DEPARTMENT OF ENERGY

PART ASSESSMENTS[1]

[1] For each program that has been assessed using the PART, this document contains details of the most recent assessment. These details are presented in their original form; some programs have revised performance targets and developed or replaced performance measures since the original assessment. The PART summaries published with the 2006 Budget (in February 2005) provide current information on follow-up to recommendations and other updates.

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PART Performance Measurements

Program: Advanced Fuel Cycle Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	53%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The purpose of the Advanced Fuel Cycle Initiative (AFCI) is to develop technologies that can reduce significantly the volume and toxicity of spent nuclear fuel generated by commercial nuclear power plants and thereby reduce the costs of waste disposal.

Evidence: National Energy Policy; Appropriation Language;Secretary Abraham Statements; AFCI Report to Congress (January 2003), Report of the U.S./Russian Joint Working Group on Advanced Nuclear Technologies (July 2002);Reports of the Nuclear Energy Research Advisory Committee (NERAC) Advanced Nuclear Transformation Technology (ANTT) Subcommittee (April 2002 and January 2003); FY 2004 Budget Request; and the AFCI Ten-Year Program and Program Management Plans.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: DOE's plan addresses size and cost of repository, proliferation risk and toxicity of spent fuel. It also will develop fuel cycle technologies for Generation IV reactor systems. National Energy Policy Report recommends addressing program issues.

Evidence: National Energy Policy; Secretary Abraham Statements; Annual AFCI Report to Congress (January 2003); Report of the U.S./Russian Joint Working Group on Advanced Nuclear Technologies (July 2002); Reports of the NERAC ANTT Subcommittee (April 2002 and January 2003); AFCI Ten-Year Program Plan.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: This is a unique initiative that does not duplicate any other Federal or non-Federal program.

Evidence: AFCI Report to Congress (January 2003); Report of the U.S./Russian Joint Working Group on Advanced Nuclear Technologies (July 2002); Reports of the NERAC ANTT Subcommittee (April 2002 and January 2003); FY 2004 Budget Request

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The program has been designed with extensive government, industry, academia and international collaboration to achieve the program objectives. Considerable analysis has been and continues to be devloted to identifying the most efficient and effective technology options for accomplishing program objectives.

Evidence: Secretary Abraham Statements; AFCI Report to Congress (January 2003), Report of the U.S./Russian Joint Working Group on Advanced Nuclear Technologies (July 2002);Reports of the NERAC Advanced Nuclear Transformation Technology (ANTT) Subcommittee (April 2002 and January 2003); FY 2004 Budget Request; AFCI Ten-Year Program and Program Management Plans; FY 2003 AFCI Comparison Report.

PART Performance Measurements

Program: Advanced Fuel Cycle Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	53%	Effective

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight: 20%

Explanation: The program targets resources to accomplish the program purpose to reduce significantly the volume and toxicity of spent nuclear fuel generated by commercial nuclear power plants and thereby reduce the cost of waste disposal. The program will support development of advanced fuel cycles for Generation IV reactor systems, contributing signficantly to the continued future viability of nuclear energy.

Evidence: AFCI Ten-Year Program and Program Management Plans; AFCI Report to Congress (January 2003); FY 2003 AFCI Comparison Report; FY2004 Budget Request; Reports of the NERAC ANTT Subcommittee (April 2002 and January 2003)

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight: 10%

Explanation: The program has developed and included in the AFCI Program Plan specific long-term performance measures that will guide program planning, budget and performance management.

Evidence: AFCI Report to Congress (January 2003); AFCI Ten-Year Program and Program Management Plans; Reports of the NERAC ANTT Subcommittee (April 2002 and January 2003); FY 2004 Budget Request; Goal 4.2 of the Draft DOE Strategic Plan; FY 2004 Annual Performance Plan; FY 2003 Joule. (See the "Measures" section of this PART.)

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight: 10%

Explanation: Ambitious baselines and quantified targets have been developed to support accomplishment of the long-term measures. These ambitious targets are based on the AFCI's need to provide a comprehensive basis for a Secretarial decision on the technical need for a second repository as early as CY 2007.

Evidence: AFCI Report to Congress (January 2003); AFCI Ten-Year Program and Program Management Plans; FY 2004 Annual Performance Plan; FY 2003 Joule. (See the "Measures" section of this PART.)

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight: 10%

Explanation: Specific, quantifiable and measurable annual program performance measures have been developed that will clearly indicate whether progress toward long-term goals is being achieved.

Evidence: AFCI Report to Congress (January 2003), AFCI Ten-Year Program and Program Management Plans. (See the "Measures" section of this PART.)

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight: 10%

Explanation: Annual performance baselines and targets have been established to measure performance. These ambitious targets are based on the AFCI's need to provide a comprehensive basis for a Secretarial decision on the technical need for a second repository as early as CY 2007.

Evidence: AFCI Report to Congress (January 2003), AFCI Ten-Year Program and Program Management Plans.

PART Performance Measurements

Program: Advanced Fuel Cycle Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	53%	Effective

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:10%

Explanation: Participant performance goals and measures are established in contractors' guidance letters and work packages that support program performance goals. They are monitored monthly through performance reports and follow-up reviews of these reports. Quarterly Program Reviews are conducted.

Evidence: AFCI Report to Congress (January 2003), AFCI Ten-Year Program and Program Management Plans; 5-year agreements with French & Swiss; program guidance memoes and associated Statements of Work for DOE contractors. Monthly performance reports.

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: The NERAC Advanced Nuclear Transformation Technology Subcommittee (ANTT) Subcommittee conducts reviews and analyses of the program at least annually and reports its recommendations to DOE. The last review was conducted on December 2, 2002, and the next is scheduled for September 18, 2003.

Evidence: NERAC ANTT meeting reports

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: Departmental budget requests for FY 2004 and prior years have not done so; however, the AFCI program maintains a detailed program plan, initially developed early in 2003, that is updated on an as-needed basis to accommodate budget changes. This document makes fully transparent the adjustments in program priorities, costs, schedules, and achievement of long- and short-term performance measures to meet budget requirements. It is also the document used to set priorities on which future budget requests are based.

Evidence: FY 2004 Budget Request; AFCI Ten-Year Program and Program Management Plans; Draft 17 of DOE Strategic Plan General Goals.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: NERAC's ANTT Subcommittee provides close review and oversight of program activities. The AFCI Ten-Year Program and Program Management plans address specific strategic plannning goals.

Evidence: Charter for the NERAC ANTT Subcommittee and associated meeting reports;AFCI Ten-Year Program and Program Management Plans

PART Performance Measurements

Program: Advanced Fuel Cycle Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	53%	Effective

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: YES Question Weight:10%

Explanation: The program has continually re-examined, analyzed and assessed its potential benefits, most recently in the AFCI Report to Congress and the FY 2003 AFCI Comparison Report. The independent NERAC ANTT (as well as independent reviewers at such universities as MIT) have reviewed the AFCI Report to Congress, and the ANTT will review the FY 2003 AFCI Comparison Report, which specifically compares benefits in addition to costs.

Evidence: Charter for the NERAC ANTT Subcommittee and associated meeting reports; AFCI Report to Congress (January 2003); FY 2004 Budget Request; FY 2003 AFCI Comparison Report, which specifically compares benefits in addition to costs.

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: The program priorities are defined in AFCI Program and Program Management Plans and the AFCI Report to Congress. The ANTT Subcommittee of NERAC provides close oversight of program activities and assists in prioritizing program activities and recommending funding levels.

Evidence: Charter for the NERAC ANTT Subcommittee and associated meeting reports; AFCI Report to Congress (January 2003); AFCI Ten-Year Program and Program Management Plans; NERAC ANTT Subcommittee Report (January 2003)

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:12%

Explanation: Program performers prepare monthly progress and earned value reports covering cost, schedule, and technical performance. Reports are reviewed monthly with the performers and corrective actions, as needed, are determined and implemented.

Evidence: FY 2004 Budget Request; Annual DOE Performance Plan and Performance Appraisal Form; Quarterly updates to the Annual Performance Plan; monthly program participant performance controls review; formal change control process

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:12%

Explanation: Program performance goals are incorporated into the annual performance plans for the federal senior manager and federal program manager. Program performance goals are also incorporated into the contractor's annual performance plan and program guidance.

Evidence: Annual DOE Performance Plan and Performance Appraisal Form; NE program guidance memos and associated Statements of Work; Performance Based Incentives in M&O contracts.

PART Performance Measurements

Program: Advanced Fuel Cycle Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	53%	Effective

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:12%

Explanation: Funds are obligated in a timely manner and program is executed in conformance with Congressional language and established program plan.

Evidence: NE program guidance memos and associated Statements of Work; NE's Monthly Obligation and Cost and Performance Tracking Report; AFCI Ten-Year Program and Program Management Plans

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:12%

Explanation: Contractor performance is judged against project costs, schedule and technical baselines. Decisions to continue funding are based on these evaluations. Incentives are included in participants' contracts but not on a program-specific basis. Costs relative to baseline are measured on a monthly basis using Earned Value Reporting.

Evidence: NE program guidance memos and associated Statements of Work; NE's Monthly Obligation and Cost and Performance Tracking Report (including earned value reporting); AFCI Ten-Year Program and Program Management Plans. Contracts and Award Fee Determinations for program participants.

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: The program is coordinated with other DOE nuclear energy and waste management programs, including the Generation IV Nuclear Energy Systems Initiative, the Nuclear Power 2010 Initiative, and the Civilian Radioactive Waste Management Program (RW). The Ten-Year AFCI Program and Program Management Plans clearly articulate interfaces with these programs, including RW. The Nuclear Energy (NE) program and RW worked closely on the AFCI Report to Congress and are involved in ongoing program planning and monitoring pursuant to a memorandum of understanding.

Evidence: National Energy Policy; AFCI Report to Congress (January 2003), NERAC ANTT Subcommittee meeting reports, FY 2004 Budget Request; AFCI Ten-Year Program and Program Management Plans; Draft NE/RW MOU (still under negotiation)

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: Internal controls are used in the execution of the program. Program performers prepare monthly progress and earned value reports covering cost, schedule, and technical performance. Reports are reviewed monthly with the performers and corrective actions, as needed, are determined and implemented.

Evidence: Annual Reporting for Federal Managers Financial Integrity Act. FY 2004 Budget Request; Annual DOE Performance Plan and Performance Appraisal Form; Quarterly updates to the Annual Performance Plan; monthly program participant performance controls review; formal change control process.

PART Performance Measurements

Program: Advanced Fuel Cycle Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	53%	Effective

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight: 12%

Explanation: No management deficiencies have been identified. Program performance goals are incorporated into staff and contractor annual performance plans and progress against these goals are monitored. The Department uses this information to evaluate contractor performance and resulting award fees. Specific deliverables and their related costs and schedules are tracked via monthly participant reports and corrective or remedial action determined in monthly review conferences; in addition, program direction, costs and schedules are tracked and calibrated in Quarterly Program Reviews.

Evidence: FY 2004 Budget Request; AFCI Ten-Year Program and Program Management Plan; AFCI Report to Congress (January 2003). Monthly participant reports and management review conferences; Quarterly Program Reviews.

3.RD1 For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality? Answer: YES Question Weight: 12%

Explanation: The program incorporates both merit-based competitive awards and national laboratory-directed awards based on technical capabilities and facilities.

Evidence: FY 2004 Budget; AFCI Ten-Year Program and Program Management Plans; AFCI Report to Congress (January 2003); Procedure for Selection of Laboratory Contractors for AFCI R&D Activities.

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: LARGE EXTENT Question Weight: 20%

Explanation: The program is relatively new but is currently on track in achieving its long-term performance goals. Annual performance measures and targets established to support the long-term perfomance and targets are being achieved.

Evidence: AFCI Report to Congress (January 2003). AFCI Ten-Year Program and Program Management Plans; FY 2003 Performance and Accountability Report; NERAC ANTT Subcommittee Reports. FY 2004 Budget Request.

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: YES Question Weight: 20%

Explanation: All annual performance goals have been achieved. Annual measures and targets are tracked on a monthly basis.

Evidence: FY 2004 Budget Request; Performance documented in monthly performance reviews and annual contractor evaluations; FY 2004 Annual Performance Plan; FY 2003 Joule; FY 2002 DOE Performance and Accountability Report.

PART Performance Measurements

Program: Advanced Fuel Cycle Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	53%	Effective

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: NO Question Weight 20%

Explanation: The program has been in operation for four years. During each year there has been a steady improvement in both management systems and technical achievements. Through foreign collaborations (including obtaining vital irradiation data from France) the program has avoided R&D costs of approximately $10 million annually over a 10+ year period beginning in 2000. DOE contracts do not reward program-specific efficiencies, but the AFCI program monitors and collects information on contractor efficiency on a quarterly basis through program reviews and also annually through 360º performance reviews. The program inputs the results of these reviews into the various contractors' award fee determinations at the Departmental level. The program has not presented detailed evidence of improvements in efficiency or cost-effectiveness.

Evidence: Improvements are documented in the annual contractor performance reviews and in the monthly cost and schedule performance reviews. AFCI-specific, task-related Performance Based Incentives.

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NO Question Weight 20%

Explanation: Foreign programs with very similar objectives and goals have been in operation for several decades; however, no comparative evaluations have been conducted. In four years, the U.S. program has achieved a technical maturity of sufficient stature that international interest in establishing cooperative programs with the United States has grown annually. There is no similar domestic program.

Evidence: French/U.S. cooperative programs in transmutation technology were established in 2001, followed by a multinational program based in Switzerland. Opportunities for cooperation with Russia, Japan and South Korea are currently under consideration. Cooperative agreements have been signed by the French, Swiss and European Union.

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: YES Question Weight 20%

Explanation: The NERAC ANTT Subcommittee chaired by Nobel Laureate Burton Richter conducts ongoing external reviews and semi-annual oversight of the program. These evaluations have confirmed that the program is effective in achieving program goals.

Evidence: NERAC ANTT Subcommittee meeting reports. The latest evaluation conducted in December 2002; the next one is scheduled for September 2003.

PART Performance Measurements

Program: Advanced Fuel Cycle Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	53%	Effective

Measure: Complete focused spent fuel treatment and transmutation technology research and development that will provide the Secretary sufficient input to decide (with a 70% confidence level) on the technical need for a second geologic repository.

Additional Information: The intermediate term goal of AFCI is to enable a decision on delaying or eliminating the need for a second repository by the statutory limit of January 1, 2010. The program wants to achieve this goal by Dec. 31, 2007.

Year	Target	Actual	**Measure Term:** Long-term
2008	Report to secretary		

Measure: Demonstrate separation of uranium from spent nuclear fuel at a level of 99.9 percent using the Uranium Extraction (UREX) process to support the development of advanced fuel cycles for enhanced repository performance.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2002	1	1	

Measure: Complete laboratory-scale "hot" testing of the UREX+ advanced aqueous spent fuel separations process.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2001	1	1	

Measure: Establish with at least one country a new international agreement on advanced accelerator applications programs that significantly leverages financial and technical resources, to the mutual benefit of both countries particularly in areas such as safety, fuels and materials development, and facility operations.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2001	1	1	

PART Performance Measurements

Program: Advanced Fuel Cycle Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	53%	Effective

Measure: Demonstrate the integrity of at least one oxide fuel form containing 5 percent plutonium.

Additional Information:

Year	Target	Actual	**Measure Term:**	Annual
2000	1	1		

Measure: Complete laboratory-scale "hot" testing of the UREX+ advanced aqueous spent fuel separations process. (Target refers to separation purity.)

Additional Information: Reaching this target will provide the baseline data required to bring final resolution to the flowsheet for the UREX+ process and aid in the verification of a key computer modeling program.

Year	Target	Actual	**Measure Term:**	Annual
2005	Purity >=99.9%			

Measure: Cost-weighted mean percent variance from established cost and schedule baselines for Advanced Fuel Cycle Initiative activities.

Additional Information:

Year	Target	Actual	**Measure Term:**	Annual	(Efficiency Measure)
2005	<10%				
2004	<10%				
2003	<10%				
2002	<10%				
2001	<10%				

PART Performance Measurements

Program: Advanced Fuel Cycle Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	53%	Effective

Measure: Complete 100 percent of the first irradiation experiment that will demonstrate the integrity of at least one oxide fuel form containing 5 percent plutonium.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2005	No fuel failure		

Measure: Complete fabrication of advanced light water reactor proliferation-resistant fuel samples and initiate irradiation

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2004	1		

Measure: Demonstrate a laboratory scale separation of americium and curium as well as cesium and strontium from spent nuclear fuel to support the development of advanced fuel cycles for enhanced repository performance.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2004	1		

Measure: Complete fabrication of proliferation resistant transmutation fuel samples and commence irradiation in the ATR beginning in FY 2004.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	1		

PART Performance Measurements

Program: Advanced Fuel Cycle Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	53%	Effective

Measure: Demonstrate a laboratory scale separation of plutoinium and neptunium as well as cesium and strontium from other actinides and fission products to support the development of advanced fuel cycles for enhanced repository performance.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	1		

Measure: Successfully manufacture advanced transmutation non-fertile fuels and testing containers for irradiation testing in the Advanced Test Reactor.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2002	1	1	

PART Performance Measurements

Program: Advanced Scientific Computing Research
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The mission of the Advanced Scientific Computing Research (ASCR) program is to discover, develop, and deploy the computational and networking tools that enable researchers in the scientific disciplines to analyze, model, simulate, and predict complex phenomena important to the Department of Energy (DOE). To accomplish this mission the program fosters and supports fundamental research in advanced scientific computing ' applied mathematics, computer science, and networking ' and operates supercomputer, networking, and related facilities.

Evidence: FY 2004 Budget Request (www.mbe.doe.gov/budget/04budget/index.htm). Public Law 95-91 that established the Department of Energy (DOE). The ASCR Mission has been validated by the Advanced Scientific Computing Advisory Committee (ASCAC).

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The ASCR program addresses the specific need for the Department of Energy's Office of Science (SC) to develop large-scale, complex, high-performance simulation capabilities to accelerate civilian scientific advancement focused on the mission needs of the DOE, and secondarily on the needs of the broader scientific community.

Evidence: This program was specifically authorized in the "High Performance Computing Act of 1991" (PL 102-194). The "Scientific Discovery through Advanced Computing (SciDAC)" plan describes the issues and the program's strategic vision circa 2000 (www.osti.gov/scidac/SciDAC.pdf).

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The ASCR program is unique in addressing the specific computational needs and challenges of civilian R&D in the DOE. ASCR is coordinated with other Federal programs through the Interagency Working Group on IT R&D (IWG/IT R&D) to ensure that efforts are not needlessly redundant. The most recent strategic vision for the program (SciDAC) briefly describes relationships with the computing programs at DOE's National Nuclear Security Administration and other Federal agencies.

Evidence: IWG/IT R&D (www.itrd.gov/iwg/program.html). SciDAC plan (see above).

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The ASCR program is based on competitive merit-review, independent expert advice, and joint program planning. This proves efficient and effective. However, a Committee of Visitors (COV) has yet to independently validate ASCR's merit review process.

Evidence: ASCAC reports (www.sc.doe.gov/ascr/adviscommittee.html). Joint planning efforts include SciDAC, Genomes to Life (doegenomestolife.org), and computational nanoscience (www.sc.doe.gov/production/bes/besac/Theory%20and%20Modeling%20in%20Nanoscience.pdf). Program reviews and files.

PART Performance Measurements

Program: Advanced Scientific Computing Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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1.5 **Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly?** Answer: YES Question Weight: 20%

Explanation: ASCAC ensure that research community input is regularly gathered to assess the priorities and progress of the program. SciDAC efforts are tightly linked to the application programs (and associated advisory committees) . Peer review is used to assess the relevance and quality of each project.

Evidence: ASCAC reviews and reports. SciDAC reports (www.osti.gov/scidac). Program files.

2.1 **Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?** Answer: YES Question Weight: 10%

Explanation: While not comprehensive, the two long-term measures reflect key goals for the underlying mathematics and computer science research sponsored by ASCR, and provide a test case for the computation component of the Genomes to Life SciDAC effort. The program has defined "successful" and "minimally effective" performance milestones for each measure, and an external panel will assess interim program performance on a triennial basis, and update the measures as necessary. It is inappropriate for a basic research program such as this one to have a quantitative long-term efficiency measure.

Evidence: SciDAC goals are outlined in program plan (www.osti.gov/scidac), and GTL-specific goals are online at doegenomestolife.org. A description of the "successful" and "minimally effective" milestones, and an explanation of the relevance of these measures to the field can be found on the SC Web site (www.sc.doe.gov/measures).

2.2 **Does the program have ambitious targets and timeframes for its long-term measures?** Answer: YES Question Weight: 10%

Explanation: ASCAC has reviewed the new long-term measures for this program and found them to be ambitious and meaningful indicators of progress toward computer science, applied mathematics, and SciDAC goals.

Evidence: Letter from ASCAC chair regarding review of long-term measures.

2.3 **Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals?** Answer: YES Question Weight: 10%

Explanation: ASCR has developed quantitative annual output measures that are indicators of progress toward the long term measures, primarily because they focus on efficiently providing the computational capabilities (hardware and the underlying applied math and computer science) necessary for enabling improved scientific progress.

Evidence: FY04 Budget Request. Description on measures and relationship to long-term goals (www.sc.doe.gov/measures). Brief description of "best value" procurement process alluded to in the procurement measure (www.nersc.gov/research/annrep01/03systems.html#NERSC4).

PART Performance Measurements

Program: Advanced Scientific Computing Research
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:10%

Explanation: All of the annual measures include quantifiable annual targets. The new efficiency measure quantifies ambitious performance improvements over current rates. Baseline data (FY02 and FY03) for the procurement and NERSC usage measures demonstrate the targets to be ambitious, yet realistic.

Evidence: FY04 Budget Request. Description on measures and relationship to long-term goals (www.sc.doe.gov/measures). NERSC FY02 Annual Report (www.nersc.gov/research/annrep02/html/).

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: NO Question Weight:10%

Explanation: ASCR program solicitations for research grants do not yet explictly include specific program goals, though Federal program managers attempt to fund a grant portfolio that is aimed at the long-term goals of the program. For contractors, a limited FY03 audit by the DOE Inspector General (IG) found that "performance expectations generally flowed down into the scope of work at the national laboratories." Management and Operations (M&O) contracts for the labs contain generic "scientific quality" peformance-based evaluation provisions.

Evidence: Most recent general renewal solicitation (www.science.doe.gov/grants/Fr03-02.html). Memo from the DOE IG to the Director of the Office of Science. M&O contract performance evaluation provisions (WWW-accesible examples include: Oak Ridge National Lab, www.ornl.gov/Contract/UT-BattelleContract.htm; and, Lawrence Berkeley National Lab, www.lbl.gov/LBL-Documents/Contract-98/AppFTOC.html).

2.6 Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need? Answer: NO Question Weight:10%

Explanation: ASCAC has conducted a fairly light review of the program's facilities to gauge relevance and quality, but there have not been similar portfolio-level peer reviews of the research program by an independent panel. The program does not yet have COV evaluations of any program elements, but expects to receive the first COV report by April 2004.

Evidence: ASCAC facilities review report (www.krellinst.org/esinfo/ASCAC-facilities-final.mhw.doc).

2.7 Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget? Answer: NO Question Weight:10%

Explanation: DOE has not yet provided a budget request that adequately integrates performance information.

Evidence:

PART Performance Measurements

Program: Advanced Scientific Computing Research
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

2.8 Has the program taken meaningful steps to correct its strategic planning deficiencies? Answer: YES Question Weight:10%

Explanation: In addition to active participation in a current interagency roadmapping task force on high end computing, ASCR has held a series of strategic planning workshops, participated in the drafting of a new Office of Science strategic plan, and new performance goals and targets have been developed in coordination with OMB. A new COV process is being organized, with the first program element review expected back by April 2004. However, the activity level of ASCAC is below that of other Office of Science advisory committees.

Evidence: Interagency task force (www.itrd.gov/hecrtf-outreach/index.html). Networking workshop (www.hep.anl.gov/may/ScienceNetworkingWorkshop). Science applications workshop (www.pnl.gov/scales). Program files, including COV charge letter to ASCAC chair. ASCAC report activity (www.sc.doe.gov/ascr/ascac_reports.htm).

2.CA1 Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity? Answer: YES Question Weight:10%

Explanation: One of a kind research facilities are not amenable to the same type of alternatives analysis as other captial asset investments. Nevertheless, the Exhibit 300s provided to OMB contain roughly equivalent analyses, which typically compare the attributes of various computer vendors' systems--using appropriate "best value" metrics--before making a procurement decision.

Evidence: Brief description of "best value" procurement for program's production facility, National Energy Research Scientific Computing Center (NERSC, www.nersc.gov/research/annrep01/03systems.html#NERSC4).

2.RD1 If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals? Answer: NA Question Weight: 0%

Explanation: This is a basic R&D program, and the question is intended for industry-related R&D programs.

Evidence:

2.RD2 Does the program use a prioritization process to guide budget requests and funding decisions? Answer: YES Question Weight:10%

Explanation: Although not visible outside DOE, internal SC budget formulation practices include a priority ranking process. ASCR is currently drafting a strategic plan--with the input of external community workshops--as a part of the overall SC planning process. ASCR has engaged the advisory process for the computing components of other SC programs. However, the program has not yet fully engaged ASCAC in its prioritization process, and it is not always obvious that program level budget execution decisions are made within a prioritization framework.

Evidence: ASCAC reports (www.sc.doe.gov/ascr/adviscommittee.html; topical computing centers report not on Web site). Engagement with other SC programs' advisory processes include: Genomes to Life (doegenomestolife.org) and computational nanoscience (www.sc.doe.gov/production/bes/besac/Theory%20and%20Modeling%20in%20Nanoscience.pdf).

PART Performance Measurements

Program: Advanced Scientific Computing Research
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

3.1 Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance? Answer: NO Question Weight: 8%

Explanation: Facility user surveys and benchmarking provide operational performance information. The program collects performance data from individual grantees and national labs, and uses peer review as a type of standardized quality control at the individual grant level. However, there is not yet a systematic process, such as regular COV evaluations, that conducts research portfolio quality and process validations. While DOE IG contracts with an outside auditor to check internal controls for performance reporting, and the IG periodically conducts limited reviews of performance measurement in SC, it is not clear that these audits check the credibility of performance data reported by DOE contractors.

Evidence: Facility user surveys and user groups/committees (hpcf.nersc.gov/about, www.es.net, www.ccs.ornl.gov/CHUG.html). Program files, including peer review of the facilities.Reporting requirements for grants (www.science.doe.gov/production/grants/605-19.html).

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight: 8%

Explanation: Senior Executive Service (SES) and Program Manager Performance Plans are directly linked to program goals. The Management and Operations (M&O) contracts for the Labs and User Facilities include performance measures linked to program goals. Research funding requirements ensure consideration of past performance.

Evidence: Program and personnel files. For performance-based fee adjustments on M&O contracts, see evidence for question 2.5. Grant rules for renewals (www.science.doe.gov/grants/#GrantRules).

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight: 8%

Explanation: Using DOE's monthly accounting reports, SC personnel monitor progress toward obligating funds consistent with an annual plan that is prepared at the beginning of the fiscal year to ensure alignment with appropriated purposes. SC programs consistently obligate more than 99.5% of available funds.

Evidence: Program files. DOE-wide audit reports.

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight: 8%

Explanation: SC is currently undergoing a reengineering exercise aimed at flattening organizational structure and improving program effectiveness. The program will collect data necessary to track their "efficiency" measure. The system performance measures used by NERSC ensures maximum return on procurement investments.

Evidence: SC reengineering information (www.screstruct.doe.gov). See "Measures" tab for the programmatic efficiency measure. NERSC system performance measures (www.nersc.gov/aboutnersc/presentations/Sc99/SC99Kramer6/SC99Kramer6.PPT, and hpcf.nersc.gov/about/ERSUG/meeting_info/May03/May03_Presentations/Wong/NERSC_Perf_Eval_Activities.ppt).

PART Performance Measurements

Program: Advanced Scientific Computing Research
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight: 8%

Explanation: The ASCR program is involved in numerous formal and informal collaborations with other programs in advanced scientific computing research, though primarily with national security agencies as oppposed to other civilian science agencies. ASCR is a leading agency in the ongoing governmental Interagency Working Group on IT R&D of the National Science and Technology Council, including co-chairing a current task force on high end computing.

Evidence: Summary of joint activities with other agencies (www.sc.doe.gov/ascr/hitchcock.ppt). Interagency Working Group on IT R&D (www.itrd.gov/iwg).

3.6 Does the program use strong financial management practices? Answer: YES Question Weight: 8%

Explanation: SC staff execute the ASCR program consistent with established DOE budget and accounting policies and practices. These policies have been reviewed by external groups and modified as required to reflect the latest government standards.

Evidence: Various Departmental manuals. Program files. Audit reports.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight: 8%

Explanation: SC is currently reengineering to improve program management efficiency. A new COV process is being organized by ASCR, with the first program element review expected back by April 2004.

Evidence: SC reengineering information (www.screstruct.doe.gov). COV charge letter to ASCAC chair, including scope, conflict of interest issues, and future schedule.

3.CA1 Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals? Answer: YES Question Weight: 8%

Explanation: Procurement contracts with computer vendors tie payments to specific deliverables, including the sustained system performance measured over the lifetime of the contract.

Evidence: Exhibit 300s submitted to OMB. Program files, including competitive performance proposals from vendors.

3.CO1 Are grants awarded based on a clear competitive process that includes a qualified assessment of merit? Answer: NO Question Weight: 8%

Explanation: First time grant applications are encouraged in all Request For Proposals. ASCR has a specific solicitation for a new Early Career Principal Investigator (ECPI) program, and investments in minority institutions under the HBCU/MI program. However, the award and merit review process has not yet been validated by a COV.

Evidence: There were 26 new and 9 renewed ASCR grantees in FY2002. In addition, there were 70 new and 9 renewed grantees in FY2001 (includes new programs for SciDAC & Microbial Cell). ECPI website (www.sc.doe.gov/production/grants/Fr02-16.html).

PART Performance Measurements

Program: Advanced Scientific Computing Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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3.CO2 **Does the program have oversight practices that provide sufficient knowledge of grantee activities?** Answer: YES Question Weight: 8%

Explanation: In addition to grantee progress reports, program managers stay in contact with grantees through email and telephone, and conduct program reviews and site visits.

Evidence: Reporting requirements for grants (www.science.doe.gov/production/grants/605-19.html). Program files, including documentation of program manager site visits, etc.

3.CO3 **Does the program collect grantee performance data on an annual basis and make it available to the public in a transparent and meaningful manner?** Answer: NO Question Weight: 8%

Explanation: In accordance with DOE Order 241.1A, the final and annual technical reports of program grantees are made publicly available on the web through the Office of Scientific and Technical Information's "Information Bridge". However, program-level aggregate data on the impact of the grants program is not adequately communicated in the annual DOE Performance and Accountability report.

Evidence: DOE Order 241.1A. Information Bridge (www.osti.gov/bridge/). FY02 Performance and Accountability Report (www.mbe.doe.gov/stratmgt/doe02rpt.pdf).

3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: NO Question Weight: 8%

Explanation: ASCAC facility reviews, facility steering committees, and user surveys validate the quality of the scientific user facilities. Unsolicited field work proposals from the Federal Labs are merit reviewed, but not competed. The funds for research programs and scientific user facilities at the Federal Labs are allocated through a limited competition analogous process to the unlimited process outlined in 10 CFR 605. However, the quality of the research funded via this process has not yet been validated by a COV.

Evidence: ASCAC facility report (www.krellinst.org/esinfo/ASCAC-facilities-final.mhw.doc). Unsolicited proposals (See 10CFR600.6, professionals.pr.doe.gov/ma5/MA-5Web.nsf/FinancialAssistance/ Part+600). Example of lab solicitation, with field work proposal reference (www.science.doe.gov/grants/LAB03_17.html). Merit Review procedures (www.sc.doe.gov/production/grants/merit.html). 10 CFR 605 (www.science.doe.gov/production/grants/605index.html). Facility user surveys and user groups/committees (hpcf.nersc.gov/about, www.es.net, www.ccs.ornl.gov/CHUG.html). Program files, including peer review of the facilities.

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: LARGE EXTENT Question Weight20%

Explanation: ASCAC will evaluate progress toward the new long term performance measures every three years, but no external portfolio-level reviews are available other than the generaly positive facilities report by ASCAC. Early results indicate that the SciDAC effort appears to be successful, which is important for acheiving the future goals of the program.

Evidence: ASCAC facilities review report (www.krellinst.org/esinfo/ASCAC-facilities-final.mhw.doc). SciDAC update at latest ASCAC meeting (www.sc.doe.gov/ascr/Laub031403.ppt).

PART Performance Measurements

Program: Advanced Scientific Computing Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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4.2 Does the program (including program partners) achieve its annual performance goals? Answer: YES Question Weight 20%

Explanation: Although the three annual performance goals for FY05 are new, ASCR has met the targets for most of its former annual measures.

Evidence: FY02 Performance and Accountability Report (www.mbe.doe.gov/ stratmgt/doe02rpt.pdf). FY04 Annual Performance Plan (www.mbe.doe.gov/budget/04budget/content/perfplan/perfplan.pdf).

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: YES Question Weight 20%

Explanation: The sustained system performance metric used by NERSC for procurements has resulted in machines with more compute nodes delivered by the vendor than originally planned, which in turn allows more scientific simulations to be carried out.

Evidence: Program files, including procurement contracts.

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NA Question Weight: 0%

Explanation: While user surveys regularly show a fairly high level of satisfaction with ASCR facilities, expert comparitive analyses of the program as a whole have not been done. The program has a unique role to serve the needs of the other five SC research programs, and the DOE mission more broadly, so the value of such analyses is questionable at best given the interconnectedness of the U.S. computing community.

Evidence: NERSC Annual User Survey (hpcf.nersc.gov/about/survey/).

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: LARGE EXTENT Question Weight 20%

Explanation: The ASCR facilities are effective in achieving desired results, based on assessment by the ASCAC in their facilities report, and based on external peer review of both NERSC and ESnet. However, no independent review process has been carried out to assess the program's research portfolio.

Evidence: ASCAC facilities review report (www.krellinst.org/esinfo/ASCAC-facilities-final.mhw.doc). Program files, including ESnet and NERSC peer review results.

4.CA1 Were program goals achieved within budgeted costs and established schedules? Answer: YES Question Weight 20%

Explanation: Performance data for FY02 and FY03 demonstrate that the capital asset procurements, primarily for NERSC acquisitions, were almost exactly on schedule and on budget. This excellent performance can be primarily attributed to the sustained system performance metric used for these procurements, which focuses on the actual performance of the resource available to the end users rather than on the theoretical peformance of a proposed system.

Evidence: Exhibit 300s submitted to OMB. FY02 Performance and Accountability Report (www.mbe.doe.gov/stratmgt/doe02rpt.pdf). Brief description of "best value" procurement for NERSC (www.nersc.gov/research/annrep01/03systems.html#NERSC4).

PART Performance Measurements

Program: Advanced Scientific Computing Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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Measure: Progress toward developing the mathematics, algorithms, and software that enable scientifically-critical models of complex systems, including highly nonlinear or uncertain phenomena, or processes that interact on vastly different scales, or contain both discrete and continuous elements. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: An external panel will conduct triennial reviews of progress. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2006	Excellent		
2009	Excellent		
2012	Excellent		
2015	Excellent		

Measure: Progress toward developing, through the Genomes to Life partnership with the Biological and Environmental Research program, the computational science capability to model a complete microbe and a simple microbial community. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: An external panel will conduct triennial reviews of progress. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2006	Excellent		
2009	Excellent		
2012	Excellent		
2015	Met Goal		

PART Performance Measurements

Program: Advanced Scientific Computing Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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Measure: Focus usage of the primary supercomputer at the National Energy Research Scientific Computing Center on capability computing (percentage of the computing time used that is accounted for by computations that require at least 1/8 of the total resource).

Additional Information: There were two primary supercomputers, in different lifecycle stages, at the Center in 2002. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Annual
2002		75%, 22%	
2003		36%	
2004	50%		
2005	50%		

Measure: Maintain Procurement Cost/Performance Baselines. Percentages within: (1) original baseline cost for completed procurements of major computer systems or network services; and, (2) original performance baseline versus integrated performance over the life of the contract(s).

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Annual
2002	<10%, <10%	0%, 0%	
2003	<10%, <10%	0%, -1%	
2004	<10%, <10%		
2005	<10%, <10%		

Measure: Improve Computational Science Capabilities. Average annual percentage increase in the computational effectiveness (either by simulating the same problem in less time or simulating a larger problem in the same time) of a subset of the application codes within the Scientific Discovery through Advanced Computing effort.

Additional Information: Initial baseline set against 2002. See www.sc.doe.gov/measures for more information, including the declaration of the subset of application codes.

Year	Target	Actual	**Measure Term:** Annual (Efficiency Measure)
2003	10%	3181%	

Program: Advanced Scientific Computing Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

2004	50%
2005	50%

OMB Program Assessment Rating Tool (PART)

Research & Development Programs

Name of Program: Advanced Simulation and Computing (ASCI)

Section I: Program Purpose & Design (Yes,No, N/A)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Is the program purpose clear?*	Yes	The Department of Energy (DOE) is responsible for enhancing U.S. national security through the military application of nuclear technology. The FY1994 National Defense Authorization Act directed the Secretary of Energy to "establish a stewardship program to ensure the preservation of the core intellectual and technical competencies of the US in nuclear weapons." The Advanced Simulation and Computing program is an essential component of the Stockpile Stewardship Program with the resposibility for creating simulation capabilities through the development of advanced weapons codes and high-performance computing that incorporate high-fidelity scientific models validated against experimental results, past tests, and theory.	Public Law 106-65, Public Law 130-160, DOE Stockpile Stewardship and Management Program 2001, ASCI Program Plan 2002-2003.	17%	0.2
2	*Does the program address a specific interest, problem or need?*	Yes	High-performance computing has been an important component of the weapons program for more than forty years. Computational capabilities underpin nuclear weapons design, engineering, and evaluation. This ASCI program provides the simulation capabilities necessary to assess and certify the safety, performance, and reliability of the U.S. nuclear stockpile in the absence of underground nuclear testing.	NNSA Strategic Plan 2002, ASCI Program Plan 2002-2003, Annual Implementation Plan, White Papers for the Task Force on Alternative Futures for the DOE Laboratories-Core Technical Capabilities 1994, DOE Stockpile Stewardship and Management Program 1995	17%	0.2
3	*Is the program designed to make a unique contribution in addressing the interest, problem or need (i.e., not needlessly redundant of any other Federal, state, local or private efforts)?*	No	While nuclear weapons are the sole province of the Federal Government, and the NNSA is the federal agency responsible for the safety, security and reliability of the stockpile, there are aspects of the ASCI program which may be redundant with other entities or unnecessary for the federal government.	ASCI Program Plan-Role of ASCI in Stockpile Stewardship 2002-2003	17%	0.0

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
4	*Is the program optimally designed to address the interest, problem or need?*	Yes	The ASCI program evolved from the merging of the Accelerated Strategic Computing Initiative and Stockpile Computing programs. The program is broken into five supporting subprograms: procuring, operating and maintaining computers; reserach and development and constructing operating environments; developing nuclear weapons assessment tools; academic partnerships; and program integration. The program manager allocates fundsto each of these areas annually after consulting with the subprogram directors and laboratory executives.	ASCI Program Plan-Overview 2002-2003, DOE Stockpile Stewardship and Management Program 1995, ASCI Tri-lab and HQ Organization; Minutes of ASCI Executives 2001	17%	0.2
5 (RD 1)	*Does the program effectively articulate potential public benefits?*	Yes	As part of the nuclear Stockpile Stewardship Program, the program is of significant interest to the Departments of Energy and Defense. While the public benefit is, perhaps, transparent to most Americans, the program plays an important role in the Nation's security.	ASCI Program Plan-Overview 2002-2003	17%	0.2
6 (RD 2)	*If an industry-related problem, can the program explain how the market fails to motivate private investment?*	Yes	Federal investment has historically driven high-performance computing due to the limited requirements for super- and ultracomputing performance outside the Departments of Energy and Defense. In recent years high-performance computing has become more prevalent in business. However, there still does not appear to be a profit incentive or business need for the computing industry to commit significant resources to this area.	Although high-performance computing has become more prevalent in business, the capability level and some technologies used do not appear to meet the performance requirements of the program.	17%	0.2
Total Section Score					**100%**	**83%**

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
Section II: Strategic Planning (Yes,No, N/A)						
1	*Does the program have a limited number of specific, ambitious long-term performance goals that focus on outcomes and meaningfully reflect the purpose of the program?*	Yes	The program has two goals to achieve by 2010: 1) create predictive simulation capabilities necessary to support weapons system certification and refurbishment schedules; 2) Provide the computing environment to accomplish the Science-based Stockpile Stewardship Program mission. Upon reaching these goals, the program will provide a full set of validated stockpile assessment tools to designers. Major program milestones provide a roadmap to achieving these goals.	ASCI Program Plan 2002-2003	11%	0.1
2	*Does the program have a limited number of annual performance goals that demonstrate progress toward achieving the long-term goals?*	Yes	The program uses a set of major milestones to chart its path to its long-term goals. Annually, the program produces an Implementation Plan to define more detailed milestones, which are used by program directors to track laboratory progress towards achieveing the major milestones. The program also expects DOE laboratories to use internal milestones in addition to DoE tracked milestones to plan and evaluate progress.	ASCI Program Plan-Appendix A 2002-2003; ASCI FY02 Implementation Plan Vol I-III, Oct 2001 (Vol I is classified).	11%	0.1
3	*Do all partners (grantees, sub-grantees, contractors, etc.) support program planning efforts by committing to the annual and/or long-term goals of the program?*	Yes	The Nuclear Weapons Complex commits to program goals at several levels. Program leadership, the headquarters program directors, and laboratory program executives develop strategic goals which are published in the Program Plan. Program leadership and scientific and engineering users collaborate to develop major milestones which are also published in the Program Plan. Program manager milestones are developed under the direction of individual program directors working with program leads at the laboratories and the work is published annually in the program Implementation Plan. University alliance partners commit to program goals through their contracting process and also publish their annual plan in the Implemantation Plan.	ASCI Program Plan 2002-2003, ASCI FY02 Implementation Plan Vol I-III, Oct 2001 (Vol I is classified), Minutes of Inaugural Milestone Meeting, ASCI Program Integrated Management Chart.	11%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
4	*Does the program collaborate and coordinate effectively with related programs that share similar goals and objectives?*	Yes	The program maintains external programmatic coordination through formal membership in the Interagency Working Group on Information Technology Research and Development, as well as more informal collaboration with the DoE Office of Science, the National Security Agency, and the National Science Foundation.	Networking and Information Technology Research and development Supplement to the President's Budget 2002, ASCI Technology Prospectus 2001, Pathforward projects, Co-funding Fellowships, ASCI Response to DOE Inspector General Audit 2002.	11%	0.1
5	*Are independent and quality evaluations of sufficient scope conducted on a regular basis or as needed to fill gaps in performance information to support program improvements and evaluate effectiveness?*	Yes	Semi-annual computer code reviews provide program and lab leaders with semi-independent peer review evaluations of progress towards achieving the milestones. The DOE Inspector General review of the Department's High Performance Computing Program resulted in no negative findings, and only four recommendations issued in a letter report. In addition, the program has been reviewed in past years by several groups, to include Blue Ribbon Panels and the General Accounting Office and has received no negative reports.	Burn Code Panel Reports, Non-nuclear Code Review Report, DOE Inspector General Audit Report No. CR-L-0204, April 5, 2002, NA 114 response to DOE Inspector General Audit, JASONS 1996, Blue Ribbon 1999, GAO 1998/1999, Platform Review agendas.	11%	0.1
6	*Is the program budget aligned with the program goals in such a way that the impact of funding, policy, and legislative changes on performance is readily known?*	Yes	The program strategy consists of five components that correspond to the program's organizational structure. These components are broken into program elements that are aligned with the Budget and Reporting Code classification system. Since the program elements are directly related to the budget structure, impacts of funding, policy and legislative changes are readily identifiable.	ASCI Program Plan-The ASCI Strategy 2002-2003, Budget and Reporting Code System	11%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
7	*Has the program taken meaningful steps to address its strategic planning deficiencies?*	Yes	The program recently revised its milestones and platforms acquisition strategy to better reflect stockpile needs. These changes resulted from an annual review of implementation plans and strategic milestones by managers which concluded that original strategic milestones needed revision based on knowledge gained over the first seven years of the program.	ASCI Program Plan-The ASCI Strategy 2002-2003; Minutes of Inaugural Milestone Meeting	11%	0.1
8 (RD 1)	*Is evaluation of the program's continuing relevance to mission, fields of science, and other "customer" needs conducted on a regular basis?*	Yes	In May 2000 an external Blue Ribbon Panel tasked to review the program and determine if it was properly aligned to support Science-based Stockpile Stewardship concluded that the program was on track. Currently, the program relies on code and Sandia National Laboratory reviews to determine if the program is making adequate progress. The results of the 2002 code reviews indicate that progress towards predictive code capabilities are on track.	2002 Sandia National Laboratory agenda; Blue Ribbion Panel report, May 2000	11%	0.1
9 (RD 2)	*Has the program identified clear priorities?*	Yes	The program has collaborated with nuclear weapon designers, manufacturers and repair specialists as well as with other NNSA science and technology program managers to develop priorities that are reflected in the major milestones that guide technical achievement of the Program.	Process for coordination with ASCI customers is in part performed at DOE headquarters, however, it is primarily carried out at the labs. ASCI Program Plan 2002-2003, ASCI Technology Prospectus 2001; Milestone Inaugural Meeting Attendance list.	11%	0.1
Total Section Score					**100%**	**100%**

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
Section III: Program Management (Yes,No, N/A)						
1	*Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?*	Yes	The laboratories report on progress on major and program manager milestones to DOE headquarters on a quarterly basis. In addition, headquarters program managers have periodic meetings, both in-person and telephonically, to keep abreast of progress and to chart future directions.	ASCI Program Plan- Program Management 2002-2003, Quarterly Progress Reports; meeting and telecon schedules.	9%	0.1
2	*Are Federal managers and program partners (grantees, subgrantees, contractors, etc.) held accountable for cost, schedule and performance results?*	Yes	Program managers allocate funding through the work authorization process and monitor costs monthly. Furthermore, they monitor schedule on a quarterly basis using major and program manager milestones. Performance is monitored using a set of milestone related targets and measures.	Financial Information System , Financial Data Warehouse reports from Finanacial Information System, Annual Implementation Plan, Work Authorizations	9%	0.1
3	*Are all funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?*	Yes	Laboratory-level resource analysts report program execution results monthly for review by program management. NNSA tracks expenditures at the sub-program level using its official Budget and Reporting classification codes and the DOE Financial Information System. Unspent funds at the end of the year have been within acceptable parameters identified by DoE.	Financial Information System, Financial Data Warehouse reports from Financial Information System , Program sweep 1999 and internal audits 1999/2000/2001 performed by ASCI staff.	9%	0.1
4	*Does the program have incentives and procedures (e.g., competitive sourcing/cost comparisons, IT improvements) to measure and achieve efficiencies and cost effectiveness in program execution?*	Yes	DoE uses distinct evaluation procedures and criteria to achieve efficiency and effectiveness of research and development investment dollars.	Pathforward Request for Proposal process.	9%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
5	*Does the agency estimate and budget for the full annual costs of operating the program (including all administrative costs and allocated overhead) so that program performance changes are identified with changes in funding levels?*	No	The program is consistent with DOE practice in estimating and budgeting for the full cost of executing direct programmatic activity within the program budgets. However, DOE budgets separately in an administrative account for its Federal administrative oversight costs, to include federal employee salary and benefits, retirement, training, travel, rents, utilities, and support services due to direction from Congress. Therefore, the full annual cost of operating the program is not known.	Evidence: DOE Accountability Report for FY 2001.	9%	0.0
6	*Does the program use strong financial management practices?*	Yes	NNSA adheres to financial management practices through the implementation of its Planning, Programming, Budgeting and Evaluation system. This goal of the system is to formalize resource management, link program guidance with fiscal guidance, apply uniform and consistent budget practices across NNSA, and incorporate financial analysis into programmatic decisions. Finally, NNSA is re-engineering its Headquarters and field structures to improve accountability at the lowest levels. Part of this re-engineering will involve the financial management processes of the field elements, and the interface of those field processes with DOE headquarters.	Evidence: NNSA Future-Years Nuclear Security Program, March 20, 2002; NNSA FY 2004 Budget submittal.	9%	0.1
7	*Has the program taken meaningful steps to address its management deficiencies?*	Yes	The DOE Inspector General inspected several aspects of the department's high performance computing program and reported no adverse findings. They reported four areas as opportunities for improvement with no response required.	DOE Inspector General Audit Report No. CR-L-0204, April 5, 2002, NA 114 response to DOE Inspector General Audit,	9%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
8 (RD 1)	*Does the program allocate funds through a competitive, merit-based process, or, if not, does it justify funding methods and document how quality is maintained?*	Yes	The program office allocates funds to the three weapons laboratories through a process that evaluates requirements and identifies the lab that can best meet those requirements. Program reviews evaluate the quality of the process. Performance bonuses are made at the Defense Programs level following an annual performance assessment in which the program is one element. However, one obstacle to a completely merit-based competitive process is the desire to keep all three labs operating to maintain competitive pressure.	Annual Implementation Plan amendment process, Pathforward Request for Proposal process, Alliances Request for Proposal Process, Annual Lab Assessment process.	9%	0.1
9 (RD 2)	*Does competition encourage the participation of new/first-time performers through a fair and open application process?*	Yes	The program procures hardware systems by using fair and open competitions. The edge for large capital acquisitions goes to large, established companies, but NNSA also looks to smaller companies as much as possible.	LOTS, MSTI, KAI, Etnus, Linux NetworX and Cray are small US companies doing business with ASCI.	9%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
10 (RD 3)	*Does the program adequately define appropriate termination points and other decision points?*	Yes	The major milestones, in conjunction with external reviews, serve as the primary technical decision points. The drafting process for the Implementation plan serves as the primary decision point to address annual events. The program plan process provides the same opportunity, but expands to include events in the out-years.	ASCI Program Plan 2002-2003, ASCI Implementation Plan 2002.	9%	0.1
11 (RD 4)	*If the program includes technology development or construction or operation of a facility, does the program clearly define deliverables and required capability/performance characteristics and appropriate, credible cost and schedule goals?*	Yes	The program lays out a tiered milestone approach that at the highest level lays out a desired capability. The desired outcome is then supported by intermediate milestones that provide an incremental path to the end-state. Each of the intermediate milestones result from specific technology and performance advancements. These milestones are all laid out on a schedule which is supported by a program budget. Construction projects are managed using DOE's construction management system based on Critical Decision points throughout the project. In 2002, Los Alamos National Labortaory completed a new computing center which was built ahead of schedule and below budget.	Contracts for platforms and technology projects utilize a milestone payment system. A proposal offeror identifies milestones and deliverables for the entire project including quarter and year of completion, a milestone payment amount, and a brief description of the deliverable.	9%	0.1
Total Section Score					**100%**	**91%**

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
Section IV: Program Results (Yes, Large Extent, Small Extent, No)						
1	*Has the program demonstrated adequate progress in achieving its long-term outcome goal(s)?*	Large Exten	Accomplishment and/or meaningful progress made on all planned major milestones (level 1). Program manager milistones (level 2) are achieved or show meaningful progress.	Major milestones (level 1) review panel reports and quarterly progress reports.	22%	0.1

Long-Term Goal I:	Creation of predictive simulation capabilities necessary to support weapons system certification and refurbishment schedules.
Target:	Transform a two dimensional simulation paradigm into one that is fully three dimensional.
Actual Progress achieved toward goal:	Progress was made this year according to plan.
Long-Term Goal II:	Provision of the computing environment to accomplish the science based Stockpile Stewardship Program mission,
Target:	Develop the computer science tools, platforms and computing centers necessary to support nuclear weapons designers needs.
Actual Progress achieved toward goal:	The majority of planned progress was made this year with minimal delay. Pending resolution of some budget issues, delayed progress should be completed in the new fiscal year.

2	*Does the program (including program partners) achieve its annual performance goals?*	Large Extent	Due to some technical challenges faced by Compaq (now Hewlett-Packard) installation of the Q, 30 TeraOPS supercomputer at Los Alamos national Laboratory was delayed 6 months. This will cause some delay in programmatic work.		22%	0.1

Key Goal I:	Number of ASCI computer codes used to analyze weapon components as part of the annual certification and life extension processes.
Performance Targets:	Proof of principle capability for three dimesional, full system studies of weapon systems. Demonstration of software designed for evaluating key three dimensional mechanical responses of a reentry vehicle system to normal flight environments.
Actual Performance:	Successfully accomplished both.
Key Goal II:	Computer Science research and development
Performance Target:	Provide a tri-lab security infrastructure, improve development tools for highly scalable applications and improve throughput and stability on ASCI White.
Actual Performance:	Successfully accomplished.
Key Goal III:	Capability of systems, measured in trillions of operations per second, that are developed, installed, and tested.
Performance Target:	Full utilization of all ASCI systems.
Actual Performance:	Successfully accomplished.

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
3	*Does the program demonstrate improved efficiencies and cost effectiveness in achieving program goals each year?*	Yes	The mix of progress according to program plan and the resulting technical benefits yield increased productivity and effectiveness for the cost.		14%	0.1
4	*Does the performance of this program compare favorably to other programs with similar purpose and goals?*	Yes	From coordination and collaboration with DOE Office of Science, as well as external agencies, the program compares very favorably. From a platform performance perspective, the program compares very favorably.	Network and Information Technology Research and Development Blue Book 2002, Top500 list	14%	0.1
5	*Do independent and quality evaluations of this program indicate that the program is effective and achieving results?*	Yes	Each Level 1 milestone is evaluated by a review panel of experts for quality and completeness of results. Reviews and awards reinforce the programmatic contention that progress is being made in the areas of interest.	Review reports - IG 2001, Blue Ribbon 1996/1999, Milestone review panels; Awards - Presidential Early Career Award for Scientists and Engineers (PECASE) 2001	14%	0.1
6 (RD 1)	*If the program includes construction of a facility, were program goals achieved within budgeted costs and established schedules?*	Yes	NNSA Strategic Computing Complex at Los Alamos National Laboratory was finished early and below the original budget.	SCC Press release, Beckner CD-4 memorandum, June 2002	14%	0.1
Total Section Score					**100%**	**85%**

PART Performance Measurements

Program: Basic Energy Sciences
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Effective
100%	80%	92%	93%	

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The mission of the Basic Energy Sciences (BES) program is to foster and support fundamental research to expand the scientific foundations for new and improved energy technologies and for understanding and mitigating the environmental impacts of energy use. As part of its mission, the BES program plans, constructs, and operates major scientific user facilities.

Evidence: FY04 Budget Request (www.mbe.doe.gov/budget/04budget/index.htm). Public Law 95-91 establishing the Department of Energy (DOE).

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: BES supports focused Core Research Activities (CRAs) within the broad areas of materials sciences and engineering, chemical sciences, biosciences, and geosciences. BES also supports major scientific user facilities.

Evidence: The 21 CRAs are described in detail, including the specific needs addressed by each, at: www.sc.doe.gov/bes/CRA.html.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The CRAs referenced above describe the unique contributions that this program makes to addressing the identified needs. BES is well coordinated with similar programs at the National Science Foundation (NSF) and other basic research Agencies to ensure complementarity and to avoid redundancy.

Evidence: Within the CRA write-ups on the web, specific coordination efforts with other federal agencies are itemized.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The BES program is based on competitive merit-review (validated by Committees of Visitors and the General Accounting Office), independent expert advice, and community planning (through the Advisory Committee) This proves efficient and effective.

Evidence: Two Committee of Visitors (COV) reports, Basic Energy Sciences Advisory Committee (BESAC) reviews and reports, and scientific workshop reports (www.sc.doe.gov/production/bes/besac/reports.html). General Accounting Office (GAO) report on BES merit review (www.gao.gov/archive/2000/rc00109.pdf). Program files.

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: BESAC ensures that research community input is regularly gathered to assess the priorities, projects, and progress of the program. Peer review is used to assess the relevance and quality of each project. User surveys and facility advisory committees help to prioritize facility research.

Evidence: BESAC reviews and reports (including facility reviews; www.sc.doe.gov/production/bes/besac/reports.html). Program files.

PART Performance Measurements

Program: Basic Energy Sciences
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Effective
100%	80%	92%	93%	

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight:10%

Explanation: Four long-term measures focus on scientific or technical outcomes, and are meaningful indicators of progress in key fields relevant to DOE missions, as outlined by numerous advisory committee panels, interagency efforts such as the National Nanotechnolgy Initiative, and DOE's technology programs. The program has defined "successful" and "minimally effective" performance milestones for each measure, and an external panel will assess interim program performance on a triennial basis, and update the measures as necessary. It is inappropriate for a basic research program such as this one to have a quantitative long-term efficiency measure.

Evidence: Multitude of BESAC reports on the scientific drivers for the fields supported by BES (www.sc.doe.gov/production/bes/besac/reports.html). National Research Council report, "Condensed-Matter and Materials Physics: Basic Research for Tomorrow's Technology" (books.nap.edu/catalog/6407.html). A description of the "successful" and "minimally effective" milestones, and an explanation of the relevance of these measures to the field can be found on the SC Web site (www.sc.doe.gov/measures).

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight:10%

Explanation: BESAC has reviewed the new long-term measures for this program and found them to be ambitious and meaningful indicators of progress in key fields. The external reviews described in 2.1 will update the measures, targets, and timeframes on an interim basis.

Evidence: Letter from BESAC chair regarding review of long-term measures.

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:10%

Explanation: The facilities construction and operations measures, and the resolution measures should provide the capabilities that the scientific community needs to make discoveries directly connected to the long term measures. The quantifiable and trendable resolution measures reflect the key technological drivers to making discoveries at smaller spatial and temporal scales, which is vital to making progress toward the long-term goals of the scientific work supported by BES.

Evidence: FY04 Budget Request. Website with further information, including an explanation of why improved spatial and temporal resolution is important to progress (www.sc.doe.gov/measures).

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:10%

Explanation: All of the annual measures include quantifiable annual targets. Baseline data (FY02, and FY01 for older measures) and the reports referenced in 2.1 verify that the annual measures are ambitious, yet realistic.

Evidence: FY04 Budget Request. Construction variance target of <10% comes from OMB Circular A-11, especially Capital Programming Guide supplement.

PART Performance Measurements

Program: Basic Energy Sciences
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Effective
100%	80%	92%	93%	

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: NO Question Weight:10%

Explanation: A limited FY03 audit by the DOE Inspector General (IG) found that "performance expectations generally flowed down into the scope of work at the national laboratories." For individual grantees, BES relies mainly on general SC program solicitations, which do not explicitly include the program goals. A 2002 DOE IG report found a lack of peformance measures to evaluate the use of beam lines at the BES user facilities.

Evidence: Most recent general renewal solicitation (www.science.doe.gov/grants/Fr03-02.html). Memo from the DOE IG to the Director of the Office of Science. M&O contract performance evaluation provisions (WWW-accesible examples include: Oak Ridge National Lab, www.ornl.gov/Contract/UT-BattelleContract.htm; and, Lawrence Berkeley National Lab, www.lbl.gov/LBL-Documents/Contract-98/AppFTOC.html). DOE IG report on light sources at Berkeley and Stanford (www.ig.doe.gov/pdf/ig-0562.pdf).

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: All research projects undergo Merit Review. Grants are reviewed triennially. Construction projects are reviewed quarterly. BESAC periodically reviews BES research and facilities, including the institution of a Committees of Visitors (COV) process to independently evaluate the quality of the BES research portfolio and organizational procedures. COVs will systematically evaluate all BES Core Research Activities on a 3-year cycle.

Evidence: SC Merit Review guidelines (www.sc.doe.gov/production/grants/ merit.html). COV reports #1 ("Chemistry" Division, 2002) and #2 ("Materials" Division, 2003),and multiple BESAC facility reviews (www.sc.doe.gov/bes/BESAC/reports.html). BES actions in response to the recommendations of COV #1 (www.sc.doe.gov/bes/besac/ BESAC%20Pat%207-22-02.ppt, slides 14-15). Program files, including Lehman review reports on construction projects.

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: DOE has not yet provided a budget request that adequately integrates performance information.

Evidence:

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: New performance goals and targets have been developed in coordination with OMB. BES participated in the drafting of a new SC strategic plan. Several recent BESAC-related workshop studies examine potential future programmatic emphases for BES.

Evidence: FY04 Budget Request/Annual Performance Plan. SC strategic plan has yet to be officially provided to OMB for review. BESAC workshops on catalysis, assuring a secure energy future, and basic research for the hydrogren initiative (www.sc.doe.gov/bes/BESAC/reports.html).

PART Performance Measurements

Program: Basic Energy Sciences
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Effective
100%	80%	92%	93%	

2.CA1 **Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity?** Answer: YES Question Weight:10%

Explanation: One of a kind research facilities are not amenable to the same type of alternatives analysis as other captial asset investments. Nevertheless, the captial asset plans and business case documentation in the Exhibit 300s provided to OMB contain roughly equivalent analyses. Lehman reviews make recommendations concerning new and ongoing projects based on various cost, schedule, and risk assessments, and the program and/or project make changes accordingly. BESAC facility reviews recommended actions that involve trade-offs between upgrading a facility or building a new facility, but these are not reviews of the program's analyses.

Evidence: BESAC facility reports (www.sc.doe.gov/bes/BESAC/reports.html). Program files, including Lehman reports of ongoing projects such as the Spallation Neutron Source.

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NA Question Weight: 0%

Explanation: This is a basic R&D program, and the question is intended for industry-related R&D programs.

Evidence:

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: A BESAC 20-year facilities roadmap exercise, with clear priority recommendations, was conducted in conjunction with the SC strategic planning process. BES does not conduct similar roadmap exercises for the base research program within the context of the facilities.

Evidence: BESAC 20-year facilities roadmap report (www.sc.doe.gov/bes/BESAC/20year_facilities_report.pdf).

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight: 8%

Explanation: Lehman reviews provided performance information for facility construction projects, and panel peer reviews evaluate the performance of facility operations. The program collects performance data from individual grantees and national labs, and uses peer review as a type of standardized quality control. A recent GAO report validated the BES merit review processes. Thorough research portfolio quality and process validations are carried out by Committee of Visitors on a 3-year cycle, and management changes are made in response to these COV reports. While DOE IG contracts with an outside auditor to check internal controls for performance reporting, and the IG periodically conducts limited reviews of performance measurement in SC, it is not clear that these audits check the credibility of performance data reported by DOE contractors.

Evidence: Program files, including Lehman reviews. BESAC facility reports (www.sc.doe.gov/bes/BESAC/reports.html). BES actions taken in response to the recommendations of COV #1 (www.sc.doe.gov/bes/besac/BESAC%20Pat%207-22-02.ppt, slides 14-15). Response to COV #2 will occur at next BESAC meeting, and process changes will be implemented starting with FY 2004 execution. GAO report on BES merit review (www.gao.gov/archive/2000/rc00109.pdf).

PART Performance Measurements

Program: Basic Energy Sciences
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
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Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight: 8%

Explanation: Senior Executive Service (SES) and Program Manager Performance Plans are directly linked to program goals. The Management and Operations (M&O) contracts for the Labs and User Facilities include performance measures linked to program goals. Actions are taken in response to findings in reviews of lab Field Work Proposal performance. Management changes were made in response to problems at the High Flux Isotope Reactor operations and Spallation Neutron Source construction at Oak Ridge National Lab. Changes were made to the Berkeley Lab's Advanced Light Source organizational structure and user program in response to a 1997 BESAC review. Research funding requirements ensure consideration of past performance.

Evidence: Program and personnel files. For performance-based fee adjustments on M&O contracts, see evidence for question 2.5. Grant rules for renewals (www.science.doe.gov/grants/#GrantRules). Briefing to OMB on problems, and subsequent management changes, at the High Flux Isotope Reactor and Spallation Neutron Source. 2000 BESAC assessment of response to 1997 review citing user concerns at the Advanced Light Source (ALS; www.sc.doe.gov/bes/BESAC/als%20report.pdf).

3.3 **Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?** Answer: YES Question Weight: 8%

Explanation: Using DOE's monthly accounting reports, SC personnel monitor progress toward obligating funds consistent with an annual plan that is prepared at the beginning of the fiscal year to ensure alignment with appropriated purposes.

Evidence: SC programs consistently obligate more than 99.5% of available funds. Program files. Audit reports.

3.4 **Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?** Answer: YES Question Weight: 8%

Explanation: SC is currently undergoing a reengineering exercise aimed at flattening organizational structure and improving program effectiveness. BES was restructured in FY02 to flatten the organizational structure and improve efficiencies. The program collects the data necessary to track their two "efficiency" measures for facility construction and operation management.

Evidence: SC reengineering information (www.screstruct.doe.gov). "Efficiency" measure data in FY04 Budget Request (www.mbe.doe.gov/budget/04budget/index.htm).

PART Performance Measurements

Program: Basic Energy Sciences
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	92%	93%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight: 8%

Explanation: The BES program is well coordinated with similar programs at the National Science Foundation and other agencies that support similar basic research to ensure complementarity and to avoid redundancy. BES is fairly well integrated with other relevant SC programs, and to a lesser degree with the energy technology programs at DOE. Partnerships with other agencies are rare, but typically important when they occur.

Evidence: A recent update by the Interagency Working Group on Neutron Science reported good progress on the DOE-NSF partnership for developing an instrument suite for the Spallation Neutron Source. The SPEAR 3 upgrade at the Stanford Sychrotron Radiation Lab (SSRL) was jointly and equally funded by BES and the National Institutes of Health (BES budget requests from FY04 and earlier). Some joint sponsorship of National Research Council studies.

3.6 Does the program use strong financial management practices? Answer: YES Question Weight: 8%

Explanation: SC staff execute the BES program consistent with established DOE budget and accounting policies and practices. These policies have been reviewed by external groups and modified as required to reflect the latest government standards.

Evidence: Various Departmental manuals. Program files. Audit reports.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight: 8%

Explanation: SC is currently reengineering to improve program management efficiency. BES has worked with OMB to improve performance evaluation. BES management was "responsive" to DOE IG report recommendations on beamline-level problems at the ALS. Changes to merit review processes were made after the first COV report, and a few more are expected in response to the second COV report.

Evidence: SC reengineering information (www.screstruct.doe.gov). BES actions in response to the recommendations of the first COV ("Chemistry" division; www.sc.doe.gov/bes/besac/BESAC%20Pat%207-22-02.ppt, slides 14-15). DOE IG report on the synchrotron sources at LBNL and SLAC (www.ig.doe.gov/pdf/ig-0562.pdf).

3.CA1 Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals? Answer: YES Question Weight: 8%

Explanation: The BES program documents the capabilities and characteristics of new facilities in conceptual design reports that are reviewed by BESAC and an independent Lehman Reviews. Progress is tracked quarterly through program and Lehman reviews, and reported annually in predecisional and budget request documents.

Evidence: Program files, including Lehman reports. Predecisional Exhibit 300s submitted to OMB. Construction project data sheets in budget requests (www.mbe.doe.gov/budget/04budget/index.htm).

PART Performance Measurements

Program: Basic Energy Sciences
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Effective
100%	80%	92%	93%	

3.CO1 **Are grants awarded based on a clear competitive process that includes a qualified assessment of merit?** Answer: YES Question Weight: 8%

Explanation: First time grant applications are encouraged in all Request For Proposals. BES conducts outreach to under-represented groups including Historically Black College and Universities, Hispanic Serving College and Universities, and women researchers. Merit review guides all funding decisions, and the process has been validated by GAO and COV reviews. Since federal regulations prohibit lab proposals from directly competing with university proposals, the process is technically defined as one of "limited competition" according to OMB Circular A-11. The first ("Chemistry") COV report found a couple small areas that had low turnover.

Evidence: On average, the BES turnover rate is 10%. If there are new initiatives, such as the nanoscience initiative, the number of new awards is much larger. "How to Apply" (www.science.doe.gov/production/grants/guide.html). GAO (www.gao.gov/archive/2000/rc00109.pdf) and COV reviews (www.sc.doe.gov/bes/BESAC/reports.html).

3.CO2 **Does the program have oversight practices that provide sufficient knowledge of grantee activities?** Answer: YES Question Weight: 8%

Explanation: In addition to grantee progress reports, program managers stay in contact with grantees through email and telephone, conduct program reviews and site visits.

Evidence: Program files, including site visit logs.

3.CO3 **Does the program collect grantee performance data on an annual basis and make it available to the public in a transparent and meaningful manner?** Answer: NO Question Weight: 8%

Explanation: In accordance with DOE Order 241.1A, the final and annual technical reports of program grantees are made publicly available on the web through the Office of Scientific and Technical Information's "Information Bridge". However, program-level aggregate data on the impact of the grants program is not adequately communicated in the annual DOE Performance and Accountability report.

Evidence: DOE Order 241.1A. Information Bridge (www.osti.gov/bridge/). FY02 Performance and Accountability Report (www.mbe.doe.gov/stratmgt/doe02rpt.pdf).

3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: YES Question Weight: 8%

Explanation: The funds for research programs and scientific user facilities at the Federal Labs are allocated through a limited competition analogous process to the unlimited process outlined in 10 CFR 605. A GAO report and the two COV reports validate both the BES merit review process, with the latter reports finding a generally high quality research portfolio, without separating university and lab work.

Evidence: SC Merit Review procedures (www.sc.doe.gov/production/grants/merit.html). 10 CFR 605 (www.science.doe.gov/production/grants/605index.html). BES Merit Review Procedures for Projects at DOE Labs (www.sc.doe.gov/bes/peerreview.html). GAO report on BES merit review (www.gao.gov/archive/2000/rc00109.pdf). BESAC and COV review reports (www.sc.doe.gov/bes/BESAC/reports.html). Program files.

PART Performance Measurements

Program: Basic Energy Sciences
Agency: Department of Energy
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Section Scores				Rating
1	2	3	4	Effective
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Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: LARGE EXTENT Question Weight 20%

Explanation: Future COVs will evaluate progress toward the new long term performance measures every three years, but no external reviews that address progress toward program goals (either past ones or the new ones proposed in the "measures" tab) are available to date other than the generally positive reviews by BESAC and the two COVs.

Evidence: BESAC & COV reports (www.sc.doe.gov/bes/BESAC/reports.html).

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: YES Question Weight 20%

Explanation: Although three of the annual performance measures for FY05 are new, BES has met the targets for all of its former annual GPRA measures.

Evidence: FY02 Performance and Accountability Report (www.mbe.doe.gov/ stratmgt/doe02rpt.pdf). FY04 Annual Performance Plan (www.mbe.doe.gov/budget/04budget/content/perfplan/perfplan.pdf).

4.3 **Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?** Answer: YES Question Weight 20%

Explanation: The recent history of tracking the two "efficiency" measures for facility construction and operation management shows that, on average, the program continues to meet or exceed expectations. The most significant deviation being the 1999/2000 baseline change for the Spallation Neutron Source (SNS) project.

Evidence: Program files, including facilities usage data. Predecisional Exhibit 300s submitted to OMB. Construction project data sheets in budget requests (www.mbe.doe.gov/budget/04budget/index.htm).

4.4 **Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?** Answer: NA Question Weight: 0%

Explanation: While the recent COV reports commented favorably upon the world-class nature of individual areas of the BES research portfolio, no other program with the range of activities and mission focus exists in the world. The National Academies recently conducted an international benchmarking study for U.S. materials science and engineering, but such studies are not able to parse accomplishments by funding agency, which dramatically reduces the value of such a comparison at the program level of the PART.

Evidence: COV reports (www.sc.doe.gov/bes/BESAC/reports.html). National Academies' benchmarking study (www.nap.edu/catalog/9784.html).

PART Performance Measurements

Program: Basic Energy Sciences
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	92%	93%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: YES Question Weight 20%

Explanation: Numerous BESAC reviews (and to some extent the COV reviews) have demonstrated that the BES program is effective and achieving results, though the program rarely seeks additional independent advice outside BESAC or workshops. DOE IG report on SSRL and the ALS found that the ALS beamlines were not being fully utilized.

Evidence: BESAC and COV review reports (www.sc.doe.gov/bes/BESAC/reports.html). DOE IG report on the synchrotron sources at LBNL and SLAC (www.ig.doe.gov/pdf/ig-0562.pdf).

4.CA1 **Were program goals achieved within budgeted costs and established schedules?** Answer: YES Question Weight 20%

Explanation: BES upgrade and construction project baselines were met for FY02. BES disagreed with a DOE IG report that found a reduction of scope in the SNS project was used to keep the project within cost. A 2002 National Research Council assessment of project management at DOE concluded that SC continues to "consider project scope as a contingency" as part of a "design-to-budget approach." Since the SNS is scientific research tool, a good argument can be made that the original scientific scope of the project will be met, regardless of what the IG declared a reduction in project scope.

Evidence: Program files, including Lehman reports. Predecisional Exhibit 300s submitted to OMB. Construction project data sheets in budget requests (www.mbe.doe.gov/budget/04budget/index.htm). NRC report, page 13 (www.nap.edu/catalog/10679.html).

PART Performance Measurements

Program: Basic Energy Sciences
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	92%	93%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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Measure: Progress in designing, modeling, fabricating, characterizing, analyzing, assembling, and using a variety of new materials and structures, including metals, alloys, ceramics, polymers, biomaterials and more--particularly at the nanoscale--for energy-related applications. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: An external panel will conduct triennial reviews of progress. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2006	Excellent		
2009	Excellent		
2012	Excellent		
2015	Excellent		
2005			

Measure: Progress in understanding, modeling, and controlling chemical reactivity and energy transfer processes in the gas phase, in solutions, at interfaces, and on surfaces for energy-related applications, employing lessons from inorganic, organic, self-assembling, and biological systems. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: An external panel will conduct triennial reviews of progress. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2006	Excellent		
2009	Excellent		
2012	Excellent		
2015	Excellent		

PROGRAM ID: 10000078

PART Performance Measurements

Program: Basic Energy Sciences
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	92%	93%	

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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Measure: Progress in developing new concepts and improving existing methods for solar energy conversion and other major energy research needs identified in the 2003 Basic Energy Sciences Advisory Committee workshop report, "Basic Research Needs to Assure a Secure Energy Future." An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: An external panel will conduct triennial reviews of progress. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2006	Excellent		
2009	Excellent		
2012	Excellent		
2015	Met Goal		

Measure: Progress in conceiving, designing, fabricating, and using new instruments to characterize and ultimately control materials. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: An external panel will conduct triennial reviews of progress. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2006	Excellent		
2009	Excellent		
2012	Excellent		
2015	Met Goal		

Measure: Average achieved operation time of the scientific user facilities as a percentage of the total scheduled annual operation time.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Annual (Efficiency Measure)
2001	>90%	96%	

PART Performance Measurements

Program: Basic Energy Sciences
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	92%	93%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

2002	>90%	96%
2003	>90%	91%
2004	>90%	
2005	>90%	
2006		

Measure: Cost-weighted mean percent variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects.

Additional Information: Cost variance listed first. See www.sc.doe.gov/measures for more information.

Measure Term: Annual (Efficiency Measure)

Year	Target	Actual
2001	<10%, <10%	+0.4%, -6.3%
2002	<10%, <10%	-0.2%, -1.8%
2003	<10%, <10%	-0.5%, -1.4%
2004	<10%, <10%	
2005	<10%, <10%	

Measure: Improve Spatial Resolution: Demonstrated spatial resolutions for imaging in the hard and soft x-ray regions, and spatial information limit for an electron microscope (measured in nanometers).

Additional Information: See www.sc.doe.gov/measures for more information.

Measure Term: Annual

Year	Target	Actual
2002		150, 24, 0.09
2003		130, 20, 0.09

Program: Basic Energy Sciences
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
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Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

2004	<115,<19, <0.08
2005	<100,<18, <0.08
2006	

Measure: Improve temporal resolution: Demonstrated duration (measured in femtoseconds) and intensity (measured in millions photons per pulse) of an x-ray pulse.

Additional Information: The 2004 intensity target is at a greatly increased average brightness. See www.sc.doe.gov/measures for more information.

Year	Target	Actual
2002		100, 0.0003
2003		500, 1.0
2004	<200, >0.005	
2005	<100, >100	

Measure Term: Annual

Measure: Number of reacting species and billions of grid points in a three-dimensional combustion reacting flow computer simulation, as a part of the Scientific Discovery through Advanced Computing effort.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual
2002		8, 0.0005
2003		8, 0.001
2004	>44, >0.0005	
2005	>44, >7	

Measure Term: Annual

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Effective
100%	89%	67%	87%	

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The mission of the Biological and Environmental Research (BER) program is to advance environmental and biomedical knowledge that promotes national security through improved energy production, development, and use and contributes to international scientific leadership.

Evidence: FY04 Budget Request (www.mbe.doe.gov/budget/04budget/index.htm). Public Law 95-91 that established the Department of Energy (DOE). The BER Mission has been validated by the Biological and Environmental Research Advisory Committee (BERAC).

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: BER supports fundamental research across a broad range of the biological and environmental sciences including: (1) biotechnology solutions for clean energy, carbon sequestration, and environmental cleanup, (2) low dose radiation research to underpin risk protection and cleanup standards, (3) high throughput DNA sequencing for DOE and National needs, (4) understanding the response of the Earth system to different levels of greenhouse gases in the atmosphere, (5) developing and demonstrating novel solutions to DOE's most challenging environmental problems, and (6) developing innovative radiopharmaceuticals for diagnosis and treatment of human disease and novel imaging instrumentation/technologies to visualize and measure biological functions.

Evidence: BERAC reviews (www.sc.doe.gov/ober/berac/Reports.html).

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: BER supports long-term, fundamental, high risk research relevant to DOE missions. The BER program is well coordinated with similar programs across the Federal government including: the US Climate Change Science Program (CCSP), the National Institutes of Health (NIH), the Environmental Protection Agency, the National Science Foundation (NSF), and DOE Energy and Environmental Management programs.

Evidence: Program reviews (BERAC, National Academy, JASON). Joint program plans including: climate (USGCRP - Annual publication of Our Changing Planet); genomics/structural biology [www.sc.doe.gov/ober/berac/final598.html]; low dose radiation; Bioengineering [www.becon1.nih.gov/becon.htm].

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The BER program is based on competitive merit-review, independent expert advice, and community planning. This proves efficient and effective. However, a Committee of Visitors (COV) has yet to validate the merit review system.

Evidence: BERAC reviews and reports. Program files.

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: BERAC ensures that research community input is regularly gathered to assess the priorities, projects, and progress of the program. Peer review is used to assess the relevance and quality of each project.

Evidence: BERAC reviews and reports. Program files.

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
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Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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2.1 **Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?** Answer: YES Question Weight:11%

Explanation: The three key long-term measures focus on key scientific research outcomes and are meaningful indicators of progress in each of the three main program areas. The program has defined specific quantitative "successful" and "minimally effective" performance milestones for each measure, and an external panel will assess interim program performance on a triennial basis, and update the measures as necessary. It is inappropriate for a basic research program such as this one to have a quantitative long-term efficiency measure.

Evidence: Advisory committee reports discuss the key scientific drivers for the breadth of BER's diverse research portfolio (www.science.doe.gov/production/ober/berac/Reports.html). A description of the specific "successful" and "minimally effective" milestones, and an explanation of the relevance of these measures to the field can be found on the Office of Science (SC) Web site (www.sc.doe.gov/measures).

2.2 **Does the program have ambitious targets and timeframes for its long-term measures?** Answer: YES Question Weight:11%

Explanation: BERAC has reviewed the new long-term and annual measures for this program and found them to be ambitious and meaningful indicators of progress. The external reviews described in 2.1 will update the measures, targets, and timeframes on an interim basis.

Evidence: Letter from BERAC chair regarding review of long-term and annual measures.

2.3 **Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals?** Answer: YES Question Weight:11%

Explanation: The facilities measure, sequencing rate measure and improvements to climate models should provide the capabilities that the scientific community needs to make discoveries directly connected to the long term measures. The measure on the scalability of field results is key to the success of the long-term measure for Environmental Remediation. The climate and environmental remediation measures are not trendable, and will have annual primary targets that continually evolve, and cannot be predicted more than one budget year in advance.

Evidence: FY04 Budget Request. Website with further information, including explanation of non-trendable measures and targets (www.sc.doe.gov/measures).

2.4 **Does the program have baselines and ambitious targets for its annual measures?** Answer: YES Question Weight:11%

Explanation: Half of the annual measures include quantifiable annual targets. The other half include specific annual scientific targets. Baseline data (FY01 and FY02) verify that the quantifiable annual measures are ambitious, yet realistic.

Evidence: FY04 Budget Request. Website with further information (www.sc.doe.gov/measures).

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	89%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:11%

Explanation: A limited FY03 audit by the DOE Inspector General (IG) found that "performance expectations generally flowed down into the scope of work at the national laboratories." BER program targeted solicitations explicitly include program goals, however the new measures from 2.1/2.3 (once adopted) should be present in future solicitations.

Evidence: Memo from the DOE IG to the Director of the Office of Science. M&O contract performance evaluation provisions (WWW-accesible examples include: Oak Ridge National Lab, www.ornl.gov/Contract/UT-BattelleContract.htm; and, Lawrence Berkeley National Lab, www.lbl.gov/LBL-Documents/Contract-98/AppFTOC.html). Solicitation examples (www.science.doe.gov/grants/Fr03-05.html, www.science.doe.gov/grants/Fr03-13.html)

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:11%

Explanation: All research projects undergo Merit Review. Grants are reviewed triennially. Major facilities are reviewed annually. Construction projects are reviewed quarterly. BERAC evaluates all aspects of the BER program every 2-5 years. JASON reviews of specific programs are used. Several large pieces of the BER portfolio are also reviewed by outside panels as part of interagency programs. Even though the FY04 PART process did not require the initiation of a Committee of Visitors (COV) review process, BER is in the process of establishing a COV because the previous external reviews have not provided a process validation and detailed portfolio quality check.

Evidence: SC Merit Review guidelines (www.sc.doe.gov/production/ grants/merit.html). BERAC reviews of climate change research, bioremediation program units, Free Air Carbon-dioxide Enrichment (FACE), and Atmospheric Radiation Measurement Unmanned Aerial Vehicles (ARM UAV) (www.sc.doe.gov/ober/berac/Reports.html). Program files, including Lehman review reports and JASON reviews. Letter to BERAC chair on creation of COV process, schedule for reviews, and conflict of interest issues.

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:11%

Explanation: DOE has not yet provided a budget request that adequately integrates performance information.

Evidence:

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	89%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:11%

Explanation: New performance goals and targets have been developed in coordination with OMB. BER participated in the drafting of a new SC strategic plan. BERAC has produced forward-looking reports on various aspects of the program, including most recently the Genomes to Life effort. BER participates in interagency planning groups on topics such as genomics and climate change, including the recent strategic plan for the U.S. Climate Change Science Program. BER is initiating a COV process to help in identifying research program strengths/weaknesses for strategic planning purposes.

Evidence: SC strategic plan has yet to be officially provided to OMB for review. BERAC reports, e.g., structural biology, Genomes to Life, and the NABIR program (www.sc.doe.gov/ober/berac/Reports.html). Climate change documents; both governmental and National Academy of Sciences (www.usgcrp.gov, dels.nas.edu/ccgc).

2.CA1 **Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity?** Answer: NA Question Weight: 0%

Explanation: The program did not have any construction or upgrade projects of sufficient scale during FY02, so no analyses were necessary.

Evidence:

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NA Question Weight: 0%

Explanation: This is a basic R&D program, and the question is intended for industry-related R&D programs.

Evidence:

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:11%

Explanation: Although not visible outside DOE, internal SC budget formulation practices include a priority ranking process. The program occasionally solicits prioritization recommendations from BERAC, though the program has a difficult time prioritizing across its diverse portfolio. BER typically appears to make priority-based decisions during program execution.

Evidence: Genomes to Life (doegenomestolife.org) is a priority of both BERAC and BER. A recent BERAC assessment of Biosphere 2 determined that it the science capability was not a priority for the program (www.science.doe.gov/production/ober/berac/Biosphere_2.pdf). Charge letter to BERAC chair asking for recommendations on priorities for atmospheric sciences program.

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
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Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: NO Question Weight: 8%

Explanation: Performance information is collected for a number of program elements, e.g., amount and quality of DNA sequence determined, spatial resolution of improved climate models, as well as retrospective analyses by BERAC on broad program impacts. Project performance information is collected via Lehman reviews. The program collects performance data from individual grantees and national labs, and uses peer review as a type of standardized quality control at the individual grant level. However, there is not yet a systematic process, such as regular COV evaluations, that conducts research portfolio quality and process validations. While DOE IG contracts with an outside auditor to check internal controls for performance reporting, and the IG periodically conducts limited reviews of performance measurement in SC, it is not clear that these audits check the credibility of performance data reported by DOE contractors.

Evidence: JGI data (www.jgi.doe.gov). Climate models (www.ccsm.ucar.edu). BERAC program reviews (www.science.doe.gov/production/ober/berac/Reports.html). Program files, including JASON studies, and Lehman review of "Mouse House."

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight: 8%

Explanation: Senior Executive Service (SES) and Program Manager Performance Plans are directly linked to program goals. The Management and Operations contracts for the Labs and Facilities include performance measures linked to program goals. Research funding requirements ensure consideration of past performance. All renewal requests are subject to competitive peer review, including earmarked projects after the first year.

Evidence: Program and personnel files. For performance-based fee adjustments on M&O contracts, see evidence for question 2.5. Grant rules for renewals (www.science.doe.gov/grants/#GrantRules).

3.3 **Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?** Answer: YES Question Weight: 8%

Explanation: Using DOE's monthly accounting reports, SC personnel monitor progress toward obligating funds consistent with an annual plan that is prepared at the beginning of the fiscal year to ensure alignment with appropriated purposes. SC programs consistently obligate more than 99.5% of available funds.

Evidence: Program files. DOE-wide audit reports.

3.4 **Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?** Answer: YES Question Weight: 8%

Explanation: SC is currently undergoing a reengineering exercise aimed at flattening organizational structure and improving program effectiveness. The program collects the data necessary to track its one "efficiency" measure for facility operation management.

Evidence: FY04 Budget Request/Annual Performance Plan. SC reengineering information (www.screstruct.doe.gov).

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	89%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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3.5 **Does the program collaborate and coordinate effectively with related programs?** Answer: YES Question Weight: 8%

Explanation: The program, by its nature as a smaller player in almost everything it funds, is well coordinated with similar programs across the Federal government including the USGCRP, NIH, EPA, NSF, and DOE Energy and Environmental programs. This coordination and cooperation includes both joint planning, priority setting, as well as joint solicitations, including recently cost-sharing a new beamline at the Stanford Sychrotron Radiation Lab with NIH.

Evidence: Program and expert reviews detail coordination (e.g., www.sc.doe.gov/ober/berac/State%20of%20BER.pdf). Joint program planning with other agencies, especially for efforts such as the Human Genome Project and the U.S. global climate change program (www.ornl.gov/TechResources/Human_Genome/home.html, www.usgcrp.gov). Recent joint interagency solicitations (www.sc.doe.gov/grants/Fr03-04.html, www.sc.doe.gov/grants/Fr03-07.html)

3.6 **Does the program use strong financial management practices?** Answer: YES Question Weight: 8%

Explanation: SC staff execute the BER program consistent with established DOE budget and accounting policies and practices. These policies have been reviewed by external groups and modified as required to reflect the latest government standards.

Evidence: Various Departmental manuals. Program files. Audit reports.

3.7 **Has the program taken meaningful steps to address its management deficiencies?** Answer: YES Question Weight: 8%

Explanation: SC is currently reengineering to improve program management efficiency. BER has worked with OMB to improve performance evaluation. Even though it was not recommended during the FY04 PART process, BER is organizing a new COV process under the auspices of BERAC.

Evidence: SC reengineering information (www.screstruct.doe.gov). Letter to BERAC chair on creation of COV process, schedule for reviews, and conflict of interest issues.

3.CA1 **Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals?** Answer: YES Question Weight: 8%

Explanation: The BER program documents the capabilities and characteristics of new facilities in conceptual design reports that are reviewed by BERAC and independent Lehman Reviews. Progress on the one construction project is tracked quarterly through program and Lehman reviews.

Evidence: Conceptual Design Reviews. Program files, including facility peer review on FACE, and Lehman report on the program's single construction project (Laboratory for Comparative and Functional Genomics, bio.lsd.ornl.gov/mgd).

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
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Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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3.CO1 **Are grants awarded based on a clear competitive process that includes a qualified assessment of merit?** Answer: NO Question Weight: 8%

Explanation: First time grant applications are encouraged in all Request For Proposals/Applications, and BER has a much higher percentage of new awards than other SC programs. Merit review guides all funding decisions, and the targeted solicitations ensure that a larger amount of research dollars are fully competed. However, the quality of the research funded via this process has not yet been validated by a COV. Also, BER has seen an increasing amount of Congressional earmarking in recent years, and this "research"--totaling almost $100 million in FY 2004--does not go through any type of merit-based competitive review process.

Evidence: On average, BER funds 30% of new research applications. For calendar year 2001, BER received 495 new applications and 82 requests for renewals of currently funded projects. (www.sc.doe.gov/ober/ober_top.html) Targeted solicitations (universities: www.science.doe.gov/grants/closed03.html; labs: www.science.doe.gov/grants/clolab03.html).

3.CO2 **Does the program have oversight practices that provide sufficient knowledge of grantee activities?** Answer: YES Question Weight: 8%

Explanation: In addition to grantee progress reports, program managers stay in contact with grantees through email and telephone, program reviews, and site visits.

Evidence: Program files, including travel logs and progress reports.

3.CO3 **Does the program collect grantee performance data on an annual basis and make it available to the public in a transparent and meaningful manner?** Answer: NO Question Weight: 8%

Explanation: In accordance with DOE Order 241.1A, the final and annual technical reports of program grantees are made publicly available on the web through the Office of Scientific and Technical Information's "Information Bridge". However, program-level aggregate data on the impact of the grants program is not adequately communicated in the annual DOE Performance and Accountability report.

Evidence: DOE Order 241.1A. Information Bridge (www.osti.gov/bridge/). FY02 Performance and Accountability Report (www.mbe.doe.gov/stratmgt/doe02rpt.pdf).

3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: NO Question Weight: 8%

Explanation: The funds for research programs and scientific user facilities at the Federal Labs are allocated through a limited competition analogous process to the unlimited process outlined in 10 CFR 605, though BER funds very little work with this mechanism. More so than other SC programs, BER competes the lab research grants by developing a large number of targeted (rather than general) solicitations. However, the quality of the research funded via this process has not yet been validated by a COV.

Evidence: SC Merit Review procedures. (www.sc.doe.gov/production/grants/merit.html) 10 CFR 605. (www.science.doe.gov/production/grants/605index.html). Targeted solicitations (universities: www.science.doe.gov/grants/closed03.html; labs: www.science.doe.gov/grants/clolab03.html).

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	89%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: LARGE EXTENT Question Weight 20%

Explanation: BERAC will evaluate progress toward the new long term performance measures every three years, but no external reviews that address progress toward program goals (either past ones or the new ones proposed in the "measures" tab) are available to date other than the generally positive BERAC reviews.

Evidence: BERAC reports, especially the 2001 assessment of the entire program (www.er.doe.gov/production/ober/berac/Reports.html).

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: LARGE EXTENT Question Weight 20%

Explanation: Although all but one of the annual performance measures for FY05 are new, BER hit over half of the targets for all of its former annual GPRA measures. The genome target was missed because of a programmatic decision to focus on completing DOE's piece of the human genome according to an accelerated interagency plan.

Evidence: FY02 Performance and Accountability Report (www.mbe.doe.gov/ stratmgt/doe02rpt.pdf). FY04 Annual Performance Plan (www.mbe.doe.gov/budget/04budget/content/perfplan/perfplan.pdf).

4.3 **Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?** Answer: YES Question Weight 20%

Explanation: The recent history of tracking the one "efficiency" measure for facility operation management shows that the program continues to meet or exceed expectations.

Evidence: Program files, including facilities usage data.

4.4 **Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?** Answer: NA Question Weight: 0%

Explanation: The program is highly integrated with the activities of other agencies, and typically plays a relatively smaller--but important--leveraging role in interagency ventures: no other program with the range of activities (i.e., environmental remediation, climate change, life sciences, medical applications) and mission focus of BER exists in the world. Partly because of the highly integrated nature of BER, no expert panel comparison of performance (either with other agencies or countries) has been conducted at the program-wide level as would be appropriate for the PART.

Evidence: Internal government planning reviews to assess the strongest aspects of each agency. BERAC reports (www.er.doe.gov/production/ober/berac/Reports.html). BER role in human genome project, etc.

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	89%	67%	87%	

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: YES Question Weight 20%

Explanation: BERAC, on a rotating schedule, reviews the major elements of the BER program against plans and scientific opportunities. The entire BER program was positively reviewed by BERAC in 2001, though this review did not have great depth. Other experts groups, such as JASON, also review pieces of BER as needed. However, BER needs a COV process to fill gaps in the normal BER review process.

Evidence: BERAC review reports (www.sc.doe.gov/ober/berac/Reports.html). Program files, including facility peer reviews and JASON reports.

4.CA1 **Were program goals achieved within budgeted costs and established schedules?** Answer: YES Question Weight 20%

Explanation: Construction of Laboratory for Comparative & Functional Genomics at Oak Ridge, to be completed in FY 2003, is on schedule and within cost.

Evidence: Program files, including 04/30/02 Lehman review report.

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	89%	67%	87%	

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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Measure: Life Sciences -- Progress in characterizing the multi-protein complexes (or the lack thereof) involving a significant fraction of a microbe's proteins, and in developing computational models to direct the use and design of microbial communities toward DOE mission needs. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: An external panel will conduct triennial reviews of progress. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2006	Excellent		
2009	Excellent		
2012	Excellent		
2015	Excellent		
2005			

Measure: Climate Change Research -- Progress in delivering improved climate data & models for policy makers to determine safe levels of greenhouse gases, and by 2013, toward substantially reducing differences between observed temperature & model simulations at subcontinental scales using several decades of recent data. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: An external panel will conduct triennial reviews of progress. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2006	Excellent		
2009	Excellent		
2012	Excellent		
2015	Met Goal		

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	89%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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Measure: Environmental Remediation -- Progress in developing science-based solutions for cleanup and long-term monitoring of DOE contaminated sites, and by 2013, toward employing advanced biology-based clean up solutions and science-based monitors at a significant fraction of DOE's long-term stewardship sites. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: An external panel will conduct triennial reviews of progress. See www.sc.doe.gov/measures for more information.

Measure Term: Long-term

Year	Target	Actual
2006	Excellent	
2009	Excellent	
2012	Excellent	
2015	Met Goal	

Measure: Increase the rate of DNA sequencing -- Number (in billions) of base pairs of high quality (less than one error in 10,000 bases) DNA microbial and model organism genome sequence produced annually.

Additional Information: See www.sc.doe.gov/measures for more information.

Measure Term: Annual

Year	Target	Actual
2001		5.8
2002		12.7
2003	>14	18
2004	>20	
2005	>20	

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	89%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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Measure: Improve climate models -- Develop a coupled climate model with fully interactive carbon and sulfur cycles, as well as dynamic vegetation to enable simulations of aerosol effects, carbon chemistry and carbon sequestration by the land surface and oceans and the interactions between the carbon cycle and climate.

Additional Information: See www.sc.doe.gov/measures for more information, including a meaningful expansion of the abbreviated nonnumeric targets.

Year	Target	Actual
2001		Consistency
2002		Resolution
2003		New Model
2004	Testbed	
2005	3 parameters	
2006		

Measure Term: Annual

Measure: Determine scalability of laboratory results in field environments -- Determine actual in situ rates of metal reduction in subsurface environments and begin to develop a numerical model to describe and predict these rates.

Additional Information: See www.sc.doe.gov/measures for more information, including a meaningful expansion of the abbreviated nonnumeric targets.

Year	Target	Actual
2002		Sequence
2003		Identify
2004	Quantify	
2005	Predict	

Measure Term: Annual

PART Performance Measurements

Program: Biological and Environmental Research
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	89%	67%	87%	

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Measure: Average achieved operation time of the scientific user facilities as a percentage of the total scheduled annual operation time.

Additional Information: See www.sc.doe.gov/measures for more information.

Measure Term: Annual (Efficiency Measure)

Year	Target	Actual
2001	>90%	98%
2002	>90%	97%
2003	>90%	97%
2004	>90%	
2005	>90%	
2006		

PROGRAM ID: 10000080

OMB Program Assessment Rating Tool (PART)

Capital Assets & Service Acquisition Programs

Name of Program: Bonneville Power Administration

Section I: Program Purpose & Design (Yes,No)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Is the program purpose clear?*	Yes	The Bonneville Power Administration (BPA) exists to meet its public responsibilities established by Congress. Bonneville's mission is to market and reliably deliver to customers, all available Federally-owned or contracted power, at cost, giving preference to public entities, while protecting fish and wildlife, encouraging conservation, and repaying to the Treasury the full cost of producing and transmitting power, including the investment in hydrpower facilities and meeting all other financial obligations entered into to conduct Federally authorized responsibilities.	See Attachment 1: BPA Statutes (DOE/BP-3415 February 2002). Key BPA statutory purposes include: provide electric power at its total system cost; build and maintain a reliable transmission system; provide preference to public power; share regional hydro system benefits; allow for public participation; protect mitigate, and enhance fish and wildlife; provide leadership in conservation and renewable energy; recover costs; and provide regional preference. See also the Canadian Treaty and treaties with Northwest tribes. In conjunction with its statutory responsibilities, BPA through its strategic planning efforts has developed a vision, mission statement and associated strategic business objectives (SBOs), strategic thrusts and performance measures. There is an ongoing review and evaluation process to assure that BPA's strategic direction is current.	20%	0.2

2	*Does the program address a specific interest, problem or need?*	Yes	Bonneville markets and transmits power generated at 31 Corps of Engineers and Bureau of Reclamation dams, a portion of a nuclear plant and several other non-Federal plants. There are many unique responsibilities placed on BPA, such as the trust responsibility related to the federal government's relationships with Columbia River Treaty Tribes and representation of the federal government in relations with Canada relating to the Columbia River. The primary program components are transmission, power, and fish and wildlife. (1) Transmission: Provide reliable transmission services to the Pacific Northwest. (2) Power: Market electric power produced by the Federal Columbia River Power System (FCRPS) at cost and improve the efficiency of power production and consumption. (BPA markets the power from thirty one Federal dams, one nuclear plant, and several nonfederal power plants.) (3) Fish and Wildlife: Mitigate effects of the FCRPS on the region's fish and wildlife resources and protect and enhance those resources.	There is a 65 year legislative history that underlies the program. (See response to question I.1).	20%	0.2
3	*Is the program designed to have a significant impact in addressing the interest, problem or need?*	Yes	(1) Transmission: BPA is the mainstay of the Northwest's power grid, (2) Power: BPA carries the legal obligation to market power to any utility in the region, public or investor-owned. (Northwest Power Act, 1980) (3) Fish and Wildlife: BPA's program is designed to mitigate for damage caused by construction of the Federal hydropower system and enhance migrating salmon and in-river fish species of the Columbia and Snake rivers and restore habitat to Federal lands impacted by the system.	(1) Transmission: BPA owns and operates about 75% of the region's transmission resources. (2) Power: BPA markets about 45% of the power consumed in the region. (3) Fish and Wildlife: In FY 2001 F&W program expenses were $221 million and associated hydro operations costs were approximately $1.5 billion. Accounting for all of BPA's costs since 1997, BPA has estimated a cost of more than $3 billion in meeting its obligations to Columbia Basin fish and wildlife, including $378 million attributed to direct program and off-site mitigation expenditures.	20%	0.2

4	*Is the program designed to make a unique contribution in addressing the interest, problem or need (i.e., not needlessly redundant of any other Federal, state, local or private efforts)?*	No	The generation and transmission of power is a well developed technology, largely provided by municipal and independently-owned utilities across the country. This function could be performed under contract or through non-federal ownership of transmission lines and generation capacity at the dams. The FCRPS resources contribute to BPA's role in balancing a large number of interests as it meets its program responsibilities. Stakeholders include power and transmission customers, environmental, Tribal, consumer, industrial and other interests. (1) Transmission: The Northwest power system is heavily reliant on long-distance, high-voltage transmission lines to connect load centers to generation sites. As new market-based models of transmission emerge that situation may change – at the margin. For example, other parties may solve some transmission congestion problems through using distributed generation. Transmission systems have been inherently unique, and that holds for BPA's system. They are too expensive to be duplicated, although BPA's transmision technology is not unique.	(1) Transmission: BPA owns and operates about 75 percent of the region's transmission grid. There is almost no duplication of transmission paths owned by BPA and other entities	20%	0.0
			(2) Power: BPA is the marketer for the federal hydropower that is generated in the Northwest, although it is one of many Northwest power providers. It makes that power accessible to both public-owned and investor-owned utilities. It works with its partner agencies – the Corps of Engineers and the Bureau of Reclamation – to ensure that power interests are in balance with other public interests (e.g., flood control, irrigation). As energy markets evolve BPA will re-examine its role to see how it can meet its responsibilities while being a market participant. (3) Fish and Wildlife: BPA funds almost all of the Columbia Basin's F&W program. There is no competition for this role.	(2) Power: BPA markets about 45 percent of the power consumed in the region. (3) Fish and Wildlife: Numerous entities participate in the Columbia Basin F&W program, but BPA funds almost all of their efforts.		

`	*Is the program optimally designed to address the interest, problem or need?*	No	Bonneville benefits from Treasury loans whose principal value has been reduced through debt forgiveness. The reduced BPA obligation places part of the cost of the construction of the FCRPS system on the general taxpayer. In addition, the statutory application of preference in the sale of power creates administrative inefficiencies and restricts market activity. Market pricing of power and unrestricted sales would improve opportunities for more efficient operations. BPA, tries to optimize its authorized role in the region through an annual cycle of strategy review, objective and target setting, and program evaluation and feedback aimed at achieving continuous improvements throughout the agency.	See response to question I.1 on legislative history. Various reports, GAO/AIMD-97-110 and GAO/AIMD- 00-114. Also the Bonneville Appropriations Refinancing Act, P.L. 100-134.	20%	0.0
Total Section Score					**100%**	**60%**

Section II: Strategic Planning (Yes,No, N/A)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Does the program have a limited number of specific, ambitious long-term performance goals that focus on outcomes and meaningfully reflect the purpose of the program?*	Yes	BPA established seven "strategic business objectives" (SBOs) in 1994. They are reviewed annually, but have remained almost constant since then. These are BPA's "eternal verities" – long term objectives that it aspires to: SBO1: Achieve high and continually improving customer satisfaction. SBO2: Increase the value of its business and share the expanded benefits. SBO3: Be a low-cost provider of power and transmission services in the region. SBO4: Achieve and maintain financial integrity. SBO5: Keep the system safe, reliable, and available. SBO6: Invest in results to enhance the region's natural environment. SBO7: Continue to grow as a diverse, employee-centered, high-performing, business-oriented organization.	Annual measures for achieving these SBOs are discussed specifically in Section IV.	11%	0.1

These SBOs are in addition to the three performance measurement areas that BPA and the other power marketing agencies report on in GPRA-related reports. Those three areas are reliability (see SBO5), safety (see SBO5), and Treasury repayment (see SBO4). Those three areas reflect a good set of measures common to all PMAs taken together, but do not reflect on the breadth of BPA responsibilities.

2	*Does the program have a limited number of annual performance goals that demonstrate progress toward achieving the long-term goals?*	No	BPA annually establishes quantifiable and measurable one year targets for its strategic business objectives. It also has a nearer-term set of "strategic thrusts" (STs) that emphasize long-term results that are needed within the one to three year timeframe, and one year performance targets are also set for these. These targets are established through a cross-agency process that is led by the Chief Operating Officer.	The SBO-related targets for FY 2002 are: SBO1: Composite Agency customer satisfaction index is in the range from 7.3 to 7.7. SBO1: SBO2: Tribal government satisfaction index is in the range from 6.1 to 6.4; composite State/Federal entities and constituent satisfaction index is in the range from 6.8 to 7.4. SBO3: Agency internally managed costs are in the range from $1,175 million to $1,105 million. SBO4: Treasury payment is made on time and in full, with Agency net revenues in the range from $75 million to $150 million. SBO5: High system reliability/sufficiency: Transmission: Outage frequency and duration for key circuits are within Control Chart limits; and Generation: No involuntary curtailments of firm load occur as a result of inadequate power supply. SBO5: Safety: Recordable, lost-time injuries are in the range from 1.6 to 1.1 per 200,000 hours worked (~100 employees) and no fatal injuries occur to BPA or contract employees working on BPA facilities. [Note: The "availability" component of SBO5 is new for FY 2003.] Wind power integration issues are resolved by end of performance year; cumulative total of 60 aMW of conservation is under ConAug contract by 9/30. Significant progress is made in BPA's Great Place to Work scores. Note: The measurement protocol for each target is specified in a "Measurement Notebook", which is developed by the Strategic Planning staff early in the year.	11%	0.0

3	*Do all partners (grantees, sub-grantees, contractors, etc.) support program planning efforts by committing to the annual and/or long-term goals of the program?*	Yes	BPA's partners in power production include hydropower from the U.S. Army Corps of Engineers (Corps) and U.S. Bureau of Reclamation (Bureau) – both providing hydropower – and Energy Northwest (Energy NW), which provides nuclear power. All partners share, support, and benefit from joint partner long term planning for power production. BPA has dedicated staffs that work with the Corps, Bureau, and Energy NW.	BPA staffs work directly with their partner agencies to support the identification of productivity improvements. BPA provides monetary incentives to Energy NW for increased nuclear power production efficiency, reliability, and cost reductions. BPA directly funds capital hydropower replacement projects to improve productivity. BPA's Power Business Line has annual measurable targets for Forced Outage Factor (amount of time a planned unit is down) and Capital Execution Rate (efficiency of executing planned capital projects) for Corps and Bureau generation units. See Attachment 2 for a discussion of current efforts in this area.	11%	0.1
4	*Does the program collaborate and coordinate effectively with related programs that share similar goals and objectives?*	Yes	Coordination occurs on a daily basis with the Corps and Bureau, and on a frequent basis with other constituents and shareholders. The Northwest Power Planning Council (Council) was created by Congress (Northwest Power Act of 1980) to give Northwest citizens a stronger voice concerning issues of electricity generated at, and fish and wildlife affected by the Columbia River Basin hydropower dams. The Council and the BPA are jointly engaging the region in a discussion of how BPA will market the power and distribute the costs and benefits of the FCRPS in the Northwest after 2006. The Western Electricity Coordinating Council (WECC) is one of the ten electricity reliability councils in North America. WECC also supports efficient competitive markets, ensures open and non-discriminatory transmission access for members, provides a forum for resolving transmission access disputes, and provides an environment for coordinating the operating and planning activities of its one hundred and forty five members.	The joint Council/BPA regional effort is described at: **http://www.nwcouncil.org/energy/bparole/default.htm**) BPA is a WECC member and has several staff participating in various WECC committees and work groups. WECC and BPA's participation is described at: **http://www.wecc.biz/committees/MR/committee/index.html**	11%	0.1

5	*Are independent and quality evaluations of sufficient scope conducted on a regular basis or as needed to fill gaps in performance information to support program improvements and evaluate effectiveness?*	Yes	SBO1 (Customer satisfaction): Since 1996 BPA annually has had an independent contractor conduct a customer survey to determine customer satisfaction and other information. SBO4 (Financial integrity): BPA's accounts are reviewed by an independent outside auditor.	SBO1 (Customer satisfaction): Since 1996 BPA annually has had an independent contractor conduct a customer survey to determine customer satisfaction and other information. SBO4 (Financial integrity): BPA's independent auditor is PricewaterhouseCoopers LLP. The recent audit opinion from Pricewaterhouse Coopers dated January 4, 2002 indicated no material weaknesses in BPA's internal control structure and noted no instances of noncompliance. BPA's Annual Report for FY 2001 is available at: http://www.bpa.gov/Corporate/kc/home/ar/01ar/ar2001.pdf.	11%	0.1
			Reliability of Transmission(SBO5): BPA uses Institute of electrical and Electronics Engineers (IEEE) standard measures of SAIFI (System Average Interruption Frequency Index) and SAIDI (System Average Interruption Duration Index) to monitor and evaluate system reliability performance as reflected in the pattern of unplanned (automatic) outages on the system. In addition, BPA participates yearly in an independent Reliability Benchmarking study conducted by SGS Statistical Services of Tucson, AZ.	With SAIFI and SAIDI as the metrics, BPA uses accepted statistical quality control techniques to develop warning limits and control limits, which provide specific operational guidance to operations and field staff. BPA's reliability measures are very similar to those in use by the California Independent System Operator. Participants in the broad-based Reliability Benchmarking study account for over 1/2 of all the transmission line miles in the US.		
			(SBO5): Loss of load due to inadequate generation is a highly visible occurrence. BPA and other parties are able to note this circumstance without the intervention of independent evaluation.	Reliability of Generation (SBO5): The vice president of Generation Supply would make any determination of loss of load due to inadequacy of Corps or Bureau generation. The power market itself is a good independent watchdog of BPA power reliability programs. The acid test of power reliability is a power outage, which is so transparent that the entire market knows when it happens. In addition, BPA has contracts for power delivery. If BPA fails to deliver power reliably, the impacted parties have legal recourse for BPA's power contract violations, and thereby serve as independent evaluators.		

6	*Is the program budget aligned with the program goals in such a way that the impact of funding, policy, and legislative changes on performance is readily known?*	Yes	BPA operates as a revolving fund and thus depends on revenue generated from the sale of power and transmission to finance its activities. BPA develops and adjusts its program budget through annual cycles of strategy review, objective and target setting, and program evaluation and feedback, working toward continuous improvements throughout the agency.	In conjunction with its statutory responsibilities, BPA through its strategic planning efforts has developed a vision, mission statement and associated strategic business objectives (SBOs), strategic thrusts and performance measures. There is an ongoing review and evaluation process to assure that BPA's strategic direction is current.	11%	0.1
7	*Has the program taken meaningful steps to address its strategic planning deficiencies?*	Yes	BPA fundamentally revamped its strategic planning process resulting, in part, with the following selected long-term strategic business objectives. SBO1 (Customer satisfaction): The two BPA business lines use the results of each customer survey to identify where they should focus the coming year's efforts. This process benefits particularly from hundreds of verbatim comments gathered by the survey interviewers and provided to the business lines. This process sometimes results in business-line targets that aim at meeting specific needs identified in the surveys, as well as improving overall customer satisfaction. SBO4 (Financial integrity): The final test of BPA's financial integrity is its ability to make its annual payments to the U.S. Treasury.	Since revamping its strategic planning process and implementing independent surveys of significant parties, BPA has seen continued improvement in the areas of client, customer and employee satisfaction levels. SBO4 (Financial integrity): BPA has taken the business actions necessary to ensure that it could make its payments to the Treasury on time and in full. These actions include a more robust treatment of risk in rate cases, reducing costs as needed, careful management of third party debt, and the prudent use of all cash management tools.	11%	0.1
			Reliability of Transmission (SBO5): The reliability of the transmission system is monitored constantly. Transmission Operations and Planning and its Network Planning function perform both real-time and long-term, strategic planning for the system.	Reliability of Transmission (SBO5): Deficiencies in system reliability are identified in the historical record through extensive, real-time monitoring of the system. Potential deficiencies are identified using system simulation models. Planning for reliable operation of the system, including planning for system reinforcement and remedial action schemes is ongoing.		

Reliability of Generation (SBO5): The conditions affecting BPA's planning for generation have changed significantly in the last ten years, with the emergence of the competitive market for wholesale power. Prior to that BPA conducted least-cost, integrated resource planning to encompass its potential long-term power supply obligations. Planning for the adequacy of power supply has now taken a different form, with reliance on power markets as well as indigenous supply. Even though the 1980 Regional Act gives BPA the authority for long-range power resource acquisition, it is not a legal mandate without BPA customer concurrence.

In 1996, BPA's customers conducted a Regional Review of BPA long-term power resource acquisition, and recommended at that time that BPA should cease the acquisition of power resources. BPA has been complying with that recommendation. Thus, BPA has now concentrated on short-term actions to address any short-term needs. This includes such activities as market purchases of power, short-term conservation, and load buy-down. Planning for maintenance and enhancement of existing Federally owned generation is conducted by the Power Business Line's office of Generation Supply. Planning for market supply is conducted by PBL's office of Bulk Marketing & Transmission Services.

Reliability of Generation (SBO5): If any power outage occurs due to inadequate power supply, it signifies a significant business failure. In order to ensure an adequate supply, BPA staff constantly plan, model, and monitor power conditions considering many time frames, from 90 and 30 days all the way to real time. Should there be a power outage, an extensive review of the planning, modeling, and monitoring process is made to identify deficiencies. In addition, BPA has contracts for power delivery. If BPA fails to deliver power, the impacted parties have legal recourse. The potential monetary impact of failure is also a powerful tool for self-correction.

8 (Cap 1.) *Are acquisition program plans adjusted in response to performance data and changing conditions?*	Yes	BPA has a Quarterly Review that includes an assessment of performance results. Business line management committees review significant changes in timelines or project scopes during the year. This includes developing updated capital spending estimates for quarterly review and other business line or agency financial reporting requirements. In addition program needs are reviewed periodically by system planners and engineers based upon load forecasts, power-flow studies, system and equipment monitoring programs, etc. The capital program needs/acquisition plans are updated regularly to reflect changing system performance criteria, electricity market conditions, and equipment conditions.	BPA establishes annual performance contracts for managers that are tied to financial targets in order to provide accountability. A similar process has been established for capital investments with contract and contract performance reviews undertaken at least annually. Throughout the year, BPA is responsive to unanticipated changes in the market and other areas resulting in applicable contract, budget or target amendments. Over past few years, the NERC (National Electricity Reliability Council) and the WECC (Western Electricity Coordinating Council) have issued new guideline on system reliability. BPA responded by reviewing all power-flow studies and scenario analyses to identify necessary changes to the transmission grid (capital acquisition) to comply with this requirement. Due to electricity deregulation and market conditions, many independent power producers proposed to build generating plants in the pacificnorthwest. BPA responded by identifying what is required for grid additions to bring these proposed generation resources to market. Since then, the electricity market and prices have stabilized causing the generation project developers to revise their plans and schedules. BPA is responding to this changing condition by revising capital acquisition plans and schedules.	11%	0.1

9 (Cap 2.)	*Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule and performance goals?*	Yes	In the budget cycle each business line performs a rigorous investment portfolio analysis that includes an analysis of trade-offs. At the very fundamental project level, program managers and sponsors identify a list of least cost alternatives that meet transmission reliability, generation, and/or other agency objective(s). For example after identification of a transmission routing problem or other requirement, agency analysts engage in a process to determine what design, including alternate routes, and/or types of facilities, would best meet agency objectives. One alternative that is always considered is the status quo and the implications of doing nothing. Analysts perform cost-effectiveness analyses for the consideration of the appropriate business line matrix team. The matrix teams use a multi-attribute criteria to balance cost-effectiveness, safety, reliability and other factors.	An example of BPA's success in this area is its equipment replacement program that has transitioned from a time-based replacement schedule to a requirement based replacement schedule based on "reliability centered maintenance" principles. This is the outcome of a review of tradeoffs between costs and performance goals, and adapting to evolving industry best practices. Also, BPA's "infrastructure" program is reviewed both internally and externally. The external review included a panel of the region's technical experts, customer group representatives, and stakeholder group representatives. The review included needs, schedules, and alternatives. Both the internal and external review identified potential alternatives other than capital additions for some projects. The capital program costs and schedules are adjusted accordingly.	11%	0.1

Total Section Score					**100%**	**89%**

Section III: Program Management (Yes,No, N/A)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?*	Yes	BPA collects timely performance information to measure annual progress against its strategic business objectives and strategic thrusts. Where appropriate some baseline results were established many years ago and progress has been measured against them. Variances in results are discussed with senior management as needed at monthly management meetings and are considered in developing performance targets for the next fiscal year.	BPA relies upon such information as independent third-party surveys of BPA's customers, employees, constituents and affected Tribes, standardized measures of reliability and workplace safety, and financial information produced in accordance with generally accepted accounting principles. Long-term results generally show improvements in most areas of BPA's performance.	9%	0.1

2	*Are Federal managers and program partners (grantees, subgrantees, contractors, etc.) held accountable for cost, schedule and performance results?*	Yes	*Federal Managers.* Each fiscal year BPA managers establish performance results contracts with their manager, which establish specific action items and measure(s) of results, to include cost, schedule and performance results, as appropriate. The accountable actions are also linked to agency Strategic Business Objectives and Strategic Thrusts. *Program Partners (Contractors).* The Bonneville Purchasing Instructions (BPI) policy prescribes shared accountability and partnership between of the federal manager and the Contracting Officer (CO) to ensure that the contract performance expectations are clearly defined, and incentives used when appropriate to achieve expected contract cost, schedule and performance results.	*Federal Managers.* Performance contract results. *Program Partners (Contractors).* Bonneville Purchasing Instructions (BPI) policy prescribes measures for the federal manager and Contracting Officer (CO) to establish performance standards and measures to achieve cost, schedule and performance results, as follows: BPI 6.5 – Requires that federal manager (requisitioner) obtain and certify that all necessary approvals have been obtained. BPI 6.15 – Requires use by program office and CO of strategy panels to address all relevant factors necessary to develop a performance based contract to adequately define requirements of the contractor for achieving results and accountability to meet schedule and budget, including a management plan for the project.	9%	0.1

				BPI 11.18 – Requires that the CO select firms on the basis of past performance, credit ratings and other relevant indicators of successful performance. BPI Part 14 – Requires that those persons with delegated authority who meet training and experience requirements, administer the contracts to ensure compliance with contract performance results, schedule and cost. BPA Appendix 4A – Prescribes approach and methodology for governance oversight of purchasing and financial assistance activities of BPA. The objective of the oversight review is to assure that adequate business systems and processes are in place, documented and supported to satisfactorily implement purchasing policy as set forth in the BPI, and financial assistance policy as contained in the Bonneville Financial Assistance Instructions (BFAI).		
3	*Are all funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?*	Yes	All funds spent are for their intended purposes. However, BPA as an enterprise fund does not receive annual appropriations. All aspects of BPA's programs are funded with money derived from ratepayers and debt proceeds. Since BPA is on a business-type budget, its focus is on ensuring that funds are spent prudently and are justifiable to both ratepayers and all other affected interest groups. Therefore, BPA is held accountable for the effectiveness of the results achieved by its overall spending, not the manner in which the funds are committed.	Since BPA is operated as a business in an increasingly competitive environment, the effectiveness of its spending it vitally important for its long-term success. Money may only be spent if it can be recovered through rates. In addition, as described in the answer to Question 6, Section 1, BPA shares its financial information in public forums and on the internet.	9%	0.1

4	*Does the program have incentives and procedures (e.g., competitive sourcing/cost comparisons, IT improvements) to measure and achieve efficiencies and cost effectiveness in program execution?*	Yes	BPA competes in a market environment. It must recover its costs through the prices (rates) that it sets. This is a spur to efficiency. As part of the annual target-setting process, BPA establishes targets for "internally managed costs" of its business units and for the agency as a whole. These targets are tied to the agency-wide "Success Share" program and business-unit-level "Team Share" programs, which provide financial incentives to all staff to perform. These targets are also incorporated in performance contracts at the executive and managerial levels.	The agency's internally managed cost target is addressed in Section II.2. BPA's principal sub-units all have internally managed cost targets.	9%	0.1
5	*Does the agency estimate and budget for the full annual costs of operating the program (including all administrative costs and allocated overhead) so that program performance changes are identified with changes in funding levels?*	Yes	Bonneville's budget is developed and managed on a fully allocated costs basis in that both business lines are responsible for the full recovery of their proper costs including administrative and pension costs. All organizations capture actual costs using activity based costing and are accountable for results through incentive targets.	In terms of managing its capital investments, Bonneville has developed and is implementing a capital investment review process that provides significant benefits by both improving direction on what the FCRPS invests in (tieing investments more closely to agency strategy) and by improving how those investments are made (better analysis and review of capital investments and their alternatives). As part of this process Bonneville established a Cross-Agency Capital Allocation Board. Near- term capital funding levels are based on Board decisions after extensive review. BPA will continue its efforts to refine and implement the revised capital investment review process to improve the value provided.	9%	0.1
			Bonneville utilizes a streamlined and integrated agency planning and budgeting process that sets forth outcome goals, output targets, and resources in the context of past results. Financial targets, including cost targets, are a component of agency performance targets.	BPA's transmission finance and estimating groups evaluate progress of capital projects relative to cost estimates and project schedules. These reviews are done monthly with formal reports to the executives also on a monthly basis. The Transmission Business Line is developing a set of net asset value measures for capital portfolio assessment to ensure the value added to the transmission system exceeds cost of capital investments.		

				Projects that cost over $500 thousand are required to have performance measures so that once the project is completed actual performance can be measured. Actual program results are used to inform and refine funding levels. BPA regularly conducts economic and financial analyses of proposed capital investments using cost-benefit, net present value and internal rates of return analysis to assist in evaluating its program levels. Financial performance is tied to delivery on set of balanced scorecard strategic objectives aimed at maximizing the value of the FCRPS.		
6	*Does the program use strong financial management practices?*	Yes	Each year BPA's independent external auditors, currently Pricewaterhouse Coopers, perform a financial statement audit. Since 1985, BPA has received an unqualified opinion that its financial statements conform with generally accepted accounting principles and are a fair representation of BPA's operations in all material respects. The opinion also considers BPA's internal control over financial reporting and compliance with certain provisions of laws and regulations. The recent audit report noted no material weaknesses in BPA's internal control structure. The auditors classified significant internal control structures as follows: financial reporting, revenues, purchases and payables, treasury, payroll, and utility plant. The recent audit report also noted no instances of noncompliance with certain provisions of laws and regulations that are required to be reported under Government Auditing Standards. The auditors tested compliance in the following categories: debt authorization and restrictions, enabling legislation, authorizations and restrictions, environmental compliance, procurement policies and procedures, and revenues.	The recent audit opinion from Pricewaterhouse Coopers dated January 4, 2002 indicated no material weaknesses in BPA's internal control structure and noted no instances of noncompliance.	9%	0.1

In compliance with the CFO Act, BPA's Administrator submits an annual management report both to the President and to Congress with a statement on internal accounting and administrative control systems. The Administrator's recent report indicated that the results of the financial management system evaluation and other information indicate that BPA's financial management systems generally conform to the principles and standards developed by the Comptroller General.

The recent "Administrator's Statement on Internal Accounting and Administrative Controls", submitted in February 2002, that reports in compliance with the CFO Act indicated that BPA's financial management systems generally conform to the principles and standards developed by the Comptroller General.

The Administrator's report also indicated that the systems of internal accounting and administrative control of BPA provide reasonable assurance that: programs and operational objectives are efficiently and effectively carried out consistent with BPA's mission; expenditures are in compliance with applicable law; funds, property, and other assets are safeguarded against waste, loss, mismanagement, unauthorized use, or misappropriation; and revenues and expenditures are recorded and accounted for properly, so that accounts and reliable financial and statistical reports may be prepared and accountability of assets maintained and security of the automated information system is adequate.

Additionally, BPA's rate case is an official legal proceeding. Public hearings are held and rates must be approved by the Federal Energy Regulatory Commission (FERC). This public rate-setting process, which requires approval from an independent regulatory organization, provides an independent and transparent process for setting rates, which ultimately translate into BPA's revenues. Recent rate case documents indicate that the rate case included public hearings and FERC approval of rates. Therefore rates were approved by an independent party and the rate setting process took place in a transparent manner.

BPA's recent rate case documents of May 2000 provide confirmation that BPA follows an independent and transparent process for setting rates.

			As a participant in national capital investment markets, BPA, through its net billing arrangements with Energy Northwest (formerly Washington Public Power Supply System), is independently rated on its financial health and business strategies by the three national bond rating agencies.	Over the last several years, despite volatility in the overall energy markets, BPA backed bonds have maintained ratings at the highest levels within the utility industry. The extent to which this rating is due to BPA's status as a federal entitiy and the implied backing of the U.S. Treasury is not clear.		
7	*Has the program taken meaningful steps to address its management deficiencies?*	Yes	In addition to monitoring and correction tools built into program activities, BPA Internal Audit provides management audits, assists managers in making process self-assessments, coordinates reviews by the DOE-IG and GAO, and tracks recommendations to completed actions, including through the DOE Department Audit and Reports Tracking System.	Deficiencies identified through any of these means are targeted for corrective actions, managers and units are assigned responsibility for these actions, and completions are tracked. The agency works toward continuous improvement to impact measurable targets.	9%	0.1
8 (Cap 1.)	*Does the program define the required quality, capability, and performance objectives of deliverables?*	Yes	BPA has established Strategic Business Objectives (SBO's) and program thrusts. Project sponsors propose projects that are evaluated by the matrix teams on the basis of the SBO's, program thrusts, and the cost-effectiveness, risk and other measures, described in question 10. The business line capital investment review panels determine ranking criteria for financial and non-financial factors and approve investments or classes of investments using those criteria. The criteria included: net present value, using market discount rates (described in question 10); discount rates based on market assessment of other firms with comparable risk profiles; compliance with regulatory requirements; reliability; safety; environmental impact; and the provision of public benefits.	Quality, capability, and performance objectives of deliverables are documented in design specifications, solicitations. The project deliverables' quantity, quality, and capability are tested and documented by BPA personnel and in the case of contractors performing the project, verified documented by the COR/COTR. For transmission grid related projects, the performance goals of the deliverables are further affirmed by system Operation's acceptance of said deliverables into the operating system.	9%	0.1

9 (Cap 2.)	*Has the program established appropriate, credible, cost and schedule goals?*	Yes	Following approval by the Business Line Capital Investment Review Panels, all capital projects are required to have a preliminary cost estimate, a "work order quality" cost estimate and schedule before a work order is issued. The costs and schedules are monitored by the project manager and reported regularly. This information is updated monthly. In the case of management-directed schedule changes (changing needs, management priorities), this is communicated to the Scheduling and Estimating group and the project managers and implemented accordingly.	The capital program planning and review process documents costs and schedules. Project costs and schedules information reside in BPA's Business Enterprise System (BES) and updated regularly.	9%	0.1
10 (Cap 3.)	*Has the program conducted a recent, credible, cost-benefit analysis that shows a net benefit?*	Yes	In each budget cycle BPA performs an agency-wide capital budget analysis. The analysis includes: general project information, project timeline, financial evaluation results (net present value, internal rate of return, and discounted payback period), key assumptions/treatment of uncertainty, impact of key sensitivities, non-financial benefits, and alternatives considered. Other optional criteria may be provided to each business line. For example, when it proves difficult to target and measure typical financial results such as revenue generation, the business case for each prospective project will recommend surrogate measures, such as use of pro forma financial statements to measure before and after financial results.	One measure of projected performance that BPA uses extensively is net present value analysis (NPV). The discount rates, used in the NPV, differ by business line. Agency financial analysts review the appropriateness of these rates each year. Currently, the rates are based on the best empirical data source available, found in the "Ibbotson Yearbook", a well-recognized and often used source of market and industry information. BPA's recent benchmarking of best practices within the utility and other industries confirmed both that Ibbotson was a good source and that our estimated discount rates were consistent with other, "best-practices" companies. The rate for the Power Business Line (PBL) is 13%.	9%	0.1

				The rate for the Transmission Business Line (TBL) is 9%. The rate for Corporate is the blended rate of 11%. For PBL the rate was derived from the weighted average cost of capital (WACC) for the Telephone Communications Industry, SIC 481. This SIC was chosen because the telephone industry has moved from regulated to deregulated, similar to what is now occurring in the Power industry. For the TBL the WACC for the Electric Services Industry, SIC 491. This SIC includes generation, transmission, and distribution companies, much of which is still highly regulated. Because the Transmission Business will remain regulated, this still represents the best estimate of the return that investors would require on transmission investments.		
11 (Cap 4.)	*Does the program have a comprehensive strategy for risk management that appropriately shares risk between the government and contractor?*	Yes	The Bonneville Purchasing Instructions (BPI) policy prescribes measures to make a comprehensive procurement strategy plan that identifies technical, cost, and schedule risks, and describes how these risks will be isolated, minimized, monitored, and controlled. As a result of this planning, the CO selects contract type and pricing mechanisms that provide appropriate incentives for contractors to meet cost, schedule and performance goals.	BPI 6.15 – Requires use by program office and CO of strategy panels to address all relevant factors necessary to develop a performance based contract to adequately define requirements of the contractor for achieving results and accountability to meet schedule and budget, including a management plan for the project. BPI Part 7 – Prescribes policy and direction to the CO for selection of the most appropriate contract type based on an assessment of the nature of the project and associated risks. The objective is to select a contract type that results in the best business approach for BPA, considering contractor risk and incentives for high performance.	9%	0.1
			From a broader perspective BPA shares its risk with rate payers through rate based credit risk adjustments that take into account financial and market changes over the rate period and has taken steps to assure a broad based agency risk assessment and management program.	Risk management includes the establishment of an executive risk management committee with an agency wide credit risk policy, rate based credit adjustment provisions, and the agency's current enterprise risk management evaluation process.		
Total Section Score					**100%**	**100%**

Section IV: Program Results (Yes, Large Extent, Small Extent, No)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Has the program demonstrated adequate progress in achieving its long-term outcome goal(s)?*	No	BPA needs to further refine its target statements. Current targets represent annual performance rather than longer term measures. BPA has made some progress toward the strategic business objectives cited earlier, while balancing the many interests that are served by the agency. SBO1 (Customer satisfaction): Up significantly since 1996. SBO4 (Financial integrity): See the answer to Question 7, Section II. SBO5 (Reliability of Transmission): BPA has maintained high levels of system reliability in the face of increasing loads, increasingly complex schedule transactions and market operations, and a more complex regulatory environment. BPA's reliability goals are not structured to necessarily improve reliability, but rather to maintain at least the same historical high levels of reliability that it has achieved in recent years. SBO5 (Reliability of Generation):	SBO1 (Customer satisfaction): The overall customer satisfaction index score that BPA received has risen from 5.8 in 1996 to 7.4 in 2002 (on a scale of 1-10). SBO4 (Financial integrity): The annual payments to the U.S. Treasury have been made on time for almost 20 years in a row. SBO5 (Reliability): Transmission -- The record of maintaining high levels of reliability is available through the Transmission Business Line's internal web site; Generation -- Any loss of load would be determined in the Office of Generation Supply.	20%	0.0

Long-Term Goal I:	SBO1: Achieve high and continually improving customer satisfaction.
Target:	For FY 2002: Composite Agency customer satisfaction index is in the range from 7.3 to 7.7 (range of 0-10).
Actual Progress achieved toward goal:	As of end of FY 2001: Customer satisfaction index at 7.4. This is a significant increase from 1996's score of 5.8.
Long-Term Goal II:	SBO4: Achieve and maintain financial integrity.
Target:	For FY 2002: Treasury payment is made on time with Agency net revenues in the range from $75 million to $150 million.
Actual Progress achieved toward goal:	BPA has made its Treasury payments on time for almost 20 years in a row; BPA is under strong pressure to meet its net revenue targets.
Long-Term Goal III:	SBO5: Keep the system safe, reliable, and available. (The focus here is on the reliability component.)
Target:	For FY 2002: High system reliability/sufficiency. Transmission: Outage frequency and duration for key circuits are within Control Chart limits; and Generation: No involuntary curtailments of firm load occur as a result of inadequate power supply.
Actual Progress achieved toward goal:	For both transmission and generation, BPA has maintained its extremely high reliability ratings.

	Does the program (including program partners) achieve its annual performance goals?	Large Extent	BPA's has made an informed forecast of performance in FY 2002 for the larger set of targets that is the basis for the Success Share program. That forecast indicates that approximately 80% of the targets will be achieved by year's end.Some final results are now in for FY 2002. SBO1 (Customer satisfaction) came in with a score of 7.6 (near the high end of the target range of 7.3 – 7.7). The previous year's result was 7.4. The 1-year results for the other two SBOs being highlighted here are not yet in for FY 2002. But BPA has annual results for targets related to those SBOs as well as the other SBOs and Strategic Thrusts. For example, in FY 2001, SBO4 (Financial integrity): BPA made its payment to the U.S. Treasury on time; but the annual net revenue milestone was not met. And for SBO5 (Reliability): the transmission and generation components were both met. BPA has a well-established system of short-term (one-year) performance targets at both the Agency and business-unit levels. These performance targets address near-term expectations for each of BPA's	At the start of each fiscal year BPA sets one-year performance targets at the Agency and business-unit levels. It then tracks performance during the year. The one-year results are important determinants of performance ratings for senior executives and determine the year's recognition payout to all employees under the Success Share program. A variety of means of documentation of results is used. SBO1 (Customer satisfaction): The index value for 2002 is 7.6, the weighted average of the results of the Transmission and Power Business Line customer surveys, as documented in the respective contractor's reports. SBO4 (Financial integrity): This is a 2-part goal. BPA' net revenue for FY 2001 is reported in its Annual Financial Report for FY 2001. Reliability of Transmission (SBO5): The measures of outage duration and frequency were within limits, as documented on TBL's internal web site. Reliability of Generation (SBO5): There was no loss of load due to inadequate power supply, as reported by the office of Generation Supply.	20%	0.1
2			and Strategic Thrusts (which focus on shorter-term needs). These annual performance targets also roll down into performance contracts that BPA vice presidents have with their supervisors. The BPA Administrator's performance contract with the DOE Deputy Secretary is based on the Strategic Thrusts.BPA places great emphasis and invests considerable effort in establishing its annual performance targets and then manages to those targets. For example, at their monthly Management Committee meetings the Power Business Line and of the Transmission Business Line, report progress toward their targets.BPA does not meet all of its annual performance targets, largely because they are established to "stretch" the Agency; hence the "large extent" rating.			

Key Goal I:	SBO1: Achieve high and continually improving customer satisfaction.
Performance Target:	For FY 2001: Composite Agency customer satisfaction index is in the range from 7.2 to 7.6.
Actual Performance:	As of end of FY 2001: The customer satisfaction index was 7.4, within the "success" range.
Key Goal II:	SBO4: Achieve and maintain financial integrity.
Performance Target:	For FY 2002: Treasury payment is made on time and in full, with Agency net revenues in the range from $75 million to $150 million.
Actual Performance:	As of end of FY 2001: BPA made Treasury payment on time and in full, but that year's net revenue target was not achieved.
Key Goal III:	SBO5: Keep the system safe, reliable, and available. (The focus here is on the reliability component.)
Performance Target:	For FY 2002: High system reliability/sufficiency. *Transmission:* Outage frequency and duration for key circuits are within Control Chart limits; and *Generation:* No involuntary curtailments of firm load occur as a result of inadequate power supply.
Actual Performance:	Transmission: Measures were within control limits in FY 2001. Generation: There were no involuntary curtailments in FY 2001.

Footnote: Performance targets should reference the performance baseline and years, e.g. achieve a 5% increase over base of *X* in 2000.

3	*Does the program demonstrate improved efficiencies and cost effectiveness in achieving program goals each year?*	Yes	Since BPA recovers its costs from rates , it is under constant pressure to trim costs and demonstrate improved efficiencies. In an increasingly competitive environment, over time only those programs which are cost effective may be pursued in order to keep rates competitive.	BPA consistently meets its internally managed costs targets year after year. The ultimate test of BPA cost effectiveness is the competitiveness of its rates. Historically, BPA's rates have been very competitive.	20%	0.2
4	*Does the performance of this program compare favorably to other programs with similar purpose and goals?*	N/A			0%	
5	*Do independent and quality evaluations of this program indicate that the program is effective and achieving results?*	Yes	BPA utilizes several independent sources to provide evaluations for a wide variety of programs and processes. For example, each year BPA's independent external auditors, Pricewaterhouse Coopers, perform a financial statement audit. The recent audit report provided an opinion that BPA's financial statements conform with generally accepted accounting principles and are a fair representation of BPA's operations in all material respects. The opinion also considers BPA's internal control over financial reporting and compliance with certain provisions of laws and regulations.	The recent audit opinion from Pricewaterhouse Coopers dated January 4, 2002 indicated no material weaknesses in BPA's internal control structure and noted no instances of noncompliance.	20%	0.2
			BPA relies upon surveys of it customers, constituents, and affected Tribes conducted by independent parties.	Long-term survey results generally show improvements in most areas of BPA's performance.		

			BPA's rate cases are official legal proceedings. Public hearings are held and rates must be approved by the FERC. On the transmission side, FERC confirms BPA's transmission rates after a finding that such rates recover BPA's costs and expenses during the rate period, and are sufficient to make full and timely payments to the U.S. Treasury.	Most recently, BPA's transmission rates were granted approval by FERC in May 2001 under the standards of the Northwest Power Act, and BPA's power rate proposal together with a supplemental rate proposal were granted interim approval by FERC in September 2001.		
6 (Cap 1.)	*Were program goals achieved within budgeted costs and established schedules?*	Yes	BPA's capital programs have historically been implemented for less than the initial budget estimates. Schedules, however, have to remain flexible in order to accommodate changing market conditions, and environmental concerns.	Comparisons of budget estimates to actual costs for BPA capital programs over the years consistently shows that actual costs were less. Schedules are constantly monitored and revised as necessary to accommodate changing market conditions, as well as any other new information that becomes available.	20%	0.2
Total Section Score					**100%**	**73%**

PART Performance Measurements

Program: Building Technologies
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	50%	88%	42%	

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The mission of the Building Technologies Program is to develop technologies, techniques and tools for making residential and commercial buildings more energy efficient, productive, and affordable. This involves research, development, demonstration, and technology transfer activities in partnership with industry, government agencies, universities, and national laboratories. The program also develops building codes and appliance standards.

Evidence: FY 2004 Budget; P.L. 94-163, "Energy Policy and Conservation Act" (EPCA) (1975) and seven subsequent pieces of related authorizing legislation.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The program aims to reduce energy use in buildings, which can help avoid emissions of pollutants and greenhouse gases. These potential benefits support the Administration's National Energy Policy, as well as the Administration's climate change goals.

Evidence: The program focuses R&D on activities that it considers too technologically risky for the private sector to undertake alone. Risk levels vary on a project-by project basis.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The program coordinates its efforts with other entities as appropriate. For example, many Buildings subprograms (windows, lighting, commercial buildings, building envelope, space conditioning) work closely with industry to identify pre-competitive R&D needs and prepare "roadmaps." The program coordinates with HUD and others in certain multi-agency efforts, such as the Partnership for Advanced Technology in Housing (PATH). Through the efforts of the Association of States Research and Technology Transfer Institute (ASERTTI), coordinated research agendas are developed with the counterpart State research entities.

Evidence: The program identified market barriers to private sector investment in energy efficient building technologies. For example, building construction is a fragmented industry comprised of thousands of builders and manufacturers, none of which has the capacity to sustain research and development activities over multi-year periods. Another factor is the compartmentalization of the building industry, in which architects and designers, developers, construction companies, engineering firms, and energy services providers do not typically apply integrated strategies for siting, construction, operations, and maintenance.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The majority of the program's activities are in the area of applied technology research and development to improve energy efficiency of buildings. The program also develops codes and standards and conducts technology transfer and information exchange to integrate R&D advances into new building construction and retrofits.

Evidence: The program found no studies to indicate that a more cost effective approach to improving energy efficiency in buildings exists.

PART Performance Measurements

Program: Building Technologies
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	50%	88%	42%	

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: NO Question Weight: 20%

Explanation: In support of the Administration's R&D Investment Criteria initiative, the program was asked to prepare "bubble charts" that plot key program variables (e.g., expected public benefits, funding levels, years to commercialization). Bubble charts can serve as an informational tool to help determine, along with other considerations, whether the program appropriately targets its R&D funding. While the program has made progress estimating public benefits, the Department has not yet developed a methodology to estimate benefits consistently within and across programs. Therefore, the program could not prepare meaningful bubble charts.

Evidence: In general, the program appears to target its resources wisely, but a lack of ability to provide appropriate evidence mandates a "no" response. EERE continues to work internally and with other DOE program offices to improve consistency and accuracy in estimating benefits.

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight: 10%

Explanation: The program has established reasonable long-term goals that cover the majority of its R&D activities. The goals relate to residential and commercial building R&D (including Zero Energy Building R&D), and development of building-related products (e.g., lighting, windows, etc.). The measures and targets have been modified for FY 2005.

Evidence: FY 2004 Budget. Building Technologies Program Multi-Year Plan (Draft in Progress).

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: NO Question Weight: 10%

Explanation: The program is in the process of identifying targets and off-ramps that would help it redirect, down-select, or terminate efforts in its main R&D activities, but its efforts are not yet complete.

Evidence:

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: NO Question Weight: 10%

Explanation: The program has developed some acceptable annual measures for its activities related to development of buidling codes and appliance standards. However, the program has not developed annual performance measures for R&D activities that directly tie to the program's long-term R&D goals.

Evidence: Building Technologies Program Multi-Year Plan (Draft in Progress).

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: NO Question Weight: 10%

Explanation: The program has not yet developed acceptable annual measures for its R&D activities.

Evidence:

PART Performance Measurements

Program: Building Technologies
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	50%	88%	42%	

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:10%

Explanation: The program develops annual operating plans which reflect the activities in the draft Multi-Year Plan. Once the operating plans are approved, grantees, sub grantees, contractors, etc. work with the program to develop specific statements of work to reflect milestones and deliverables that ultimately support achievement of the long term goals.

Evidence: Building Technologies Program Multi-Year Plan (Draft in Progress); Draft FY 2004 Annual Operating Plans for the Commercial Buildings Team, Residential Building Team, Emerging Technologies Team, and Appliance Standards Team.

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: Historically, the program has not planned for peer reviews. However, in FY 2003, each of the four teams of the Building Technologies Program developed an evaluation plan, which includes quality and control activities, such as peer reviews and third party evaluation. The program is working with EERE to develop guidelines for peer reviews which will be adopted and implemented. In the Emerging Technologies Team, the space conditioning R&D activity conducted a peer review in May 2003. In addition to technology specific peer reviews, the program should consider expanding the scope of peer reviews to include overall program effectiveness and relevance.

Evidence: Space Conditioning Peer Review (May 2003). Evaluation Plans for Building Technology Teams.

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: Program funding requests are tied to specific activities that contribute to the program's long-term goals. However, budget documents do not clearly indicate the full costs of achieving the program goals. Salaries, benefits, and other admininstrative expenses to support the program are included in a separate budgetary line item ("Policy and Management"). EERE does not report the allocation of Policy and Management funding to the various programs it supports.

Evidence: FY 2004 Budget. Building Technologies Program Multi-Year Plan (Draft in Progress).

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: Among the deficiencies in strategic planning are inconsistencies and lack of clear links between goals and targets in budget submissions, program strategic plans, and annual performance plans. The program has begun a multi-year planning process that should address some of these deficiencies.

Evidence: Building Technologies Program Multi-Year Plan (Draft in Progress).

PART Performance Measurements

Program: Building Technologies
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	50%	88%	42%	

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NO Question Weight:10%

Explanation: Each year, the program estimates the public benefits of its activities in support of the Government Performance and Results Act (GPRA) and the Administration's R&D Investment Criteria initiative. However, the program has not yet developed a consistent and reliable methodology for comparing potential benefits within and across programs with similar goals.

Evidence: FY 2004 Budget

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: For development of appliance standards, the program evaluates potential energy savings and prioritizes its proposals for rules accordingly. The program participated in EERE's zero-based budget exercise to help determine priorities for R&D activities. Priorities for the program were grouped and less clear than for other EERE programs, but the program did attempt to prioritize.

Evidence: EERE Priority Ranking Tool, Zero Based Budget Exercise.

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:12%

Explanation: The EERE Strategic Management System -- which establishes at the beginning of each fiscal year an 18-month schedule for key planning, budget formulation, budget execution, and analysis / evaluation functions -- requires that each EERE program establish and track long-term and near-term program performance goals and measures. Program results as evaluated through the goals and measures are used annually and throughout the year to assess partners' performance, adjust funding, and re-align R&D portfolios.

Evidence: SMS Implementation Letter for FY 2002 - 2005 (October 2001). The program also reports on quarterly milestones in the Department's Joule database. However, in general, milestones in the Joule system are not necessarily meaningful or fully reflective of program progress. Thus, the Department's Joule system provides little value-added. The new I-MANAGE system, currently under development, will better integrate budget and performance.

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:12%

Explanation: The Annual Performance Appraisals of all EERE Program Managers include criteria directly related to cost, schedule, and performance results. EERE reviews these criteria monthly in the EERE Monthly Management Reviews. Most EERE contracts include award fee and other performance criteria to hold those partners accountable.

Evidence: Performance Plan and Performance Appraisal Form for Performance Management System Employees. EERE Award Fee and Performance Based contracts.

PART Performance Measurements

Program: Building Technologies
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	50%	88%	42%	

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:12%

Explanation: EERE conducts an Annual Operating Plan (AOP) Review before each fiscal year to assure that new funding is obligated consistent with the appropriated purpose. EERE uses data from Departmental procurement and financial systems -- and similar data from National Laboratory partners -- to assure that actual expenditures occur for purposes and on a schedule consistent with the AOP. Unobligated balances brought forward to FY 2004 were $713,000, 1.2 percent of the program's FY 2003 appropriation of approximately $60 million.

Evidence: Annual Operating Plans for each of four Building Program teams. Monthly obligation and cost reports from the EERE Strategic Management System and Departmental financial systems. Building Technology Program FY 2003 Financial Status Report (June 2003), FY 2004 Apportionment

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:12%

Explanation: EERE's reorganization in 2002 clarified lines of responsibility and eliminated organizational "stovepipes" by consolidating planning, budgeting, and analysis into a single business administration office. The reorganization reduced management layers, although staff levels remained the same. EERE developed a new IT report to improve program managers' access to EERE cost, obligation, and procurement data. EERE plans to consolidate several legacy IT systems into a single program management system that is intended to track all required information on a project by project basis (cost share, type of contract according to A-11 definitions, etc.). EERE is also developing a measure to reduce uncosted balances, which means obligated funds will be put to use more quickly. These recent actions should achieve efficiencies and improve cost effectiveness, although it will be difficult in some cases to demonstrate definitively.

Evidence: EERE Reorganization "All Hands" presentation: http://www.eere.energy.gov/office_eere/pdfs/eere_reorg.pdf. EERE IT Business Case Number 019-20-01-12-01-1011-00-304-101. Building Technology Program FY 2003 Financial Status Report (June 2003).

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: The program coordinates with HUD and the private sector in the Partnership for Advanced Technology in Housing (PATH). Through the efforts of the Association of States Research and Technology Transfer Institute (ASERTTI), coordinated research agendas are developed with the counterpart State research entities. The program has collaborated with industry on the development of several Technology Roadmaps.

Evidence: Building Envelope Technology Roadmap. Windows Industry Technology Roadmap. Lighting Industry Technology Roadmap. High Performance Commercial Buildings Technology Roadmap. PATH website (www.pathnet.org)

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: Each year, EERE develops and maintains a Spend Plan and a Measures spreadsheet that links the Spend Plan to annual and long-term goals and measures for each EERE program. The program reviews quarterly costing reports and weekly project status reports. There is no evidence of erroneous payments or statutory violations.

Evidence: FY2003 Spend Plan, Measures spreadsheet, and sample weekly project status report.

PART Performance Measurements

Program: Building Technologies
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	50%	88%	42%	

3.7 **Has the program taken meaningful steps to address its management deficiencies?** Answer: YES Question Weight:12%

Explanation: The National Association of Public Administrators (NAPA) found dozens of management deficiencies in the program's bureau (the Office of Energy Efficiency and Renewable Energy, or EERE) in a review published in 2000. EERE provided evidence that it addressed some of management deficiencies identified by NAPA, and has prepared a Management Action Plan that will address many of the remaining findings. While a few NAPA recommendations have not been addressed (e.g., that EERE conduct periodic audits to assure that cost-sharing partners actually provide funding they agree to), in general, EERE has taken meaningful steps to address most deficiencies.

Evidence: A Review of the Management in the Office of Energy Efficiency and Renewable Energy (NAPA, 2000). Letter Report from Assistant Secretary Garman to Chairman of the House Subcommittee on Interior and Related Agencies on implementation of NAPA recommendations (July 11, 2001). EERE Management Action Plan (August 2003)

3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: NO Question Weight:12%

Explanation: Curently, the program provides much of its research funding to "lead labs," which represent centers of knowledge in particular subject areas. The program reports that it is moving away from the "lead lab" concept in favor of more competitively funded research, including having national labs compete against each other. In addition, in 2003, the program developed a Quality, Control and Evaluation plan for each of its four teams, which is used to maintain quality and timeliness of the program's R&D. Despite these advances, the program could not document the conduct of its R&D activities in accordance with OMB Circular A-11 definitions (e.g., merit-reviewed with limited competitive selection, Congressionally directed, etc.). The program could also not demonstrate that research stage (basic, applied, development, demonstration) correlated with statutory and Administration guidelines for cost sharing.

Evidence: The program estimates that less than half of its FY 2003 funding was competitively awarded or supported work at the national labs.

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: LARGE EXTENT Question Weight:25%

Explanation: The program's long term measures and targets have been modified for FY 2005. The program has not developed good indicators, so progress toward achieving the new long-term goals is difficult to assess. However, in FY 2003, the Residential Building Integration Team reportedly passed one milestone, the 30 percent energy savings in building design packages, on the path to designing net Zero Energy Homes, a key long-term goal. In addition, the National Academy of Sciences reviewed a small subset of historic program activities and concluded that the program has produced several technological successes in energy efficiency that have saved energy for the nation and energy costs for consumers.

Evidence: EERE FY 2005 OMB Budget Submission. Energy Research at DOE: Was It Worth It?: Energy Efficiency and Fossil Energy Research 1978 to 2000 (NAS, 2001).

PART Performance Measurements

Program: Building Technologies
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	50%	88%	42%	

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: NO Question Weight 25%

Explanation: The program's annual performance measures for R&D activities are under development. The program reports that it has met recent targets for development appliance standards, although it's not clear that these targets were ever explicitly identified in budget documents, GPRA performance plans, or other materials.

Evidence:

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: NO Question Weight 25%

Explanation: The program largely supports R&D, and could not demonstrate improved efficiencies in achieving its long-term goals, which have been modified this year. For development of codes, the program reports that it has instituted a process improvement initiative to better collaborate with industry. The reported result is that the time to create a standard has been reduced from five plus years to three years or less. The program did not provide evidence of an accelerated timeline.

Evidence:

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NA Question Weight: 0%

Explanation: The program coordinates with, but does not compete with, other Federal, state, and private activities.

Evidence:

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: YES Question Weight 25%

Explanation: The National Academy of Sciences "found very positive returns on a relatively modest federal investment for all but one of the projects reviewed." NAS reviewed only seven Buildings projects out of hundreds that DOE has pursued since the 1970s. The program also reports that it has received nine R&D 100 awards, 15 Energy 100 awards, seven Popular Science "Best of..." awards, 10 Excellence in Technology Transfer awards, and over 90 patents. The awards indicate external recognition for program accomplishments, but it's difficult to assess whether the numbers are impressive given the investment of more than $7 billion since the program began. It may be useful to benchmark awards/patents per dollar invested against similar applied R&D programs.

Evidence: Energy Research at DOE: Was It Worth It?: Energy Efficiency and Fossil Energy Research 1978 to 2000 (NAS, 2001).

PART Performance Measurements

Program: Building Technologies
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	50%	88%	42%	

Measure: Number of design technology packages for new residential buildings (and percent increase in energy efficiency relative to the 2004 Building America benchmark) at little or no incremental cost. (There are 15 potential design packages: 3 building types in each of 5 climate zones. Design packages incorporating renewable energy technologies can lead to Zero Energy Homes.)

Additional Information: Use of the design packages will reduce expected energy consumption of new residential buildings (single family homes, multi-family homes, and townhomes). The range in efficiency improvements reflects the range that can be expected in different climates.

Year	Target	Actual
2003	5 (30%)	0 (30%)
2004	2 (30%)	
2005	3 (30%)	
2007	5 (40-70%)	
2010	5 (40-70%)	

Measure Term: Long-term

Measure: Percent increase in energy efficiency of the International Energy Conservation Code for residential buildings based on cost effective proposals developed by the program.

Additional Information: Code change proposals will increase the energy efficiency of all residential buildings constructed to the IEEC standard.

Year	Target	Actual
2004	5%	?
2005	5%	
2006	5%	

Measure Term: Annual

PART Performance Measurements

Program: Building Technologies
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	50%	88%	42%	

Measure: Number of design technology packages for new commercial buildings (and percent increase in energy efficiency relative to the 2004 Building America benchmark) at little or no incremental cost.

Additional Information: Use of the design packages will reduce expected energy consumption of new commercial buildings. The range in efficiency improvements reflects the range that can be expected in different climates.

Year	Target	Actual
2002		

Measure Term: Long-term

Measure: Percent increase in energy efficiency of the International Energy Conservation Code for commercial buildings based on cost effective proposals developed by the program.

Additional Information: Code change proposals will increase the energy efficiency of all commercial buildings constructed to the IEEC standard.

Year	Target	Actual
2004	5%	
2005	5%	
2006	5%	

Measure Term: Annual

Measure: Efficiency of "white light" solid state lighting, in lumens per watt (LPW). (Solid state lighting, also known as light emitting diodes [LEDs], can potentially be more than twice as efficient as fluorescent lighting [currently about 85 LPW] and may be able to last 10 times as long [up to 100,000 hours].)

Additional Information: Improving the efficiency, reducing the cost, and improving the quality of white light produced by LEDs can lead to increased commercial deployment and significant energy savings as a result.

Year	Target	Actual
2002		25
2003	47	48
2005	50	
2007	65	
2010	100	

Measure Term: Long-term

PART Performance Measurements

Program: Building Technologies
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	50%	88%	42%	

Measure: Windows R&D measure under development

Additional Information: Windows are a leading cause of energy loss from buildings.

Year	Target	Actual	**Measure Term:** Long-term
2002			

Measure: Emerging Technologies / HVAC measure under development

Additional Information:

Year	Target	Actual	**Measure Term:** Long-term

Measure: Number of proposals to update appliance standards and test procedures published in the Federal Register. (Based on potential energy savings, the program prioritizes rulemakings to reduce the backlog of legislatively mandated new rules and updates to existing rules.)

Additional Information: These standards and test procedures lead to improved energy efficiency of appliances and equipment, which reduces energy use and greenhouse gas emissions.

Year	Target	Actual	**Measure Term:** Annual
2001	3	3	
2002	2	1	
2003	4	2	
2004	4		
2005	4		

Measure: Annual measures for long-term R&D goals under development

Additional Information:

Year	Target	Actual	**Measure Term:** Annual

PART Performance Measurements

Program: Clean Coal Research Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
60%	67%	75%	40%	

1.1	**Is the program purpose clear?**	Answer: YES	Question Weight 20%

Explanation: The program's purpose is to support research and development (R & D) of technologies that will promote the use of coal in an environmentally acceptable manner.

Evidence: National Energy Policy (NEP, Chapter 5); Budget documents (e.g., FY 2004 Budget Congressional Justification).

1.2	**Does the program address a specific and existing problem, interest or need?**	Answer: YES	Question Weight 20%

Explanation: The program is aimed at maintaining coal as an environmentally acceptable component in domestic energy supply mix.

Evidence: NEP (Chapter 5), Budget documents.

1.3	**Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort?**	Answer: YES	Question Weight 20%

Explanation: The majority of effort in this area do not appear to have counterparts elsewhere in government, and the historically-regulated nature of the utility industry has resulted in few private programs that are not linked to this program.

Evidence: Budget Documents; Clean Coal Power Initiative (CCPI) website and Coal Utilization Research Council (CURC) website (at http://www.coal.org/rdmap.htm).

1.4	**Is the program design free of major flaws that would limit the program's effectiveness or efficiency?**	Answer: NO	Question Weight 20%

Explanation: Program has been too heavily weighted toward short-term projects and demonstrations rather than longer-term research and development. The program has not demonstrated how this concern will be addressed in the new CCPI program.

Evidence: Budget Documents; DOE Round 1 project solicitation; Section V--Evaluation and Selection.

1.5	**Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly?**	Answer: NO	Question Weight 20%

Explanation: Benefits from the program accrue from continued use of coal in the energy mix. Substantial future economic beneftis have been postulated for lower cost technology to reduce mercury, NOx, SOx, and acid gases, but the Department has not established consistent measurement systems for future benefits, and the distribution of benefits between the public and private for-profit firms is not well examined. The program was unable to estimate public benefits consistently within and across programs to determine whether the program appropriately targets its R&D funding.

Evidence: Program plans (http://www.fe.doe.gov/coal_[pwer/programplans/00/sects_3-7.pdf).

PART Performance Measurements

Program: Clean Coal Research Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
60%	67%	75%	40%	

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight:11%

Explanation: Long-term goals are: 50% efficent coal based power generation (IGCC) in 2010; CO2 capture at 10% increase in cost of electricity by 2012; 90% reduction in mercury emissions at less than 75% current cost 2012; $1000/kW capital cost for Integrated Gasification Combined Cycle (IGCC) technology in 2010.

Evidence: See "Measures" section of this PART; Joule system and DOE strategic objective ER 4 of performance targeting and measurement; Budget documentation.

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: NO Question Weight:11%

Explanation: The program has ambitious targets and timeframes, however the program has not demonstrated that it has defined appropriate decision and termination points.Demonstration projects are generally for defined construction projects, and while those that go forward have a clear end point, those that encounter trouble with sponsors or siting have no clear termination point. No evidence submitted to demonstrate that R & D projects are required in advance to define thresholds of experimental success necessary to continue work.

Evidence: See "Measures" section of this PART; Joule system of performance targeting and measurement, budget documentation.

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:11%

Explanation: See measures.

Evidence: See "Measures" section of this PART; Joule system of performance targeting and measurement, budget documentation.

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:11%

Explanation: The program has baselines and ambitious targets for annual measures.

Evidence: See "Measures" section of this PART; Joule system of performance targeting and measurement, budget documentation.

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: YES Question Weight:11%

Explanation: Private-sector stakeholders are actively involved in providing input and receiving output from the program. Industry experts critique and evaluate segments of the program and specific projects. Program planning has centered on input and interaction from a broad set of energy-sector stakeholders.

Evidence: Workshops; meeting proceedings (the CCPI website includes documentation of the three public meetings referenced for Round 1 and the feedback obtained from the first such meeting on Round 2); individual project cooperative agreements (Eight Round I project fact sheets stating individual project goals may be found at: http://www.netl.doe.gov/coalpower/ccpi/)

PART Performance Measurements

Program: Clean Coal Research Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
60%	67%	75%	40%	

2.6	**Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?**	Answer: YES	Question Weight:11%

Explanation: Recent review by the National Academy of Sciences/National Research Council (NAS/NRC).

Evidence: NSA/NRC report: "Energy Research at DOE - Was It Worth It?" (2001).

2.7	**Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?**	Answer: NO	Question Weight:11%

Explanation: The Department has not submitted budget requests explicitly tied to annual and long-term performance goals, or resource needs in a complete and transparent manner.

Evidence: Budget documents.

2.8	**Has the program taken meaningful steps to correct its strategic planning deficiencies?**	Answer: YES	Question Weight:11%

Explanation: The programs use annual stakeholder program meetings, periodic meetings with industry, and evaluations by NAS and the American Society of Mechanical Engineers to adjust the R & D program focus and as input to the strategic planning process. Improvements in benefits modeling, and efforts to connect long- and short-term goals through the JOULE performance tracking system, and development of the Unified Coal Roadmap are all concrete steps that could help with planning efforts.

Evidence: CCPI website documenting stakeholder workshops.

2.RD1	**If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?**	Answer: NO	Question Weight: 0%

Explanation: The Department has been unable to articulate how it assesses and compares potential costs and benefits of programs with similar goals.

Evidence:

2.RD2	**Does the program use a prioritization process to guide budget requests and funding decisions?**	Answer: NO	Question Weight:11%

Explanation: The program has been unable to articulate how it prioritizes budget requests and funding decisions.

Evidence:

PART Performance Measurements

Program: Clean Coal Research Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
60%	67%	75%	40%	

3.1	**Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?**	Answer: YES	Question Weight:12%

Explanation: Major milestone are delineated (historically, and planned for CCPI), along with performance requirements, and the milestones tracked and performance measured through regular reporting procedures and project status meetings.

Evidence: DOE Round 1 solicitation, Project Management Information System (ProMIS).

3.2	**Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?**	Answer: YES	Question Weight:12%

Explanation: The National Energy Technology Laboratory (NETL) has identified a schedule of incentives holding key product personnel responsible for results under their control. Recently, NETL was one of only two organizations in the entire Federal government to win the Office of Personnel Management's (OPM) Pillar Award for outstanding efforts in linking performance with accountability.

Evidence: OPM's Pillar Award for linking performance with accountability.

3.3	**Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?**	Answer: NO	Question Weight:12%

Explanation: Historically the Clean Coal Technology program has had a history of high carryover balances. The program has not demonstrated how the CCPI program will address this potential concern in the new program.

Evidence: FY 2002 and FY 2003 Budget Documentation

3.4	**Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?**	Answer: NO	Question Weight:12%

Explanation: The program provided no efficiency or cost effectiveness measures for this program. It is unclear whether the program achieves administrative/program delivery efficiencies.

Evidence: CCPI Round 1 Solicitation, CCPI web-site.

PART Performance Measurements

Program: Clean Coal Research Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
60%	67%	75%	40%	

3.5	**Does the program collaborate and coordinate effectively with related programs?**	Answer: YES	Question Weight:12%

Explanation: The programs coordinate well on both an intra- and interagency level. For example, the Carbon Sequestration Program complements a number of other R & D efforts being conducted in the Federal sector. The program has established relationships with the United States Geological Survey, the United States Forest Service within USDA, and the Office of Surface Mining within the Department of the Interior to collaborate in the area of carbon sequestration. Another example is in the coal fuels program. The research to be performed in this effort encompasses the production of hydrogen from coal. Elements of the program are managed in conjunction with other power generation technologies in DOE's Energy Efficiency and Renewable Energy office, but explicit trade-off mechanisms are not well-defined.

Evidence: Coal & Power Systems Strategic Plan, CCPI Product and Multi-Year Plans.

3.6	**Does the program use strong financial management practices?**	Answer: YES	Question Weight:12%

Explanation: No known deficiencies. Computer based systems exist for both financial and project management oversight. In addition, individual contract specialists keep detailed files of primary records. However, costs are not clearly allocated between appropriation accounts.

Evidence: DOE annual Performance and Accountability report; computer based project management control systems (BMIS, PADS, DISCAS).

3.7	**Has the program taken meaningful steps to address its management deficiencies?**	Answer: YES	Question Weight:12%

Explanation: Most research efforts undergo routine review, a new performance tracking system is being implemented for applied R&D programs throughout the Department, and improved efforts at modeling benefits have been made. However, little effort to benchmark administrative costs or control them across appropriation accounts.

Evidence: Annual C&PS Program Review (most recently completed February 10, 2003). The DOE Product Team provides guidance to the implementing project team. JOULE System.

3.RD1	**For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?**	Answer: YES	Question Weight:12%

Explanation: Approximately eighty five percent of funds are awarded competitively.

Evidence: OMB/DOE discussion.

4.1	**Has the program demonstrated adequate progress in achieving its long-term performance goals?**	Answer: SMALL EXTENT	Question Weight:20%

Explanation: The CCPI program is just beginning. Projects were selected in January 2003. Most of DOE's coal research technologies have not penetrated the market, but the IEP program has contributed to cost reductions in emission control technology and taken mercury control from a concept in the mid-1990's to current field testing activities.

Evidence: CCPI Round 1 Solicitation;Factsheets for selected projects.

PART Performance Measurements

Program: Clean Coal Research Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
60%	67%	75%	40%	

4.2	**Does the program (including program partners) achieve its annual performance goals?**	Answer:	SMALL EXTENT	Question Weight 20%

Explanation: Annual performance goals are being met.

Evidence: Joule system; CCPI website; CCPI round 1 Solicitation.

4.3	**Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?**	Answer:	NO	Question Weight 20%

Explanation: The program has provided no documentation of efficiency or cost-effectiveness improvements.

Evidence: CCPI website.

4.4	**Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?**	Answer:	YES	Question Weight 20%

Explanation: There are no other efforts known that have similar goals.

Evidence: CCPI website.

4.5	**Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?**	Answer:	SMALL EXTENT	Question Weight 20%

Explanation: Of 11 sub-programs evaluated by NAS, only two are credited with benefits that exceed costs.

Evidence: CCPI website.

PART Performance Measurements

Program: Clean Coal Research Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
60%	67%	75%	40%	

Measure: Efficiency of advanced coal-based energy plants. (Percentage of heat in fuel converted to electricity.) Demonstrate technologies at pilot scale which validate the feasibility of targets.

Additional Information: Complete one or more commercial-scale demonstration projects that prove the commercial feasibility of achieving the target. Current state-of-the-art IGCC plant are 40% efficient and cost $1500/kw to construct. Conventional pulverized coal plants are 35 - 40% efficient and cost approximately $1100/kw.

Year	Target	Actual	**Measure Term:** Long-term
2003		0.4	
2010	50%		

Measure: Capital cost of Integrated Gasification Combined Cycle (IGCC) coal plants. Demonstrate technologies at pilot scale which validate the feasibility of target costs. Such plants currently produce power at a cost of approximately $1275 per kw.

Additional Information: First-of-a-kind clean coal technologies in CCT program had capital costs >$1500/kW. Optimized designs are about $1250-1300/kW. Advanced air separation, gas cleaning, combustion turbine, and gasifier technologies potentially reduce $60-80/kW further each.

Year	Target	Actual	**Measure Term:** Long-term
2003		$1250-1300	
2010	1000		

Measure: Mercury (Hg) removal cost and removal efficiencies from coal-fired power plants.

Additional Information: Have > 90% Hg capture technology, at < 75% conventional technology cost, ready for full-scale commercial demonstration. 2003 Baseline cost mercury removal is $50000 - $70000/lb at 70% - 90% removal efficency.

Year	Target	Actual	**Measure Term:** Long-term
2003		70-90%HG removal*	
2010	>90% Hg removal**		

PART Performance Measurements

Program: Clean Coal Research Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
60%	67%	75%	40%	

Measure: Reduce net cost of CO2 capture and sequestration. In 2003 the cost impact of state-of-the-art (amine scrubber @$200/ton of C) increases cost of electricity (COE) by 30% for new plants, compared to non-sequestered counterpart.

Additional Information: Measure based on analysis of pilot scale tests of 90% carbon capture technologies. Current 90% capture technology increases COE by 30% or about 1 cent/kw.

Year	Target	Actual	**Measure Term:** Long-term
2003		30% increase COE	
2012	10% increase COE;		

Measure: Efficiency from advanced coal-based energy plants. (Percentage of heat in fuel converted to electricity.) Demonstrate at pre-commercial scale technologies which validate the feasibility of targets.

Additional Information: In 2005 advanced gas cleanup, in 2007 advanced air separation, in 2009 advanced gasifier and combustion turbine improve efficiency by 1-2%, 1-3%; and 3-5% respectively. Conventional PC coal plants are 35-40% efficient, today's IGCC is 38-40% efficient.

Year	Target	Actual	**Measure Term:** Annual
2003		35-40% eff	
2005	43%		
2006	45%		
2007	46%		

Measure: Capital cost of IGCC coal plants. Demonstrate technologies at pre-commercial scale which validates the feasibility of target costs. Such plants currently produce power at a cost of approximately $1275 per kw.

Additional Information: Gas cleaning is >10% of capital cost of IGCC plant; advanced technology can potentially reduce cost by $60-80/kWe. Air separation is 12-15% of capital cost of IGCC plant; advanced technology can potentially reduce cost by $75-100kWe.

Year	Target	Actual	**Measure Term:** Annual
2003		$1250-1300	
2005	$1,200		
2006	$1,200		

Program: Clean Coal Research Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
60%	67%	75%	40%	

2007	$1,150

Measure: Mercury (Hg) removal cost and removal efficiencies from coal-fired power plants.

Additional Information: 2005 pilot scale slip stream field testing of 50-70% Hg capture technology at current costs (carbon injection technology); 2006 initiate field testing of >90% Hg removal at current cotsts; 2007 complete field tests of 50-70% Hg removal at <75% current costs; 2008 have 50-70% Hg capture technology available for full-scale commercial demonstration; 2009 complete field testing of >90% Hg capture technology at <75% current costs; 2010 >90% Hg capture technology ready for full commercial demonstration. *at conventional cost.$at <75% current cost. ^ at <75% cost.

Measure Term: Annual

Year	Target	Actual
2003		70-90%eff/$50-70k/lb
2005	50-70% convt. cost	
2006	> 90% capt.*	
2007	50-70% removal$	

Measure: Reduce net cost of CO2 capture and sequestration.

Additional Information: Measure based on analysis of pilot scale tests of 90% carbon capture technologies. Current 90% capture technology increases COE by 30% or about 1 cent /kW

Measure Term: Annual

Year	Target	Actual
2003		30% increase coe
2005	25% increase COE	
2007	20% increase COE	
2009	17% increase COE	

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	74%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The clear purpose of the Directed Stockpile Work (DSW) Program is science-based stockpile stewardship -- to ensure that all nuclear warheads in the U.S. nuclear stockpile are safe, secure, and reliable, if needed. The DSW Program achieves this purpose by: (1) conducting scheduled warhead maintenance, (2) conducting tests to certify warhead reliability and to detect/predict potential warhead issues mainly from aging, (3) developing solutions to extend warhead life or to correct potential issues resulting in a First Production Unit (FPU), (4) refurbishing all warheads to install the life extension solution and other fixes, (5) dismantling warheads retired from the stockpile, and (6) developing advanced warhead concepts for the stockpile.

Evidence: The Atomic Energy Act of 1954 (as amended); Public Law (PL) 106-65; Nuclear Weapons Stockpile Memorandum (NWSM); & Requirements and Planning Document (RPD).

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The DSW Program directly supports the Nation's nuclear weapons defense mission. Through the Department of Energy (DOE), the National Nuclear Security Administration (NNSA) DSW Program is responsible for enhancing U.S. national security through the military application of nuclear technology. The FY1994 National Defense Authorization Act directed the Secretary of Energy to "establish a stewardship program to ensure the preservation of the core intellectual and technical competencies of the U.S. in nuclear weapons." The Act codifies the need to maintain the Nation's nuclear deterrent while addressing no underground testing with an aging work force and stockpile. The DSW Program addresses the specific need to certify to the President on an annual basis that the U.S. nuclear weapons stockpile is safe, reliable, and secure in the absence of underground nuclear testing.

Evidence: The Atomic Energy Act of 1954 (as amended); Department of Defense (DoD) Nuclear Posture Review (NPR), 2001; NNSA Strategic Plan; & Production and Planning Directive (P&PD).

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The research, development, and production of nuclear warheads are the sole province of the federal government. By statute, the research, development, and production of nuclear warheads/bombs is a federal government role and responsibility. The DOE National Nuclear Security Administration (NNSA) is the federal agency solely responsible for the research, development, and production of these warheads and their safety, security and reliability. Within NNSA Defense Programs, DSW is supported by: a select group of Campaigns to provide specialized capabilities, Readiness in Technical Base and Facilities (RTBF) to provide a robust infrastructure, and Secure Transportation Asset to provide secure movement; but their roles are to supplement, not duplicate, the DSW R&D and production functions. Specific reference to the Atomic Energy Act of 1954 establishes the need for civilian control (versus military/DoD control) of the nuclear stockpile thereby eliminating a redundant or duplicative program in the Nation's public or private sector.

Evidence: The Atomic Energy Act of 1954 (as amended); NWSM; NNSA Strategic Plan; & Joint DOE-DoD Phase 6.X (Refurbishment) Process.

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	74%	Effective

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The NNSA DSW elements are jointly planned with, and reviewed by, the DoD through the Nuclear Weapons Council (NWC) process to assure that the program is efficiently and effectively meeting the needs of the Nation's nuclear deterrent policies and requirements. This process is focused on accountability and management of a large capital assets and strong R&D program to assure a safe, reliable, and secure nuclear stockpile to meet National Security policies and military requirements. The DSW Program is structured to effectively manage and leverage funding through decisions made at the NWC level, the weapon refurbishment Phase 6.x Process, and a streamlined warhead/bomb-specific budgeting-by-weapon process. To support management and accounting, budget categories were established by weapon type in FY 2005 and include sub-categories under the Stockpile Research and Development (R&D) and Management sub-programs to execute warhead/bomb Life Extension Programs (LEPs), warhead/bomb stockpile systems work, and retire weapons, provide stockpile services, and develop advanced concepts.

Evidence: Annual DSW Program and Implementation Plans; Quarterly Program Reviews (QPRs); Joint DOE-DoD Phase 6.X Process; LEP Project Plans; DOE Inspector General (IG) Audits; NWC deliberation minutes; & Project Officer's Group (POG) recommendations

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: The NNSA PPBE Process and FYNSP properly allot funding resources to the specific program elements and M&O contractors, on both a multi-year and annual basis. Specific DSW elements are funded annually according to the needs that have been defined by NNSA and/or jointly identified and approved with the DoD to assure a safe, reliable, and secure nuclear weapon stockpile to meet National Security requirements. Annual budget decisions correlate these joint NNSA-DoD-NWC agreements with targeted resources. Implementation is done annually by Work Authorizations and Approved Funding Programs from the program to the M&O contractors and weapons complex documentation, such as the Production & Planning Directive (P&PD). The jointly agreed-upon Life Extension Programs (LEPs) are individually planned and executed. This directly supports the program's purpose.

Evidence: NNSA Strategic Plan; NNSA Budget/Future-Years Nuclear Security Program (FYNSP); DSW Program & Implementation Plans; LEP Project Plans; & P&PD.

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight 11%

Explanation: The DSW Program has a limited number of specific long-term measures to meaningfully assess progress in achieving the program purpose. They are: 1) annually, complete required assessment and reports to support Stockpile Certification to the President; 2) annually, complete 95% of all Production Control Document (PCD)-required stockpile maintenance activity and 100% all prior year's non-compliance evaluations; 3) complete the B61-7/11 LEP by FY 2009: 4) complete the W76-1 LEP by FY 2013; 5) complete the W80-3 LEP by FY 2015; 5) complete the W87 LEP by FY 2008; and 7) complete appropriately authorized Robust Nuclear Earth Penetrator (RNEP) activities.

Evidence: NNSA Budget/FYNSP; DSW Program and Implementation Plans; Selected Acquisition Reports (SARs); RPD; & Program Control Documents (PCDs) for each warhead and bomb type/family.

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	74%	Effective

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight: 11%

Explanation: The long-term measures cited above are ambitious, measurable, and have specific endpoints. Implementation of the NNSA Planning, Programming, Budgeting, and Evaluation (PPBE) process has instituted requirements to identify the appropriate level of performance measures for DSW work that is coordinated through the Nuclear Weapons Council. The long-term measures are correlated with DSW ongoing and long-term efforts and associated timeframes that are extremely ambitious given the one-of-a-kind R&D that goes into nuclear weapons, the strict adherence to safety and security requirements, the commitment to forego underground nuclear testing, the aging of weapon systems and components beyond their design life, and the retiring of nuclear experts with design, production, and underground test experience. The targets are negotiated and developed by NNSA federal managers and are vetted with the Management and Operating (M&O) Contractors to arrive at an agreed set of targets/ milestones/ timelines for the scope of work required. Detailed planning and independent reviews validate that these targets, although highly challenging, are also reasonable and achievable.

Evidence: NNSA Strategic Plan; RPD; P&PD; PCDs; Stockpile Stewardship Plan (SSP) & Master Nuclear Schedule (MNS) [refurbishment Life Extension Option (LEO) process and notional Advanced Concept Initiatives (ACI) activities]

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight: 11%

Explanation: The DSW Program has a limited number of specific annual measures to meaningfully assess progress in achieving the program's long-term measures. For FY 2006, they are: 1) complete annual Stockpile Certification & Surety Assessments and Reports; 2) accomplish 95% of PCD-scheduled activity and 100% of prior year's non-completed evaluations (an efficiency measure); 3) for B61-7/11 LEP, complete 100% of Phase 6.4 and 6.5 activity and 6% of Phase 6.6 activity; 4) for W76-1 LEP, complete 85% of Phase 6.3 activity and 45% of Phase 6.4 activity; 5) for W80-3 LEP, complete 90% of Phase 6.3 activity and 45% of Phase 6.4 activity; 6) for W87 LEP, complete 35% of scheduled Phase 6.6 future surveillance production (FP); and 7) for RNEP, complete scheduled Phase 6.2/6.2A activity.

Evidence: NNSA Budget/FYNSP; DSW Program & Implementation Plans; LEP Project Plans; SARs; P&PD; & Site Office Memoranda defining annual expectations; Contractor Program Execution Plans (CPEPs); & Work Authorizations.

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight: 11%

Explanation: The DSW annual performance measures relate directly to the defined activities that can be monitored to determine the success of NNSA's efforts in meeting nuclear weapon stockpile needs and provide the correct framework for annual targets to measure progress. The DSW Program Directors also maintain a detailed set of ambitious annual milestones and deliverables derived from the NNSA Strategic Plan and DSW Program Plan, and approved baselines. The annual measures are supported by the Level 1 and Level 2 milestones that are under change control in the Defense Programs (DP) Milestone Reporting Tool (MRT) database. Level 3 and lower-level milestones supporting the Level 1 and Level 2 milestones are documented in the M&Os Implementation Plans and Work Authorizations. Level 2 milestones are statused by the DSW program managers quarterly with input from the responsible site. In light of the age of the weapons in the stockpile and the lack of underground nuclear testing, the annual targets are ambitious.

Evidence: NNSA Budget/FYNSP; DSW GPRA (Government Performance and Results Act) Unit Program Plan; DSW Implementation Plans; LEP Project Plans; Seamless Safety for the 21st Century (SS-21) Project Plans; Warhead Certification Plans; Refurbishment Project Plans; QPRs; DP MRT; Site Level 3 Milestones; & Work Authorizations.

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:11%

Explanation: All DSW partners (NNSA, Campaigns, RTBF, M&Os, DoD, & NWC) commit and work towards the annual/long-term goals. The NNSA federal managers and M&O Contractors are fully involved in determining the appropriate scope of work necessary to meet the DSW program elements (e.g., LEPs; Enduring Weapon Stockpile Systems activities; Retired Weapon Stockpile Systems; Stockpile Services R&D, Certification and Safety; Stockpile Services Management, Technology and Production; and Advanced Concepts). This work scope is then delineated in DSW Program and Implementation Plans and is provided to each supporting Site Office (and M&O contractor) by Work Authorization. Additionally, the NNSA-related DSW efforts are coordinated with and collaborated among DoD stakeholders through the NWC and the directed Nuclear Weapons Stockpile Memorandum. This body brings together the NNSA and DoD organizations such as Office of Secretary of Defense (OSD) Policy, Joint Chiefs of Staff, Operating Commands, and the Military Services who support the nuclear weapons stockpile. The NWC, according to statute, serves as the focal point for collaborative and coordinated positions and decisions affecting the Nation's nuclear deterrent forces. All stakeholders attend the Project Officers Group's meetings to ensure overall goals of the individual weapons programs are met and provide a status of the annual and long-term performance targets.

Evidence: NWC (Section 179 of Title 10 of the United States Code); Joint DoD-DOE Memorandum of Agreement for the Joint Nuclear Weapons Council, March 23, 1997; Implementation Plans; LEP Project Plans and agreements with campaign managers on deliverables; Joint DOE-DoD Phase 6.X Process; & NWSM.

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:11%

Explanation: All major DSW activity is monitored by the Nuclear Weapons Council on behalf of the DoD and the Armed Services. There are also many periodic independent evaluations of the DSW-related activities conducted by: Congressionally established groups (e.g., FY 2003 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile, April 11, 2003--Foster Panel); Chiles Commission Reports; JASON External Peer Review; The Secretary of Energy's 30-Day Review of the Stockpile Stewardship Program; DoD groups [e.g., U.S. Strategic Command Strategic Advisory Group Stockpile Assessment Team (SAGSAT) Peer Reviews and Science & Technology (S&T) groups], and other pre-eminent external review groups that evaluate the total scope of DSW activities. The Defense Nuclear Facilities Safety Board (DNFSB), Office of Management and Budget (OMB), U.S. General Accounting Office (GAO), and DOE Inspector General (IG) also conduct regular independent reviews to evaluate the performance of the major weapon programs. Additional advice is sought through established groups of "external " experts that review specific program elements (e.g., NA-12-sponsored Kitchen Cabinet and NA-11 Science Council). These external reviews are of sufficient scope and quality so as to assure annual nuclear weapons certification to the President.

Evidence: FY 2003 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile, April 11, 2003 (Foster Panel); Chiles Commission Report; JASON External Peer Review; DNFSB findings and recommendations; SAGSAT Peer Reviews; GAO Reports; & DOE IG Reports.

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

2.7 Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget? Answer: YES Question Weight: 11%

Explanation: Each NNSA program is managed using long-term performance goals with annual targets that cascade seamlessly from the NNSA strategic plan, and also link to supporting milestones, deliverables, and the budgets for program performers. The NNSA program performance measures are the framework for resource allocation decisions made in the annual PPBE Programming and Budgeting processes. The Budget and Reporting (B&R) categories for the DSW Program are listed and linked to performance metrics. All direct and indirect costs to attain the performance results for the DSW Program are reported in the B&R categories. The cost for the NNSA Federal employees is carried in a separate NNSA program direction account, as required by the Congress. In the FY 2005 President's Budget, NNSA initiated a budget request format that includes the current 3 years plus 4 additional years of performance and budget information for each program ("GPRA Units") in the mainline budget justification document. Formerly, the outyear funding and performance targets were included in a separate document, the Future-Years Nuclear Security Program, provided with the budget request. The DSW planning process mirrors the NNSA PPBE process improvements with the primary focus to provide the necessary information to complete all levels of planning and to task experienced senior Program Managers to implement the directed DSW plans. In FY 2005, DSW implemented a B&R Code restructuring, as requested by Congress in FY 2003, to manage the DSW Program, by weapon type. The new structure has improved the visibility and accountability of the individual weapons program within DSW and has provided alignment with the DoD funding cycle.

Evidence: NNSA Strategic Plan; NNSA PPBE requirements/documents; LEP Project Plans; Organizational Excellence Initiative for planning process development; & Adoption of DOE Order 413 for Weapons Planning.

2.8 Has the program taken meaningful steps to correct its strategic planning deficiencies? Answer: YES Question Weight: 11%

Explanation: For each major nuclear warhead/bomb refurbishment program under DSW, that is managed and budgeted by weapon system, there is a specific process (either Life Extension Option--LEO--or Phase 6.X Process) that is mandated to assure that the program team addresses alternative design approaches and conducts trade-offs between cost, schedule, risk, and performance to arrive at the appropriate options for consideration in the refurbishment decision. The specific process is followed closely by senior NNSA managers through regularly scheduled program reviews to monitor the program's progress in meeting the goals and deliverables, and to guide the activity as necessary.

Evidence: Ongoing Systems Engineering approach; NPR; SCA; DOE-DoD Phase 6.X Process; LEO Process; BeO (Beryllium Oxide) Issues Study; & Gas Transfer System Optimization Study.

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

2.CA1 **Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity?** Answer: YES Question Weight: 11%

Explanation: The analysis that supported the recent restructuring of DSW to reflect management and reporting by weapon system reflects this type of analysis. The specific process (either Life Extension Option--LEO--or Phase 6.X Process) for each major nuclear warhead/bomb refurbishment program under DSW that is followed provides phases or stages where the program team addresses alternative design approaches and conducts trade-offs between cost, schedule, risk, and performance to arrive at the appropriate options for consideration in the refurbishment decision. The process is followed closely by senior NNSA managers through regularly scheduled program reviews to monitor the program's progress in meeting the goals and deliverables, and to guide the activity as necessary.

Evidence: Ongoing Systems Engineering approach; Integrated Construction Program Plan (ICPP); Special Materials Study; NPR; SCA; DOE-DoD Phase 6.X Process; LEO Process; BeO Issues Study; & Gas Transfer System Optimization Study.

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: YES Question Weight: 0%

Explanation: DSW activities are unique and cannot be directly compared to any public or commercial program. However, the DSW Program does ensure that the potential benefits derived from a particular major refurbishment are carried through the life-cycle of all warhead/bomb systems via the joint DOE-DoD Phase 6.X Process. For example, during the Phase 6.2/2A (Feasibility Study and Option Down-Select/Design Definition and Cost Study) process where most R&D activities are funded, the issued study determines the technical feasibility of the warhead concept and selected alternatives and refines the warhead design (design definition, program schedule, and cost estimates). As this process is consistently used across all warhead systems, program benefits and information are shared with all design (physics laboratories) and production teams. Additionally, Significant Finding Investigations (SFIs) are documented and coordinated across warhead systems that use similar design and production parts to achieve closure. Common safety and reliability issues, therefore, are beneficially resolved across multiple warhead systems. NNSA has also evaluated the NASA Columbia Accident Investigation Report for Lessons Learned.

Evidence: Joint DOE-DoD Phase 6.X Process; Joint Nuclear Weapons Life-Cycle Management Process; DP Quality Management Policy (QC-1) integrated database; lessons learned W87 LEP; LEO Process; Subcritical Experiments (SCE) Program Plan; SCA; P&PD; Defense Programs NASA Columbia Accident Investigation Report; & Significant Finding Investigation Monthly Reports (classified).

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight: 0%

Explanation: The DSW Program follows the NNSA Defense Programs Planning Guidance, with annual program priorities, to set DSW priorities for the R&D and production efforts. These priorities are documented in the DSW Program Plan and the P&PD correlating to the FYNSP and updated annually. Being an applied R&D program related specifically to the Refurbishment Schedule and the Annual Assessment Report reported to the President, funding decisions within the DSW Program must achieve the stated program objectives (e.g., R&D outputs, Engineering Releases, & closure of Significant Finding Investigations) when required for ensuring the safety and reliability of the stockpile. Budget requests are derived from these priorities and are supported by work scopes presented in the annual DSW R&D and production Implementation Plans. Funding decisions are validated by both the DoD and the NWC via approval of the Phase 6.X Process for individual warhead/bomb systems. Mid-year and annual program reviews of all DSW R&D activities are performed to measure progress on meeting the planning milestones.

Evidence: DP Program Planning Guidance; DSW Program & Implementation Plans; P&PD; DP Milestone Reporting Tool; & SARs for the LEPs.

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight: 13%

Explanation: The Program Managers for major activities routinely collect information to evaluate the performance of their programs and report quarterly to senior managers their program progress. There are Quarterly Program Reviews and Management Reviews conducted with Site Offices and M&O Contractors to review the status of ongoing sub-programs and projects under the DSW program. Implemented in FY 2004 as a new management process, the DP Milestone Reporting Tool (MRT) database contains all DSW Level 1 and Level 2 milestones under change control. The MRT is statused quarterly by both the responsible M&O contractor and federal program manager. MRT data is presented quarterly at the Quarterly Program Reviews (QPRs). Additionally, the R&D activities that are conducted at the nuclear weapons laboratories are reviewed in detail at least twice a year to ascertain the progress and compliance with program goals and objectives.

Evidence: QPR briefings; DP MRT; Quarterly LEP Reviews; annual NNSA Administrator reviews of major program activities; Annual and Mid-Year DSW R&D Program Reviews; & weekly video teleconferences. Also, Section 4.3 of Chapter 4 of the Development and Production (D&P) Manual details the process of reporting and accounting for the nuclear weapon stockpile inventory.

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight: 13%

Explanation: The implementation of the NNSA PPBE and the emphasis on Program Management, with designated NNSA DSW Program Managers for warheads and bombs and DSW performance measures linked to M&O performance evaluations, has increased the accountability for cost, schedule, and performance (scope) for critical DSW work. Program Managers are responsible for allocating funding through the work authorization process and monitoring costs and schedule monthly. Federal program managers are held accountable to their programs by performance metrics in their measures of performance (MOPs) and annual appraisals that link to program performance results. M&Os and other partners are held accountable through Work Authorizations, project plans, and award fees that link to program performance results. Performance is monitored using a documented set of milestone-related targets and measures, the Milestone Reporting Tool database, and annual program/performance reviews.

Evidence: Financial Data/Warehouse reports from DOE Financial Information Management System (FIMS); DSW Implementation Plans; Work Authorizations; Quarterly Program Reviews; Annual Laboratory Assessments; Cost Control Board; Quarterly LEP Reviews; DP MRT; Individual Federal Program Manager MOPs & Performance Appraisals; & annual NNSA Administrator reviews of major program activities.

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight: 13%

Explanation: The program funding under DSW is projected in Implementation Plans and obligated in a timely manner via Approved Funding Program (AFP) documents and Work Authorizations. Fund expenditures are tracked monthly to assure funds are obligated timely for intended purposes. The Program Managers routinely conduct reviews with their teams to evaluate the progress in obligating and spending program resources according to program requirements.

Evidence: Monthly Financial reports; Quarterly Program Reviews; NNSA Administrator reviews of major program activities; Annual and Mid-Year DSW R&D Program Reviews; Implementation Plans; AFPs; & Work Authorizations.

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: NO Question Weight: 13%

Explanation: Because its nuclear weapons activities are unique and are primarily executed by an M&O contractor base in Government-owned facilities, the NNSA lacks the capability to use competitive sourcing/cost comparisons for prime procurements. This limits but does not eliminate the potential to be efficient & cost-effective. PPBE implementation, adopting management & cost reporting by weapon system, and assigning Program Managers for each warhead/bomb program have resulted in strong financial accountability, performance-based management, and improved business practices and procedures that emphasize scope, schedule, and budgetary review. The PPBE Programming Phase uses cost efficiencies (e.g., during FY 2006 Programming, a complex-wide team was established to develop a cost-effective alternate for Gas Transfer Systems). Annual schedule, scope, and cost estimates are devised with site office and M&O contractor input, as are program planning and execution (e.g., Kansas City Plant (KCP) and Sandia National Laboratory (SNL) are collaborating on the W76-1 Integrated Project Plan; the W76, W80, and B61 LEP Cost Control Board; and activities to monitor LEP execution cost, schedule, and milestones. During execution, program elements work as a team to efficiently meet targets (e.g., KCP & SNL work closely in Concurrent Design and Manufacturing to achieve cost & production efficiencies in item inventory and scheduling, and implementing central procurement processes and procedures. Progress is tracked against the schedule and the program, M&O contractors, and individual employees are evaluated against the performance targets (e.g., Federal Program Managers evaluate M&O contractors semi-annually, using DSW performance and contract metrics to determine overall performance and incentive award fees.

Evidence: Department of Energy Acquisition Regulation (DEAR) 970.5204-87, Cost Reduction, April 1999; Quarterly Program Reviews and Progress Reports; LEP agreements with Campaigns; annual M&O contractor reviews; & NNSA PPBE requirements.

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight: 13%

Explanation: The NNSA efforts under DSW are coordinated and collaborated with DoD stakeholders in the nuclear weapons stockpile through the Nuclear Weapons Council. This body brings together the NNSA and DoD organizations such as OSD Policy, Joint Chiefs of Staff, Operating Commands, and the Military Services who support the nuclear weapons stockpile. Collaboration is necessary to perform the annual weapon assessment, to coordinate between the design and production agencies, to maintain Readiness in Technical Base and Facilities (RTBF), and to compliment the activities of supporting campaigns (e.g., Science, Engineering, Readiness, and Advanced Strategic Computing) which work toward a common Stockpile Stewardship Program goal. Similar coordination is performed through membership in working committees within the Defense Threat Reduction Agency, Project Officers Group (POG), and many DoD-funded R&D agencies. Cooperation within DOE (e.g., Office of Science) and external to the U.S. with selected allied nations is also effected. Culmination of the collaboration with DSW partners and related programs is the issuance of the Annual Assessment Reports, signed by the Secretaries of Energy & Defense, to the President which ensures that the existing stockpile continues to meet its military requirements without underground nuclear testing.

Evidence: Joint DoD-DOE Memorandum of Agreement for the Joint Nuclear Weapons Council, March 23, 1997; Joint DOE-DoD Phase 6.X Process; LEO Process; POG Charters for each nuclear warhead & bomb program; LEP Project Plans (and agreements with Campaigns); & P&PD.

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

3.6 Does the program use strong financial management practices? Answer: YES Question Weight: 13%

Explanation: The DSW Program is covered by DOE's financial management policies, procedures, and practices that meet all statutory requirements. The accounting services for NNSA are provided by DOE and these are free of material internal control weaknesses. The DOE's financial statements have been given a clear audit opinion in 7 of the last 8 years. The DSW Program staff reviews accounting reports on a monthly basis to monitor obligations and costs for all projects and sites.

Evidence: DOE Financial Management Orders; NNSA PPBE Guidance Documents located on the NNSA web-site; Quarterly DSW Program Reviews; & Laboratory Quarterly DSW Progress Reports.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight: 13%

Explanation: The NNSA PPBE process and the assignment of Program Managers for each warhead and bomb effort have been major steps toward resolving management issues. The definition of steps to comply with the new process and the definition of specific Program Management approaches have helped NNSA program teams to institute needed controls and measurement techniques that help guide projects conducted under DSW to their successful conclusion. Internally, the NNSA uses separate Campaign Programs to augment the DSW with required specialized scientific, engineering, and production readiness resources to minimize DSW internal management/priority conflicts. The DOE Inspector General audited several Defense Programs' high profile projects, including construction and operation of testing facilities and resolution of Significant Finding Investigations. They reported areas of opportunities for improvement which have the support of NNSA management and are undergoing evaluation and implementation within the re-engineering process. For example, in FY 2004, two LEP programs were re-baselined to align FYNSP funding to support the First Production Unit (FPU) delivery dates. The re-baselining efforts were coordinated through detailed estimates at completions and project management principles established from lessons learned from the W87 LEP and the NASA Columbia Accident Investigation Report and implementation of NNSA's QC-1. Although the re-baselining impacted multiple sites and Defense Programs project prioritization in the outyears, the LEPs are on track to meet FPU through sound management of realistic resource-loaded schedules.

Evidence: Quarterly Program Reviews; Agreements with Campaigns; NNSA Administrator reviews of major program activities; NNSA PPBE requirements; DOE IG Audit Reports on the Dual-Axis Radiographic Hydrodynamic Test Facility and SFIs; SFI quarterly reports; & Foster Panel Report.

3.BF1 Does the program have oversight practices that provide sufficient knowledge of grantee activities? Answer: YES Question Weight: 0%

Explanation: The NNSA PPBE process and the assignment of Program Managers for each warhead and bomb effort have been major steps toward resolving management issues. The use of annual Program and Implementation Plans with performance measures, LEP NNSA Program Plans and schedules, P&PD, and configuration-controlled Level 1 and Level 2 milestones for major DSW efforts (with corresponding site--Level 3 milestones) have helped define the deliverables tied to cost and schedule requirements. The definition of steps to comply with the new process and the definition of specific Program Management approaches have helped NNSA program teams to institute needed controls and measurement techniques that help guide projects conducted under DSW to their successful conclusion.

Evidence: Quarterly Program Reviews; NNSA Administrator reviews of major program activities; NNSA PPBE requirements; DP MRT; DSW Program & Implementation Plans; LEP Plans; SS-21 Project Plans; Warhead Certification Plans; & SARs for LEPs.

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

3.CA1 **Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals?** Answer: YES Question Weight: 13%

Explanation: The NNSA PPBE process and the assignment of Program Managers for each warhead and bomb effort have been major steps toward resolving management issues. The use of annual Program and Implementation Plans with performance measures, LEP NNSA Program Plans and schedules, P&PD, and configuration-controlled Level 1 and Level 2 milestones for major DSW efforts (with corresponding site--Level 3 milestones) have helped define the deliverables tied to cost and schedule requirements. The definition of steps to comply with the new process and the definition of specific Program Management approaches have helped NNSA program teams to institute needed controls and measurement techniques that help guide projects conducted under DSW to their successful conclusion.

Evidence: Quarterly Program Reviews; NNSA Administrator reviews of major program activities; NNSA PPBE requirements; DP MRT; DSW Program & Implementation Plans; LEP Plans; SS-21 Project Plans; Warhead Certification Plans; & SARs for LEPs.

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: YES Question Weight: 20%

Explanation: The NNSA DSW is meeting its requirements for stockpile maintenance and production to assure military operational requirements are met. In addition, the stockpile evaluation activities are being conducted to allow the assessment of stockpile safety and performance. DSW's current long-term R&D performance measure is the completion of the Phase 6.X Process for the Robust Nuclear Earth Penetrator (RNEP). In FY 2006, DSW is scheduled to and is on track to complete the Phase 6.2/2A Feasibility Study. Long-term annual performance goals are achieved with documented evidence through Quarterly Program Reviews and MRT updates with the Program Managers for major Life Extension Programs and current stockpile systems. Any schedule adjustments to jointly approved NNSA-DoD programs are routinely negotiated and reviewed by the appropriate Project Officers Group and the NWC stakeholders prior to implementation. The planning for future DSW refurbishment efforts and other long-range activities continues to be assessed on an annual basis through the Life Extension Options process and associated Component Decision Document (CDD) and P&PD.

Evidence: NNSA Budget/FYNSP; production/delivery schedules; P&PD; DSW Program Plan; Master Nuclear Schedule; P&PD; CDDs; DP MRT; Interactions with the appropriate warhead or bomb POG; & individual Federal Manager measures of performance (MOPs).

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: LARGE EXTENT Question Weight: 20%

Explanation: The NNSA DSW elements are jointly planned and reviewed by the Department of Defense through the Nuclear Weapons Council process to assure that the program is efficiently and effectively meeting the performance goals and needs of the Nation's nuclear deterrent policies and requirements. This process is focused to assure a safe, reliable, and secure nuclear warhead stockpile to meet the National Security policies and related military requirements. Most annual performance goals have been met. However, because of funding priorities in FY 2004, DSW accepted the schedule risk on the completion of several annual performance goals. Delays associated with the completion of hydrodynamic tests and burn codes, and re-baselining LEPs have impacted the DSW ability to achieve all Level 2 milestones associated with the PCD.

Evidence: NNSA Strategic Plan; NNSA Budget/FYNSP; Nuclear Weapons Council deliberations; DSW Program & Implementation Plans; DP MRT; & Project Officer's Groups' recommendations.

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?

Answer: LARGE EXTENT Question Weight: 20%

Explanation: Within the limitations described in Q3.4, NNSA has improved cost efficiencies. The DSW annually establishes program performance measures for the M&O contractors and the Federal Program Managers evaluate the M&O contractor efficiency and effectiveness in meeting these measures to determine contract award fee(s). Detailed monthly financial reports are used by Program Managers to closely track expenditures and obligations. The NNSA Federal workforce re-engineering initiative has also focused on combining functions and has resulted in a re-definition of roles and responsibilities to improve efficiencies in DSW program direction and management. The benefits of the NNSA re-engineering effort are showing positive results within the DSW program and DSW (weapons) sub-programs are significantly more effective (than the prior functional approach) and greater accountability has eliminated previously perceived duplication of effort. For FY 2006, DSW Program Planning Guidance to the M&O contractors includes directing work toward, and demonstration of, not less than 10% efficiencies at the DSW sites as well as determination of cost/unit for dismantlements and cost/unit for surveillance activities. Additionally, BWXT Y-12 is providing DSW weapons hardware and other technical services to the Design Agencies in a highly responsive manner in terms of timeliness, quality and cost-effectiveness--meaning that BWXT Y-12's project performance will be judged to be "faster, better, and cheaper" when compared with similar projects & earlier evaluation periods. The new DSW B&R budget & accounting structure will increase M&O cost accounting consistency and accuracy reporting. The I-MANAGE financial system will soon be available to generate better financial reports to integrate cost reports & better evaluate DSW efficiencies and cost-effectiveness.

Evidence: NNSA Monthly Financial Reports; Annual M&O contractor program evaluation by Federal Managers; Annual Certification Reports to the President and to Congress; W80 and W76 LEP Cost Control Boards; laboratory and production plant Performance-Based Incentives Programs; & NNSA Reengineering efforts and related reports to Congress.

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?

Answer: NA Question Weight: 0%

Explanation: No other program has the mission, scope, or operating environment that the DSW has. This is a federal government program with a unique mission and where M&O contractors perform highly technical and classified R&D and production activities to maintain the U.S. nuclear warhead deterrent forces. In some respects, this compares to large DoD activities that procure military equipment from industrial contractors; however, it differs in that there is no specific competitive efforts for warhead development and production external to the NNSA complex. There are some joint individual R&D and production programs with the DoD that might be comparable such as the integrated Arming, Firing, and Fuzing (AF&F) systems for Submarine-Launched Ballistic Missile warheads. The NNSA also jointly works with the DoD through joint Memoranda of Understanding (MOUs) for research and development on a variety of technologies such as fuzing, penetrator mechanics, and sensors. This does not mean that DSW works in a vacuum. The joint DoD activity provides some progress comparisons as does work with foreign governments. DSW also reviews selected aspects of the commercial R&D and production environment for lessons learned and state-of-the art concepts & capabilities. There are also steps being taken within DSW to institute systems engineering approaches, stronger program management techniques, and incentives for program performance that are expected to improve this element, based on efforts in other programs.

Evidence: President's Budget; Joint DOE-DoD MOUs; POG meetings; LEP Management Plan; NNSA M&O contractor evaluations; & GAO Reports.

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: LARGE EXTENT Question Weight 20%

Explanation: The DSW Program achieves its annual and long-term targets with the continual oversight of various independent technical panels and experts groups focused on current evaluations of program elements. As independent program evaluation reports are issued, NNSA addresses identified concerns with the goal of continuous improvement to the Stockpile Stewardship Program. Within Defense Programs, the Kansas City Plant has recently achieved ISO (International Standards Organization) 9000 status in managing its production facilities with the highest certifiable quality. The NNSA is striving for similar levels of high quality performance among its M&O contractors across the weapons complex. Additionally, In FY 2004, the independent JASON report evaluated the use of a technical approach called Quantification of Margins and Uncertainties (QMU) within the annual stockpile assessment process under the Stockpile Stewardship Program, leading to the conclusion that QMU is an effective tool in validating the DSW assessment of stockpile reliability. External independent program evaluations of NNSA DSW activities are conducted by the Congressionally established Foster Panel, the NNSA Administrator's Advisory Committee, DoD expert groups (e.g., the U.S. Strategic Command Strategic Advisory Group Stockpile Assessment Team (SAGSAT) and Science and Technology (S&T) Groups), and other pre-eminent external review groups that evaluate the total scope of DSW activities. Additionally, the DNFSB, OMB, GAO, and DOE IG regularly evaluate and report on major NNSA DSW weapons programs. All these external reviews are of sufficient scope, scrutiny and quality so as to assure the continued DSW programmatic validation of the annual nuclear weapons certification to the President.

Evidence: DNFSB reports; Foster Panel report; SAG S&T reviews; POG reviews; & JASON External Peer Review.

4.CA1 Were program goals achieved within budgeted costs and established schedules? Answer: LARGE EXTENT Question Weight 20%

Explanation: The DSW Program Managers establish annual budgets and performance metrics for the M&O Contractors to achieve program goals and milestones. The DSW program performance goals are monitored through performance of stockpile maintenance, evaluation, dismantlement/disposal, production support, and R&D work elements and are measured against budget and schedule identified in the DSW Program Plan. The Program Managers work with each of the M&O contractor project teams to identify budget and schedule issues and to facilitate project integration throughout the course of the projects to ensure product delivery, on time and within budget. When adjustments are required, the Federal program managers and the M&O contractors work together to redefine the planned scope and milestones to meet program needs. Revisions and impacts to other DSW sub-programs are considered and higher NNSA managers are included to evaluate the crosscutting impacts to the total DSW effort.

Evidence: NNSA Budget/FYNSP; DSW Program Plan; Program Reviews; & DOE Financial Information Management System reports.

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

Measure: Annual percentage of warheads in the stockpile that are safe, secure, reliable, and available to the President for deployment.

Additional Information:

Year	Target	Actual
2003	100%	100%
2004	100%	
2005	100%	
2006	100%	
2007	100%	
2008	100%	
2009	100%	
2010	100%	

Measure Term: Annual

Measure: Annual percentage of required Stockpile Certification and Surety Assessments and Reports completed to support stockpile certification to the President

Additional Information:

Year	Target	Actual
2003	100%	100%
2004	100%	
2005	100%	
2006	100%	
2007	100%	

Measure Term: Annual

PROGRAM ID: 10002126

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

2008	100%
2009	100%
2010	100%

Measure: Annual percentage of Program Control Document (PCD) maintenance items on the enduring stockpile completed [and annual percentage of prior year non-completed maintenance items completed]

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	95%-100%	93%-79%	
2004	95%-100%		
2005	95%-100%		
2006	95%-100%		
2007	95%-100%		
2008	95%-100%		
2009	95%-100%		
2010	95%-100%		

Measure: Cumulative percentage of progress in completing Nuclear Weapons Council-approved W76-1 LEP activity.

Additional Information:

Year	Target	Actual	**Measure Term:** Long-term
2003	0.18	0.18	

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

2004	0.24
2005	0.29
2006	0.34
2007	0.39
2008	0.44
2009	0.49
2010	0.54

Measure: Cumulative percentage of progress in completing Nuclear Weapons Council-approved B61-7/11 LEP activity.

Additional Information:

Year	Target	Actual
2003	0.1	0.1
2004	0.2	
2005	0.3	
2006	0.4	
2007	0.7	
2008	0.9	
2009	1	

Measure Term: Annual

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition, Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

Measure: Cumulative percentage of progress in completing Nuclear Weapons Council-approved W80-3 LEP activity.

Additional Information:

Year	Target	Actual
2004	0.24	0.18
2005	0.3	
2006	0.36	
2007	0.42	
2008	0.48	
2009	0.54	
2010	0.6	

Measure Term: Long-term

Measure: Cumulative percentage of progress in completing Nuclear Weapons Council-approved W87 LEP activity.

Additional Information:

Year	Target	Actual
2003	1	
2004	1	
2005	1	

Measure Term: Long-term

PART Performance Measurements

Program: Directed Stockpile Work (DSW)
Agency: Department of Energy
Bureau: NNSA
Type(s): Capital Assets and Service Acquisition Research and Development

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	88%	74%	

Measure: Cumulative percentage of progress for the Robust Nuclear Earth Penetrator (RNEP), if appropriately authorized.

Additional Information:

Year	Target	Actual
2003	N/A	
2004	0.02	
2005	4%	

Measure Term: Long-term

PART Performance Measurements

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The mission of the Distributed Energy Resources Program is to strengthen America's affordable energy infrastructure and provide distribution utilities and consumers with a greater array of energy efficient technology choices for generation and thermal energy. To accomplish the mission, the program funds research, development, demonstration, technology transfer, and education and outreach activities in partnership with industries, businesses, utilities, States, other Federal programs and agencies, universities, national laboratories, and other stakeholders.

Evidence: FY 2004 OMB Budget Request; numerous program publications (in print and on EREN website). Authorizing legislation includes: P.L. 93-577, "Federal Non-nuclear Energy Research and Development Act of 1974"; P.L. 94-163, "Energy Policy and Conservation Act" (EPCA) (1975); P.L. 94-91, "Department of Energy Organization Act" (1977) ; P.L. 94-385, "Energy Conservation and Production Act" (ECPA) (1976); P.L. 95-619, "National Energy Conservation Policy Act" (NECPA) (1978); P.L. 101-218, "Renewable Energy and Energy Efficiency Technology Competitiveness Act of 1989"; P.L. 102-486, "Energy Policy Act of 1992".

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The program aims to help to upgrade America's aging electric power infrastructure, relieve congestion on transmission and distribution systems, reduce consumption and increase supplies and reliability during periods of peak demand, accelerate the introduction of advanced systems to improve the efficiency of market operations, support the transition from traditional monopoly regulation to more competitive markets, and reduce environmental emissions, including greenhouse gases. These efforts support the Administration's National Energy Policy as well as the Administration's climate change goals.

Evidence: The program focuses R&D on activities that it considers too technologically risky for the private sector to undertake alone. Risk levels vary on a project-by project basis.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The program is the primary Federal program working to improve efficiency and reduce emissions from distributed generation technologies. In cases where potential overlap may exist with State activities, the program works closely with States. For example, the program's staff and California Energy Commission staff issued separate solicitations for work on microturbines, and staff from each program sat on the other's review panels to ensure that projects were synergistic. The program also works with industry to develop joint plans and establish mutual goals; other groups, such as the Electric Power Research Institute (EPRI), target areas not necessarily representing national public benefit or funded at a level necessary to mobilize national change.

Evidence: The program considers uncertain risk-to-return ratio and lack of industry capital to be market barriers to private sector investment in distributed energy technologies. The program considers its aggressive goals to improve efficiency, reduce emissions, and reduce cost simultaneously to be outside of industry's capability.

PART Performance Measurements

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

1.4 **Is the program design free of major flaws that would limit the program's effectiveness or efficiency?** Answer: YES Question Weight 20%

Explanation: The DER program is focused on increasing the efficiency and decreasing the emissions of distributed energy through research and development in order to achieve the outcomes of greater electricity reliability and reduced emissions of pollutant and greenhouse gases.

Evidence: A review RAND's web site (www.rand.org, energy and public policy research) has indicated no debate the relative costs and benefits of promulgating efficiency standards for generation technologies vs. conducting research and development.

1.5 **Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly?** Answer: NO Question Weight 20%

Explanation: In support of the Administration's R&D Investment Criteria initiative, the program was asked to prepare "bubble charts" that plot key program variables (e.g., expected public benefits, funding levels, years to commercialization). Bubble charts can serve as an informational tool to help determine, along with other considerations, whether the program appropriately targets its R&D funding. While the program has made progress estimating public benefits, the Department has not yet developed a methodology to estimate benefits consistently within and across programs. Therefore, the program could not prepare meaningful bubble charts.

Evidence: In general, the program appears to target its resources wisely, but a lack of ability to provide appropriate evidence mandates a "no" response. EERE continues to work internally and with other DOE program offices to improve consistency and accuracy in estimating benefits.

2.1 **Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?** Answer: YES Question Weight 10%

Explanation: The program has two long-term goals that capture most of the activities supported in each of the two subprograms. One subprogram focuses on the development of 'next generation' distributed energy technologies (e.g., microturbines, reciprocating engines, industrial gas turbines, thermally activated cooling and humidity control devices, combined heat and power systems) that are cleaner and more reliable, fuel efficient, fuel flexible and affordable than existing equipment. The second subprogram concentrates on the development of technologies, tools, and techniques to enable prospective users of distributed energy systems - regardless of the type of technology - to evaluate benefits, install, operate, control, and maintain those systems in an optimized manner to meet the needs of their facilities and business operations, and those of the electric power and natural gas utilities to which the systems are interconnected.

Evidence: FY 2004 Budget.

2.2 **Does the program have ambitious targets and timeframes for its long-term measures?** Answer: YES Question Weight 10%

Explanation: The program has developed a Multi-Year Program Plan (July 2003) that sets out the objectives and milestones for each program activity over the 2003 - 2009 time frame and links them to the program's long-term goals. For example, one long-term measure of the program is to demonstrate three 70% efficient integrated combined heat and power (CHP) systems. (The current state of the art for these systems is approximately 60%.) The program is investing in 17 proof-of-concept demonstrations with the hopes of achieving at least 3 successes.

Evidence: Multi-Year Program Plan (FY2003-2009) for the Distributed Energy Resources Program (May 2003).

PART Performance Measurements

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

2.3 **Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals?** Answer: YES Question Weight:10%

Explanation: Annual measures are directly track to the program goals for increased efficiency and reduced pollution.

Evidence: Measures Tab.

2.4 **Does the program have baselines and ambitious targets for its annual measures?** Answer: YES Question Weight:10%

Explanation: The targets for the annual measures are quantifiable and provide a specific value with which performance (e.g. efficiency) can be compared. Baselines are clearly defined. These targets are ambitious and approach the theoretical efficiency maxima.

Evidence: Measures Tab.

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:10%

Explanation: Technical milestones outlined in cooperative agreements with industry are intended to ensure monitoring of progress towards overall program goals. Competitive solicitations link activities to long-term goals of the program.

Evidence: Sample solicitation that documents performance goals as Objectives for solicitation. Sample contract document that includes program goals.

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: The program regularly solicits opinions from experts outside of the U.S. Department of Energy to guide decision making about program directions and priorities. To accomplish this, the program develops technology roadmaps and holds peer reviews. In addition, over the past several years, the DER program has engaged in discussions with hundreds of stakeholders - manufacturers, businesses, utilities, laboratories, universities, state agencies, and public interest groups - as part of an extensive series of visioning, roadmapping, and multi-year planning processes.

Evidence: Distributed Energy Resources Peer Review (January, 2002). Microturbine Peer Review (March 2002). Reciprocating Engine Peer Review (April 2002) Gas Turbine Peer Review (March 2002). Thermal Activation Technology Peer Review (May 2002). End-use Systems Peer Review (January 2002). Peer reviewers were independent evaluators that received no program funding. Peer review questions were standard questions documenting effectiveness and progress on research, gaps and concerns.

PART Performance Measurements

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: Program funding is explicitly tied to accomplishing the two long-term performance measures for the program. However, budget documents do not clearly indicate the full costs of achieving the program goals. Salaries, benefits, and other admininstrative expenses to support the program are included in a separate budgetary line item ("Policy and Management"). EERE does not report the allocation of Policy and Management funding to the various programs it supports.

Evidence: FY 2004 Budget.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: The DER Strategic Peer Review in November, 2000, identified weak coordination with States as a strategic planning deficiency. The program implemented better coordination with the states by participating on CEC/NYSERDA solicitation reviews. The program has also prepared a draft Multi-Year Program Plan.

Evidence: DER Strategic Peer Review (November 2000), Multi-Year Program Plan (FY2003-2009) for the Distributed Energy Resources Program (May 2003).

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NO Question Weight:10%

Explanation: Each year, the program estimates the public benefits of its activities in support of the Government Performance and Results Act (GPRA) and the Administration's R&D Investment Criteria initiative. However, the program has not yet developed a consistent and reliable methodology for comparing potential benefits within and across programs with similar goals.

Evidence: FY 2004 Budget

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: At the beginning of each budget cycle, the program identifies a list of research priorities, based upon needs, issues, and trends -- not only for this budget, but for the next few years as well. These activities are ranked from lowest to highest. Without a formal Federal Advisory Committee, the program utilizes the peer review process to evaluate priorities for the program.

Evidence: The program prioritized its current activities as follows (highest to lowest priority): end-use systems integration, generation, combined heat and power, thermally activiated technologies. EERE Priority Ranking Tool, Zero Based Budget Exercise.

PART Performance Measurements

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

3.1 Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance? Answer: YES Question Weight:12%

Explanation: The EERE Strategic Management System -- which establishes at the beginning of each fiscal year an 18-month schedule for key planning, budget formulation, budget execution, and analysis / evaluation functions -- requires that each EERE program establish and track long-term and near-term program performance goals and measures. Program results as evaluated through the goals and measures are used annually and throughout the year to assess partners' performance, adjust funding, and re-align R&D portfolios.

Evidence: SMS Implementation Letter for FY 2002 - 2005 (October 2001). Sample Quarterly Progress Reports from Oak Ridge National Lab. Subprograms have quarterly reviews, with critical paths reviewed to ensure that program milestones are met. The program also reports on quarterly milestones in the Department's Joule database. However, in general, milestones in the Joule system are not necessarily meaningful or fully reflective of program progress. Thus, the Department's Joule system provides little value-added. The new I-MANAGE system, currently under development, will better integrate budget and performance.

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight:12%

Explanation: The Annual Performance Appraisals of all EERE Program Managers include criteria directly related to cost, schedule, and performance results. EERE reviews these criteria monthly in the EERE Monthly Management Reviews. Most EERE contracts include award fee and other performance criteria to hold those partners accountable.

Evidence: Performance Plan and Performance Appraisal Form for Performance Management System Employees; EERE Award Fee and Performance Based contracts; Uncosted Reports; Cooperative Agreements. The program indicates that a contracting officer the Chicago Operations office monitors spending, performance, cost and schedule, and that headquaters staff monitor laboratory funding, performance, cost, and schedule.

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:12%

Explanation: Each year, the program develops an Annual Operating Plan, which is reviewed internally to ensure that new funding is planned to be obligated consistent with the appropriated purpose. EERE also develops a Spend Plan for all of its programs. The program uses data from Departmental procurement and financial systems -- and similar data from National Laboratory partners -- to assure that actual expenditures occur for intended purposes and on a schedule consistent with the Spend Plan. Unobligated balances brought forward to FY 2004 were $1.6 million, 2.6 percent of the program's FY 2003 appropriation of approximately $61 million.

Evidence: EERE Spend Plan; monthly obligation and cost reports from the Departmental financial systems. FY 2002 AOP and 2002 spend plan showing planned expenditures vs. actuals. FY 2004 apportionment.

PART Performance Measurements

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:12%

Explanation: EERE's reorganization in 2002 clarified lines of responsibility and eliminated organizational "stovepipes" by consolidating planning, budgeting, and analysis into a single business administration office. The reorganization reduced management layers, although staff levels remained the same. EERE developed a new IT report to improve program managers' access to EERE cost, obligation, and procurement data. EERE plans to consolidate several legacy IT systems into a single program management system that is intended to track all required information on a project by project basis (cost share, type of contract according to A-11 definitions, etc.). EERE is also developing a measure to reduce uncosted balances, which means obligated funds will be put to use more quickly. These recent actions should achieve efficiencies and improve cost effectiveness, although it will be difficult in some cases to demonstrate definitively.

Evidence: EERE Reorganization "All Hands" presentation: http://www.eere.energy.gov/office_eere/pdfs/eere_reorg.pdf. EERE IT Business Case Number 019-20-01-12-01-1011-00-304-101. DER Program FY 2003 Financial Status Report (June 2003). The program notes that it uses electronic formats (e.g. CD) and the web as the primary source for information transfer to stakeholders, saving on document production costs.

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: The program partners with EPA through an interagency agreement on combined heat and power (CHP) partnerships. The program also partners with Defense (Office of Naval Research) on materials R&D. Program staff peer review contract proposals received by the New York State Energy Research and Development Agency (NYSERDA) and the California Energy Commission (CEC). CEC's program plan for reciprocating engines shows the linkages to the DOE program.

Evidence: CEC web site: www.energy.ca.gov/distgen/equipment/reciprocating_engines/future.html; EPA web site: www.epa.gov/chp/index.htm. Sample "Funds Out Interagency Agreement" with Office of Naval Research (May, 2003).

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: Each year, EERE develops and maintains a Spend Plan and a Measures spreadsheet that links the Spend Plan to annual and long-term goals and measures for each EERE program. The program reviews quarterly costing reports and weekly project status reports. There is no evidence of erroneous payments or statutory violations.

Evidence: Sample Quarterly Costing Report, EERE FY 2003 Spend Plan, measures spreadsheet

PART Performance Measurements

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight: 12%

Explanation: The National Association of Public Administrators (NAPA) found dozens of management deficiencies in the program's bureau (the Office of Energy Efficiency and Renewable Energy, or EERE) in a review published in 2000. EERE provided evidence that it addressed some of management deficiencies identified by NAPA, and has prepared a Management Action Plan that will address many of the remaining findings. While a few NAPA recommendations have not been addressed (e.g., that EERE conduct periodic audits to assure that cost-sharing partners actually provide funding they agree to), in general, EERE has taken meaningful steps to address most deficiencies.

Evidence: A Review of the Management in the Office of Energy Efficiency and Renewable Energy (NAPA, 2000). Letter Report from Assistant Secretary Garman to Chairman of the House Subcommittee on Interior and Related Agencies on implementation of NAPA recommendations (July 11, 2001). EERE Management Action Plan (August 2003)

3.RD1 For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality? Answer: YES Question Weight: 12%

Explanation: All non-laboratory efforts are conducted under a competitive merit based solicitation. For the reciprocating engine program the laboratory and university funds were competed for phase I of the program. All funded activities are screened for merit on a scientific and technical basis and peer reviewed. The reciprocating engine program also conducted a capability review of the national laboratories.

Evidence: Chicago Solicitation for Microturbines and Reciprocating Engines. Review of the National Laboratories by ARES. Table showing funding allocations as per OMB Circular A-11 definitions for "Conduct of Research and Development."

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: LARGE EXTENT Question Weight: 25%

Explanation: The program's 2002 peer review indicates that the program has generally met its short-term milestones that contribute the long-term performance goals. But the performance measures and targets were refined frequently each year before the FY 2004 Budget, making "large extent" a more reasonable response than "yes" to this question. Historically, the National Academy of Sciences notes that the program successfully completed its last long-term performance goal: develop and demonstrate an advanced industrial gas turbine (5MW) that achieves 40 percent efficiency and low NOx emissions (less than 10 lbs/MWh) by FY 2000. This program was completed in FY2000 and the program expects a commercial offering of this product in 2004.

Evidence: DER 2002 Peer Review. Energy Research at DOE: Was It Worth It? (NAS, 2000)

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: LARGE EXTENT Question Weight: 25%

Explanation: The program's 2002 peer review indicates that the program has generally met its short-term milestones that contribute the long-term performance goals. But the performance measures and targets were refined frequently each year before the FY 2004 Budget, making "large extent" a more reasonable response than "yes" to this question.

Evidence: DER 2002 Peer Review.

PART Performance Measurements

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: NO Question Weight 25%

Explanation: The program identified several activities that would seem to promote efficiency and cost-effectiveness, including: adjustable cost sharing to provide opportunities for reassessment of performance, government role and cost share with partners; integrated planning and identification of most cost effective investments/roles in R&D consortia; shifting work previously done by labs that the private sector; and developing electronic collection, storage, management and reporting systems that eliminate historic but unneeded reporting, and integrate performance, planning, fiscal and management data. The program could not provide evidence that these activities have improved efficiency and cost effectiveness.

Evidence:

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NA Question Weight: 0%

Explanation: No studies available comparing DER program performance with other R&D activities designed to improve energy efficiency in the Nation.

Evidence:

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: YES Question Weight 25%

Explanation: The DER 2002 Peer Review provided mixed, but largely positive, comments. The National Academy of Sciences reviewed one technology (Advanced Turbine Systems) developed by the program and concluded: "All in all the ATS program is a good example of a successful industry-government RD&D Program. The focus on design and build of actual equipment with a parallel supporting technology and with well-defined measurable performance goals and intermedialte milestones lead to this success." The program indicates that numerous techologies associated with the program (e.g. commerical absorption chiller; cooled silicon nitride turbine vanes; coatings extend turbine performance) have been honored by R&D Magazine as among the 100 most technologically significant products for the year. The awards indicate external recognition for program accomplishments, but it's difficult to assess their significance. It may be useful to benchmark awards/patents per dollar invested against similar applied R&D programs.

Evidence: DER 2002 Peer Review. Energy Research at DOE: Was It Worth It? (NAS, 2000)

PART Performance Measurements

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

Measure: Cumulative number of technologies developed with 25 percent increase in energy efficiency (2000 baseline), with NOx emissions less than 0.15 lbs per MWh, and an equivalent or 10 percent reduction in cost to comparable technologies.

Additional Information: The measure aims to increase energy efficiency of distributed generation and thermally activated technologies while reducing pollutant (nitrogen oxide) emissions and reducing cost, ensuring market acceptance. Deployment of the technologies can contribute to the Department's goals of increased energy efficiency and increased electricity reliability during periods of peak demand.

Year	Target	Actual
2003	0	0
2005		
2006	1	
2008	3	

Measure Term: Long-term

Measure: Cumulative number of integrated combined heat and power systems developed that will achieve 70 percent efficiency and customer payback in less than 4 years.

Additional Information: The measure assesses the program's development highly efficient and cost effective CHP package systems, which can reduce baseload on the electric grid. The payback goal assumes commercial-scale production of CHP systems, which will reduce their capital costs.

Year	Target	Actual
2003	0	0
2004	0	
2005	1	
2006	1	
2007	2	
2008	3	

Measure Term: Long-term

PART Performance Measurements

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

Measure: Efficiency of energy conversion for prototype microturbines.

Additional Information: This measures tracks the improvements in efficiency for microturbines while maintaining or reducing pollutant emissions.

Measure Term: Annual

Year	Target	Actual
2000	28%	28%
2001	28%	28%
2002	28%	28%
2003	33%	
2004	33%	
2005	35%	
2006	35%	
2007	35%	
2008	37%	

Measure: Efficiency of energy conversion for reciprocating engines.

Additional Information: This measures tracks the improvements in efficiency for reciprocating engines while maintaining or reducing pollutant emissions.

Measure Term: Annual

Year	Target	Actual
2000	36%	36%
2001	38%	38%
2002	38%	39%
2003	38%	

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

2004	42%
2005	42%
2006	42%
2007	42%
2008	47%

Measure: Amount of nitrogen oxide pollutant emitted per unit of power from small microturbines (less than 1 megawatt), in pounds per megawatt-hour (lbs/MWh).

Additional Information: Environmental emissions are relevant because there is a tradeoff between efficiency and emissions.

Measure Term: Annual

Year	Target	Actual
2001	0.7	0.7
2002	0.7	0.5
2003	0.4	
2004	0.4	
2005	0.3	
2006	0.3	
2007	0.3	
2008	0.15	

PART Performance Measurements

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

Measure: Amount of nitrogen oxide pollutant emitted per unit of power from reciprocating engines (1-10 megawatts), in pounds per megawatt-hour (lbs/MWh).

Additional Information: Environmental emissions are relevant because there is a tradeoff between efficiency and emissions.

Measure Term: Annual

Year	Target	Actual
2001	3.1	3.1
2002	3.1	3.1
2003	3.1	
2004	3.1	
2005	1.5	
2006	1.5	
2007	1.5	
2008	0.15	

Measure: Amount of nitrogen oxide pollutant emitted per unit of power from industrial gas turbines (1-10 megawatts), in pounds per megawatt-hour (lbs/MWh).

Additional Information: Environmental emissions are relevant because there is a tradeoff between efficiency and emissions.

Measure Term: Annual

Year	Target	Actual
2001	0.35	0.35
2002	0.35	0.35
2003	0.35	
2004	0.25	
2005	0.25	

Program: Distributed Energy Resources
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

2006	0.18
2007	0.18
2008	0.15

Measure: Efficiency of combined heat and power package systems.

Additional Information: Tracks only development of the most efficient CHP package systems.

Year	Target	Actual
2003	60%	60%
2004	60%	
2005	60%	
2006	60%	
2007	70%	
2008	70%	

Measure Term: Long-term

Measure: Thermally Activated Technologies.

Additional Information:

Year	Target	Actual

Measure Term:

PART Performance Measurements

Program: Elimination of Weapons-Grade Plutonium Production Program
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
60%	89%	100%	0%	Demonstrated

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The EWGPP Program has a clear purpose to reduce the threat of nuclear terrorism by facilitating shutdown of the three remaining weapons-grade plutonium production reactors in the Russian Federation through: (1) Construction of a new fossil-fuel (coal) plant at Zheleznogorsk; (2) Refurbishment of an existing fossil-fuel (coal) power plant at Seversk; and (3) Execution of a Nuclear Safety Upgrades Project to improve reactor safety pending shutdown of the reactors.

Evidence: NNSA Strategic Plan (February 2002) ; Program Strategic Plan, (October 2002); Justification of Mission Need, approved by the Deputy Secretary on 12/20/03; Implementing Agreement between the Department of Energy and the Ministry for Atomic Energy of the Russian Federation, (signed 3/12/03).

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The three remaining plutonium production reactors in the Russian Federation (RF) represent a specific and existing problem to U.S. national security because they generate 1.2 metric tons of weapons-grade plutonium per year. The fossil energy replacement program will facilitate the shutdown of the reactors thereby preventing the production of several metric tons of weapons-grade plutonium which would compound an already substantial proliferation concern.

Evidence: National Security Council Review of EWGPP Program (December 2001); US/RF Gov't-to-Gov't Plutonium Production Reactor Agreement of 1997

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The EWGPP Program offers a unique opportunity to reduce world-wide nuclear risk that is neither redundant nor duplicative of any other program. Although other programs address the disposition and safeguard of existing plutonium in the RF, no other program addresses ending the production of new plutonium in the RF.

Evidence: 2001 NSC Russian Program Review designated the EWGPP as a cost-effective, unique contribution to the nonproliferation initiative. An Implementing Agreement between DOE and the Russian Federation for Atomic Energy (March 12, 2003) has defined this unique method.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: NO Question Weight 20%

Explanation: The nature of the program is that the US Government must rely on the Russian Government to create conditions that would not limit the program's effectiveness and efficiency. This is largely out of the control of the program office, but still a potential flaw in the structure of the program. Notwithstanding this potential flaw, DOE has sought external, objective experience and insight to develop tools to establish program structure, monitor status and track costs for the program.

Evidence: DoD draft "Fossil Replacement Option" document (10/2000); TIP (Team of Independent Professionals) Report on Acquisition Strategy for EWGPP, (12/2002); NSC review, including cost/benefit analysis of the EWGPP concept (2001)

PART Performance Measurements

Program: Elimination of Weapons-Grade Plutonium Production Program
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
60%	89%	100%	0%	Demonstrated

1.5 **Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly?** Answer: NO Question Weight:20%

Explanation: The nature of the program is that the US Government negotiate with the Russian Government to ensure that the funds are spent for the intended purpose. Therefore, it's possible that issues with the Russian government could interfere with program execution.

Evidence: U.S./Russian Federation commitment to cease plutonium production (1994); Implementing Agreement between DOE and the Russian Federation for Atomic Energy (March, 2003); Seversk & Zheleznogorsk Project Plans (June, 2003)

2.1 **Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?** Answer: YES Question Weight:11%

Explanation: The EWGPP Program has one outcome oriented measure that encapsulates the overall effort: (1) Metric tons of weapons-grade plutonium produced in Russia per year.

Evidence: FY 2004-2008 FYNSP (Feb. 2003); FY 2004 Budget Submittal (2003); EWGPP Critical Decision #0; Briefing to the Deputy Secretary and Energy Systems Acquisition Advisory Board (Dec. 2002)

2.2 **Does the program have ambitious targets and timeframes for its long-term measures?** Answer: YES Question Weight:11%

Explanation: The EWGPP Program has identified ambitious, quantified targets for its long-term performance measures. The timeframes for accomplishment of the goals are also ambitious, driven by the need to terminate plutonium production as quickly as possible to reduce the threat from continuing production. The Program has established scope, cost, and schedule baselines in accordance with Critical Decision-0

Evidence: FY 2004-2008 FYNSP (Feb. 2003); FY 2004 Budget Submittal (2003); EWGPP Program Plan (June 2003)

2.3 **Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals?** Answer: YES Question Weight:11%

Explanation: The EWGPP Program has established specific annual performance goals. For FY 2005, they are: (1)Nuclear Safety Upgrades: Complete an additional 33% (for a total of 100%) of needed safety upgrades. (2) Seversk: Complete an additional 32% (for a total of 57%) towards construction of a fossil fuel plant. (3) Zheleznogorsk: Complete an additional 10% (for a total of 13%) towards construction of the fossil fuel plant for Zheleznogorsk. (4) Russian Plutonium Production: No more than 1.2 Metric Tons. See Measures tab for additional details.

Evidence: FY 2004-2008 FYNSP (Feb. 2003); FY 2004 Budget Submittal (2003)

PART Performance Measurements

Program: Elimination of Weapons-Grade Plutonium Production Program
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
60%	89%	100%	0%	Demonstrated

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:11%

Explanation: The EWGPP Program has baseline ranges and ambitious targets for its annual measures to support the aggressive schedules. Baseline development is underway as part of the DOE 413.3 Critical Decision process. The EWGPP Program is adhering to the DOE standards for program/project management . The program has established scope, cost, and schedule baselines and ambitious targets as annual measures for its projects. The baseline ranges will provide a basis for measuring progress against ambitious targets identified for completion on an annual basis. Once firm baselines are established, an earned value performance measurement system will be instituted for the program.

Evidence: FY 2004-2008 FYNSP (Feb. 2003); FY 2004 Budget Submittal (2003); EWGPP Program Plan (June 2003); EWGPP Project Controls Plan (June 2003)

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: YES Question Weight:11%

Explanation: The EWGPP Program uses input from contractors, Russian subcontractors, and other stakeholders in development of annual targets and long-term goals for the program. Commitment of all partners to the annual and long-term goals of the program is achieved through implementation of bilateral agreements, program and project plans.

Evidence: EWGPP Program Plan (June 2003); US/Russia Implementing Agreement (March 2003); Team of Independent Professionals Acquisition Strategy Evaluation (2002)

2.6 Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need? Answer: YES Question Weight:11%

Explanation: To date, independent evaluations have been performed by : (1) Stone and Webster and Burns and Roe on the RF cost estimates; (2) National Security Council (NSC); (3) a Team of Independent Professionals on the acquisition strategy. A GAO review of the program is scheduled to be complete in the spring of 2004.

Evidence: Draft DOE Project Management Manual, 413.3-1; Draft EWGPP Quality Assurance Plan (May 2003); Draft EWGPP Management Assessment Plan (May, 2003); NSC Russian Program Review (2001); Independent Professional Review of Program Acquisition Strategy (TIP Team) (Dec. 2002); Stone and Webster & Burns and Roe Review of RF Cost Estimates (June 2002)

2.7 Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget? Answer: NO Question Weight:11%

Explanation: The funding profile for the EWGPP program is a flat $50 million per year. While this profile represents what was transferred from DoD, NNSA needs to realign the profile to more accurately represent the amount of funding needed to accomplish its goals.

Evidence: NNSA PPBE Guidance Documents located on the NNSA web-site; FY04 Congressional Budget Request, FY 04 PDM; FY04-08 FYNSP

PART Performance Measurements

Program: Elimination of Weapons-Grade Plutonium Production Program
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
60%	89%	100%	0%	Demonstrated

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:11%

Explanation: Through strategic planning, the EWGPP Program is assimilating 'Lessons Learned' from other Russian programs such as International Nuclear Materials Protection and Cooperation, Highly Enriched Uranium Transparency, and Plutonium Disposition, which identify potential deficiencies such as training, communications, and site access. The Program is also assimilating lessons learned by two Cooperative Threat Reduction programs (1) the Fissile Material Storage Facility at Mayak and its use of incentive contracts and (2) EWGPP program when it was under the responsibility of CTR. The Program used the established DoD CTRIC process to gain the benefit of a high level of competition to select two technically qualified contactors with years of experience in completing this type of work in Russia while keeping acquisition costs low. The Program is also implementing Action Plans to provide project management training to program staff and Rosatomstroi, the Russian integrating contractor. In addition, the Program Office is establishing an Executive Review Group to evaluate planning and progress on an annual basis, identify deficiencies and address corrective actions.

Evidence: Draft Management Assessment Plan (June 2003); Draft Training Plan for EWGPP program staff and Rosatomstroi (June 2003); US/Russian Implementing Agreement (March 2003)

2.CA1 **Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity?** Answer: YES Question Weight:11%

Explanation: The Program Office commissioned a Team of Independent Professionals (TIP Team) to identify and analyze alternative acquisition strategies for carrying out the mission. Data was used to establish acquisition strategy and support Mission Need approval by the Deputy Secretary. The DOD conducted extensive alternative analyses in 2000-2002, resulting in the decision to cancel plans for reactor core conversion and select fossil fueled power plants as the preferred alternative to meet the mission.

Evidence: Team of Independent Professionals (TIP) Report of Acquisition Strategy Alternatives (Dec. 2002); DOD Fossil Replacement Option Studies (Oct. 2000)

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:12%

Explanation: The EWGPP Program requires monthly reporting of progress for support contractors who are on board. The US Contractors, once on board, will be monitored against milestones and baselines identified to Work Breakdown Structure (WBS) elements through an earned value system. The program reporting systems apply to the US contractors and to Russian participants, and are used to identify management issues and improve performance.

Evidence: EWGPP Reporting Policy and Procedures (June 2003); EWGPP Program Plan (June 2003)

PART Performance Measurements

Program: Elimination of Weapons-Grade Plutonium Production Program
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
60%	89%	100%	0%	Demonstrated

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:12%

Explanation: The EWGPP Program is establishing clear and documented baseline change control, cost reporting, schedule tracking and performance review criteria and procedures. Each HQ manager has a critical element in his or her performance appraisal on project management that includes cost, schedule and quality criteria. Finally, the Program will provide payment in Russia only for work confirmed to be completed -- final management accountability.

Evidence: EWGPP Program Plan (June 2003); Performance Evaluation Plans (annual) Program/Project Controls Manual (June 2003)

3.3 **Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?** Answer: YES Question Weight:12%

Explanation: In the past the Program experienced problems with uncosted carryover and the transfer of funds to support the program. Both problems were resolved and a corrective action is in place to ensure that funds are obligated in a timely manner and spent for the intended purpose. FY 2003 is the first fiscal year for DOE program responsibility, since until that time it resided under the cognizance of DoD's CTR program. The DOE Program got started late because funds were not fully transferred from DoD until May 2003. Plans have already been developed for obligating funds to the Nuclear Safety Upgrades project in FY2003. Plans for the Seversk and Zheleznogorsk projects are in development. Systems and procedures are being established to monitor and control program obligations.

Evidence: FY 2003 Budget Submittal (2002); FY 2003 Project Work Plans and WAS Monthly cost reports

3.4 **Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?** Answer: YES Question Weight:12%

Explanation: The EWGPP Program is utilizing incentive-based contracting for implementing its work in the Russian Federation, and will make payment only on completion of work. Two contractors with years of experience in completing this type of work in Russia were awarded Cost Plus Incentive Fee contracts through the highly competitive DoD CTRIC contract mechanism. The established DoD CTRIC process allowed DOE to gain the benefit of a high level of competition to select technically qualified contactors while keeping acquisition costs low. Program and contract procedures are in place to measure and achieve efficiencies and cost effectiveness in program execution. For example, the U.S. contractor will pay for Russian subcontractor work only after inspection to ensure the work is complete and in accordance with contract specifications. The projects are being phased so that Zheleznogorsk will benefit from the lessons learned at Seversk.

Evidence: EWGPP Statement of Objectives for Seversk and Zheleznogorsk (March 2003); DOE contracts with US contractors (June 2003)

PART Performance Measurements

Program: Elimination of Weapons-Grade Plutonium Production Program
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
60%	89%	100%	0%	Demonstrated

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: The EWGPP Program is coordinating with the MPC&A, HEU-T, and Pu Disposition programs, all of which have related efforts in the Russian Federation, to assimilate 'lessons learned', and identify areas of similarity and potential commonality where management solutions in those programs can be used in EWGPP. The program has coordinated with the Departments of State and Defense to ensure full collaboration and effective management. The program is also working actively to coordinate with the Russian Federation on this program, with several agreements already made, and further agreements being negotiated

Evidence: US/Russian Implementing Agreement (March 2003); Draft EWGPP Program Plan (June 2003)

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: NNSA is covered by DOE's financial management policies, procedures and practices that meet all statutory requirements. The accounting services for NNSA are provided by DOE, and these are free of material internal control weaknesses. The DOE's financial statements have been given a clean audit opinion in 6 of the last 7 years. Day-to-day NNSA operations are supported through the NNSA PPBE processes that require the integration of financial and performance management information systems at each phase. The DOE is well underway on a new initiative (I-MANAGE) in support of the President's Management Agenda to fully integrate all financial, performance and administrative data for the DOE in a single system within the next 5 years that will include all NNSA information.

Evidence: NNSA PPBE Guidance Documents located on the NNSA web-site; DOE Financial Management Orders

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:12%

Explanation: Corrective actions and procedures are in place to identify and address management deficiencies. The EWGPP Program has augmented staff resources through direct hires, transfers and contractor personnel. Immediate, meaningful and decisive steps, such as, senior management involvement in weekly meetings and in the definition of all major milestones, have been taken to address past program problems. Systems and procedures to control program costs and obligations, schedules, and performance have been developed. The Program has an established Executive Review to evaluate program management activities, identify deficiencies and recommend corrective actions in accordance with DOE Orders. The Program is considering the use of an automated financial/project management system.

Evidence: EWGPP Program Plan (June 2003); Management Assessment Plan (June 2003)

3.CA1 Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals? Answer: YES Question Weight:12%

Explanation: In accordance with DOE 413.3, the Program Functions and Requirements documents, as part of the design process for projects, clearly define capability and performance objectives. The program has developed a sophisticated acquisition strategy which defines the relations between the contractors and only allows payment for work completed. The Program Deliverable Acceptance Policy will only allow payment in Russia for work completed and inspected which addresses quality, capability and performance objectives for each deliverable. Cost and schedule goals for the three projects are contained in their respective draft Project Execution Plans, to be completed in FY 2003.

Evidence: Draft Project Execution Plans (Seversk & Zheleznogorsk, Nuclear Safety Upgrades) (June 2003); Draft EWGPP Deliverable Acceptance Policy, June 2003); Draft EWGPP Program Plan (June 2003); Implementing Agreement (March 12, 2003)

PART Performance Measurements

Program: Elimination of Weapons-Grade Plutonium Production Program
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
60%	89%	100%	0%	Demonstrated

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: NA Question Weight: 0%

Explanation: Although CD-0 was approved and the US contractors have been selected, the EWGPP Program does not have the data to address this question.

Evidence:

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: NA Question Weight: 0%

Explanation: As a new project, the EWGPP Program does not have the data to address this question.

Evidence:

4.3 **Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?** Answer: NA Question Weight: 0%

Explanation: As a new program, data does not yet exist to address this question.

Evidence:

4.4 **Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?** Answer: NA Question Weight: 0%

Explanation: As a new program, data does not yet exist to address this question. However, the Program planning and development process compares favorably with other programs; EWGPP is being developed in accordance with DOE 413.3 and good management practices.

Evidence:

4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: NA Question Weight: 0%

Explanation: As a new program, data does not yet exist to address this question.

Evidence:

4.CA1 **Were program goals achieved within budgeted costs and established schedules?** Answer: NA Question Weight: 0%

Explanation: As a new program, data does not yet exist to address this question.

Evidence:

PART Performance Measurements

Program: Elimination of Weapons-Grade Plutonium Production Program
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
60%	89%	100%	0%	Demonstrated

Measure: Percent of interim safety upgrades completed on three remaining plutonium producing nuclear reactors.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	5%	5%	
2004	67%		
2005	100%		

Measure: Percent of construction completed on fossil fuel plant in Seversk that will facilitate the shutdown of two weapons-grade plutonium producing reactors.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2004	25%		
2005	57%		
2006	80%		
2007	94%		
2008	100%		

Measure: Percent of construction completed on fossil fuel plant in Zheleznogorsk that will facilitate the shutdown of one weapons-grade plutonium producing reactor.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2004	3%		
2005	13%		

Program: Elimination of Weapons-Grade Plutonium Production Program
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
60%	89%	100%	0%	Demonstrated

2006	27%
2007	44%
2008	62%

Measure: Metric tons of weapons-grade plutonium produced per year in the Russian Federation

Additional Information:

Year	Target	Actual
2004	1.2	
2006	1.2	
2009	0.4	
2012	0	

Measure Term: Long-term

PART Performance Measurements

Program: Energy Information Administration (EIA)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Results Not
100%	55%	100%	47%	Demonstrated

1.1 Is the program purpose clear? Answer: YES Question Weight: 20%

Explanation: EIA collects, evaluates, assembles, analyzes, and disseminates to the public and private sectors unbiased and comprehensive energy data, information, and analysis on energy resource reserves, production, demand, technology, related economic and statistical information, and adequacy of the resource base to meet near and long term demands. EIA's mission is to promote sound policymaking, efficient markets, and public understanding.

Evidence: 1977 Department of Energy Organization Act 42 USC 7135: requires that EIA collect, evaluate, assemble, analyze, and disseminate to the public and private sectors unbiased and comprehensive energy data, information, and analysis on energy resource reserves, production, demand, technology, related economic and statistical information, and adequacy of the resource base to meet near and long term demands.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight: 40%

Explanation: EIA provides comprehensive and unbiased national and regional energy information that the private sector will not or can not provide because: 1) revenues from disseminating the information would not cover the costs of collecting it; and 2) much of the information is proprietary. EIA provision of data ensures bias is avoided, helping to inhibit market manipulation. EIA also provides unbiased policy analysis and, uniquely among federal statistical agencies, forecasts (in EIA's case of future energy scenarios).

Evidence: •
The 1977 Department of Energy Organization Act 42 USC 7135 created EIA to provide unbiased and comprehensive data as such information was unavailable to the government and public. The Oil Daily on market impact of Weekly Petroleum Supply Report and Weekly Natural Gas Storage Report: this trade journal indicates that EIA's provision of certain data is crucial in ensuring that oil and gas markets are efficient. Barclays Capital Research April 15, 2004 (proprietary): this analysis provides expert opinion that energy data provided by a source other than EIA is of such poor quality as to be useless.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight: 10%

Explanation: EIA is the only organization that collects, analyzes, and disseminates comprehensive energy information. In limited cases, private, state or other federal agencies collect energy information. However it isn't comprehensive, lacks sufficient detail, and may be confidential. EIA works to ensure that it doesn't duplicate such efforts, but complements them, minimizing burden on industry. While a few private firms do proprietary forecasts, they do not place their models in the public domain. Thus biases are unknowable to the general public, and access may be limited due to cost.

Evidence: Electric Power Surveys; lack of other comprehensive energy data.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight: 10%

Explanation: There is no evidence that any other method for data collection would be more effective.

Evidence: Participation on Interagency Council on Statistical Policy and Federal Committee on Statistical Methodology; American Statistical Association Committee on Energy Statistics. Through participation in these organizations, EIA ensures that design flaws do not exist.

PART Performance Measurements

Program: Energy Information Administration (EIA)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Results Not
100%	55%	100%	47%	Demonstrated

1.5 **Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly?** Answer: YES Question Weight 20%

Explanation: EIA focuses resources on critical industry sectors, while maintaining a comprehensive balance. EIA reallocates resources to address gaps, such as coverage of the electricity and natural gas sectors, as those industries have changed with restructuring and deregulation. EIA reaches a broad audience, pioneered usage of a website in 1995 for web dissemination, reaching a web audience of 1.5 million in 2004. Customer satisfaction surveys consistently rate the program as very strong/excellent.

Evidence: Annual Customer Satisfaction Surveys, 2001 American Customer Satisfaction Index survey, budget documents, NEMS/AEO Conference satisfaction survey, website statistics.

2.1 **Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?** Answer: YES Question Weight 20%

Explanation: EIA has established longterm performance measures, which support EIA's mission to promote sound policymaking, efficient markets, and public understanding. They include: Percentage of EIA survey frames with sufficient industry coverage; Percentage of outside experts rating EIA's analysis and forecasting program as relevant and reliable; Percentage of EIA surveys meeting quality targets; Percentage of customers satisfied with the quality of EIA information; Percentage of recurring products meeting release date targets; and Sub-Set of surveys released on schedule at a cost-savings, with no decrease in accuracy. These are ouput measures as opposed to outcome measures because it is inherently difficult to measure sound policy making, efficient markets, and public understanding. These measures address quality, timeliness, and relevancy of EIA's products, all necessary attributes of information which will contribute to sound policy making, efficient markets, and public understanding.

Evidence: See measures tab.

2.2 **Does the program have ambitious targets and timeframes for its long-term measures?** Answer: NO Question Weight: 5%

Explanation: While EIA has ambitious targets for customer satisfaction (maintaining rating of over 90% satisfied or highly satisfied), targets have not been set yet for the remaining four measures which are new measures.

Evidence: •

2.3 **Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals?** Answer: NO Question Weight 13%

Explanation: EIA is developing annual performance measures.

Evidence:

2.4 **Does the program have baselines and ambitious targets for its annual measures?** Answer: NO Question Weight 13%

Explanation: EIA is developing baselines and targets for its annual measures.

Evidence:

PART Performance Measurements

Program: Energy Information Administration (EIA)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Results Not
100%	55%	100%	47%	Demonstrated

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:10%

Explanation: EIA will award its first full performance-based contract on September 1, 2004. This award will be the first full performance-based award that links the contractor's performance directly to EIA's annual and long-term goals.

Evidence:

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: NO Question Weight:15%

Explanation: EIA actively seeks specific advice from experts on projects of current interest, particularly methodology, twice per year from the American Statistical Association (ASA) Energy Committee. EIA staff develop information concerning projects of current interest, and seek specific advice, particularly concerning methodology. Meetings are open to the public. EIA posts meeting transcripts as well as EIA's follow-up actions to recommendations, on the EIA website. EIA also has an Independent Expert Review (IER) process. This review program contracts, on an as needed basis, with academics or consultants to examine a particular process or report. Additionally, EIA's forecasting model is in the public domain, and therefore available for public review and comment. However, no recurring independent evaluations of sufficient scope (program-wide and addressing achievement of performance targets), effectiveness, or independence occur.

Evidence:

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: YES Question Weight:20%

Explanation: EIA's budget request makes clear the impact of funding and legislative decisions on expected performance and explains why the requested performance/resource mix is appropriate

Evidence: FY 2005 Budget Documents.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight: 5%

Explanation: EIA routinely seeks input from customers, stakeholders, and staff. EIA is making good progress in setting new long-term performance measures and is developing annual performance measures, baselines, and targets. EIA is also seeking to initiate independent, broad program evaluations.

Evidence: EIA Strategic Plan Stewardship Information; conversations with OMB.

PART Performance Measurements

Program: Energy Information Administration (EIA)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Results Not
100%	55%	100%	47%	Demonstrated

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:14%

Explanation: While EIA is in the process of setting new performance measures, historically EIA has collected timely and credible performance informations. EIA survey managers monitor response rates, release times, revisions, and other quality measures of their surveys on an ongoing basis. Surveys conducted under contract report basic quality measures. For both managers and supervisors, EIA explicitly incorporates quality measures into its performance evaluations. EIA has some performance-based contracts and is encouraging more. Customer satisfaction surveys are monitored, as are comments received and website usage by product.

Evidence: EIA 2002 Standards Manual; Survey Response Rates; Data quality summary for the 2001 Residential Energy Consumption Survey; Website usage statistics. The Standards Manual sets detailed, specific quality guidance, which managers apply.

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:14%

Explanation: EIA's Federal employees are held accountable through individual performance plans. EIA's first full performance-based contract will be awarded in September 2004. The award will have a base period of sixteen months and three one-year options. EIA will evaluate the contractor's performance/contributions to EIA's goals annually and discontinue the contractor's services after any one-year interval inwhich the contractor fails to meet performance requirements. I

Evidence: Performance Plans.

3.3 **Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?** Answer: YES Question Weight:14%

Explanation: EIA assures obligated funds are used for their intended purpose through the use of several fiscal oversight processes. These include: Monitoring the obligation of funds against a program specific Annual Operating Plan; Monitoring the use of uncosteds against an annual utilization plan;Small Business goals, monitored and reported monthly;Monthly review of EIA financial activities with DOE financial reports; Monthly status of obligations, uncosted and deobligated balances reported to EIA Administrator.

Evidence: Annual Operating Plan; Obligation, Uncosted and Small Business monthly report; Example of Individual Office report on Obligations, Uncosteds, and Small Business goals; Example of the monthly DOE Financial Data Warehouse (FDW) report on 1) small business, 2) Uncosteds.

PART Performance Measurements

Program: Energy Information Administration (EIA)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Results Not
100%	55%	100%	47%	Demonstrated

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:14%

Explanation: With the recent award of the EIA Omnibus Procurement instrument (EOP II), EIA has a series of contractors for each functional area (survey, IT, Administrative support, etc.), which are pre-approved to compete for tasks and EIA mission support activities. With virtually all EIA work (labor hours and services) competed among these pre-approved contractors, value and quality for each dollar expended is enhanced. Additionally, EIA has an efficiency long-term measure to produce a set of surveys in Petroleum or Natural Gas, and Coal or Electricity at a cost-savings with no decrease in accuracy.

Evidence: Strategic Plan; EIA Omnibus Procurement.

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:14%

Explanation: EIA actively collaborates with state statistical agencies and professional organizations, sharing research, methods, and software. This is evidenced by its relationship with the IOGCC. Specific examples of EIA's cooperation with Federal agencies include: working with Census as the data collection agent for its Manufacturing Energy Consumption Survey; contracting with Census to evaluate five of our survey frames; and incorporating data collected by the U.S. Department of Health and Human Services into its Residential Energy Consumption Survey. EIA also particpates monthly in the OMB-led Interagency Council on Statistiacl Policy (ICSP).

Evidence: www.eia.doe.gov/pub/oil_gas/natural_gas/analysis_publications/ngprod/ngprod.pdf. Report on "How EIA Estimates Natural Gas Production" showing EIA uses data from MMS and State of Texas describes how EIA collaborates and coordinates with States and the Department of the Interior's Mineral Management Service on natural gas production data. While the data could be more rigourous, this is an example of how EIA prioritzes scarce resources, by using data collected elsewhere. http://tonto.eia.doe.gov/FTPROOT/Consumption/063297.pdf from RECS 1997 page 224 for LIHEAP data showing coordination with the Department of Health and Human Services - EIA collected data for DHHS.

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:14%

Explanation: EIA's efforts to ensure its fiscal and oversight rsponsibilities include: Monthly and annual close-out reconcilations between DOE financial management systems and EIA's Contracts Management System (CMS); EIA senior management have real-time access to status of funds status; Continuous monitoring of obligations, uncosteds reductions, and small business obligations and their tracking with approved plans; and mandatory verification of fund availability prior to obligations.

Evidence: Intranet Financial Status Report (FSR); Finance Division Monthly Contracts Management System and DOE financialmanagement system reconcile report.

PART Performance Measurements

Program: Energy Information Administration (EIA)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Results Not
100%	55%	100%	47%	Demonstrated

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:14%

Explanation: EIA actively seeks to improve its efficiency as an organization. Its goals in this regard are outlined in the Strategic Plan. Specific efforts to improve efficiency include, making office directors responsible for tracking their uncosteds, holding bi-annual management meetings, and making performance measures a key portion of all levels of management's performance evaluations. In addition, EIA's quality council has undertaken several initiatives to improve the organization.

Evidence: Obligations report; List of Current Activities of EIA Quality Council; EIA Quality Council Charter

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: SMALL EXTENT Question Weight20%

Explanation: EIA is revising its performance measures to better focus on managing for results. EIA believes these new goals will strengthen future performance. EIA does have historical data for two of its long-term measures which indicate EIA would have met the targets. Furthermore, in regards to the previous performance measures scheduled for retirement, EIA did meet or surpass the targets for these measures through 2003.

Evidence: Consolidated Quarterly Performance Report Second Quarter 2004 - EIA green rating; Customer Survey Results - 2001 Amercian Customer Satisfaction Survey found that EIA is delivering service equal to the private sector, and better than the government-wide average.

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: NO Question Weight20%

Explanation: Prior year peformance goals were met. For the measures currently under development, performance results are not available. In the area of outreach, two of EIA's previous goals and annual targets were met.

Evidence: EIA performance measures are in the process of being revised. EIA, its contractors, and partner agencies collect basic data quality measures like response rates and timeliness. However, EIA's new aggregate measures and targets are not at the stage where performance mesures for these areas are available. DOE quarterly reports show EIA has met performance goals for measures in use during 2003.

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: LARGE EXTENT Question Weight20%

Explanation: Despite declining real budgets (EIA's FY 2005 Budget request represented a 54% real decrease over the 1980 level) and steadily falling numbers of full-time employees (between FY 1990 and FY 2004 EIA reduced its Federal staff by 100 FTEs and its contract staff by over 160 positions), EIA has increased its output. Illustrative examples of increased output include EPACT 1992 requirements for Alternative Transportation Fueled Vehicles Survey (EIA-886) and Voluntary Greenhouse Gas Reductions Registry; and the Weekly Natural Gas Storage Report.

Evidence: Budget documents; GAO Report "Electricity Resturcturing" www.gao.gov/new.items/d03586.pdf, found that regarding electricity data, EIA had increased the number of entities it reports on and the amount of information it collects.

PART Performance Measurements

Program: Energy Information Administration (EIA)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Results Not
100%	55%	100%	47%	Demonstrated

4.4 **Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?** Answer: YES Question Weight 20%

Explanation: EIA compares favorably with other federal statistical agencies. EIA participated in the American Customer Satisfaction Index (ACSI) in January 2001. The overall index score for EIA's website users was 73 on a 0-100 point scale, which compares favorably with other statistical agencies. It was approximately 4 points higher than the 2000 Federal government index of 68.6. EIA plans to participate in the ACSI in 2004 and every 3-4 years thereafter. EIA is the preferred source of data for market participants and analysts."Time" cited EIA's Web site as one of the Best Web site on the Internet. Results of EIA's customer satisfaction surveys show the majority of customers have favorable opinions of EIA. EIA is unique among statistical agencies because of the amount and transparency of its energy analysis and modeling programs.

Evidence: Barclay's Capital Research, April 15, 2004; Customer survey results. The American Customer Satisfaction Index 2001 which allows comparison to other organizations doing similar work, found that the quality of EIA's information was very strong or excellent (83). EIA intends to participate in the ACSI every three years, with the next survey in 2004.

4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: SMALL EXTENT Question Weight 20%

Explanation: While EIA appears to be effective and achieving results, based in large part on universal reliance on EIA's data and analyses, no independent evaluations of the entire program have been conducted.

Evidence: ACSI Customer Satisfaction Survey; Barclay's Capital Research April 15, 2004.

PART Performance Measurements

Program: Energy Information Administration (EIA)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Results Not
100%	55%	100%	47%	Demonstrated

Measure: Percent of customers satisfied or very satisfied with quality of EIA information.

Additional Information:

Year	Target	Actual	**Measure Term:** Long-term
2003	Baseline	> 90%	
2006	> 90%		

Measure: Cost savings realized from a subset of surveys, released on schedule, without any decrease in accuracy.

Additional Information: Surveys to be selected from Petroleum or Natural Gas and Coal or Electricity areas.

Year	Target	Actual	**Measure Term:** Long-term
2004		82	
2006			

Measure: Percent of outside experts rating EIA's analysis and forecasting program as relevant and reliable; consistent with changing industry markets; and the quality of EIA's analysis and forecasting products high.

Additional Information: This is a new measure. Definitions and a baseline value will be established for 2004 and targets will be set for 2005 and beyond.

Year	Target	Actual	**Measure Term:** Long-term
2004	Baseline		
2006			

Measure: Percent of key EIA survey frames with sufficient industry coverage to produce reliable supply, demand and price statistics.

Additional Information: This is a new measure. Definitions and a baseline value will be established for 2004 and targets will be set for 2005 and beyond.

Year	Target	Actual	**Measure Term:** Annual
2004	Baseline		

PART Performance Measurements

Program: Energy Information Administration (EIA)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Results Not
100%	55%	100%	47%	Demonstrated

2006

Measure: Percent of EIA surveys meeting quality targets.

Additional Information: This is a new measure. Definitions and a baseline value will be established for 2004 and targets will be set for 2005 and beyond.

Year	Target	Actual	**Measure Term:** Annual
2004	Baseline		

2006

Measure: Percent of selected EIA recurring products meeting their release data targets (all product types.)

Additional Information: This is a new measure and serves as both an output and an efficiency measure. Definitions and a baseline value will be established for 2004 and targets will be set for 2005 and beyond.

Year	Target	Actual	**Measure Term:** Annual
2004	Baseline		

2006

Measure:

Additional Information:

Year	Target	Actual	**Measure Term:**
2004	Baseline		

2006

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:

Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The Environmental Management (EM) program, created in 1989, is responsible for the cleanup of the legacy created by over 50 years of nuclear weapons production and energy research.

Evidence: FY 2004 Congressional Budget Justification.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: Fifty years of nuclear weapons production and nuclear energy research produced large volumes of nuclear materials, spent nuclear fuel, radioactive waste, and hazardous waste, resulting in contaminated facilities, soil, and groundwater at 114 geographic sites.

Evidence: FY 2004 Congressional Budget Justification.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: EM manages and funds almost all cleanup activities with limited cost sharing from the private sector or foreign countries.

Evidence: FY 2004 Congressional Budget Justification.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The February 2002 Top-to-Bottom-Review of the EM program concluded that many of its business processes do not allow the program to efficiently and effectively accomplish its mission. The Top-to Bottom Review served as a catalyst that initiated EM's reevaluation of previously accepted cleanup strategies. EM is implementing a number of significant management reforms which will enable the program to more readily accelerate risk reduction and site closure, thereby reducing cost and schedule.

Evidence: FY 2004 Congressional Budget Justification; Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress (August 2003); Progress in Improving Project Management at the Department of Energy, 2002 Assessment.

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: EM's accelerated risk reduction cleanup initiatives are premised on four principal management reforms that have been implemented: a human capital revitalization, an improved acquisition strategy, a strict configuration management system, and a revised budget structure. The new budget structure complements the management reform initiatives by focusing on completion, clearly delineating how resources will be utilized (i.e., for direct cleanup activities versus other activities in the program that only indirectly relate to on-the-ground cleanup). The new structure also establishes three time-dependent accounts (2006, 2012, and 2035) to target resources to expected completion timeframes, thereby establishing accountability. These four reform initiatives, along with the establishment of new corporate performance measures, help ensure that program resources are focused on direct, on-the-ground cleanup activities, which lead to accelerated risk reduction and site closure.

Evidence: FY 2004 Congressional Budget Justification; Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress, (August 2003).

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight:10%

Explanation: As part of the commitment to accelerating risk reduction and site closure, EM has taken on the long-term challenge of reducing life-cycle costs and the time to complete cleanup by more than $50 billion and 35 years, respectively. The long-term goals will be met when EM: 1) reduces its life-cycle cost reported in the Department's FY 2001 Performance and Accountability Report by $50 billion (in comparable dollars); 2) cuts the completion time for the EM mission from 2070 to 2035; and 3) demonstrates the ability to execute cleanup activities consistent with accelerated cost and schedule baselines. EM has successfully stopped the program's recent history of annual cost estimate increases and schedule slippages.

Evidence: FY 2004 Congressional Budget Justification; Performance and Accountability Reports; Top-to- Bottom Review of the EM Program: Status of Implementation, Report to Congress (August 2003).

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight:10%

Explanation: EM has established ambitious long-term cost and schedule goals. New site baselines approved by the Assistant Secretary reflect the aggressive accelerated risk reduction and closure strategies found in each site's Performance Management Plan (PMP) or accelerated strategy. EM's new corporate performance measures were established in early FY 2003 to provide the basis for measuring both near-and long-term performance against the site baselines. The new measures are under strict change control and monitoring of these key performance measures facilitates a high level of confidence that the program's long-term goals can be met.

Evidence: FY 2004 Congressional Budget Justification; Top-to- Bottom Review of the EM Program: Status of Implementation, Report to Congress (August 2003).

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: NO Question Weight:10%

Explanation: The EM program is in the process of developing performance measures that are logically linked to and demonstrate progress toward long-term cost and schedule goals. However, the Assistant Secretary has established a new set of sixteen corporate performance measures that demonstrates how the program is eliminating or reducing risk, not just managing them. The new measures are under strict change control, thereby establishing accountability to annual performance targets established by each Operations/Field Manager.

Evidence: Environmental Management Performance Measures (DOE/IG-0561, June 2002); FY 2004 Congressional Budget Justification; Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress (August 2003).

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: NO Question Weight:10%

Explanation: To support the development of cost and schedule targets, existing baselines, where appropriate, are undergoing changes in FY 2003 to reflect a site's PMP or accelerated closure strategy. To ensure that acceleration goals depicted in a new resource-loaded site baseline are equally ambitious and achievable, each site's new baseline is to undergo a rigorous review, validation, and approval process. Once approved, certain elements (e.g., corporate performance measures, cost and schedule projections) of the baseline will be placed under strict change control. Regular senior management reviews between Headquarters and the Field are held on at least a quarterly basis to monitor progress toward achieving its annual performance targets.

Evidence: FY 2004 Congressional Budget Justification.

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:10%

Explanation: The contractors EM uses to carry out its mission commit to executing programs to achieve long-term goals as a condition of their contracts. EM contractors have developed site PMPs or accelerated strategies which are consistent with the goals of accelerating risk reduction, reducing costs, and accelerating cleanup schedules.

Evidence: Top-to- Bottom Review of the EM Program: Status of Implementation, Report to Congress (August 2003).

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: The General Accounting Office (GAO) regularly evaluates the EM program as part of its performance and accountability reports, issued every two years, covering major management challenges and program risk in each cabinet department. In addition, the February 2002 Top-to-Bottom Review (conducted under contract) was the first major, comprehensive evaluation done by the Department. This evaluation resulted in a significant refocusing of the EM program to assure accelerated risk reduction and cleanup. In addition,

Evidence: GAO 2003 Performance and Accountability Series and High Risk Update; Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress (August 2003).

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: YES Question Weight:10%

Explanation: The EM budget reflects current program goals, with the annual budget request derived by estimating what is needed to accomplish the annual performance measures in the context of long-term goals. The corporate performance measures that appear in the budget are directly tied to accelerated site baselines, which reflect PMPs/accelerated closure strategies. The corporate measures are under strict change control. Additionally, the EM budget includes separate accounts supporting the goal of completing as many sites as possible by 2006, 2012, and 2035. Within these three time-dependent accounts, individual projects are identified that tie funding to performance. For these projects, the impact of funding and other changes such as new environmental requirements can be assessed.

Evidence: FY 2004 Congressional Budget Justification; Top-to- Bottom Review of the EM Program: Status of Implementation, Report to Congress (August 2003).

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: The February 2002 Top-to-Bottom Review concluded that many of EM's business processes do not allow the program to efficiently and effectively accomplish its mission. As a result of this review EM has aggressively implemented a number of management reforms to correct these deficiencies. Additionally, EM has also created Integrated Project Teams (IPTs) for 10 key initiatives identified in the top-to-bottom report. Whereas PMPs were developed for individual sites, the IPTs will be formulating corporate-level initiatives to accelerate risk reduction in a much -improved, more cost effective manner.

Evidence: FY 2004 Congressional Budget Justification; Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress (August 2003).

2.CA1 **Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity?** Answer: YES Question Weight:10%

Explanation: In addition to the aggressive implementation of reforms as a result of the February 2002 Top-to-Bottom Review and creation of 10 integrated project teams, existing site baselines, where appropriate, are undergoing changes in FY 2003 to reflect a site's PMP or accelerated closure strategy. Reflected in the PMP/accelerated closure strategy and site baseline are the results of recent analysis of possible alternatives which take into consideration various reassessments of program cost, schedule, and performance goals.

Evidence: FY 2004 Congressional Budget Justification; Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress (August 2003).

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NA Question Weight: 0%

Explanation: EM's Technology Development and Deployment (TDD) program is an applied R&D program dedicated to supporting the EM program's cleanup mission. This program does not address private industry issues.

Evidence: FY 2004 Congressional Budget Request

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: EM's TDD program has prioritized its work based on the evaluation of cost and risk associated with each site's baseline, which is consistent with its PMP or accelerated strategy. Prior to initiation of a TDD project, the proposed impact is reviewed and compared against the site baseline to ensure that a real opportunity for substantial improvement exists. The reviews analyze the trade-offs between baseline cost, schedule, risk, and performance goals as well as competing approaches and technologies.

Evidence: FY 2004 Congressional Budget Request

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:

Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

3.1 Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance? Answer: YES Question Weight:12%

Explanation: EM's new corporate performance measures enable the program to more comprehensively track progress in risk reduction and closure. Sites input targets and actual performance data in the Integrated Planning, Accountability, and Budgeting System (IPABS). Each Field Manager is accountable for the performance data entered into the system. Based on an analysis of the performance data, management may decide to adjust program priorities in order to ensure annual targets are met. On a monthly basis, EM also enters earned value data for selected projects found in the Department's Project Assessment and Reporting System (PARS). As new site baselines are approved, other cleanup projects for a site will be entered into PARS. Once baselines are completed for all sites, approximately 80% of EM's life-cycle costs will be captured in projects found in PARS for which earned value data will be reported.

Evidence: Resource Management: Configuration Management Change Control Process for the Environmental Management Program (December 2002); Memorandum for the Assistant Secretary for Environmental Management from the Deputy Assistant Secretary Office of Policy, Planning, and Budget re: Configuration Control Board Mid-Year Report (May 2003).

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight:12%

Explanation: In FY 2003, the EM program required that Field and Headquarters managers have in their performance plans activities that could be measured for which they are accountable. The measures have been benchmarked to the recommendations of the FY 2002 Top-to-Bottom Review; managers will be evaluated against these critical few elements on October 1, 2003. As an example, targets were established by each operations/field office manager using the new corporate performance measures. The FY 2003 targets, which are under change control, are in each manager's performance plan. Each Manger's performance against those targets will be evaluated.

Evidence: Department of Energy Senior Executive Service Performance Appraisal (DOE F 331.2).

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:12%

Explanation: Funds are obligated consistent with the overall EM program plan, with timeframes established for obligation of the funds that are reported in the Department's financial accounting system.

Evidence: FY 2004 Congressional Budget Justification; Department of Energy Performance and Accountability Reports.

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

3.4 **Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?** Answer: YES Question Weight: 12%

Explanation: The EM program performs almost all of its cleanup activities through contracts. EM has recently increased the use of performance-based contractor fees as an incentive to improve program execution. However, the FY 2002 Top-to-Bottom Review recognized the need to utilize performance-based contracts by focusing fees on measurable results. As a result, procedures are being put in place to improve the acquisition and administration processes for performance-based contracts. This will require EM contractors to make significant improvements in efficiencies and cost effectiveness.

Evidence: Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress, (August 2003).

3.5 **Does the program collaborate and coordinate effectively with related programs?** Answer: NA Question Weight: 0%

Explanation: The EM program is the only program responsible for cleaning up the legacy of waste and contamination from past DOE operations.

Evidence: FY 2004 Budget Congressional Justification.

3.6 **Does the program use strong financial management practices?** Answer: YES Question Weight: 12%

Explanation: In 1998, DOE received a qualified opinion due to EM's weakness in the documentation supporting its environmental liabilities. This problem was corrected in 1999 and since then EM has received unqualified opinions through FY 2002.

Evidence: DOE Performance and Accountability Reports.

3.7 **Has the program taken meaningful steps to address its management deficiencies?** Answer: YES Question Weight: 12%

Explanation: The February 2002 Top-to-Bottom Review concluded many of EM's business processes do not allow the program to efficiently and effectively accomplish its mission. As a result of the review, EM is implementing significant reforms to the program. EM has made in significant progress in addressing issues related to its acquisition strategy, contract management, and regulatory agreements.

Evidence: Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress, (August 2003).

3.CA1 **Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals?** Answer: YES Question Weight: 12%

Explanation: Management reforms (i.e., a new budget structure, human capital revitalization, revised acquisition strategy, improved contract management, and strict change control) have been developed. In addition, site PMPs or accelerated cleanup strategies have been developed which describe end-states, strategies, and milestones that will achieve site cleanup faster and cheaper than originally anticipated. EM is using and managing the acquisition process as one tool to drive contract performance. Performance-based contracts are being implemented to establish more focused performance incentives and to restructure projects to accelerate risk reduction and site closure, thereby reducing life-cycle costs. EM has established a Contract Management Advisory Council that reviews contracts from a corporate perspective. Most contracts have been reevaluated and either renegotiated or announced for a new competitive procurement.

Evidence: FY 2004 Congressional Budget Justification; Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress, (August 2003).

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: YES Question Weight:12%

Explanation: The Technology Development and Deployment program's competitive procurement strategy is to contract with "technology developers/integrators" using a multiple-award, phased, performance-based contracting approach. The projects are reviewed at the completion of each phase. Only projects meeting the stated objectives for that phase and still appear to represent a significant improvement over the baseline are continued.

Evidence: FY 2004 Congressional Budget Request.

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: SMALL EXTENT Question Weight20%

Explanation: The EM program's accelerated cleanup strategies are being incorporated into site cost, schedule, and performance baselines. EM has aggressively implemented management reforms and initiatives that have resulted in a significant downward revision of program life-cycle cost and schedule estimates. The EM program needs to demonstrate it can actually execute to these aggressive cost and schedule baseline and achieve the projected savings.

Evidence: FY 2004 Congressional Budget Justification; Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress, (August 2003).

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: NO Question Weight20%

Explanation: The EM program is in the process of developing annual performance measures and targets aligned with its long-term cost and schedule goals. However, the EM program has developed new corporate performance measures that align with EM's new approach of accelerated cleanup and risk reduction. Mid-year performance measure data indicate that EM is presently on track to achieve most of its annual risk reduction targets.

Evidence: FY 2004 Congressional Budget Justification; Third Quarter Corporate Performance Measures Report (July 2003).

4.3 **Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?** Answer: SMALL EXTENT Question Weight20%

Explanation: The EM program is implementing numerous reforms to improve program performance. These initiatives include, for example, revising cleanup and closure strategies such as risk-based treatment and disposal of radioactive waste; consolidating overhead activities for several small cleanup sites into a single service center; and implementing performance-based contracts.

Evidence: Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress, (August 2003).

4.4 **Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?** Answer: NA Question Weight: 0%

Explanation: There are no programs with similar purpose and goals for comparison.

Evidence:

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:

Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: SMALL EXTENT Question Weight 20%

Explanation: The GAO also continues to identify the EM program as a major performance and accountability challenge. Also, the February 2002 Top-to-Bottom Review (conducted under contract) was the first major, comprehensive evaluation done by the Department. The review indicated that EM is not as effective at achieving results as it should be. In FY 2003, EM is aggressively changing the approach to its risk reduction and cleanup mission in order to achieve greater risk reduction faster, accelerate site closure schedules, and reduce life-cycle costs.

Evidence: GAO 2003 Performance and Accountability Series and High Risk Update; A Review of the Environmental Management Program (February 2002); Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress, (August 2003).

4.CA1 **Were program goals achieved within budgeted costs and established schedules?** Answer: SMALL EXTENT Question Weight 20%

Explanation: Based on EM's latest data, the EM program is projecting significant cost and schedule reductions as a result of major changes made in the program since the February 2002 Top-to-Bottom Review. However, the recent $1.4 billion (+33 percent) increase in the baseline for the Hanford Waste Treatment Plant indicates continuing problems in achieving program results within budgeted costs.

Evidence: Top-to-Bottom Review of the EM Program: Status of Implementation, Report to Congress, (August 2003); Congressional Notification (May 2003).

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:

Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

Measure: Reduce life-cycle costs of the EM program from 2001 baseline (amounts shown are 2004 dollars in millions).

Additional Information: This long-term goal measures EM's ability to control life-cycle costs. EM has successfully aborted the program's recent history of annual cost and schedule increases. Dollars shown under the "Actual" column are in FY 2002 constant dollars (billions). Once this goal is achieved, EM will face the additional challenge of maintaining, or further reducing, the life-cycle cost of the program.

Year	Target	Actual	**Measure Term:** Long-term
2001		203	
2002	< 192	161	
2003	< 161	142	
2004	< 142		

Measure: Number of liquid tanks closed.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	1	0	
2004	9		
2005	9		

Measure: Canisters of high-level waste packaged for final disposition

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	130	115	
2004	250		
2005	250		

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

Measure: Transuranic waste shipped for disposal at WISP (cubic meters)

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	4,522	6,361	
2004	12,952		
2005	13,318		

Measure: Number of nuclear facilities completed

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	2	4	
2004	5		

Measure: Number of radioactive facilities completed

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	7	24	
2004	45		
2005	57		

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

Measure: Number of industrial facilities completed

Additional Information:

Year	Target	Actual
2003	49	107
2004	104	
2005	152	

Measure Term: Annual

Measure: Number of material access areas eliminated

Additional Information:

Year	Target	Actual
2003	0	0
2004	1	
2005	1	

Measure Term: Annual

Measure: Low-level/mixed low-level waste disposed (m3)

Additional Information:

Year	Target	Actual
2003	75,030	118,362
2004	89,070	
2005	84,635	

Measure Term: Annual

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

Measure: Number of the 7,666 release sites that are completed.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	214	258	
2004	196		
2005	283		

Measure: Reduce the time it takes to complete the EM mission by 35 years.

Additional Information: This ambitious long-term goal measures EM's challenge to reduce the time it takes to complete the EM mission. It is EM's current belief that the completion of the EM mission can be accelerated from 2070 to 2035. EM believes this projection is accurate. However, until all new resource-loaded site baselines (which reflect approved PMPs or accelerated strategies) have been approved by the Assistant Secretary, EM is being conservative in classifying this goal as completed. Once this goal has a basis, EM will face the additional challenge of maintaining, or further reducing, time to completion.

Year	Target	Actual	**Measure Term:** Long-term

Measure: Number of the 107 geographic sites where cleanup is completed.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2001	74	74	
2002	75	75	
2003	77	76	
2004	77		
2005	79		

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

Measure: Number of the 6,045 certified DOE storage, treatment, & disposal containers (3013 or equivalent) of plutonium metal or oxide packaged and ready for long-term storage

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2002		1,484	
2003	4,320	4,549	
2004	5,543		
2005	5,708		

Measure: Number of certified containers of enriched uranium packaged ready for long-term storage

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	277	201	
2004	925		
2005	669		

Measure: Plutonium or uranium residues packaged for disposition (kg of bulk material)

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	934	1,140	
2004	254		
2005	76		

PART Performance Measurements

Program: Environmental Management
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	80%	100%	26%	

Measure: Spent Nuclear Fuel packaged for final disposition (metric tons of heavy metal)

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	857	807	
2004	633		
2005	1		

Measure: Depleted and other Uranium packaged for disposition (metric tons)

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	1,815	4551	
2004	0		
2005	0		

Measure: Liquid waste eliminated (millions of gallons);

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	700	0	
2004	1,300		
2005	1,900		

OMB Program Assessment Rating Tool (PART)

Capital Assets & Service Acquisition Programs

Name of Program: Facilities and Infrastructure

Section I: Program Purpose & Design (Yes,No)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Is the program purpose clear?*	Yes	The mission of the Facilities and Infrastructure Recapitalization Program (FIRP) is to restore, rebuild and revitalize the physical infrastructure of the nuclear weapons complex by directly funding maintenance and infrastructure activities above current operating levels. Programs across the entire National Nuclear Security Administration (NNSA) complex are integrated and prioritized on one list. The goal is to significantly increase the operational efficiency and effectiveness of the NNSA weapons complex sites.	Report to Congress on the Organization and Operations of the NNSA (Feb 02); NNSA Strategic Plan (Feb 02); NNSA Future Years Nuclear Security Program (FYNSP) March 02;	20%	0.2
2	*Does the program address a specific interest, problem or need?*	Yes	Numerous internal and external reports, studies, and audits have highlighted the deteriorating condition of the existing Nuclear Weapons Complex. NNSA initiated the program to better direct resources against deteriorating infrastructure by: 1) recapitalizing operational facilities, focusing on deferred maintenance and repair; 2) disposing of excess facilities that are not radiologically contaminated (or have minimum fixed quantified contamination) to reduce long-term costs/ risk and the total complex footprint; 3) continuing a disciplined planning, execution and evaluation effort to ensure effective outyear project execution of Recapitalization and Dispostion projects.	**Documentation of the problem includes:** Nuclear Posture Review (NPR); FY 2000 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile (Foster Panel) (Feb 01);	20%	0.2
3	*Is the program designed to have a significant impact in addressing the interest, problem or need?*	Yes	The program is designed to improve the condition of facilities and infrastructure across the Nuclear Weapons complex by identifying, prioritizing, funding, and expeditiously correcting infrastructure problems. The program is intended to stop the deterioration of the NNSA's facilities and infrastructure, stabilize and then reduce deferred maintenance, and reduce the existing NNSA complex footprint by disposing of excess facilities that are no longer required for DOE/ NNSA's needs. If successful, the program will address deficiencies noted in numerous reports in recent years.	NNSA Strategic Plan; DOE FY 03 Annual Performance Plan; Ten Year Comprehensive Site Plan Guidance (including FIRP criteria); Site Ten Year Comprehensive Site Plans; Future Years Nuclear Security Program (March 02); FY 03 Congressional Budget Request; FY04 OMB Budget Request (draft); Report to Congress on the Organization and Operations of the NNSA (Feb 02); Foster Panel Report (Feb 01).	30%	0.3

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
4	*Is the program designed to make a unique contribution in addressing the interest, problem or need (i.e., not needlessly redundant of any other Federal, state, local or private efforts)?*	No	The program focuses on renewing and sustaining NNSA facilities and infrastructure. These activities appear to overlap with activities under another NNSA program called Readiness in Technical Base and Facilities and, possibly, construction programs funded in the NNSA campaigns. Broadly speaking, all of these efforts play a role in restoring the complex to an acceptable condition. While the program is separate from the maintenance and infrastructure efforts funded out of the Readiness in Technical Base and Facilities, the extent to which it is unique remains to be determined.	Ten Year Comprehensive Site Plan Guidance (including FIRP project Criteria) NNSA Strategic Plan; Strategic Assessment Model, second edition (2001), Annual Budget request justification material.	20%	0.0
5	*Is the program optimally designed to address the interest, problem or need?*	Yes	The Facilities and Infrastructure Recapitalization (FIRP) is structured as a capital renewal and sustainability program that addresses significant facilities and infrastructure issues that are separate from the ongoing operations and maintenance programmatic base. The program uses a team which includes representatives from DOE headquarters and field facility operators and managers to develop Ten Year Comprehensive Site Plans that ensure a comprehensive look at NNSA facilities and infrastructure. The program is designed to address the worst/most urgent facilities and infrastructure problems first, consistent with the program criteria.	NNSA Strategic Plan; FIRP 5-Year Program Plan; Project Data Sheets; Project Work Authorizations; Annual Budget Requests; Ten Year Comprehensive Site Plans guidance; Former Administrator John Gordon letter to Congress.	10%	0.1
Total Section Score					**100%**	**80%**
Section II: Strategic Planning		**(Yes,No, N/A)**				
1	*Does the program have a limited number of specific, ambitious long-term performance goals that focus on outcomes and meaningfully reflect the purpose of the program?*	Yes	The Facilities and Infrastructure Recapitalization Program's (FIRP) long-term goals are to reduce the backlog of deferred maintenance and reduce the amount of facilities and infrastructure no longer needed. Deferred maintenance is a standard industry metric that refers to the deferred amount of maintenance required to keep a facility in a condition for which it was originally intended. NNSA's goal is to return its deferred maintenance level to industry standards by FY 2009 for mission-critical facilities. Reducing excess infrastructure is both a DOE/NNSA and Congressional item of interest and NNSA intends to dispose of 3,000,000 square feet of space by 2009. Achieving the goals will benefit NNSA by lowering total maintenance costs.	Source Documents: Annual Budget Request; Deferred Maintenance Reduction Summit	15%	0.2

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
2	*Does the program have a limited number of annual performance goals that demonstrate progress toward achieving the long-term goals?*	Yes	The program's annual performance goals are still a work in progress, but initial indications support the assertion that they will lead to achieving the long-term goals. For example, near-term performance goals include stabilizing the amount of deferred maintenance and reducing excess space by 435,000 gross square feet in FY 2004.	FY 03 DOE Annual Performance Plan; FY 03 Congressional Budget Request; Program Execution Plan; Monthly project reports; Project Data Sheets; Work Authorizations.	15%	0.2
3	*Do all partners (grantees, sub-grantees, contractors, etc.) support program planning efforts by committing to the annual and/or long-term goals of the program?*	Yes	FIRP partners with representatives from NNSA's eight sites and operating contractors to support program planning and execution. Field representatives submit infrastructure site plans to the FIRP program office as part of the overall vetting process. These site plans form the base of the annual and long-term goals. Furthermore, the FIRP program office shares best practices and attains broad agreement and commitment from Headquarters, Field, and operating contractors to support the achievement of corporate goals. NNSA Headquarters and each Site (Federal and operating contractor) committed to the NNSA corporate goals of deferred maintenance reduction at Deferred Maintenance Reduction Summit in July 2002.	Ten Year Comprehensive Site Plan Guidance; Site Ten Year Comprehensive Site Plans; Five-Year Program Plans; Deferred Maintenance Reduction Summit (Jul 25, 02)	10%	0.1
4	*Does the program collaborate and coordinate effectively with related programs that share similar goals and objectives?*	Yes	The program works with NNSA Defense Programs and the operating contractors in the field to ensure that the most critical facilities and infrastructure needs of the complex are addressed. In addition, the program office has worked with other DoE organizations (including the Office of Engineering and Construction Management) to support Departmental reporting requirements. The program office also informally collaborates with counterparts in the Department of Defense.	Ten Year Comprehensive Site Plan Guidance; Ten Year Comprehensive Site Plan Review Plan Deferred Maintenance Reduction Summit (Jul 25, 02); RTBF Implementation Plans; Integrated Construction Program Plan;	15%	0.2
5	*Are independent and quality evaluations of sufficient scope conducted on a regular basis or as needed to fill gaps in performance information to support program improvements and evaluate effectiveness?*	Yes	Within the NNSA, the Office of Project Management and Engineering Support is responsible for conducting Independent Project Reviews that provide NNSA program managers with feedback on the status of project development and execution. The purpose of the independent project reviews is to ensure rigorous and systematic reviews of projects at key stages of the program and project life-cycle. The review process provides a standard methodology and report format for independent project reviews of NNSA programs and projects. The personnel that perform the independent project reviews have no direct role or interest in the execution or outcome of the Program and projects being reviewed.	Project Review Facilities and Infrastructure Program Capabilities at NNSA Nevada June 11-13, 02; Independent project review Project Management Capabilities at Y-12 National Security Complex, Oak Ridge, TN, Jan 22-25, 2002.	10%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
6	*Is the program budget aligned with the program goals in such a way that the impact of funding, policy, and legislative changes on performance is readily known?*	Yes	The program budget structure is aligned with key objectives thereby enabling the impact of funding decisions to be assessed by sub-program (i.e., Recapitalization, Facility Disposition, Infrastructure Planning) and by individual project. There are Budget and Reporting codes associated with each of the sub-programs against which funding is allocated and costs reported. This budget structure has enabled the program to readily respond to Congressional direction, such as the following: "The Committee directs that at least 25% of the facilities and infrastructure funding in FY 2003 be used to dispose of excess facilities that will provide the greatest impact on reducing long-term cost and risk."	Future Years Nuclear Security Plan (Mar 02); NNSA Program Decision Memorandum for FY 2004-2008 (Jul 02); Foster Panel report; Office of Secretary of Defense Program Analysis and Evaluation Review (1999); FY 04 NNSA Program/Subprogram/Major technical Elements Table (shows FIRP budget and reporting structure)	15%	0.2
7	*Has the program taken meaningful steps to address its strategic planning deficiencies?*	Yes	The program has developed a system of evaluating the effectiveness of its strategic planning efforts and makes improvements, as needed. As part of the annual update of the Ten Year Comprehensive Site Plans, NNSA Headquarters, the Field and operating contractors conduct a comprehensive review of the sites' draft Ten Year Comprehensive Site Plans and identify lessons learned and areas requiring improvement. Both site-specific and complex-wide issues (such as Deferred Maintenance, a general weakness noted during review of the draft FY 03 Ten Year Comprehensive Site Plans) are addressed. The most significant site-specific planning deficiencies are identified by formal memorandum to the site managers (for example a site's development of a draft Ten Year Comprehensive Site Plan that was not resource-constrained); the more detailed and less significant comments are distributed via e-mail to the site facility and infrastructure contacts. The comments are resolved by the sites working with their operating contractors and Headquarters (as needed). The final Ten Year Comprehensive Site Plans are reviewed by NNS that needed revisions have been appropriately incorporated.	FY 03 Ten Year Comprehensive Site Plan Guidance; Ten Year Comprehensive Site Plan Lessons Learned; Review Process for NNSA FY 2003 Ten Year Comprehensive Site Plans; Ten Year Comprehensive Site Plan Formal comments;	10%	0.1
8 (Cap 1.)	*Are acquisition program plans adjusted in response to performance data and changing conditions?*	Yes	Plans are adjusted twice a year in response to performance data and changing conditions. The program and NNSA headquarters conduct a comprehensive review of each sites' draft Ten Year Comprehensive Site Plan to identify corrective actions that must be reflected in the final Ten Year Comprehensive Site Plans to incorporate changing conditions or cost-effective alternatives. Project and related performance data reported in the site's draft and final Ten Year Comprehensive Site Plans are adjusted in response to changes to the budget.	Ten Year Comprehensive Site Plans; Review Process for NNSA FY 2003 Ten Year Comprehensive Site Plans; Ten Year Comprehensive Site Plan Formal comments; Roofing Partnership.	5%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
9 (Cap 2.)	*Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule and performance goals?*	Yes	The program considers alternatives and trade-offs as part of pre-project planning and during the establishment of project cost, schedule and performance baselines. The program recently conducted an analyses of alternatives on a project proposed by a site which resulted in a new funding strategy, schedule, and scope. The site initially requested approval of a project at a total cost of $194M. Infrastructure and Facilities Management, in collaboration with the site, analyzed the scope, implementation schedule and costs and developed an alternative strategy that considered trade-offs between cost, schedule and performance goals. The new strategy reduced and realigned the scope to more manageable, smaller projects based upon priority and execution efficiencies; adjusted the funding profile, consistent with Future Years Nuclear Security Plan constraints; and ensured the program criteria for project selection were met.	Ten Year Comprehensive Site Plan Guidance (including Facility and Infrastructure Recapitalization Program and Disposition Rating Matrices); Ten Year Comprehensive Site Plans;	5%	0.1
Total Section Score					**100%**	**100%**
Section III: Program Management (Yes,No, N/A)						
1	*Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?*	Yes	Facilities and Infrastructure Recapitalization Program establishes baselines for its projects and collects monthly and bi-monthly status reports from the operating contractors at each site for all projects. These status reports provide an assessment of each project's cost, scope, and schedule status and other key project information related to milestones, baseline changes, financial data, and program manager assessments. Additional oversight of projects is conducted through periodic program reviews, formal baseline change control, and continuous dialogue with Field program managers, including specific feedback on corrective action plans for all projects that are reported to be out-of-tolerance.	DOE Status Reporting (reference FY 02, 3rd Quarter FIRP Results); Guidance on Improving the Facilities Information Management System (FIMS) to Support Facilities and Infrastructure Management (Aug 01); FY 2004 NNSA Facilities and Infrastructure Crosscut Field Budget Data; FY 2004 NNSA Surplus Facilities Management Data (draft); Ten Year Comprehensive Site Plan Guidance; Monthly/bi-monthly project reports;	10%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
2	*Are Federal managers and program partners (grantees, subgrantees, contractors, etc.) held accountable for cost, schedule and performance results?*	Yes	NNSA incorporates program performance into the evaluation standards of senior Federal managers responsible for achieving program results. Senior level managers' Performance Appraisal Plans are required to include "Key Programmatic Accomplishments" that are specific and measurable. As an example, the Program Manager's FY 02 Performance Appraisal Plan included an objective to, "Develop/manage the program and budget" with the the associated measure to, "Manage the FIRP Program within approved scope, cost, and schedule". NNSA's operating contracts are performance-based, consisent with DOE Acquisition Regulations to emphasize contractor performance and accountability. Contractor Performance Evaluation Plans are used to hold contractors accountable for achieving key results, including the objectives and expectations of the program. Failure to achieve stated objectives results in reductions to the fee the contractor earns (for fee-based contracts).	DOE Senior program managers Performance Appraisals; Example of Contractor Performance Evaluation Plan; Monthly Project Reports.	10%	0.1
3	*Are all funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?*	Yes	The program obligates funds in a timely manner, as evidenced by the following: (1) $8.7 million of supplemental funding received in August 2001 was obligated by September 2001; 2) The FIRP FY 02 total obligational authority available is $196.55M. As of July 2002, FIRP had obligated $183.5M (93%) and anticipated no difficulty obligating the remaining $13.1M by the end of the year. All program funds are spent for the intended purpose. As required by DOE/NNSA, the program utilizes the Approved Funding Plan and monthly performance-based Work Authorizations that provide the program guidance consistent with distribution of the Approved Funding Plan. The Approved Funding is the financial guidance controlling the distribution of DOE's obligational authority in compliance with all legal and administrative controls and also provides the funds necessary to support the monthly work authorizations. The sites submit monthly/bi-monthly project status reports that provide the Budget Outlay Profile and actual costs along with milestones, narratives and other data, providing accountability and furt that funds are being spent for the intended purpose.	FIRP Work Authorizations; Approved Funding Program; Quarterly Allotment; Monthly status reports; FIRP Obligation Report (Financial Data Warehouse).	10%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
4	*Does the program have incentives and procedures (e.g., competitive sourcing/cost comparisons, IT improvements) to measure and achieve efficiencies and cost effectiveness in program execution?*	Yes	The program is implementing a program and project management process to ensure efficient use of funding. Sites establish project cost, schedule, and scope baselines and routinely measure and report their performance to Headquarters. Changes to the original baseline are monitored through a formal baseline change control process. To encourage efficient and effective project management and performance, project under runs remain at the sites to accomplish additional high-priority scope from the prioritized project list. In addition, cost efficiency is an important consideration for selection and validation of candidate projects. NNSA evaluates the cost efficiency of each project that appears on site lists for their immediate effect on the condition of a given facility and the savings of maintenance dollars.	Program Execution Plan	10%	0.1
5	*Does the agency estimate and budget for the full annual costs of operating the program (including all administrative costs and allocated overhead) so that program performance changes are identified with changes in funding levels?*	No	The program is In its infancy and, as yet, has not established a track record for estimating and budgeting for full program costs. Furthermore, the program's Federal Salary and Benefits, retirement, training, travel, rents, utilities, contractual and support services, and working capital fund costs are funded from a separate account and rolled up with other NNSA program direction funds consistent with Congressional direction.		10%	0.0
6	*Does the program use strong financial management practices?*	Yes	NNSA adheres to financial management practices through the implementation of its Planning, Programming, Budgeting and Evaluation system. This goal of the system is to formalize resource management, link program guidance with fiscal guidance, apply uniform and consistent budget practices across NNSA, and incorporate financial analysis into programmatic decisions. Finally, NNSA is re-engineering its Headquarters and field structures to improve accountability at the lowest levels. Part of this re-engineering will involve the financial management processes of the field elements, and the interface of those field processes with DOE headquarters.	Evidence: NNSA Future-Years Nuclear Security Program, March 20, 2002;	10%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
7	*Has the program taken meaningful steps to address its management deficiencies?*	Yes	Although the program is in its early stages, it has established formal program and project management processes and procedures (i.e., Ten Year Comprehensive Site Plan Guidance, Program Execution Plan, various NNSA Planning and Budgeting requirements) that lay the groundwork to effectively manage the program. NNSA's eight sites appear to understand and concur with the processes established by the program office, and are part of continuous improvement efforts to correct deficiencies as they are identified. The program office collects lessons learned, benchmarks against other, similar, programs, and compares the program to the best practices of industry. Finally, facility management issues are routinely discussed and resolved during monthly Facilities and Infrastructure Team teleconferences.	Ten Year Comprehensive Site Plan Lessons Learned; Benchmarking with independent entities (including industry and other sites); Survey of NNSA F&I Best Management Practices (ongoing);	15%	0.2
8 (Cap 1.)	*Does the program define the required quality, capability, and performance objectives of deliverables?*	Yes	NNSA operating contracts are performance-based. The quality, capability, and performance characteristics are specified in Performance Evaluation Plans consistent with Departmental guidance on performance based management. NNSA Headquarters programs formally concur on the Performance Evaluation Plans. The NNSA Headquarters Work Authorizations delineate the funding and provide a statement of work that includes a detailed description of the work to be performed including scope, deliverables, milestones, and performance measures/ expectations. The program work authorizations are performance-based and cascade down from the goals, objectives, strategies and indicators reported in the NNSA Strategic Plan, 5-Year Program Plans, work plans and other guidance specifically tasked and approved by the responsible headquarters program managers.	Performance Evaluation Plan; Program Execution Plan; Work Authorizations; Project Authorizations; Monthly Project Reports	10%	0.1
9 (Cap 2.)	*Has the program established appropriate, credible, cost and schedule goals?*	Yes	The program has established appropriate, credible cost and schedule goals and is able to estimate unit costs, annual costs, and life-cycle costs which are incorporated into the Ten Year Comprehensive Site Plan. The planning goals are resource-constrained to reflect budget realities, consistent with the Future Years Nuclear Security Program. The FY 2003 Ten Year Comprehensive Site Plans include the sites' proposed FIRP projects for FYs 2003-12. The program's cost, schedule, and performance goals are established through a project management approach where sites establish cost and schedule baselines that the program office reviews. After the initial baselines are established, changes are managed through a formal baseline change control process. The program is able to estimate unit costs for excess facilities disposition (i.e., dollars/square foot of excess facilities disposed) based on data collected in the sites' Ten Year Comprehensive Site Plans and project status reports.	Ten Year Comprehensive Site Plan Guidance; Ten Year Comprehensive Site Plans; Future Years Nuclear Security Plan; Program Execution Plan; Project Authorization; Project Data Sheets; Monthly/bi-monthly project reports; Status Reporting (reference FY 02, 3rd Quarter FIRP Results);	10%	0.1

Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
10 (Cap 3.) *Has the program conducted a recent, credible, cost-benefit analysis that shows a net benefit?*	N/A	Although initial reviews of the program appear to be favorable, the program is still too new to have developed sufficient data for a cost-benefit analysis.	N/A	0%	0.0
11 (Cap 4.) *Does the program have a comprehensive strategy for risk management that appropriately shares risk between the government and contractor?*	Yes	The program manages risk by prioritizing the most critical areas that require attention and sequencing the work to address those areas. During program planning, risk is directly factored into the site's prioritization of projects and into the Office of Infrastructure and Facilities Management selection of projects for funding. The sites prioritize their Recapitalization projects using the program's Recapitalization prioritization matrix which factors in Health and Safety risk to workers and the public; Mission Risk; Environmental Risk; and Safeguards and Security Risk. The sites prioritize their excess facilities disposition projects using the Disposition Matrix which factors in the facility condition assessment and cost into the prioritization rating. Congress has specifically directed that funding be used to, "dispose of Excess Facilities that will provide the greatest impact on reducing long-term costs and risk."	Ten Year Comprehensive Site Plan Guidance; Ten Year Comprehensive Site Plan; Performance Evaluation Plan .	5%	0.1
Total Section Score				**100%**	**90%**

Section IV: Program Results (Yes, Large Extent, Small Extent, No)

The Facilities and Infrastructure Recapitalization Program (FIRP) is a new program that received initial funding of $8.7M in August 2001, and

1	*Has the program demonstrated adequate progress in achieving its long-term outcome goal(s)?*	large Extent	Although relatively new, the program appears to have a plan for achieving success. Notwithstanding previous DoE efforts at infrastructure maintenance and recapitalization, the program office appears to have the support of NNSA leadership, as demonstrated by a healthy funding profile in NNSA's Future Year Nuclear Security Plan. Given the numerous reports that have highlighted the poor state of the weapons complex infrastructure, significant attention will likely be given both internally and externally to this program.	FY 04 OMB Budget Request (draft) Deferred Maintenance Reduction Summit	100%	0.670

Long-Term Goal I:	Stabilize deferred maintenance by FY 2005.
Target:	This is a new long-term goal included in the FY 04 Budget.
Actual Progress achieved toward goal:	N/A
Long-Term Goal II:	Return facilities and infrastructure specific deferred maintenance to industry standards by FY 2009 for mission-critical facilities.
Target:	This is a new long-term goal included in the FY 04 Budget.
Actual Progress achieved toward goal:	N/A

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
	Long-Term Goal III: Reduce excess space by 3,000,000 gross square feet by FY 2009. Target: This is a new long-term goal included in the FY 04 Budget. Actual Progress achieved toward goal: N/A					
2	*Does the program (including program partners) achieve its annual performance goals?*	N/A	The FY 2002 program annual goals, as reported in the DOE FY 2003 Annual Performance Plan are provided below, along with projected year-end results. These annual goals were established during the program's start-up year. The goals were recently updated to provide a more quantitative assessment of program progress and to align more closely with the program's long-term performance goals. The updated annual performance goals and targets for FY 2004 are shown under Key Goal 1 and Performance Target, and are included in the FY 2004 Budget. **FY 02 Annual Goal:** Execute oversight of more than 50 FY 2002 Recapitalization Projects consistent with scope, cost, and schedule baselines. **Status:** Currently executing 99% (80 of 81) FY 2002 Recapitalization projects within established baselines. **FY 02 Annual Goal:** Implement an excess prioritized project list to ensure high priority facilities are demolished, based on NNSA's TYCSPs that result in disposal of over 500,000 square feet of floor space. **Status:** On track to achieve footprint reduction of 500,000 gross square feet through execution of FY 2002 Program Facility Disposition projects.	FY 04 OMB Budget Request (draft) FY 02 3rd Quarter Performance Results	0%	
	Key Goal I: **Deferred Maintenance Reduction:** Allocate 45% of the Recapitalization budget to facilities and infrastructure specific deferred maintenance activities, thereby achieving significant reductions in gross deferred maintenance. Performance Target: This is a new annual performance goal that is included in the FY 04 Budget and will be included in the DOE FY 04 Annual Performance Plan. Actual Performance: N/A					
	Key Goal II: **Footprint Reduction:** Reduce the NNSA footprint by 435,000 gross square feet through FY 2004 FIRP Facility Disposition projects. Performance Target: This is a new annual performance goal that is included in the FY 04 Budget and will be included in the DOE FY 04 Annual Performance Plan. Actual Performance: N/A					

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
3	*Does the program demonstrate improved efficiencies and cost effectiveness in achieving program goals each year?*	N/A		N/A	0%	
4	*Does the performance of this program compare favorably to other programs with similar purpose and goals?*	N/A	The House Energy Water Development and Appropriations Bill for FY 2003 provided a favorable assessment of the program. Specifically: "The Committee is encouraged by the execution of this program to date and expects the NNSA to ensure that the results of this funding are quantifiable and quickly show measured improvements at each site . . .The Committee directs the NNSA to ensure that funds for recapitalization are not diverted to fund ongoing maintenance and programmatic needs."	Congressional language	0%	
5	*Do independent and quality evaluations of this program indicate that the program is effective and achieving results?*	N/A			0%	
6 (Cap 1.)	*Were program goals achieved within budgeted costs and established schedules?*	N/A			0%	
Total Section Score					**100%**	**67%**

PART Performance Measurements

Program: Fuel Cells (Stationary)
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	70%	88%	42%	

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The program's purpose is to develop low-cost commercially competitive fuel cells that benefit the nation by providing enhanced energy security, reliability, environmental and health benefits, and economic choices.

Evidence: Distributed Generation Program Brochure; Solid State Energy Conversion Alliance (SECA) Program Plan; Hybrid Program Plan; budget documentation (e..g, FY 2004 Congressional Justification); internet sites (SCNG.doe.gov, SECA.doe.gov); Public Workshop Proceedings; National Energy Policy (NEP); DOE Fuel Cell Report to Congress.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The program addresses increasing efficiency of electricity production from fossil fuels resulting in fuel conservation and CO2 reduction, transitioning to a hydrogen-based economy, and reducing pollutant emissions to negligible levels.

Evidence: Program Plans; NEP; Budget Documentation; Internet Sites.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The program targets stationary fuel cells for utility- and distributed generation. The Fossil Energy (FE) program is the primary high-temperature fuel cell program within the Federal Government. Coordination meetings are held with other Department of Energy (DOE) offices, Department of Defense (DoD), National Aeronautics and Space Administration (NASA), Environmental Protection Agency (EPA), and National Institute of Standards and Technology (NIST) to ensure redundancy does not exist.

Evidence: Budget Documents (e.g., FY 2004 Congressional Justification), Internet Sites.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: There is no evidence of an alternative progam desing that would be more efficient or effective. Research and development (R&D) is considered the least-intrusive government action to address market failures and generate desired public benefits.

Evidence: Program plans; Budget Documents; Public Workshop Proceedings; Internet Sites; Bayh Dole Act Exceptional Circumstance

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: NO Question Weight 20%

Explanation: The Distributed Energy (DG) Program targets U.S. electricity user. Because of the high risk still associated with high temperature fuel cells, no significant industry-sector capital investment was available prior to the start of the SECA Program. The DG Program lowers this technical risk to allow increasingly greater industry investment. However, the Department has not presented R & D Investment Criteria information at a detailed level discussing variables such as years to commercialization, public benefits, technolgical risk, cost share, or plotting economic, environment or security benefits.

Evidence: Program Plans, Public Workshops Proceedings, Internet Sites.

PART Performance Measurements

Program: Fuel Cells (Stationary)
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	70%	88%	42%	

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight:10%

Explanation: The long-term and annual performance measures are as indicated in the PART Measures section. The measures address fuel cell system cost and efficiency. Year 2010 targets of $400/kW and 75% fuel cell cost and efficiency are well defined.

Evidence: See the "Measures" section of this PART; also program plans; SECA Industry Team Solicitation.

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight:10%

Explanation: The Program's long-term measures are ambitious: $400/kW and 75% efficiency in 2015 will represent a 10-fold reduction in cost and almost 20-point improvement in efficiency compared to existing technology. SECA has 3 phases (2005, 2008) and the program is targeted to end in 2010. Program and individual projects are continually monitored. All Financial Assistance Awards permit substantial technical involvment of government personnel in decisions.

Evidence: See the "Measures" section of this PART; program plans; program solicitations.

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:10%

Explanation: Annual performance measures of system cost and energy conversion efficiency quantifiably demonstrate incremental progress toward long-term goals. Detailed performance measures are provided by an annual JOULE performance plan and a project database of objectives.

Evidence: See the Measrues scetion of this PART; ProMIS project database; Joule Milestones plans.

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:10%

Explanation: The program has baselines and ambitious targets for its annual measures. The baselines are indicated in the PART measures section as an actual without a target. These baselines exist for cost and efficiency of fuel cell and hybrid systems. The annual targets increase aggressively to 2010 and 2015 targets that are at the edge of feasibility.

Evidence: SECA Program Plan; Hybrid Program Plan; public workshop proceedings.

PART Performance Measurements

Program: Fuel Cells (Stationary)
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	70%	88%	42%	

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:10%

Explanation: Every project award in the SECA program is focused on the targets of the PART measures section that were also goals included in the solicitation. The Core R&D solicitation topics are selected with input from the fuel cell system developers and DOE prioritization of the most important program issues/goals. Every project is also focused on prioritization of issues viewed most critical to achieving these goals. Each project within the program has milestones identified in the Scope of Work, frequently on a quarterly basis but no less than annual. These milestones are monitored through periodic reports, site visits, the PROMIS project management database, and JOULE quarterly milestones. Private sector cost share of the DG Program has been in excess of 40%. Industry-team elements of SECA have committed to increasing higher cost shares as system designs evolve, initial phases exceed 20%.

Evidence: PROMIS project management database; program solicitations, Quarterly Joule Milestones; PART measures.

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: The Fuel Cell program has been reviewed by the National Research Council and receives a continuous stream of industry and academia input. In developing the SECA program significant effort was expended to canvas the technology world-wide to ensure the most recent technology and commercial status were incorporated in the program. This effort continues to ensure that new information is assimilated including interaction with other government agencies. Other reviews include a due diligence of the fuel cell developers by a third party (Spencer Management and Argonne National Laboratory), and annual public Workshops that specifically encourages industry, university, and Nat Lab inputs.

Evidence: National Research Council reports, Due diligence summary, Public Workshop Proceedings.

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: The Department has not submitted budget documents explicitly linking performance goals to request levels, or presented resource needs in a complete and transparent manner.

Evidence:

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: Improvements in benefits modeling, and efforts to connect long- and short-term goals through the JOULE performance tracking system are all concrete steps that help with planning efforts. The program also uses its annual stakeholder program meetings and other periodic meetings with industry to adjust the R&D program focus and as input to the strategic planning process.

Evidence: Public workshop proceedings; program plans; Joule Quarterly Reports.

PART Performance Measurements

Program: Fuel Cells (Stationary)
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	70%	88%	42%	

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NO Question Weight:10%

Explanation: The program has not submitted R & D Investment Criteria information analyzing key program variables at a detailed level, such as years to commercialization, potential public benefits (economic, environmental, security), total project cost, technological risk, cost share.

Evidence:

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: NO Question Weight:10%

Explanation: The program has not explained how potential benefits and other factors are used in determining program priorities.

Evidence:

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:12%

Explanation: In projects forming the crux of the program, major milestones are delineated, along with performance requirements, and the milestones tracked and performance measured through regular reporting procedures and project status meetings.

Evidence: ProMis database; websites (www.seca.doe.gove/scng, www.netl.doe.gov/scng); and program plans and roadmaps.

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:12%

Explanation: Industrial teams have clearly defined milestones to meet and senior DOE Office of Fossil Energy managers (SES) have their performance plans linked to goals. The performance criteria for individual Federal product and project managers are based on agreement between employee and supervisors; however, in most cases this will include rating criteria based on success of activities managed.

Evidence: Program roadmaps; program plans; contracts; Senior Executive Service Performance Management plans.

3.3 **Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?** Answer: YES Question Weight:12%

Explanation: All funds have been obligated in a timely manner and have funded the intended purpose identified in appropriations. Three solicitations have resulted in over thirty awards over three years and six national laboratories have been funded through Field Work Proposals.

Evidence: Program solicitation and selection documents. Program Field Work Proposals.

PART Performance Measurements

Program: Fuel Cells (Stationary)
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	70%	88%	42%	

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:12%

Explanation: About 75% of the program is implemented through the National Energy Technology Lab (NETL) competitive solicitation process resulting in a high level of cost sharing thereby illustrating a high level of industry relevance. The remainder of the program is largely congressionally earmarked. Beginning in FY 2002, this effort was peer-reviewed twice annually at invitation only SECA core technology workshops (public summary in draft) where industry teams critique the work of DOE Nat. Labs. Additionally, R & D performed in-house at NETL is peer reviewed annually (beginning in FY 2001) with results captured in an annual work plan/report as posted on the NETL web.

Evidence: Program websites (www.seca.doe.gove/scng, www.netl.doe.gov/scng).

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: Activities of the Fuel Cell hybrid program are fully integrated with those of the SECA program. Knowledge is shared between the low temperature, transportation fuel cell program in DOE's Energy Efficiency and Renewable Energy program via annual coordination meetings. There are also several fuel cell industry advisory groups that routinely interact with the various DOE fuel cell program R&D stategists. SECA is a relatively unique program although small efforts through NIST and DoD exist. Project and Program reveiw meetings are jointly attended in many cases.

Evidence: Websites (www.seca.doe.gove/scng, www.netl.doe.gov/scng); budget documents.

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: DOE received a clean audit in FY 2002; no known deficiencies specific to this program. Several computer-based project management controls are in place to assist in financial management. Systems exist both on the financial side and the project management side. In addition, individual contract specialists keep detailed files of primary records.

Evidence: DOE annual Performance and Accountability reports.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:12%

Explanation: DG Program recently revamped to target deficiencies. Forty percent of SECA funding will support core R&D topics, through government financial assistance mechanisms, and will be selected by government personnel with input from industry through annual workshops. Results will be peer reviewed by industry and peer researchers semi-annually to ensure relevance and quality. 60% of funding will be used to establish Multiple Industrial Teams which will each incorporate the core R&D within their unique system approach. Clear, phased goals are provided to measure progress. If these strict requirements of aggressive cost and efficiency goals are not being met, corrective actions inclusive of off-ramping may be imposed. This approach supplants a previous program deficiency of extended government subsidy of costly demonstrations with a research and development focus.

Evidence: Budget documents; program plans, Reports to Congress.

PART Performance Measurements

Program: Fuel Cells (Stationary)
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	70%	88%	42%	

3.RD1	**For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?**	Answer: YES	Question Weight:12%

Explanation: Approximately 75% of the program is subject to competitive solicitation. The remaining portion of the program is largely congressionally earmarked.

Evidence:

4.1	**Has the program demonstrated adequate progress in achieving its long-term performance goals?**	Answer: SMALL EXTENT	Question Weight25%

Explanation: External review has questioned the ability of the program to discern industrial commitment to commercialization. However, some DOE stationary fuel cell programs have begun the transition to commercialization.

Evidence: National Academy of Sciences, National Researach Council report: "Energy Research at DOE: Was it Worth It? (2001).

4.2	**Does the program (including program partners) achieve its annual performance goals?**	Answer: LARGE EXTENT	Question Weight25%

Explanation: Deficiencies have been corrected with clarity of the linkage between annual and long-term performance goals. The JOULE performance tracking system resulted in a 100% performance score. FY 2003 year-to-date provides validation that all programmatic milestones were met. (In the DG Program, 100 percent of milestones were completed for the first two quarters of FY 2003.)

Evidence: NEMS methodology and results; JOULE system results; ProMIS database (NETL); public workshop proceedings; SCNG and SECA website accomplishments and results (www.seca.doe.gove/scng, www.netl.doe.gov/scng).

4.3	**Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?**	Answer: NO	Question Weight25%

Explanation:

Evidence:

4.4	**Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?**	Answer: NA	Question Weight: 0%

Explanation: No similar programs exist for comparison.

Evidence:

PART Performance Measurements

Program: Fuel Cells (Stationary)
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	70%	88%	42%	

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?

Answer: LARGE EXTENT

Question Weight 25%

Explanation: Enhancements in the processes for independent reviews have been made. Using a rigorous methodology that was developed to assess prior fuel cell development, this "Due Diligence" independent evaluation will be applied to the SECA program in June 2003. The SECA program strategy and progress is being reviewed publicly once annually and the R&D program is peer reviewed semi-annually. The NRC (NAS) has reviewed the DOE fuel cell program, comments were incorporated during the 2000 - 2002 redesign phase.

Evidence: SECA workshop proceedings and peer review summary (www.seca.doe.gove/scng); NAS/NRC report "Energy Research at DOE: Was it Worth It?" (2001); Due diligence summary report.

PART Performance Measurements

Program: Fuel Cells (Stationary)
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	70%	88%	42%	

Measure: Efficiency of fuel cell turbine systems (percentage of heat in fuel converted to electricity).

Additional Information: Fuel cell turbine systems can achieve 60 -75% efficiency surpassing any known technology using fossil fuel or hydrogen. The measure is based on DC or AC power divided by fuel content as Lower Heating Value.

Year	Target	Actual	**Measure Term:** Long-term
2003		30%	
2015	60%		

Measure: Efficiency of fuel cell turbine systems.

Additional Information: This measure is based on independently audited estimates of system efficiency or complete-system verification tests. Scheduled verification tests years are 2005, 2008, & 2010.

Year	Target	Actual	**Measure Term:** Annual
2003		30%	
2005	33%		
2006	34%		
2007	35%		
2008	36%		

Measure: Capital Cost of fuel cell system. Fuel cell systems currently produce power at a cost of $4500 per kw.

Additional Information: SECA and Hybrid R&D plans were designed with specific cost goals that will result in economically competitive, free market deployment of fuel cell systems. This measure is based on actual cost or independently audited cost projected to high volume manufacturing.

Year	Target	Actual	**Measure Term:** Long-term
2003		4,500	
2014	400		

PART Performance Measurements

Program: Fuel Cells (Stationary)
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
80%	70%	88%	42%	

Measure: Capital Cost of fuel cell system. Fuel cell systems currently produce power at a cost of $4500 per kw.

Additional Information: The outcome required to ensure fuel cells are economically competitive with other technologies in a free market. This measure is based on actual cost or independently audited cost of complete systems projected to high volume manufacturing.

Year	Target	Actual
2003		4,500
2005	1,500	
2006	1,000	
2007	800	
2008	750	

Measure Term: Annual

PART Performance Measurements

Program: Fusion Energy Sciences
Agency: Department of Energy
Bureau: Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	67%	80%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The mission of the Fusion Energy Sciences (FES) program is to advance plasma science, fusion science, and fusion technology--the knowledge base needed for an economically and environmentally attractive fusion energy source.

Evidence: FY04 Budget Request (www.mbe.doe.gov/budget/04budget/index.htm). Public Law 95-91 that established the Department of Energy (DOE).

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The Fusion Energy Sciences program goals are designed to address the scientific and technology issues facing fusion energy development:1. plasma chaos, turbulence, and transport, 2. magnetic configuration stability, reconnection, and dynamo,3. plasma sheaths and boundary layers, 4. wave-particle interaction in plasmas, and5. materials and technology engineering.

Evidence: FY04 Budget Request. National Research Council (NRC) report "Plasma Science". Fusion Energy Sciences Advisory Committee (FESAC) "Report on the Integrated Program Planning Activity for the DOE Fusion Energy Sciences Program" (www.ofes.fusion.doe.gov/More_HTML/FESAC_Charges_Reports.html).

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: FES is unique in funding fusion research for energy purposes. The program is coordinated with NNSA inertial confinement fusion program. FES also provides support for research in plasma science, and is coordinated with the National Science Foundation (NSF) program.

Evidence: Program funds all dedicated fusion energy research, and a significant share of the plasma physics research in the U.S. Coordinated planning with NNSA in inertial fusion. MOUs and joint solicitations with NSF.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The FES program is based on competitive merit-review, independent expert advice, and community planning. This proves efficient and effective. However, a COV has yet to validate the merit review system.

Evidence: FESAC, NRC reviews and reports (www.ofes.fusion.doe.gov/More_HTML/FESAC_Charges_Reports.html, www.ofes.fusion.doe.gov/FusionDocs.html). Program files.

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: FESAC ensures that input from the fusion research community is regularly gathered to assess the priorities, projects, and progress of the program. Peer review is used to assess the relevance and quality of each project.

Evidence: FESAC, NRC reviews and reports (www.ofes.fusion.doe.gov/More_HTML/FESAC_Charges_Reports.html, www.ofes.fusion.doe.gov/FusionDocs.html). Program files.

PART Performance Measurements

Program: Fusion Energy Sciences
Agency: Department of Energy
Bureau: Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	67%	80%	Effective

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight:10%

Explanation: While not comprehensive, the three key long-term measures focus on outcomes and are meaningful indicators of progress in fusion and plasma physics. The three long-term measures reflect critical areas of uncertainty as identified in the FESAC and NRC reports. The program has defined "successful" and "minimally effective" performance milestones for each measure, and an external panel will assess interim program performance on a triennial basis, and update the measures as necessary. It is inappropriate for a basic research program such as this one to have a quantitative long-term efficiency measure.

Evidence: National Research Council (NRC) report "Plasma Science" and Frontiers in High Energy Density Physics". Fusion Energy Sciences Advisory Committee (FESAC) "Report on the Integrated Program Planning Activity for the DOE Fusion Energy Sciences Program" (www.ofes.fusion.doe.gov/More_HTML/FESAC_Charges_Reports.html). A description of the "successful" and "minimally effective" milestones, and an explanation of the relevance of these measures to the field can be found on the SC Web site (www.sc.doe.gov/measures).

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight:10%

Explanation: FESAC has reviewed the new long-term measures for this program and found them to be ambitious and meaningful indicators of progress in key fields. The external reviews described in 2.1 will update the measures, targets, and timeframes on an interim basis.

Evidence: Letter from FESAC chair regarding review of long-term measures.

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:10%

Explanation: The facilities construction and operations efficiency measures should provide capabilities that the scientific community needs to make discoveries directly connected to the long term measures.

Evidence: FY04 Budget Request. Website with further information (www.sc.doe.gov/measures).

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:10%

Explanation: All of the annual measures include quantifiable annual targets. Baseline data (FY01 and FY02) is included in the attached measures sheet to verify that the annual measures are ambitious, yet realistic.

Evidence: FY04 Budget Request. Website with further information (www.sc.doe.gov/measures). Construction variance target of <10% comes from OMB Circular A-11, especially Capital Programming Guide supplement.

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Section Scores				Rating
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100%	90%	67%	80%	Effective

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:10%

Explanation: A limited FY03 audit by the DOE Inspector General (IG) found that "performance expectations generally flowed down into the scope of work at the national laboratories." A recent FES program solicitation included links to programs goal documents, but future solicitation should explicitly include the PART measures.

Evidence: Program files. Memo from the DOE IG to the Director of the Office of Science. Example of recent research solicitation (www.science.doe.gov/grants/Fr03-19.html). PPPL contract (www.pppl.gov/common_pages/doe_pu_contract.html, Appendix B).

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: All research projects undergo Merit Review. Grants are reviewed triennially. Construction projects are reviewed quarterly. FESAC evaluates all aspects of the FES program. In addition to evaluating whether FES has achieved its goals in a timely fashion, it recommends how the program should be modified to improve its performance. The Presidential Council of Advisors in Science and Technology (PCAST) and the National Research Council (NRC) have reviewed aspects of the program. The program should initiate a Committee of Visitors (COV) review effort to provide the a process validation and detailed portfolio quality check.

Evidence: SC Merit Review guidelines (www.sc.doe.gov/production/ grants/merit.html). Program files, including facility peer reviews and Lehman reviews. FESAC review reports on materials and theory (www.ofes.fusion.doe.gov/More_HTML/FESAC_Charges_Reports.html). SEAB, PCAST and NRC reports (www.ofes.science.doe.gov/FusionDocs.html).

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: DOE has not yet provided a budget request that adequately integrates performance information.

Evidence:

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: New performance goals and targets that have been developed in coordination with OMB and FESAC will be engaged in reviewing them. The program has not yet produced a new [Congressionally-requested] Administration strategic vision for the program given the decision to join ITER, and should do so as soon as all relevant advisory committee studies are complete. The program should initiate a COV process to help in identifying research program strengths and weaknesses for strategic planning purposes.

Evidence: FESAC development report (www.ofes.fusion.doe.gov/More_HTML/FESAC/Dev.Report.pdf). FES plans to develop an Administration plan once the current NRC review of burning plasma physics is complete (www7.nationalacademies.org/bpa/projects_bpac.html). 1996 FES program strategic plan (wwwofe.er.doe.gov/FusionDocuments/StrategicPlan.pdf).

PART Performance Measurements

Program: Fusion Energy Sciences
Agency: Department of Energy
Bureau: Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	67%	80%	Effective

2.CA1 **Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity?**
Answer: YES Question Weight: 10%

Explanation: FESAC recently provided advice to the program on the burning plasma effort, including the various options for pursuing a burning plasma experiment. A Lehman review of the ITER project cost estimate was conducted prior to the ITER decision. The justification provided to OMB for the NCSX project lacks a meaningful alternatives analysis.

Evidence: FESAC burning plasma report (www.ofes.fusion.doe.gov/More_HTML/ FESAC/Austinfinalfull.pdf). Lehman report on ITER cost basis (ofes.fusion.doe.gov/News/ITERCostReport.pdf). NRC interim report on burning plasma program (ofes.fusion.doe.gov/News/ BPAC_Letter_final_ns_122002.pdf). Program files, including predecisional Exhibit 300 for NCSX submitted to OMB.

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?**
Answer: NA Question Weight: 0%

Explanation: This is a basic R&D program, and the question is intended for industry-related R&D programs.

Evidence:

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?**
Answer: YES Question Weight: 10%

Explanation: FESAC and NAS recommendations identify strategic priorities, and the FES budget requests prior to the ITER decision closely followed FESAC guidance.

Evidence: 1995 National Research Council (NRC) "Plasma Science" report (www.nap.edu/catalog/4936.html). FESAC reports on "Integrated Program Planning" and "Priorities and Balance" (www.ofes.fusion.doe.gov/More_HTML/FESAC_Charges_Reports.html).

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?**
Answer: NO Question Weight: 8%

Explanation: The program collects and acts upon performance information including weekly facilities reports, quarterly grantee progress reports, annual facility program advisory committee reports, and annual contractor performance assessments. Additional project performance information is collected via Lehman reviews. Research performance data from individual grantees and national labs is collected and assessed via peer review as a type of standardized quality control at the individual grant level. However, there is not yet a systematic process, such as regular COV evaluations, that conducts research portfolio quality and process validations. While DOE IG contracts with an outside auditor to check internal controls for performance reporting, and the IG periodically conducts limited reviews of performance measurement in SC, it is not clear that these audits check the credibility of performance data reported by DOE contractors.

Evidence: Program files, including Lehman reviews, action items based on contractor performance reports, weekly facility reports, and program advisory committee reports.

PART Performance Measurements

Program: Fusion Energy Sciences
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3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight: 8%

Explanation: Senior Executive Service (SES) and Program Manager Performance Plans are directly linked to program goals. The Management and Operations contracts for the Labs and Facilities include performance measures linked to program goals. Research funding requirements ensure consideration of past performance.

Evidence: 10 CFR 605 (www.science.doe.gov/production/grants/605index.html). Program and personnel files, including reviews and actions on poorly performing efforts at Los Alamos National Lab and Univ. of Texas. Performance-based fee arrangements in PPPL contract (Appendix B at www.pppl.gov/common_pages/doe_pu_contract.html). Statistics of PI renewals.

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight: 8%

Explanation: Using DOE's monthly accounting reports, SC personnel monitor progress toward obligating funds consistent with an annual plan that is prepared at the beginning of the fiscal year to ensure alignment with appropriated purposes. SC programs consistently obligate more than 99.5% of available funds.

Evidence: Program files. Audit reports.

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight: 8%

Explanation: SC is currently undergoing a reengineering exercise aimed at flattening organizational structure and improving program effectiveness. The program collects the data necessary to track their "efficiency" measure on facility operations.

Evidence: SC reengineering information (www.screstruct.doe.gov). Program files on facility operations.

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight: 8%

Explanation: FES reviews and coordinates research activities with NNSA's Inertial Confinement Fusion program. FES jointly sponsors research support for basic plasma physics with NSF.

Evidence: Joint program plans and reviews with NNSA. MOU with NSF for joint funding and oversight of plasma physics facility at UCLA. Joint solicitation with NSF (www.nsf.gov/pubs/2002/nsf02184/nsf02184.htm).

3.6 Does the program use strong financial management practices? Answer: YES Question Weight: 8%

Explanation: SC staff execute the FES program consistent with established DOE budget and accounting policies and practices. These policies have been reviewed by external groups and modified as required to reflect the latest government standards.

Evidence: Various Departmental manuals. Program files. Audit reports.

PART Performance Measurements

Program: Fusion Energy Sciences
Agency: Department of Energy
Bureau: Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	67%	80%	Effective

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight: 8%

Explanation: SC is currently re-engineering to improve program management efficiency. The FES program is reviewing the establishment of formal Committee of Visitors reviews for FY04. Program action on Lehman review findings are critical to success of construction projects.

Evidence: SC reengineering information (www.screstruct.doe.gov). Program files, including Lehman review of NCSX; actions taken in response to review of Tritium Systems Test Assembly at Los Alamos; review and corrective management actions at PPPL after NSTX coil failure.

3.CA1 Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals? Answer: YES Question Weight: 8%

Explanation: The FES program documents the capabilities and characteristics of new facilities in conceptual design reports that are reviewed by FESAC and an independent Lehman review. Progress is tracked quarterly through program and Lehman reviews.

Evidence: Program files, including Lehman report on NCSX critical decision review, and program milestones for DIII-D user facility. Predecisional Exhibit 300 for NCSX.

3.CO1 Are grants awarded based on a clear competitive process that includes a qualified assessment of merit? Answer: NO Question Weight: 8%

Explanation: First time grant applications are encouraged in all Requests For Proposals. FES has a specific solicitation for the Outstanding Junior Investigator (OJI) program, in which awards are made to young non-tenured faculty. "Merit Review" guides all funding decisions. However, the quality of the research funded via this process has not yet been validated by a COV.

Evidence: For FY 2002, FES received 169 proposals-73 new, 41 for renewals, and 55 for supplements. Of these 26 new proposals were approved, 40 renewals were approved, and 52 supplementals were approved. Thus, FES funded 36% of new research applications.

3.CO2 Does the program have oversight practices that provide sufficient knowledge of grantee activities? Answer: YES Question Weight: 8%

Explanation: In addition to grantee progress reports, program managers stay in contact with grantees through email and telephone, conduct program reviews and site visits.

Evidence: Program files, including progress reports, and on-site review reports.

3.CO3 Does the program collect grantee performance data on an annual basis and make it available to the public in a transparent and meaningful manner? Answer: NO Question Weight: 8%

Explanation: In accordance with DOE Order 241.1A, the final and annual technical reports of program grantees are made publicly available on the web through the Office of Scientific and Technical Information's "Information Bridge". However, program-level aggregate data on the impact of the grants program is not adequately communicated in the annual DOE Performance and Accountability report.

Evidence: DOE Order 241.1A. Information Bridge (www.osti.gov/bridge/). FY02 Performance and Accountability Report (www.mbe.doe.gov/stratmgt/doe02rpt.pdf).

PART Performance Measurements

Program: Fusion Energy Sciences
Agency: Department of Energy
Bureau: Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	67%	80%	Effective

3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: NO Question Weight: 8%

Explanation: The funds for research programs and scientific user facilities at the Federal Labs are allocated through a limited competition analogous process to the unlimited process outlined in 10 CFR 605. FES publishes its own specific grant guidelines, and manages the execution of the research program very closely. Solicitations for labs are somewhat targeted, though unsolicited work (typically defined as "inherently unique") is not competed. However, the quality of the research funded via this process has not yet been validated by a COV.

Evidence: FES grant and merit review procedures (www.ofes.fusion.doe.gov/Grant/Grants.html). 10 CFR 605. (www.science.doe.gov/production/grants/605index.html) Program files. Example of lab solicitation (www.science.doe.gov/grants/LAB03_19.html).

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: LARGE EXTENT Question Weight20%

Explanation: FESAC will evaluate progress toward the long term performance measures every three years. External reports have found good scientific progress, though for the ultimate energy goal, critics question the credibily of the fusion community in continually promising "30 years to commercial fusion power"

Evidence: FESAC reports (www.ofes.fusion.doe.gov/More_HTML/FESAC/Dev.Report.pdf). NRC quality assessment (www.nap.edu/books/0309073456/html). Article in July 20, 2002 edition of "The Economist."

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: LARGE EXTENT Question Weight20%

Explanation: FES met roughly half of its annual performance goals in FY02, though one missed target was due to a programmatic decision.

Evidence: FY02 Performance and Accountability Report (www.mbe.doe.gov/ stratmgt/doe02rpt.pdf): "mixed results" in SC6-2 and SC7-6 goals.

4.3 **Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?** Answer: LARGE EXTENT Question Weight20%

Explanation: For construction efficiency, the Electron Cyclotron Heating upgrade at DIII-D was more than 10% behind schedule for FY02. The National Spherical Torus Experimental (NSTX) Facility has recently experienced serious operational difficulties, and it is not expected to meet its original scheduled operating time for FY03.

Evidence: FY02 Performance and Accountability Report (www.mbe.doe.gov/ stratmgt/doe02rpt.pdf): "mixed results" for the efficiency measure on facility construction. Program files, including program review of NSTX coil failure.

PART Performance Measurements

Program: Fusion Energy Sciences
Agency: Department of Energy
Bureau: Science

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	67%	80%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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4.4 **Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?** Answer: NA Question Weight: 0%

Explanation: FESAC, NRC, and PCAST reviews and interactions with foreign governments compare this program favorably to similar programs oversees. FES program is only 15% of world program in funding, and expert panels find an disproportionately large impact made by the U.S.

Evidence: NRC report (www.nap.edu/books/0309073456/html/). PCAST report (www.ofes.fusion.doe.gov/More_HTML/PDFfiles/PCAST.pdf). FESAC reports (www.ofes.fusion.doe.gov/More_HTML/ FESAC_Charges_Reports.html).

4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: YES Question Weight 20%

Explanation: FESAC, on a rotating schedule, reviews the major elements of the FES program. These reviews examine scientific progress, assess the scientific opportunities, and recommend reordering priorities based upon existing budget profiles. The program's performance has received generally positive marks by external panels from National Research Council and President's Council of Advisors on Science and Technology. NRC report found that the fusion community is too isolated, and this impacts its effectiveness.

Evidence: Burning Plasma Physics and Theory were reviewed by FESAC in 2001 (www.ofes.fusion.doe.gov/More_HTML/FESAC_Charges_Reports.html). External reports by PCAST, NRC, and SEAB (www.ofes.fusion.doe.gov/FusionDocs.html).

4.CA1 **Were program goals achieved within budgeted costs and established schedules?** Answer: YES Question Weight 20%

Explanation: NCSX, the only new large project in FES, had not been baselined yet. The problems at NSTX (see Question 4.3) are a potential concern for ITER since one reason given for the coil failure on the much smaller NSTX project was the inadequate number of qualified engineers at Princeton Lab.

Evidence: Program files, including Lehman review of NSTC coil failure. FY02 Performance and Accountability Report (www.mbe.doe.gov/ stratmgt/doe02rpt.pdf). FY04 Annual Performance Plan (www.mbe.doe.gov/budget/04budget/index.htm).

PART Performance Measurements

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Agency: Department of Energy
Bureau: Science

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	67%	80%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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Measure: Progress in developing a predictive capability for key aspects of burning plasmas using advances in theory and simulation benchmarked against a comprehensive experimental database of stability, transport, wave-particle interaction, and edge effects. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual
2006	Excellent	
2009	Excellent	
2012	Excellent	
2015	Excellent	
2005		

Measure Term: Long-term

Measure: Progress in demonstrating enhanced fundamental understanding of magnetic confinement and in improving the basis for future burning plasma experiments through research on magnetic confinement configuration optimization. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual
2006	Excellent	
2009	Excellent	
2012	Excellent	
2015	Met Goal	

Measure Term: Long-term

PART Performance Measurements

Program: Fusion Energy Sciences
Agency: Department of Energy
Bureau: Science

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	67%	80%	Effective

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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Measure: Progress in developing the fundamental understanding and predictability of high energy density plasma physics. An independent expert panel will conduct a review and rate progress (excellent, adequate poor) on a triennial basis.

Additional Information: See www.sc.doe.gov/measures for more information.

Measure Term: Long-term

Year	Target	Actual
2006	Excellent	
2009	Excellent	
2012	Excellent	
2015	Met Goal	

Measure: Average achieved operation time of the major national fusion facilities as a percentage of the total planned operation time.

Additional Information: See www.sc.doe.gov/measures for more information.

Measure Term: Annual (Efficiency Measure)

Year	Target	Actual
2001	>90%	100%
2002	>90%	94%
2003	>90%	81%
2004	>90%	
2005	>90%	
2006		

PROGRAM ID: 10000096

PART Performance Measurements

Program: Fusion Energy Sciences
Agency: Department of Energy
Bureau: Science

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	67%	80%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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Measure: Cost-weighted mean percent variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects.

Additional Information: See www.sc.doe.gov/measures for more information.

Measure Term: Annual (Efficiency Measure)

Year	Target	Actual
2001	<10%, <10%	-6%, -6%
2002	<10%, <10%	+5%, 0%
2003	<10%, <10%	0%, 0%
2004	<10%, <10%	
2005	<10%, <10%	
2006		

PROGRAM ID: 10000096

PART Performance Measurements

Program: Generation IV Nuclear Energy Systems Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	60%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The purpose of the program is to expand U.S. nuclear power generation to meet economic and environmental needs with next-generation reactor technologies.

Evidence: National Energy Policy; Appropriation Language; Secretary Abraham statements; A Technology Roadmap for Generation IV Nuclear Energy Systems, FY 2004 Budget Request, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program; Generation IV Nuclear Energy Systems Initiative Program Plan

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The need to expand U.S. power sources, including the development of nuclear energy, is defined in the National Energy Policy.

Evidence: National Energy Policy; A Technology Roadmap for Generation IV Nuclear Energy Systems, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program; Generation IV Nuclear Energy Systems Initiative Program Plan

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The program has been designed with extensive government-industry-academia and international collaboration. Nuclear Energy Programs have discrete objectives. The near term deployment of existing technologies falls under the Nuclear Power 2010 initiative. The deployment of next-generation technologies from 2015-2030 falls under Generation IV.

Evidence: A Technology Roadmap for Generation IV Nuclear Energy Systems, FY 2004/2005 Budget Request, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program; Generation IV Nuclear Energy Systems Initiative Program Plan

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: Extensive interactions with other government programs, international partners, and external review groups have minimized the potential for flaws. No flaws presently known.

Evidence: National Energy Policy; Secretary Abraham statements; A Technology Roadmap for Generation IV Nuclear Energy Systems, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: Funded R&D directly contributes to program goals. Funding is allocated to R&D performers based on prioritization of program objectives and past performance.

Evidence: National Energy Policy; Generation IV Nuclear Energy Systems Initiative Program Plan; A Technology Roadmap for Generation IV Nuclear Energy Systems, FY 2004 Budget Request, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program

PART Performance Measurements

Program: Generation IV Nuclear Energy Systems Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	60%	Effective

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight:10%

Explanation: The long-term goal of the Generation IV program is to develop next-generation nuclear energy systems for deployment before 2030, which provide significant improvements in four performance areas: sustainability, proliferation resistance and security, safety and reliability, and economics. Each performance area has one or more associated performance measures as described in both the Generation IV Roadmap and the Generation IV Program Plan, where they are called 'technology goals.' In the long term, the program's outcome is measured by how well the system(s) developed under this program advance the performance measures.

Evidence: A Technology Roadmap for Generation IV Nuclear Energy Systems ; FY 2004 Budget Request; Generation IV Nuclear Energy Systems Initiative Program Plan, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program. Goal 4.1 of the FY 2004 Annual Performance Plan; FY 2003 Joule.

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight:10%

Explanation: DOE has developed both long-term and intermediate outcome measures that are supported by annual output measures to support ambitious program goals and schedules. One ambitious long term goal is the demonstration of economic hydrogen production with nuclear energy by 2015. This will require completeion of supporting R&D, design, construction and startup of an advanced reactor within 12 years. Supporting annual goals include the development of the reactor point design, pre-conceptual design, conceptual design, preliminary design and then final design.

Evidence: A Technology Roadmap for Generation IV Nuclear Energy Systems ; FY 2004 Budget Request; FY 2004 Annual Performance Plan, FY 2003 Joule, Generation IV Nuclear Energy Systems Initiative Program Plan, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:10%

Explanation: The linkage between annual performance measures and long-term goals is established in the Gen IV Program Plan. Sustainability, proliferation resistance and security, safety and reliability, and economics can be evaluated with any degree of confidence only at a level of system definition provided by a well-developed preconceptual or even a conceptual design, the target for FY 2005. With the conceptual design in hand, broader and more quantitative evaluation criteria and metrics will be developed to evaluate Generation IV designs.

Evidence: A Technology Roadmap for Generation IV Nuclear Energy Systems ; FY 2005 Budget Request; Generation IV Nuclear Energy Systems Initiative Program Plan, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:10%

Explanation: Annual program performance baselines and targets have been established to measure performance in attaining the annual targets. The targets include extending scientific knowledge of materials and chemistry into high termperature regions not previously explored on a schedule to support early deployment of Generation IV technologies. Efforts are underway to refine performance measures as preconceptual designs are completed.

Evidence: A Technology Roadmap for Generation IV Nuclear Energy Systems ; FY 2005 Budget Request; Generation IV Nuclear Energy Systems Initiative Program Plan, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program

PART Performance Measurements

Program: Generation IV Nuclear Energy Systems Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	60%	Effective

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:10%

Explanation: Several international agreements hav been signed in the past year, and the Internatinal Nuclear Energy Research Initiative (I-NERI) has made five bi-lateral project awards.

Evidence: A Technology Roadmap for Generation IV Nuclear Energy Systems ; FY 2005 Budget Request; Generation IV Nuclear Energy Systems Initiative Program Plan, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program, program guidance letters and associated statements of work for DOE contractors. Monthly Performance Reports.

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: A comprehensive program evaluation is planned for February 2004.

Evidence: Charter for the Nuclear Energy Research Advisory Committee (NERAC) Generation IV Technology Planning Subcommittee and associated meeting reports, A Technology Roadmap for Generation IV Nuclear Energy Systems ; FY 2005 Budget Request; Generation IV Nuclear Energy Systems Initiative Program Plan

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: Beginning with the FY 2005 OMB and Congressional Budget submissions, the Department will utilize a unique format to link budget and performance data; however, such linkages were not established in prior year budgets. Departmental deficiencies notwithstanding, however, the Generation IV program maintains a detailed program plan, initially developed in 2003, that is updated on an as-needed basis to accommodate budget changes. This document makes fully transparent the adjustments in program priorities, costs, schedules, and achievement of long- and short-term performance measures to meet budget requirements. It is also the document used to set priorities on which future budget requests are based.

Evidence: A Technology Roadmap for Generation IV Nuclear Energy Systems ; FY 2004 Budget Request; Generation IV Nuclear Energy Systems Initiative Program Plan, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program, draft 17 of DOE Strategic Plan General Goals

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: Instituted a new plan for external reviews, instituted earned value accounting and reporting, wrote new program planning documents, FY 2005 budget is outcome and output driven in support of National goals. No management deficiencies have been identified.

Evidence: Annual DOE Performance Plan and Performance Appraisal Form; DOE/NE Program Guidance Letters and associated Statements of Work, detailed and executive level program plans written for Gen IV, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program

PART Performance Measurements

Program: Generation IV Nuclear Energy Systems Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	60%	Effective

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: YES Question Weight:10%

Explanation: The program has continually re-examined, analyzed and assessed its potential benefits, most recently in the U.S. Generation IV Implementation Plan to be submitted to Congress in July 2003. Quantitative benefits depend on the success of the program and the degree of deployment of Generation IV reactors; they will be assessed in later years using tools developed by the program. Qualitative benefits include new commercial options for generating economic electricity and hydrogen without harmful air emissions.

Evidence: A Technology Roadmap for Generation IV Nuclear Energy Systems ; FY 2005 Budget Request; Generation IV Nuclear Energy Systems Initiative Program Plan, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program, U.S. Generation IV Implementation Plan

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: R&D priorities are established in the Technology Roadmap for Generation IV Nuclear Energy Systems and in the U.S. Generation IV Implementation Plan.

Evidence: A Technology Roadmap for Generation IV Nuclear Energy Systems ; FY 2004 Budget Request; Generation IV Nuclear Energy Systems Initiative Program Plan, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program, The U.S. Generation IV Implementation Plan.

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:12%

Explanation: The Department monitors program performance and uses the information to manage the program, improve performance, and determine future funding requirements. In FY 2003, monthly earned value reporting was instituted.

Evidence: Annual DOE Performance Plan and Performance Appraisal Form; Quarterly updates to the Annual Performance Plan, Monthly Earned Value Reporting.

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:12%

Explanation: Program performance goals are incorporated into the annual performance plans for the Federal senior manager and Federal program manager. Program performance goals are also incorporated into the contractor's annual performance plan.

Evidence: Annual DOE Performance Plan and Performance Appraisal Form; DOE/NE Program Guidance Letters and associated Statements of Work, Monthly Earned Value Reporting. Performance Based Incentives in M&O contracts.

PART Performance Measurements

Program: Generation IV Nuclear Energy Systems Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	60%	Effective

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:12%

Explanation: Funds are obligated in a timely manner and program is executed in conformance with Congressional language and established program plan.

Evidence: DOE/NE Program Guidance Letters and associated Statements of Work; DOE/NE's Monthly Obligation and Cost and Performance Tracking Report; Generation IV Nuclear Energy Systems Initiative Program Plan

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:12%

Explanation: DOE contractor performance is judged against project costs, schedule and technical baselines. Decisions to continue funding are based on these evaluations. Incentives are included in participants contracts but not on a program-specific basis. Additionally, starting in June, 2003, efficiency will be monitored on a monthly basis via earned value reporting.

Evidence: A Technology Roadmap for Generation IV Nuclear Energy Systems; DOE/NE Program Guidance Letters and associated Statements of Work; DOE/NE's Monthly Obligation and Cost and Performance Tracking Report; Generation IV Nuclear Energy Systems Initiative Program Plan, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program. Contracts and Award Fee Determinations for program participants, Monthly status of work packages and earned value reports.

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: The program is coordinated with other DOE nuclear energy R&D programs including the Nuclear Power 2010 program, the Nuclear Hydrogen Initiative, and the Advanced Fuel Cycle Initiative to capitalize on existing synergies and to ensure no duplication of effort. In addition, the program is coordinated with the NRC and the State Department.

Evidence: FY 2005 Budget Request; A Technology Roadmap for Generation IV Nuclear Energy Systems, Generation IV Nuclear Energy Systems Initiative Program Plan, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: Internal controls are used in the execution of the program. The Department monitors program performance and uses the information to manage the program, improve performance, and determine future funding requirements. In FY 2003, monthly earned value reporting was instituted.

Evidence: Annual Reporting for Federal Managers Financial Integrity Act. Annual DOE Performance Plan and Performance Appraisal Form; Quarterly updates to the Annual Performance Plan, Monthly Earned Value Reporting.

PART Performance Measurements

Program: Generation IV Nuclear Energy Systems Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	60%	Effective

3.7 **Has the program taken meaningful steps to address its management deficiencies?** Answer: YES Question Weight:12%

Explanation: No management deficiencies have been identified. Program performance goals are incorporated into staff and contractor annual performance plans and progress against these goals are monitored. The Department uses this information to evaluate contractor performance and resulting award fees. Weekly review meetings are held with the project management team, problems are highlighted, and corrective actions implemented.

Evidence: Annual DOE Performance Plan and Performance Appraisal Form; DOE/NE Program Guidance Letters and associated Statements of Work

3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: YES Question Weight:12%

Explanation: The program incorporates both merit-based competitive awards and national laboratory-directed awards based on technical capabilities and facilities.

Evidence: FY 2005 budget; Generation IV Nuclear Energy Systems Initiative Program Plan; A Technology Roadmap for Generation IV Nuclear Energy Systems. Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: YES Question Weight:30%

Explanation: The program is on track to achieve its long-term performance goals. The program established overall goals in FY 2002 as documented in the final draft Generation IV Technology Roadmap (September 2002) The U.S. chose four specific technologies to fund with emphasis on VHTR beginning in FY 2003. Related programs are managed in a single organization. Earned value reporting was initiated in FY 2003. Detailed program plans have been written.

Evidence: Final Draft of A Technology Roadmap for Generation IV Nuclear Energy Systems (September 2002). FY 2004 Budget, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program, Gen IV Program Plan [note: the September 2002 draft Roadmap is cited above rather than the final published Roadmap to show actual continuity in the development and execution of the program]

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: YES Question Weight:30%

Explanation: All annual performance goals have been achieved. Annual measures and targets are tracked on a monthly basis.

Evidence: FY 2002 and FY 2003 Budgets; A Technology Roadmap for Generation IV Nuclear Energy Systems, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program, FY 2002 Performance and Accountability Report, FY 2004 Annual Performance Plan, FY 2003 Joule

PART Performance Measurements

Program: Generation IV Nuclear Energy Systems Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	60%	Effective

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: NO Question Weight 20%

Explanation: This new program has begun significant cost-sharing with foreign partners. Further, the Department has initiated collaboration web sites that limit foreign travel by allowing international committees to jointly draft documents, keep a calendar, chat, and otherwise manage committee business. DOE contracts do not reward program-specific efficiencies, but the program employs program controls that collect information on contractor performance and efficiency monthly, including an earned value management system beginning in 2003 (although detailed evidence for such efficiencies has not yet been presented). The program inputs the results of these reviews into the various contractors' award fee determinations at the Departmental level.

Evidence: A Technology Roadmap for Generation IV Nuclear Energy Systems, Program Planning Documents, FY 2004 Budget, Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NA Question Weight: 0%

Explanation: There are no comparable programs.

Evidence: R&D Portfolio Management Report, National Energy Policy, Generation IV Nuclear Energy Systems Initiative Program Plan; A Technology Roadmap for Generation IV Nuclear Energy Systems. FY 2004 Budget. Technical Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: NO Question Weight 20%

Explanation: A comprehensive evaluation is planned for February 2004.

Evidence: Charter for the NERAC Generation IV Technology Planning Subcommittee and associated meeting reports; Communiqué from GIF Tokyo Meeting (September 2002), Generation IV Program Plan

PART Performance Measurements

Program: Generation IV Nuclear Energy Systems Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	60%	Effective

Measure: Develop a next-generation nuclear energy systems for deployment before 2020, which provides 20 percent improvement in safety and reliability, 20 percent improvement in economics, and equal or better performance in sustainability, and proliferation resistance and security.

Additional Information: The long-term goal of the Generation IV program is to develop next-generation nuclear energy systems for deployment before 2030, which provide significant improvements in four performance areas: sustainability, proliferation resistance and security, safety and reliability, and economics. Each performance area has one or more associated performance measures as described in the Generation IV Roadmap where they are called •technology goals.• The program•s outcome is measured by how well the system(s) developed under this program advance the performance measures.

Year	Target	Actual	**Measure Term:** Long-term
2020	1		
2020	1		
2020	1		

Measure: Develop a next-generation nuclear energy system for deployment between 2015 and 2030. *Targets: 10X improvement in sustainability, 2X improvement in proliferation resistance and security, 20% improvement in safety and reliability, and 20% improvement in economics.

Additional Information: Three concepts are in development for deployment before 2030. Viability assessments will be complete and a down selection to just one or two concepts will occur in 2014.

Year	Target	Actual	**Measure Term:** Long-term
2015	*		
2030	1		
2030	1		
2030	1		

Measure: Variance from cost and schedule baselines

Additional Information:

Year	Target	Actual	**Measure Term:** Annual (Efficiency Measure)
2005	1		

PART Performance Measurements

Program: Generation IV Nuclear Energy Systems Initiative
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	60%	Effective

Measure: Advance Generation IV Nuclear Plant reactor system concepts Targets (1) Complete preconceptual design for Next Generation Nuclear Plant (NGNP) (2) Complete reference point design for NGNP (3) Technology roadmap completion

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2005	(1)		
2004	(2)		
2003	(3)		

Measure: Variance from cost and schedule baselines

Additional Information:

Year	Target	Actual	**Measure Term:** Annual (Efficiency Measure)
2005	<10%		
2006	<10%		

Measure: Issue the Generation IV Technology Roadmap to develop the most promising next generation nuclear energy system concepts.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	1	1	

Measure: Develop preliminary functional requirements for the Generation IV Very-High-Temperature Reactor.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	1		

PART Performance Measurements

Program: Generation IV Nuclear Energy Systems Initiative

Agency: Department of Energy

Bureau:

Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
100%	90%	100%	60%	Effective

Measure: Complete the draft Generation IV Technology Roadmap for development of the next generation nuclear energy systems.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2002	1	1	

Measure: Formally establish the Generation IV International Forum to assist in identifying and conducting cooperative R&D. Initiate development of a Generation IV Technology Roadmap for development of next generation nuclear energy systems.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2001	1	1	

PART Performance Measurements

Program: Geothermal Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	59%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The purpose of the Geothermal Technology program is to establish geothermal energy as an economically competitive contributor to the U. S energy supply, capable of meeting a significant portion of the Nation's heat and power needs.

Evidence: FY 2004 Budget. P.L. 93-410, "Geothermal Energy Research, Development and Demonstration Act " (1974); P.L. 101-218, "Renewable Energy and Energy Efficiency Technology Competitiveness Act of 1989"; P.L. 101-575, "Solar, Wind, Waste, and Geothermal Power Production Incentives Act of 1990"; P.L. 102-1018, "Energy Policy Act of 1992"

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The program aims to expand the use of geothermal energy, which can increase domestic energy supplies and avoid emissions of pollutants and greenhouse gases associated with conventional methods of power production. These potential benefits support the Administration's National Energy Policy, as well as the Administration's climate change goals. The program focuses on reducing drilling costs, improving finding rates of exploratory drilling, expanding geothermal resource base, and reducing surface system costs of producing electricity.

Evidence: The program focuses R&D on activities that it considers too technologically risky for the private sector to undertake alone. Risk levels vary on a project-by project basis.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The program's activities are unique in that there is no other entity in the United States mounting a significant research effort to improve geothermal technologies. Both the California Energy Commission and the U.S. Navy have small geothermal programs. (The Navy program focuses only on the Coso geothermal development in California.) The Department's program coordinates with these other programs, usually through the exchange of experts for technical proposals review. While Federal and private sector research efforts on oil and gas drilling may complement some of the program's R&D efforts, the results are not completely transferrable because geothermal resources occur in a much more challenging (deeper, hotter, harder, more chemically aggressive) environment that requires specialized technologies for exploration and production.

Evidence: The program considers uncertain risk-to-return ratio and lack of industry capital to be market barriers to private sector investment in geothermal technologies.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The program focuses on reducing costs of geothermal power though technology development in order to achieve the outcomes of increased domestic energy supply and reduced emissions of pollutants and greenhouse gases.

Evidence: The program found no studies that indicate a production tax credit, regulatory driver, or other policy mechanism would be a more cost effective approach than R&D.

PART Performance Measurements

Program: Geothermal Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	59%	Effective

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: NO Question Weight: 20%

Explanation: The program focuses resources and technologies that are not yet commercially competitive. In support of the Administration's R&D Investment Criteria initiative, the program was asked to prepare "bubble charts" that plot key program variables (e.g., expected public benefits, funding levels, years to commercialization). Bubble charts can serve as an informational tool to help determine, along with other considerations, whether the program appropriately targets its R&D funding. While the program has made progress estimating public benefits, the Department has not yet developed a methodology to estimate benefits consistently within and across programs. Therefore, the program could not prepare meaningful bubble charts.

Evidence: Although unable to prepare bubble charts, the program did estimate years to commercialization for its major R&D activities as follows: enhanced geothermal system (EGS) technology (15 years); non-invasive resource verification (15 years); advanced drilling system (10 years); advanced surface systems (10 years). The program's estimates have not been peer reviewed. In general, the program appears to target its resources wisely, but a lack of ability to provide appropriate evidence mandates a "no" response. EERE continues to work internally and with other DOE program offices to improve consistency and accuracy in estimating benefits.

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight: 10%

Explanation: The program has identified three long-term performance measures that reasonably capture most program activities.

Evidence: FY 2004 Budget. Geothermal Multiyear Program Plan (September 2003).

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight: 10%

Explanation: The Program has established multi-year Program goals that target specific areas of improvement in drilling costs, cost of constructing geothermal power plants, and expansion of economic geothermal resources, all of which affect the long-term measure of reducing geothermal power costs. Every year the Program reassesses progress of the research efforts, and makes adjustments in R&D.

Evidence: The program has identified "off-ramps" to redirect, down-select, or terminate efforts in its main R&D activities. For example, Surface system R&D will be terminated if it is unable to meet annual goals for reducing surface systems cost for three consecutive years.

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight: 10%

Explanation: The program has developed three new annual performance measures that demonstrate progress toward the long-term goals. The program also monitors a suite of annual milestones and indicators that are designed to track progress toward meeting long-term goals.

Evidence: Geothermal Multiyear Program Plan (September 2003).

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight: 10%

Explanation: The program's new annual performance measures have baselines and the targets appear to be reasonably ambitious.

Evidence:

PART Performance Measurements

Program: Geothermal Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	59%	Effective

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:10%

Explanation: National laboratories and other contractors are required to define, monitor, and report on meaningful measures of program accomplishment that are consistent with long-term goals of the program. Those goals are used to guide the formulation of the Annual Operating Plan (AOP) that documents the specific accomplishments to which each performer commits in accepting financial support.

Evidence: FY 2003 Annual Operating Plan. Sample contract document identifying program performance goals.

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: The program regularly organizes independent peer reviews to evaluate research projects and establish directions for future work. Peer reviewers typically evaluate individual projects based on technical performance to date. The program should consider expanding the scope of peer reviews to include overall program effectiveness and relevance.

Evidence: Geothermal peer review conferences: August 23-24, 2001, March 25-27, 2002, and July 29-August 1, 2003.

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: Program funding is explicitly tied to specific priority activities that are designed to lower drilling costs, improve exploration success rates, and lower the cost of constructing geothermal power plants. However, budget documents do not clearly indicate the full costs of achieving the program goals. Salaries, benefits, and other admininstrative expenses to support the program are included in a separate budgetary line item ("Program Direction"). EERE does not report the allocation of Program Direction funding to the various programs it supports.

Evidence: FY 2004 Budget.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: The program has consulted with industry and other stakeholders on priority needs and has formulated a multiyear research plan.

Evidence: Geothermal Multiyear Program Plan (September 2003).

PART Performance Measurements

Program: Geothermal Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	59%	Effective

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NO Question Weight:10%

Explanation: Each year, the program estimates the public benefits of its activities in support of the Government Performance and Results Act (GPRA) and the Administration's R&D Investment Criteria initiative. However, the program has not yet developed a consistent and reliable methodology for comparing potential benefits within and across programs with similar goals.

Evidence: FY 2004 Congressional Budget Justification materials.

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: The program indicates that each activity that it supports is assigned a relative impact based upon factors such as system cost, risk of achieving success, and cost to market and other technology variables. While the program did not provide information on these relative impacts or use bubble charts to inform its decisions, it did participate in an EERE-wide zero-based budget exercise in which priorities at the activity level were clearly laid out.

Evidence: Program prioritized its activities as follows (highest to lowest priority): drilling R&D, enhanced geothermal systems, detection and mapping, core geothermal research, advanced heat and power, and Geopowering the West. EERE Priority Ranking Tool, Zero Based Budget Exercise.

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:12%

Explanation: The EERE Strategic Management System -- which establishes at the beginning of each fiscal year an 18-month schedule for key planning, budget formulation, budget execution, and analysis / evaluation functions -- requires that each EERE program establish and track long-term and near-term program performance goals and measures. Program results as evaluated through the goals and measures are used annually and throughout the year to assess partners' performance, adjust funding, and re-align R&D portfolios.

Evidence: SMS Implementation Letter for FY 2002 - 2005 (October 2001). The program also reports on quarterly milestones in the Department's Joule database. However, in general, milestones in the Joule system are not necessarily meaningful or fully reflective of program progress. Thus, the Department's Joule system provides little value-added. The new I-MANAGE system, currently under development, will better integrate budget and performance.

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:12%

Explanation: The Annual Performance Appraisals of all EERE Program Managers include criteria directly related to cost, schedule, and performance results. EERE reviews these criteria monthly in the EERE Monthly Management Reviews. Most EERE contracts include award fee and other performance criteria to hold those partners accountable.

Evidence: Performance Plan and Performance Appraisal Form for Performance Management System Employees; EERE Award Fee and Performance Based contracts

PART Performance Measurements

Program: Geothermal Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	59%	Effective

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:12%

Explanation: Each year, the program develops an Annual Operating Plan, which is reviewed internally to ensure that new funding is planned to be obligated consistent with the appropriated purpose. EERE also develops a Spend Plan for all of its programs. The program uses data from Departmental procurement and financial systems -- and similar data from National Laboratory partners -- to assure that actual expenditures occur for intended purposes and on a schedule consistent with the Spend Plan. Unobligated balances brought forward to FY 2004 were $129,000, less than one percent of the program's FY 2003 appropriation of approximately $29 million.

Evidence: FY 2003 Annual Operating Plan. Geothermal Technology Program FY 2003 Financial Status Report (June 2003). FY 2004 Apportionment, FY 2003 Spend Plan.

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:12%

Explanation: EERE's reorganization in 2002 clarified lines of responsibility and eliminated organizational "stovepipes" by consolidating planning, budgeting, and analysis into a single business administration office. The reorganization reduced management layers, although staff levels remained the same. EERE developed a new IT report to improve program managers' access to EERE cost, obligation, and procurement data. EERE plans to consolidate several legacy IT systems into a single program management system that is intended to track all required information on a project by project basis (cost share, type of contract according to A-11 definitions, etc.). EERE is also developing a measure to reduce uncosted balances, which means obligated funds will be put to use more quickly. These recent actions should achieve efficiencies and improve cost effectiveness, although it will be difficult in some cases to demonstrate definitively.

Evidence: EERE Reorganization "All Hands" presentation: http://www.eere.energy.gov/office_eere/pdfs/eere_reorg.pdf. EERE IT Business Case Number 019-20-01-12-01-1011-00-304-101. Geothermal Technology Program FY 2003 Financial Status Report (June 2003).

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: The program collaborates with the DOE Fossil Energy program on oil and gas drilling activities and with the US Geologic Survey (USGS) on geothermal resource assessment. The program also actively participates in activities at the State level when opportunities arise. The USGS and California Energy Commission were panel members in the 2002 Drilling and ESR&T Peer Review and the 2001 Geoscience Peer Review. The program shares in the development of high temperature electronic drilling components in a Joint Industry Partnership with the oil & gas industry.

Evidence: Interagency agreements with USGS: DE-AI07-92ID13207 and DE-AI07-98ID13673. Drilling/ESR&T Peer Review Report (2002). Geoscience Peer Review Report (2001). Collaborative projects with DOE Office Fossil Energy. Joint project with California Energy Commission under Public Interest Energy Research and the State's Geothermal Resources Development Account.

PART Performance Measurements

Program: Geothermal Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	59%	Effective

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: Each year, EERE develops and maintains a Spend Plan and a Measures spreadsheet that links the Spend Plan to annual and long-term goals and measures for each EERE program. The program reviews quarterly costing reports and weekly project status reports. There is no evidence of erroneous payments or statutory violations.

Evidence: FY 2003 Spend Plan and Measures spreadsheet. Sample quarterly costing report.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:12%

Explanation: The National Association of Public Administrators (NAPA) found dozens of management deficiencies in the program's bureau (the Office of Energy Efficiency and Renewable Energy, or EERE) in a review published in 2000. EERE provided evidence that it addressed some of management deficiencies identified by NAPA, and has prepared a Management Action Plan that will address many of the remaining findings. While a few NAPA recommendations have not been addressed (e.g., that EERE conduct periodic audits to assure that cost-sharing partners actually provide funding they agree to), in general, EERE has taken meaningful steps to address most deficiencies.

Evidence: A Review of the Management in the Office of Energy Efficiency and Renewable Energy (NAPA, 2000). Letter Report from Assistant Secretary Garman to Chairman of the House Subcommittee on Interior and Related Agencies on implementation of NAPA recommendations (July 11, 2001). EERE Management Action Plan (August 2003).

3.RD1 For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality? Answer: NO Question Weight:12%

Explanation: The program uses a lead National Lab concept in managing technical activities. The program allocates funds based on technical program goals, utilizing the expertise at the National Labs. The program could not document the conduct of its R&D activities in accordance with OMB Circular A-11 definitions (e.g., merit-reviewed with limited competitive selection, Congressionally directed, etc.). Program could also not demonstrate that research stage (basic, applied, development, demonstration) correlated with statutory and Administration guidelines for cost sharing.

Evidence:

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: LARGE EXTENT Question Weight:25%

Explanation: The key long-term measure is cost of geothermal power. Since 1980, the cost of geothermally generated electricity has dropped from 16 cents/kWh to 5-8 cents/kWh today, in part due to DOE-sponsored R&D. The program has contributed to improvements in geothermal drilling subsystems (drill bit design, lost circulation control, high temperature cements, etc), energy conversion surface facilities (advanced direct contact condensers, metastable turbine expansions, etc.), and other geothermal technologies, many of which have contributed to reduced geothermal power cost.

Evidence:

PART Performance Measurements

Program: Geothermal Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	59%	Effective

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: LARGE EXTENT Question Weight 25%

Explanation: The program's annual performance measures are new, so it is too early to assess progress on achieving targets. However, peer review data and available historic data on the annual measures indicates that the program has contributed to progress on the measures.

Evidence:

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: NO Question Weight 25%

Explanation: The program could not demonstrate that actions it has taken have resulted in tangible productivity or efficiency gains.

Evidence:

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NA Question Weight: 0%

Explanation: DOE geothermal program activities are unique in that there is no other large entity in the United States mounting a significant research effort in geothermal technologies. The U.S Navy and the State of California each sponsor small geothermal R&D programs. The programs coordinate (usually through the proposal review process) to ensure no duplication of effort, but there is little evidence on which to base a value judgement of whether one program is "better" than the others.

Evidence: http://www.energy.ca.gov/geothermal/index.html

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: YES Question Weight 25%

Explanation: In a review in 2000, the National Academy of Sciences wrote: "Significant progress has been made in drilling technology and down-hole diagnostic methods, resevoir modeling..., and power conversion methods. In addition, DOE accelerated the development of ground source heat pump technology as a very reliable, cost-effective means of increasing heating and air conditioning efficiency." The program also conducts annual peer reviews of its project to evaluate progress and technical merit on a project-by- project basis. While the scope of these reviews is limited and does not include evaluation of program success in achieving annual and long-term goals, most projects have generally received favorable reviews. The program also reports receiving the following awards: 1995 R&D 100 award for advanced direct contact condensers; 1999 R&D 100 award for high temperature cements; 2002 R&D 100 award for PPS coating for tubes; 2003 R&D 100 awards for acoustic telemetry for drilling and a low emissions separator system. It's difficult to assess whether the number of awards is significant given the investments to date. It may be useful to benchmark awards/patents per dollar invested against similar applied R&D programs.

Evidence: Renewable Power Pathways: A Review of the U.S. Department of Energy's Renewable Energy Programs (NAS, 2000). Proceedings from geothermal program peer review conferences: August 23-24, 2001, March 25-27, 2002, and July 29-August 1, 2003.

PART Performance Measurements

Program: Geothermal Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	59%	Effective

Measure: Cost of "flash power" from geothermal resources, in cents per kilowatt-hour (¢/kWh). (Flash power means power produced by "flashing" geothermally pressurized water into steam to turn a turbine.)

Additional Information: Reducing the cost of power can help increase domestic use of the resource, which will contribute to the Department's goals of increased energy security and reduced greenhouse gas and pollutant emissions.

Year	Target	Actual
1995		4.2
2000	3.5	3.8
2005	3.4	
2007	3.2	
2010	3.0	

Measure Term: Long-term

Measure: Cost of "binary power" from geothermal resources, in cents per kilowatt-hour (¢/kWh). (Binary power plants transfer the heat of the geothermal fluid to a separate working fluid, which boils to vapor and is directed into a turbine for power production.)

Additional Information: Reducing the cost of power can help increase domestic use of the resource, which will contribute to the Department's goals of increased energy security and reduced greenhouse gas and pollutant emissions.

Year	Target	Actual
1995		7.7
2000	5.5	5.6
2005	5.0	
2007	4.8	
2010	4.5	

Measure Term: Long-term

PART Performance Measurements

Program: Geothermal Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	59%	Effective

Measure: Outreach measure under development.

Additional Information: Tracks extent to which cost reductions and outreach activities contribute to increased deployment, although State and Federal policies may also have a significant impact on results. Assumes the average American home uses about 10,500 kWh of electricity per year.

Measure Term: Long-term

Year	Target	Actual
2000		1.3 million
2004	1.3 million	
2008	2.3 million	
2012	4.5 million	
2015	7.0 million	

Measure: Cost of drilling geothermal wells based on program estimates, in dollars per foot ($/ft).

Additional Information: Cost of drilling is a major contributing factor to overall geothermal cost of energy.

Measure Term: Annual

Year	Target	Actual
2000		300
2002	282	282
2003	273	
2004	268	252
2005	246	
2006	246	
2008	225	

PART Performance Measurements

Program: Geothermal Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	59%	Effective

Measure: Capital cost of geothermal surface systems based on program estimates, in dollars per kilowatt ($/kW)

Additional Information: Surface systems refer to the power plant components. Capital cost of surface systems is a major contributing factor to overall geothermal cost of energy.

Year	Target	Actual
2001		1,960
2002		1,920
2003	1,880	
2007	1,720	
2010	1,600	

Measure Term: Annual

Measure: Enhanced geothermal systems measure under development.

Additional Information: An EGS is an engineered reservoir created to extract heat from economically unproductive geothermal resources. "Economic" means a particular geothermal resource could be used to produce power at competitive prices.

Year	Target	Actual
2000		5
2004	5.3	
2008	10	
2012	24	
2015	40	

Measure Term: Annual

PART Performance Measurements

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The mission of the High Energy Physics (HEP) program is to understand the universe at a more basic level by investigating the elementary particles that are the fundamental constituents of matter and the forces between them.

Evidence: FY 2004 Budget Request (www.mbe.doe.gov/budget/04budget/index.htm). Public Law 95-91 that established the Department of Energy (DOE).

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The HEP program addresses several key questions: Can we realize Einstein's dream of a unified description of fundamental particles and forces in the universe?Where is the fundamental particle that endows all other particles with their masses?Are there additional or 'hidden' dimensions of space-time?What are the masses of the neutrinos, and what is their role in the universe?Why is there more matter than anti-matter in the universe?What is the nature of the dark matter and the dark energy, which together make up more than 95% of the universe?

Evidence: FY04 Budget Request/Annual Performance Plan. High Energy Physics Advisory Panel (HEPAP) Long-Range Plan (doe-hep.hep.net/hepap_reports.html). Portions of the HEP program address: the National Research Council (NRC) reports "Physics in a New Era: An Overview"; "Connecting Quarks with the Cosmos: Eleven Science Questions for the New Century"; and "Astronomy & Astrophysics in the New Millennium" (www7.nationalacademies.org/bpa/BPA_Reports.html).

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The Office of Science (SC) HEP program is the principal source of federal funding for basic, long-term High Energy Physics research and much of particle astrophysics and cosmology research.

Evidence: About 90% of U.S. High Energy Physics research is supported by the HEP program. Much of the remaining portion is supported by the National Science Foundation and is coordinated through HEPAP, a joint advisory committee.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The HEP program is based on competitive, merit-review, independent expert advice, and community planning. However, a COV has yet to validate the merit review system.

Evidence: HEPAP reviews and reports. (doe-hep.hep.net/hepap_reports.html). Program files.

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: HEPAP ensure that input from the high energy physics research community is regularly gathered to assess the priorities, projects, and progress of the program. Peer review is used to assess the relevance and quality of each project.

Evidence: HEPAP reviews and reports. (doe-hep.hep.net/hepap_reports.html). Program files.

PART Performance Measurements

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight:10%

Explanation: The six long-term measures, listed in priority order, reflect the key scientific drivers that the U.S. high energy physics community has outlined for the field for roughly the next decade. The program has defined "successful" and "minimally effective" performance milestones for each measure, and an external panel will assess interim program performance on a triennial basis, and update the measures as necessary. It is inappropriate for a basic research program such as this one to have a quantitative long-term efficiency measure.

Evidence: HEPAP Long-Range Plan (doe-hep.hep.net/hepap_reports.html). National Research Council (NRC) reports "Physics in a New Era: An Overview"; "Connecting Quarks with the Cosmos: Eleven Science Questions for the New Century"; and "Astronomy & Astrophysics in the New Millennium" (www7.nationalacademies.org/bpa/BPA_Reports.html). A description of the "successful" and "minimally effective" milestones, and an explanation of the relevance of these measures to the field can be found on the SC Web site (www.sc.doe.gov/measures).

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight:10%

Explanation: HEPAP has reviewed the long-term measures for this program and found them to be ambitious and meaningful indicators of progress in the field. The external reviews described in 2.1 will update the measures, targets, and timeframes on an interim basis.

Evidence: Letter from HEPAP chair regarding review of long-term measures.

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:10%

Explanation: The quantitative annual output measures for facility construction and operations, and the data delivery goals for the two primary accelerators, serve as proxies for progress, because the efficient on-cost and on-schedule delivery of scientific data from these large facilities provides a critical resource necessary for continuing scientific discoveries that are directly connected to the long term goals of the program.

Evidence: FY04 Budget Request, previous GPRA reports. Website with further information, including explanation of units for data delivery measures (www.sc.doe.gov/measures).

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:10%

Explanation: All of the annual measures have baseline data (FY01 and/or FY02) that demonstrate that the targets are ambitious, yet realistic. Based on past experience with the data delivery measures, a 20 percent tolerance is used to guard against facilities unwisely stressing hardware near the end of the fiscal year.

Evidence: FY04 Budget Request, previous GPRA reports. Construction variance target of <10% comes from OMB Circular A-11, especially Capital Programming Guide supplement.

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: NO Question Weight:10%

Explanation: A limited FY03 audit by the DOE Inspector General (IG) found that "performance expectations generally flowed down into the scope of work at the national laboratories." For individual grantees, HEP uses general solicitations that do not explicitly include program goals.

Evidence: Memo from the DOE IG to the Director of the Office of Science. M&O contract performance evaluation provisions (Fermilab, www.fnal.gov/directorate/documents/DOE_Contract/appendixb.html; SLAC, www-group.slac.stanford.edu/bsd/contract/). Most recent general renewal solicitation (www.science.doe.gov/grants/Fr03-02.html).

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: NO Question Weight:10%

Explanation: All research projects undergo merit review, ongoing grants are reviewed triennially, major facilities are reviewed annually, and construction projects are reviewed quarterly. While the program has a great number of reviews on its construction projects and facility operations in the case of the Tevatron at Fermilab, any portfolio-level reviews of the research program conducted by HEPAP have typically concerned the lab program only, and have lacked sufficient scope and depth. HEP is working to begin a Committee of Visitors (COV) review process for the program, and hopes to review the first program element in 2003.

Evidence: SC Merit Review guidelines (www.sc.doe.gov/production/grants/merit.html) . Project reviews by advisory bodies (doe-hep.hep.net/general_reports.htm). HEPAP reports (doe-hep.hep.net/hepap_reports.html). Program files, including Lehman review reports, and post-meeting summary letters from HEPAP chair to DOE and NSF.

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: DOE has not yet provided a budget request that adequately integrates performance information.

Evidence:

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: New long-term and annual performance goals and targets have been developed in coordination with OMB. A new COV process is being organized, with the first program element review to occur in 2003. The new Particle Physics Project Prioritization Panel ("P5") report is expected in September, 2003, though the Panel is only looking at a select number of new projects. HEP does not yet have indpendent reviews or a program strategic plan that considers new and ongoing projects, early project R&D, and facility operations within the context of the research program.

Evidence: COV charge letter from DOE to HEPAP chair. HEPAP Long-Range Plan and 20-year facilities plan (doe-hep.hep.net/hepap.html). P5 Report due September, 2003 (doe-hep.hep.net/p5/index.html).

PART Performance Measurements

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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2.CA1 **Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity?** Answer: YES Question Weight:10%

Explanation: One of a kind research facilities are not amenable to the same type of alternatives analysis as other captial asset investments. Recent Lehman review of Tevatron complex considered cost, schedule, risk, and performance issues within the effort. The analysis provided to OMB in the predecisional Exhibit 300s is frequently not meaningful.

Evidence: Program files, including Lehman reviews and Exhibit 300s. Summary of recent Tevatron review (doe-hep.hep.net/HEPAP/Jul2003/Lehman_HEPAP.pdf).

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NA Question Weight: 0%

Explanation: This is a basic R&D program, and the question is intended for industry-related R&D programs.

Evidence:

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: Although not visible outside DOE, internal SC budget formulation practices include a priority ranking process. The HEPAP long range plan identified strategic priorities for the U.S. particle physics community. Priorities for specific large projects will be independently evaluated by the Particle Physics Project Prioritization Panel ("P5"). HEPAP recommened a 20-year facilities plan for DOE as a part of the SC strategic planning process.

Evidence: HEPAP Long-Range Plan and 20-year facilities plan (doe-hep.hep.net/hepap.html). P5 Report due September, 2003 (doe-hep.hep.net/p5/index.html).

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: NO Question Weight: 8%

Explanation: A great deal of project performance information collected via Lehman facility construction and operations reviews, annual lab reviews, etc., and management changes are made in response to these reviews. The program collects performance data from individual grantees and national labs, and uses peer review as a type of standardized quality control at the individual grant level. However, there is not yet a systematic process, such as regular COV evaluations, that conducts research portfolio quality and process validations. While DOE IG contracts with an outside auditor to check internal controls for performance reporting, and the IG periodically conducts limited reviews of performance measurement in SC, it is not clear that these audits check the credibility of performance data reported by DOE contractors.

Evidence: Program files, including Lehman reviews and subprogram reviews. Reporting requirements for grants (www.science.doe.gov/production/grants/605-19.html).

PART Performance Measurements

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight: 8%

Explanation: Senior Executive Service (SES) and Program Manager Performance Plans are directly linked to program goals, and several high level management changes were recently carried out, partially in response to ongoing problems at the Tevatron. The Management and Operations contracts for the Labs and Facilities include performance measures linked to program goals. Research funding requirements ensure consideration of past performance.

Evidence: 10 CFR 605 (www.science.doe.gov/production/grants/605index.html). Program and personnel files, including consequences for underperforming lab and university research, grant renewal statistics, and implications for performance-based fee for the Fermilab contractor.

3.3 **Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?** Answer: YES Question Weight: 8%

Explanation: Using DOE's monthly accounting reports, SC personnel monitor progress toward obligating funds consistent with an annual plan that is prepared at the beginning of the fiscal year to ensure alignment with appropriated purposes.

Evidence: SC programs consistently obligate more than 99.5% of available funds. Program files. Audit reports.

3.4 **Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?** Answer: YES Question Weight: 8%

Explanation: SC is currently undergoing a reengineering exercise aimed at flattening organizational structure and improving program effectiveness. The program collects the data necessary to track the two "efficiency" measures for facility construction and operations management.

Evidence: SC reengineering information (www.screstruct.doe.gov).

3.5 **Does the program collaborate and coordinate effectively with related programs?** Answer: YES Question Weight: 8%

Explanation: The HEP program is well coordinated with similar programs at NSF and NASA through joint advisory and assessment groups (HEPAP and SAGENAP) and joint oversight groups (JOGs) for specific projects. The program jointly funds a range of international and interagency projects.

Evidence: HEPAP (doe-hep.hep.net/hepap.html) and SAGENAP (doe-hep.hep.net/general_reports.htm). JOG Minutes. International agreements with Europe, Japan, and China. MOU with National Science Foundation for HEPAP and the Large Hadron Collider in Europe. Implementing agreement with NASA for primary instrument on the GLAST mission. Early planning process for a potential joint dark energy mission.

3.6 **Does the program use strong financial management practices?** Answer: YES Question Weight: 8%

Explanation: SC staff execute the HEP program consistent with established DOE budget and accounting policies and practices. These policies have been reviewed by external groups and modified as required to reflect the latest government standards.

Evidence: Various Departmental manuals. Program files. Audit reports.

PART Performance Measurements

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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3.7 **Has the program taken meaningful steps to address its management deficiencies?** Answer: YES Question Weight: 8%

Explanation: SC is currently reengineering to improve program management efficiency. A Committee of Visitors (COV) process is being implemented. A layer of management above HEP was removed. Several management changes were recently made, partially in response to ongoing problems at the program's largest facility.

Evidence: SC reengineering information (www.screstruct.doe.gov). SC reorganization memoranda.

3.CA1 **Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals?** Answer: YES Question Weight: 8%

Explanation: Facility critical decision points are documented and reviewed an independent Lehman review, and occasionally via an assessment by HEPAP or SAGENAP. Progress for ongoing efforts is tracked quarterly through program and Lehman reviews. The Tevatron luminosity upgrade was not "projectized," and this was a key problem that is finally being addressed.

Evidence: Program files, including Lehman reports and program peer reviews. SAGENAP reviews (doe-hep.hep.net/general_reports.htm). Exhibit 300s.

3.CO1 **Are grants awarded based on a clear competitive process that includes a qualified assessment of merit?** Answer: NO Question Weight: 8%

Explanation: First time grant applications are encouraged in all Requests For Proposals. In addition, new or first-time scientists apply for funding through the Outstanding Junior Investigator award program. "Merit Review" guides all funding decisions. However, the award and merit review process has not yet been validated by a COV.

Evidence: In FY 2002, the HEP program funded 15 new research grants out of a total of 160 grants. Several of the new grants for junior investigators are incorporated as new "tasks" within existing grants.

3.CO2 **Does the program have oversight practices that provide sufficient knowledge of grantee activities?** Answer: YES Question Weight: 8%

Explanation: In addition to grantee reports, program managers stay in contact with grantees through email and telephone, conduct program reviews, video conferences and site visits, and have grantees participate in independent reviews of other projects.

Evidence: HEPAP and SAGENAP reports (doe-hep.hep.net/general_reports.htm). Program files, including site visits and reviews.

3.CO3 **Does the program collect grantee performance data on an annual basis and make it available to the public in a transparent and meaningful manner?** Answer: NO Question Weight: 8%

Explanation: In accordance with DOE Order 241.1A, the final and annual technical reports of program grantees are made publicly available on the web through the Office of Scientific and Technical Information's "Information Bridge". However, program-level aggregate data on the impact of the grants program is not adequately communicated in the annual DOE Performance and Accountability report.

Evidence: DOE Order 241.1A. Information Bridge (www.osti.gov/bridge/). FY02 Performance and Accountability Report (www.mbe.doe.gov/stratmgt/doe02rpt.pdf).

PART Performance Measurements

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: NO Question Weight: 8%

Explanation: Priorities are determined in accord with guidance from the HEPAP Long-Range Plan, and construction projects are reviewed regularly. Unsolicited field work proposals from the Federal Labs are merit reviewed, but not competed. The funds for research programs and scientific user facilities at the Federal Labs are allocated through a limited competition analogous process to the unlimited process outlined in 10 CFR 605. However, the quality of the research funded via this process has not yet been validated by a COV.

Evidence: HEPAP long range plan (doe-hep.hep.net/lrp_panel/index.html). SC Merit Review procedures (www.sc.doe.gov/production/grants/merit.html, www.science.doe.gov/production/grants/605index.html) Program files, including example of merit review for lab work.

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: LARGE EXTENT Question Weight20%

Explanation: HEPAP will evaluate progress toward the new long term performance measures every three to five years. HEPAP reports discuss exciting recent discoveries in several areas of particle physics. Ongoing challenges and uncertainties in reaching expected luminosity levels at the Tevatron (currently the world's highest energy particle accelerator) may continue to present barriers to the mid-term scientific progress for much of the program.

Evidence: HEPAP long range plan (doe-hep.hep.net/lrp_panel/index.html). Post-meeting summary letters from HEPAP chair to DOE/NSF managers. Summary of recent Tevatron review (doe-hep.hep.net/HEPAP/Jul2003/Lehman_HEPAP.pdf).

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: YES Question Weight20%

Explanation: HEP has met most of its annual performance goals in FY02, with the one schedule slip on the Large Hadron Collider project due to international partners. It appears that BABAR detector at SLAC's B-Factory might miss its luminosity goal for FY03.

Evidence: FY02 Performance and Accountability Report (www.mbe.doe.gov/ stratmgt/doe02rpt.pdf). FY04 Annual Performance Plan (www.mbe.doe.gov/budget/04budget/content/perfplan/perfplan.pdf).

4.3 **Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?** Answer: YES Question Weight20%

Explanation: The recent history of tracking the two "efficiency" measures for facility construction and operation management shows that, on average, the program continues to meet expectations.

Evidence: Program files.

PART Performance Measurements

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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4.4 **Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?** Answer: NA Question Weight: 0%

Explanation: High energy physics is, by its very nature, an integrated worldwide effort, which makes comparison to similar programs in other countries questionable at best. An international benchmarking study has not been done, due in large part to its questionable value.

Evidence: 50% of collaborators at BaBar, CDF, and D-Zero experiments in U.S. are foreign. Half of collaborators on SuperK experiment in Japan are from the U.S. The U.S. has a significant stake in the Large Hadron Collider being built in Europe.

4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: YES Question Weight 20%

Explanation: Somewhat superficial HEPAP reviews of scientific progress in the program have found good research performance except for the Tevatron, though this was in part to mismanaged expectations by HQ and FNAL. Recent performance of the Tevatron accelerator (Run-II) has been a concern, and a recent Lehman review found decent progress, with many key hurdles for the project stretching through 2004. DOE-run reviews of laboratory programs include outside researchers, and have generally found good results.

Evidence: HEPAP reports (doe-hep.hep.net/hepap.html). Post-meeting summary letters from HEPAP chair to DOE/NSF managers. Program files, including lab peer reviews. Summary of recent Tevatron review (doe-hep.hep.net/HEPAP/Jul2003/Lehman_HEPAP.pdf).

4.CA1 **Were program goals achieved within budgeted costs and established schedules?** Answer: LARGE EXTENT Question Weight 20%

Explanation: NuMI/MINOS has maintained its new baseline cost and schedule since 2001 rebaselining. All three components of the US contribution to the LHC project have maintained cost and schedule, though CERN has delayed the official completion of the LHC project. The Gamma-ray Large Area Space Telescope (GLAST/LAT) project, a collaborative venture with NASA, has maintained its baseline cost and schedule, though the recent departure of France as a partner causes concern. There are positive signs for the Tevatron complex, but there are significant technical and managerial hurdles remaining in order to meet cost and schedule "baselines" once the effort is finally "projectized" in early 2004. Since "finding the Higgs" was a major driver for the program in the past several HEP budget requests, the program should be held to this standard until they advance more realistic expectations.

Evidence: Lehman review reports for NuMI/MINOS, GLAST/LAT and US LHC projects (doe-hep.hep.net/general_reports.htm). Program files. Exhibit 300s. Summary of recent Tevatron review (doe-hep.hep.net/HEPAP/Jul2003/Lehman_HEPAP.pdf).

PART Performance Measurements

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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Measure: Progress (excellent, adequate, poor) in measuring the properties and interactions of the heaviest known particle (the top quark) in order to understand its particular role in the so-called "Standard Model" of particle physics. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual
2006	Excellent	
2009	Excellent	
2012	Excellent	
2015	Excellent	
2005		

Measure Term: Long-term

Measure: Average achieved operation time of the scientific user facilities as a percentage of the total scheduled annual operation time.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual
2002	>80%	87%
2003	>80%	83%
2004	>80%	
2005	>80%	

Measure Term: Annual (Efficiency Measure)

PART Performance Measurements

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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Measure: Progress in measuring the matter-antimatter asymmetry in many particle decay modes with high precision. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2006	Excellent		
2009	Excellent		
2012	Excellent		
2015	Excellent		

Measure: Progress in discovering or ruling out the Standard Model Higgs particle, thought to be responsible for generating mass of elementary particles. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2006	Excellent		
2009	Excellent		
2012	Excellent		
2015	Excellent		

Measure: Progress in determining the pattern of the neutrino masses and the details of their mixing parameters. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2006	Excellent		

PART Performance Measurements

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

2009	Excellent
2012	Excellent
2015	Excellent

Measure: Progress in confirming the existence of new supersymmetric (SUSY) particles, or ruling out the minimal SUSY "Standard Model" of new physics. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual
2006	Excellent	
2009	Excellent	
2012	Excellent	
2015	Excellent	

Measure Term: Long-term

Measure: Progress in directly discovering, or ruling out the existence of, new particles which could explain the cosmological "dark matter." An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a triennial basis.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual
2006	Excellent	
2009	Excellent	
2012	Excellent	
2015	Excellent	

Measure Term: Long-term

PART Performance Measurements

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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Measure: Total integrated amount of data (within 20%; measured in inverse picobarnes) delivered to the CDF and D-Zero detectors at the Tevatron. (Targets are set in part by the funding requested/appropriated during that fiscal year. The ambitiousness of the target error bar of 20% is currently under review by OMB.)

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual
2002	80	83
2003	225	240
2004	240	
2005	390	
2006		

Measure Term: Annual

Measure: Total integrated amount of data (within 20%; measured in inverse femtobarnes) delivered to the BABAR detector at the SLAC B-factory. (Targets are set in part by the funding requested/appropriated during that fiscal year. The ambitiousness of the target error bar of 20% is currently under review by OMB.)

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual
2001	25	25
2002	35	42
2003	45	40
2004	45	
2005	50	
2006		

Measure Term: Annual

PART Performance Measurements

Program: High Energy Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Moderately
100%	70%	67%	87%	Effective

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

Measure: Cost-weighted mean percentage variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects.

Additional Information: See www.sc.doe.gov/measures for more information.

Measure Term: Annual (Efficiency Measure)

Year	Target	Actual
2002	<10%	1.4%, -2.1%
2003	<10%	3.1%, -3.4%
2004	<10%	
2005	<10%	

PART Performance Measurements

Program: High Temperature Superducting (HTS) R&D
Agency: Department of Energy
Bureau: Electric Transmission & Distribution
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	70%	88%	59%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The High Temperature Superconductivity (HTS) program conducts research and development on technologies that will transmit and use electricity with near perfect efficiency and much higher capacity.

Evidence: FY 2004 Budget Congressional Justification; PL 100-697 (1988) and PL 102-486 (1992).

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: While electricity demand increases 1.8% each year, grid losses have grown to more than 10% of all electricity generated, and transmission limitations have recently caused blackouts in the U.S.

Evidence: P.L. 100-697 (1988) and P.L. 102-486 (1992).

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The private sector is not willing to conduct R&D without DOE participation because of the high risk and long-term nature of the effort. Additionally, laws prohibit utilities from funding research and development (R&D) with rate increases. The program has ranked cost/performance/ancillary benefit market barriers.

Evidence: 2002 Annual Programmatic Evaluation Peer Review Panels and other internal documents.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: There is no evidence that an alternative design would be more efficient or effective. The program uses "cooperative agreements" for the major cost-shared projects. Contracts (intended for acquisition of goods and services) are the alternative, which was rejected because the government is not the customer of these technologies and is not in a position to develop the necessary requirements. Cooperative agreements allow strong government involvement, while meeting the needs of the power industry.

Evidence: Annual Programmatic Evaluation Peer Review Panels.

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: NO Question Weight 20%

Explanation: The program has not provided information on its R&D investment criteria at a detailed level demonstrating how years to commercialization, public benefits, total federal costs, technical risk, and/or cost sharing information is used in determining funding priorities.

Evidence:

PART Performance Measurements

Program: High Temperature Superducting (HTS) R&D
Agency: Department of Energy
Bureau: Electric Transmission & Distribution
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	70%	88%	59%	Effective

2.1 **Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?** Answer: YES Question Weight:10%

Explanation: The program's long-term goal is: By 2010, develop the capability for industry to produce generators, motors, cables, and transformers incorporating HTS technologies.Expl_1.4

Evidence: See "Measures" section of this PART.

2.2 **Does the program have ambitious targets and timeframes for its long-term measures?** Answer: YES Question Weight:10%

Explanation: Projects last for only 3-4 years with new competition required at that point. New proposals are judged against new proposals.

Evidence: See "Measures" section of this PART.

2.3 **Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals?** Answer: YES Question Weight:10%

Explanation: Annual measures exist for each of four types of HTS power equipment: motors, generators, transformers, and cables.

Evidence: See "Measures" section of this PART.

2.4 **Does the program have baselines and ambitious targets for its annual measures?** Answer: YES Question Weight:10%

Explanation: The program has a specific baseline and quantifiable and measureable targets for its annual goals, which are linked to the long-term goal and targets.

Evidence: See "Measures" section of this PART.

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:10%

Explanation: Program staff ensure that all program-sponsored work addresses program goals, and conducts frequent reviews to monitor progress toward these goals.

Evidence: Superconductivity for Electric Systems Strategic Plan FY 2003-7 (Draft of April 2002); Partner contracts.

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: Annual independent peer reviews, consisting of industry, government and academia, foreign and domestic, representation, annually evaluate all major office/program activities, help shape long-term program direction and evaluate program's progress toward these goals and mission.

Evidence: Superconductivity for Electric Systems Annual Peer Review Programmatic Evaluation; Cryogenic Roadmap Assessment, April 2002.

Program: High Temperature Superducting (HTS) R&D
Agency: Department of Energy
Bureau: Electric Transmission & Distribution
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	70%	88%	59%	Effective

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: The Department has not submitted budget requests linking annual and long-term performance goals with resource needs in a complete and transparent manner.

Evidence:

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: In accord with the NEP, Office of Electric Transmission and Distribution (OETD) has evaluated HTS at the program level and is re-evaluating its strategic planning based on OETD's visioning and roadmapping meetings, and independent peer reviews.

Evidence: Roadmap July 2001; Update in July 2003.

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NO Question Weight:10%

Explanation: The program did not submit R & D Investment Criteria information demonstrating how DOE prioritizes programs based on potential benefits.

Evidence:

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: NO Question Weight:10%

Explanation: The program did not submit R & D Investment Criteria information demonstrating how risk, years to commercialization etc are used in prioritizing. However, proposals must make case for national energy benefits, judged on teams capabilities, costs, cost share, scheduling compared to other proposals.

Evidence:

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:12%

Explanation: OTED's Spend Plan, an 18-month schedule for key planning, budget formulation, budget execution, and analysis/evaluation functions, requires that each OETD program to establish and track long-term and near-term program performance goals and measures. Program results, as evaluated through the goals and measures, are used annually and throughout the year to assess partners' performance, adjust funding, and re-align R&D portfolios. Program personnel visit sites regularly (at least once per year). The program's annual and long-term goals and targets are tracked through DOE's Joule (a performance measurement tracking system), which informs DOE's management of programs.

Evidence: FY 2003 Spend Plan & Report; Joule System.

Program: High Temperature Superducting (HTS) R&D
Agency: Department of Energy
Bureau: Electric Transmission & Distribution
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	70%	88%	59%	Effective

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight:12%

Explanation: The annual performance appraisals of all OETD Program Managers include criteria directly related to cost, schedule and performance results. Most OETD contracts include award fee and other performance criteria to hold partners accountable for results.

Evidence: Annual Performance Appraisals; OETD contracts.

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:12%

Explanation: OETD will conduct a Spend Plan Review before each fiscal year to ensure that obligation planning for new funding is consistent with the appropriated purpose. OETD uses data from departmental procurement and financial systems (and similar data from national laboratory partners) to ensure that actual expenditures occur for purposes, and on a schedule, consistent with the Spend Plan.

Evidence: Spend Plan Review documentation; monthly Financial Information Service statements.

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: NO Question Weight:12%

Explanation: Program did not provide documentation of cost-effectiveness procedures or measures.

Evidence:

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: Program collaborates with related Federal and State programs, as well as partners with industry. Each partnership has specific and quantifiable goals and objectives.

Evidence: DOD-DOE partnership on superconductivity. DOD - DOE MOU

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: No known deficiencies.

Evidence: DOE annual Performance and Accountability reports.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:12%

Explanation: There is constant improvement in program management through a competitive, merit-based, review processess. In addition, quality is maintained through the annual performance-based peer review.

Evidence: 2002 Peer Review Report

PART Performance Measurements

Program: High Temperature Superducting (HTS) R&D
Agency: Department of Energy
Bureau: Electric Transmission & Distribution
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	70%	88%	59%	Effective

3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: YES Question Weight:12%

Explanation: The Spend Plan and site visit reviews are used to assess partner's progress and re-allocate funding accordingly, and annual independent peer reviews impact program funding and direction.

Evidence: FY 2003 Spend Plan & Report; Annual Programmatic Evaluation Peer Reviews; Cooperative Agreements; R&D Investment Criteria information categorizing type of research funding.

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: LARGE EXTENT Question Weight25%

Explanation: Demonstrated First Generation Wire in distribution system (Southwire) beginning in 1999; and is making progress towad lower cost second generation wire. Successful equipment prototypes include first-of-a-kind cables, transformers, motors and generators, and the program is moving forward towards final power and voltage goals for these technologies.

Evidence: Annual Performance Plan.

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: LARGE EXTENT Question Weight25%

Explanation: In 2000 and 2001 the program achieved its annual performance goals. It achieved the FY 2003 wire develoment goal ahead of schedule.

Evidence: Annual Performance Plan

4.3 **Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?** Answer: NO Question Weight25%

Explanation:

Evidence:

4.4 **Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?** Answer: NA Question Weight: 0%

Explanation: No comparisons available.

Evidence:

PART Performance Measurements

Program: High Temperature Superducting (HTS) R&D
Agency: Department of Energy
Bureau: Electric Transmission & Distribution
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	70%	88%	59%	Effective

4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: YES Question Weight 25%

Explanation: Program annually reassesses program activities (via peer reviews) and redirects or eliminates projects based on evaluation of their effectiveness, management and technical progress toward achieving program goals. As an additional indicator, as of 2002, program-generated intellectual property: more than 574 invention disclosures, 209 patents & 239 pending.

Evidence: Superconductivity for Electric Systems Annual Peer Review Programmatic Evaluation; Program patent history.

PART Performance Measurements

Program: High Temperature Superducting (HTS) R&D
Agency: Department of Energy
Bureau: Electric Transmission & Distribution
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	70%	88%	59%	Effective

Measure: Ability to produce increasingly powerful superconducting Power Equipment prototypes: power (megawatts), voltage, and/or length.

Additional Information: By 2010 develop capability for industry to produce electric motors, generators, cables, and transformers at 1/2 the size (or twice the capacity - MW) and half the energy losses of conventional equipment with the same power rating. Measured from current research baseline.

Year	Target	Actual
2012	5MW motor	
2012	850MW Gen.	
2012	340MW transf	
2012	2 mile Cable	
2005		
2006		

Measure Term: Long-term

Measure: Maintain progress in achieving milestones for voltage, power, and cable length

Additional Information: For motors, generators, transformers, and cables power, voltage, and/or length increases over time. Selected yearly targets due to limited PART space.

Year	Target	Actual
2003	1.8MW gen	
2003	.02 mile cable	
2004	10MW Transf	
2006	.2 mile cable	
2008	300MW Gen	

Measure Term: Annual

PART Performance Measurements

Program: High Temperature Superducting (HTS) R&D

Agency: Department of Energy

Bureau: Electric Transmission & Distribution

Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	70%	88%	59%	Effective

Measure: HTS Wire capacity, length, and cost

Additional Information: By 2015 develop wire prototype at 1/2 the price per kilo-amp of copper wire and 100 times the amps/'square centimeter of copper wire. 2002 target was 1st generation wire. 2005-2006: 100 meter; 2008 500 meter, $200; 2010: 300A/cm, 1000 meter, $100/kA-M

Year	Target	Actual
2002	$200/kA-M	$200/kA-M
2005	100 A/cm	
2006	200A/cm	
2008	300A/cm	
2010	300A/cm	

Measure Term: Annual

Measure: HTS Wire capacity, length, and cost

Additional Information: By 2015 develop wire prototype at 1/2 the price per kilo-amp of copper wire and 100 times the amps/'square centimeter of cooper wire. 2002 target was 1st generation wire. 2005-2006: 100 meter; 2008 500 meter, $200; 2010: 300A/cm, 1000 meter, $100/kA-M

Year	Target	Actual
2002	$200/kA-M	$200/kA-M
2017	$10/kA-M	
2005		
2006		

Measure Term: Long-term

PART Performance Measurements

Program: Hydrogen Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The mission of the DOE's Hydrogen Program is to research, develop, and validate fuel cell and hydrogen production, delivery, and storage technologies. The long-term aim is to accelerate progress toward an energy future for the Nation where hydrogen plays a more significant role as an energy carrier in all sectors of the economy and all regions of the country, so that environmental and energy security benefits can be realized.

Evidence: FY 2004 Budget. Hydrogen Futures Act of 1996.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The hydrogen program develops hydrogen-based technologies for transportation and electricity production in an effort to reverse America's growing dependence on foreign oil, enhance energy diversity and energy security, and reduce greenhouse gas emissions. These potential benefits support the Administration's National Energy Policy, as well as the Administration's climate change goals. The program is a key component of the President's Hydrogen Fuel Initiative announced on January 28, 2003.

Evidence: The program focuses R&D on activities that it considers too technologically risky for the private sector to undertake alone. Risk levels vary on a project-by project basis.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The program collaborates with other Federal agencies, State agencies, industry groups, and non-profit organizations to avoid duplication of efforts. The program participates in a Hydrogen R&D Interagency Task Force to better coordinate hydrogen-related activities among relevant Federal agencies. The program led the formulation of a Hydrogen Posture Plan (under review), which was collaboratively developed with the Department's Offices of Energy Efficiency & Renewables Energy (EERE), Fossil Energy (FE), and Nuclear Energy (NE), with input from the Office of Science. The Plan helps coordinate planned hydrogen-related activities within the Department. The National Hydrogen Energy Roadmap, released on November 12, 2002, was developed by approximately 220 technical experts and industry practitioners from public and private organizations.

Evidence: National Hydrogen Energy Roadmap (November 2002). DRAFT Hydrogen Posture Plan (September 2003). DOE Hydrogen Program Management and Operations Plan (July 2003). In May 2003, the program participated in a Hydrogen Coordinating Meeting, which brought together the program managers and reserach leads for the Department's EERE, FE, and NE offices. The program aims to accelerate private sector efforts on hydrogen technologies for which markets do not yet exist.

PART Performance Measurements

Program: Hydrogen Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The long term goal of establishing hydrogen as the primary fuel for cars and trucks, as stated in the President's 2003 State of the Union Address, cannot be achieved without substantial advances in hydrogen research. Regulations can play a facilitating role by providing codes and standards specifications for hydrogen production and storage. Similarly, once initial hydrogen facilities and fuel cells are available, use of hydrogen in Federal fleets and facilities could be mandated. Such regulations, however, cannot mandate the development of an entirely new energy source. The same is true for market-incentive policies, which require the technology basis for targeted markets to develop. At this early stage in the R&D cycle for hydrogen production and storage, alternative policy options cannot substitute for or adequately induce the needed technology improvements.

Evidence: The program found no studies that indicate a tax credit, regulatory driver, or other policy mechanism would be a more cost effective approach than R&D, since most of the technologies being researched are so far from commercialization.

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: NO Question Weight 20%

Explanation: The program funds national laboratories and co-sponsors industry research and development to overcome the high risk, 'critical path' barriers. These barriers include hydrogen production efficiency and cost, hydrogen storage, fuel cell cost, hydrogen delivery cost, lack of approved codes and standards, and lack of hydrogen infrastructure. In support of the Administration's R&D Investment Criteria initiative, the program was asked to prepare "bubble charts" that plot key program variables (e.g., expected public benefits, funding levels, years to commercialization). Bubble charts can serve as an informational tool to help determine, along with other considerations, whether the program appropriately targets its R&D funding. While the program has made progress estimating public benefits, the Department has not yet developed a methodology to estimate benefits consistently within and across programs. Therefore, the program could not prepare meaningful bubble charts.

Evidence: In general, the program appears to target its resources wisely, but a lack of ability to provide appropriate evidence mandates a "no" response. EERE continues to work internally and with other DOE program offices to improve consistency and accuracy in estimating benefits.

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight 10%

Explanation: The program has developed one key outcome measure (displacing petroleum). The program can track progress against this measure directly, but significant progress will not occur until major technical barriers that the program's R&D addresses are overcome. The program has several output measures that cover most of the programs key activities, including R&D on the production of hydrogen from renewable and non-renewable resources, hydrogen storage, and infrastructure validation, as well as public education efforts. The program is developing measures for its efforts to support the development of codes and standards and to conduct systems analyses.

Evidence: FY 2004 Budget, DRAFT Multi-Year Research, Development, and Demonstration Plan (June 2003).

PART Performance Measurements

Program: Hydrogen Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight:10%

Explanation: Targets and timeframes are ambitious. The program's multi-year research identifies R&D technical targets, off-ramps, and endpoints. Projects (including cooperative agreements and national laboratory efforts) are negotiated to include milestones and go/no-go decision points that support the achievement of the program performance goals.

Evidence: DRAFT Multi-Year Research, Development, and Demonstration Plan (June 2003). DRAFT Hydrogen Posture Plan (September, 2003).

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:10%

Explanation: Most of the long-term measures can be tracked directly on an annual basis, and therefore can also be considered annual measures. The program also has milestones for its projects, each of which directly support a long-term goal.

Evidence: FY 2004 Budget, DRAFT Multi-Year Research, Development, and Demonstration Plan (June 2003).

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:10%

Explanation: Baselines have been established for all annual performance measures, and targets appear to be ambitious.

Evidence: DRAFT Multi-Year Research, Development, and Demonstration Plan (June 2003). DRAFT Hydrogen Posture Plan (September, 2003).

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: YES Question Weight:10%

Explanation: Partners are funded based on commitment to the subprogram's annual performance goals through a competitive, cost-shared solicitation process. Long-term goals are developed in partnership with a wide spectrum of public and private industry representation. Industry partners in the Administration's FreedomCAR partnership have committed to the partnership's goals.

Evidence: FreedomCAR Partnership Plan (April, 2003). Sample competitive solicitation. FY 2003 Annual Operating Plan.

PART Performance Measurements

Program: Hydrogen Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: The program regularly conducts external merit reviews of its R&D projects. In addition, the National Research Council (NRC) is currently reviewing the program's Multi-Year Research, Development and Demonstration Plan and is evaluating the multiple pathways to hydrogen production, delivery and storage. The NRC has provided an interim report to the program, which offers four recommendations addressing: a systems approach to hydrogen energy RD&D; exploratory research as the foundation for breakthroughs in technology; safety issues; and coordination of R&D strategy and programs. The program has a track record of being responsive to the recommendations of program evaluators and continues to work to address recommended actions as they are identified.

Evidence: Merit Review and Peer Evaluation of the Hydrogen, Fuels Cells and Infrastructure Technologies Program (May 19-22, 2003). 2002 Annual Hydrogen Program Review Meeting (May 6-8, 2002). Merit Review and Peer Evaluation National Laboratory R&D (May 9-10, 2002). NRC Letter Report (April, 2003).

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: In general, the budget identifies the resources needed to achieve each of its performance goals. However, budget documents do not clearly indicate the full costs of achieving the program goals. That is, salaries, benefits, and other admininstrative expenses to support the program are included in a separate budgetary line item ("Program Direction"). EERE does not report the allocation of Program Direction funding to the various programs it supports.

Evidence: FY 2004 Budget.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: The program is developing a Multi-year Research, Development, and Demonstration Plan. The program led the development of the Hydrogen Posture Plan, in collaboration with the Offices of Fossil and Nuclear Energy, with input from the Office of Science, to ensure planning is aligned with Departmental strategic priorities.

Evidence: DRAFT Multi-Year Research, Development, and Demonstration Plan (June 2003). DRAFT Hydrogen Posture Plan (September, 2003).

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NO Question Weight:10%

Explanation: Each year, the program estimates the public benefits of its activities in support of the Government Performance and Results Act (GPRA) and the Administration's R&D Investment Criteria initiative. However, the program has not yet developed a consistent and reliable methodology for comparing potential benefits within and across programs with similar goals.

Evidence: FY 2004 Congressional Budget Justification materials

PART Performance Measurements

Program: Hydrogen Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: The program defines technical priorities based both on market needs and detailed trade-off analyses between system requirements, performance and cost. Projects are judged annually by a combination of process analysis, and independent and peer review to assess performance against objectives. In addition, workshops with industry experts and Nobel laureate scientists were conducted to support the development of targeted solicitations on hydrogen storage. The program participated in an EERE-wide zero-based budget exercise in which priorities at the activity level were clearly laid out.

Evidence: Proceedings of the Hydrogen Storage Think Tank Meeting (March 2002). DRAFT Multi-Year Research, Development, and Demonstration Plan (June 2003). EERE Priority Ranking Tool, Zero Based Budget Exercise.

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:12%

Explanation: The EERE Strategic Management System -- which establishes at the beginning of each fiscal year an 18-month schedule for key planning, budget formulation, budget execution, and analysis / evaluation functions -- requires that each EERE program establish and track long-term and near-term program performance goals and measures. Program results as evaluated through the goals and measures are used annually and throughout the year to assess partners' performance, adjust funding, and re-align R&D portfolios. The program also conducts annual peer review meetings and regular meetings with the industry partners (e.g., USCAR) technical teams to review projects and assess performance towards meeting the program goals. The program also conducts independent analysis of the various technological solutions. Using this process, the program has eliminated funding for biological water gas shift R&D because analysis indicated this technology would not be economically competitive in the long run.

Evidence: SMS Implementation Letter for FY 2002 - 2005 (October 2001). The program also reports on quarterly milestones in the Department's Joule database. However, in general, milestones in the Joule system are not necessarily meaningful or fully reflective of program progress. Thus, the Department's Joule system provides little value-added. The new I-MANAGE system, currently under development, will better integrate budget and performance.

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:12%

Explanation: The Performance Appraisal and Management Plan for each Technology Development Manager includes an element to provide technical direction to industry, laboratories and universities to support the achievement of program level milestones and to keep projects on schedule and within cost. Solicitations identify the key technology challenges and associated technical targets. Proposals are evaluated on their ability to contribute solutions to these key technology challenges. Projects (including cooperative agreements and national laboratory efforts) are negotiated to include milestones and go/no-go decision points that support the achievement of the program performance goals.

Evidence: Performance Plan and Performance Appraisal Form for Performance Management System Employees; Sample contract documents.

PART Performance Measurements

Program: Hydrogen Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:12%

Explanation: Each year, the program develops an Annual Operating Plan, which is reviewed internally to ensure that new funding is planned to be obligated consistent with the appropriated purpose. EERE also develops a Spend Plan for all of its programs. The program uses data from Departmental procurement and financial systems -- and similar data from National Laboratory partners -- to assure that actual expenditures occur for intended purposes and on a schedule consistent with the Spend Plan. Unobligated balances brought forward to FY 2004 were $82,000, less than one percent of the program's FY 2003 appropriation of approximately $39 million. The program reports that cooperative agreement invoices are paid only after verification that the costs are in accordance with the approved budget.

Evidence: FY 2003 Annual Operating Plan. Hydrogen Technology Program FY 2003 Financial Status Report (June 2003). FY 2004 Apportionment. FY 2003 Spend Plan.

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:12%

Explanation: EERE's reorganization in 2002 clarified lines of responsibility and eliminated organizational "stovepipes" by consolidating planning, budgeting, and analysis into a single business administration office. The reorganization reduced management layers, although staff levels remained the same. EERE developed a new IT report to improve program managers' access to EERE cost, obligation, and procurement data. EERE plans to consolidate several legacy IT systems into a single program management system that is intended to track all required information on a project by project basis (cost share, type of contract according to A-11 definitions, etc.). EERE is also developing a measure to reduce uncosted balances, which means obligated funds will be put to use more quickly. These recent actions should achieve efficiencies and improve cost effectiveness, although it will be difficult in some cases to demonstrate definitively.

Evidence: EERE Reorganization "All Hands" presentation: http://www.eere.energy.gov/office_eere/pdfs/eere_reorg.pdf. EERE IT Business Case Number 019-20-01-12-01-1011-00-304-101. Hydrogen Technology Program FY 2003 Financial Status Report (June 2003).

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: The program coordinates informally with EERE's wind, solar, and biomass programs, and formally through Memoranda of Understanding (MOU) with NASA and the Department's Office of Fossil Energy. The program participates in a Hydrogen R&D Interagency Task Force to better coordinate hydrogen-related activities among relevant Federal agencies. The program led the formulation of a Hydrogen Posture Plan (under review), which was collaboratively developed with the Department's Offices of Energy Efficiency & Renewables Energy, Fossil Energy, and Nuclear Energy, with input from the Office of Science. The Plan helps coordinate planned hydrogen-related activities within the Department.

Evidence: DRAFT Hydrogen Posture Plan (September 2003). MOUs with Office of Fossil Energy and NASA

PART Performance Measurements

Program: Hydrogen Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: Each year, EERE develops and maintains a Spend Plan and a Measures spreadsheet that links the Spend Plan to annual and long-term goals and measures for each EERE program. The program requires monthly cost reports that are evaluated against progress and used the make financial adjustments. The program works with the Golden Field Office to manage cooperative agreements, audit partners, ensure invoices are in accordance with the agreements and to issue reimbursement. There is no evidence of erroneous payments or statutory violations.

Evidence: FY 2003 Spend Plan and Measures spreadsheet. Sample quarterly costing report.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:12%

Explanation: The National Association of Public Administrators (NAPA) found dozens of management deficiencies in the program's bureau (the Office of Energy Efficiency and Renewable Energy, or EERE) in a review published in 2000. EERE provided evidence that it addressed some of management deficiencies identified by NAPA, and has prepared a Management Action Plan that will address many of the remaining findings. While a few NAPA recommendations have not been addressed (e.g., that EERE conduct periodic audits to assure that cost-sharing partners actually provide funding they agree to), in general, EERE has taken meaningful steps to address most deficiencies. At the program level, the program has drafted a Management and Operations Plan that links the research, development, demonstration, and education activities to policies, requirements and the process for selecting options; organizing the program; and managing and monitoring the program. The program also developed a Systems Integration Plan to provide a disciplined approach to the design, development, and validation of complex systems.

Evidence: A Review of the Management in the Office of Energy Efficiency and Renewable Energy (NAPA, 2000). Letter Report from Assistant Secretary Garman to Chairman of the House Subcommittee on Interior and Related Agencies on implementation of NAPA recommendations (July 11, 2001). EERE Management Action Plan (August 2003). DRAFT DOE Hydrogen Program Management and Operations Plan (June 2003). DRAFT Systems Integration Plan (2003).

3.RD1 For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality? Answer: YES Question Weight:12%

Explanation: Competitive Procurement Processes are used for all financial assistance awards (except some earmarks), such that all proposed activities are evaluated for scientific and technical merit. The program conducts an annual peer review using the OMB scorecard criteria to guide peer evaluations. In FY 2003, 23 percent of the funds were earmarked, and 40 percent went to national labs. The program competitively awarded all of remaining R&D funds, mostly using merit review with external (peer) evaluation.

Evidence: FY 2003 Spend Plan; Table showing funding allocations as per OMB Circular A-11 definitions for "Conduct of Research and Development."

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: LARGE EXTENT Question Weight:25%

Explanation: Generally, the program appears to be making reasonable progress, although some measures and targets are new, and a few are still under development. In addition, in 2000, the National Academy of Sciences noted that the program has made significant R&D advances.

Evidence: National Academy of Sciences, "Renewable Power Pathways: A Review of The U.S. Department of Energy's Renewable Energy Programs" (2000)

PART Performance Measurements

Program: Hydrogen Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: LARGE EXTENT Question Weight 25%

Explanation: Generally, the program appears to be making reasonable progress, although some measures and targets are new, and a few are still under development. The program reports that it has met its first and second quarter milestones toward achievement of its FY 2003 targets.

Evidence:

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: NO Question Weight 25%

Explanation: The program identified several activities that would seem to promote efficiency and cost-effectiveness, including: integrated planning and identification of most cost effective investments/roles in R&D consortia; shifting work previously done by labs that the private sector; and developing electronic collection, storage, management and reporting systems that eliminate historic but unneeded reporting, and integrate performance, planning, fiscal and management data. The program could not provide evidence that these activities have improved efficiency and cost effectiveness.

Evidence:

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NA Question Weight: 0%

Explanation: The program works closely with industry and other Federal programs to advance the state of the art in hydrogen technologies. There are no studies comparing this program to similar programs.

Evidence:

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: YES Question Weight 25%

Explanation: According to a National Academy of Sciences review, the program is "well defined and well managed...The research itself appears to be well done, and an organized peer review system is in place." The program "has established a firm foothold in critical technical areas that can provide incremental improvements." Other peer reviews generally report positively on technical progress of projects.

Evidence: National Academy of Sciences, "Renewable Power Pathways: A Review of The U.S. Department of Energy's Renewable Energy Programs" (2000). Merit Review and Peer Evaluation of the Hydrogen, Fuels Cells and Infrastructure Technologies Program (May 19-22, 2003). 2002 Annual Hydrogen Program Review Meeting (May 6-8, 2002). Merit Review and Peer Evaluation National Laboratory R&D (May 9-10, 2002).

PART Performance Measurements

Program: Hydrogen Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

Measure: Modeled cost of hydrogen produced from natural gas (at 5,000 pounds per square inch (psi), untaxed, at the pump, with no carbon sequestration), in dollars per gasoline gallon equivalent ($/gge).

Additional Information: Reducing hydrogen production costs accelerate the market viability and deployment of hydrogen technologies, which contribute to the Department's goal of increased energy security and reduced greenhouse gas and pollutant emissions.

Year	Target	Actual
2003	5	5
2004	5	
2006	3	
2008	2	
2010	1.5	

Measure Term: Annual

Measure: Modeled cost of hydrogen produced from renewables (at 5,000 pounds per square inch (psi), untaxed, at the pump), in dollars per gasoline gallon equivalent ($/gge).

Additional Information: Reducing hydrogen production costs accelerate the market viability and deployment of hydrogen technologies, which contribute to the Department's goal of increased energy security and reduced greenhouse gas and pollutant emissions.

Year	Target	Actual
2002		8.5
2003	6	6.2
2004	5.7	
2005	5.7	
2006		
2008	4.6	
2010	3.9	

Measure Term: Annual

PART Performance Measurements

Program: Hydrogen Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

Measure: Energy density of hydrogen storage system using compressed gas storage tanks, in kilowatt-hours per liter (kWh/l)

Additional Information: Reducing hydrogen storage volume will enable the development of hydrogen fuel cell vehicles that are competitive with gasoline powered vehicles for driving range. The metric is for volume, but weight and cost targets must also be met. The 2010 target will enable a driving range of about 300 miles in some vehicles.

Year	Target	Actual
2002	0.7	0.7
2003	1	1
2004	1	
2005	1.2	

Measure Term: Annual

Measure: Energy density of hydrogen storage system using solid state storage technologies, in weight percent. (Six weight percent will enable a 300-mile driving range in some vehicles.)

Additional Information: Reducing hydrogen storage volume will enable the development of hydrogen fuel cell vehicles that are competitive with gasoline powered vehicles for driving range. The metric is for volume, but weight and cost targets must also be met. The 2015 target will enable a driving range of greater than 300 miles in all light-duty vehicles.

Year	Target	Actual
2000	5.0	2.3
2004	3.0	
2005	4.5	
2007	5.5	
2010	6.0	

Measure Term: Long-term

PART Performance Measurements

Program: Hydrogen Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

Measure: Number of U.S. students and teachers (kindergarten through 12th grade) who understand the concept of a hydrogen economy and how it may affect them, based on response to survey questions, determined by statistical sample and extrapolation

Additional Information: Educating the public about hydrogen properties and safety may facilitate a more rapid transition to a hydrogen economy.

Year	Target	Actual	**Measure Term:** Long Term
2004	Baseline survey		
2008	2 fold inc.		
2011	4 fold inc.		

Measure: Validated cost of hydrogen production, untaxed, including co-generation of electricity, in dollars per kilogram ($/kg). The unit is roughly equivalent to the cost of a gallon of gasoline.

Additional Information: This measure tracks demonstration activities intended to validate modeled or estimated costs of hydrogen production. Reducing hydrogen production costs can help accelerate the market viability and deployment of hydrogen technologies, which contribute to the Department's goal of increased energy security and reduced greenhouse gas and pollutant emissions.

Year	Target	Actual	**Measure Term:** Long Term
2004	3.6		
2005	3.6		
2009	3		
2013	1.5		

Measure: Displacement of petroleum, in millions of barrels of oil per day (m bbl/d)

Additional Information: As technical targets are met in this and other related programs, hydrogen fuel cell vehicles and other hydrogen-powered technologies may become commercially viable, thereby displacing oil consumption.

Year	Target	Actual	**Measure Term:** Long Term
2002	0	0	
2020	0.5		

Program: Hydrogen Technology
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

2030	4
2040	11

Measure: Systems analysis

Additional Information:

Year	Target	Actual	**Measure Term:** Annual

Measure: Development of codes and standards

Additional Information:

Year	Target	Actual	**Measure Term:** Long Term

Program Assessment Rating Tool (PART)

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	Moderately Effective
100%	90%	89%	60%	

1.1 Is the program purpose clear? Answer: YES Question Weight: 20%

Explanation: The purpose of the Inertial Confinement Fusion Ignition and High Yield Campaign (ICF Campaign) is to support current & future National Nuclear Security Administration (NNSA) Stockpile Stewardship Program (SSP) objectives by developing laboratory capabilities to create and measure extreme conditions of temperature, pressure, and radiation approaching those in a nuclear explosion and by conducting weapons-related research in these environments. This capability is required to support assessments and certification of the nation's nuclear weapons stockpile.

Evidence: The NNSA Strategic Plan, 2002; NNSA FY 2004-08 Future-Years Nuclear Security Program (FYNSP), February 2003; Stockpile Stewardship and Management Programmatic Environmental Impact Statement (SSM PEIS); ICF Program Plan/Strategic Plan; annual ICF Campaign Implementation Plans; 2001 and 2003 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile ("Foster Panel"); High Energy Density Physics Study; National Academy of Sciences and JASON reviews of the ICF Program and NIF Project; Inertial Confinement Fusion Advisory Committee Reviews; Pulsed Power Review Committees ("Garwin" & "Trivelpiece" Reviews); ICF Campaign/Program external review history; and National Ignition Facility Key Decision Zero document.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight: 20%

Explanation: The ICF Campaign addresses the NNSA need to examine conditions of extreme temperature and pressure present in a nuclear weapon and to provide experimental data to develop and support computational models related to the performance of these weapons. Achievement of technical goals in this field, known as "high energy density physics," is recognized as essential to success of the SSP mission of ensuring the safety, security and reliability of weapons in the stockpile. As such, the ICF Campaign is addressing a specific requirement for the Department of Energy (DOE), which is to enhance national security through the military application of nuclear technology. The FY 1994 National Defense Authorization Act directed the Secretary of Energy to "establish a stewardship program to ensure the preservation of the core intellectual and technical competencies of the U.S. in nuclear weapons."

Evidence: The FY 1994 National Defense Authorization Act; NNSA Strategic Plan; NNSA FY 2004-08 FYNSP; SSM PEIS; ICF Program Plan/Strategic Plan; annual ICF Campaign Implementation Plans; 2001 and 2003 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile ("Foster Panel"); High Energy Density Physics Study; National Academy of Sciences and JASON reviews of the ICF Program and NIF Project; Inertial Confinement Fusion Advisory Committee Reviews; Pulsed Power Review Committees ("Garwin" & "Trivelpiece" Reviews); ICF Campaign/Program external review history; and National Ignition Facility Key Decision Zero document.

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	Moderately Effective
100%	90%	89%	60%	

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight: 20%

Explanation: Nuclear weapons are the sole province of the Federal Government, and NNSA is the federal agency responsible for the safety, security and reliability of the nuclear weapons stockpile. The ICF Campaign capabilities are unique and address the specific needs of the SSP. No equivalent laboratory experimental capabilities (facilities and diagnostics) for conducting research in nuclear weapons-relevant temperature/ pressure regimes are available or being planned elsewhere in the U.S. According to the 2003 National Research Council report (Frontiers in High Energy Density Physics), "Existing and future NNSA High Energy Density Facilities... are uniquely capable of probing the behavior of macroscopic collections of matter under extreme conditions." The National Ignition Facility (NIF) will be the only laboratory facility capable of accessing conditions for nuclear burn applicable for the SSP, and the Z pulsed-power facility is the only laboratory facility with sufficiently high energy x-rays for certain radiation tests of weapons components.

Evidence: The NNSA Strategic Plan; NNSA FY 2004-08 FYNSP; Stockpile Stewardship and Management Programmatic Environmental Impact Statement (SSM PEIS); ICF Program Plan/Strategic Plan; annual ICF Campaign Implementation Plans; 2001 and 2003 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile ("Foster Panel"); High Energy Density Physics Study; National Academy of Sciences and JASON reviews of the ICF Program and NIF Project; Inertial Confinement Fusion Advisory Committee Reviews; Pulsed Power Review Committees ("Garwin" & "Trivelpiece" Reviews); ICF Campaign/Program external review history; National Ignition Facility Key Decision Zero document; and Frontiers in High Energy Density Physics (National Research Council, 2003).

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight: 20%

Explanation: NNSA has greatly improved overall management of the program since it identified problems in the structure and management of the NIF Project in FY 2000. Since that time, NNSA has created the NIF Project Office and has applied proven project management methods. However, some recommendations stemming from the previous difficulties remain unfulfilled and some major technical challenges to achieving the project's objectives remain.

Evidence: The NNSA Strategic Plan; ICF Program Plan/Strategic Plan; annual ICF Campaign Implementation Plans; list of ICF Campaign Reviews; ICF periodic milestone status reports; ICF site monthly updates; 2001 and 2003 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile ("Foster Panel"); High Energy Density Physics Study; National Academy of Sciences and JASON reviews of the ICF Program and NIF Project; Inertial Confinement Fusion Advisory Committee Reviews; Pulsed Power Review Committees ("Garwin" & "Trivelpiece" Reviews); ICF Campaign/Program external review history; and National Weapons Laboratories Annual Contractor Performance Evaluations.

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	Moderately Effective
100%	90%	89%	60%	

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight: 20%

Explanation: The composition of the ICF Campaign is uniquely structured to meet the needs of the national nuclear weapons program. The SSP and ICF Campaign resources are targeted, in accordance with the NNSA Strategic Plan, toward ensuring the long term vitality of the scientific and engineering base at the weapons laboratories in order to assess and certify the nuclear stockpile. The ICF Campaign provides nuclear weapons-relevant facilities and research, including fusion ignition capabilities, at the weapons laboratories and leading U.S. scientific laboratories.

Evidence: The NNSA Strategic Plan; NNSA FY 2004-08 FYNSP; SSM PEIS; ICF Program Plan/Strategic Plan; annual ICF Campaign Implementation Plans; 2001 and 2003 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile ("Foster Panel"); High Energy Density Physics Study; National Academy of Sciences and JASON reviews of the ICF Program and NIF Project; Inertial Confinement Fusion Advisory Committee Reviews; Pulsed Power Review Committees ("Garwin" & "Trivelpiece" Reviews); ICF Campaign/Program external review history; and National Ignition Facility Key Decision Zero document.

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight: 10%

Explanation: NNSA has made significant progress in developing tangible, concrete measures for a research and development program that is inherently difficult to measure. While, perhaps, not as clear and concise as measures for other programs, NNSA's intent is to continue to refine the ICF measures to link outputs and outcomes.

Evidence: The NNSA Strategic Plan; NNSA FY 2004-08 FYNSP; Stockpile Stewardship and Management Programmatic Environmental Impact Statement (SSM PEIS); Draft FY 2004-09 ICF Program Plan; ICF Strategic Plan; FY 2003 and Draft FY 2004-05 ICF Campaign Implementation Plans; High Energy Density Physics Study; National Ignition Facility Key Decision One document; National Academy of Sciences and JASON reviews of the ICF Program and NIF Project; Inertial Confinement Fusion Advisory Committee Reviews; ICF Campaign/Program external review history; and NIF Construction Project Data Sheet, milestone list, and Project Execution Plan.

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight: 10%

Explanation: The performance targets for the ICF Campaign long-term measures are ambitious and technically challenging. They also have a defined target date. Independent external reviews have validated the technical value and ambitious nature of the goals.

Evidence: The NNSA FY 2004-08 FYNSP; NNSA FY 2004 Congressional Budget Request; Draft FY 2004-09 ICF Program Plan; ICF Strategic Plan; FY 2003 and Draft FY 2004-05 ICF Campaign Implementation Plans; NIF Construction Project Data Sheet, milestone list, and Project Execution Plan; National Academy of Sciences and JASON reviews of the ICF Program; and ICF Level 1 & 2 milestone list.

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	Moderately Effective
100%	90%	89%	60%	

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight: 10%

Explanation: The ICF Campaign has a limited number of specific annual performance measures designed to demonstrate progress toward achieving the Campaign's long-term goals. Annual performance measures exist in the form of FYNSP Performance Indicators that are consistent with ICF Campaign and NIF Project Milestones (Level 1 & 2 milestones) and with ICF Campaign Implementation Plans. These annual performance measures are listed, for FY 2002-FY 2008, in the separate Performance Measures Tab.

Evidence: NNSA FY 2004-08 FYNSP; FY 2004 Congressional Budget Request; Draft FY 2004-09 ICF Program Plan; ICF Strategic Plan; ICF Annual Campaign Implementation Plans; NIF Construction Project Execution Plan, milestone list, and Project Data Sheet; ICF Level 1 & 2 milestone list; ICF periodic milestone status reports; ICF site monthly updates; and annual budgets.

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight: 10%

Explanation: The ICF Campaign has ambitious targets and baselines for its annual measures. Annual measures provide a quantitative means of measuring progress in major technical efforts critical to achieving long-term goals and outcome targets. Technical scope, cost and schedule baselines have been established for NIF construction-related activities and adherence to these baselines is monitored and formally reported per established requirements. A system of annual performance indicators and targets was introduced with the FY2004 NNSA FYNSP. Annual ICF performance targets are established to meet expected SSP technical baselines.Progress on technical milestones is monitored closely by NNSA and senior-level laboratory management. This progress is reported in NNSA FYNSP and Government Performance Results Act documentation.

Evidence: The NNSA FY 2004-08 FYNSP; Draft FY 2004-09 ICF Program Plan; ICF Strategic Plan; ICF Campaign Implementation Plans; NIF Construction Project Execution Plan, milestone list, and Project Data Sheet; ICF Level 1 & 2 milestone list; ICF periodic milestone status reports; ICF site monthly updates; and annual budgets.

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: YES Question Weight: 10%

Explanation: The Nuclear Weapons complex commits to program goals at several levels. Top-level goals are codified via NNSA Level 1 milestones. An ICF Program Executive Group ("HEDP Executives"), consisting of representatives from all laboratories involved in the ICF Campaign and related work for SSP Science Campaigns, oversees the formulation of long-term program goals and associated milestones. This same group oversees the management and execution of the annual work-scope for the ICF Campaign, which is documented in ICF Campaign Implementation Plans and site-owned Project Execution Plans. Actual progress in achieving results against these plans is reported by ICF sites to the NNSA Campaign Manager periodically throughout the year and is also tracked via NNSA reviews as part of the NNSA Planning, Programming, Budgeting, and Evaluation/Execution (PPBE) process, which is further described in the responses to questions 2.7 and 3.1.

Evidence: The NNSA Strategic Plan; NNSA FY 2004-08 FYNSP; Draft FY 2004-09 ICF Program Plan; ICF Strategic Plan; ICF Campaign Implementation Plans; NIF Construction Project Execution Plan; and ICF Level 1 & 2 milestone list.

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	Moderately Effective
100%	90%	89%	60%	

2.6 Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?

Answer: YES Question Weight: 10%

Explanation: External committees, to include the Secretary of Energy's Advisory Board, the Inertial Confinement Fusion Advisory Committee, National Academy of Sciences, JASON, and, more recently, the High Energy Density Physics Study, have validated the program's purpose, direction, and long-term strategy. External reviews of the NIF Construction Project are conducted as needed. Recent NIF reviews include the General Accounting Office (GAO) in June 2001 and the DOE Inspector General (IG) in April 2003. Other topic-specific reviews are conducted as needed. OMB recommends an additional independent evaluation (from the DoD/national security standpoint) that addresses the relevance of the program to the overall stockpile stewardship effort.

Evidence: National Academy of Sciences and JASON reviews of the ICF Program and NIF Project; High Energy Density Physics Study; Inertial Confinement Fusion Advisory Committee reviews of the ICF Program; DOE Stockpile Stewardship Program, 30-Day Review, Nov. 1999; ICF Campaign/Program external review history; JASON High Energy Laser Study; ZR Mission Need Review; OMEGA EP Mission Need Review; Garwin Review of Pulsed Power Sciences; Trivelpiece Review of Pulsed Power Sciences; Lawrence Livermore National Laboratory NIF Program Advisory Committee Reviews; Los Alamos National Laboratory Physics Division Review Committee Reports; NNSA Reviews of the Naval Research Laboratory ICF Program; Inspector General Report on NIF; National Weapons Laboratory Performance Assessments; JASON High Power Laser Study; National Ignition Facility Key Decision Zero document; 2001 & 2003 Reports to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile ("Foster Panel"); GAO-01-677R, Follow-up Review of DOE's National Ignition Facility, June 1, 2001; and DOE IG Audit Report, DOE/IG-0598, Status of the National Ignition Facility Project, April 2003.

2.7 Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?

Answer: YES Question Weight: 10%

Explanation: The NNSA budget requests are explicitly tied to anticipated annual and long-term performance goals via the comprehensive PPBE process. Long-term performance goals established/validated during the Planning Phase are linked in a performance cascade to annual targets and detailed technical milestones. During the Programming Phase, budget and resource trade-offs and decisions are evaluated based on impact to annual and long-term performance measures. These NNSA performance-planning-budgeting decisions are documented in the Program Decision Memorandum (PDM) and used to develop the budget requests during the Budgeting Phase. Program and financial performance for each measure is corporately monitored and assessed during the Execution and Evaluation Phase. The resource needs for NNSA programs are presented in a complete and transparent manner. The budget requests for NNSA programs are "fully loaded" - that is, the direct and indirect costs of program execution by program performers are reflected in the budget. Only about 4% of NNSA's personnel are Federal employees who provide direction, oversight, and administration of the technical efforts. These resources are also specifically and separately identified in NNSA budget requests, as required by the Congress.

Evidence: The NNSA PPBE Guidance Documents located on the NNSA web-site; FY 2004 NNSA Congressional Budget Request; NNSA FY 2004 & FY 2005 PDMs; and NNSA FY 2004-08 FYNSP.

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	Moderately Effective
100%	90%	89%	60%	

2.8 Has the program taken meaningful steps to correct its strategic planning deficiencies? Answer: YES Question Weight: 10%

Explanation: Comprehensive improvement of strategic planning is occurring within NNSA and also within the ICF Campaign. The recently completed NNSA Strategic Plan defines the overall goals, strategies, and strategic indicators for the SSP. Strategic guidance issued by NNSA as part of the PPBE process defines objectives and provides guidance for budget formulation. The ICF Campaign continually reexamines its long term goals, most recently via the High Energy Density Physics Study and ICF Campaign specific strategic planning exercises documented in the ICF Program Plan. The NIF Construction Project has improved its prior planning deficiencies by creating the NNSA Office of the NIF Project (now NA-10.1) and by establishing, validating, and certifying a new Project baseline to Congress in September 2000. This new baseline established key milestones to monitor and track the various phases of the Project, implemented an earned value management reporting system, and established a project management review process. All of these steps, along with enhancing the significance of the NIF in the University of California contract performance measures, have increased the direct involvement of senior laboratory management in oversight of the Project.

Evidence: The NNSA Strategic Plan; NNSA FY 2004-08 FYNSP; SSM PEIS; Draft FY 2004-09 ICF Program Plan; ICF Strategic Plan; ICF Campaign Implementation Plans; High Energy Density Physics Study; NNSA Defense Programs FY2005 PPBES Strategic Guidance; and 2001 & 2003 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile ("Foster Panel").

2.CA1 Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity? Answer: YES Question Weight: 10%

Explanation: The High Energy Density Physics Study, which included participation by stockpile stewardship stakeholders from outside NNSA and the laboratories, was conducted in 2001. This study affirmed the need for the ICF Campaign and validated the technical goals for the Campaign. As part of this study, alternatives to constructing the full 192-beam NIF were examined and reviewed, including half- and quarter-sized NIF. The study concluded that the full NIF Project, including the ignition goal, was the best option for stockpile stewardship.

Evidence: High Energy Density Physics Study; NNSA Strategic Plan; SSM PEIS; Draft FY 2004-09 ICF Program Plan; ICF Strategic Plan; ICF Campaign Implementation Plans; and NNSA Defense Programs FY2005 PPBES Strategic Guidance.

2.RD1 If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals? Answer: NA Question Weight: 0%

Explanation: There are no U.S. efforts outside of the ICF Campaign that have the same or similar goals or capabilities. The nature and scope of the SSP and ICF Campaign are uniquely defined by the needs for appropriate stewardship of the nation's nuclear weapons stockpile and for maintaining a U.S. technology base adequate to provide this support. Relevance and validity of efforts are reviewed and evaluated on a regular basis with the stakeholder community.

Evidence:

Program:	Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency:	Department of Energy
Bureau:	National Nuclear Security Administration
Type(s):	Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	
100%	90%	89%	60%	Moderately Effective

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: NO Question Weight: 10%

Explanation: It does not appear that there has been a concerted effort to evaluate and prioritize this program relative to other SSP programs and the benefit they provide to overall national security.

Evidence: The NNSA Strategic Plan; NNSA FY 2004-08 FYNSP; NNSA FY 2004 Congressional Budget Request; SSM PEIS; Draft FY 2004-09 ICF Program Plan; ICF Strategic Plan; ICF Campaign Implementation Plans; High Energy Density Physics Study; and NNSA Defense Programs FY2005 PPBE Strategic Guidance.

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight: 12%

Explanation: The ICF Campaign has conducted periodic program reviews; these are now a requirement of the NNSA PPBE evaluation process. The NIF Construction Project reports progress and adherence to baselines on a monthly and quarterly basis. The National Weapons Laboratory contracts include requirements and criteria for annual assessment of performance. Semi-annual reviews of ICF Campaign progress are held. The status of Level 1 and 2 milestone accomplishment is updated several times per year. The Campaign's major university contractor provides quarterly and annual technical reports. The Campaign's industrial contractor is reviewed semi-annually. Other specific activities oriented towards construction, such as ZR and OMEGA EP, provide quarterly reporting per standard DOE procedure (DOE Order 413.3). Sites also produce annual reports of progress. Data from all ICF Campaign participants is collected and incorporated in campaign planning and budget formulation.

Evidence: NIF Project monthly reports; ICF Campaign semi-annual reviews; ICF periodic milestone status reports; National Laboratory contract performance reports; University of Rochester quarterly and annual reports; General Atomics, Inc. semi-annual review reports; NIF Diagnostics Program Quarterly review; ZR Project Quarterly review; site monthly updates; and DOE Order 413.3, Program and Project Management for the Acquisition of Capital Assets, October 13, 2000.

Program:	Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency:	Department of Energy
Bureau:	National Nuclear Security Administration
Type(s):	Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	
100%	90%	89%	60%	Moderately Effective

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight: 11%

Explanation: Responsibility and accountability for technical quality of stewardship work performed are key elements of NNSA and national lab culture. Responsible managers for the ICF Program have been identified at NNSA headquarters and field offices and also at participating laboratory sites. Performance standards, usually in the form of specific milestones, are defined for each individual program element and manager. Construction projects are executed via externally reviewed project execution plans; progress is reviewed on a regular basis. Cost and schedule data is collected and tracked for the ICF Campaign and NIF Construction Project. Technical progress is tracked via milestones. Award of contract fees is based on Annual Performance assessments of the three National Weapons Laboratories. Review criteria for these assessments include ICF and NIF Construction Project objectives. The NIF Construction Project's industrial contracts include performance thresholds and appropriate incentives. Federal managers are held accountable for program performance in manager evaluations.

Evidence: National Weapons Laboratory Performance Assessments; University of Rochester quarterly and annual progress reports; University of Rochester contract renewal review; General Atomics, Inc. semi-annual review; ICF Program Plan/Strategic Plan; NIF Construction Project Execution Plan; ZR Project Execution Plan; ICF Level 1 & 2 milestone list and updates; and NNSA Federal Employee evaluations

3.3 **Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?** Answer: YES Question Weight: 11%

Explanation: The NNSA tracks expenditures at the sub-program level using its official Budget and Reporting (B&R) classification codes and the DOE Single Integrated Financial Management System. Program and Project Managers allocate funding through the work authorization process and monitor costs monthly. Funding B&R code structure is based on Campaign major technical efforts (MTEs) and instructions that are included with Approved Funding Program/Work Authorization Statements when funds are released to sites make the intended purposes clear. Sites are required to report obligations and expenditures to NNSA in a timely fashion.

Evidence: NNSA Financial Plan and monthly Work Authorization Statements; laboratory financial reports; and NIF Construction Project monthly reports.

3.4 **Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?** Answer: YES Question Weight: 11%

Explanation: The DOE and NNSA use distinct evaluation procedures and criteria to achieve efficiency and effectiveness of research and development investment dollars. There are clear criteria for laboratories to use in make/buy decisions when it is appropriate to have competition for subcontracted/outsourced work. For NIF construction, Lawrence Livermore National Laboratory has worked extensively with industrial sources to develop required technologies and control component production costs. Multiple vendors have been employed where appropriate to maintain competition and reduce costs. Fabrication of targets for ICF experimental facilities has been outsourced to General Atomics, Inc. This has centralized target fabrication capabilities and reduced costs. All University grants are awarded on a competitive basis.

Evidence: NNSA Critical Decision Process (see DOE Order 413.3); NIF Construction Project Execution Plan; NNSA Contract with General Atomics, Inc.; DP Stockpile Science Academic Alliance Grant Solicitation and Selection Process; and National Weapons Laboratory Performance Assessments.

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	Moderately Effective
100%	90%	89%	60%	

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight: 11%

Explanation: There is strong collaboration and coordination between the ICF Campaign and other activities within the SSP/NNSA, DOE, and other government agencies. An HEDP Executives group facilitates interactions with other portions of the SSP. At NNSA direction, individual sites have established review committees to ensure experiments on major facilities are coordinated and dedicated to high priority activities. Regular meetings are held with the DOE Office of Science to coordinate management of congressionally mandated activities relevant to production of energy from inertial fusion.

Evidence: NNSA Strategic Plan; Draft FY 2004-09 ICF Campaign Program Plan; ICF Strategic Plan; SSM PEIS; DP FY 2005 PPBE Strategic Guidance; NIF Experiment Planning Advisory Committee (EPAC); OMEGA and Z scheduling committees; National Weapons Laboratory Performance Assessments; ICF Campaign Implementation Plans; High Energy Density Physics Study; 2002 National Research Council Report on High Energy Density Physics - "Frontiers in High Energy Density Physics"; and 2002 National Academy of Science Report on the Physics of the Universe - "Quarks to Cosmos Report."

3.6 Does the program use strong financial management practices? Answer: YES Question Weight: 11%

Explanation: The NNSA is covered by DOE's financial management policies, procedures, and practices that meet all statutory requirements. The accounting services for NNSA are provided by DOE, and these are free of material internal control weaknesses. The DOE's financial statements have been given a clean audit opinion in 6 of the last 7 years. Day-to-day NNSA operations are supported through the NNSA PPBE processes that require the integration of financial and performance management information systems at each phase. The DOE is well underway on a new initiative (I-MANAGE) in support of the President's Management Agenda to fully integrate all financial, performance, and administrative data for the DOE into a single system within the next 5 years that will include all NNSA information.

Evidence: DOE Financial Management Orders and NNSA PPBE Guidance Documents located on the NNSA web-site

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight: 11%

Explanation: The setting of clear goals (long-term and annual) for the overall program and integration of research and development activities are the major management issues requiring attention. The NNSA has developed and implemented a strategic plan, FYNSP, and associated PPBE process to address the first issue of setting clear goals. The integration issue has been addressed via the formation of the Office of Program Integration (NA-13) within DP. Within the ICF Campaign, the NNSA implemented an "HEDP Executive Group," consisting of senior managers from NNSA and the National Laboratories, to address integration issues. This group examines overall ICF Campaign strategic direction and integration and works to ensure that program resources are used in the most efficient and effective manner. The oversight of the NIF Construction Project was improved several years ago by creating a specific NNSA Office of the National Ignition Facility Project (now NA-10.1). The Foster Panel noted that, when problems developed in the NIF, "NNSA took action to clarify roles and responsibilities in a manner that has significantly improved management effectiveness, program performance, and confidence in the program plan."

Evidence: NNSA Defense Programs documentation on PPBES; Program Progress Reviews and Program Self Assessments; NNSA/DP documentation on NA-13; Draft FY 2004-09 ICF Campaign Program Plan; ICF Strategic Plan; and 2001 & 2003 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile ("Foster Panel")

Program Assessment Rating Tool (PART)

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	Moderately Effective
100%	90%	89%	60%	

3.CA1 **Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals?** Answer: NO Question Weight: 11%

Explanation: In September 2000, the NNSA rebaselined the NIF Project because of significant cost over-runs and schedule delays. Given this need to rebaseline, the program will exceed original cost and schedule estimates. (However, since the rebaselining the program has met all of its interim goals within cost and schedule and has been commended for good program management.)

Evidence: The NNSA FY 2004-08 FYNSP; Draft FY 2004-09 ICF Campaign Program Plan; ICF Strategic Plan; FY 2003 and Draft FY 2004-05 ICF Campaign Implementation Plans; National Weapons Laboratory Performance Assessment Criteria; NIF Construction Project Data Sheet, milestone list, and Project Execution Plan; ICF Level 1 & 2 milestone list; and annual work scope authorization statements/agreements for the three National Weapons Laboratories, University of Rochester Laboratory for Laser Energetics, Naval Research Laboratory, and General Atomics, Inc.

3.CO1 **Are grants awarded based on a clear competitive process that includes a qualified assessment of merit?** Answer: NA Question Weight: 0%

Explanation:

Evidence:

3.CO2 **Does the program have oversight practices that provide sufficient knowledge of grantee activities?** Answer: NA Question Weight: 0%

Explanation:

Evidence:

3.CO3 **Does the program collect grantee performance data on an annual basis and make it available to the public in a transparent and meaningful manner?** Answer: NA Question Weight: 0%

Explanation:

Evidence:

3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: YES Question Weight: 11%

Explanation: The program manager allocates research & development funds to participating laboratories through a process that evaluates stockpile stewardship requirements and identifies the technical means that can best meet those requirements. Program reviews evaluate the quality of implementation and execution. Weapons laboratory contract award fees are paid following an annual performance assessment in which the quality of program management and technical executions are assessment criteria elements.

Evidence: Draft FY 2004-09 ICF Campaign Program Plan; ICF Strategic Plan; ICF Campaign Implementation Plans; NIF Construction Project Execution Plan, milestone list, and Project Data Sheet; ICF Level 1 & 2 milestone list; National Weapons Laboratory Performance Assessments; and technical progress reports.

Program Assessment Rating Tool (PART)

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	
100%	90%	89%	60%	Moderately Effective

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: SMALL EXTENT Question Weight: 20%

Explanation: The 2001 GAO "Follow-Up Review of the National Ignition Facility" expressed concern over the role and performance of NIF. It is not clear that NNSA has addressed all of these concerns and, therefore, demonstrated adequate progress towards achieving its long-term goals. However, NNSA has met all of its interim goals since the September 2000 program rebaselining.

Evidence: NNSA FY 2004-08 FYNSP; Draft FY 2004-09 ICF Campaign Program Plan; ICF Strategic Plan; ICF Campaign Implementation Plans; ICF Program Level 1 & 2 milestone list and updates; NIF Construction Project Execution Plan; Inertial Confinement Fusion Advisory Committee reviews of the ICF Program; ICF Campaign/Program external review history; and 2000 "Garwin" and 2002 "Trivelpiece" Pulsed Power Program Reviews

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: LARGE EXTENT Question Weight: 20%

Explanation: Annual performance goals are established based upon technical milestones expected to be completed each year. Milestone scheduling and progress are tracked by NNSA in the campaign's annual Implementation Plan. The NIF Construction Project is meeting all of its cost, schedule and technical objectives. (In March 2003, the Project achieved its goal of demonstrating full performance in a single laser beam, thus proving the laser design.) Research and Development (R&D) milestones are achieved with some modifications in schedule because of funding availability and the difficulty inherent in forecasting scientific progress. For example, as documented under the measures tab, in 2002 the campaign achieved all of its annual targets with the exception of those related to procurement of some items needed to support NIF experiments.

Evidence: The NNSA FY 2004-08 FYNSP; Draft FY 2004-09 ICF Campaign Program Plan; ICF Implementation Plans; ICF Level 1 & 2 milestone list and updates; National Weapons Laboratory Performance Assessments; and DOE/IG-0598.

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: YES Question Weight: 20%

Explanation: Throughout its history, the ICF Campaign has taken positive actions to improve efficiency and cost effectiveness. Examples include competitive procurements using a multiple vendor base to reduce program costs for facility components and support equipment, developing a common diagnostic platform for use at all ICF facilities, and integrating efforts across ICF facilities to achieve national long-term goals. Understanding of learning curves on existing facilities increases efficiency and results in cost savings on new or upgraded facilities. Efficiency improvements include development of specific techniques on a facility, which are then applied to other facilities. Additional improvements in efficiency and cost savings result from obtaining more accurate data or from a reduction in the time devoted to facility maintenance or hardware installation (e.g., the increased efficiency in installing single laser beams at the NIF). Information technologies (e.g., video conferencing, e-mail, web pages, and electronic data transfer) are used to control costs and increase effectiveness by reducing the need for face-to-face meetings and facilitating communications and coordination among participants.

Evidence: Lawrence Livermore National Laboratory ICF Annual Reports; University of Rochester Laboratory for Laser Energetics quarterly and annual reports; ICF site monthly updates; NIF Project monthly status reports; ZR Project monthly status reports; ZR Mission Need Report; Z and OMEGA scheduling committees; NIF diagnostics quarterly progress reports; and international agreements on pulsed power science and/or laser technology.

Program:	Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency:	Department of Energy
Bureau:	National Nuclear Security Administration
Type(s):	Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	
100%	90%	89%	60%	Moderately Effective

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?

Answer: NA Question Weight: 0%

Explanation: No private or governmental programs have the same or similar purpose and goals. However, the use of ICF expertise and facilities to make positive contributions to the success of other governmental programs and initiatives in science validates that the program is of high technical quality and delivers results. In 2003, the National Research Council (NRC), in its Frontiers in High Energy Density Physics Report, concluded that "Recent advances....make extremely high energy density matter accessible in the laboratory," and NNSA's state-of-the-art ICF facilities "allow repeatable experiments and controlled parameter variations to elucidate the important underlying physics.' Comparison of ICF program performance to other scientific research programs can also be measured in terms of professional awards. ICF managers and technical staff have received a number of awards and accolades, including membership in the National Academies of Science and Engineering, fellowship in professional societies (2-3/year), RD100 awards, and major American Physical Society and Institute of Electrical and Electronic Engineers awards.

Evidence: NIF Construction Project National Safety Council Occupational Safety/Health Award; NIF Project Construction Users Roundtable award for outstanding achievement in construction Industry Safety Excellence; 2002 Joint NNSA-Office of Science Review of ICF-managed High Average Power Laser Program (HAPL); NIF Project Director and ZR Project Director DOE/NNSA M&O Contractor management excellence awards; Industry Week Award for Z Accelerator; National Research Council Report on High Energy Density Physics - "Frontiers in High Energy Density Physics," 2003; National Academy of Science Report on the Physics of the Universe - "Quarks to Cosmos Report," 2002; NIF Construction Project monthly reports and Press releases; Office of Engineering and Contract Management Project Status Reports; NNSA monthly Project Status Snapshots for Management Reports; and file on ICF Program/NIF Project awards, accomplishments, and publications.

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?

Answer: YES Question Weight: 20%

Explanation: The effectiveness of the ICF Campaign has been reviewed separately and as part of the overall SSP. Internal NNSA reviews and independent external reviews have validated the need for the ICF Campaign and the progress of the ICF effort. The DOE Inspector General (IG) reviewed the NIF Project in June 2001 and reported significant progress towards constructing the facility within the revised schedule and cost baselines. In addition, the Project has demonstrated full performance in a single laser beamline, setting a world record for laser performance.

Evidence: High Energy Density Physics Study; National Weapons Laboratory Performance Assessments; Inertial Confinement Fusion Advisory Committee reviews of the ICF Program; ICF Campaign/Program external review history; Inspector General Report on the NIF, 2003; 2000 "Garwin" and 2002 "Trivelpiece" Pulsed Power Program Reviews; 2001 & 2003 Reports to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile ("Foster Panel"); National Research Council Report on Frontiers in High Energy Density Physics, 2003; National Academy of Sciences and JASON reviews of the ICF Program and NIF Project; JASON High Energy Laser Study; ZR Mission Need Review; OMEGA EP Mission Need Review; Los Alamos National Laboratory Physics Division Advisory Committee reviews; NNSA Reviews of the Naval Research Laboratory ICF Program; National Weapons Laboratory Contractor Performance Assessments; and DOE Stockpile Stewardship Program 30-Day Review, November 1999.

Program Assessment Rating Tool (PART)

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Constructi
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Research and Development Capital Assets and Service Acquisition

Section Scores				Overall Rating
1	2	3	4	Moderately Effective
100%	90%	89%	60%	

4.CA1 **Were program goals achieved within budgeted costs and established schedules?** Answer: NO Question Weight: 20%

Explanation: Significant cost over-runs and schedule delays resulted in NNSA having to rebaseline the NIF project in September 2000. Given this need to rebaseline, the program will exceed original estimates. However, since the rebaselining the program has met all of its interim goals within cost and schedule and has been commended for good program management.

Evidence: The NIF Project Execution Plan; NNSA FY 2004-08 FYNSP; NNSA FY 2004 Congressional Budget Request; Draft FY 2004-09 ICF Campaign Program Plan; ICF Implementation Plans; ICF Level 1 & 2 milestone list and updates; Congressional correspondence on NIF/Ignition program; University of California Lawrence Livermore National Laboratory Performance Assessments; and DOE/IG-0598.

PART Performance Measurements

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Construction Projec

Agency: Department of Energy

Bureau: National Nuclear Security Administration

Measure: Cumulative percentage of progress (measured by program milestones completed) towards creating and measuring extreme temperature and pressure conditions -- a 2010 stockpile stewardship requirement.

Additional Information: This measure supports NNSA goals and strategies expressed in the NNSA Strategic Plan. Specifically, NNSA Goal 1 and NNSA Strategy 1-2 . Annual ICF measures # 5, 6, 9, & 10 (below) support this measure and its associated targets.

Year	Target	Actual
2002	52%	52%
2003	57%	57%
2004	63%	

Measure Term: Long-term

Measure: Cumulative percentage of progress towards simulating conditions of a nuclear explosion at the National Ignition Facility (NIF) to increase confidence in modeling the performance of nuclear weapons.

Additional Information: This measure supports NNSA goals and strategies expressed in the NNSA Strategic Plan. Specifically, NNSA Goal 1 and NNSA Strategy 1-2. Annual ICF measures # 5, 7, 8, 9, & 10 (below) support this measure and its associated targets.

Year	Target	Actual
2002	51%	51%
2003	56%	55%
2004	63%	
2007	78%	
2014	100%	

Measure Term: Long-term

Measure: Cumulative percentage of construction completed on the NIF.

Additional Information: This measure supports NNSA goals and strategies expressed in the NNSA Strategic Plan. Specifically, NNSA Goal 1 and NNSA Strategy 1-2. Annual ICF measures # 7, 8, & 10 (below) support this measure and its associated targets.

Year	Target	Actual
2002	57%	57%
2003	65%	65%

Measure Term: Annual

PART Performance Measurements

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Construction Projec

Agency: Department of Energy

Bureau: National Nuclear Security Administration

Measure: Cumulative percentage of construction completed on the NIF.

Additional Information: This measure supports NNSA goals and strategies expressed in the NNSA Strategic Plan. Specifically, NNSA Goal 1 and NNSA Strategy 1-2. Annual ICF measures # 7, 8, & 10 (below) support this measure and its associated targets.

Year	Target	Actual
2004	74%	
2006	88%	
2008	100%	

Measure Term: Annual

Measure: Cumulative percentage of equipment fabricated to support ignition experiments at the National Ignition Facility.

Additional Information: This measure supports NNSA goals and strategies expressed in the NNSA Strategic Plan. Specifically, NNSA Goal 4 and NNSA Strategy 4-1.

Year	Target	Actual
2002	18%	2%
2003	24%	7%
2004	40%	
2007	73%	
2010	100%	

Measure Term: Annual

Measure: Annual number of days available to conduct stockpile stewardship experiments. (Total includes all ICF facilities.)

Additional Information: This measure tracks efficiency and effectiveness of ICF facilities in meeting support commitments coordinated with SSP Science and Engineering Campaigns and ICF Campaign objectives. It supports long-term measures #1, 2, & 3 (above) and associated long-term targets 1.2, 2.1, 2.2, 2.3, & 3.1.

Year	Target	Actual
2002	500	580
2003	500	580
2004	500	
2007	500	

Measure Term: Annual (Efficiency Measure)

PART Performance Measurements

Program: Inertial Confinement Fusion Ignition and High Yield Campaign/NIF Construction Projec

Agency: Department of Energy

Bureau: National Nuclear Security Administration

Measure: Annual number of days available to conduct stockpile stewardship experiments. (Total includes all ICF facilities.)

Additional Information: This measure tracks efficiency and effectiveness of ICF facilities in meeting support commitments coordinated with SSP Science and Engineering Campaigns and ICF Campaign objectives. It supports long-term measures #1, 2, & 3 (above) and associated long-term targets 1.2, 2.1, 2.2, 2.3, & 3.1.

Year	Target	Actual
2010	800	

Measure Term: Annual (Efficiency Measure)

OMB Program Assessment Rating Tool (PART)

Service Acquisition Program

Name of Program: International Nuclear Materials Protection and Cooperation

Section I: Program Purpose & Design (Yes,No, N/A)					
Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1 *Is the program purpose clear?*	Yes	The International Nuclear Materials Protection and Cooperation (MPC&A) program reduces the likelihood of nuclear terrorism by working in Russia and other regions of concern to 1) secure and eliminate vulnerable nuclear weapons and weapons-usable material; 2) locate, consolidate and secure radiological materials that can be used in a dirty bomb and; 3) install detection equipment at border crossings to detect and prevent the illicit transfer of nuclear material.	Soviet Nuclear Threat Reduction Act of 1991 (Nunn-Lugar); "U.S. Policy on Improving Nuclear Material Security in Russia and other Newly Independent States" of September 1995; Program Agreements; Annual Congressional Legislation; MPC&A Strategic Plan/Mission Statement, July 2001; National Security Council reviews of 2001	20%	0.2
2 *Does the program address a specific interest, problem or need?*	Yes	The breakup of the Soviet Union has resulted in vast quantities of poorly secured nuclear materials and warheads. The security system that protected this material during the Soviet period has weakened considerably due to a sustained period of political and economic upheavals. There have been 12 confirmed cases of weapon-usable material thefts from Russia and other states of the former Soviet Union since May 1992	Site visits, media reports, Congressional and Intelligence reports, and the Administration's National Security Council Review of 2001, confirm the problem.	20%	0.2
3 *Is the program designed to have a significant impact in addressing the interest, problem or need?*	Yes	Russia's ongoing economic crisis has destroyed its ability to account fully for and secure its 600 metric tons (MTs) of nuclear material. US/DOE financial and technical contributions are critical in effectively and rapidly securing these materials. Leveraging of funds are done where possible with host countries, international partners and non-profit organizations. However, given the size and complexity of these facilities, the extent of US/DOE provided assistance drives the rate at which these upgrades can be completed.	National Security Council reviews of 2001; GAO reports; Life-Cycle Cost and Schedule Estimate Revision 3, March 28, 2002; Supplemental Appropriations in FY2002 to accelerate upgrades	20%	0.2

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
4	*Is the program designed to make a unique contribution in addressing the interest, problem or need (i.e., not needlessly redundant of any other Federal, state, local or private efforts)?*	Yes	The program's mission focuses on nuclear material security and is based on expertise in securing nuclear material at DOE facilities, and work to secure nuclear warheads is closely coordinated with the Department of Defense and via regular interagency meetings. There is, however, the possibility that other nations (to include Russia) and non-government agencies could fund at least a portion of the work that is currently supported by the US.	National Security Council review of Russian and Non-Russian Nonproliferation programs; "U.S. Policy on Improving Nuclear Material Security in Russia and other Newly Independent States" of September 1995; Interagency meetings	20%	0.2
5	*Is the program optimally designed to address the interest, problem or need?*	Yes	The program is optimally designed and organized into offices, budget and reporting structure and projects to cooperate with specific partner organizations in Russia (Navy, Strategic Rocket Forces, Ministry of Atomic Energy, etc). The program has developed a clear set of criteria that optimizes cost-effectiveness by 1) prioritizing which nuclear material is more attractive as a weapon and which should be secured first; 2) establishing an orderly sequence of security upgrades to ensure that the first money spent will result in the greatest threat reduction; and 3) established an independent review board to evaluate annually every project against the criteria.	MPC&A Strategic Plan, July 2001; Guidelines for Material Protection, Control and Accounting Upgrades at Russian Facilities Revision 2, September 13, 2001; Life-Cycle Cost and Schedule Estimate Revision 3, March 28, 2002; General Accounting Office reports; National Security Council review of nonproliferation programs	20%	0.2
Total Section Score					**100%**	**100%**

Section II: Strategic Planning (Yes,No, N/A)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Does the program have a limited number of specific, ambitious long-term performance goals that focus on outcomes and meaningfully reflect the purpose of the program?*	Yes	The program has three specific ambitious long-term goals: 1.) secure all 4000 nuclear warheads and 60 tons of material at Russian Navy sites by 2006; 2.) secure all 540 tons of nuclear material at Russian Ministry of Atomic Energy sites by 2008; and 3.) eliminate 29 tons of Highly Enriched Uranium by 2009.	DOE Strategic Plan; NNSA Strategic Plan, February 2002; MPC&A Strategic Plan, July 2001; Life-Cycle Cost and Schedule Estimate Revision 3, March 28, 2002	14%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
2	*Does the program have a limited number of annual performance goals that demonstrate progress toward achieving the long-term goals?*	Yes	The program has established and regularly tracks and updates a series of annual performance goals and measures to produce a scorecard of program progress to ensure progress toward achieving long-range outcomes. See section IV for detailed information.	Life-Cycle Cost and Schedule Estimate Revision 3, March 28, 2002; Nuclear Material Directory, March 2002; MPC&A scorecard, April 2002; Annual budget requests include performance goals.	14%	0.1
3	*Do all partners (grantees, sub-grantees, contractors, etc.) support program planning efforts by committing to the annual and/or long-term goals of the program?*	Yes	All DOE laboratories, U.S. and Russian subcontractors commit to annual and long-term goals via input to developing and implementing the Life-Cycle Cost and Schedule Estimate Revision 3, March 28, 2002; Project Work Plans, and contracts, follow-on upgrades criteria. Each project receives an annual independent audit. Performance reviews of installed systems in Russia are conducted.	Life-Cycle Cost and Schedule Estimate Revision 3, March 28, 2002; Project Work Plans; Contracts and Statements of Work; MPC&A Agreement	14%	0.1
4	*Does the program collaborate and coordinate effectively with related programs that share similar goals and objectives?*	Yes	The program coordinates closely with the Department of Defense's Cooperative Threat Reduction program, State Department, the Nuclear Regulatory Commission and U.S. Customs as well as international partners in Russia, other former Soviet states and the International Atomic Energy Agency.	Interagency coordination meetings and memorandums of understanding; International agreements and protocols, contracts, and Statements of Work	14%	0.1
5	*Are independent and quality evaluations of sufficient scope conducted on a regular basis or as needed to fill gaps in performance information to support program improvements and evaluate effectiveness?*	Yes	The program has an independent group that reviews all projects each year against performance criteria. In addition, several independent external reviews have been conducted by the General Accounting Office, DOE Inspector General, Secretary of Engery Advisory Board, National Security Council, and National Academy of Science over the past three years.	Independent project review team reports; General Accounting Office report, February 2001; DOE Inspector General reports; Secretary of Engery Advisory Board reports; National Security Council recommendation in December 2001; and National Academy of Science reports.	14%	0.1
6	*Is the program budget aligned with the program goals in such a way that the impact of funding, policy, and legislative changes on performance is readily known?*	Yes	The program's budget structure is aligned with both program goals and performance measures at the program and project level via Budget and Reporting Structure, accounting systems, and the Life-Cycle Cost and Schedule Estimate Revision 3, March 28, 2002; the MPC&A scorecard; Project Work Plans; and budget formulation so that the impact of funding and policy changes can be readily known and quickly implemented.	Life-Cycle Cost and Schedule Estimate Revision 3, March 28, 2002; MPC&A scorecard, April 2002; Project Work Plan; Annual budget plans	14%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
7	*Has the program taken meaningful steps to address its strategic planning deficiencies?*	Yes	The program has developed and successfully implemented Action Plans to improve internal communication and training for new employees identified during strategic planning sessions.	Action plans; New Employee Handbook, April 2002; Training Curriculum; Communication Action Plan	14%	0.1
Total Section Score					**100%**	**100%**

Section III: Program Management (Yes,No, N/A)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?*	Yes	The program regularly collects and updates performance information. On a monthly basis the program collects and updates cost and deliverables at the project level. And at least once a year, all project data is integrated to update program short-term and long-range plans to improve performance. Each project receives an independent annual review. The program regularly reports and tracks performance via the DOE annual budget performance tracking databases.	Life-Cycle Cost and Schedule Estimate Revision 3, March 28, 2002; Monthly cost reports; Project Work Plans; MPC&A scorecard, April 2002; TST reports; DOE Solomon system	14%	0.1
2	*Are Federal managers and program partners (grantees, subgrantees, contractors, etc.) held accountable for cost, schedule and performance results?*	Yes	The program has clear and documented cost control, cost reporting, schedule tracking and performance review criteria. Also, each headquarters manager has a critical element in their performance appraisal on project management that includes cost, schedule, and quality criteria.	Project Management Document Revision 5, May 17, 2002; Guidelines for Material Protection, Control and Accounting Upgrades at Russian Facilities Revision 2, September 13, 2001; Performance Appraisals	14%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
3	*Are all funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?*	No	Program funds have been slow to spend out. (As of July 2002, roughly 60% of the 2002 funds were costed with 70% projected by the end of the year.) While some of this may be due to additional funds provided by emergency supplementals and the difficulty in negotiating access with the Russian government, there is room for improvement. The program subcontracts about 50% of its funds to Russian nuclear facilities and private vendors which requires extra oversight to ensure funds are spent for intended purposes. This oversight is successfully accomplished by frequent visit by U.S. experts to Russian sites to validate and provide Assurance Reports, as well as to conduct performance tests of completed security systems.	Monthly cost reports; Project Work Plans; Review of contracts and Statements of Work; Trip reports, Performance test results; Site Photographs	14%	0.0
4	*Does the program have incentives and procedures (e.g., competitive sourcing/cost comparisons, IT improvements) to measure and achieve efficiencies and cost effectiveness in program execution?*	Yes	The MPC&A program has used incentive based contracting to accelerate security upgrades at sites. In addition, the program has developed several procedures ranging from security upgrades criteria to common contracting practices to control costs and performance monitoring to ensure effective program execution.	General Accounting Office reports; National Security Council reviews; Contracts and Statements of Work; Project Management Document Revision 5, May 17, 2002; Contracts Policy; and Guidelines for Material Protection,Control and Accounting Upgrades at Russian Facilities Revision 2, September 13, 2001	14%	0.1
5	*Does the agency estimate and budget for the full annual costs of operating the program (including all administrative costs and allocated overhead) so that program performance changes are identified with changes in funding levels?*	No	The NNSA programs are consistent with DOE practice in estimating and budgeting for the full cost of executing direct programs within the program budgets. However, consistent with Congressional requirements, DOE budgets separately for its Federal administrative oversight and allocable costs in Program Direction accounts applicable to each Program Office.	Evidence: DOE Accountability Report for FY 2001.	14%	0.0
6	*Does the program use strong financial management practices?*	No	NNSA adheres to strict financial management practices through the implementation of a new Planning, Programming, Budgeting and Evaluation system that is formalizing program and resource management processes. However, questions remain about the ability to track funds at the program level.	Evidence: NNSA Future-Years Nuclear Security Program, March 20, 2002; NNSA FY 2004 Budget submittal.	14%	0.0

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
7	*Has the program taken meaningful steps to address its management deficiencies?*	Yes	The program updates financial and program management guidelines annually to incorporate lessons learned. For example, the program has recently increased both budget and reporting codes and sub-budget and reporting code/Sub-project level cost reporting to better track the funds associated with Russian vs. U.S. costs for equipment, travel, labor and overhead rates. This has resulted in identifying ways of decreasing U.S. overhead and labor costs; thus, accelerating security upgrades in Russia.	Project Work Plan; Monthly cost reports; MPC&A website; GAO reports; National Security Council reviews	14%	0.1
Total Section Score					**100%**	**57%**

Section IV: Program Results (Yes, Large Extent, Small Extent, No)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Has the program demonstrated adequate progress in achieving its long-term outcome goal(s)?*	Large Extent			20%	0.1

Long-Term Goal I:	Secure nuclear warheads and weapons-usable material at Russian Navy sites
Target:	Complete security upgrades on all 4000 nuclear warheads and 60 tons of weapons-usable material at 53 Russian navy nuclear sites by 2006.
Actual Progress achieved toward	Percentage of total Navy Warheads completed: 18% by FY01; 40% by FY02; 60% by FY03; 90% by FY04; 98% by FY05; 100% by FY06
	e of total
Long-Term Goal II:	Secure all weapons-usable nuclear material at Russian Ministry of Atomic Energy and Russian and other formers Soviet States Civilian sites
Target:	Complete security upgrades on all 540 tons of weapons-usable material at 29 Russian and 13 former Soviet Union nuclear sites by 2008.
Actual Progress achieved toward goal:	Percentage of total Russian Ministry of Atomic Energy and Russian and other States of the former Soviet Union Civillian material completed: 6% by FY01; 8% by FY02; 18% by FY03; 22% by FY04; 41% by FY05; 46% by FY06; 76% by FY07; 100% by FY08
Long-Term Goal III:	Eliminate excess weapons-usable material
Target:	Convert 29 tons of Highly Enriched Uranium (HEU) to Low Enriched Uranium (LEU) by 2009. HEU is a greater proliferation risk than LEU.
Actual Progress achieved toward goal:	Percentage of 29MT HEU converted: 8% by FY01; 12% by FY02; 22% by FY03; 32% by FY04; 44% by FY05; 57% by FY06; 69% by FY07; 81% by FY08; 100% by FY09

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
2	*Does the program (including program partners) achieve its annual performance goals?*	Large Extent			20%	0.1

Key Goal I:	Secure 4000 Russian navy warheads
Performance Target:	July 2001 Strategic Plan projected 18% completed by FY01
Actual Performance:	Actual reported in April 2002 MPC&A scorecard is 16%

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
	Key Goal II:	Secure 600 tons nuclear material				
	Performance Target:	July 2001 Strategic Plan projected 16% completed by FY01				
	Actual Performance:	Actual reported in April 2002 MPC&A scorecard is 18%				
	Key Goal III:	Complete security upgrade at 95 sites				
	Performance Target:	July 2001 Strategic Plan projected 38 completed by FY01				
	Actual Performance:	Actual reported in April 2002 MPC&A scorecard is 38				
3	*Does the program demonstrate improved efficiencies and cost effectiveness in achieving program goals each year?*	Yes	The program has over the past six years continued to increase funds spent on security upgrades and decrease costs for U.S. lab oversight, travel, and procurement rates. The pace of the security upgrades has also increased, leading to greater schedule efficiencies and decreased program costs.	Monthly cost reports; Life-Cycle Cost and Schedule Estimate Revision 3, March 28, 2002	20%	0.2
4	*Does the performance of this program compare favorably to other programs with similar purpose and goals?*	Yes	The program was reviewed by National Security Council (NSC) in 2001 along with all other U.S.-Russian nonproliferation programs for cost effectiveness and received a high rating relative to other nonproliferation programs. The NSC recommended additional funding to accelerate schedules.	National Security Council recommendations, December 2001	20%	0.2
5	*Do independent and quality evaluations of this program indicate that the program is effective and achieving results?*	Yes	Several reviews by the General Accounting Office, DOE Inspector General, Secretary of Engery Advisory Board, National Security Council, and National Academy of Science over past years have all indicated the program is effective.	National Security Council recommendations; General Accounting Office report, February 2001; Secretary of Engery Advisory Board report	20%	0.2
Total Section Score					**100%**	**87%**

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The purpose of this program is to build, maintain, operate, and dispose of real property owned by Office of Nuclear Energy, Science and Technology's (NE-HQ) at the Idaho National Engineering and Environmental Laboratory (INEEL) and the Argonne National Laboratory ' West (ANL-W). This includes conducting day-to-day infrastructure operations and maintenance, and recapitalization. It also includes management of various crosscutting contracts and obligations between the Department of Energy (DOE) and other entities, including the National Oceanic and Atmospheric Administration, the Shoshone and Bannock Indian Tribes, the State of Idaho, and payments in lieu of taxes for the four counties in which the INL is located. The INEEL and ANL-W will be combined into the Idaho National Laboratory (INL) in FY 2005. The program supports the major nuclear energy programs: (1) Generation IV reactor concepts; (2) Next Generation Nuclear Plant; (3) nuclear hydrogen; (4) Advanced Fuel Cycle Initiative research and development; (5) Radioactive Power Supplies for Space Application Program; and, (6) the University Reactors Program. In addition, the program supports other programs at INL, such as National Security Technology; Fuels and core component irradiation testing for the Naval Nuclear Propulsion Program; production of M-1 Abrams Tank armor; Fossil Energy, Energy Efficiency, and Renewable Energy research programs; the Idaho Cleanup Project under the DOE Office of Environmental Management; and advanced technology laboratories.

Evidence: 1. Department of Energy (DOE) Strategic Plan, Sept. 20032. Secretary of Energy's Announcement of the New Mission for the Idaho National Engineering and Environmental Laboratory of July 15, 20023. Idaho National Laboratory Ten Year Site Plan of April 20044. NE-HQ Program Plan for GPRA Unit 17, Maintain the Nation's Nuclear Infrastructure Capability5. NE-HQ Program Plan for GPRA Unit 14, Develop New Nuclear Generation Technologies6. Report of the Infrastructure Task Force of the DOE Nuclear Energy Research Advisory Committee, Draft of January 16, 2003.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The program specifically addresses the need of operating and maintaining the Idaho National Engineering and Environmental Laboratory (INEEL) mission-essential, common-use infrastructure and Office of Nuclear Energy, Science and Technology's (NE-HQ) programmatic facilities in support of the new NE-HQ mission for the site and the numerous other programs using or planning to use the site as discussed in Question 1.1. This must be done to achieve the programmatic goals of the NE-HQ programs, provide adequate infrastructure support for the multi-program, mission-essential facilities, meet Congressional direction for footprint reduction, and ensure compliance with environmental, safety and health laws and regulations.

Evidence: 1. Announcement of Secretary of Energy on the New Mission of the Idaho National Engineering and Environmental Laboratory of July 15, 20022. Request for Proposal for Idaho National Laboratory DE-RP07-03ID145173. NE-HQ Program Plan for GPRA Unit 17, Maintain the Nation's Nuclear Infrastructure Capability4. NE-HQ Program Plan for GPRA Unit 14, Develop New Nuclear Generation Technologies5. Idaho National Laboratory Ten Year Site Plan of April 20046. Report of the Infrastructure Task Force of the U.S. DOE Nuclear Energy Research Advisory Committee, Draft, Rev. 1 of January 16, 2003

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

1.3 **Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort?** Answer: YES Question Weight 20%

Explanation: The function of the program is to provide landlord services and infrastructure support for the programs noted in Question 1.1. A dedicated landlord program for managing infrastructure is required at all Federal sites. The Idaho facilities are unique in that for over 50 years the site has been the nation's primary laboratory for development of nuclear energy for civilian electric power and nuclear propulsion for the U.S. Navy. Most of these facilities are one-of-a-kind assets considered essential by the Secretary of Energy for accomplishment of the new nuclear energy and multi-program mission assigned to the site.

Evidence: 1. Secretary of Energy's Announcement of the New Mission for the Idaho National Engineering and Environmental Laboratory of July 15, 20022. FY 2005 Department of Energy's Budget Rollout3. NE-HQ Program Plan for GPRA Unit 17, Maintain the Nation's Nuclear Infrastructure Capability 4. NE-HQ Program Plan for GPRA Unit 14, Develop New Nuclear Generation Technologies5. Idaho National Laboratory Ten Year Site Plan for April 20046. U.S. Department of Energy Nuclear Reactor Technology Lead Laboratory Charter of July 19997. DOE Order 413.3, Program and Project Management of the Acquisition of Capital Assets

1.4 **Is the program design free of major flaws that would limit the program's effectiveness or efficiency?** Answer: YES Question Weight 20%

Explanation: To enhance effectiveness and efficiency in accomplishing the new mission for the INEEL discussed in Question 1.1, a new contracting arrangement consisting of two separate contracts for the INEEL has been designed and is planned to be competed in FY 2004 to take effect in FY 2005. One contract will focus on the new Office of Nuclear Energy, Science and Technology mission as well as providing adequate infrastructure support for all programs at the INEEL. The other contract is planned to be focused on completion of the cleanup mission at the site under the DOE Office of Environmental Management. The INL Ten Year Site Plan (TYSP) will be the primary management document for the Idaho Facilities Management Program. It provides a mission-based needs analysis of existing facilities and infrastructure and recommendations for short- and long-term recapitalization of existing mission-essential facilities over a ten-year planning horizon.

Evidence: 1. Request for Proposal for Idaho National Laboratory - DE-RP07-03ID14517 2. Current contract with Bechtel BWXT of Idaho, LLC ' DE-AC07-99ID137273. Department Order 430.1B, Real Property Asset Management4. INL Ten Year Site Plan of April 2004

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

1.5 **Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly?** Answer: YES Question Weight 20%

Explanation: Idaho Facilities Management Program funds are targeted to address program purposes through formal planning and financial control mechanisms such as: 1) the Idaho National Laboratory (INL) Ten Year Site Plan (TYSP); 2) the Office of Nuclear Energy, Science and Technology Program Plan for Government Performance and Results Act; 3) preparation of the program's annual Congressional Budget Request from the INL TYSP; 4) the providing of annual program execution guidance from NE-HQ that specifically delineates where funding is to be expended; and 5) ensuring strict accountability for funds using Department accounting procedures with validation by independent audits.

Evidence: 1. NE-HQ Program Plan for GPRA Unit 17, Maintain the Nation's Nuclear Infrastructure Capability2. NE-HQ Program Plan for GPRA Unit 14, Develop New Nuclear Generation Technologies3. Idaho National Laboratory Ten Year Site Plan of April 20044. NE-40 Memorandum of January 16, 2004, Fiscal Year (FY) 2004 Work Authorization and Program Guidance for the Idaho National Engineering and Environmental Laboratory (INEEL) Idaho Facilities Management-INEEL Infrastructure Program5. FY 2005 Congressional Budget for Idaho Facilities Management6. INEEL Detailed Work Plan Summary for FY 2004 ' INEEL/EXT-03-011017. INEEL Site Wide Landlord Operations FY 2004 Detailed Work Plan ' INEEL/EXT-03-01101-SW8. Physical Assets Maintenance and Operations FY 2004 Performance Baseline INEEL/EXT-03-014119. DOE Office of Inspector General Memorandum of February 9, 2004, Management Letter on the Audit of the Department of Energy's Consolidated Financial Statements for Fiscal Year 2003.

2.1 **Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?** Answer: YES Question Weight 11%

Explanation: The Idaho Facilities Management Program's long-term outcomes and performance measures are summarized in the Office of Nuclear Energy, Science and Technology's (NE-HQ) Program Plans for Government Performance and Results Act (GPRA), and discussed in detail in Chapter 6 of the Idaho National Laboratory's (INL) Ten Year Site Plan (TYSP). The program's basic long-term performance measures are: 1) Efficient Use of Existing Assets: The performance measure is to achieve an Asset Utilization Index (AUI) of 'good' to 'excellent' by 2014. The AUI provides a combined appraisal of utilization of operating facilities through Effective Space Management targets and elimination of excess facilities through achievement of Footprint Reduction targets; 2) Improve construction project management: The performance measure is to complete planned projects in the INL TYSP on time and within a maximum of 10% above the approved baseline cost; 3) Improved Maintenance of Facilities: The performance measures are to stabilize the deferred maintenance backlog (stop the growth) for mission-critical facilities by 2007 and to reduce the deferred maintenance backlog for those facilities to within the average range for equivalent industrial facilities by 2014, and 4) Improve value of mission-essential INL assets: The goal is to achieve a condition assessment of 'Good' for 60% of the active, mission-critical, INL NE-HQ facilities by 2008 and a condition assessment of 'Good' for 80% of the active mission-critical, INL NE-HQ Facilities by 2013.

Evidence: 1. NE-HQ Program Plan for GPRA Unit 17, Maintain the Nation's Nuclear Infrastructure Capability2. NE-HQ Program Plan for GPRA Unit 14, Develop New Nuclear Generation Technologies3. Idaho National Laboratory Ten Year Site Plan of April 20044. Request for Proposal for Idaho National Laboratory DE-RP07-03ID14517 5. Department Order 430.1B, Real Property Asset Management6. Department Order 413.3, Program and Project Management for the Acquisition of Capital Assets7. INEEL/INL Footprint Reduction Plans Summarized (in INL TYSP)8. INEEL/INL Space Management Program Documentation 9. National Research Council Report, Stewardship of Federal Facilities, 1998

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight:11%

Explanation: The Idaho National Engineering and Environmental Laboratory contract is being re-competed for implementation as the Idaho National Laboratory (INL) contract in FY 2005 to achieve the new mission in a more efficient and cost-effective manner in accordance with the Department's performance-based procurement guidance. Completion of the contract term is clearly tied to ambitious performance goals, and well-defined off-ramps are provided if performance is not achieved. The targets and timeframes in the TYSP are ambitious and challenging. They include: 1. Ensuring that achieving measurable progress in cost efficiency while accomplishing the program goals is part of the terms and conditions of the contract and is factored into the Performance Based Incentives;2. Ensuring efficiency and cost-effectiveness in work force management through the use of sub-contracting to the maximum extent possible.3. Conducting construction projects strictly in accordance with Department Order 413.3, Program and Project Management for the Acquisition of Capital Assets, which requires careful analysis of alternatives and cost-effectiveness;4. Using Value Engineering processes to reduce construction project costs; and5. Ensuring the contractor conducts periodic, targeted, in-depth reviews of infrastructure management to identify efficiencies and enhance cost-effectiveness such as the recent major maintenance management review and upgrade which led to new procedures for achieving and measuring efficiencies and cost-effectiveness in the performance of maintenance and repair.

Evidence: 1. Idaho National Laboratory Ten Year Site Plan of April 20042. Current Bechtel BWXT Contract DE-AC07-99ID137273. Current Argonne National Laboratory-West Contract, W-31-109-ENG-384. Request for Proposal for Idaho National Laboratory DE-RP07-03ID145175. Value Engineering Process description, INEEL GDE-706. DOE Order 413.3, Program and Project Management for the Acquisition of Capital Assets7. Bechtel BWXT Idaho, LLC Physical Asset Maintenance Management Improvement Presentation of December 2003

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:11%

Explanation: All annual and long-term measures for the Idaho Facilities Management Program are intended to provide infrastructure support for the research and development missions of the laboratory identified in Question 1.1. Specific annual targets to accomplish the long-term Performance Measures for the Idaho Facilities Management Program are set forth in Chapter 5 of the Idaho National Laboratory (INL) Ten Year Site Plan (TYSP) and are identified in the "Measures" section of this assessment. They include measures addressing: Infrastructure Operations and Planning; General Plant and Operating Projects; Line Item Construction Projects; General-Purpose-Capital-Equipment Procurements; and Disposition of Excess Facilities.

Evidence: 1. NE-HQ Program Plan for GPRA Unit 17, Maintaining the Nation's Nuclear Infrastructure Capability2. NE-HQ Program Plan for GPRA Unit 14, Develop New Nuclear Generation Technologies3. Idaho National Laboratory Ten Year Site Plan of April 20044. DOE Order 430.1B, Real Property Asset Management

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

2.4 **Does the program have baselines and ambitious targets for its annual measures?** Answer: YES Question Weight:11%

Explanation: The site contractor prepares a Physical Assets Maintenance and Operations Performance Baseline document and detailed work plans each fiscal year for review and approval by the Office of Nuclear Energy, Science and Technology (NE-HQ). NE-HQ ensures that targets are ambitious relative to achieving long-term performance measures (set forth in the answers to questions 2.1 and 2.2). These include taking an aggressive approach to ensuring adequate cost estimates, managing projects on schedule and within cost, and achieving measurable gains in maintenance efficiency.

Evidence: 1. Idaho National Laboratory Ten Year Site Plan of April 20042. Current Contract with Bechtel BWXT of Idaho, LLC ' DE-AC07-99ID137273. INEEL Detailed Work Planning Summary for FY 2004 ' INEEL/EXT-03-011014. DOE Order 413.3, Program and Project Management for the Acquisition of Capital Assets5. DOE Order 430.1B, Real Property Asset Management6. INEEL Physical Assets Maintenance and Operations FY 2004 Performance Baseline ' INEEL/EXT-03-014117. INEEL Excess Facility Action Plan for FY 2004

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:11%

Explanation: The Department's partners for the Idaho Facilities Management Program are the primary Management and Operating (M&O) Contractor and other government programs that use the Idaho facilities and infrastructure as noted in Question 1.1. All programs at the Idaho National Engineering and Environmental Laboratory (INEEL) and the current M&O contractor for the INEEL participated in the development of the Idaho National Laboratory (INL) Ten Year Site Plan (TYSP) and committed to work toward its annual and long-term goals. The current contract is a performance-based, incentivized contract that addresses the requirements of both the nuclear energy and the current multi-program missions of the site. The Request for Proposals for the new M&O contract for the INL to take effect in FY 2005 specifically states that the new contractor will, 'Aggressively streamline, upgrade, and plan for new infrastructure'at the INL using the goals and milestones contained in the INL Ten Year Site Plan.' The new contract will also be a performance based, incentivized contract that addresses both the nuclear energy and planned multi-program missions for the Laboratory. Planned annual revisions to the INL TYSP will be made in full partnership with the M&O contractor and all the programs using the INL facilities and infrastructure.

Evidence: 1. Idaho National Laboratory Ten Year Site Plan of April 20042. Current Contract with Bechtel BWXT of Idaho, LLC ' DE-AC07-99ID137273. Request for Proposal for Idaho National Laboratory DE-RP07-03ID14517

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrate

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?**

Answer: YES Question Weight:11%

Explanation: Routine independent evaluators include: 1) the DOE Office of the Inspector General (IG); 2) the DOE Office of Independent Oversight and Performance Assessment (OA); 3) the DOE Office of Environment, Safety and Health (EH); 4) the General Accounting Office (GAO); 5) the Idaho Operations Office (NE-ID); 6) the Office of Nuclear Energy, Science and Technology (NE-HQ); and 7) the State of Idaho Department of Environmental Quality (DEQ). The DOE IG, DOE OA, DOE EH, Idaho DEQ, and GAO audits occur at random intervals and cover selected issues as determined by their planning process.A key independent evaluation was conducted after announcement of the new mission for the Idaho National Engineering and Environmental Laboratory in July of 2002. An evaluation of the status of the Idaho infrastructure and its ability to support the new nuclear energy research and development mission was conducted by the Infrastructure Task Force of the U.S. DOE Nuclear Energy Research Advisory Committee with a report issued in January of 2003. None of the members of this committee are from the Department of Energy'representatives are from universities, industry, and national laboratories. The results of this evaluation were factored into the development of the Idaho National Laboratory Ten Year Site Plan and the NE-HQ Program Plans for Government Performance and Results Act (GPRA). The Manager of NE-ID, the NE-ID Contracting Officer, and NE-HQ, as the program sponsor, are primarily responsible for providing comprehensive independent evaluations of the contractor's performance on a daily basis. These continuous evaluations and associated follow-up actions are documented in a variety of reporting mechanisms. A comprehensive program review of the contractor's performance is held annually by NE-HQ and NE-ID at the mid-point of the fiscal year from which actions and commitments for improvement are developed. At these comprehensive mid-year reviews, the program's accomplishment of its primary purpose to provide infrastructure support to all the research and development and cleanup missions of the laboratory is evaluated.

Evidence: 1. Idaho Reviews Summary of February 20042. Memorandum from the DOE Office of Inspector General of February 9, 2004, Management Letter on the Audit of the Department of Energy's Consolidated Financial Statements for Fiscal Year 20033. DOE Office of Independent Oversight and Performance Assurance (OA), Inspection of Environment, Safety, and Health Management and Emergency Management at the INEEL of September 2003 4. Idaho Operations Office Corrective Action Plan for the September 2003 DOE OA Inspection at INEEL dated January 20045. State of Idaho Department of Environmental Quality Letter the Idaho Operations Office of November 28, 2001, Hazardous Waste Management Act/Resource Conservation and Recovery Act Compliance Inspection Narrative Report for the Inspection Conducted at INEEL on July 16 ' 20, 20016. Report of the Infrastructure Task Force of the U.S. DOE Nuclear Energy Research Advisory Committee of January 16, 20037. ATR, TRA, INEEL Infrastructure, ANL-W Mid-Year Reviews for FY 20048. Idaho Operations Office Assessment Program , Schedules and Sample Reports9. INEEL Assessment Program, Schedules and Sample Reports10. ICARE System Description and sample status report

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:11%

Explanation: The long-term performance goals for the Idaho Facilities Management Program were developed and finalized in FY 2004 as part of the Idaho National Laboratory Ten Year Site Plan. They will be used to inform decisions during the FY 2006 Budget development process.

Evidence: 1. NE-HQ Program Plan for GPRA Unit 17, Maintain the Nation's Nuclear Infrastructure Capability 2. NE-HQ Program Plan for GPRA Unit 14, Develop New Nuclear Generation Technologies 3. Idaho National Laboratory Ten Year Site Plan of April 20044. FY 2005 Idaho Facilities Management Congressional Budget5. INEEL LST 246 Rev 3, INEEL Building Ownership Data Base6. INEEL FY 2004 Indirect and Other Distributable Costs Baseline, CCN 44714

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:11%

Explanation: The Office of Nuclear Energy, Science and Technology (NE-HQ) has taken four meaningful steps to correct strategic planning deficiencies and revise strategic planning for the INEEL.1. The current contract for the INEEL is focused on the cleanup mission under the Office of Environmental Management. It was recognized that an incentivized contract must be in place to focus on the new mission without detracting from the continuing cleanup mission. Thus, the INEEL contract is being re-competed and will be split into two contracts for implementation in FY 2005. One contract will focus on the new mission and the NE-HQ facilities under this contract will be re-named the Idaho National Laboratory (INL). The other contract will focus on completing the Idaho cleanup program and will be called the Idaho Completion Project. Thus, the new contractor for the INL will be able to fully focus on the new mission. 2. It was recognized that having the NE facilities at Argonne National Laboratory-West as a separate entity under the Chicago Operations Office while also being an integral part of the new NE-HQ mission at INEEL was not efficient or cost-effective. As a fundamental step in the new strategy, the Argonne National Laboratory-West facilities in Idaho will be transferred to the INL in FY 2005 as part of the new contract.3. To ensure that the Idaho Facilities Management Program has clear performance goals rooted in the Department's Strategic Plan, new NE-HQ Program Plans for Government Performance and Results Act (GPRA) Unit 17, Maintain the Nation's Nuclear Infrastructure Capability, and GPRA Unit 14, Develop New Nuclear Generation Technologies, have been developed in accordance with direction from the Deputy Secretary. The Idaho Facilities Management Program is a fundamental part of GPRA Unit 17 and is required to support the Program Plan for GPRA Unit 14. These plans establish a link between the Department's Strategic Plan and the NE-HQ Idaho Facilities Management Program annual budgets, performance measures, and performance reporting.4. NE-HQ developed the INL Ten Year Site Plan to explicitly link the annual budget requests to the Performance goals of the Program Plans for GPRA Units 17 and 14. The plan provides annual targets and performance measures in sufficient detail to fully support a defendable annual budget request for the program. The INL TYSP addresses how the site's real property assets will support the Department's strategic plan, the Secretary's 5-year planning guidance, and appropriate program guidance.

Evidence: 1. Department's Strategic Plan of September 20032. Secretary of Energy's Announcement of the New Mission for the Idaho National Engineering and Environmental laboratory of July 15, 20023. NE-HQ Ten Year Program Plan for GPRA Unit 17, Maintain the Nation's Nuclear Infrastructure Capability4. NE-HQ Program Plan for GPRA Unit 14, Develop New Nuclear Generation Technologies5. Idaho National Laboratory Ten Year Site Plan of April 20046. Request For Proposal for Idaho National Laboratory DE-RP07-03ID14517

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

2.CA1 **Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity?**

Answer: YES

Question Weight:11%

Explanation: Since Idaho Facilities Management is a continuing level-of-effort program that serves all programs on the site, the INL TYSP development and maintenance process involves continuously looking at alternatives and trade-offs between cost, schedule, risk and performance goals for routine maintenance, recapitalization, and proposed new initiatives for mission-essential infrastructure facilities, systems and structures. The Congressionally sponsored analysis by the National Research Council titled "Stewardship of Federal Facilities" (1998), which discusses trade-offs and alternatives between cost, schedule, risk and performance goals, was used to guide establishment of long-term performance measures in the plan. The plan is a living document that will undergo annual revision to ensure it is current.For Line Item Construction Projects and General Plant Projects, DOE Order 413.3, Program and Project Management for the Acquisition of Capital Assets, has been implemented at INL. The Value Engineering Process is used in planning all capital projects. This process requires rigorous, documented analyses of alternatives that include trade-offs between cost, schedule, risk and performance goals as an initial step for any proposed project, and all such analyses are subject to independent review. Recent examples of this process being applied to specific issues include an independent analysis of the proposed INL Remote Treatment Project and a major maintenance management review and upgrade for routine maintenance by the contractor that analyzed alternatives and trade-offs between cost, schedule, risk, and performance goals using models from other Department sites and private industry. It is estimated that implementation of these improvements is saving about $13 million per year in routine maintenance costs across the laboratory.

Evidence: 1. Idaho National Laboratory Ten Year Site Plan of April 20042. DOE Order 430.1B, Real Property Asset Management3. DOE Order 413.3, Program and Project Management for the Acquisition of Capital Assets 4. ASTM review of RTP 5. Bechtel BWXT Idaho, LLC Physical Asset Maintenance Management Improvement Presentation of December 20036. Value Engineering Process Description7. National Research Council report on Stewardship of Federal Facilities, 1998

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:13%

Explanation: Information collected includes but is not limited to: 1) audit reports from the DOE Office of the Inspector General and the General Accounting Office; 2) assessment reports from the DOE Office of Independent Oversight and Performance Assurance and the DOE Office of Environment, Safety and Health; 3) recurring environmental compliance inspection reports from the Idaho Department of Environmental Quality; and4) miscellaneous inspection or assessment reports that occur on request.The Office of Nuclear Energy, Science and Technology (NE-HQ) and the Idaho Operations Office (NE-ID) collect timely and credible performance information in a variety of ways, including: 1) NE-ID monthly status meetings with the contractor on infrastructure, focusing on earned value and programmatic milestone accomplishments for the performance measures in the Idaho National Laboratory Ten Year Site Plan and the fiscal year Detailed Work Plans; 2) formal mid-fiscal year reviews with contractor program management and customers; 3) DOE Facility Representative surveillance reports that reflect a systematic, continual assessment of contractor operations at all site facilities in accordance with an annual assessment plan;4) monthly reports on maintenance performance indicators, contractor reactor programs, and budget performance; and 5) reports from the meetings of the Facilities and Infrastructure Executive Steering Committee, which monitors integration of site-wide activities. When issues for improvement are identified in any review, they are formally documented and tracked to resolution.

Evidence: 1. Idaho National Laboratory Ten Year Site Plan of April 20042. INEEL Reviews Summary Report for February 20043. Idaho Operations Office Assessment Program Description, sample of Schedule, and sample of Reports4. INEEL Assessment Program Description, sample of Schedule, and sample of Reports5. INEEL Agenda for Monthly Program Status Meeting of March 20046. INEEL Monthly Financial Reports 7. Presentations for the INEEL Infrastructure, Test Reactor Area, Argonne National Laboratory ' West, and Advanced Test Reactor Mid-Year Reviews for FY 2004 8. Sample of Facility Representative Reports from Test Reactor Area9. INEEL Detailed Work Plan Summary for Fiscal Year 2004 ' INEEL/EXT-03-0110110. INEEL Detailed Work Plan for Site Wide Landlord Operations for FY 2004 ' INEEL/EXT-03-01101-SW11. INEEL Facilities and Infrastructure Executive Steering Committee Charter12. Sample of INEEL Reactor Programs Monthly Report 13. Memorandum from the DOE Office of Inspector General of February 9, 2004, Management Letter on the Audit of the Department of Energy's Consolidated Financial Statements for Fiscal Year 200314. DOE Office of Independent Oversight and Performance Assurance (OA), Inspection of Environment, Safety, and Health Management and Emergency Management at the INEEL of September 2003 15. Idaho Operations Office Corrective Action Plan for the September 2003 DOE OA Inspection at INEEL dated January 200416. U.S. Army Corps of Engineers Report of February 20, 1998, Critical Analysis of INEEL Infrastructure 17. Presentation and Agenda for Monthly Tele-video Conference with NE Headquarters on Status of the Test Reactor Area Landlord for March 2004 18. Bechtel BWXT Idaho, LLC Issues Communication and Resolution Environment Process and sample Status Report19. Idaho Department of Environmental Quality Letter to the Manager of the Idaho Operations Office of November 28, 2001, Hazardous Waste Management Act/Resource Conservation and Recovery Act Compliance Inspection Narrative Report

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:13%

Explanation: Achieving formally established goals and performance measures is incorporated into individual Federal and contractor managers' performance standards upon which annual performance appraisals and bonus awards are based. Performance is reviewed periodically with each individual. Corporate accountability for meeting goals and performance standards is measured by level of success in achieving Performance Based Incentives (PBI) developed for the contract. The contractor's award fee is based on these PBIs.

Evidence: 1. Current Bechtel BWXT Contract (Pertinent Sections) ' #DE-AC07-99ID137272. Request for Proposal for Idaho National Laboratory - #DE-RP07-03ID145173. Samples of individual federal individual performance standards for the Idaho Operations Office (NE-ID)

3.3 **Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?** Answer: YES Question Weight:13%

Explanation: Routine independent audits performed by the DOE Office of the Inspector General have revealed no weaknesses in the obligating of funds in a timely manner for the intended purpose. The Idaho Facilities Management Program managers at NE-ID prepare annual detailed work plans (DWP) based on the appropriated budget, the Idaho National Laboratory Ten Year Site Plan, and annual Program Guidance from NE-HQ. DWPs provide planned budgets and schedules to meet established performance goals within approved resources. Funds are obligated to meet the workscope defined in the approved DWPs. There is a Baseline Change Control process in place to ensure configuration management of the DWPs. Funding status is reviewed monthly which includes: issuing of a monthly Approved Funding Program from NE, tracking the actual placing of funds on contract, and generation of a monthly funding status report at NE-ID that tracks actual cost incurred against the Work Breakdown Structure for the program. Management accountability is established for both the contractor and NE-ID management (see Question 3.2).

Evidence: 1. DOE Accounting Handbook2. DOE Order 534.1B Accounting3. DOE Order 135.1, Budget Execution-Funds Distribution and Control4. DOE Manual 135.1-1, Budget Execution Manual5. NE-ID Manual 120.A-1, General Business Planning Alignment Manual6. Memorandum from the Manager, Idaho Operations Office of August 15, 2003, Management Control and Financial Management System Review7. DOE Office of the Inspector General Memorandum of February 9, 2004, Management Letter on the Audit of the Department of Energy's Consolidated Financial Statements for Fiscal Year 20038. NE-40 Memorandum of January 16, 2004, Fiscal Year (FY) 2004 Work Authorization and Program Guidance for the Idaho National Engineering and Environmental Laboratory (INEEL) Idaho Facilities Management-INEEL Infrastructure Program9. Idaho National Laboratory Ten Year Site Plan of April 200410. INEEL Fiscal Year Detailed Work Plan Summary ' INEEL/EXT-03-01-0110111. NE-HQ FY 2004 Monthly Financial and Performance Report for February 2004

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?

Answer: YES Question Weight:13%

Explanation: Processes and procedures used to achieve and measure cost efficiencies and cost effectiveness in program execution include:1. Ensuring that achieving measurable progress in efficiency and cost-effectiveness is part of the terms and conditions of the contract and is factored into the Performance Based Incentives used by the Idaho Operations Office Contracting Officer to determine annual Award Fee.2. Ensuring efficiency and cost-effectiveness in work force management through the use of sub-contracting to the maximum extent possible, maintaining the permanent workforce at the minimum needed and enabling achievement of efficiencies and cost-effectiveness through the competitive bid process for completing specific projects.3. Conducting construction projects strictly in accordance with Department Order 413.3, Program and Project Management for the Acquisition of Capital Assets, which requires careful analysis of alternatives and cost-effectiveness in Line Item Construction Projects and General Plant Projects.4. Using Value Engineering processes to reduce cost while ensuring performance goals are met in planning infrastructure projects.5. Conducting targeted in-depth reviews by the contractor to identify efficiencies and enhance cost-effectiveness such as the recent major maintenance management review and upgrade which led to new procedures for achieving and measuring efficiencies and cost-effectiveness in the performance of maintenance and repair.6. Re-competing the Department's Management and Operating contract for implementation in FY 2005 to achieve the new mission in a more efficient and cost effective manner.7. Implementation of Enterprise Architecture for efficient and cost effective planning of Information Technology system improvements for Idaho Facilities Management including identification of duplicate applications, redundant data collection and maintenance activities, and opportunities for operational consolidation through shared resources.

Evidence: 1. Current Bechtel BWXT Contract ' #DE-AC07-99ID13727 (PBIs for Idaho Facilities Management)2. Request for Proposal for Idaho National Laboratory - #DE-RP07-03ID14517 (sections applicable to Idaho Facilities Management)3. Value Engineering Process description (used for Idaho Facilities Management Projects) 4. DOE Order 413.3, Program and Project Management for the Acquisition of Capital Assets5. Bechtel BWXT Idaho, LLC Physical Asset Maintenance Management Improvement for Idaho Facilities Management Presentation of December 20036. NE-ID Information Technology Enterprise Architecture Program description (applicable to Idaho Facilities Management)

3.5 Does the program collaborate and coordinate effectively with related programs?

Answer: YES Question Weight:13%

Explanation: The Idaho Facilities Management Program is primarily a landlord program. Its related programs are the multi-mission programs it supports at the laboratory as described in Question 1.1. The program collaborates and coordinates with the active programs it supports primarily through the Idaho National Laboratory's (INL) long-term planning process. The nature of the collaboration and coordination is to formally work with the tenant programs on a continuing basis to identify mission-essential infrastructure and to incorporate that information into annual and long-term maintenance and recapitalization project planning. All active programs at the INEEL and planned future users of the laboratory participate in this process. With inputs from these programs, now including ANL-W, numerous detailed five to ten-year plans linked to the research and development and cleanup missions discussed in Question 1.1 covering various infrastructure issues related to these missions are rolled up into one high level Ten Year Site Plan.

Evidence: 1. NE-HQ Program Plan for GPRA Unit 17, Maintain the Nation's Nuclear Infrastructure Capability2. NE-HQ Program Plan for GPRA Unit 14, Develop New Nuclear Generation Technologies3. INL Ten Year Site Plan of April 20044. Department Order 430.1B, Real Property Asset Management5. Request for Proposal for Idaho National Laboratory - #DE-RP07-03ID14517

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:13%

Explanation: NE-ID receives routine independent financial audits from the DOE Office of the Inspector General who uses an independent contractor, KPMG, for this function. No significant weaknesses in financial management were noted in the most recent audit. Areas noted for improvement are tracked to resolution.

Evidence: 1. DOE Accounting Manual2. DOE Order 534.1B Accounting3. DOE Order 135.1, Budget Execution-Funds Distribution and Control4. DOE Manual 135.1-1, Budget Execution Manual5. NE-ID Manual 120.A-1, General Business Planning Alignment Manual6. Manager Idaho Operations Office Memorandum of August 15, 2003, Management Control and Financial Management System Review7. DOE Office of the Inspector General Memorandum of February 9, 2004, Management Letter on the Audit of the Department of Energy's Consolidated Financial Statements for Fiscal Year 2003

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:13%

Explanation: Examples of recent actions taken by the Idaho Operations Office (NE-ID) to address management deficiencies for the Idaho Facilities Management Program include:1. The contractor's self-assessment programs for environment, safety and health oversight were evaluated as ineffective. A credible self-assessment program is mandatory if the contractor is to accomplish program goals efficiently and effectively. A new contract oversight model has been developed as part of the re-competing of the Management and Operating contract for the Idaho National Laboratory. Under the new model, NE-ID will monitor that the contractor has a robust self-assessment program and will refocus its oversight on risk based reviews of relevant information and data.2. In 2003, NE-ID identified three management areas as weaknesses. These were in the areas of setting contract requirements, internal management processes, and contract management all of which are applicable to Idaho Facilities Management. A Baseline and Benchmarking Initiative to address the identified weaknesses was initiated. Three teams, one for each issue, conducted an in-depth baseline review of conformance to requirements and conducted comparisons with how other similar DOE sites addresses these requirements. A report was prepared in November of 2003 and has formed the basis of a management improvement plan for NE-ID. 3. Construction project management has been identified as a Department-wide weakness. This is directly applicable to the Idaho Facilities Management Program that routinely conducts construction projects. An independent review of Program and Project Management (PPM) at the Idaho National Engineering and Environmental Laboratory (INEEL) was conducted in May of 2003 to assess the capabilities and maturity of the management processes used to deliver PPM services and products at INEEL. Two observations and five recommendations resulted from the assessment that are being used to improve PPM at INEEL.5. To further address the Department-wide weakness in construction project management, NE-HQ and NE-ID have implemented a certification program for all construction project managers using the Department's Acquisition Career Development Program.

Evidence: 1. ISO 90001 description and process for certification2. Department Policy 450.5, Line Environment, Safety and Health Oversight3. Request for Proposal for Idaho National Laboratory DE-RP07-03ID145174. Idaho Operations Office Baseline and Benchmarking Initiative Report of November 2003, DOE/NE-ID-111265. Report on the Program and Project Management Independent Assessment (Rev 2) at the Idaho National Engineering and Environmental Laboratory by the Logistics Management Institute of McLean, VA, June 2003 6. Department Order 361.1, Chg. 2, Acquisition Career Development Program

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

3.CA1 **Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals?** Answer: YES Question Weight:13%

Explanation: The current contract is a 'Performance Based Management Contract' that uses an award fee element and specific performance-based incentive fees. The INL contract is being re-competed to have a new contractor in place in FY 2005. The Request for Proposals for the new contract specifies it as a performance-based contract. The Idaho Facilities Management Program is linked to the requirements of the research and development and cleanup missions discussed in Question 1.1, and the program deliverables, performance characteristics, and cost and schedule goals are completely focused on providing infrastructure support for those missions.Within this performance context, clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals are identified primarily in: 1) the Idaho National Laboratory (INL) Ten Year Site Plan (TYSP) and its supporting documents; 2) the annual program guidance from the Office of Nuclear Energy, Science and Technology; and 3) the annual detailed work plans.The Office of Nuclear Energy, Science and Technology program managers and the Idaho Operations Office staff formally review actual accomplishments against the annual and long-term performance targets and measures primarily through a monthly reporting and review process. Oversight of contractor performance in all areas occurs in various forms on a daily basis.

Evidence: 1. INL Ten Year Site Plan of April 20042. Current Bechtel BWXT Contract (Pertinent Sections) ' #DE-AC07-99ID137273. Request for Proposal for Idaho National Laboratory - #DE-RP07-03ID145174. FY 2005 Idaho Facilities Management Budget Submission5. INEEL Fiscal Year Detailed Work Plan Summary ' INEEL/EXT-03-01-011016. NE FY 2004 Monthly Financial and Performance Report for February 2004

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: NO Question Weight:17%

Explanation: The long-term performance goals for the Idaho Facilities Management Program were developed and finalized in FY 2004 as part of the Idaho National Laboratory Ten Year Site Plan. This plan was used in establishing the first program annual goals for FY 2005. Therefore, the program will be unable to demonstrate progress until the end of FY 2005.The program has met all of its significant planning milestones. These include:1. Completion of the Office of Nuclear Energy, Science and Technology's (NE-HQ) Program Plans for Government Performance and Results Act (GPRA), which establish a concrete link between the Dpartment's Strategic Plan and the Department's annual budgets, performance measures, and performance reporting for Idaho Facilities Management. 2. Completion of the Idaho National Laboratory (INL) Ten Year Site Plan (TYSP) for the Idaho Facilities Management program for accomplishing the new mission ahead of schedule in October 2003. The plan was approved and implemented in time to allow adjustments to the FY 2004 Idaho Facilities Management detailed work planning to support the new mission within approved funding and to help support the FY 2005 budget request, then in progress. 3. Re-competing the INEEL contract for implementation in FY 2005. This new contracting process remains on schedule.4. Overhauling the Idaho Facilities Management Program's Maintenance Management System in FY 2003 and 2004 which will result in significant savings in costs of routine maintenance.

Evidence: 1. NE-HQ Program Plan for GPRA Unit 17, Maintain the Nation's Nuclear Infrastructure Capability2. NE-HQ Program Plan for GPRA Unit 14, Develop New Nuclear Generation Technologies3. Idaho National Laboratory Ten Year Site Plan of April 20044. DOE Order 430.1B, Real Property Asset Management 5. DOE Order 413.3, Program and Project Management for the Acquisition of Capital Assets 6. INEEL Building Ownership Database ' ID LST 246, Rev. 3 of January 21, 20047. Bechtel BWXT Idaho, LLC Physical Asset Maintenance Management Improvement Presentation of December 2003

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: NO Question Weight:17%

Explanation: The long-term performance goals for the Idaho Facilities Management Program were developed and finalized in FY 2004 as part of the Idaho National Laboratory Ten Year Site Plan. This plan was used in establishing the first program annual goals for FY 2005. Therefore, the program will be unable to demonstrate progress until the end of FY 2005.

Evidence:

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: NO Question Weight:17%

Explanation: The long-term performance goals for the Idaho Facilities Management Program were developed and finalized in FY 2004 as part of the Idaho National Laboratory Ten Year Site Plan. This plan was used in establishing the first program annual goals for FY 2005. Therefore, the program will be unable to demonstrate progress until the end of FY 2005.Since the Office of Nuclear Energy, Science and Technology (NE-HQ) assumed responsibility for the Idaho Facilities Management Program from the Office of Environmental Management in May of FY 2003, the program is striving to implement improved efficiency and cost-effectiveness in achieving its programmatic goals of providing infrastructure support to the new and ongoing missions of the Idaho National laboratory discussed in Question 1.1. Examples of efficiency improvements include:1. The Idaho National Engineering and Environmental Laboratory (INEEL) contract is being re-competed for FY 2005. When implemented, the Argonne National Laboratory-West facilities in Idaho will be incorporated into the INEEL and the new complex will be renamed the Idaho National Laboratory (INL). This will achieve significant improvement in efficient management of the NE-HQ programmatic facilities and common-use infrastructure at the INL.2. A new INL Ten Year Site Plan (TYSP) has been developed in 2003 that meets the requirements of Department Order 430.1B, Real Property Asset Management. The INL TYSP provides, among other things, a mission needs analysis of existing facilities and infrastructure, a prioritization process, and long-term performance goals. 3. A new Maintenance Management Program has been implemented in FY 2004 that is expected to save $13.8 million in routine maintenance costs each year.4. An energy management initiative that is designed to reduce energy costs continues to achieve its goals.5. Safety emphasis at the INL has continued to make significant reductions in injury and illness incidents. This results in a direct and significant improvement in efficiency and effective use of resources.6. A major efficiency improvement in site vehicle utilization has been achieved with a reduction in the number of vehicles needed to support INEEL programs.7. An Information Technology Architecture Program has been implemented to define capabilities and utilization so that new requirements can take advantage of already available capability. For FY 2004 savings are anticipated to be $600,000.8. A major upgrade to construction project management to ensure compliance with Department Order 413.3, Program and Project Management for the Acquisition of Capital Assets, has been implemented to ensure that such projects are planned effectively and meet budget and schedule goals. 9. Three Line Item Construction Projects were terminated in FY 2003 and FY 2004 as a result of rigorous implementation of Department Order 413.3. This will save several million dollars.

Evidence: 1. Current Bechtel BWXT Contract (Pertinent Sections) ' #DE-AC07-99ID137272. Request for Proposal for Idaho National Laboratory - #DE-RP07-03ID145173. Department Order 430.1B, Real Property Asset Management4. INL Ten Year Site Plan of April 20045. Bechtel BWXT Idaho, LLC Physical Asset Maintenance Management Improvement Presentation of December 20036. Documentation about in-house energy management, including 'bi-annual' performance agreements. 7. Documentation regarding improved management of vehicles8. Footprint and leased space reduction data.9. Information Technology Architecture Program 10. DOE O 413.3, Program and Project Management for the Acquisition of Capital Assets11. Data on reduced injury and illnesses12. NE-40 Memorandum of January 16, 2004, Fiscal Year (FY) 2004 Work Authorization and Program Guidance for the Idaho National Engineering and Environmental Laboratory (INEEL) Idaho Facilities Management-INEEL Infrastructure Program

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

4.4 **Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?** Answer: NO Question Weight:17%

Explanation: The long-term performance goals for the Idaho Facilities Management Program were developed and finalized in FY 2004 as part of the Idaho National Laboratory Ten Year Site Plan. This plan was used in establishing the first program annual goals for FY 2005. Therefore, the program will be unable to demonstrate progress until the end of FY 2005.

Evidence:

4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: NO Question Weight:17%

Explanation: The long-term performance goals for the Idaho Facilities Management Program were developed and finalized in FY 2004 as part of the Idaho National Laboratory Ten Year Site Plan. This plan was used in establishing the first program annual goals for FY 2005. Therefore, the program will be unable to demonstrate whether it is effective and achieving results until the end of FY 2005.Independent, in-depth evaluations for selected areas of focus will be routinely conducted by organizations such as: the General Accounting Office, the DOE Office of the Inspector General; the DOE Office of Independent Oversight and Performance Assessment; the DOE Office of Environment, Safety and Health; the General Accounting Office; and the State of Idaho Department of Environmental Quality. The Manager of the Idaho Operations Office (NE-ID), the Contracting Officer, and the NE-ID Facilities Management Program managers are primarily responsible for providing comprehensive independent evaluations of the contractor's performance on a continuing basis. This is DOE's established process for providing comprehensive, baseline, independent oversight of its contractors. Properly qualified personnel from the Idaho Operations Office and the NE-ID Program Office are committed to this task as their primary duty. In addition to daily general monitoring of contractor performance, formal assessments will also be conducted for specific functions. The ID and NE Headquarters assessments follow formal, approved assessment plans and are detailed and comprehensive.

Evidence: 1. Idaho Reviews Summary for February 2004 ' NE-ID.2-02/17/042. DOE Office of the Inspector General Memorandum of February 9, 2004, Management Letter on the Audit of the Department of Energy's Consolidated Financial Statements for Fiscal Year 20033. DOE Office of Independent Oversight and Performance Assurance, Summary Report on Inspection of Environment, Safety, and Health Management and Emergency Management of the Idaho Operations Office and Idaho National Engineering and Environmental Laboratory, September 20034. ID Assessment Program, Schedules, and sample Reports 5. ID Facility Representative Assessment Program, Schedules, and sample Reports

4.CA1 **Were program goals achieved within budgeted costs and established schedules?** Answer: NO Question Weight:17%

Explanation: The long-term performance goals for the Idaho Facilities Management Program were developed and finalized in FY 2004 as part of the Idaho National Laboratory Ten Year Site Plan. This plan was used in establishing the first program annual goals for FY 2005. Therefore, the program will be unable to demonstrate progress until the end of FY 2005.

Evidence:

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

Measure: Complete maintenance and recapitalization projects and upgrades for active mission-critical INL-NE real property assets on time and within 10% of the approved baseline cost.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2004-2010	+/-10%		

Measure: Stabilize (stop the growth) of INL deferred maintenance backlog for active, mission-critical INL-NE real property assets by end of FY 2007 as measured by little or no growth the last two quarters.

Additional Information:

Year	Target	Actual	**Measure Term:** Long-term
2007	0%		

Measure: Validate the Asset Condition Index (ACI), and achieve an ACI rating of "good" for 60% of active mission-critical INL-NE facilities by 2008, and a rating of "good" for 80% of active mission-critical INL-NE facilities by 2013 (Improved condition of mission-critical facilities).

Additional Information:

Year	Target	Actual	**Measure Term:** Long-term
2004	Baseline	42.4%	
2006	48.4%		
2007	54.4%		
2008-2013	60.0-80.0%		

PART Performance Measurements

Program: National Nuclear Infrastructure
Agency: Department of Energy
Bureau:
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Results Not
100%	89%	100%	0%	Demonstrated

Measure: Validate the Asset Utilization Index (AUI, and achieve an AUI rating of "good" to "excellent" for active mission-critical INL-NE facilities by 2014 (More efficient, cost-effective use of mission-critical facilities).

Additional Information:

Year	Target	Actual	**Measure Term:** Long-term
2005	0.90-0.75%		
2007	0.95-0.75%		
2014	0.98-1.00%		

Measure: Reduce and maintain the deferred maintenance backlog for active mission-critical INL-NE real property assets to within the average range for equivalent industrial facilities by 2014.

Additional Information:

Year	Target	Actual	**Measure Term:** Long-term
2006	Baseline	TBD	
2014	2%		

PART Performance Measurements

Program: Natural Gas Technologies
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
40%	60%	88%	25%	

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The program goal is to accelerate technology development for exploration and production of nonconventional resources, to advance technology development aimed at maximizing the productivity of each well and to reduce the impact of production. For methane hydrates, the purpose is to understand the role of gas hydrates in seafloor stability and the global carbon cycle, and to develop, by 2015, the knowledge and technology necessary for commercial production of methane from hydrates while protecting the environment. This goal is shared by the five agencies that cooperate on gas hydrate research and development (R&D): The Departments of Energy (DOE), Commerce, Interior, Defense and the National Science Foundation (NSF).

Evidence: Budget documentation (e.g., FY 2004 Budget Congressional Justification); web pages; workshop proceedings; Methane Hydrate Research and Development Act of 2000 PL 106-193; Methane Hydrates Strategic Plan; and Multi-Year R&D Plan.

1.2 Does the program address a specific and existing problem, interest or need? Answer: NO Question Weight 20%

Explanation: The gas industry has stated that "Sufficient resources exist to meet growing demand well into the twenty-first century." However an ongoing National Petroleum Council Natural Gas Study is revisiting this issue. While the industry dentifies technology development as important, the need for Federal involvement isn't clear, since the industry's average annual capital budget for E & P was over $27 billion from 1991 to 1998 and is expected to grow. The FY 2004 President's Budget request refocused the program on longer-term, higher risk efforts such as hydrogen from natural gas, sustainable supply, and ultra-deep drilling.

Evidence: National Petroleum Council "Natural Gas: Meeting the Challenges of Adding Reserves".

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: NO Question Weight 20%

Explanation: The program funds projects comparable to those funded by private industry, and generally for the benefit of private industry. The Methane Hydrate program is designed to make a unique contribution. It addresses research to develop domestic hydrate reserves. It is unique in the US in aiming toward future production. Other Federal agencies address other aspects of gas hydrates(e.g. United States Geological Survey (USGS), resource assessments; National Oceanic and Atmospheric Administration, biota of subsea hydrates.) DOE's long-term reserach on hydrates is beyond the capital investment horizon of most companies.

Evidence: FY 2004 DOE R&D Investment Criteria submission for Oil Exploration and Production (E&P) states: "The independent operator's business model approach (including the largest independents) is to 'buy technology from the service companies' as needed." This statement, which also applies to the gas production business, illustrates that a market for these technologies exists, and that DOE research is often duplicative of, or competes with and potentially crowds out, private investement. See also the Hydrate Strategic Plan and Interagency Coordination Plan.

PART Performance Measurements

Program: Natural Gas Technologies
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
40%	60%	88%	25%	

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: There is no evidence that an alternative design would be more efficient or effective at developing pre-competitive knowledge and technology. For the Hydrates program, tax incentives for production have been shown to be ineffective in stimulating industry in the absence of needed technology. The international cooperation in the research underscores the importance and approval of the approach.

Evidence: FY 2004 R&D Investment Criteria submission; http://www.netl.doe.gov/publications/proceedings/00/hydrates/00hydrate.html (Note the original hydrate strategy (see Section 1, Q 1) was developed and critiqued at two national hydrate workshops).

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: NO Question Weight 20%

Explanation: DOE has not presented R&D Investment Criteria information at a detailed level discussing variables such as years to commercialization, public benefits, technological risk, cost share or plotting economic, environmental and/or security beneifts.

Evidence:

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight 10%

Explanation: Long-term goals are: 1) by 2015, develop technologies to expand the 2002 domestic gas economically recoverable resource base by 100 trillion cubic feet (Tcf); 2) develop technologies that will by 2025 add 20 Tcf of technically recoverable resources of natural gas from methane hydrates; 3) by 2013, reduce the cost of hydrogen production from natural gas by 25% from current baseline of $5.54/MM Btu (steam reforming of methane at Natural gas price of $3.15/MM Btu.)

Evidence: See "Measures" section of this PART; Joule System.

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight 10%

Explanation: Ambitious targets and timeframes have been established for long-term measures. Projects last for three to five years, with new competition required at that point. New proposals are judged against new proposals.

Evidence: See "Measures" section of this PART.

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight 10%

Explanation: Achievement of the annual measures (as well as long term goals) for this program is assessed through the GSAM model. Further detailed analysis is necessary to ensure that the critical assumptions in this model are valid and transparent, and to ensure that any resource base expansion is actually attributable to DOE activities. Additionally, annual measures for methane hydrates need to be agreed upon.

Evidence: See "Measures" section of this PART.

PART Performance Measurements

Program: Natural Gas Technologies
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
40%	60%	88%	25%	

2.4 **Does the program have baselines and ambitious targets for its annual measures?** Answer: YES Question Weight:10%

Explanation: Program has established baselines and ambitious targest for annual measures.

Evidence:

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:10%

Explanation: Each cooperative agreement between DOE and participating partners has detailed milestones and key decision points. These milestones are reviewed annually between the DOE management and the performing organization, as well as at all project funding decision points. If a partner is not meeting stated requirements, then that cooperative agreement does not to go into the next budget period. A Federal Advisory Committee and an Interagency Coordinating Committee oversee, coordinate, and integrate Methane Hydrates research to a common mission. Regular national and international meetings of researchers strengthen understanding of the DOE goal. The National Academy of Sciences National Reserach Council (NAS/NRC) is planning to start periodic peer reviews of the program in 2003. All funding awards focus on a statement of work related to program goals.

Evidence: PROMIS project management database; program solicitations; quarterly JOULE Milestones. The Methane Hydrate program's work is tied to the goals and oversight requirements in the Methane Hydrate R&D Act of 2000.

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: NO Question Weight:10%

Explanation: The program was recently reviewed by the NAS/NRC. However, the program has previously used industry reviews to evaluate effectiveness and performance. These efforts do not meet the requirements for independent review. The program will explore including third-party reviews. The Methane Hydrate Federal Advisory Committee conducts meetings to address issues that may arise. The NAS/NRC will start periodic peer reviews in 2003.

Evidence: NAS/NRD report: "Energy Research at DOE: Was it Worth It?" (July 2001).

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: The Department has not submitted budget documents linking performance goals to resource levels in a complete or transparent manner.

Evidence:

PART Performance Measurements

Program: Natural Gas Technologies
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
40%	60%	88%	25%	

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: Improvements in benefits modeling, and efforts to connect long and short term goals through the JOULE performance tracking system are concrete steps that could help with planning efforts.

Evidence: JOULE System, budget documents.

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NO Question Weight:10%

Explanation: The program did not submit R&D Investment Criteria information demonstrating how DOE prioritizes programs based on potential benefits.

Evidence: Public Workshop Proceedings, EIA NEMS benefit analysis.

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: NO Question Weight:10%

Explanation: Program did not submit R&D Investment Criteria information demonstrating how risk, years to commercialization, and other key factors are used in setting priorities. However, the GSAM model is used to prioritize gas projects based on supply impact and R&D success.

Evidence: GSAM

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:12%

Explanation: The cooperative agreements in the gas program clearly outline the major milestones and performance requirements that the participating partner must meet. These milestones are tracked and performance measured through quarterly and other technical reporting requirements. Accomplishments and key milestones are reported weekly to the Laboratory Director. Significant accomplishments are transmitted to the Assistant Secretary of Fossil Energy (FE) and are reported in technical fact sheets (TechLines), available to the public on the DOE/FE web site. Project reviews are held on an annual basis. JOULE is used as a performance management tool to track results on a quarterly basis.

Evidence: Progress is tracked through progress, management, and financial reports from the participating partner required by the cooperative agreement. Project databases (ProMis) facilitate and inform project and program management decisions. Websites (such as www.netl.doe.gov/scng) have information regarding the projects and programs. The SCNG website contains information regarding the reporting requirements of cooperative agreements.

PART Performance Measurements

Program: Natural Gas Technologies
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
40%	60%	88%	25%	

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight:12%

Explanation: The National Energy Technology Laboratory (NETL) has identified a schedule of incentives holding key product personnel responsible for results under their control. Recently, NETL was one of only two organizations in the entire Federal Government to win Office of Personnel Management's Pillar Award for outstanding efforts in linking performance with accountability. However, the program has not demonstrated that an earned value system for tracking cost, schedule, and performance currently exists.

Evidence: OPM's Pillar Award for linking performance with accountability.

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:12%

Explanation: Funds are obligated based on an annual Program Implementation Plan approved by DOE management and consistent with appropriations. Essentially all funds are obligated in the budget year. Spending of cooperative agreements is audited as required by procurement rules.

Evidence: Program implementation plan signed by the Director of NETL and the Deputy Assistant Secretary includes all planned funding obligations and a schedule of procurements; DOE's annual Performance and Accountability reports.

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: NO Question Weight:12%

Explanation: The program has not demonstrated that proceedures exist to measure and achieve efficiencies and cost effectiveness in program administration. Although Headquarters staff has been reduced by 13% over the past five years, DOE did not demonstrate cost-savings from this, or highlight whether field/lab staff has shown efficiencies.

Evidence:

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: The program is fairly well integrated with other programs with similar goals at DOE, and with non-Federal parties. Methane hydrates R&D is integrated through the interagency coordination committee consisting of representatives from the Departments of Energy, Interior, Commerce, Defense and the National Science Foundation (NSF).

Evidence: NETL Operations Plan, Program plans, including the Methane Hydrates Interagency Coordination Plan http://www.netl.doe.gov/scng/hydrate/pdf/InteragencyPrint.pdf

PART Performance Measurements

Program: Natural Gas Technologies
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
40%	60%	88%	25%	

3.6	**Does the program use strong financial management practices?**	Answer: YES	Question Weight:12%

Explanation: DOE received clean audits in FY 2001 and FY 2002; no known deficiencies specific to this program. Several computer-based project management controls are in place to assist in financial management. Systems exist both on the financial side and the project management side.

Evidence: DOE annual Performance and Accountability report.

3.7	**Has the program taken meaningful steps to address its management deficiencies?**	Answer: YES	Question Weight:12%

Explanation: Recent and continuing efforts to develop adequate performance measures is a positive step. As the "Top to Bottom" review is fully implemented additional areas will be addressed.

Evidence: Fossil Energy Top-to-Bottom Review, JOULE results.

3.RD1	**For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?**	Answer: YES	Question Weight:12%

Explanation: About 97 percent of program funds are subject to competive selection.

Evidence: Selection Process for In-house R&D Projects; proceedings/summary of peer review meetings; annual in-house work proposals

4.1	**Has the program demonstrated adequate progress in achieving its long-term performance goals?**	Answer: SMALL EXTENT	Question Weight:25%

Explanation: Between 1978 and 2000, the gas program has provided over 4 Tcf of incremental production (a subset of economically recoverable resources) or about 1.4 % of consumption.

Evidence: NAS/NRC report: "Energy Research at DOE: Was it Worth it?" (2001)

4.2	**Does the program (including program partners) achieve its annual performance goals?**	Answer: SMALL EXTENT	Question Weight:25%

Explanation: Achievement of annual measures (as well as long term goals) is based on measurement using the GSAM model. Further detailed analysis is necessary to ensure that the critical assumptions in the model are valid and transparent, and to ensure that resource base expansion is actually attributable to DOE. Under old measures, program has 100% performance score through 2nd quarter of FY 2003.

Evidence: JOULE results, ProMIS project database of accomplishments.

4.3	**Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?**	Answer: NO	Question Weight:25%

Explanation: Program did not demonstrate improved efficiencies or cost effectiveness in achieving program goals.

Evidence:

PART Performance Measurements

Program: Natural Gas Technologies
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
40%	60%	88%	25%	

4.4 **Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?**

Answer: NA Question Weight: 0%

Explanation:

Evidence:

4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?**

Answer: SMALL EXTENT Question Weight 25%

Explanation: Incremental production attributed to program by NAS/NRC study. However, the NAS/NRC also stated that it is difficult to accurately attribute DOE contributions versus private industry contributions.

Evidence: NAS/NRD report: "Energy Research at DOE: Was it Worth It?" (2001).

PART Performance Measurements

Program: Natural Gas Technologies
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
40%	60%	88%	25%	

Measure: Additional economically recoverable domestic gas resource (trillion cubic feet).

Additional Information: By 2015 develop technologies to expand the 2002 domestic gas economically recoverable resource base by 100Tcf. ($3.50/mcf price/AEO 03 assumptions).

Year	Target	Actual	**Measure Term:** Long-term
2010	28		
2015	50		

Measure: Additional economically recoverable domestic gas resource (trillion cubic feet).

Additional Information: Annual performance will be measured by modeling, and assumes that 8 projects from current potfolio will succesfully achieve critical milestones in each year, thereby contributing additional Tcf. Technology products include prototype and/or field-tests of innovative means for resource characterization, exploration success rate, production cost reduction, and/or increased productivity. Critical technology areas include advanced drilling, stripper-well enhancement, and gas storage.

Year	Target	Actual	**Measure Term:** Annual
2005	1.5		
2006	4		
2007	10		
2008	16		

Measure: Technically recoverable resources of natural gas from methane hydrates (trillion cubic feet).

Additional Information: Without DOE R&D, initial production of natural gas from methane hydrates is unlikely until about 2025. With DOE R&D, initial production can be accelerated by about 5 years to 2020 (at the FY05 level-of-R&D-effort which is a reduction from the current FY03 effort). Based on estimated ratios of technically-recoverable resources (TRR) to production levels, the TRR in 2025 will be roughly 25 Tcf, approximately 20 Tcf greater than in the no-DOE case."•

Year	Target	Actual	**Measure Term:** Long-term
2015	0		
2020	5		
2025	20		

PART Performance Measurements

Program: Natural Gas Technologies
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
40%	60%	88%	25%	

Measure:

Additional Information:

Year	Target	Actual	**Measure Term:** Annual

Measure: Percent cost reduction for production of hydrogen from natural gas (with carbon capture and sequestration)

Additional Information: Cost reduction is achieved via development of advanced technologies of ITM synthesis gas generation, advanced membrane separation, and CO2 capture. The 25% cost reduction is needed to achieve the target of $0.56/kg hydrogen at the plant gate. The baseline cost of current hydrogen production technology is based on steam reforming of methane at $5.54/MM Btu and a natural gas price of $3.15/MM Btu.

Year	Target	Actual	**Measure Term:** Long-term
2003		$5.54/MMBtu	
2013	25%		

Measure: Completion the critical-path milestones as listed by year and target.

Additional Information: The critical path milestones (listed in the target column) begin with the award of technology projects and initiation several protoype tests in FY04.*Demonstrate a 0.5 MMscfd hydrogen ITM production unit;**Demo bench scale ITM alt feasibility;***Demo bench scale ITM alt feasibility;$Select H2 delivery module concept (from competing bench demos);$$Select concept for semi-plant scale demo (from competing pilot demos)

Year	Target	Actual	**Measure Term:** Annual
2005	*		
2006	**		
2007	***		
2008	$		
2009	$$		

PART Performance Measurements

Program: Nonproliferation and International Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	100%	100%	73%	

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The Nonproliferation and International Security (NIS) program has a clear purpose -- to strengthen the global nuclear nonproliferation regime by 1) limiting sensitive exports; 2)supporting international safeguards; and 3) providing technical advice to develop and implement U.S. policy (treaties, agreements, and mutual inspections).

Evidence: Office of Nonproliferation and International Security Strategic Plan (January 2003)

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: President Bush's speech at the National Defense University on 2/11/04 outlined several challenges to the nonproliferation regime that the post-9/11 world faces, including sub-state terrorists, clandestine WMD programs in countries such as Iran and North Korea, and the clandestine network of nuclear suppliers uncovered in Pakistan. The NIS program addresses these issues by strengthening the nonproliferation regime and securing technology and materials.

Evidence: National Security Strategy (September 2002) (pp. 5-7, 12-16); National Strategy to Combat Weapons of Mass Destruction (December 2002) (pp. 2-6); NSPD17/HSPD-4; NNSA Strategic Plan (February 2002) (pp. 2-3, 7-10); NA-24 Strategic Plan (pp. 2-7)

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The NIS program focuses the unique highly technical expertise of DOE/NNSA's national laboratories on resolving global nonproliferation issues, limiting sensitive WMD exports, minimizing global quantities of weapons-usable materials, and strengthening the global nonproliferation regime. This expertise is unique from that of DoD or State because of NNSA's sole responsibility for development of nuclear weapons.

Evidence: NA-24 Strategic Plan (pp. 2-7, 44-47); FY2005 Budget (pp. 126-132, 383-384, 427-441); NNSA PPBE process; PPBS

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: NIS programs are free of major design flaws and are accomplishing their stated goals. The scope of NIS programming is extremely broad and includes both policy and implementation functions. However, the Secretary has directed NNSA to re-evaluate whether minor alternations in functional alignment are warranted in light of an evolving threat environment, exemplified by recent revelations about clandestine proliferation networks.

Evidence: NA-24 Strategic Plan (pp. 44-47); FY2005 Budget (pp. 126-132, 383-384, 427-441); NNSA PPBE process

PART Performance Measurements

Program: Nonproliferation and International Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	100%	100%	73%	

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight: 20%

Explanation: Based upon annual program reviews and explicit prioritization of activities, resources are allocated to specific programs and to the national laboratories, contractors, and foreign entities that carry out NIS projects. Funding priorities are based on NNSA Strategic Planning Guidance, the National Strategy to Combat Weapons of Mass Destruction, and risk-based decision making. Detailed statements of work, performance targets and schedules ensure that work conducted is aligned with mission and goal of the program. An NSC review of NNSA nonproliferation programs found that NIS programs have 'satisfactory controls to prevent diversion of assistance,' thereby assuring that resources directly serve intended program purposes.

Evidence: NNSA Strategic Planning Guidance (2005-2009) (pp. 15-16); National Strategy to Combat Weapons of Mass Destruction (pp. 2-6); Statements of Work; Annual Program Review activities; Program Execution Plans; Bilateral Implementing Arrangements; NNSA PPBE process

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight: 13%

Explanation: The NIS program uses a limited number of specific long-term measures to meaningfully assess progress in achieving its program purpose. They are 1) by 2019 secure 100% of 5716kg of globally targeted sensitive nuclear material, 2) by 2014, convert 100% of 98 targeted research and test reactors from HEU to LEU fuel, 3) by 2011, train 13000 personnel (e.g. export control and customs officials, IAEA inspectors) in nuclear nonproliferation since 9/11/01, and 4) by 2011, reduce average cost per review of WMD export license applications to $420.

Evidence: NA-24 Strategic Plan (pp. 9-11, 28-29); FY2005 Budget (pp. 126-132, 383-384, 427-441); NNSA PPBE process; PPBS

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight: 13%

Explanation: Given the challenges and unexpected opportunities caused by global events (for example, the clandestine network developed by A.Q. Khan, and Libya's renunciation of its WMD programs), the unprecedented nature of repatriating HEU to Russia, and the sensitivities of encouraging private operators to convert reactors to LEU fuels, the NIS measures are ambitious, but realistic and achievable.

Evidence: NA-24 Strategic Plan (pp. 10-43); FY2005 Budget (pp. 126-132, 383-384, 427-441); NNSA PPBE process; PPBS

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight: 13%

Explanation: The NIS program has a limited number of specific annual measures to meaningfully assess progress in achieving the program's long-term measures. For FY2006 they are 1) secure 20% of 5716kg of globally targeted sensitive nuclear material, 2) convert 60% of 98 targeted research and test reactors from HEU to LEU fuel, 3) train 7000 personnel (e.g. export control and customs officials, IAEA inspectors) in nuclear nonproliferation since 9/11/01, and 4) reduce average cost per review of WMD export license applications to $430.

Evidence: NA-24 Strategic Plan (pp. 10-43); FY2005 Budget (pp. 126-132, 383-384, 427-441); NNSA PPBE process; PPBS

PART Performance Measurements

Program: Nonproliferation and International Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	100%	100%	73%	

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:13%

Explanation: The NIS maintains a detailed set of ambitious annual milestones and deliverables documented in project work plans, statements of work, and annual operating plans to monitor progress toward achieving annual measures.

Evidence: Project Workplans; Statements of Work

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: YES Question Weight:13%

Explanation: NIS communicates annual and long-term performance goals to implementing partners through program execution plans and annual program guidance. Contractors and national laboratory partners are held accountable for meeting project milestones in support of these goals in quarterly reports, annual program reviews, and laboratory performance reviews. Meetings are held on a regular basis with domestic and foreign partners to continually reinforce performance goals and to track progress. Agreement on annual work plans and long-term goals are reached with foreign partners through action sheets, bilateral agreements, joint statements of intent, such as one recently signed with China, and in records from Joint Coordinating Committees such as for the Warhead Safety and Security Exchange (WSSX). Agreement with other USG Agencies is reached through NSC-coordinated strategy meetings.

Evidence: Annual Reviews; JCC Records of Meeting; Program Execution Plans; Program Guidance; Quarterly reports

2.6 Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need? Answer: YES Question Weight:13%

Explanation: GAO, the NSC, and the DOE IG have performed 5 evaluations of NIS programs in four years. The NSC reviewed NNSA's nonproliferation programs in 2002 and found all to be effective. The IG reviewed NIS's automated export control system, and role in Commerce control and munitions lists. Recommendations for export control systems have been acted upon. Currently, RERTR and RRRFR are undergoing a GAO audit.

Evidence: Inspection Report on "Inspection of the Department of Energy's Automated Export Control System," December 2001, Report IG-0533 (pp. 1-15); Inspection Report on "Inspection of the Department of Energy's Role in the Commerce Control List and the U.S. Munitions List," March 2001, Report INS-O-01-03 (pp. 1-7)

2.7 Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget? Answer: YES Question Weight:13%

Explanation: NNSA budget requests are explicitly tied to accomplishment of the annual and long-term performance goals and resource via the comprehensive PPBE process. Long-term performance goals are linked in a performance cascade to annual targets and detailed technical milestones. Budget and resources trade-offs and decisions are evaluated based on the impact to annual and long-term performance measures. Each unique program goal has its own B&R structure to track resource expenditures independently.

Evidence: NNSA PPBE process; PDMs

PART Performance Measurements

Program: Nonproliferation and International Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	100%	100%	73%	

2.8 Has the program taken meaningful steps to correct its strategic planning deficiencies? Answer: YES Question Weight:13%

Explanation: NIS is engaged in a continual, long-term effort to strengthen its strategic planning. NIS released a strategic plan in FY2003, which corresponds with the National Security Strategy (2002), the National Strategy to Combat Weapons of Mass Destruction (2002), and the NNSA Strategic Plan. During annual and mid-year NNSA Management Council reviews, annual and long-term strategies for NIS sub-elements are evaluated against the evolving threat environment and adjustments are made accordingly. For example, according to a Management Council recommendation in FY2003, greater emphasis was placed on training export control officials in transshipment and emerging supplier states.

Evidence: NA-24 Strategic Plan (pp. 44-47); National Security Strategy (pp. 5-7, 12-16); National Strategy to Combat Weapons of Mass Destruction (pp. 2-6); NNSA Strategic Plan (pp. 16-19, 28-35)

3.1 Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance? Answer: YES Question Weight:14%

Explanation: NIS requires monthly and quarterly reporting against baseline program milestones and costing targets from its national laboratory and other contractors. This information is used to determine whether corrective action is necessary. Contractor performance is reviewed quarterly and annually to correct systematic project management deficiencies. Official DOE accounting data is reviewed monthly by federal managers as a check on contractor reports.

Evidence: Monthly and Quarterly Reports; Program Reviews; Financial Data; Peformance Appraisals

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight:14%

Explanation: Program directors' performance appraisal standards include ambitious targets that support program goals. They are held accountable for meeting performance targets, cost and schedule through their annual performance appraisals. Program managers take past performance of contractors and national laboratories into account when follow-on funding decisions are made.

Evidence: Performance Appraisals; Lab performance appraisals

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:14%

Explanation: NIS funds are clearly identified for individual projects through work authorizations when they are obligated. Strict project selection and review procedures, as well as rigorous implementation oversight, ensure that project funds are used in accordance with program objectives. In recent years, continuing resolutions and mid-year budget supplementals have created challenges to timely obligation of funds by the end of the fiscal year. NIS management addresses this by adjusting schedules with more work in the second half of the year. Unobligated carryover as a percentage of new budget authority was cut in half from 40% in FY2002 to 20% in FY2003 --nearly all of which was caused by Agreement delays on BN-350 work, and the balance from delays caused by the war in Iraq.

Evidence: Financial Plans; NNSA PPBE process

PART Performance Measurements

Program: Nonproliferation and International Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	100%	100%	73%	

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:14%

Explanation: NIS uses efficiency measures to find ways of doing more with fewer resources, for example, to increase the number of export license reviews without additional resources. NIS also uses electronic databases and tracking systems to efficiently and cost-effectively manage its programs. For example, time-sensitive export license reviews are conducted via the Proliferation Information Network System (PINS), a secure client-server network vastly improving security, timeliness, capacity, and access to information for technical and policy experts at the national laboratories and headquarters, resulting in a decrease in average cost per review from $969 in FY2002 to $636 in FY2003 (a savings of 34%). Further improvements will reduce the cost to $430 by FY2009. Competitive sourcing of contracts is used as appropriate per federal regulation.

Evidence: NNSA PPBE process; PINS

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:14%

Explanation: NIS is in nearly daily coordination with colleagues elsewhere in NNSA, DOE, and other agencies that results in improved U.S. policy and national security. For example, NIS provided technical expertise to a USG mission to eliminate Libya's clandestine WMD program. Together with State, Defense and other Agencies, NIS personnel planned and executed several on-the-ground operations to remove designs, materials, and equipment that could be used to make nuclear weapons.

Evidence: ProStrat PCC meeting notes; INFCIRC/225; Joint Standing Committee on Nuclear Energy Cooperation meeting minutes and action sheets

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:14%

Explanation: NIS is covered by DOE's financial management policies, procedures, and practices that meet all statutory requirements. The accounting services for NNSA are provided by DOE and these are free of material internal control weaknesses. The DOE's financial statements have been given a clear audit opinion in 7 of the last 8 years. NIS program staff reviews accounting reports on a monthly basis to monitor obligations and costs for all projects and sites.

Evidence: DOE Financial Management Orders; PPBE Guidance Documents; PPBS

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:14%

Explanation: Preventive and corrective procedures are in place to identify and address management deficiencies. Program Execution Plans and program guidance are reviewed annually and updated as necessary. The NNSA Management Council annually reviews the NIS program. NIS participates in NNSA-wide efforts to improve program management practices in areas such as leadership, diversity, contract administration, and project management. In addition, NIS has incorporated management improvements into its strategic planning process, including review of management structure, program and project management practices, internal and external communications, staff development and succession planning.

Evidence: NA-24 Strategic Plan (pp. 44-47); NNSA Strategic Plan (pp. 28-35); Annual Program Reviews; Leadership Skills Training; Diversity Training; PPBS

PART Performance Measurements

Program: Nonproliferation and International Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	100%	100%	73%	

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: YES Question Weight 20%

Explanation: NIS is on track to achieve its long-term performance goals. In FY2003, The NIS program 1) secured 10% of 5716 kg of globally targeted sensitive nuclear material, and is on track to secure 100% by FY2019, 2) converted 45% of 98 targeted research and test reactors from HEU to LEU fuel, and is on track to complete 100% by FY2014, and 3) trained 3095 personnel in nuclear nonproliferation since 9/11/01, and is on track to train over 13000 by FY2011.

Evidence: PPBE

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: LARGE EXTENT Question Weight 20%

Explanation: To a large extent, NIS achieved its annual performance goals for FY2003, and is on track to meet them in FY2004. In FY2003, it 1) secured 10% of 5716 kg of globally targeted sensitive nuclear material, 2) converted 45% of 98 targeted research and test reactors from HEU to LEU fuel, 3) trained 3095 personnel in nuclear nonproliferation since 9/11/01, and 4) reduced the average cost per review of WMD export license applications to $636. FY2003 final JOULE report says NIS has two greens (export and training) and one yellow (EIS for Russian Fuel Return). Protracted negotiations with Kazakhstan regarding long-term storage options delayed BN-350 program progress significantly. These negotiations were completed successfully in 2003 and a new baseline will be established in FY2005.

Evidence: PPBE; JOULE

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: YES Question Weight 20%

Explanation: Despite the challenges of decreased personnel and increased mission, NIS has been able to achieve its goals. The scope of NIS programs has grown, as recent revelations about the extent of Libya's clandestine weapons program and the A.Q. Khan network have demonstrated. For example, in FY2003, NIS began reviewing chemical, biological and missile export license applications in addition to nuclear, nearly doubling the caseload. However, NIS reduced the cost per technical review from $969 in FY2002 to $636 in FY2003 (a savings of 34%). Further improvements will reduce the cost-per-review to $430 in FY2009.

Evidence: PPBE; internal management council reviews

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: LARGE EXTENT Question Weight 20%

Explanation: The NSC completed its review of all USG nonproliferation programs in January 2002, and found that NIS programs were effectively run, achieving results, and that export control programs should be expanded.

Evidence: NSC Review

PART Performance Measurements

Program: Nonproliferation and International Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	100%	100%	73%	

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?

Answer: SMALL EXTENT

Question Weight 20%

Explanation: While independent evaluations have been conducted, they are somewhat dated. The NSC completed its review of all USG nonproliferation programs in 2002, and found that NIS programs were effectively run and achieving results. In its two reviews of export controls elements in 2001, the IG concluded that NIS is 'providing appropriate support to the Commerce Control List' and that the automated export controls system was 'adequate to..fulfilling its responsibilities.' Two recommended improvements to the system have been made.

Evidence: NSC Review (2002), IG reports cited in Q2.6

PART Performance Measurements

Program: Nonproliferation and International Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	100%	100%	73%	

Measure: Cumulative percentage of 5716 kg of globally targeted sensitive nuclear material secured at civilian sites (e.g. RRRFR, BN-350, non-weapons states)

Additional Information:

Year	Target	Actual
2002	New	9%
2003	New	10%
2004	15%	
2006	20%	
2008	75%	
2010	80%	
2019	100%	

Measure Term: Long-term

Measure: Cumulative percentage of 98 targeted research/test reactors converted from Highly Enriched Uranium to Low Enriched Uranium fuel.

Additional Information:

Year	Target	Actual
2002	40%	40%
2003	45%	45%
2004	50%	
2005	55%	
2006	60%	
2007	65%	

Measure Term: Long-term

Program: Nonproliferation and International Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	100%	100%	73%	

2009	75%
2014	100%

Measure: Cumulative number of WMD nonproliferation experts trained since 9/11/01 (e.g. IAEA inspectors, export control officers, etc.)

Additional Information:

Measure Term: Long-term

Year	Target	Actual
2002	New	1086
2003	New	3095
2004	4400	
2005	5500	
2006	7000	
2007	8400	
2009	11000	
2011	13000	

Measure: Annual average cost per review of nuclear, chemical and biological export license applications

Additional Information:

Measure Term: Annual

Year	Target	Actual
2002	New	$969
2003	New	$636
2004	$450	

Program: Nonproliferation and International Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	100%	100%	73%	

2005	$450
2006	$430
2007	$430
2009	$430
2011	$420

OMB Program Assessment Rating Tool (PART)

Research & Development Programs

Name of Program: Nuclear Energy Research Initiative

Section I: Program Purpose & Design (Yes,No, N/A)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Is the program purpose clear?*	Yes	This program addresses expanding U.S. nuclear power generation by enhancing the performance of light-water reactors and addressing the barriers to advanced reactors that provide greater sustainability, increased safety and reliability, improved economics, and greater proliferation resistance and physical protection.	National Energy Policy; Secretary Abraham statements; Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002); FY 2004 Budget.	17%	0.2
2	*Does the program address a specific interest, problem or need?*	Yes	The program addresses the need defined in the *National Energy Policy* to expand nuclear power generation in the United States. This goal is supported by leveraging R&D investment through international collaborative efforts.	National Energy Policy; Secretary Abraham statements; Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002); FY 2004 Budget.	17%	0.2
3	*Is the program designed to make a unique contribution in addressing the interest, problem or need (i.e., not needlessly redundant of any other Federal, state, local or private efforts)?*	Yes	In addition to merit-based, peer-reviewed project selection process, the program management team evaluates the projects with respect to other R&D being conducted within the Department to prevent redundancies.	Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002)	17%	0.2
4	*Is the program optimally designed to address the interest, problem or need?*	Yes	Consistent with the recommendations of the PCAST, program is structured to solicit the best investigator-initiated, innovative proposals to address the major barriers to expanding nuclear generation in the U.S. and internationally. The Nuclear Energy Research Advisory Committee (NERAC) provides close oversight of the program.	1997 PCAST report on Federal Energy R&D for the Challenges of the 21st Century; 1999 PCAST report on the Federal Role in International Cooperation on Energy Innovation; Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002); FY 2004 Budget.	17%	0.2

5 (RD 1)	*Does the program effectively articulate potential public benefits?*	Yes	The program is designed to address the major barriers - economics, waste management, and proliferation resistance - to expanding nuclear power generation in the United States and internationally. Clear public benefits will be realized with successful implementation of the program.	National Energy Policy; Secretary Abraham statements; Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002)	17%	0.2
6 (RD 2)	*If an industry-related problem, can the program explain how the market fails to motivate private investment?*	Yes	Private industry is unable to finance long-term, high-risk nuclear R&D programs; the potential public and environmental benefits from the program justify government sponsorship of these high-risk, leading-edge technologies.	National Energy Policy; 1997 PCAST report on Federal Energy R&D for the Challenges of the 21st Century; International Nuclear Energy Research Initiative Program Plan (September 2002); Nuclear Energy Research Initiative Program Plan (September 2002).	17%	0.2
Total Section Score					**100%**	**100%**

Section II: Strategic Planning (Yes,No, N/A)						
	Questions	**Ans.**	**Explanation**	**Evidence/Data**	**Weighting**	**Weighted Score**
1	*Does the program have a limited number of specific, ambitious long-term performance goals that focus on outcomes and meaningfully reflect the purpose of the program?*	Yes	The long-term, ambitious goals of the program are to enhance the performance of light-water reactors and address the barriers to advanced reactors that provide greater sustainability, increased safety and reliability, improved economics, and greater proliferation resistance and physical protection.	Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002); 1997 PCAST report on Federal Energy R&D for the Challenges of the 21st Century; 1999 PCAST report on the Federal Role in International Cooperation on Energy Innovation.	12%	0.1
2	*Does the program have a limited number of annual performance goals that demonstrate progress toward achieving the long-term goals?*	No	The program funds projects annually through grants and cooperative agreements for up to three years. It evaluates projects quarterly to monitor progress and annually to determine qualification for continued funding. Research projects not meeting the established criteria at the specific decision points will be subject to termination via provisions included in the awarded contract. Projects' contributions to long-term goals are not quantified and measurable.	Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002).	11%	0.0
3	*Do all partners (grantees, sub-grantees, contractors, etc.) support program planning efforts by committing to the annual and/or long-term goals of the program?*	Yes	Program funds investigator-initiated, innovative R&D projects annually through grants and cooperative agreements for up to three years with specific milestones and deliverables. Projects are selected based on their contribution toward annual and long-term program goals.	Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002).	11%	0.1
4	*Does the program collaborate and coordinate effectively with related programs that share similar goals and objectives?*	Yes	The program is coordinated with other DOE nuclear energy R&D programs including Nuclear Power 2010, Gen IV, and Advanced Fuel Cycle Initiative to capitalize on existing synergies and to ensure no duplication of effort. In addition, the program is coordinated with the NRC and the State Department, however, these agencies do not have programs with similar goals and objectives.	FY 2003 and FY 2004 Budgets; Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002)	11%	0.1

5	*Are independent and quality evaluations of sufficient scope conducted on a regular basis or as needed to fill gaps in performance information to support program improvements and evaluate effectiveness?*	No	NERAC's Subcommittee on Long-Term Planning for Nuclear Energy Research, composed of experts in the nuclear field from industry, laboratories, and universities, provides close oversight of program activities, and Subcommittee staff participate in annual project evaluations. NERAC will establish an independent program evaluation.	Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002); Charter for the NERAC Long-Term Planning Subcommittee and associated meeting reports.	11%	0.0
6	*Is the program budget aligned with the program goals in such a way that the impact of funding, policy, and legislative changes on performance is readily known?*	No	The program budget request, which focuses on output measures, e.g., projects initiated and completed, does not show contribution to achievement of long-term goals	FY 2003 and FY 2004 Budgets; Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002)	11%	0.0
7	*Has the program taken meaningful steps to address its strategic planning deficiencies?*	No	NERAC's Subcommittee on Long-Term Planning for Nuclear Energy Research provides close oversight of program activities. Further work is needed to link measure individual project contributions to long-term goals.	Charter for the NERAC Long-Term Planning Subcommittee and associated meeting reports.	11%	0.0
8 (RD 1)	*Is evaluation of the program's continuing relevance to mission, fields of science, and other "customer" needs conducted on a regular basis?*	Yes	The Subcommittee on Long-Term Planning for Nuclear Energy Research of DOE's independent Nuclear Energy Research Advisory Committee provides close oversight of all program activities.	Charter for the NERAC Long-Term Planning Subcommittee and associated meeting reports.	11%	0.1
9 (RD 2)	*Has the program identified clear priorities?*	Yes	The program solicits investigator-initiated proposals on identified areas of research, i.e. advanced reactor systems, advanced fuels/fuel cycles, fundamental science, and nuclear production of hydrogen. The program is reviewed, at a minimum, on an annual basis to review the technology areas to be addressed by the program.	Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002)	11%	0.1
Total Section Score					**100%**	**56%**

Section III: Program Management (Yes,No, N/A)						
	Questions	**Ans.**	**Explanation**	**Evidence/Data**	**Weighting**	**Weighted Score**
1	*Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?*	Yes	Through quarterly and annual internal and independent reviews, the Department monitors program performance and uses the information to manage the program, improve performance, and determine future funding requirements.	FY 2003 and FY 2004 Budgets; Annual DOE Performance Plan and Performance Appraisal Form; Quarterly updates to the Annual Performance Plan.	10%	0.1
2	*Are Federal managers and program partners (grantees, subgrantees, contractors, etc.) held accountable for cost, schedule and performance results?*	Yes	Program performance goals are incorporated into the annual performance plans for the federal senior manager and federal program manager. Program performance goals are also incorporated into the contractor's annual performance plan.	Annual DOE Performance Plan and Performance Appraisal Form; NE program guidance memos and associated Statements of Work	9%	0.1
3	*Are all funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?*	Yes	The program is executed in conformance with Congressional language and established Program Plan.	NE program guidance memos and associated Statements of Work; NE's Monthly Obligation and Cost and Performance Tracking Report; Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002)	9%	0.1
4	*Does the program have incentives and procedures (e.g., competitive sourcing/cost comparisons, IT improvements) to measure and achieve efficiencies and cost effectiveness in program execution?*	Yes	The program involves investigator-initiated, merit-based, peer-reviewed R&D projects for which such incentives and procedures cannot be readily developed; however, the award process is managed by the Oak Ridge Operations office, which is subject to reviews for efficiency and cost effectiveness.	Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002).	9%	0.1
5	*Does the agency estimate and budget for the full annual costs of operating the program (including all administrative costs and allocated overhead) so that program performance changes are identified with changes in funding levels?*	No	Salaries, benefits, retirement funding, and other administrative expenses to support the program are included in a separate budgetary line-item ("Program Direction"). These costs are not allocated to the various programs they support.	FY 2004 Budget.	9%	0.0
6	*Does the program use strong financial management practices?*	Yes	Internal controls are used in the execution of the program.	Annual Reporting for Federal Managers Financial Integrity Act	9%	0.1

7	*Has the program taken meaningful steps to address its management deficiencies?*	Yes	The Subcommittee on Long-Term Planning for Nuclear Energy Research of DOE's independent Nuclear Energy Research Advisory Committee provides close oversight of all program activities. No management deficiencies have been identified.	Charter for the NERAC Long-Term Planning Subcommittee and associated meeting reports.	9%	0.1
8 (RD 1)	*Does the program allocate funds through a competitive, merit-based process, or, if not, does it justify funding methods and document how quality is maintained?*	Yes	Awards are based on the results of the merit-based, peer-reviewed evaluations of planned scope and technical competence of proposals.	Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002); FY 2003 and FY 2004 Budget Requests.	9%	0.1
9 (RD 2)	*Does competition encourage the participation of new/first-time performers through a fair and open application process?*	Yes	Awards are based on the results of the merit-based, peer-reviewed evaluations of planned scope and technical competence of proposals.	Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002); FY 2003 and FY 2004 Budget Requests.	9%	0.1
10 (RD 3)	*Does the program adequately define appropriate termination points and other decision points?*	Yes	Awards are made for one - three years and funded annually subject to satifactory project performance.	Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002); FY 2003 and FY 2004s.	9%	0.1
11 (RD 4)	*If the program includes technology development or construction or operation of a facility, does the program clearly define deliverables and required capability/performance characteristics and appropriate, credible cost and schedule goals?*	Yes	The program conducts technology development projects that clearly define scope, deliverables, end products, and planned cost and schedule.	FY 2002 NERI soliciation; NERI Program Plan (September 2002).	9%	0.1
Total Section Score					**100%**	**92%**

Section IV: Program Results (Yes, Large Extent, Small Extent, No)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Has the program demonstrated adequate progress in achieving its long-term outcome goal(s)?*	Large Extent	The program has made progress with the completion of NERI projects and ongoing NERI and I-NERI projects. Further effort is needed to assess individual projects' contributions to long-term goals.	NERI Annual Report; I-NERI Research Abstracts report; FY 2003 and 2004 Budgets; Nuclear Energy Research Initiative Program Plan; International Nuclear Energy Research Initiative Program Plan; NERI Annual Report 2001.	40%	0.3

Long-Term Goal I:	Remove barriers to the deployment of advanced nuclear energy systems that provide significant improvements in sustainability, proliferation and terrorism resistance, safety and reliability, and economics. Specific outcome measures are under development.
Target:	In FY 2002, continue projects initiated in FY 2000 and FY 2001. In FY 2002, initiate approximately 24 neew NERI projects. In FY 2002, complete 25 NERI R&D projects. In FY 2003, coplete 22 NERI R&D projects. In FY 2003, establish bilateral I-NERI agreements and initiate new projects with Brazil, Canada, and the Republic of South Africa; also initiate new projets wht the Republic of Korea. In FY 2004, coplete 12 projects. In FY 2004, complete 3 I-NERI projects initiated in FY 2001.
Actual Progress achieved toward goal:	Completed 25 NERI projects and continued projects initiated in FY 2000 and FY 2001. Initiated 24 new NERI projects. Initiated 9 new I-NERI projects--two with France, six with Korea, and one with the Nuclear Energy Agency.
Long-Term Goal II:	
Target:	
Actual Progress achieved toward goal:	
Long-Term Goal III:	
Target:	
Actual Progress achieved toward goal:	

2	*Does the program (including program partners) achieve its annual performance goals?*	No	Outcome measures are needed that can be used to determine individual projects' contributions to NERI's long-term goals.	2002 & 2003 Budget Requests; Nuclear Energy Research Initiative Program Plan; International Nuclear Energy Research Initiative Program Plan; NERI Annual Report 2001.	40%	0.0
	Key Goal I: Measures under development. Performance Target: Actual Performance:					
	Key Goal II: Performance Target: Actual Performance:					
	Key Goal III: Performance Target: Actual Performance:					
3	*Does the program demonstrate improved efficiencies and cost effectiveness in achieving program goals each year?*	N/A	Projects are managed independently of one another and only last 1-3 years.		0%	
4	*Does the performance of this program compare favorably to other programs with similar purpose and goals?*	N/A	Program is unique (innovative, investigator-initiated R&D), and its performance therefore can not be compared to that of other programs..		0%	
5	*Do independent and quality evaluations of this program indicate that the program is effective and achieving results?*	No	DOE's independent Nuclear Energy Research Advisory Committee provides reviews and oversight of program activities. These reviews have confirmed that the program is effective in achieving program goals. Independent program evaluations have yet to begin.	Nuclear Energy Research Initiative Program Plan (September 2002); International Nuclear Energy Research Initiative Program Plan (September 2002)	20%	0.0
	If the program includes construction of a facility, were program goals achieved within budgeted costs and established schedules?	N/A	Facility funding has been insignificant to date.		0%	
Total Section Score					**100%**	**26%**

PART Performance Measurements

Program: Nuclear Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The mission of the Nuclear Physics (NP) program is to foster fundamental research in nuclear physics that will provide new insights and advance our knowledge on the nature of matter and energy and develop the scientific knowledge, technologies and trained manpower that are needed to underpin DOE missions.

Evidence: FY04 Budget Request (www.mbe.doe.gov/budget/04budget/index.htm). Public Law 95-91 that established the Department of Energy (DOE). The NP Mission has been validated by the Nuclear Science Advisory Committee (NSAC).

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The NP program addresses five key questions:(1) What is the structure of the nucleon? (2) What is the structure of nucleonic matter? (3) What are the properties of hot nuclear matter? (4) What is the nuclear microphysics of the universe? (5) What is to be the new Standard Model?

Evidence: NSAC Long-Range Plan (www.sc.doe.gov/production/henp/np/nsac/docs/LRP_5547_FINAL.pdf) .

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The Office of Science (SC) NP program is the principal source of federal funding for basic, long-term research in Nuclear Physics.

Evidence: More than 90% of U.S. Nuclear Physics research is supported by this program. The remaining 10% is supported by the National Science Foundation (NSF) and coordinated through NSAC - a joint advisory committee.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The NP program is based on competitive merit review, independent expert advice, and community planning. However, a Committee of Visitors (COV) has yet to validate the merit review system.

Evidence: NSAC reviews and reports (www.sc.doe.gov/production/henp/np/nsac/nsac.html). Program files.

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: NSAC ensures that input from the nuclear physics research community is regularly gathered to assess new opportunities, priorities, and progress of the program. Peer review is used to assess the relevance and quality of each project.

Evidence: NSAC reviews and reports (www.sc.doe.gov/production/henp/np/nsac/nsac.html). Program files.

PART Performance Measurements

Program: Nuclear Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	67%	87%	

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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2.1 **Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?** Answer: YES Question Weight:10%

Explanation: The four long-term measures reflect the key scientific drivers that the U.S. nuclear physics community has outlined for the field for roughly the next decade. The program has defined "successful" and "minimally effective" performance milestones for each measure, and an external panel will assess interim program performance, and update the measures as necessary, every five years. It is inappropriate for a basic research program such as this one to have a quantitative long-term efficiency measure.

Evidence: NSAC Long-Range Plan (www.sc.doe.gov/production/henp/np/nsac/docs/LRP_5547_FINAL.pdf). National Research Council report, "Nuclear Physics: The Core of Matter, the Fuel of Stars" (books.nap.edu/catalog/6288.html). A description of the "successful" and "minimally effective" milestones, and an explanation of the relevance of these measures to the field can be found on the SC Web site (www.sc.doe.gov/measures).

2.2 **Does the program have ambitious targets and timeframes for its long-term measures?** Answer: YES Question Weight:10%

Explanation: NSAC has reviewed the new long-term measures for this program and found them to be ambitious and meaningful indicators of progress in the field. The external reviews described in 2.1 will update the measures, targets, and timeframes on an interim basis.

Evidence: Letter from NSAC chair regarding review of long-term measures.

2.3 **Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals?** Answer: YES Question Weight:10%

Explanation: The quantitative annual output measures for facility construction and operations, and the data delivery goals for the program's major facilities, serve as proxies for progress, because the efficient on-cost and on-schedule delivery of scientific data from these large facilities provides a critical resource necessary for continuing scientific discoveries that are directly connected to the long term goals of the program.

Evidence: FY04 Budget Request. Website with further information, including explanation of data delivery measures (www.sc.doe.gov/measures).

2.4 **Does the program have baselines and ambitious targets for its annual measures?** Answer: YES Question Weight:10%

Explanation: All of the annual measures have baseline data (FY01 and/or FY02) that demonstrate that the targets are ambitious, yet realistic. A 20-30 percent tolerance is used to guard against facilities unwisely stressing hardware near the end of the fiscal year.

Evidence: FY04 Budget Request. Website with further information (www.sc.doe.gov/measures). Construction variance target of <10% comes from OMB Circular A-11, especially Capital Programming Guide supplement.

PART Performance Measurements

Program: Nuclear Physics
Agency: Department of Energy
Bureau: Office of Science
Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Effective
100%	80%	67%	87%	

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: NO Question Weight:10%

Explanation: A limited FY03 audit by the DOE Inspector General (IG) found that "performance expectations generally flowed down into the scope of work at the national laboratories." For individual grantees, NP uses general solicitations that do not explicitly include program goals.

Evidence: Memo from the DOE IG to the Director of the Office of Science. M&O contract performance evaluation provisions (e.g., Appendix B in contracts for Jefferson Lab, www.sura.org/DOE/m&o_contract.html; and, Brookhaven Lab, www.bnl.gov/prime/searchprime.asp). Example of recent general renewal solicitation (www.science.doe.gov/grants/Fr03-01.html).

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: All research projects undergo merit review; ongoing grants are reviewed triennially; major facilities are reviewed annually; and, construction projects are reviewed quarterly. NSAC produces planning documents and assessments of various components of the NP program on a rotating basis. NP is working to begin a Committee of Visitors (COV) review process for the program on a triennial basis, and expects the first review in 2003.

Evidence: SC Merit Review guidelines (www.sc.doe.gov/production/grants/merit.html). Program files, including Lehman review reports and program advisory committee reports. NSAC reports, including Long-Range Plan, reviews of Low and Medium Energy subprograms, and recent charge letter to NSAC for review of education, theory, and neutron program elements (www.sc.doe.gov/production/henp/np/nsac/nsac.html). Letter from DOE to NSAC establishing a regular evaluation process utilizing a COV.

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: DOE has not yet provided a budget request that adequately integrates performance information.

Evidence:

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: New performance measures and targets have been developed in coordination with OMB. A new COV process is being organized, with the first program review in 2003. The U.S. nuclear physics community has recently completed a long-range strategic plan for the field. As part of the SC strategic planning process, NSAC recently issued a 20-year facilities priority plan for NP.

Evidence: Letter from DOE to NSAC establishing a regular evaluation process utilizing a COV. NSAC Long-Range Plan (www.sc.doe.gov/production/henp/np/nsac/docs/LRP_5547_FINAL.pdf).

PART Performance Measurements

Program: Nuclear Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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2.CA1 **Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity?** Answer: YES Question Weight:10%

Explanation: NSAC provides advice to the program on alternative approaches to addressing key physics questions. The program relies on the Lehman review process and program reviews to monitor construction projects. Facility scientific program advisory committees help prioritize facility research. The program does not currently support a capital project for which a Exhibit 300 is required, so no PART-level project-specific alternatives analyses have been necessary.

Evidence: NSAC reviews and reports (www.sc.doe.gov/production/henp/np/nsac/nsac.html). Program files, including Lehman reports and program advisory committee reports.

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NA Question Weight: 0%

Explanation: This is a basic R&D program, and the question is intended for industry-related R&D programs.

Evidence:

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: Although not visible outside DOE, internal SC budget formulation practices include a priority ranking process. The NSAC Long-Range Plan identified strategic priorities for the U.S. nuclear physics community. Previous regular NSAC reviews of subprograms make recommendations, including constant-level-funding scenarios and shutting down facilities. Such reviews prove useful for program planning and should serve as a model for responsible committee advice.

Evidence: NSAC Long-Range Plan, Low Energy, and Medium Energy reviews (www.sc.doe.gov/production/henp/np/nsac/nsac.html).

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: NO Question Weight: 8%

Explanation: A great deal of project performance information collected via Lehman facility operations reviews, annual facility reviews, and management changes are made in response to these reviews. The program collects performance data from individual grantees and national labs, and uses peer review as a type of standardized quality control at the individual grant level. However, there is not yet a systematic process, such as regular COV evaluations, that conducts research portfolio quality and process validations. While DOE IG contracts with an outside auditor to check internal controls for performance reporting, and the IG periodically conducts limited reviews of performance measurement in SC, it is not clear that these audits check the credibility of performance data reported by DOE contractors.

Evidence: Program files, including Lehman reviews and subprogram reviews. Reporting requirements for grants (www.science.doe.gov/production/grants/605-19.html).

PART Performance Measurements

Program: Nuclear Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	67%	87%	

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight: 8%

Explanation: Senior Executive Service (SES) and Program Manager Performance Plans are directly linked to program goals. The Management and Operations contracts for the Labs and Facilities include performance measures linked to program goals. Research funding requirements ensure consideration of past performance.

Evidence: Program and personnel files, including grant renewal statistics. Performance-based contract fee evaluation provisions (e.g., Jefferson Lab, www.sura.org/DOE/m&o_contract.html; and, Brookhaven Lab, www.bnl.gov/prime/searchprime.asp). 10 CFR 605 (www.science.doe.gov/production/grants/605index.html).

3.3 **Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?** Answer: YES Question Weight: 8%

Explanation: Using DOE's monthly accounting reports, SC personnel monitor progress toward obligating funds consistent with an annual plan that is prepared at the beginning of the fiscal year to ensure alignment with appropriated purposes.

Evidence: SC programs consistently obligate more than 99.5% of available funds. Program files. Audit reports.

3.4 **Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?** Answer: YES Question Weight: 8%

Explanation: SC is currently undergoing a reengineering exercise aimed at flattening organizational structure and improving program effectiveness. The program collects the data necessary to track the two "efficiency" measures for facility construction and operations management.

Evidence: SC reengineering information (www.screstruct.doe.gov). Program files.

3.5 **Does the program collaborate and coordinate effectively with related programs?** Answer: YES Question Weight: 8%

Explanation: The program is well coordinated with a similar program at NSF through a joint Advisory Committee (NSAC) that has produced a recent coordinated strategic plan for nuclear physics. Several experiments at large facilities are jointly funded with NSF and/or international partners. The program has yet to demonstrate adequate coordination and collaboration with other countries (namely Germany and Japan) on future rare isotope accelerators.

Evidence: NSAC Long-Range Plan (www.sc.doe.gov/production/henp/np/nsac/docs/LRP_5547_FINAL.pdf), including chapter on international collaboration. List of joint projects with other offices/agencies/countries.

3.6 **Does the program use strong financial management practices?** Answer: YES Question Weight: 8%

Explanation: SC staff execute the NP program consistent with established DOE budget and accounting policies and practices. These policies have been reviewed by external groups and modified as required to reflect the latest government standards.

Evidence: Various Departmental manuals. Program files. Audit reports.

PART Performance Measurements

Program: Nuclear Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	67%	87%	

Type(s): Research and Development Competitive Grant Capital Assets and Service Acquisition

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3.7 **Has the program taken meaningful steps to address its management deficiencies?** Answer: YES Question Weight: 8%

Explanation: SC is currently reengineering to improve program management efficiency. A Committee of Visitors (COV) process is being implemented. A layer of management above NP in the SC structure was recently removed.

Evidence: SC reengineering information (www.screstruct.doe.gov). Program files.

3.CA1 **Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals?** Answer: YES Question Weight: 8%

Explanation: Community input, through NSAC, is gathered on what capabilities are needed to address scientific opportunities. The NP program documents the capabilities and characteristics of new facilities at critical decision points that are reviewed by an independent Lehman review. Progress is tracked quarterly through program reviews and annually through Lehman reviews.

Evidence: NSAC reviews, including 1999 ISOL task force report (www.sc.doe.gov/production/henp/np/nsac/nsac.html). Program files, including Lehman operations review reports, and the STAR Barrel Electromagnetic Calorimeter Enhancement project mangagement plan.

3.CO1 **Are grants awarded based on a clear competitive process that includes a qualified assessment of merit?** Answer: NO Question Weight: 8%

Explanation: First time grant applications are encouraged in all Requests For Proposals. The NP Program has a specific solicitation for the Outstanding Junior Investigator (OJI) program, in which awards are made to young non-tenured faculty. Merit review guides all funding decisions. However, the award and merit review process has not yet been validated by a COV.

Evidence: In FY 2002 the NP Program received 31 new research proposals, of which 8 (26%) were approved for funding. 5 OJI awards were made. "How to apply" (www.science.doe.gov/production/grants/guide.html).

3.CO2 **Does the program have oversight practices that provide sufficient knowledge of grantee activities?** Answer: YES Question Weight: 8%

Explanation: In addition to grantee progress reports, program managers stay in contact with grantees through e-mail and telephone, conduct program reviews and site visits .

Evidence: Program files, including a list of multiple annual site visits to lab and university groups.

3.CO3 **Does the program collect grantee performance data on an annual basis and make it available to the public in a transparent and meaningful manner?** Answer: NO Question Weight: 8%

Explanation: In accordance with DOE Order 241.1A, the final and annual technical reports of program grantees are made publicly available on the web through the Office of Scientific and Technical Information's "Information Bridge". However, program-level aggregate data on the impact of the grants program is not adequately communicated in the annual DOE Performance and Accountability report.

Evidence: DOE Order 241.1A. Information Bridge (www.osti.gov/bridge/). FY02 Performance and Accountability Report (www.mbe.doe.gov/stratmgt/doe02rpt.pdf).

PART Performance Measurements

Program: Nuclear Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: NO Question Weight: 8%

Explanation: Priorities are determined in accord with guidance from the NSAC plans and reviews. Unsolicited field work proposals from the Federal Labs are merit reviewed, but not competed. The funds for research programs and scientific user facilities at the Federal Labs are allocated through a limited competition analogous process to the unlimited process outlined in 10 CFR 605. Lehman and other peer reviews of user facilities are conducted annually. However, the quality of the research funded via this process has not yet been validated by a COV.

Evidence: NSAC Long-Range Plan (www.sc.doe.gov/production/henp/np/nsac/docs/LRP_5547_FINAL.pdf). SC Merit Review procedures. (www.sc.doe.gov/production/grants/merit.html) 10 CFR 605 (www.science.doe.gov/production/grants/605index.html) Separate university and lab solicitations for RIA R&D. Program files, including Lehman reviews of operation at major facilities, and a Jefferson Lab facility peer review.

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: LARGE EXTENT Question Weight 20%

Explanation: NSAC will evaluate progress toward the long-term performance measures every five years. NSAC and National Research Council (NRC) reviews of progress in the program over the past decade have found good scientific progress.

Evidence: NSAC Long-Range Plan ("Recent accomplishments, p. 4, www.sc.doe.gov/production/henp/np/nsac/docs/LRP_5547_FINAL.pdf). NRC Decade Survey report ("Schiffer Report," Introduction, www.nap.edu/catalog/6288.html)

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: LARGE EXTENT Question Weight 20%

Explanation: NP has met all but one of its annual performance goals in FY02. The one goal, not timely met, resulted in no adverse effect on the facility.

Evidence: FY02 Performance and Accountability Report (www.mbe.doe.gov/ stratmgt/doe02rpt.pdf). FY04 Annual Performance Plan (www.mbe.doe.gov/budget/04budget/content/perfplan/perfplan.pdf).

4.3 **Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?** Answer: YES Question Weight 20%

Explanation: The recent history of tracking the two "efficiency" measures for facility construction and operation management shows that, on average, the program continues to meet expectations.

Evidence: FY04 Budget Request. Program files.

PART Performance Measurements

Program: Nuclear Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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4.4 **Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?** Answer: NA Question Weight: 0%

Explanation: The DOE supports over 90% of the U.S. nuclear physics basic research program via this program; the balance is supported by the NSF. The two programs are highly coordinated including a common Advisory Committee (NSAC). A significant number of the projects have international collaborations. An international benchmarking study has not been done, due in part to its questionable value.

Evidence: Program files, including list of international projects. "International collaborations and cooperation" chapter in NSAC Long-Range Plan (www.sc.doe.gov/production/henp/np/nsac/docs/LRP_5547_FINAL.pdf)

4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: YES Question Weight20%

Explanation: NSAC and of the major NP program elements have determined that the program is effective in achieving results. These reviews examine scientific progress against the long-range plan, assess scientific opportunities, and recommend priorities based upon realistic budget profiles. Program advisory committees and Lehman facility operations reviews are generally favorable.

Evidence: NSAC reports, including Low- and Medium Energy programs reviews (www.sc.doe.gov/production/henp/np/nsac/nsac.html). Program files, including Lehman reviews. Also see evidence from Question 4.1.

4.CA1 **Were program goals achieved within budgeted costs and established schedules?** Answer: YES Question Weight20%

Explanation: All NP construction/operation projects met cost and schedule performance goals during the first two quarters of FY03. No contingency remains in the FY04 data collection schedule for the new BLAST detector at MIT/Bates.

Evidence: FY02 Performance and Accountability Report (www.mbe.doe.gov/ stratmgt/doe02rpt.pdf). FY04 Annual Performance Plan (www.mbe.doe.gov/budget/04budget/content/perfplan/perfplan.pdf). List of FY03 quarterly milestones. Program files.

PART Performance Measurements

Program: Nuclear Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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Measure: Progress in realizing a quantitative understanding of the quark substructure of the proton, neutron, and simple nuclei by comparison of precision measurements of their fundamental properties with theoretical calculations. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a quinquennial basis.

Additional Information: An external panel will conduct reviews of progress every 5 years. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2007	Excellent		
2012	Excellent		
2017	Excellent		

Measure: Progress in searching for, and characterizing the properties of, the quark-gluon plasma by recreating brief, tiny samples of hot, dense nuclear matter. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a quinquennial basis.

Additional Information: An external panel will conduct reviews of progress every 5 years. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2007	Excellent		
2012	Excellent		
2017	Excellent		
2005			
2006			

PART Performance Measurements

Program: Nuclear Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

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Measure: Progress in investigating new regions of nuclear structure, studying interactions in nuclear matter like those occurring in neutron stars, and determining the reactions that created the nuclei of atomic elements inside stars and supernovae. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a quinquennial basis.

Additional Information: An external panel will conduct reviews of progress every 5 years. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2007	Excellent		
2012	Excellent		
2017	Excellent		

Measure: Progress in determining the fundamental properties of neutrinos and fundamental symmetries by using neutrinos from the sun and nuclear reactors and by using radioactive decay measurements. An independent expert panel will conduct a review and rate progress (excellent, adequate, poor) on a quinquennial basis.

Additional Information: An external panel will conduct reviews of progress every 5 years. See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Long-term
2007	Excellent		
2012	Excellent		
2017	Excellent		

Measure: Weighted average number (within 20%) of billions of events recorded by experiments in Hall A, Hall B, and Hall C, respectively, at the Continuous Electron Beam Accelerator Facility. (Targets are set in part by the funding requested/appropriated during that fiscal year. The ambitiousness of the target error bar of 20% is currently under review by OMB.)

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Annual
2001		3.3, 9.9, 2.2	
2002		2.8, 9.9, 2.7	

Program: Nuclear Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

2003		3.0, 9.0, 2.6
2004	2.4, 7.2, 2.1	
2005	2.9, 9.6, 2.8	
2006		

Measure: Weighted average number (within 30%) of millions of heavy-ion collision events recorded by the PHENIX and STAR detectors, respectively, at the Relativistic Heavy Ion Collider. (Targets are set in part by the funding requested/appropriated during that fiscal year. The ambitiousness of the target error bar of 30% is currently under review by OMB.)

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Annual
2002		170, 8.2	
2003		5500, 38	
2004	900, 40		
2005	1800, 40		
2006			

Measure: Weighted average number (within 20%) of billions of events recorded at the Argonne Tandem Linac Accelerator System and Holifield Radioactive Ion Beam facilities, respectively. (Targets are set in part by the funding requested/appropriated during that fiscal year. The ambitiousness of the target error bar of 20% is currently under review by OMB.)

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual	**Measure Term:** Annual
2001		7.7, 3.4	
2002		2.5, 5.4	

Program: Nuclear Physics
Agency: Department of Energy
Bureau: Office of Science

Section Scores				Rating
1	2	3	4	Effective
100%	80%	67%	87%	

Type(s): Research and Development | Competitive Grant | Capital Assets and Service Acquisition

2003		39, 2.1
2004	25, 5.3	
2005	25, 5.3	

Measure: Average achieved operation time of the scientific user facilities as a percentage of the total scheduled annual operation time.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual
2001	>80%	85%
2002	>80%	89%
2003	>80%	88%
2004	>80%	
2005	>80%	

Measure Term: Annual (Efficiency Measure)

Measure: Cost-weighted mean percent variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects.

Additional Information: See www.sc.doe.gov/measures for more information.

Year	Target	Actual
2004	<10%	
2005	<10%	
2006	<10%	

Measure Term: Annual (Efficiency Measure)

PART Performance Measurements

Program: Nuclear Power 2010
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
100%	89%	88%	45%	

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The purpose of the program is to expand U.S. nuclear power generation as recommended in the National Energy Policy. The actions outlined in the FY 2005 Budget request implement the recommendations of the Nuclear Energy Research Advisory Committee (NERAC) in the Near-Term Deployment Roadmap.

Evidence: National Energy Policy, FY 2005 Budget request and "A Roadmap to Deploy New Nuclear Power Plants in the U.S. by 2010." (DOE, Oct. 31, 2001), Nuclear Power 2010 Program Plan (June 2003)

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The National Energy Policy recommends expansion of nuclear energy as a major component of a national energy policy.

Evidence: "National Energy Policy," May 2001; "A Roadmap to Deploy New Nuclear Power Plants in the U.S. by 2010." (DOE, Oct. 31, 2001), Nuclear Power 2010 Program Plan (June 2003)

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The Program is based on the detailed "Roadmap" recommendations of the Near-Term Deployment Group, an independent industry, academia and laboratory group, and approved by NERAC. Program activities are coordinated with industry organizations such as NEI and EPRI and the the regulator -- NRC, to ensure there is no duplication. Implementation of program activities are cost-shared with specific industry organizations including power generation companies. Nuclear Energy Programs have discrete objectives. The near-term deployment of existing technologies falls under the Nuclear Power 2010 initiative. The deployment of next-generation technologies from 2015-2030 falls under Generation IV Nuclear Energy Systems Initiative.

Evidence: "A Roadmap to Deploy New Nuclear Power Plants in the U.S. by 2010." (DOE, Oct. 31, 2001), Nuclear Power 2010 Program Plan (June 2003).

PART Performance Measurements

Program: Nuclear Power 2010
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
100%	89%	88%	45%	

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight: 20%

Explanation: The NP2010 program is designed to address the regulatory and technical risks affecting near-term deployment of new nuclear power plants in the United States.. The program design is based on input from industry, academia, and national laboratories as documented in the near-term deployment roadmap. A major portion of the Program activities are cost-shared with nuclear industry participants (e.g. nuclear utilities, reactor vendors and architect engineers/constructors) to maintain overall program effectiveness and efficiency.

Evidence: "A Roadmap to Deploy new Nuclear Power Plants in the U.S. by 2010." (DOE, Oct. 31, 2001); FY 2005 Budget request; Nuclear Power 2010 Program Plan (June 2003). Three cost-shared cooperative agreements for Early Site Permit regulatory demonstration projects have been established with three nuclear power companies. An additional cost-shared cooperative agreement for a constructabiliy assessment of advanced reactor designs has been established with a joint team of 3 power companies. Lastly, the Department is in the process of establishing an additional industry cost-shared cooperative agreement with the Electric Power Research Institute (EPRI) for generic regulatory activities related to the combined Construction and Operating License (COL) regulatory demonstration. The NP 2010 industry cost-shared activities avoids duplication of effort and integrates industry input and cost-shared resources focused on achieving a common objective.

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight: 20%

Explanation: The program targets funding to only those activities which have direct support of power generation companies because only these companies would order and build new nuclear power plants.

Evidence: Cooperative agreements established with power generation companies: DE-FC07-02ID14411; DE-FC07-02ID14412; DE-FC07-02ID14414; DE-FC07-03ID14492; Solicitation for New Nuclear Plant Licensing Demonstration Projects

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight: 11%

Explanation: Program goals are established in budget and program documents and are consistent with the recommended activities and actions outlined in the Roadmap.

Evidence: "A Roadmap to Deploy New Nuclear Power Plants in the U.S. by 2010." (DOE, Oct. 31, 2001); FY 2005 Budget request; NP2010 Program Plan (June 2003), FY 2004 Annual Performance Plan, FY 2003 Joule.

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight: 11%

Explanation: Program goals are established in budget and program documents consistent with the recommendations of Roadmap. Targets and timeframes are ambitious considering that no new nuclear power plant has been ordered in the past 30 years and Nuclear Regulatory Commission's new processes for licensing new plants have never been tested.

Evidence: "A Roadmap to Deploy New Nuclear Power Plants in the U.S. by 2010." (DOE, Oct. 31, 2001); FY 2005 Budget request; NP2010 Program Plan (June 2003), FY 2004 Annual Performance Plan, FY 2003 Joule.

PART Performance Measurements

Program: Nuclear Power 2010
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
100%	89%	88%	45%	

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:11%

Explanation: The program's established annual performance goals demonstrate a clear path to achieving long-term goals. Performance measures, timelines, definitions of success are provided.

Evidence: A Roadmap to Deploy New Nuclear Power Plants in the U.S. by 2010. (DOE, Oct. 31, 2001); FY 2005 Budget request; NP2010 Program Plan (June 2003).

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:11%

Explanation: The program's established annual performance goals demonstrate a clear path to achieving long-term goals. Performance measures, timelines, definitions of success are provided. The annual targets are ambitious considering that the Early Site Permit applications will be the first-ever to be submitted to the NRC which is still in the process of developing review guidance.

Evidence: A Roadmap to Deploy New Nuclear Power Plants in the U.S. by 2010. (DOE, Oct. 31, 2001); FY 2005 Budget request; NP2010 Program Plan (June 2003).

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: YES Question Weight:11%

Explanation: Government and industry are actively supporting program planning and execution. Industry is committing to the program on an incremental basis consistent with the program schedule. For example, cost-shared Early Site Permit (ESP) cooperative agreements have been established with three utility partners who are well on their way to completing the first-ever ESP applications scheduled to be submitted to NRC in FY 2003; a constructability study has been initiated with three utility partners to independently evaluate construction schedules for candidate advanced reactor plant designs. Projects are monitored through monthly and quarterly performance reports, participation in project meetings, and periodic project reviews. The contracts and cooperative agreements can be terminated if the progress is not sufficient or accountability is not demonstrated.

Evidence: "A Roadmap to Deploy new Nuclear Power Plants in the U.S. by 2010." (DOE, Oct. 31, 2001: pp. 36-42). DOE Press Release # PR-02-032, "The Business Case for New Nuclear Power Plants" (DOE, July 2002), Cooperative agreements:DE-FC07-02ID14411; DE-FC07-02ID14412; DE-FC07-02ID14414; DE-FC07-03ID14492; Monthly and Quarterly performance reports .

PART Performance Measurements

Program: Nuclear Power 2010
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
100%	89%	88%	45%	

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight: 11%

Explanation: The Department's independent advisory committee, Nuclear Energy Research Advisory Committee (NERAC), provides oversight of all NP 2010 program activities. NERAC subcommittees have held in-depth reviews of the NP 2010 program activities, however, NERAC was inactive throughout Fiscal Year 2003. To ensure the program is being executed effectively, an independent assessment being conducted by industry technical experts was initiated in August.

Evidence: The charter for NERAC authorized oversight of NP 2010 program activities. The oversight of the NP 2010 is documented in NERAC meeting minutes. Also, the Independent Program Review Assessment, described in the NP 2010 Program Review Plan, is underway and is scheduled for the assessment report to be completed by September 15, 2003.

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight: 11%

Explanation: Departmental budgets to date have not done this.

Evidence: FY 2003 and FY 2004 Budgets.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight: 11%

Explanation: The Department plans to adopt a format for its FY 2005 Budget Request that will clearly link budget and performance data in the context of its overall strategic plan.

Evidence: Draft FY 2003 Strategic Plan; draft FY 2005 budget request format.

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NA Question Weight: 0%

Explanation: This is the only program that seeks to achieve near-term deployment of new nuclear plants to reverse the trend over last 30 years. The program is working with industry in a cost-shared effort to demonstrate for the first time new licensing processes and development of advanced nuclear technologies which can compete in a deregulated market. There are no other programs with similar goals.

Evidence: FY 2005 Budget request; Nuclear Power 2010 Program Plan (June 2003); "A Roadmap to Deploy New Nuclear Power Plants in the U.S. by 2010" (October 2001).

PART Performance Measurements

Program: Nuclear Power 2010
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
100%	89%	88%	45%	

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:11%

Explanation: A clear set of time-phased priorities has been established for the NP2010 program outlined in the Roadmap and carried forward into the Program Plan. The endorsement of the Roadmap by DOE's independent Nuclear Energy Research Advisory Committee and continuing oversight by NERAC will help maintain program focus and priorities.

Evidence: A Roadmap to Deploy New Nuclear Power Plants in the U.S. by 2010. (DOE, Oct. 31, 2001); NP2010 Program Plan (June 2003) ; NERAC meeting reports.

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:12%

Explanation: The Department monitors program cost, technical, and schedule performance on a monthly, quarterly, and annual basis and uses the information in determining future funding requirements and managing the program and improving performance.

Evidence: FY 2003, FY 2004 Budgets and FY 2005 Budget request; Nuclear Power 2010 Program Plan (June 2003); Annual DOE Performance Plan and Performance Appraisal Form; Quarterly updates to the Annual Performance Plan, Reports from project performers.

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:12%

Explanation: All program participants are held accountable for program cost, schedule, and performance results. Program performance goals are incorporated into the annual performance plans for the federal senior manager and federal program manager. Performance objectives for each activity are incorporated in the appropriate guidance memoranda, cooperative agreements and contracts. Projects are monitored through monthly and quarterly performance reports, participation in project meetings, and periodic project reviews. The contracts and cooperative agreements can be terminated if the progress is not sufficient or accountability is not demonstrated.

Evidence: Annual DOE Performance Plan and Performance Appraisal Form; NE program guidance memos and associated Statements of Work; Cooperative Agreements and contracts. Monthly and Quarterly performance reports

3.3 **Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?** Answer: YES Question Weight:12%

Explanation: Funds are obligated in a timely manner and the program is executed in conformance with Congressional language and established program plan.

Evidence: NE program guidance memos and associated Statements of Work; NE's Monthly Obligation and Cost and Performance Tracking Report; Nuclear Power 2010 Program Plan (June 2003)

PART Performance Measurements

Program: Nuclear Power 2010
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
100%	89%	88%	45%	

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: NO Question Weight:12%

Explanation: The majority of program activities are competitively awarded and require industry cost share. Activities requiring unique national laboratory capabilities will not be competitively selected. However, incentives are included in participants' contracts although not on a program-specific basis.

Evidence: Nuclear Power 2010 Program Plan (June 2003) ; "A Roadmap to Deploy new Nuclear Power Plants in the U.S. by 2010" (October 2001). Contracts and award fee determinations for program participants.

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: NP2010 is coordinated with other NE programs including the Generation IV and Advanced Fuel Cycle Initiative. NE has solicited extensive industry (including NEI, EPRI) and interagency Nuclear Regulatory Commission (NRC) collaboration.

Evidence: A Roadmap to Deploy New Nuclear Power Plants in the U.S. by 2010. (DOE, Oct. 31, 2001); FY 2005 Budget request; NP2010 Program Plan (June 2003).

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: Internal controls are used in the execution of the program. The Department monitors program cost, technical, and schedule performance on a monthly, quarterly, and annual basis and uses the information in determining future funding requirements and managing the program and improving performance.

Evidence: Annual Reporting for Federal Managers Financial Integrity Act, Monthly Fin Plans, Guidance Memos, terms and conditions incorporated in cooperative agreements and contracts.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:12%

Explanation: No management deficiencies have been identified. DOE's independent Nuclear Energy Research Advisory Committee has provided close oversight of all NP2010 program activities. However, for Fiscal Year 2003 NERAC was not active. To ensure that the program does not have any management deficiencies, program managers enlisted a panel of industry experts to perform an Independent Program Assessment for FY 2003. The panel's purpose is to assess the Program's progress against established goals and industry developments.

Evidence: The charter for NERAC authorized oversight of NP 2010 program activities. The oversight of the NP 2010 is documented in NERAC meeting minutes. The Department monitors the program's cost, technical activities and schedule of performance on a monthly, quarterly, and annual basis and uses the information in determine future funding requirements, management of the program and to improve performance. In addition, an Independent Program Assessment (refer to the NP2010 Program Review Plan) was initiated in August with a completion date of September 15, 2003.

PART Performance Measurements

Program: Nuclear Power 2010
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
100%	89%	88%	45%	

3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: YES Question Weight:12%

Explanation: Program plan and budget requests clearly indicate that competitive cost-shared procurements for industry activities will be used. Prioritization and resource allocations of program activities are documented in the Program Plan, which is revised annually, and are to be evaluated in planned annual assessments.

Evidence:

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: LARGE EXTENT Question Weight33%

Explanation: Although program is in an early stage, measurable progress has been made. The program is on track in achieving its long-term performance goals. Annual performance measures and targets are being achieved to a large extent.

Evidence: "A Roadmap to Deploy New Nuclear Power Plants in the U.S. by 2010' (DOE, Oct. 31, 2001); Early Site Permit (ESP) scoping studies for commercial and federal sites, cooperative agreements with power generation companies for ESP demonstration and for schedule and constructability assessment of candidate advanced plant designs; "The Business Case for New Nuclear Power Plants" (July 2002), Solicitation for New Nuclear Plant Licensing Demonstration Projects, Nuclear Power 2010 Program Plan (June 2003), Annual Performance and Accountability Reports.

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: LARGE EXTENT Question Weight33%

Explanation: FY 2002 performance goals have been met and FY 2003 goals are expected to be met. For FY 2003, a goal regarding competitively awarding at least one cooperative agreement for technology development and regulatory demonstration activities has been postponed to FY 2004. Since the industry has not yet made a technology selection for the next nuclear plant, DOE management has made a decision to delay the solicitation and only support the development of those designs that utilities are willing to build. A solicitation has been finalized and will allow the award to be made in FY 2004.

Evidence: Roadmap was issued. Cooperative agreements established with industry for ESP projects, Solicitation for New Nuclear Plant Licensing Demonstration project has been finalized. FY 2002 Annual Performance Plan; FY 2002 DOE Performance and Accountability Report; and FY 2003 Joule Performance Measures Tracking System .

4.3 **Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?** Answer: NO Question Weight: 0%

Explanation: Improvements in program efficiency have not yet been demonstrated.

Evidence:

PART Performance Measurements

Program: Nuclear Power 2010
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
100%	89%	88%	45%	

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NA Question Weight: 0%

Explanation: There are no comparable programs with the goal of stimulating the implementation of Gen III nuclear power generation. The program is coordinated with other nuclear energy R&D programs including the Generation IV Nuclear Energy Systems Initiative and Advanced Fuel Cycle Initiative to capitalize on existing synergies and to ensure no duplication of effort.

Evidence: Insufficient Information for comparison

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: NO Question Weight33%

Explanation: None completed to date.

Evidence: NERAC maintained independent oversight and consistent evaluation of the program from the inception of the Roadmap to Deploy New Nuclear Power Plants in the U.S. by 2010 through the initial implementation of the Nuclear Power 2010 program through FY 2002. However, in FY 2003 NERAC was inactive, (Refer to the NERAC meeting minutes) To ensure the NP 2010 program is being executed effectively, an independent panel of technical experts was formed by the program office to evaluate and assess the program beginning in August 2003. This expert panel is charged to address the appropriateness, adequacy and completeness of current and planned activities for achieving the NP 2010 program goals and objectives. The final report and recommendations is scheduled to be completed by September 15, 2003. (Refer to the NP 2010 Program Review Plan)

PART Performance Measurements

Program: Nuclear Power 2010
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
100%	89%	88%	45%	

Measure: Achieve an industry decision by January 2005 to order and build at least one new advanced nuclear power plant that will begin commercial operation by 2014.

Additional Information:

Year	Target	Actual	**Measure Term:** Long-term
2006	*		
2009	Plant ordered		
2010	Construction start		
2014	Plant Startup		

Measure: Increase the amount of industry cost share funding for Nuclear Power 2010 program activities from 44 percent in FY 2003 to a minimum of 80 percent of available program budget funding by 2005.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual

Measure: Demonstrate for the first time the combined Construction and Operating License (COL) process.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2004	Solicit	Done	
2005	Make Awards		

PART Performance Measurements

Program: Nuclear Power 2010
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Adequate
100%	89%	88%	45%	

Measure: Following a competitive process, award at least one industry cost-shared cooperative agreement for technology development and regulatory demonstration activities.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	1	0.5	

Measure: Support at least two Early Site Permit (ESP) applications for commercial reatcor sites to the NRC.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2003	ESPs awarded		
2006	****	****	

Measure: Complete at least two cooperative agreements with U.S. power generating companies to jointly proceed with at least two Nuclear Regulatory Commission (NRC) Early Site Permit applications for specific DOE and/or commercial sites.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2002	1	1	

Measure: Complete and issue the government/industry roadmap to build new nuclear power plants in the United States by 2010.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2002	1	1	

PART Performance Measurements

Program: Oil Technology
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
60%	60%	88%	25%	

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The program's purpose is to enhance U.S. energy security by managing and funding oil exploration and production (E&P) research; ensuring that oil technology that produces public benefits is utilitzed to the advantage of US producers in the market; and supporting the development of information and policy options that benefit the American public. Program areas include Enhanced Oil Recovery/CO2 Injection, Domestic Resource Conservation, and Environmental Science.

Evidence: Exploration and Production and Environmental Product Plans October 2002; Oil and Gas Product Plan October 2002; Microhole Road Map Workshop Summary at www.npto.doe.gov/news/microholetech.html; budget documentation (e.g., FY 2004 Congressional Justification), National Energy Policy.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The program promotes national energy security through enhanced oil recovery and increases the supply of energy by increasing domestic production.

Evidence: Budget documentation and program plans.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: NO Question Weight 20%

Explanation: The program funds projects comparable to those funded by private industry, and generally for the direct benefit of private industry.

Evidence: DOE's FY 2004 Research and Development (R&D) Investment Criteria submission for Oil E&P states "The independent operator's business model approach (including the largest independents) is to "buy technology from the service companies' as needed." This illustrates that a maket for these technologies exists, and that DOE research is often duplicative of, or competes with and potentially crowds out, private investment.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: There is no evidence that an alternative model would be more efficient or effective. The program uses a combination of technology development, risk assessment, regulatory streamlining tools, and regulatory impact analysis to address all aspects of high priority environmental issues. The program is currently investigating methods of repayment of R&D support funding as part of its refocusing effort. Additionally, the program has refocused towards longer-term efforts and away from downstream projects, especially in the Effective Environmental Protection program.

Evidence: Budget documents.

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: NO Question Weight 20%

Explanation: DOE has not presented information regardijng its R&D investments at a detailed level discussing variables such as years to commercialization, public benefits, technological risk, cost share or plotting economic, environmental and/or security benefits.

Evidence:

PART Performance Measurements

Program: Oil Technology
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
60%	60%	88%	25%	

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight:10%

Explanation: The long-term goal is to increase economically recoverable oil resource base by 2.3 billion barrels by FY 2025. (The baseline is the AEO 2003 Reference case.)

Evidence: See the "Measures" section of this PART.

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight:10%

Explanation: The program has established ambitious targets and timeframes. Projects last three to five years, with new competition required if a decision is made to move to the next phase. New proposals are judged against other new proposals.

Evidence: See the "Measures" section of this PART.

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:10%

Explanation: Achievement of annual measures (as well as long-term goals) is based on measurement using the TORIS/NEMS models. Detailed further analysis is necessary to ensure that the critical assumptions in these models are valid and transparent, and to document any resource base expansion attributable to DOE.

Evidence: See the "Measures" section of this PART.

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:10%

Explanation: Targets for annual measures are ambitious as required to achieve the long-term measures.

Evidence: See the "Measures" section of this PART.

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: YES Question Weight:10%

Explanation: Projects within the Oil Technologies portfolio are designed with annual and project life-cycle goals and milestones that are geared to meeting the annual and long-term program goals. Each cooperative agreement between DOE and participating partner has detailed milestones and key decision points. These milestones are reviewed annually between DOE management and the performing organization, as well as at all project funding decision points. If a partner is not meeting stated requirements, then the decision is made not to go into the next budget period of that cooperative agreement. A strong measure of a partner commitment to the program goals is their cost share that is 50 percent or greater for demonstration projects (i.e. Independent Program Field Demos) and 20 percent for Research and Development projects.

Evidence: Program solicitations; Joule Quarterly Milestones; PRoMIS database; PART measures.

PART Performance Measurements

Program: Oil Technology
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
60%	60%	88%	25%	

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: NO Question Weight:10%

Explanation: The Oil E&P Program received external/independent review as part of the "Energy Research at DOE: Was it Worth It?" National Research Council (NRC), July 2001. The NRC is beginning a review of Fossil Energy program benefits (including the Oil Program). However, on an ongoing basis, the program relies on industry review to evaluate effectiveness and performance. These efforts do not meet the requirements for independent review, and the program will explore including third-party review.

Evidence: National Academy of Sciences/Nation Research Council report: "Energy Research at DOE: Was it Worth It?" (2001)

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: The Department has not submitted budget documents linking performance goals to resource levels in a complete of transparent manner.

Evidence: Budget documents.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: Improvements in benefits modeling and efforts to connect long- and short-term goals through the JOULE performance tracking system are concrete steps that could help planning efforts. In FY 2003, the Oil Upstream Program was refocused to two technology areas (Exploration & Production and Domestic Resource Conservation), and the Gas and Oil Environmental Program eliminated its downstream activities and focused on two major research areas: water management and access to petroleum resources on Federal lands.

Evidence: Fossil Energy Top-to-Bottom review; Budget documentation; Integrated performance measures; Public Workshop Proceedings ; JOULE quarterly reports.

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NO Question Weight:10%

Explanation: The program did not submit information regarding its R&D investments that demonstrates how DOE prioritizes programs based on potential benefits.

Evidence:

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: NO Question Weight:10%

Explanation: Program did not submit R&D Investment Criteria information demonstrating how risk, years to commercialization, etc. are used in prioritizing. However, National Energy Modeling System (NEMS) is used to determine which projects should get priority based on R&D success and supply impact.

Evidence: Product plans; NEMS models.

PART Performance Measurements

Program: Oil Technology
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
60%	60%	88%	25%	

3.1 Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?

Answer: YES Question Weight:12%

Explanation: Program contracts and cooperative agreements clearly outline the major milestones and performance requirements that the participating partner must meet. These milestones are tracked and performance measured through quarterly and other technical reporting requirements. This information is available through the Project Management Information System (ProMIS) and the publicly available extraction from PROMIS, the Fossil Energy Research Database (FRED). Accomplishments and key milestones are reported weekly to the Laboratory Director. Significant accomplishments are transmitted to the Assistant Secretary of Fossil Energy (FE) and are reported in technical fact sheets (TechLines) available to the public on the DOE/FE web site. Joule is used as a performance management tool to track results on a quarterly basis.

Evidence: The JOULE submittal with results collected and posted by the project managers includes reports, contract activity, and technological developments; retroactive metrics analyses; and periodic peer reviews. (For example, in FY 2003 this included the new oil and gas modeling system, the microhole work, and interagency work in synthetic based muds, produced water, and Federal lands.

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?

Answer: YES Question Weight:12%

Explanation: The National Energy Technology Laboratory (NETL) has identified a schedule of incentives holding key product personnel responsible for results under their control. It was one of only two organizations in the entire Federal governement to win the Office of Personnel Management's (OPM) Pillar Award for outstanding efforts in linking performance to accountability.

Evidence: OPM's Pillar Award for linking performance to accountability.

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?

Answer: YES Question Weight:12%

Explanation: Funds are obligated based on an annual Program Implementation Plan approved by DOE management and consistent with appropriations. Essentially all funds are obligated in the budget year. Cooperative agreement spending is audited as required by procurement rules.

Evidence: Financial reports, Budget documents.

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?

Answer: NO Question Weight:12%

Explanation: The Fossil Energy Top-to-Bottom Review identified organizational changes to reduce layers of management, reduce the manager-to-employee ratio and to more closely tie management to program goals. However the program has not demonstrated that dollar savings have accrued from this reorganization. The program provided no other evidence of administrative/program delivery effciencies or that cost effectiveness measures are in place.

Evidence: Top to Bottom Review completed in the year 2002.

PART Performance Measurements

Program: Oil Technology
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
60%	60%	88%	25%	

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: The program is fairly well coordinated with other programs with similar goals. For example, the program has entered into a Memorandum of Understanding with related programs at the Department of the Interior to address technical concerns related to oil and gas drilling on federal lands that have resulted in access limitations and/or delays.

Evidence: Product plans; Federal Leadership Forum; memoranda of understanding with the Department of the Interior's Bureau of Land Managmeent and the Mining and Minerals Service; IEA Cooperative Agreement on Enhanced Oil Recovery.

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: DOE received a clean audit in FY2001 and FY2002 with no known program deficiencies. Several computer based project management controls are in place to assist in financial management. Systems exist both on the financial side and the project management side. In addition, individual contract specialists keep detailed files of primary records.

Evidence: DOE annual Performance and Accountability reports; contract files.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:12%

Explanation: The Top-to-Bottom review will be implemented throughout Fossil Energy. As a result, there has been increased use of R&D investment criteria and internal/external project review, and improved performance measures and implementation of performance tracking systems (JOULE/PRoMIS). These measures will continue to improve management performance.

Evidence: Fossil Energy Top-to-Bottom Review (2002); Budget documents; JOULE results; President's R&D Investment Criteria.

3.RD1 For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality? Answer: YES Question Weight:12%

Explanation: Approximately 90% of program projects are selected on a competitive basis.

Evidence: Information on percentage of funds earmarked, and subject to competitive review.

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: SMALL EXTENT Question Weight:25%

Explanation: Incremental oil production of about 2% of domestic oil consumption over the 22 years of the study period (2.3 billion barrels additional 1978-2000).

Evidence: NRC/NAS Report: "Energy Research at DOE Was it Worth It?" (2001)

PART Performance Measurements

Program: Oil Technology
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
60%	60%	88%	25%	

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: SMALL EXTENT Question Weight 25%

Explanation: Changes to correct deficiencies include the establishment of the JOULE performance tracking system resulting in a 100% performance score FY 2003 year-to-date. Based on the AEO 2003 price track, the Oil program will develop technologies that will be used to increase domestic oil supplies in an environmentally friendly manner and to contribute to the Nation's energy security by adding 60 million barrels* in economically recoverable oil resources in FY 2005.

Evidence: Oil and Gas Environmental Program Metrics: 2000 Analysis and Results; JOULE database; Environmental reverse metrics; Computer model results; Scored Met Goal in the 2002 GPRA activities and have met all goals in FY2003 Joule system through the 3rd quarter; Report on Analysis of Field Applications Technology.

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: NO Question Weight 25%

Explanation: The program has not demonstrated improved efficiencies or cost effectiveness in achieving program goals.

Evidence:

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NA Question Weight: 0%

Explanation:

Evidence:

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: SMALL EXTENT Question Weight 25%

Explanation: Incremental production attributed to program efforts estimated by NAS/NRC. However, NAS/NRC also stated that it is difficult to accurately attribute DOE contributions versus private industry contributions.

Evidence: NRC/NAS report: "Energy Research at DOE Was it Worth It?" (2001)

PART Performance Measurements

Program: Oil Technology
Agency: Department of Energy
Bureau:
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Ineffective
60%	60%	88%	25%	

Measure: Additional economically recoverable domestic oil (annual incremental additional billion barrels of oil)

Additional Information: This measure is the cumulative total economically recoverable oil resource added from existing and expected projects. Estimates assume level funding at the FY04 President•s request through 2025. The baseline production is the AEO 2003 Reference case production forecast and price assumptions. Program benefit estimate is based upon the National Energy Modeling System (NEMS). The targets for this measure reflect the cumulative total output through 2025 from the NEMS model analysis. This analysis is to be repeated each year to obtain a comparative actual value reflective of the R&D success.

Year	Target	Actual
2010	.615	
2015	1.4	
2020	1.9	
2025	2.0	

Measure Term: Long-term

Measure: Additional economically recoverable domestic oil (annual incremental additional million barrels of oil).

Additional Information: This measure is the annual economically recoverable oil resource added by the program. Since project results are not known in advance, the annual addition will be calculated based upon the technology project impacts completed during the previous year. Computer models will calculate these additions and, where possible, supplement them with actual data. The target numbers are based upon level funding starting with the President's FY04 budget and the AEO 2003 reference price track.

Year	Target	Actual
2004	52	
2005	23	
2006	29	
2007	34	
2008	45	

Measure Term: Annual

PART Performance Measurements

Program: Readiness in Technical Base and Facilities (RTBF), Operations
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	56%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The program's purpose is clear - operate and maintain NNSA programmatic facilities in a safe, secure, and reliable condition so that they are operationally ready to execute nuclear weapons stockpile stewardship tasks on-time as identified by the Directed Stockpile Work and Campaign programs. This purpose includes facility operating cost (e.g. utilities, equipment, facility personnel, training, and salaries), facility and equipment maintenance costs (staff, tools, and replacement parts), and environment, safety, and health costs.

Evidence: DOE NNSA Fiscal Year 2001 Stockpile Stewardship Plan Executive Overview June 12, 2000. NNSA FY 2004-08 Future-Years Nuclear Security Program (FYNSP), February 2003. FY2004 NNSA Congressional Budget Submission.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The program provides for the ongoing operation of unique national facilities, capabilities, and critical skill sets in support of the statutory mission of the NNSA Office of Defense Programs (DP) to maintain and enhance the safety, reliability, and performance of the United States nuclear weapons stockpile to meet national security requirements. The ongoing operation of these facilities is essential for the success of the NNSA Stockpile Stewardship Program mission. Without these mission-essential facilities and capabilities, all aspects of the Stockpile Stewardship Program would fail, including nuclear weapons design, engineering, and evaluation. Quote from Stockpile Stewardship Plan Executive Overview, DOE, NNSA, FY2001: "No weapons work or other activities can take place unless the infrastructure is in place and ready for business providing an appropriately equipped workplace with modern safety and security measures."

Evidence: DOE NNSA Fiscal Year 2001 Stockpile Stewardship Plan Executive Overview June 12, 2000. NNSA FY 2004-08 FYNSP, February 2003.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: This program is not redundant or duplicative of any other Federal, state, local, or private effort. This is the only program that provides the base level of resources, including facility support personnel and money for facility operations and maintenance, for use in supporting the Nation's nuclear weapons stockpile. The breadth of these activities requires a federally-managed effort. Chronic under-funding of scheduled maintenance planned for the 1990s resulted in an excess backlog of deferred maintenance. This condition led Congress to approve a new, limited duration appropriation in FY2002, the Facility and Infrastructure Recapitalization Program (FIRP). The FIRP is a separate, distinct, but complementary program whose goals are to reduce this deferred maintenance levels and dispose of excess facilities, thus decreasing future maintenance costs.

Evidence: DOE NNSA Fiscal Year 2001 Stockpile Stewardship Plan Executive Overview June 12, 2000. NNSA FY 2004-08 FYNSP, February 2003 (FY04-08). FY2003 NNSA Budget and Reporting Structure, Readiness in Technical Base and Facilities, Operations of Facilities. FY 2003 Readiness in Technical Base and Facilities (RTBF) Execution Guidance, August 2002. FY 2003 Readiness in Technical Base and Facilities (RTBF) Implementation Plans (8 sites).

PART Performance Measurements

Program: Readiness in Technical Base and Facilities (RTBF), Operations
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	56%	Effective

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: NNSA has made great strides to improve its infrastructure management, and the Ten Year Comprehensive Site Plan is an excellent management tool. However, it is not clear that the approach has filtered down to the field and the funds are targeted to address needs across all of NNSA.

Evidence: NNSA FY 2004-08 FYNSP, February 2003. NNSA Infrastructure Plan for the NNSA Nuclear Complex, April 2003. Defense Programs Facilities and Infrastructure Assessment Phase I Report, 2000.

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: The program uses a Work Authorization process and separate and specific Budget and Reporting codes to ensure the effective and direct targeting of funds to facilities for specific work for the express purposes defined in program execution guidance. Site-level implementation plans are sufficiently detailed as to demonstrate the effective targeting of program funding to its intended beneficiaries for its intended purposes. Program funding to the sites is in these Budget and Reporting "bins" that are separate and identifiable from everything else.

Evidence: NNSA FY 2004-08 FYNSP, February 2003. FY 2003 Congressional Budget Appropriation. FY 2003 NNSA Budget and Reporting Structure, Readiness in Technical Base and Facilities, Operations of Facilities. FY 2003 Readiness in Technical Base and Facilities (RTBF) Execution Guidance, August 2002. FY 2003 Site Readiness in Technical Base and Facilities (RTBF) Implementation Plans (8 sites). FY 2003 Work Authorization Statements examples.

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight 11%

Explanation: The program has four long-term measures to meaningfully determine progress. These are: 1) annually, provide mission essential program facilities availability 90% or more of scheduled days; 2) achieve better than the national average for the number of reportable accidents/200,000 hours of work using National Bureau of Labor Standards data; 3) beginning in FY 2005, complete 100% of the scheduled annual maintenance activities for mission-essential facilities such that deferred maintenance backlog is stabilized and doesn't increase; and, 4) achieve by FY 2009, a rating of "good" or better in the Facilities Information Management System for all enduring mission-essential facilities.

Evidence: Future-Years Nuclear Security Program NNSA February 2003 (FY04-08). NNSA Strategic Plan (February 2002). FY 2003 Readiness in Technical Base and Facilities (RTBF) Implementation Plans (8 sites). FY 2004 Readiness in Technical Base and Facilities (RTBF) Execution Guidance (May 2003).

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight 11%

Explanation: The long-term measures targets and timeframes are extremely ambitious. After years of under-funding facilities during the 1990's, it will be a significant challenge to maintain and improve facility conditions while maintaining the current facility availability, safety, and costs profiles to just inflationary increases.

Evidence: NNSA Strategic Plan, February 2002. NNSA FY 2004-08 FYNSP, February 2003. FY 2004 NNSA Congressional Budget Submission. NNSA Infrastructure Plan for the NNSA Nuclear Complex, April 2003. U.S. Department of Energy Performance and Accountability Report, Fiscal Year 2002.

PART Performance Measurements

Program: Readiness in Technical Base and Facilities (RTBF), Operations
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	56%	Effective

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:11%

Explanation: The program has four annual measures to meaningfully determine progress. For FY 2005, these are: 1) annually, provide mission essential program facilities availability 90% or more of scheduled days; 2) reportable accidents are below the national average of 6.7 per 200,000 work-hours (National Bureau of Labor Standards data); 3) 100% of FY2005 maintenance activities are completed as scheduled thus stabilizing the deferred maintenance backlog; and, 4) 65% of enduring mission-essential facilities are rated "good" or better in the Facilities Information Management System.

Evidence: NNSA FY 2004-08 FYNSP, February 2003. FY 2004 NNSA Congressional Budget Submission. NNSA Infrastructure Plan for the NNSA Nuclear Complex, April 2003. U.S. Department of Energy Performance and Accountability Report, Fiscal Year 2002.

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:11%

Explanation: Operations of Facilities requires baselines for annual measures as explained in the annual implementation guidance. Currently, there are baselines for two of the four annual measure (facility availability and safety). NNSA is developing baselines for the remaining measures.

Evidence: NNSA FY 2004-08 FYNSP, February 2003. FY 2004 NNSA Congressional Budget Submission. NNSA Infrastructure Plan for the NNSA Nuclear Complex, April 2003. U.S. Department of Energy Performance and Accountability Report, Fiscal Year 2002.

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: YES Question Weight:11%

Explanation: Partners at the headquarters level clearly commit to achieving the long-term goals. Strong emphasis from NNSA management has also resulted in a commitment from the Maintenance and Operations contractors to the NNSA-wide goals, as demonstrated by quarterly briefings from the M&O contractors to the headquarters managers.

Evidence: NNSA FY 2004-08 FYNSP, February 2003. FY 2003 Readiness in Technical Base and Facilities (RTBF) Implementation Plans (8 sites). FY 2004 Readiness in Technical Base and Facilities (RTBF) Execution Guidance, May 2003. NNSA FY 2003 Ten-Year Comprehensive Site Plans (8 sites). RTBF Readiness in Technical Base and Facilities Quarterly Reports and/or Program Reviews (8 sites).

2.6 Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need? Answer: YES Question Weight:11%

Explanation: Several actions were taken by NNSA to enhance management visibility into the program. In FY 2000, the program budget was restructured to clearly identify the base level of annual funding for operation of unique national facilities and capabilities needed

Evidence: FY 2003 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile, April 11, 2003 (Foster Panel). NNSA Model for Improving Management and Performance February 2003. DOE Activities Relating to the DFNSB 2002 Annual Report to Congress, February 2003. DOE Office of Independent Oversight and Performance Assurance Reports. Defense Programs Facilities and Infrastructure Assessment Phase I Report, 2000. ISSM and ORR reports.

PART Performance Measurements

Program: Readiness in Technical Base and Facilities (RTBF), Operations
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	56%	Effective

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: YES Question Weight:11%

Explanation: NNSA budget requests are explicitly tied to anticipated annual and long-term performance goals via the comprehensive Planning, Programming, Budgeting and Evaluation (PPBE) process. Long-term performance goals established/validated during the Planning Phase are linked in a performance cascade to annual targets and detailed technical milestones. During the Programming Phase, budget and resources trade-offs and decisions are evaluated based on the impact to annual and long-term performance measures. These NNSA performance-planning-budgeting decisions are documented in the Program Decision Memorandum (PDM) and used to develop the budget requests during the Budgeting Phase. Program and financial performance for each measure is corporately monitored and assessed during the Execution and Evaluation Phase. The resource needs for NNSA programs are presented in a complete and transparent manner. The budget requests for NNSA programs are "fully loaded" -- that is, the direct and indirect costs of program execution by program performers are reflected in the budget.Only about 4 percent of NNSA's personnel are Federal employees providing direction, oversight and administration of the technical efforts. These resources are also specifically and separately identified in the NNSA budget request, as required by the Congress. Collectively, these actions are intended to ensure that enduring mission-essential facilities will be properly maintained in the future.

Evidence: NNSA FY 2005 Planning, Programming, Budgeting, and Evaluation System Guidance. NNSA FY 2004 Congressional Budget Submission. FY 2004 NNSA Program Decision Memorandum, July 2002. NNSA FY 2004-08 FYNSP, February 2003.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:11%

Explanation: The program has taken several meaningful steps to improve strategic planning. Following the FY2000 budget restructuring to separately identify program facility operations and maintenance costs, site implementation plans were created to tie program facility and infrastructure budgets with the planning and execution of facility level milestones. With the creation of the Future-Years Nuclear Security Program, the program identified linkages to the NNSA Strategic Plan and developed five-year budget estimates and performance goals for all sites. With the evolution of NNSA's implementation of the Planning, Programming, Budgeting, and Evaluation system, the program developed a tiered structure of the critical few milestones needed to achieve national program objectives. In addition, during periodic program reviews, Headquarters program managers regularly solicit feedback from Site Office staff and site contractors to identify and address strategic planning issues.

Evidence: DOE NNSA Fiscal Year 2001 Stockpile Stewardship Plan Executive Overview June 12, 2000. Future-Years Nuclear Security Program NNSA February 2003 (FY04-08). Planning, Programming, Budgeting, and Evaluation System FY2005 Guidance.

PART Performance Measurements

Program: Readiness in Technical Base and Facilities (RTBF), Operations
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	56%	Effective

2.CA1 **Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity?** Answer: YES Question Weight:11%

Explanation: The program conducts alternative analyses for activities. Recently, NNSA studied alternatives for improving accountability by modifying current management and operating contracts for its sites. The program prepares implementation plans for Defense Nuclear Facility Safety Board (DNFSB) Recommendations that weighs schedule, cost, and risk while establishing site-specific performance goals. Progress towards reaching performance goals for recommendations is assessed by the DNFSB and reported to Congress. Additionally, the program conducts conceptual planning activities and documents alternative analysis, alternative design analysis, and value engineering for each proposed project prior to receiving capital funds. Each alternative's cost, schedule, scope, and risk are documented in the Conceptual Design Report. Acquisition alternatives and trade-offs are documented in each project's Acquisition Strategy Plan. Each document is reviewed by construction organizations independent of the program, both internal and external to NNSA.

Evidence: NNSA Model for Improving Management and Performance, February 2003. DOE Activities Relating to the DFNSB 2002 Annual Report to Congress, February 2003. DOE Order and Manual 413.3, "Program and Project Management for the Acquisition of Capital Assets." Conceptual Design Report example. Acquisition Strategy Plan example.

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:12%

Explanation: The program collects quarterly data from site contractors to manage and improve program performance. Contractors and NNSA negotiate appropriate milestones for facility availability, safety, staffing, and cost. RTBF Program Execution Guidance requires periodic written reports and onsite reviews of its contractors with the objective of making appropriate, timely adjustments to improve program performance. These reviews gain detailed assessments of program performance/issues and validate the information contained in the quarterly reports. Program performance is informally monitored through periodic interactions with site contractors on daily program execution issues. The Work Authorization process is utilized on a monthly basis to adjust site funding to assure adequate resources for continued safe, secure, reliable and compliant program facility operations.

Evidence: NNSA FY 2003 Ten-Year Comprehensive Site Plans (8 sites). FY 2003 Readiness in Technical Base and Facilities (RTBF) Execution Guidance, August 2002. FY 2003 Readiness in Technical Base and Facilities (RTBF) Implementation Plans (8 sites). RTBF Readiness in Technical Base and Facilities Quarterly Reports and/or Program Reviews (8 sites). Integrated Facility and Infrastructure Cross-Cut. Defense Nuclear Facilities Safety Board Corrective Action Tracking System (CATS) monthly meetings. Quarterly Reports based upon RTBF oversight and DOE Policy 450.5, Line Management of Environment, Safety, and Health (ES&H).

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: NO Question Weight:12%

Explanation: Although site-specific contracts with DOE/NNSA include performance measurements for the program activities, leverage over the contractor remains a question. Bottom line: evidence does not support a "YES".

Evidence: Performance contracts and evaluation plans (8 sites). Performance plans for federal managers.

PART Performance Measurements

Program: Readiness in Technical Base and Facilities (RTBF), Operations
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	56%	Effective

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:12%

Explanation: Work Authorizations define the purpose for which funding is intended. A formal change control process is used to revise Work Authorizations. The budget is reported and analyzed monthly by Headquarters RTBF management and their financial resource analysts. Funds and costs are tracked and reported at the RTBF element level (e.g. Operations of Facilities) using Defense Program's (DP's) official Budget and Reporting classification codes and the DOE Financial Information System.

Evidence: Performance contracts and evaluation plans (8 sites). Performance plans for federal managers.

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:12%

Explanation: The program follows Departmental procedures and processes to measure cost reductions. These requirements are contained in site performance contracts and performance evaluation plans. NNSA also uses award and incentive fees to foster cost reduction at all sites. Semi-annual site program reviews the effectiveness of these procedures and the management of the program.

Evidence: Performance contracts and evaluation plans (8 sites). Department of Energy Acquisition Regulation (DEAR) 970.5204-87, Cost Reduction, April 1999.

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: The program works closely with managers of Campaigns, Directed Stockpile Work (DSW), and the Facilities and Infrastructure Recapitalization Program to ensure the base capabilities of program facilities and infrastructure remain viable to support current and future mission workloads. A matrix of program facilities supporting specific Campaign and DSW activities is provided in each site implementation plan. During development of draft and final Ten-Year Comprehensive Site Plans, program managers provide review and comments on program related information proposed by site contractors. In addition, the program has conducted several combined on-site program reviews and three Maintenance Summits in conjunction with FIRP to ensure a corporate approach in addressing NNSA deferred maintenance goals as well as participating in annual corporate planning meetings.

Evidence: FY 2003 Readiness in Technical Base and Facilities (RTBF) Implementation Plans (8 sites). NNSA FY2003 Ten-Year Comprehensive Site Plans (8 sites). FY2002 Program Review Guidance for RTBF and FIRP. Agendas from the May 2003 Maintenance Summit and the FY2005 Corporate Planning Meeting.

PART Performance Measurements

Program: Readiness in Technical Base and Facilities (RTBF), Operations
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	56%	Effective

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: NNSA is covered by DOE's financial management policies, procedures and practices that meet all statutory requirements. The accounting services for NNSA are provided by DOE, and these are free of material internal control weaknesses. The DOE's financial statements have been given a clean audit opinion in 6 of the last 7 years. Day-to-day NNSA operations are supported through the NNSA PPBE processes that require the integration of financial and performance management information systems at each phase. The DOE is well underway on a new initiative (I-MANAGE) in support of the President's Management Agenda to fully integrate all financial, performance, and administrative data for the DOE in a single system within the next 5 years that will include all NNSA information.

Evidence: NNSA FY 2005 Planning, Programming, Budgeting, and Evaluation System Guidance. FY 2003 Readiness in Technical Base and Facilities (RTBF) Execution Guidance, August 2002. NNSA Re-Engineering Planning.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:12%

Explanation: Several actions were taken by NNSA to enhance management visibility into the program. In FY 2000, the program budget was restructured to clearly identify the base level of annual funding for operation of unique national facilities and capabilities needed to perform stockpile stewardship mission objectives. The new structure provides a stable planning base which facilitates evaluation of program goals. In FY 2002, NNSA Headquarters created high-level program milestones to provide consistent, measurable goals related to facility and infrastructure capabilities across all sites. Additionally, NNSA created the Planning, Programming, Budgeting, and Evaluation (PPBE) process to enhance management visibility in programs. NNSA is reorganizing its federal workforce to improve performance and results. NNSA is streamlining operations, maintenance, and oversight while clarifying roles and responsibilities with a goal of achieving a new, more responsive organization that will improve federal management of our nuclear weapons complex. Collectively, these actions are intended to ensure that enduring mission-essential facilities will be properly maintained in the future.

Evidence: NNSA PPBE Guidance Documents. FY 2003 Readiness in Technical Base and Facilities (RTBF) Execution Guidance, August 2002. NNSA Re-Engineering planning documents.

3.CA1 Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals? Answer: YES Question Weight:12%

Explanation: Program costs are well understood and supported by realistic schedules. Work Authorizations summarize the program's specific deliverables while site implementation plans define more specific performance metrics on a sub-element site basis. The site implementation plans contain the cost, schedule, and performance goals for the program. Additionally, the five-year budget and planning process defines the budgets and develops the baseline program.

Evidence: NNSA FY 2004-08 FYNSP, February 2003. FY 2003 RTBF Implementation Plans (8 sites). FY 2004 Readiness in Technical Base and Facilities (RTBF) Implementation Plan. FY 2004 Readiness in Technical Base and Facilities (RTBF) Execution Guidance, May 2003.

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: LARGE EXTENT Question Weight:16%

Explanation: NNSA has only recently identified long-term performance goals and there are no results to support an assertion of adequate progress.

Evidence:

PART Performance Measurements

Program: Readiness in Technical Base and Facilities (RTBF), Operations
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	56%	Effective

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: SMALL EXTENT Question Weight:16%

Explanation: For established measures, NNSA achieved its goals to a large extent. For FY 2001 and FY 2002, the aggregate BLS-reported accident rate average for all eight sites was significantly better than the national average of 6.7 (2.6 and 2.2, respectively). Facility availability data was not complete for all eight sites; however, no programmatic milestones were missed as a result of this program. Given no milestones were missed, NNSA has extrapolated annual performance measures for facilities availability of 94.6% for FY 2001 and 95.1% for FY 2002.

Evidence: RTBF Readiness in Technical Base and Facilities Quarterly Reports and/or Program Reviews (8 sites). DOE Occupational Injury and Property Damage Summary, Calendar Years 2001 and 2002. Quarterly Reports based upon RTBF oversight and DOE Policy 450.5, Line Management of ES&H.

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: SMALL EXTENT Question Weight:16%

Explanation: NNSA has a cost management objective to accomplish required work, which is increasing in scope, with an essentially flat budget. Since salary and benefit costs continue to rise to reflect economic changes and retention of critical skill sets, facility and infrastructure efficiencies are being found by the sites as demonstrated by the measure to keep mission-essential facilities available 90% or more of planned days. Additionally, site contracts contain incentives to encourage identification and implementation of efficiencies which are reinvested back into the program.

Evidence: RTBF Readiness in Technical Base and Facilities Quarterly Reports and/or Program Reviews (8 sites). Performance contracts and evaluation plans (8 sites).

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: LARGE EXTENT Question Weight:16%

Explanation: Facility availability rates and site-wide safety record are significantly better than national industry standards, indicating favorable performance.

Evidence: RTBF Readiness in Technical Base and Facilities Quarterly Reports and/or Program Reviews (8 sites). DOE Occupational Injury and Property Damage Summary, Calendar Years 2001 and 2002.

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: SMALL EXTENT Question Weight:16%

Explanation: Independent program evaluations indicate improvement in facilities and infrastructure, but so far they are not of a scope to establish the program as "effective". In addition, some reports have identified problems in the DoE NNSA infrastructure improvement process.

Evidence: FY 2003 Report to Congress of the Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile, April 11, 2003 (Foster Panel) vs. DoE IG report.

PART Performance Measurements

Program: Readiness in Technical Base and Facilities (RTBF), Operations
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	56%	Effective

4.CA1 **Were program goals achieved within budgeted costs and established schedules?** Answer: YES Question Weight:16%

Explanation: For FY 2002, the program completed the year within its budget while meeting all program goals. In the current year, the program is reviewing actual costs against program planned costs and, to date, program goals are being achieved within budgeted costs and established schedules.

Evidence: RTBF Readiness in Technical Base and Facilities Quarterly Reports and/or Program Reviews (8 sites). Site Maintenance and Operation Contracts and Performance Assessments. Defense Programs Monthly Financial Reports.

PART Performance Measurements

Program: Readiness in Technical Base and Facilities (RTBF), Operations
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	56%	Effective

Measure: Percentage of time that mission-essential facilities are available.

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2001	> 90%	94.6%	
2002	> 90%	95.1%	
2003	> 90%	96.5%	
2004	> 90%		
2005	> 90%		

Measure: Reportable accidents per 200,000 workhours (National Bureau of Labor (NBL) standard is 6.7 accidents per 200,000 workhours)

Additional Information:

Year	Target	Actual	**Measure Term:** Annual
2001	< 6.7	2.6	
2002	< 6.7	2.2	
2003	< 6.7	2.1	
2004	< 6.7		
2005	< 6.7		

PART Performance Measurements

Program: Readiness in Technical Base and Facilities (RTBF), Operations
Agency: Department of Energy
Bureau: National Nuclear Security Administration
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	88%	56%	Effective

Measure: Percentage of scheduled annual maintenance activities for mission-essential facilities that are completed.

Additional Information:

Year	Target	Actual	**Measure Term:** Long-term
2003	> 90%	102.7%	
2004	> 90%		
2006	100%		
2007	100%		
2008	100%		

Measure: Percentage of mission-essential facilities rated as good or better in the Facilities Information Mangement System (FIMS).

Additional Information:

Year	Target	Actual	**Measure Term:** Long-term
2005	>50%		
2006	>65%		
2007	>80%		
2008	>90%		
2009	100%		

PART Performance Measurements

Program: Safeguards and Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately
60%	88%	100%	73%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The purpose of the Safeguards & Security (S&S) program is clear - to protect National Nuclear Security Administration (NNSA) personnel, facilities, nuclear weapons, and information from terrorists and other post September 11th threats in a cost-effective manner.

Evidence: Report to Congress on the Organization and Operations of the NNSA (Feb 02), NNSA Strategic Plan (Feb 03), Atomic Energy Act (amended), 1954

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The US intelligence community and Department of Homeland Security (DHS) have confirmed that there exists a credible and growing threat of attack and espionage against the US homeland and especially nuclear facilities. This post 9/11 threat is defined in the US interagency threat analysis that resulted in the document entitled The Postulated Threat to US Nuclear Weapons Facilities and Other Selected Strategic Facilities published by the Defense Intelligence Agency (DIA) in Jan 2003. The Department of Energy (DOE) then completed an updated Design Basis Threat (DBT) in May 2003 that sets adversary strengths, capabilities, and tactics thresholds against which the DOE must protect their sensitive assets.

Evidence: Public Law 106-65, dated 10/5/99, Section 3232 and NNSA budget submission. Atomic Energy Act. Site Safeguards and Security Plans. DOE Orders (Series 470). Report to Congress on the Organization and Operations of the NNSA (Feb 02), NNSA Strategic Plan (Feb 03).

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: No other Federal, state, or local program provides protection for the NNSA's critical weapons research and production assets. While there is some professional overlap with the DOE Office of Security, there are clearly defined roles and responsibilities between DOE and NNSA (i.e. DOE prescribes policy and conducts independent oversight while NNSA is responsible for implementation activities).

Evidence: Report to Congress on the Organization and Operations of the NNSA (Feb 02), NNSA Strategic Plan (Feb 03), DOE Safeguards and Security Orders (series 470), NNSA Safeguards & Security (S&S) Strategic Plan (Feb 03)

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: NO Question Weight 20%

Explanation: The S&S program design is a work in progess. The quarterly review process established at Headquarters to oversee the implementation and validate requirements of the new DOE DBT plans could potentially identify significant impacts. The new performance measure on DBT helps track the cost effectiveness of the marginal dollar so S&S managers have a better method to assess S&S cost-performance.

Evidence: Public Law 106-65, dated 10/5/1999, Section 3232 and Planning, Programming, Budgeting, and Execution (PPBE) budget submission. General Accounting Office (GAO), DOE Inspector General (IG), and DOE Office of Independent Oversight and Performance Assurance (OA) reviews, Iterative Site Analysis (ISA).

PART Performance Measurements

Program: Safeguards and Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately
60%	88%	100%	73%	Effective

1.5 **Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly?** Answer: NO Question Weight 20%

Explanation: [[[The Safeguards and Security resource allocation process is improving, but it is still not at the level needed. NNSA decisions still rely greatly on laboratory contractor input and congressional interests.]]] The program's resources are effectively targeted using the following process: Each year in the spring, Office of Nuclear Safeguards & Security Programs sends a request to NNSA sites requesting a fully prioritized listing of their site S&S needs. The compiled listing of prioritized S&S resource (staffing) and funding needs allows NNSA S&S determine how S&S funding is being utilized at field locations to manage risk and provide protection in compliance with National, DOE and NNSA security requirements. This method of data collection allows S&S to track in detail the application of funding for S&S at each NNSA site. NNSA can also track additional funding and resource needs as required. This system for reporting S&S funds expenditures helps ensure that funding requirements and authorizations are being properly utilized.

Evidence: Congressional Budget submissions, NNSA Budget Allocations (PPBE budget allocations), NNSA Strategic Plan (Feb 03), DOE S&S Orders (series 470), OA reviews, On-site Federal reviews, NNSA oversight reviews of budget allocations, National Security Presidential Directives.

2.1 **Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?** Answer: YES Question Weight 13%

Explanation: The NNSA has improved its performance measures from last year and now has a limited number of specific long-term measures to meaningfully assess progress towards achieving the program's purpose. They are: 1) by end of FY 2006 to have full implementation of the Design Basis Threat policy; 2) by 2006, increase the annual percentage of Physical and Cyber Security external Office of Independent Oversight and Performance Assurance (OA) reviews at the NNSA sites where an evaluation of "Effective" is achieved to 90%; 3) by 2006, increase the annual percentage of OA findings that have approved corrective action plans in place within 60 days to 90%.

Evidence: Congressional Budget submissions, NNSA Budget Allocations (PPBE budget allocations), FYNSP, NNSA Strategic Plan (Feb 03), DOE Safeguards and Security Orders (series 470), OA reviews, On-site Federal reviews, NNSA oversight reviews of budget allocations

2.2 **Does the program have ambitious targets and timeframes for its long-term measures?** Answer: YES Question Weight 13%

Explanation: Yes, these long-term goals are ambitious for the following reasons: 1) DHS hightened security levels make future planning difficult; 2) In order to ensure that our facilities protection is based on the most current threat, ambitious annual milestones and timeframes have been established and approved in order to have full implementation of the DBT by FY2006. These milestones are based on budgetary timelines required to complete large ticket items; 3) Delays in obtaining clearances have far-reaching impacts. Although these are ambitious and challenging targets, detailed planning and external review have validated them as realistic.

Evidence: FY2006 Programming Data (PPBE), FYNSP, performance indicators, NNSA S&S Strategic Plan (Feb 03)

PART Performance Measurements

Program: Safeguards and Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately Effective
60%	88%	100%	73%	

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:13%

Explanation: The S&S program has a specific set of annual measures to meaningfully monitor progress towards achieving the long-term goals. For FY 2006 they are: 1) by end of FY 2006 to have full implementation of the Design Basis Threat policy; 2) 90% of Physical and Cyber Security external OA reviews at the NNSA sites will have achieved an evaluation of "Effective"; 3) 90% of OA findings will have approved corrective action plans in place within 60 days.

Evidence: FY2006 Programming Data (PPBE), FYNSP, performance indicators, NNSA S&S Strategic Plan (Feb 03), Memo on Implementation of the DBT policy (Jan 30, 2004).

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:13%

Explanation: The program has established detailed site by site baselines with specific values for each annual target in which performance can be compared. The S&S Program Management Plan (PMP) Program Execution Guidance (PEG) is issued annually to define the NNSA-programmatic guidance for the upcoming FY. The PEG will reflect PART performance metrics applicable to field. Each sites unique DBT Implementation Plan is monitored through a quarterly reporting process. These targets are ambitious, challenging and will ensure continued improvement of efficiencies.

Evidence: FY05 Programming Data (PPBE) and FYNSP, NNSA S&S Strategic Plan (03), Reference Performance Measures calculation methodology and site-by-site baselines.

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: NO Question Weight:13%

Explanation: [[[LANL process fouls indicate the M&O contractor is not sufficiently committed to achieving the goals.]]] Partners in this program consist of management and operating (M&O) contractors that operate the government laboratories and production facilities. The contractors meet annually to develop, update, and agree upon annual and long-term targets. Contractor performance is monitored monthly against these commitments and a series of independent annual and bi-annual security reviews are conducted to assess the contractors security performance. Contractor Award fees are tied directly to how well the contractor performs against pre-established award fee criteria. Specifically University of California contract ties security to its award fee.

Evidence: Five Year Nuclear Security Plan (FYNSP), SNL Quarterly Technology Development Project Summaries (UCNI), DOD Technical Security Working Group (TSWG) reports, and performance measures. DEAR clause (Dec 2003).

2.6 Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need? Answer: YES Question Weight:13%

Explanation: OA evaluates NNSA sites bi-annually. Inspector General (IG), General Accounting Office (GAO), and other independent agencies conduct reviews and inspections. The results of all reviews and corrective plans are integrated in a single data base in order to aide in tracking actions to closure.

Evidence: Bi-annual OA reviews, DOE Inspector General (IG) Reviews (10 in previous 2 years), contractor self-assessments, and surveys/surveillances.

PART Performance Measurements

Program: Safeguards and Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately
60%	88%	100%	73%	Effective

2.7 Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget? Answer: YES Question Weight:13%

Explanation: The S&S program has demonstrated tremendous improvement over the past year with respect to budget and performance integration. However, it is a hard program to determine how much is enough and what does the marginal dollar buy in terms of security. S&S performance goals with annual targets cascade from the NNSA strategic plan, and also link to supporting milestones, deliverables, and budgets. Program performance measures provide information for the resource allocation decisions made in the annual Programming and Budgeting processes. The Budget and Reporting (B&R) categories for the STA Program are listed and linked to performance metrics. All direct and indirect costs to attain the performance results for the STA Program are reported in the B&R categories. The cost for the NNSA STA Federal employees is carried in a separate STA program direction account/sub-program, as required by the Congress. In the FY 2005 President's Budget, NNSA initiated a budget request format that includes the current 3 years plus 4 additional years of performance and budget information for each program ("GPRA Units") in the mainline budget justification document. Formerly, the outyear funding and performance targets were included in a separate document, the Future-Years Nuclear Security Program, provided with the budget request.

Evidence: NNSA PPBE Guidance Documents, FY2005 Congressional Budget Request, FY2005 Program Decision Memorandum, and FY2006-2009 FYNSP.

2.8 Has the program taken meaningful steps to correct its strategic planning deficiencies? Answer: YES Question Weight:13%

Explanation: The program has taken meaningful steps to correct strategic planning deficiencies by: 1) improving our performance measurement data; 2) updating our response to and implementation of the revised DBT; 3) establishing the S&S PMP to improve budget oversight and change control; 4) conducting budget reviews at each of the NNSA sites. In addition, the NNSA organization has clarified the roles and responsibilities to reinforce managers' accountability and reduce direction from entities outside line management.

Evidence: Long term goals and performance measures, NNSA S&S Strategic Plan, Iterative Site Analysis, PPBE process, Technology Development program, Functions, Responsibilities, and Authorities Manual.

3.1 Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance? Answer: YES Question Weight:14%

Explanation: Federal personnel conduct Directors and contractors (NSIE) meetings routinely (9/03 and 3/04) as well as annual inspections of each site. Performance information is exchanged to improve performance at all sites. Additional reviews are conducted in selected areas based on current issues. Federal personnel monitor the processing of security clearances. Vulnerability Analysis reviews are used to address site specific issues. Security incidents, corrective action plans, and OA/IG/GAO findings are tracked through to resolution.

Evidence: Annual federal reviews, OA inspection reports, Vulnerability Assessments, IG reports and audits, contractor self-assessments.

PART Performance Measurements

Program: Safeguards and Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately
60%	88%	100%	73%	Effective

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight:14%

Explanation: Full time federal personnel are assigned specific S&S responsibilities both in the field and at Headquarters. Federal personnel at each site are assigned responsibility for security oversight in specific S&S functional areas. This includes security specialists, security managers and the federal site manager. Federal site personnel assure contractor's performance meets cost, schedule, and performance goals. Contractors are held accountable through the federal contractor award process. Senior department managers are held accountable for meeting performance measures.

Evidence: Annual federal performance appraisal system (Workforce Analysis). Job Task Inventory; Roles, Responsiblities, and Authorities; Program Management Plan; Program Execution Guidance; DBT Implementation Plans, SSSPs, Joule and S&S Information Management System (SSIMS) data bases and Incident Tracking & Analysis Center (ITAC) (in the future). Functions, Responsibilities, and Authorities Manual (FRAM).

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:14%

Explanation: A formal process monitors expenditure of funds based on budgetary allocations. Costed balances are regularly reviewed and adjusted to assure funds are obligated in a timely manner and spent for the intended purposes.

Evidence: NNSA Work Authorization system documents distribution of funds. The financial information system (MARS) monitors field expenditures to ensure funds are spent as intended.

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:14%

Explanation: Continual reviews are being conducted to assure programs are achieving their goals in an efficient and cost-effective manner. Cost-effectiveness is one of the primary measurement tools used to assess the overall effectiveness of contractor performance under the contractor aware fee program. The S&S PMP PEG for FY04 required site offices to set-up cost-effectiveness programs. PEG for FY05 will require them to achieve a savings (2-5%) from their baseline measures.

Evidence: Safeguards & Security is a subset of the overall contractor award fee, competition and acquisition system used in the NNSA. Corrective action plans are created to measure progress.

PART Performance Measurements

Program: Safeguards and Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately
60%	88%	100%	73%	Effective

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:14%

Explanation: The NNSA has membership in the DOE S&S working groups, Department of Defense (DOD) working groups and participates in selected security conferences. The NNSA is part of the interagency Nuclear Security Steering Group. NNSA encourages sharing of knowledge among NNSA sites within security limits. NNSA has begun a reinvigorated program with the SSA. NNSA liaison initiatives include: 1) DOE/Nuclear Regulatory Commission (NRC) Comparability initiative that reviews S&S policy and implementation; 2) Diplomatic Security Reciprocity initiative with the State Department looking at foreign visit procedures and physical security upgrades; 3) Use of Force Comparability initiative with the Air Force and US Secret Service; 4) Mutual Defense Agreement International Security Program initiated to exchange baseline program information; 5) Physical Security of Weapons Comparability study with DOD.

Evidence: NNSA Strategic Plan (Feb 2002), S&S Plan (03), numerous meetings with NRC. Participation in End-to-end review (2001-2001). Participation in on-going DOE working groups. Conducted NNSA/DOE security directors conference (3/01, 3/02, 5/03, 3/04). National Industrial Security Program (NISP)

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:14%

Explanation: S&S is covered by DOE's financial management policies, procedures, and practices that meet all statutory requirements. The accounting services for NNSA are provided by DOE and these are free of material internal control weaknesses. The DOE's financial statements have been given a clear audit opinion in 7 of the last 8 years. S&S program staff review accounting reports on a monthly basis to monitor obligations and costs for all projects and sites.

Evidence: DOE Financial Management Orders; NNSA PPBE Guidance Documents located on the NNSA web-site

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:14%

Explanation: Management deficiencies identified are resolved through corrective action plans, which are analyzed and tracked by Headquarters. NNSA has begun S&S budget and program reviews to not only determine the budget, but also to validate that the tactics and deployment of personnel are cost-effective and that funds are being spent on actual S&S needs. New Chief Security Officers have been appointed for the 3 weapons laboratories and 1 of the production plants to bring experienced managers into the S&S field. In addition, NNSA has established three independent review groups: one focus is on S&S professional development programs, another on physical security issues, the third on management at a specific NNSA site. The report of the first group has been finalized and an Action Plan is in development.

Evidence: Specific corrective action plans are created for each review with a tracking system to ensure tracking to resolution. Results of corrective action plans are provided by the sites to the federal oversight office and then to the inspecting activity (for DOE related activties). Independent review such as Science and Security in the 21st Century are tracked as DOE-wide issues and resolutions briefed at senior levels. Ongoing IG Reports, and GAO Reports from March 2003. SSSPs for sites provide credible evidence of scheduled goals. DOE Management Challenges.

PART Performance Measurements

Program: Safeguards and Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately Effective
60%	88%	100%	73%	

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: LARGE EXTENT Question Weight 20%

Explanation: There have been no successful breaches of physical security perimeters by terrorists or criminals. The annual performance measurements were chosen to reflect the measures that indicate this protection will be maintained at a high level. S&S has significantly improved program performance measures since last year. The following are prior year results for the new measures that demonstrate the program has made adequate progress in achieving most of our long-term goals: 1) A series of quarterly reports on the progress of DBT implementation plans has been implemented. The first reports were received April 2004; 2) Physical and cyber security OA assessments at NNSA sites that resulted in a rating of "Effective" for FY 2003 were 78%; 3) OA findings that had approved corrective action plans in place within 60 days of the final report date or by the OA required date for FY 2003 were 33%.

Evidence: Federal assessments of contractor performance, OA reports, GAO report of March 2002. GAO Management Challenges

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: LARGE EXTENT Question Weight 20%

Explanation: There have been no successful breaches of physical security perimeters by terrorists or criminals. High-level management attention to the Management Challenges initiative are resulting in close scrutiny by both HQ and field managers to achieve corrective action plans (CAPs) and their timely closure. The following information is based on FY2004 year-to-date data compared with FY2003 baselines: 1) based on the requirements of the new DBT implementation schedule, NNSA sites have plans that were submitted, reviewed and approved by Feb 2004 as required. First quarterly reports are due April 2004. 2) Only 3 out of 7 OA assessments have been performed in FY04. Awaiting results for future OA assessments scheduled and expect to be on target with our annual goal of 80% "Effective" ratings. 3) CAPs for 3 recent OA assessments are currently on track to be completed within established timeframes. 4) Based on past 2 year's performance, percentage of Headquarters personnel receiving annual security education and awareness training via technology-based programs will be 100%.

Evidence: Site reviews, Independent Assessment reviews, GAO report of March 2002

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: SMALL EXTENT Question Weight 20%

Explanation: The program shows improved cost efficiencies through: 1) The NA-55 PMP PEG for FY04 required site offices to set-up cost-effectiveness programs. PEG for FY05 will require them to achieve a savings (2-5%) from their baseline measures. 2) Progress is being made to identify expeditious ways to shorten the clearance process to clear more protective force officers resulting in decreased overtime. 3) Anticipated cost avoidance of up to $800k per year in manpower due to a security upgrade. 4) The newly instituted continual surveillance program increases efficiency, using fewer resources with a better useful product. 5) DBT implementation plans will ultimately reduce security costs through cost avoidance measures (i.e. hiring less guards) and by reducing expensive compensatory measures now in place. 6) Human capital management program includes training to increase employee productivity.

Evidence: Federal assessments of contractor performance, OA reviews, GAO report of March 2003

PART Performance Measurements

Program: Safeguards and Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately
60%	88%	100%	73%	Effective

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: YES Question Weight 20%

Explanation: There is no real direct comparability with other facilities that do weapons manufacturing. However, DOD and NRC do similar civil and military applications. The NNSA works closely with both the DOD and the NRC. The measures and targets are in excess of any other known S&S program in the government. Recent new analysis shows that the program performs at a high level and compares very favorably to other activities with similar responsibilities. There have been no successful breaches of physical security perimeters by terrorists or criminals.

Evidence: NNSA Strategic Plan, GAO reports of March 2002 and 2003, DOD End-to-End review, DOE/NNSA/NRC Comparability Study.

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: YES Question Weight 20%

Explanation: The OA inspection, an independent assessment group reporting directly to the Secretary of Energy, routinely assesses and evaluates NNSA S&S protection, using DOE issued requirements and policies. In addition, recent GAO reports indicate significant progress toward the performance measures. In the most recent report, May 2003, the GAO notes that 'despite the problems some contractors have had in preparing root cause analyses, corrective action processes in 2002 at all 7 (reviewed by GAO) sites showed that some sites are making progress.' While the information in the report was dated, i.e. the review was conducted from December 2001 through April 2003, it notes that many efforts have already made marked progress.

Evidence: OA independent inspection Reports, GAO report of March 2002 and March 2003; GAO report on Nuclear Security: NNSA Needs to Better Manage its Safeguards and Security Program, May 2003.

PART Performance Measurements

Program: Safeguards and Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately
60%	88%	100%	73%	Effective

Measure: Cumulative percentage of physical security reviews conducted by the Office of Independent Oversight and Performance Assurance (OA) at NNSA sites that resulted in the best rating of "Effective" (based on last OA review at each site over 6 physical security topical areas)

Additional Information:

Year	Target	Actual
2003	Baseline	
2004	80%	68%
2005	85%	
2006	90%	
2007	90%	

Measure Term: Long-term

Measure: Cumulative percentage of cyber security reviews conducted by the Office of Independent Oversight and Performance Assurance (OA) at NNSA sites that resulted in the best rating of "Effective" (based on last OA review at each site over 2 cyber security topical areas)

Additional Information:

Year	Target	Actual
2003	Baseline	
2004	80%	79%
2005	85%	
2006	90%	
2007	90%	

Measure Term: Long-term

PART Performance Measurements

Program: Safeguards and Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately
60%	88%	100%	73%	Effective

Measure: Annual percentage of OA review findings that have an approved corrective action plan in place within 60 days of the final report date or by the OA required date.

Additional Information:

Year	Target	Actual
2003	Baseline	33%
2004	80%	100%
2005	85%	
2006	90%	
2007	90%	

Measure Term: Annual

Measure: Cumulative percentage of milestones completed resulting in full implementation of the Design Basis Threat policy at all NNSA sites.

Additional Information:

Year	Target	Actual
2003	N/A	
2004	30%	
2005	70%	
2006	100%	

Measure Term: Long-term

PART Performance Measurements

Program: Safeguards and Security
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately
60%	88%	100%	73%	Effective

Measure: Cumulative percentage of pieces of classified removable electronic media (CREM) at the Los Alamos National Laboratory destroyed due to increased capability for classified diskless computing.

Additional Information:

Year	Target	Actual
2005	10%	
2006	20%	
2007	30%	

Measure Term: Long-term

Measure: Annual average days per applicant for NNSA to complete the processing needed to grant Q-clearances for NNSA federal and contractor employees.

Additional Information:

Year	Target	Actual
2003	baseline	
2004		
2005		
2006		
2007		
2008		

Measure Term: Annual

PART Performance Measurements

Program: Secure Transportation Asset (STA)
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	86%	67%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The mission of Secure Transportation Asset (STA) is to safely and securely transport nuclear weapons, weapon components, and special nuclear materials to meet projected Department of Energy (DOE), Department of Defense (DoD), and other customer requirements.

Evidence: National Nuclear Security Administration (NNSA) Strategic Plan; Defense Programs (DP) annual planning guidance; DOE Order 461.1, Packaging and Transfer or Transportation of Materials of National Security Interest; & NNSA Budget/Future-Years Nuclear Security Program (FYNSP).

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The program addresses the scheduling, safety, and security concerns associated with the movement of nuclear weapons and components in a public environment. The program mitigates the national security risks associated with the seizure and use of a shipment by adversarial groups and individuals.

Evidence: Congressional line item budget; NNSA Budget/FYNSP; STA Program and Implementation Plans;

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: No other agency, including the DoD, performs the full extent of the STA specialized work/mission. The program is designed to conduct shipments across state jurisdictions with nuclear materials couriers who have specialized training and federal authority. The shipments require the use of specialized trailers and vehicles, operated by carefully screened individuals who are rigorously and repeatedly trained on the various response situations.

Evidence: NNSA Budget/FYNSP & STA Program and Implementation Plans--DOE Orders drive mission responsibilities.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The program is designed to be managed and executed by federal personnel and supported by contractors. This design addresses the full mission spectrum through specialized agent recruitment methods, development of unique and specialized training programs, and research, development, and design of state-of-the art command and control systems and equipment. The program was designed to bring all of the assets of a secure transportation system under one single manager that works closely with its predominant customer -- Defense Programs. A Departmental STA Advisory Board (STAAB) evaluates all potential shipments among competing customers and develops a priority list to ensure that national interests are met.

Evidence: NNSA Budget/FYNSP; STA Program and Implementation Plans; DOE Order 461.1 & STAAB Charter.

PART Performance Measurements

Program: Secure Transportation Asset (STA)
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	86%	67%	Effective

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: The STA is organizationally aligned with Defense Programs, its primary customer. In the past, competing customers and departmental campaigns put the STA in the position of choosing which shipments would be deferred to another year or invoking extreme amounts of overtime. Now, a Departmental STA Advisory Board (STAAB) evaluates all potential shipments among competing customers and develops a priority list to ensure that national interests are met. Since the STA operates at full capacity and the STAAB sets the priority, any backlog that is present is only relevant to the optimum capacity that the STA should achieve. The STA manages the resources to obtain a mission capacity that provides a consistent level of safety and protection to all nuclear shipments.

Evidence: STAAB Charter; NNSA Budget/FYNSP; STA Program and Implementation Plans; & STA Functions Document.

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight 13%

Explanation: The STA has 6 specific long-term measures that meaningfully assess progress in achieving the STA purpose. They are: (1) Increase the annual percentage of requested shipments completed to 90% by 2005; (2) Increase annual capacity to 150 convoys by 2009; (3) Produce 51 new Safeguards Transporters (SGT) by 2011; (4) Increase the number of Federal Agents to 420 by 2008; (5) maintain at least a 15 % optimization of requested workload; and (6) reduce overtime per federal agent to 800 hours by 2006. The measures are linked to the STA objective of optimizing the mission capacity to meet customer requirements.

Evidence: NNSA Budget/FYNSP; STA Program and Implementation Plans; STA Primavera Work Breakdown Structure; & STA Project Review List.

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight 13%

Explanation: The STA long-term measures are ambitious and challenging in order to meet the significant increase in the number of transportation requirements in the outyears. The agent strength targets are set to compensate for projected losses and gradually ramp-up the force. The targets increase the force from 180 agents to 420. The SGT targets are also a gradual ramp-up, corresponding to the increased workload. The targets establishes a new fleet of 51 trailers. The optimization measure is ambitions because it assumes that efficiencies can be identified to increase convoy capacity. The convoy targets reflect the growth in mission capacity, 60 to 150 convoys.

Evidence: STA Program and Implementation Plan; STA Primavera Work Breakdown Structure; STA Project Review List; & NNSA Budget/FYNSP.

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight 13%

Explanation: A limited number of annual performance measures have been identified for STA that demonstrate progress toward achieving the long-term goals of the organization. The STA has specific annual measures that meaningfully assess progress in achieving the four STA long-term measures. For FY 2006, they are: (1) complete shipments for 90% of requested shipments; (2) Complete at least 120 convoys; (3) Increase Safeguards Transporter fleet to 37; (4) Attain at least 370 Federal Agents; (5) maintain an optimization percentage of 15; and (6) reduce overtime to 600 hours per agent on average. (See measures tab for other years measures.)

Evidence: STA Program and Implementation Plans; STA Primavera Work Breakdown Structure; STA Project Review List; & NNSA Budget/FYNSP.

PART Performance Measurements

Program: Secure Transportation Asset (STA)
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	86%	67%	

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:13%

Explanation: Annual performance targets reflect qualifiable numbers and incremental steps that are based on actual experience and are clearly measurable. For convoys, the increase is based on additional agents, SGTs, and scheduling efficiencies. For agents, the increase is based on projected losses and the expected class size for new recruits. For SGTs, the increased is based on the production line and optimum fleet size. For shipment optimization, requested shipments are calculated to determine mission hours. After optimization, the actual mission hours are recorded when the shipment is complete. The decrease in mission hours represents the optimization percent. From the baseline calculated in FY02, the STA goal was to maintain an optimization percentage of 10% for FY2003. Based on the FY2003 results the outyears were increased to 15%.

Evidence: STA Program and Implementation Plans; STA Primavera Work Breakdown Structure; & STA Project Review List.

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: YES Question Weight:13%

Explanation: The program efforts carried out by the program partners [Federal employees, Support Contractors, and, for some activities, M&O Contractors] are directly tied to the program's annual and long-term performance measures. The customers of the program are external partners via the STAAB, where they aid the organization in optimizing shipping schedules through quarterly meetings. Program resources and schedules are integrated into supporting projects containing specific milestone and schedule data. Primavera Project Planning software is used for performance monitoring and measurement. The projects are organized by the STA objectives and strategies, and program partners are directly involved in the projects. Formal task agreements bind contractors to project performance. The annual and long-term measures transcend projects and strategies and provide an indicator for strategic objectives.

Evidence: NNSA Budget/FYNSP; STA Primavera Project Listing; STA Program and Implementation Plans & STAAB Minutes.

2.6 Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need? Answer: YES Question Weight:13%

Explanation: The program has been surveyed in the functional areas of aviation, security, emergency management, operations, human reliability, cyber security, human resource operations, property, and safety; often annually, to ensure performance against requirements and to eliminate gaps and improve process and efficiencies. For example, independent security evaluations are conducted to test the security measures during shipments. These evaluations prompt revision to the Site Safeguards and Security Plan.

Evidence: DOE Orders; OST Policies & Standard Operating Procedures; Self-Assessment and Survey Program Documentation; Joint Testing Exercises; DOE Inspector General (IG), and Office of Oversight Assessment (OA) Independent Surveys of STA functions; & U.S. General Accounting Office (GAO) audits;

PART Performance Measurements

Program: Secure Transportation Asset (STA)
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	86%	67%	

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: YES Question Weight:13%

Explanation: STA's performance goals with annual targets cascade from the NNSA strategic plan, and also link to supporting milestones, deliverables, and budgets. Program performance measures provide information for the resource allocation decisions made in the annual Programming and Budgeting processes. The Budget and Reporting (B&R) categories for the STA Program are listed and linked to performance metrics. All direct and indirect costs to attain the performance results for the STA Program are reported in the B&R categories. The cost for the NNSA STA Federal employees is carried in a separate STA program direction account/sub-program, as required by the Congress. In the FY 2005 President's Budget, NNSA initiated a budget request format that includes the current 3 years plus 4 additional years of performance and budget information for each program ("GPRA Units") in the mainline budget justification document. Formerly, the outyear funding and performance targets were included in a separate document, the Future-Years Nuclear Security Program, provided with the budget request.

Evidence: NNSA PPBE guidance documents located on the NNSA web-site; NNSA Budget/FYNSP; NNSA FY 2004 PDM; STA Primavera Project Listing; & STA Project Review List.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:13%

Explanation: The STA has taken several steps to address strategic planning deficiencies to include establishing a Headquarters Liaison Office to aid in the adoption of the PPBE process and assigning functional areas and individuals to specific areas of the PPBE process to insure timely compliance with all the required data submission deadlines. Federal Managers assigned to all projects are enrolled in project management & federal budget process training. Project Managers are held accountable for the planning, schedule, and cost of assigned projects. Program reviews held bi annually for all OST projects report on cost, schedule, and future goals of all OST projects. The OST has developed a formal system for evaluating its strategic planning process and any identified deficiencies or gaps. This system entails weekly budget and project reviews, quarterly readiness and capability briefings, and an annual program review. Identified deficiencies are addressed through the PPBE process and reallocation of funding is based on priorities. The STAAB is an example of correcting deficiencies. Since the STA operates at full. capacity and requests exceed that capacity, the STA was in the position of determining which customers would be served. Now, the STAAB sets the priority for shipping schedules.

Evidence: PPBES Schedule and Program Plan; STA primavera project/priority list; capability and readiness briefings; budget reports; & meeting minutes.

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:14%

Explanation: The OST currently has bi-monthly program reviews with Sandia National Laboratories and Honeywell/NM and quarterly reviews with Honeywell/Kansas City. At these reviews, costs and schedules are discussed in order to manage the projects. In addition, an annual assessment of various functional areas is performed as well as an independent review of the security function and over-the-road operations. This information if used to manage the program more effectively and continually improve performance.

Evidence: Sample of Quarterly Program Reviews: Honeywell/NM; Honeywell/KC; Self-Assessment Reports; Survey Reports; & STA Organizational Capability/Readiness Reviews, by division.

PART Performance Measurements

Program: Secure Transportation Asset (STA)
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	86%	67%	

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight:14%

Explanation: Federal Managers and program partners are held accountable for cost, schedule, and performance results by performance metrics in their annual appraisal plans that link to the program performance results. Contractors and partners are held accountable through work authorizations, project work plans, and award fees that link to program performance results. Integration is achieved via bimonthly reviews and the tracking of project data in the integrated Primavera Project management database, which compares the project target plan verses the project actual. This process provides regular and effective two-way communications between Federal Managers and their contractor counterparts.

Evidence: STA PRIMAVERA FY 2004 Project Listing; contract administration; Performance Measures in STA Operational/Implementation Plans; Performance Appraisal Plan; individual measures of performance; & task agreements.

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: NO Question Weight:14%

Explanation: All funds are spent for the intended purpose but unobligated balances are high. Although the STA has obligated funds in a manner consistent with the type/status of the program it is--a government-owned organization, it is changing its methodology of sending funds to M&O contractors to achieve consistency with other programs of NNSA/Defense Programs. Funds currently transferred to M&O contractors on a quarterly basis will be changed to annually. This will significantly improve the timeliness of obligating funds in future years. Procurements will still be made through federal channels and are based on operational conditions and real-time priorities. The STA will be able to execute its budget in a manner to retain flexibility in light of changing security conditions and mission priorities.

Evidence: Uncosted and Cost Reports; monthly financial reports; & monthly budget meetings with budget representatives.

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:14%

Explanation: The STA performance plans include performance indicators and targets for each year from FY 2003-08 directly tied to the annual and long-term goals. Internal performance measurements include capability/readiness metrics; quarterly contractor reviews; and quarterly project scope, schedule and cost reviews. Internal surveys and self assessments are routinely conducted. Aggressive production schedules are continually monitored and supplemented by 6 Sigma analyses, time-motion studies, and quality reviews. Federal manpower efficiencies are a primary focus. Many of the mission support functions are performed by contractors & subcontractors, freeing agent man-hours for other secure convoys. For example, contractor drivers are used to move vehicles and trailers to their loading point and government aircraft are used to move agents to convoy starting locations and return them to their home station when a convoy is complete. There is also a process for optimizing shipping schedules, freeing additional agent man-hours.

Evidence: STA shipment & production schedules; personnel overtime records; time and time-motion studies; Bi-Weekly meetings with contractors and Federal Managers to discuss issues/concerns; Contract Award Process; and Change Control Process.

PART Performance Measurements

Program: Secure Transportation Asset (STA)
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	86%	67%	

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:14%

Explanation: The STA collaborates extensively with its Department of Defense (DoD) and NNSA Defense Programs/HQ customers and with its M&O and support service contractor suppliers on production, planning, scheduling, operations, design, and training. The STAAB aids in the coordination process and is frequently tasked to solve shipping issues. A headquarters Liaison Office was established to aid in coordination efforts between programs.

Evidence: STAAB Charter

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:14%

Explanation: STA is covered by DOE's financial management policies, procedures, and practices that meet all statutory requirements. The accounting services for NNSA are provided by DOE and these are free of material internal control weaknesses. The DOE's financial statements have been given a clear audit opinion in 7 of the last 8 years. The STA Program staff reviews accounting reports on a monthly basis to monitor obligations and costs for all projects and sites.

Evidence: DOE Financial Management Orders; NNSA PPBE Guidance Documents located on the NNSA-Web site; internal OST policies/procedures; purchase requests; & credit card process.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:14%

Explanation: The OST has taken several steps to address management deficiencies to include establishing a Headquarters Liaison Office to aid in the adoption of the PPBE process and assigning functional areas and individuals to specific areas of the PPBE process to insure timely compliance with all the required data submission deadlines. Federal Managers assigned to all projects are enrolled in project management & federal budget process training. Project Managers are held accountable for the planning, schedule, and cost of assigned projects. Program reviews held bi annually for all OST projects to report on cost and schedule and future goals of all OST projects. The organization also addresses management deficiencies when found in the form of corrective action plans as a result of the self assessment program and the survey program. Another example would be the creation of the STAAB. This was done when it was realized that not all customer needs could be satisfied.

Evidence: Organizational structure and specific position descriptions; project assignments and training; STA self assessment and survey reports and corrective action plans; & STA readiness/capability reviews.

PART Performance Measurements

Program: Secure Transportation Asset (STA)
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	86%	67%	

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: LARGE EXTENT Question Weight 25%

Explanation: STA has been very successful in improving its capability/capacity to meet an increasing percentage of customer's annual transport needs. In FY2004, the program is on-track to meet 85% of transport needs vs. only 80% in Fy2003. Especially instrumental has been the progress toward more than doubling the number of secure convoys (78 in FY 2003), despite a re-baselining after 9/11, that required twice the prior resources for each convoy. The initiative to increase capacity was formulated through strategic planning in 2001 and 2002. Plans & budget forecasts were revised to support the infrastructure and support systems to enable the increase in capacity. Since there are many sub-systems and interdependencies associated with a convoy, all support systems must be fully integrated as change is introduced. Agent numbers continue to increase (to 248 in FY 2003) despite a large number of mandatory retirements and buyouts. Safeguard Transporter production (to 28 in FY 2003) is on a pace to correspond with the increase in missions.

Evidence: Performance Measure Targets/Results evidenced in the NNSA Budget/FYNSP & STA Program and Implementation Plans.

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: LARGE EXTENT Question Weight 25%

Explanation: The STA met the annual target for SGT production and number of convoys. The number of agents was slightly below target due to a backlog in security clearance processing and a loss of agents to Homeland Security. There are 254 agent on-board now with a target of 280 by the end of the fiscal year. Based on the delays in processing investigations, future targets were adjusted to more realistic numbers. The optimization measure was baselined in 2002 and exceeded the target of 10%. The initiative to increase capacity was formulated through strategic planning in 2001 and 2002.

Evidence: STA Program and Implementation Plans; STA Project Reviews; quarterly contractor reviews; completion of shipments; and STA record of management of annual objectives.

PART Performance Measurements

Program: Secure Transportation Asset (STA)
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	86%	67%	

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: YES Question Weight: 25%

Explanation: The STA demonstrated improved efficiencies by achieving its 4 strategic objectives for 2003. Production and schedule targets are reviewed quarterly to ensure program targets are met. Shipment schedules are developed and tracked to ensure timely completion to meet customer requirements. Surveys and self assessments determine the need for improvements that are tracked to completion. The STA meets production schedules for vehicles and other systems; performs analyses using 6 Sigma teams, time motion studies, and quality reviews to improve efficiencies in production and operation; and uses contractor quarterly reviews, surveys, self assessments, implementation plans, and production schedules. STA has been building armored class tractors for 3 years. During this time, time studies were performed to reduce labor hours for assembly. As a result, STA realized a reduction from an initial man-hour requirement of over 1600 hours per unit to less than 1000. This approach is being used for escort vehicle production that started in FY 2002. Final efficiencies for these vehicles are still being determined, but we have seen a similar improvement. STA also builds Safeguard Transporters (SGTs), 40-foot trailers with specialized design and operation features. This effort began in 1998 and continues to be on schedule (4 trailers per year) and on budget. The cost per trailer has been maintained since 1998 when the first trailer was built at a cost of $2.7M. Costs have only increased due to inflation. Time motion studies are in process to see if additional efficiencies can be realized. The continuing STA objective is to produce specific numbers of vehicles while decreasing production costs and schedules was obtained. In addition to the above, The STA has increased its number of convoys and the amount of training to agents, while continuing to decrease overtime.

Evidence: STA Shipment Schedules; OST overtime records; OST time and time motion studies; STA escort vehicle production and Safeguard Transporter schedules; & OST convoy scheduling records.

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NA Question Weight: 0%

Explanation: No other agency has a similar purpose or goals. Occasionally, DoD will transport weapons to their permanent facility, but these moves rely on large numbers of resources to compensate for potential threats.

Evidence:

PART Performance Measurements

Program: Secure Transportation Asset (STA)
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	86%	67%	

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?

Answer: SMALL EXTENT

Question Weight 25%

Explanation: [[[Evaluations are not recent]]] Independent external evaluations of STA security, emergency management, aviation, property, Joint Testing Exercises, and other critical areas have been generally but not completely favorable. For example, during a safeguards & security evaluation 3 topical areas were found to be effective; however there were 6 findings. Also, an emergency management evaluation board found 6 areas to be effective and 4 areas that required improvement. The STA aviation and Joint Technical Operations Team functions are evaluated on a yearly basis. Overall, STA has shown a decrease in the number of issues and the level of criticality of findings, indicating that it is becoming more effective & efficient in achieving results. This is consistent with the self assessment program, in effect for several years, that has resulted in a decreased number of findings/negative observations overall, particularly in areas critical to mission accomplishment. When an external evaluation determined that a specific mission capability needed to be available/improved, a "Goalpost Plan" was executed to quickly create that capability. A follow-up inspection validated the plan and the capability.

Evidence: Independent survey reports by the DOE IG and Office of Oversight Assessment (OA), & GAO, as validated by STA self assessment reports, corrective action plans, and contractor quality assurance results. Report examples: Independent Safeguards and Security Follow-up Inspection of the TSD, December 10, 1999; and DOE/IG-0605, Inspection of National Nuclear Security Administration's Ability to Meet the Aircraft Requirements of the Joint Technical Operations Team, June 2003.

PART Performance Measurements

Program: Secure Transportation Asset (STA)
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	86%	67%	

Measure: Annual percentage of requested packages of nuclear weapons, components, and material shipped safely and securely.

Additional Information:

Year	Target	Actual
2003	baseline	0.8
2004	0.85	
2005	0.9	
2006	0.9	
2007	0.9	

Measure Term: Annual

Measure: Annual number of secure convoys completed

Additional Information:

Year	Target	Actual
2002	70	72
2003	75	78
2004	90	
2005	105	
2006	120	
2007	130	
2008	140	
2009	150	

Measure Term: Annual

Program: Secure Transportation Asset (STA)
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately
100%	100%	86%	67%	Effective

2010	150

Measure: Cumulative number of Safeguards Transporters (SGTs) in operation.

Additional Information:

Year	Target	Actual
2001	21	21
2002	25	25
2003	28	28
2004	31	
2005	34	
2006	37	
2011	51	

Measure Term: Long-term

Measure: Cumulative number of federal agents at the end of each year.

Additional Information:

Year	Target	Actual
2002	210	215
2003	255	248
2004	280	
2005	335	
2006	370	

Measure Term: Long-term

Program: Secure Transportation Asset (STA)
Agency: Department of Energy
Bureau: NNSA
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Moderately Effective
100%	100%	86%	67%	

2007	405
2008	420

Measure: Annual percentage of mission hours reduced by shipment optimization (compares mission hours actually used after approved shipment requirements have been combined and pick-up timing optimized vs. planned mission hours needed for individual shipments)

Additional Information:

Year	Target	Actual
2002	baseline	
2003	10%	18%
2004	15%	
2005	15%	
2006	15%	

Measure Term: Annual

Measure: Annual average scheduled overtime hours per federal agent.

Additional Information:

Year	Target	Actual
2002	baseline	1300
2003	1200	1200
2004	1100	1100
2005	900	
2006	800	

Measure Term: Annual

PART Performance Measurements

Program: Solar Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The program's mission is to develop efficient, reliable, and affordable solar technologies that can transform domestic solar resources into a substantial source of usable energy.

Evidence: EERE FY 2005 OMB Budget Submission. Program first authorized in 1975 by P.L. 94-163, "Energy Policy and Conservation Act" (EPCA). Reauthorized in 1976 (P.L. 94-385), 1978 (P.L. 95-619), and 1992 (P.L. 102-1018).

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The program aims to expand the use of solar energy, which can increase domestic energy supplies and avoid emissions of pollutants and greenhouse gases associated with conventional methods of power production. These potential benefits support the Administration's National Energy Policy, as well as the Administration's climate change goals.

Evidence: The program focuses R&D on activities that it considers too technologically risky for the private sector to undertake alone. Risk levels vary on a project-by project basis.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The Solar Energy Program collaborates with industry, academic and State solar research programs, as well as other programs in EERE. From this collaboration, program managers direct research that complements, but does not duplicate, other ongoing efforts. For example, meetings are held yearly with the Energy Materials Coordinating Committee (EMaCC) to review Federal R&D programs conducting similar research within the government. Meetings are also held with State representatives and other organizations, such as the Electric Power Research Institute. Occasionally, other Federal programs, such as the Department of Commerce Advanced Technology Program, fund solar energy projects. However, these efforts are comparatively small and not part of a coordinated research effort.

Evidence: The program considers lack of industry capital to be a market barrier to private sector investment in solar energy technology R&D.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The program focuses on reducing costs of solar power though technology development in order to achieve the outcomes of increased domestic energy supply and reduced emissions of pollutants and greenhouse gases.

Evidence: The program found no studies that indicate a production tax credit, regulatory driver, or other policy mechanism would be a more cost effective approach.

PART Performance Measurements

Program: Solar Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: NO Question Weight: 20%

Explanation: The program focuses resources on technologies that are not yet commercially competitive. In support of the Administration's R&D Investment Criteria initiative, the program was asked to prepare "bubble charts" that plot key program variables (e.g., expected public benefits, funding levels, years to commercialization). Bubble charts can serve as an informational tool to help determine, along with other considerations, whether the program appropriately targets its R&D funding. While the program has made progress estimating public benefits, the Department has not yet developed a methodology to estimate benefits consistently within and across programs. Therefore, the program could not prepare meaningful bubble charts.

Evidence: Although unable to prepare bubble charts, the program did estimate years to commercialization for its major R&D activities as follows: photovoltaics (17 years); solar thermal technologies (7 years). The program's estimates have not been peer reviewed. In general, the program appears to target its resources wisely, but a lack of ability to provide appropriate evidence mandates a "no" response. EERE continues to work internally and with other DOE program offices to improve consistency and accuracy in estimating benefits.

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight: 10%

Explanation: The program's key long-term measures track cost-of-energy and reasonably represent the most important program activities.

Evidence: FY 2004 Budget. Solar Energy Technology Program. DRAFT Multi-Year Technical Plan (2003).

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight: 10%

Explanation: The program's long-term measures are ambitious and designed to maintain aggressive progress. For example, the cost-of-energy goal for photovolatics is 6 cents/kWh by 2020, a significant reduction from the corresponding cost in 2000 of 25 cents/kWh. This is based on new research concepts, e.g., nanostructures and multi-junction cells, that are high risk but could potentially lead to cost breakthroughs. To maintain focus on long-term targets, intermediate goals in periodic solicitations are used to direct and redirect activities within the PV subprogram as well as to redirect the PV subprogram itself. Such decision points provide regular 'on and off ramp' opportunities.

Evidence: Solar Energy Technology Program DRAFT Multi-Year Technical Plan (2003). The US Photovoltaic Industry Roadmap (2001). Photovoltaics, Energy for the New Millennium: The National Photovoltaics Program Plan 2000-2004 (2000).

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight: 10%

Explanation: The program's annual performance measures tie directly to the long-term cost-of-energy goals. For photovoltaics, the key annual measure is cost of production of photovoltaic modules. For solar water heating, cost-of-energy is tracked directly. The photovoltaic subprogram should develop additional annual measures that capture its fundamental research activities.

Evidence: FY 2004 Budget. Solar Energy Technology Program DRAFT Multi-Year Technical Plan (2003).

PART Performance Measurements

Program: Solar Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:10%

Explanation: The annual performance measures have baselines and are specific and quantified. They are also ambitious but realistic. They are based on estimates from lab engineers and researchers of what can be accomplished in a short period of time, one year, with the available resources.

Evidence: FY 2004 Budget.

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: YES Question Weight:10%

Explanation: The program selects only projects from partners who show commitment and that will contribute to the program goals of decreasing the cost and increasing the performance of systems being developed. Projects are subject to semi-annual or annual reviews, and project performers must submit monthly or quarterly status reports. The majority of performance measures are quantifiable and trends can be linked to objective baselines for the technical performance of the technologies being developed and demonstrated. Program goals are identified when R&D efforts are solicited. Responses from interested parties are evaluated based on the demonstration of their ability to achieve progress toward these goals as presented in work statements submitted for competitive evaluation. Such information is developed as targets and milestones in the final contracting documents.

Evidence: Sample program R&D solicitations.

2.6 Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need? Answer: YES Question Weight:10%

Explanation: Each major subprogram is subject to external peer reviews every two years. [The most recent peer review of the concentrating solar power was not independent (one panel member was a member of a solar industry advocacy organization), but that activity was terminated in the FY 2004 Budget.] In addition to peer reviews the program undergoes a thorough internal program review every 18 months. The most recent review was March 2003. The program should consider expanding the scope of peer reviews to include overall program effectiveness and relevance.

Evidence: National Academy of Sciences (NAS), "Renewable Power Pathways: A Review of The U.S. Department of Energy's Renewable Energy Programs" (2000). 2001 Peer Review of the DOE Photovoltaic Program, September 14, 2001. Concentrating Solar Power Peer Review: Final Report (2001). 2001 Peer Review of the U.S. Department of Energy's Solar Buildings Technology Research Program, December 2001.

2.7 Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget? Answer: NO Question Weight:10%

Explanation: The budget identifies the resources needed to achieve the program's cost-of-energy performance goals. However, budget documents do not clearly indicate the full costs of achieving the program goals. Salaries, benefits, and other admininstrative expenses to support the program are included in a separate budgetary line item ("Program Direction"). EERE does not report the allocation of Program Direction funding to the various programs it supports.

Evidence: FY 2004 Budget.

PART Performance Measurements

Program: Solar Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: There are no recent reports criticizing the program's strategic planning efforts. The program has consulted with industry and other stakeholders on priority needs and has formulated a multiyear research plan. The program also prepares R&D roadmaps in consultation with industry. One recent PV subprogram responses to PV community needs are the development of the High Performance R&D activity in FY 2000 in response to industry's need for higher efficiency concepts to reduce system costs on a 'per energy' basis. Another example is the development, initiated in 2002, of a concerted effort to address system reliability with particular emphasis on thin-film modules and their special aspects that both promise inexpensive manufacturing processes but also require new approaches to ensure durability.

Evidence: Solar Energy Technology Program DRAFT Multi-Year Technical Plan (2003). The US Photovoltaic Industry Roadmap (2001). Photovoltaics, Energy for the New Millennium: The National Photovoltaics Program Plan 2000-2004 (2000).

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NO Question Weight:10%

Explanation: Each year, the program estimates the public benefits of its activities in support of the Government Performance and Results Act (GPRA) and the Administration's R&D Investment Criteria initiative. However, the program has not yet developed a consistent and reliable methodology for comparing potential benefits within and across programs with similar goals.

Evidence: FY 2004 Congressional Budget Justification materials.

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: The Solar Energy Program works closely with industry, academic, and State solar research programs to identify R&D needs and prepare "roadmaps" that delineate the highest priority activities that provide the most value. In addition, the program's multi-year program plan defines the major activities that will be carried out over a five-year period. Each activity is assigned a relative impact on system cost, risk of achieving success, and cost. These factors are considered in developing priorities and assigning budgets. In addition, the assessments described in 2.RD1, for example, technological risk, and other factors, such as market potential, are used in establishing the zero-based budget for the Solar Energy Program that identifies priorities at the activities level.

Evidence: Solar Energy Technology Program DRAFT Multi-Year Technical Plan (2003). The US Photovoltaic Industry Roadmap (2001). Photovoltaics, Energy for the New Millennium: The National Photovoltaics Program Plan 2000-2004 (2000). Concentrating Solar Power: An Industry Vision for the New Millennium (2001); Parabolic-Trough Technology Roadmap: A Pathway for Sustained Commercial Development and Deployment of Parabolic-Trough Technology (1999). Concentrating Solar Power Dish Roadmap (2000). Draft: Central Receiver Technology Roadmap: A Pathway for Sustained Commercial Development and Deployment of Central Receiver Technology (2001).

PART Performance Measurements

Program: Solar Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

3.1 Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance? Answer: YES Question Weight:12%

Explanation: The EERE Strategic Management System -- which establishes at the beginning of each fiscal year an 18-month schedule for key planning, budget formulation, budget execution, and analysis / evaluation functions -- requires that each EERE program establish and track long-term and near-term program performance goals and measures. Program results as evaluated through the goals and measures are used annually and throughout the year to assess partners' performance, adjust funding, and re-align R&D portfolios.

Evidence: SMS Implementation Letter for FY 2002 - 2005 (October 2001). Monthly, quarterly and annual reports from key program partners and contractors. Performance information on one measure (cost of production of PV modules) is recorded in Joule, the Department's performance management system. However, in general, milestones in the Joule system are not fully reflective of program progress. Thus, the Department's Joule system provides little value-added. The new I-MANAGE system, currently under development, will better integrate budget and performance.

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight:12%

Explanation: The Annual Performance Appraisals of all EERE Program Managers include criteria directly related to cost, schedule, and performance results. EERE reviews these criteria monthly in the EERE Monthly Management Reviews. Most EERE contracts include award fee and other performance criteria to hold those partners accountable.

Evidence: Performance Plan and Performance Appraisal Form for Performance Management System Employees; EERE Award Fee and Performance Based contracts.

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:12%

Explanation: Each year, the program develops an Annual Operating Plan, which is reviewed internally to ensure that new funding is planned to be obligated consistent with the appropriated purpose. EERE also develops a Spend Plan for all of its programs. The program uses data from Departmental procurement and financial systems -- and similar data from National Laboratory partners -- to assure that actual expenditures occur for intended purposes and on a schedule consistent with the Spend Plan. The program has had year-end amounts ranging from 12 to 35 percent of appropriated funds from FY 2000 to FY 2002. The program reports that the high uncosted level of 35 percent in FY 2002 was due to the anticipation of delayed appropriations for FY 2003. (The program operated did not receive appropriations till halfway through the fiscal year in 2003.) Unobligated balances brought forward to FY 2004 were $337,000, less than one percent of the program's FY 2003 appropriation of approximately $83 million.

Evidence: FY 2003 Annual Operating Plan. Solar Energy Program FY 2003 Financial Status Report (June 2003). FY 2003 Apportionment. FY 2003 Spend Plan.

PART Performance Measurements

Program: Solar Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?

Answer: YES Question Weight:12%

Explanation: EERE's reorganization in 2002 clarified lines of responsibility and eliminated organizational "stovepipes" by consolidating planning, budgeting, and analysis into a single business administration office. The reorganization reduced management layers, although staff levels remained the same. EERE developed a new IT report to improve program managers' access to EERE cost, obligation, and procurement data. EERE plans to consolidate several legacy IT systems into a single program management system that is intended to track all required information on a project by project basis (cost share, type of contract according to A-11 definitions, etc.). EERE is also developing a measure to reduce uncosted balances, which means obligated funds will be put to use more quickly. The program also reports that it has established its own database that track the following information for each project: objectives, background, approach, recipient, location, milestones, status, funding level, and program priority. The database will reportedly be compatible with Departmental databases under development. These recent actions should achieve efficiencies and improve cost effectiveness, although it will be difficult in some cases to demonstrate definitively.

Evidence: EERE Reorganization "All Hands" presentation: http://www.eere.energy.gov/office_eere/pdfs/eere_reorg.pdf. EERE IT Business Case Number 019-20-01-12-01-1011-00-304-101. Solar Energy Program FY 2003 Financial Status Report (June 2003). Solar Energy Technologies Program database.

3.5 Does the program collaborate and coordinate effectively with related programs?

Answer: YES Question Weight:12%

Explanation: The program collaborates with related EERE programs, specifically Buildings Technologies, the Federal Energy Management Program, and the Distributed Energy Resources Program. Photovoltaics (PV) research is coordinated with the DOE Office of Science. Interagency coordination between DOE and other Federal agencies (Air Force, Army, NASA, and Navy) is accomplished through the government-sponsored Interagency Advanced Power Group (IAPG). The program supports Department of Interior (DOI) solar efforts in national parks, provides Federal Emergency Management Agency with mobile solar systems that generate power immediately after disasters, helps the Army analyze the benefits of solar water heaters and PV on military housing, collaborates with the Department of Housing and Urban Development educating appraisers about solar technology, and works with the Western Governors Association analyzing the costs and benefits of CSP for relevant States.

Evidence: U.S. Department of Interior Press Release, evaluating renewable energy resources on public lands, February 21, 2003. IAPG website (http://www.grc.nasa.gov/WWW/IAPG/).

3.6 Does the program use strong financial management practices?

Answer: YES Question Weight:12%

Explanation: Each year, EERE develops and maintains a Spend Plan and a Measures spreadsheet that links the Spend Plan to annual and long-term goals and measures for each EERE program. The program reviews quarterly costing reports and weekly project status reports. There is no evidence of erroneous payments or statutory violations.

Evidence: FY 2003 Spend Plan and Measures spreadsheet. Sample quarterly costing report.

PART Performance Measurements

Program: Solar Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

3.7 **Has the program taken meaningful steps to address its management deficiencies?** Answer: YES Question Weight:12%

Explanation: The National Association of Public Administrators (NAPA) found dozens of management deficiencies in the program's bureau (the Office of Energy Efficiency and Renewable Energy, or EERE) in a review published in 2000. EERE provided evidence that it addressed some of management deficiencies identified by NAPA, and has prepared a Management Action Plan that will address many of the remaining findings. While a few NAPA recommendations have not been addressed (e.g., that EERE conduct periodic audits to assure that cost-sharing partners actually provide funding they agree to), in general, EERE has taken meaningful steps to address most deficiencies.

Evidence: A Review of the Management in the Office of Energy Efficiency and Renewable Energy (NAPA, 2000). Letter Report from Assistant Secretary Garman to Chairman of the House Subcommittee on Interior and Related Agencies on implementation of NAPA recommendations (July 11, 2001). EERE Management Action Plan (August 2003).

3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: YES Question Weight:12%

Explanation: The program completed a spreadsheet summarizing the conduct of its R&D in accordance with OMB Circular A-11 definitions. More than 80 percent of program funding goes to national labs, about half of which is subcontracted out, almost entirely competitively. Of the remaining (non-national lab) funding, about half is earmarked, and the balance is largely awarded competitively. The strong reliance on competitive awards ensures program quality. Program efficiency can be improved by reducing funding for subcontracts run by the national labs, and instead having the program run the competitive solicitations directly.

Evidence: FY 2003 Spend Plan. Table showing funding allocations as per OMB Circular A-11 definitions for "Conduct of Research and Development."

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: LARGE EXTENT Question Weight:25%

Explanation: Progress on long-term goal photovolatics goal appears to be on track. Some targets for reducing the cost of solar water heating in non-freezing climates have been missed in the past, in part due to appropriations below the request level, and in part due to technological difficulties with polymer materials. In a 2000 report, the NAS noted that the photovolatics subprogram has demonstrated effective progress.

Evidence: National Academy of Sciences, "Renewable Power Pathways: A Review of The U.S. Department of Energy's Renewable Energy Programs" (2000).

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: LARGE EXTENT Question Weight:25%

Explanation: The program achieved its key annual performance target for producer costs of photovoltaic modules. Appropriations below request level contributed to missed targets in solar hot water heating. (Achievement of targets is in part impacted by budget level.) Advances in polymer materials for solar water heaters also proceeded more slowly than expected. Future targets have been adjusted accordingly.

Evidence:

PART Performance Measurements

Program: Solar Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?

Answer: NO Question Weight 25%

Explanation: The program identified several activities that would seem to promote efficiency and cost-effectiveness, such as developing electronic collection, storage, management and reporting systems that eliminate historic but unneeded reporting, and integrate performance, planning, fiscal and management data. In 2003, the program also reorganized its three, formerly "stovepiped" activities (photovoltaic, concentrating solar power, solar buildings) into a new, unified "systems-driven approach." The new approach is intended to help prioritize activities in the portfolio by relying on analyses of present and potential markets, technology trade-off studies, and R&D reviews. While the approach is commendable, the program could not provide evidence that these activities have improved efficiency and cost effectiveness.

Evidence: Results of the Systems-Driven Approach to Solar Workshop (December 17-18, 2002). DRAFT Summary Report of the DOE Workshop for a Systems-Driven Approach to Inverter Research and Development (July 2003).

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?

Answer: NA Question Weight: 0%

Explanation: The program works closely with industry and State programs to advance the state of the art in solar energy technologies. There are no studies comparing this program to similar programs.

Evidence:

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?

Answer: YES Question Weight 25%

Explanation: In its analysis of the photovoltaics subprogram (the largest component of the program's portfolio), the National Academy of Sciences noted: "Effective progress in developing low-power, off-grid applications has kept many firms in business and is partly responsible for today's billion dollar industry." NAS gave a poor review of the Concentrating Solar Power Subprogram: "CSP's portfolio is mostly politically driven; and no hard measures have been established for measuring progress or allocating funding." Accordingly, the CSP subprogram was phased out in the FY 2003 and FY2004 Budgets while detailed reviews of the potential for CSP were conducted. The reviews are currently under consideration. NAS did not review the solar buildings subprogram.

Evidence: National Academy of Sciences, "Renewable Power Pathways: A Review of The U.S. Department of Energy's Renewable Energy Programs" (2000).

PART Performance Measurements

Program: Solar Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

Measure: Producer manufacturing cost of photovoltaic modules in dollars per Watt ($/W).

Additional Information: Targets for producer cost of PV modules tie directly to the long-term targets for reducing cost of photovoltaic power. Producer cost data are collected from industry partners.

Year	Target	Actual
2002	$2.25/W	$2.25/W
2003	$2.10/W	$2.10/W
2004	$1.95/W	
2005	$1.85/W	
2006	$1.75/W	
2010	$1.50/W	

Measure Term: Annual

Measure: Cost of energy from solar water heaters in non-freezing climates, in cents per kilowatt-hour (c/kWh).

Additional Information: Reducing the cost of solar water heating can result in increased deployment, providing benefits such as reduced emissions from power generation, increased energy supply diversity, reduced energy imports, and increased electricity reiability by reducing the system load on the grid. (Published targets in 1998 and 2000 based on request level; appropriations below request contributed to missed targets.)

Year	Target	Actual
1998	6	8
2000	7	8
2003	8	
2004	7	
2005	5	
2006	4	

Measure Term: Annual

PART Performance Measurements

Program: Solar Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

Measure: Cost of energy from solar water heaters in freezing climates, in cents per kilowatt-hour (c/Kwh).

Additional Information: Reducing the cost of solar water heating can result in increased deployment, providing benefits such as reduced emissions from power generation, increased energy supply diversity, reduced energy imports, and increased electricity reiability by reducing the system load on the grid.

Year	Target	Actual
2003	10	10
2006	10	
2009	5	

Measure Term: Long-term

Measure: Cost of power from large-scale concentrating solar power (CSP) plants, in cents per kilowatt-hour (¢/kWh).

Additional Information: The cost targets apply to solar tower technology, one of the three different CSP technologies.

Year	Target	Actual
2003		14
2004	12	
2005	11	
2006	11	
2010	9	

Measure Term: Long-term

Measure: Years of durability of polymer materials for solar water heaters, measured by "accelerated" testing.

Additional Information: Polymer materials for solar water heaters need to be durable for at least 20 years, in addition to meeting other technical and cost specifications.

Year	Target	Actual
2002	7 years	7 years
2003	13 years	13 years

Measure Term: Annual

Program: Solar Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	100%	59%	Effective

2004	17 years
2005	20 years

Measure: Cost of power from photovoltaics, in cents per kilowatt-hour (¢/kWh). (The cost of energy from a photovoltaic system is dependent on application and system requirements, financing terms, and possibly other non-technology related factors, which is why targets are given as ranges.)

Additional Information: The ranges tie to the annual targets for producer cost of PV modules. Reducing the cost of PV modules can result in increased deployment, providing benefits such as reduced emissions from power generation, increased energy supply diversity, reduced energy imports, and increased electricity reliability by reducing the system load on the grid.

Measure Term: Long-term

Year	Target	Actual
2000	20-25	20-25
2003	19-24	19-24
2004	18-23	18-23
2005	17-22	
2006	17-22	
2010	14-19	
2020	6	

Measure: Additional measures for photovoltaics

Additional Information: PV has many subactivities and comprises the bulk of the solar budget. Measures should be developed for each major activity for which progress is not directly captured by the measures already listed above.

Year	Target	Actual	**Measure Term:**

OMB Program Assessment Rating Tool (PART)

Direct Federal Programs

Name of Program: Southeastern Power Administration

Section I: Program Purpose & Design (Yes,No, N/A)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Is the program purpose clear?*	Yes	Southeastern's mission is to market Federal hydroelectric power at the lowest possible cost, as widely as possible, giving preference to public bodies and covering all costs of producing and transmitting power including the repayment of principle and interest.	Section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s)	20%	0.2
2	*Does the program address a specific interest, problem or need?*	Yes	Southeastern is responsible for disposing of surplus power generated from Federal dams built for multiple purposes including navigation, flood control, fish and wildlife, recreation, and power. Power is marketed in 11 southeastern states --Georgia, South Carolina, North Carolina, Virginia, West Virginia, Tennessee, Kentucky, southern Illinois, Mississippi, Alabama, and Florida.	Southeastern markets and delivers about 5 billion kilowatt-hours of energy and over 3 million kilowatts of capacity to 306 preference customers in 11 southeastern states. Southeastern's hydropower, combined with power from other suppliers, provides for the power needs to millions of consumers in the Southeast.	20%	0.2
3	*Is the program designed to have a significant impact in addressing the interest, problem or need?*	Yes	Southeastern provides peaking power delivered from 23 hydroelectric projects in four regional systems operated by the U.S. Army Corps of Engineers. The power is delivered through wheeling arrangements made with neighboring utilities.	Southeastern's hydropower is an integral part of the regional power grid and has a significant impact on power supplies in the Southeast.	20%	0.2

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
4	*Is the program designed to make a unique contribution in addressing the interest, problem or need (i.e., not needlessly redundant of any other Federal, state, local or private efforts)?*	No	The generation and transmission of power is a well developed technology , largely provided by municipal and independently-owned utilities across the country. This federal function could be performed under contract or through non-federal ownership of generation capacity. Southeastern's program contributes to the regional energy supply, is marketed largely to rural entities and generally operates at times of peak load, to offset higher-cost alternative power. Reliability is enhanced due to instant operation of hydroelectric plants during peak load times.	Hundreds of utilities across the country provide power to consumers.	20%	0.0
5	*Is the program optimally designed to address the interest, problem or need?*	No	Southeastern benefits from subsidized loans that place part of the cost of hydrosystem construction on the Treasury. In addition, application of preference in the sale of power creates inefficiencies and restricts market activity. Market pricing of power and use of auctions would improve opportunities for more efficient operations. Southeastern also conducts a purchase power and wheeling (buying power and transmitting it over leased transmission lines) program that, to some degree, duplicates available private sector services. Southeastern believes this program enhances the value of its power though it does not capture that value in its customer rates.	Various GAO reports discuss the cost of the SEPA to the goverment. See GAO/RECD 97-48,GAO/AIMD97-110 and GAO/AIMD 00-114.	20%	0.0
Total Section Score					**100%**	**60%**

Section II: Strategic Planning (Yes,No, N/A)

Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Does the program have a limited number of specific, ambitious long-term performance goals that focus on outcomes and meaningfully reflect the purpose of the program?*	No	Southeastern's statements of goals, in sections II and IV, do not focus on outcomes and are of insufficient quality to rate a yes. Southeasrtern has only extended its short-term goals to the long-term. Southeasterns justification is noted below. In accordance with FERC regulations, Southeastern's long-term goals and performance is reviewed annually and compared to its mission. Southeastern also works closely with the Corps of Engineers on developing a 10-Year Maintenance Plan for the hydroelectric projects. The plan is based on input from numerous sources. Southeastern stays abreast of the changing utility industry by participating in the Tri-state Water Compacts, the regional Transmission Organizations, and FERC's Open Access Transmission Orders. This participation, compliance, and communication helps Southeastern meet long-term goals and requirements.	Southeastern Power Administration Strategic Plan, DOE Energy Resources Strategic Objective ER-9. FY 2004 Congressional Budget Request, various FERC orders	14%	0.0
2	*Does the program have a limited number of annual performance goals that demonstrate progress toward achieving the long-term goals?*	No	Southeastern is committed to maintaining reliability by meeting or exceeding the North Amerncan Electric Reliability Council's (NAERC) compliance ratings, and establishing and meeting annual planned cost payment targets for each Federal Power System.	FY 2004 Congressional Budget Request, DOE Energy Resources Strategic Objective ER-9-2, Southeastern Power Administration Strategic Plan. Southeastern did not meet its FY 2002 debt repayment target.	14%	0.0
3	*Do all partners (grantees, sub-grantees, contractors, etc.) support program planning efforts by committing to the annual and/or long-term goals of the program?*	Yes	Southeastern works closely with the U. S. Army Corps of Engineers and customers to ensure as much reliable power as possible is generated at the hydroelectric projects and delivered to customers and to work toward the repayment of Federal investment with interest. Southeastern also coordinates with other Federal and State agencies and stakeholders to address the competing uses of water issues.	U. S. Army Corps of Engineers, Preference Customers, Hydropower Conferences, Quarterly Customer Meetings, Meetings with competing water users	14%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
4	*Does the program collaborate and coordinate effectively with related programs that share similar goals and objectives?*	Yes	Southeastern works closely with the other Power Marketing Administrations, the Corps of Engineers, the National Electric Reliability Council, Southeastern Electric Reliability Council, Virginias Carolinas Electric Reliability Council, the Southeastern Federal Power Customers, Southeastern Federal Power Alliance, and Team Cumberland regarding initiatives and other pertinent issues that impact SEPA's customer organizations and goals to market power and ensure reliability of the power grid.	PMA Washington Liaison Office, the Southwestern Power Administration, the Western Area Power Administration, NERC, and other regionsal reliability councils, the Corps of Engineers, Southeastern Federal Power Customers, Inc., Southeastern Federal Power Alliance, Team Cumberland.	14%	0.1
5	*Are independent and quality evaluations of sufficient scope conducted on a regular basis or as needed to fill gaps in performance information to support program improvements and evaluate effectiveness?*	Yes	Southeastern's financial statements, along with the power portion of the U. S. Army Corps of Engineers' are independently reviewed annually by a contract auditing firm. Southeastern's rate actions are independently reviewed and approved by FERC. Southeastern also participates with the other PMAs in a cyber security peer review to ensure computer systems comply with the Government Information Security Reform Act. In addition, Southeastern receives periodic management reviews from the General Services Administration, the Department of Energy, and the General Accounting Office.	Independent audit of the Southeastern Federal Power Program for FY 2002 and FY 2001, dated January 15, 2002, Information Security Reform Act/Peer Review of Cyber Security, Department of Energy, General Services Administration, General Accounting Office, Control Area Reviews, NERC, SERC, Office of Personnel Management, Summary Management Review, FERC filings, Inspector General Reviews	14%	0.1
6	*Is the program budget aligned with the program goals in such a way that the impact of funding, policy, and legislative changes on performance is readily known?*	Yes	Southeastern's budget supports Southeastern's long and short-term performance goals and is based on Southeastern's best estimate of its program needs. Funding changes could substantially alter Southeastern's ability to meet its performance goals and objectives.	FY 2004 Budget Request	14%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
7	*Has the program taken meaningful steps to address its strategic planning deficiencies?*	Yes	Southeastern annually prepares a Strategic Plan under the guidelines of the Government Performance and Results Act. Also, power rates are reviewed and re-evaluated on an annual basis in order to meet repayment goals. Unforeseen deficiencies are identified from reviews of prior year operations and corrected by Southeastern in order to meet performance goals and objectives. Southeastern publishes Strategic Plan updates that show its performance goals and lists all other agency goals and objectives.	FY 2002 Strategic Plan	14%	0.1
Total Section Score					**100%**	**71%**

Section III: Program Management (Yes,No, N/A)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?*	Yes	Southeastern collects data on water conditions, market conditions, generation, load unit maintenance, power schedules, power outages, budget execution, financial management, and other project management tools used to direct Southeastern's activities.	Various reporting and data collection studies, including NERC and SERC	14%	0.1
2	*Are Federal managers and program partners (grantees, subgrantees, contractors, etc.) held accountable for cost, schedule and performance results?*	Yes	Individual Employee Performance Agreements are completed annually, reviewed semi-annually by management, and signed by Southeastern's Administrator. Southeastern has formed teams to achieve goals and to accomplish its mission. These teams establish goals that are reviewed and evaluated by senior management. In addition, Southeastern's Administrator signs his own Individual Performance Agreement with the Secretary of Energy. Southeastern's Strategic Plan is evaluated annually and signed by the Core Team and the Administrator.	Individual Performance Agreements, Team Performance Evaluations, Strategic Plan	14%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
3	*Are all funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?*	Yes	Southeastern's funds are obligated in a timely manner. Unobligated and uncosted balances are minimal, and fund controls are in place to ensure all funds are spent for their intended purposes. Fund control procedures are independently reviewed on an annual basis.	Independent audit of the Southeastern Federal Power Program for FY 2002 and FY 2001, dated January 15, 2002	14%	0.1
4	*Does the program have incentives and procedures (e.g., competitive sourcing/cost comparisons, IT improvements) to measure and achieve efficiencies and cost effectiveness in program execution?*	Yes	Southeastern uses cost comparisons and competitive bidding procedures following the Federal Procurement Regulations for all program purchases and improvements. Southeastern carefully reviews and prioritizes all purchases in order to successfully accomplish the agency's goals and objectives.	Federal Procurement Regulations, Budget formulation reports	14%	0.1
5	*Does the agency estimate and budget for the full annual costs of operating the program (including all administrative costs and allocated overhead) so that program performance changes are identified with changes in funding levels?*	No	Southeastern's budget includes most annual costs required for operating its program but assumes some debt subsidies. Southeastern's funding for staffing and overhead-related costs are included in Program Direction. Purchase Power and Wheeling costs are funded through the use of revenues and alternative funding mechanisms. Repayment studies are reconciled to financial statements annually in order to ensure all administrative costs are included.	Budget formulation reports, Rate Studies See also GAO/AIMD Reports 96-145 and 97-110	14%	0.0
6	*Does the program use strong financial management practices?*	Yes	Southeastern's financial statements are independently reviewed on an annual basis. No material internal control weaknesses were reported by the auditing firm in FY 2001. Southeastern uses audit reports and its own internal reviews to make improvements to financial operations.	Audit of the Southeastern Federal Power Program financial statements for FY 2001 and FY 2000, dated January 15, 2002	14%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
7	*Has the program taken meaningful steps to address its management deficiencies?*	Yes	Southeastern recruits and maintains highly qualified employees. Business systems are continuously reviewed, improved, and upgraded to ensure all goals and objectives are met. For example, Oracle Financials are used to maintain Southeastern's accounting system. All business systems are reviewed at Southeastern to ensure sound business practices are followed.	DOE Order 3335.1C, Oracle Financials, various other business systems	14%	0.1
Total Section Score					**100%**	**86%**

Section IV: Program Results (Yes, Large Extent, Small Extent, No)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Has the program demonstrated adequate progress in achieving its long-term outcome goal(s)?*	No	Southeastern has been unable to describe long term goals. The goals identified below, that Southeastern has proposed, are not long term goals, but rather are extensions of short term goals. Southeastern needs to continue its effort to define long-term output oriented goals.		20%	0.0

Long-Term Goal I:	Maintain reliability in the evolving electric utility industry
Target:	Meet or exceed North American Reliability Council standards to measure the ability of control areas to match generation to load
Actual Progress achieved toward goal:	Received Control Compliance Rating of "Pass" for each month of FY 2001 using the North American Reliability Council Performance Standard (ER2-5)
Long-Term Goal II:	Promote employee awareness and commitment to working safely by providing the necessary training and equipment to assure a safe working environment
Target:	Achieve a safety performance of 3.3 recordable accident frequency rate for recordable injuries per 200,000 hours worked
Actual Progress achieved toward goal:	Southeastern has no recordable injuries in FY 2001
Long-Term Goal III:	Achieve required repayment on Federal investment
Target:	Unpaid Federal Investment is to be less than the Allowable Unpaid Federal Investment
Actual Progress achieved toward goal:	There were no required repayments for FY 2001

2	*Does the program (including program partners) achieve its annual performance goals?*	Large Extent	Southeastern's annual performance objectives are met through its mission to market Federal hydroelectric power at the lowest possible cost. Southeastern also meets its repayment requirements in a timely manner.	Of the $1.6 billion power investment, Southeastern has repaid $632 million. Audit of the Southeastern Federal Power Program financial statements for FY 2001 and FY 2000, dated January 15, 2002.	20%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
	Key Goal I: Maintain reliability in the evolving electric utility industry					
	Performance Target: Meet or exceed North American Reliability Council standards to measure the ability of control areas to match generation to load					
	Actual Performance: Received Control Compliance Rating of "Pass" for each month of FY 2001 using the North American Reliability Council Performance Standard					
	Key Goal II: Promote employee awareness and commitment to working safely by providing the necessary training and equipment to assure a safe working environment					
	Performance Target: Achieve a safety performance of 3.3 recordable accident frequency rate for recordable injuries per 200,000 hours worked					
	Actual Performance: Southeastern has no recordable injuries in FY 2001					
	Key Goal III: Achieve required repayment on Federal investment					
	Performance Target: Unpaid Federal Investment is to be less than the Allowable Unpaid Federal Investment					
	Actual Performance: There were no required repayments for FY 2001					
3	*Does the program demonstrate improved efficiencies and cost effectiveness in achieving program goals each year?*	Yes	In order to meet goals, Southeastern must continue to improve its standards in the ever-changing utility environment. The Southeastern Power Administration continues to meet its goals to market hydroelectric power by adjusting to severe drought conditions, adverse market conditions, and/or unit outages. Preference customer contract requirements and obligations are continually met. Southeastern continues to meet or exceed NERC standards for power reliability requirements, and continues to be below the industry average for safety performance standards.	Annual Performance Standards, NERC Standards, Customer Contract Reviews	20%	0.2
4	*Does the performance of this program compare favorably to other programs with similar purpose and goals?*	Yes	Southeastern is comparable to the other PMAs in its ability to meet long and short-term power marketing obligations to market and deliver reliable hydroelectric power at the lowest cost possible, even in adverse water conditions. In addition, Southeastern and the Corps compare its hydroelectric facilities to privately-owned facilites throughout the Nation, focusing on operations, maintenance, and reliability issues.	Annual Performance Plan for PMAs, Rate Payment Schedules, Customer Contracts, Southeastern/Corps Benchmarking Program	20%	0.2

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
5	*Do independent and quality evaluations of this program indicate that the program is effective and achieving results?*	Yes	Southeastern's activities are reviewed annually by an independent audit firm with no adverse findings reported. The annual audited financial statements and operating performance information is made available to all interested parties. Southeastern's rate-setting activities are open to public participation, and are reviewed and approved by FERC. FERC approves private and public sector rates and would not approve either unless it judged the programs effective and efficient. Recent annual repayment performance has been impacted by drought and abnormal market conditions; however, the long-term repayment progress complies with that which is required by law.	Audited Financial Statements, Repayment Studies and Reports, Federal Register Announcements, Annual Performance Plan, FERC	20%	0.2
Total Section Score					**100%**	**73%**

OMB Program Assessment Rating Tool (PART)

Capital Assets and Service Acquisition Programs

Name of Program: Southwestern Power Administration

Section I: Program Purpose & Design (Yes,No, N/A)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Is the program purpose clear?*	Yes	The Southwestern Power Administration's (Southwestern) mission is to cover all costs of producing, transmitting, marketing and reliably delivering cost-based Federal hydroelectric power, giving preference to public entities, encouraging its most widespread use and repaying the Federal investment (principal plus interest) consistent with sound business practices. Southwestern meets most of its mission requirements. This is accomplished by striving to maximize the use of assets while recommending to the U.S. Corps of Engineers (Corps) how to balance power needs with the diverse interests of other interstate water resource users, and implementing public policy.	Authorizing legislation; Section 5, Flood Control Act of December 22, 1944; 58 Stat. 887, 890; 16 U.S.C.A. 825; Other legislation; Continuing Fund established under Title I, 58 Stat. 890, H.R.3896, P. L. 350 (Amended in 1989); Department of Energy Organization Act of 1977; P.L. 95-91, Section 302; Southwestern's Mission Statement; Southwestern's Strategic Plan; Southwestern's Annual Budgets; Congressionally Authorized Project Purposes; National Environmental Policy Act (NEPA); and Southwestern's Marketing Plan.	20%	0.2

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
2	*Does the program address a specific interest, problem or need?*	Yes	Southwestern is responsible for marketing power from 24 Federal dams built for multiple purposes including hydroelectric generation, navigation, flood control, fish and wildlife, recreation, and water supply. Southwestern also recovers most of the cost of the Federal investment associated with the hydropower purpose. Power is marketed at cost based wholesale rates to municipal utilities and rural electric cooperatives in a six state area. Factors considered prior to Congress authorizing project construction includes the estimated economic benefit hydropower would bring to the region.	To accomplish the widespread use principle in Section 5 of the Flood Control Act of 1944, Southwestern markets power at wholesale rates to 78 municipal utilities, 22 rural electric cooperatives and three government installations located in six states; AR, KS, LA, MO, OK, and TX; and transmits power through 1,380 miles of transmission line. Southwestern reviews annually and, as necessary, develops and assesses rates for power and other services which repay all annual operating costs and much of the Federal investment. Rate reviews by Department of Energy and Federal Energy Regulatory Commission are intended to ensure that Southwestern meets its acknowledged requirements. Each year, Southwestern publishes an annual report, which documents customers served, power and energy sold, and the Federal investment repaid. The Federal hydroelectric generation marketed by Southwestern produces an average annual benefit to the region in excess of $400 million, based on the average annual energy of the System and FERC's replacement value.	20%	0.2

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
3	*Is the program designed to have a significant impact in addressing the interest, problem or need?*	Yes	Southwestern's marketing plan is designed to provide all available power to customers and spread the benefits of Federal power as widely as possible within a six state region. As a matter of DOE policy, consistent with FERC requirements, Southwestern offers excess capacity in its transmission system to other users in a non-discriminatory manner, and supports regional transmission service reliability. More recently, Southwestern has participated in the development of FERC initiated Regional Open Access Transmission Services with the use of its Federal transmission system. Southwestern's marketing plan recognizes the relatively small amount of water storage of its hydroelectric system in a manner which maximizes and assures the reliable repayment of the Federal investment and provides significant economic benefits to the region while accommodating the diverse interests of other interstate water users.	Southwestern repays annual operating costs and much of the Federal investment associated with the hydropower purpose. This is evidenced in Southwestern's annual report, financial statements, and annual repayment studies. Southwestern's customers consider this power critical to their communities' economic health. Southwestern routinely meets with those having an interest in other project purposes to determine the impact of power operations on those purposes and vice versa. Southwestern is a member of the White River Dissolved Oxygen Committee; is a signatory to the Corps Management Plan, dealing with Least Tern (an endangered bird) issues; and has an Memorandum of Understanding with the Corps, which recognizes the multi-purpose nature of the projects and Southwestern's resulting responsibilities. Southwestern is currently a member of the regional reliability council and is participating in an Open Access Transmission Tariff. Other evidence includes Congressionally authorized project purposes as stated in project authorizing legislation; and Southwestern's Marketing Pl	20%	0.2

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
4	*Is the program designed to make a unique contribution in addressing the interest, problem or need (i.e., not needlessly redundant of any other Federal, state, local or private efforts)?*	No	The generation and transmission of power is a well developed technology, largely provided by municipal and independently-owned utilities across the country. This function could be performed under contract or through non-federal ownership of transmision lines and generation capacity on the dams. Southwestern is the only entity marketing and delivering Federal hydropower in the six state area of Oklahoma, Arkansas, Missouri, Kansas, Texas and Louisiana. Southwestern's transmission system is an integral part of the interconnected transmission network that is vital to the delivery of power in this region.	DOEOA (1977); Section 5 Flood Control Act of 1944; FERC Orders 888 & 889; National Energy Policy Act (1992); Current membership in a regional reliability council; Participating in the development of a regional transmission organization; Southwestern Open Access; and Transmission Tariff. Hundreds of utilities across the country provide power to consumers and do identical work.	20%	0.0
5	*Is the program optimally designed to address the interest, problem or need?*	No	Southwestern benefits from subsidized loans that place part of the cost of hydrosystem construction on the Treasury. In addition, the application of preference in the sale of power creates administrative inefficiencies and restricts market activity. Market pricing of power and unrestricted sales would improve opportunities for more efficient operations. Southwestern also conducts a purchase power and wheeling program (buying power and transmitting it over leased lines) that, to some degree, duplicates available private sector services. Southwestern believes this program enhances the value of its power, though it does not capture that value in its customer rates. Southwestern's marketing plan assures the reliable repayment of annual operating costs and much of the Federal investment, and provides significant economic benefits to the region while accommodating the diverse interests of other water users. As an interconnected transmission system partner in the region, Southwestern also maintains its transmission system in compliance with the regional reliability council and NERC requirements.	Using Congressionally authorized appropriations and authorities, Southwestern has and continues to meet its marketing plan and reliability obligations to the region's interconnected power and transmission system even though budgets have been reduced in recent years. In addition, Southwestern in partnership with its power customers and the U. S. Army Corps of Engineers (Corps), developed and implemented a customer funding mechanism whereby a significant portion of Corps non-routine maintenance items are funded by Southwestern's customers. Southwestern continues to look for such mechanisms to optimize its program and reduce the burden on the U.S. Treasury. Southwestern's subsidies are discussed in various reports including GAO Report GAO/AIMD-97-110 and GAO/AIMD-00-114.	20%	0.0
Total Section Score					**100%**	**60%**

Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
Section II: Strategic Planning (Yes, No, N/A)					
1 *Does the program have a limited number of specific, ambitious long-term performance goals that focus on outcomes and meaningfully reflect the purpose of the program?*	No	Southwestern has been unable to state long term goals that focus on outcomes and they do not qualify for a yes rating. The goals identified by Southwestern below do not qualify for that purpose. Southwestern's arguments for achieving a yes are provided below. 1. Market and deliver all available hydroelectric power from Corps dams while balancing power needs with the diverse interests of water resource users and providing regional economic benefits to the region. 2: Operate and maintain a Federal power system to assure reliability of the system while meeting utility safety standards and encouraging competition through open access to facilities. 3: Maximize the use of Federal assets to repay the investment (principal plus interest) as well as operation and maintenance costs of the Southwestern Federal power system while supporting the President's Management Agenda. Southwestern reviews its long-term goals annually and makes operational adjustments to its Strategic Plan as needed to assure that all available power is marketed and reliably delivered, and repayment of annual operating costs and the Federal investment is achieved.	Southwestern's Strategic Plan; DOE Strategic Objective ER9-1; Annual Report; Annual Budget Submission; and Mission Statement.	12%	0.0

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
2	*Does the program have a limited number of annual performance goals that demonstrate progress toward achieving the long-term goals?*	No	Southwestern's annual performance goals are: maintain reliability in the evolving electric utility industry; meet repayment of the Federal power investment; and promote employee awareness and commitment to working safely by providing the necessary training and equipment to assure a safe working environment. The achievement of annual performance goals contribute to long-term goals to market and deliver all available hydropower, operate and maintain the power system, and repay the Federal investment.	FY 2004 Congressional Budget Request; DOE Energy Resources Strategic Objective ER9-1, ER9-2, ER9-3, ER9-4, ER9-5; Annual Performance Plan/Report; Southwestern's Strategic Plan; Annual Report; Annual Budget Submission; and Performance and Accountability Report.	11%	0.0
3	*Do all partners (grantees, sub-grantees, contractors, etc.) support program planning efforts by committing to the annual and/or long-term goals of the program?*	Yes	Southwestern recommends to the Corps how to balance power needs with the diverse interests of other interstate water users. Southwestern also works closely with its customers and interested parties to ensure repayment of annual operating costs and the Federal investment with interest. Southwestern works with the Corps, State Agencies, and other affected interests to address competing uses of interstate water resources and transmission capacity.	Joint planning and operations meetings with the Corps; Corps/Southwestern Hydropower Council meetings; Corps/Southwestern/Customer Hydro power Conference meetings; Southwestern Power Resources Association (Customer Organization); Monthly operations conference calls with Corps; Quarterly Operations meetings; and Meetings with Competing Users.	11%	0.1
4	*Does the program collaborate and coordinate effectively with related programs that share similar goals and objectives?*	Yes	Southwestern works closely with the other Power Marketing Administrations (PMAs) and the Corps on issues that affect these Agencies. Southwestern is actively involved with the NERC and other reliability organizations to ensure the reliability of and the nondiscriminatory access to transmission in Southwestern's marketing area.	Memorandum of Understanding with the Corps; PMA Issue Meetings; PMA Peer Reviews; Department of Energy; NERC; and Southwestern Power Resources Association.	11%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
5	*Are independent and quality evaluations of sufficient scope conducted on a regular basis or as needed to fill gaps in performance information to support program improvements and evaluate effectiveness?*	Yes	Southwestern's internal and external reviews provide performance information to evaluate program effectiveness. Southwestern power repayment studies and customer, DOE and FERC reviews of power rates have provided information that Southwestern consistently controls costs and is meeting the requirements of the law to pay annual operating costs and most of the Federal investment. Cyber and facility security peer reviews and audits have provided recommendations resulting in additional security for the Southwestern's facilities and improved protection for the power system and automated business systems. NERC and the Regional Reliability Council Operational Audits and Control Area Reviews have resulted in improvements to the regional electrical grid of which Southwestern is a participant. Some evaluations have provided no recommendations for improvement as was the case when the DOE IG reviewed Southwestern's fiber optic program and found that Southwestern was doing a good job. Unqualified opinions from independent auditors since 1979 attest to the reliability of our financial system.	DOE IG Review; Information Technology Reviews and Audits; Summary Management Review; Customer Formal Comment Periods on Rate Filings; DOE and FERC Rate Filings; Office of Personnel Management Audits; General Accounting Office Audits; Reliability Council Audits; Control Area Reviews; Procurement Management and Assistance Review; NERC/Regional Reliability Council Operational Audits and Control Area Reviews; DOE IG's Survey of Transmission Line Maintenance; and Independent audit of Southwestern's financial statements.	11%	0.1
6	*Is the program budget aligned with the program goals in such a way that the impact of funding, policy, and legislative changes on performance is readily known?*	Yes	Southwestern's requested budget supports Southwestern's short-term and long-term performance goals. The request is based on Southwestern's best assessment of program needs and is aligned with long-term performance goals. Therefore, any funding, policy, and legislative changes affect Southwestern's ability to meet performance goals.	Annual Budget Request; and Southwestern's Strategic Plan.	11%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
7	*Has the program taken meaningful steps to address its strategic planning deficiencies?*	Yes	Southwestern relies on several annual reviews to monitor and adjust the Strategic Plan's performance goals. A Summary Management Review, Budget Decision Templates, and the Annual Financial Audit Report are prepared and reviewed by managers annually. Aligned with the Strategic Plan, Southwestern also defines Annual Improvement Measurement (AIM) Goals accomplishments for measuring performance across the Agency. Progress toward goals is updated quarterly and available on Southwestern's Intranet for all employees to monitor and track the progress toward their achievement. Utilizing the information in these reviews, Southwestern identifies and corrects any noted weaknesses in the strategic planning process.	Summary Management Reviews; Budget Decision Templates; Achievement Improvement Measurement (AIM) Goals; and Annual Financial Audit Report.	11%	0.1
8	*Are acquisition program plans adjusted in response to performance data and changing conditions? (Addresses capital assets only)*	Yes	Southwestern's funding for its program consists primarily of replacements to its existing system. Priorities are placed on those situations that pose the highest risk to safety and reliability. Southwestern's Maintenance and Engineering Offices prepare 1 year, and 10 year program plans. The Offices review these plans annually to determine if any adjustments should be made due to industry changes, reliability, emergency situations (earthquakes, tornado, etc.), or safety issues. Due to Southwestern's aging infrastructure, program plans are adjusted frequently due to these changing conditions. Recommendations are then forwarded to Southwestern's Senior Management Team for review and approval. Facility/Project Data Sheets and Budget Decision Templates are prepared for all projects and activities over $100,000.	One and Ten Year Construction Plans; Facility/Project Data Sheets; Budget Decision Templates; and Acquisition Planning (Quarterly Meetings).	11%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
9	*Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule and performance goals? (Addresses capital assets only)*	Yes	Southwestern's 10 year Construction Plan is updated at least annually to determine if priorities have changed. The Budget Decision Templates are updated annually. Southwestern's Senior Management Team reviews these Templates for cost estimates, schedules, justifications, alternatives and benefits before determining if a particular activity/project should be initiated or continued. This process is used by Southwestern in preparing its annual budget request analyzes trade-offs among cost, schedules, and performance.	Annual Budget Request; 10 Year Construction Plan; Facility/Project Data Sheets; and Budget Decision Templates.	11%	0.1
Total Section Score					**100%**	**77%**

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
Section III: Program Management (Yes,No, N/A)						
1	*Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?*	Yes	Southwestern collects data on a daily, monthly, quarterly and yearly basis. This data is used for operating and managing Southwestern's program. Quarterly progress on specific Agency goals is published internally on a periodic basis. Quarterly progress on issues and goals of specific interest to Southwestern's customers is reviewed by Southwestern and its customers in joint meetings. Southwestern periodically surveys customers on services provided and solicits feedback on performance. Southwestern periodically meets with other competing users of the multipurpose reservoir projects from which Southwestern markets power to ascertain impacts on such competing uses and on power production. Southwestern's regional security coordinator periodically reviews operations to ascertain compliance with NERC and local security coordinator requirements. Southwestern annually looks at repayment progress through annual repayment studies, public hearings, and continually evaluates the costs associated with its activities.	Various daily and monthly reports as follows are used in managing the agency: Financial Reports; Water Conditions; Generation; Loads; Unit Maintenance; Power Schedules; Transmission Line Maintenance; Audited annual financial statements; Customer Surveys; Quarterly written and oral presentations to the Southwestern Power Resources Association (customer group); Annual Report; Public Hearings; Annual Repayment Studies; and Southwestern meets NERC requirements and complies with operational reviews of the Regional Reliability Council.	10%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
2	*Are Federal managers and program partners (grantees, subgrantees, contractors, etc.) held accountable for cost, schedule and performance results?*	Yes	Performance standards for Federal managers include specific Agency activities for which they are held responsible and accountable. The Agency Strategic Plan contains objectives which are the responsibility of Agency managers to implement. The Agency also has an annual performance and award system tied to the objectives of the Strategic Plan. Each manager and employee annually reviews and recommends, and commits to the achievement of the goals. The Strategic Plan is reviewed annually and adjusted as needed to address deficiencies. Southwestern's customer group reviews Southwestern's operations and activities as well as rates. The regional reliability council reviews Southwestern's operational performance. Southwestern's customers also review work performed by Southwestern under its non-Federal reimbursable program. All projects/activities whose estimated cost is $100,000 or more require a budget decision template justifying the project/activity.	Employee Annual Performance Appraisals; Achievement Improvement Measurement (AIM) Award Program; Various operational reviews of Southwestern's system by the Regional Reliability Council such as Southwestern's area control error, under frequency and other NERC compliance requirements; Annual summation of the duration of Southwestern's transmission line outages; Contract audits; Facility/Project Data Sheets; Public forums for customer review of system rate changes; Customer Review of System Operations/Activities; and Budget Decision Templates.	10%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
3	*Are all funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?*	Yes	Southwestern uses generally accepted accounting practices in managing its obligations. Obligations are entered into a financial management accounting system by organization, fund type, and object code. Appropriate approvals are obtained in the system before the actual obligations are made to assure accountability and that the funds are used for the intended purpose. The enacted budget is used as the guiding document in the obligation of funds with the exception of emergency purchases. The financial management system provides program managers up to date reports on the obligations and expenditures that occur. Southwestern does periodic reviews on the obligation and expenditure activity to assure that obligations occur in a timely manner. A formal Mid-Year Review is conducted to assure that all requirements are being funded on schedule. In addition, managers prepare project estimates. These estimates are compared with the obligations and expenditures to enable the manager to keep the project on schedule.	Oracle Reports; Enacted Budget; Budget Status of Funds Report; Project Cost Estimates; Purchase Order Reports; Mid-Year Budget Review; FERC Uniform System of Accounts; Annual Financial Statement Audits including Internal Controls; and Budget Execution Report (SF133) to OMB/DOE.	10%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
4	*Does the program have incentives and procedures (e.g., competitive sourcing/cost comparisons, IT improvements) to measure and achieve efficiencies and cost effectiveness in program execution?*	Yes	Southwestern uses cost comparisons and competitive sourcing as required under Federal Acquisition Regulations to satisfy the principle of "lowest possible rates to consumers consistent with sound business principles" as set forth in Section 5 of the Flood Control Act of 1944. In addition, Southwestern's rates are reviewed by its customers in a public forum for overall cost effectiveness. Southwestern utilizes an Agency performance award system called AIM (Achievement Improvement Measurement) in which the objectives of the Strategic Plan are summarized in annual performance targets. Each employee's individual performance is reviewed semi-annually. All projects with an estimated cost of $100,000 or more must be justified in a project template in order to receive funding from the Agency. Additionally, the Agency maintains a rolling 10 Year Construction Plan and detailed individual program plans for major projects such as the one prepared for Southwestern's fiber optic system.	AIM Award Program; Federal Acquisition Regulations; Budget Decision Templates (for Procurement over $100,000); Purchase Orders/Contracts; Southwestern's Performance Award System tied to Objectives set forth in the Agency's Strategic Plan; 10 Year Construction Plan; and Detailed Program Plans for Major Projects.	10%	0.1
5	*Does the agency estimate and budget for the full annual costs of operating the program (including all administrative costs and allocated overhead) so that program performance changes are identified with changes in funding levels?*	No	Southwestern budgets for most annual costs of operating the program including allocated overhead and administrative costs but assumes some debt subsidies. Overhead is allocated by direct labor hours and all direct labor hours are budgeted. Southwestern, by law, recovers costs of the program in accordance with RA 6120.2 and the Flood Control Act of 1944. Funding level changes are evaluated and program performance impacts are identified in budget proposals. Effects on reliability and repayment are analyzed.	Proposed Budget; Enacted Budget; Budget Status of Funds Report; RA 6120.2; and Flood Control Act of 1944, Section 5. See also GAO/AIMD Reports 96-145 and 97-110	10%	0.0

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
6	*Does the program use strong financial management practices?*	Yes	Southwestern's books and records have been audited on an annual basis by an independent audit firm since 1979. The fact that Southwestern has always received an Unqualified Opinion attests to the fact that Southwestern maintains strong financial management practices. During the FY 2001 and FY 2000 audits there were no material findings or recommendations. Southwestern complies with accounting regulations prescribed by the U.S. Treasury, the FERC, the DOE and the CFO Act of 1990 to ensure strong financial practices. Southwestern's financial management employees are trained in accordance with the DOE Financial Management Development Program. Southwestern endeavors to use the latest financial accounting tools and management practices such as use of the Oracle Financial System.	Southwestern's audited financial statements for FY 2001 and FY 2000; DOE Financial Management; Development Training; Oracle; and FERC Uniform System of Accounts.	10%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
7	*Has the program taken meaningful steps to address its management deficiencies?*	Yes	Southwestern continuously improves its business systems and follows sound business practices by leveraging its capabilities to achieve functional efficiencies and process improvements. For example, an in-house computer-based maintenance planning system consisting of two major functions is used. One part of the system Maintenance Management Information System (MMIS) is used for electrical substation equipment and microwave station maintenance scheduling and planning while the other part Overhead Transmission Maintenance System (OTMS) is used for all transmission line and right-of-way maintenance scheduling and planning. This system establishes a comprehensive maintenance database for reliability-centered maintenance programs and principles. Oracle Financials is used to ensure that Southwestern's complex business is totally and accurately accounted for. Southwestern uses project management principles and practices. Southwestern has developed a multi-year effort to recruit and maintain highly qualified employees.	Process documentation is continuously updated; MMIS and OTMS is updated by using a complex testing and verification process to assure accuracy and user-friendliness; Facility/Project Data Sheets; Budget Decision Templates; and Organization 2000 Plus.	10%	0.1
8	*Does the program define the required quality, capability, and performance objectives of deliverables? (Addresses capital assets only)*	Yes	Southwestern's offices prepare statements of work for the installation and procurement of equipment. These statements are used to prepare Invitations for Bid (IFB) or Requests for Proposal (RFP).	Statements of Work; IFB/RFP; Procurement Package; and Performance Clauses.	7%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
9	*Has the program established appropriate, credible, cost and schedule goals? (Addresses capital assets only)*	Yes	Southwestern's 10 year Construction Plan is reviewed at least annually to determine if priorities have changed. The Facility/Project Data Sheets and Budget Decision Templates are updated annually reflecting any necessary changes. The Budget Decision Templates provide Southwestern's Senior Management Team with the necessary information for decision making, including cost estimates, schedules, justifications, alternatives, and benefits to determine appropriate program adjustments.	10 Year Construction Plan; Facility/Project Data Sheets; Budget Decision Templates; and Power Repayment Studies.	7%	0.1
10	*Has the program conducted a recent, credible, cost-benefit analysis that shows a net benefit? (Addresses capital assets only)*	Yes	The Facility/Project Data Sheets and Budget Decision Templates are updated annually reflecting any necessary changes. The Budget Decision Templates provide Southwestern's Senior Management Team with the necessary information for decision making, including cost estimates, schedules, justifications, alternatives, and benefits to determine appropriate program adjustments. Southwestern's 10 year Construction Plan is reviewed at least annually to determine if priorities have changed.	Budget Decision Templates; Power Repayment Studies; 10 Year Construction Plan; and Facility/Project Data Sheets.	8%	0.1
11	*Does the program have a comprehensive strategy for risk management that appropriately shares risk between the government and contractor? (Addresses capital assets only)*	Yes	Each construction project is evaluated for risk at the beginning of the procurement process. When the requirements are defined, the procurement and program offices make a determination as to the type of contract to be awarded. To minimize the risk to the government all contracts include detailed statements of work and surveillance plans. These procurement tools promote sound risk management.	Statements of Work; IFB/RFP; Procurement Package; Surveillance Plan; and Performance Clauses.	8%	0.1
Total Section Score					**100%**	**90%**

Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
Section IV: Program Results (Yes, Large Extent, Small Extent, No)					
1 *Has the program demonstrated adequate progress in achieving its long-term outcome goal(s)?*	No	The table below does not provide long-term goals. Southwestern needs to continue its efforts to define long-term output oriented goals. The statements below are Southwestern's proposed long term goals.	Annual Performance Plan; Accountability Report; Power Repayment Studies; Annual Financial Audit Report; NERC Standards; Bureau of Labor Statistics; Occupational Safety and Health Act (OSHA) Reports; Southwestern's Marketing Plan; Southwestern's Strategic Plan; and Annual Budget Submission.	20%	0.0

Long-Term Goal I: Market and Deliver all available hydroelectric power from Corps dams while balancing power needs with the diverse interests of water resources users.

Targets: 1: Market 100 percent of firm capacity and associated energy to public bodies and cooperatives.

2: Exceed $400 million in regional economic benefits under average water conditions.

3: Save 9.2 million barrels of oil, 2.7 million tons of coal, or 56 billion cubic feet of gas under average water conditions through hydro power generation.

Actual Progress achieved toward goal in FY 2001: 1: Marketed 100 percent of firm capacity to 78 municipal utilities, 22 rural electric cooperatives, and three Government Agencies.

2: Produced 4,667,750,000 Kilowatt-hours and 2,295,400 Kilowatts equating to over $413 million in National Economic Benefits.

3: Saved an estimated 2.2 million tons of coal, 7.7 million barrels of oil, or 47 billion cubic feet of gas through hydropower generation. Environmental savings were lower than the target due to drought conditions in the region.

Long-Term Goal II: Operate and maintain a Federal power system to assure reliability of the system while meeting utility safety standards and encouraging competition through open access to facilities.

Targets: 1: Achieve a System Average Interruption Duration Index (SAIDI) of not more than 150 minutes.

2: Achieve a power system control area compliance rating of "Pass" using the North American Electric Reliability Council (NERC) performance standard.

3: Maintain a safety record of lost time accident frequency rate lower than the industry average.

Actual Progress achieved toward goal in FY 2001: 1: Achieved a SAIDI for total preventable outages of approximately 77% below the allowable outages.

2: Achieved a power system control area rating of "Pass" using the NERC performance standard.

3: Achieved a safety performance of 3.1 recordable accident frequency rate.

Long-Term Goal III: Maximize the use of Federal assets to repay the investment (principal and interest) as well as operation and maintenance costs of the Southwestern Federal power system while supporting the President's Management Agenda.

Targets: 1: Achieve an average debt service coverage ratio of 1.0 based on average water conditions.

Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
		2: Increase by two percentage points the ratio of cumulative principal payments to Federal investment based on average water conditions.			
		3: Attain a "Green" rating on at least 90% of the President's Management Agenda initiatives.			
Actual Progress achieved toward goal in FY 2001:		1: Achieved a debt service coverage ratio of 0.891 due to lower than average water conditions.			
		2: Achieved less than two percentage points related to the cumulative principle payments to Federal investment due to lower than average water conditions. FY 2000 repaid 42.6%; FY 2001 repaid 43.9%.			
		3: The President's Management Agenda was initiated in FY 2002. Results are not yet available for FY 2002. However, Southwestern has assessed its performance and has already attained totally, or to a large extent, 90% of the functional areas.			
2 *Does the program (including program partners) achieve its annual performance goals?*	Large Extent	See table below.	Annual Performance Plan; Accountability Report; Power Repayment Studies; Annual Financial Audit Report; NERC Standards; Bureau of Labor Statistics; OSHA Reports; Southwestern's Marketing Plan; Southwestern's Strategic Plan; and Annual Budget Submission.	20%	0.1
Key Goal I:		Maintain reliability in the evolving electric utility industry.			
Performance Targets:		1: Attain average NERC compliance ratings of 100 or higher for Control Performance Standard (CPS) 1, and 90 or above for Control Performance Standard 2.			
		2: Achieve a SAIDI of not more than 150 minutes of total preventable outages per year.			
FY 2001 Actual Performance:		1: Actual - CPS 1 - 192; CPS 2 - 100.			
		2: Achieved total preventable outages of approximately 77% below the allowable outages.			
Key Goal II:		Promote employees' awareness and commitment to working safely by providing the necessary training and equipment to assure a safe working environment.			
Performance Target:		Achieve a safety performance of not greater than a 3.3 recordable accident frequency rate for recordable injuries per 200,000 hours worked or the Bureau of Labor Statistics' industry rate, whichever is lower.			
FY 2001 Actual Performance:		Achieved a safety performance of a 3.1 recordable accident frequency rate for recordable injuries per 200,000 hours worked.			
Key Goal III:		Meet repayment on the Federal power investment.			
Performance Targets:		1: Meet planned annual repayment of principal on Federal power investment.			
		2: Meet all required payments of the Federal power system within the repayment period.			

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
	FY 2001 Actual Performance: 1: Planned $22,822,000; Repaid $19,892,418. Annual planned repayment was not met due to below average water conditions. Long-term repayment is still on target. 2: Required repayment due in FY 2001 on the Federal power investment was paid in full.					
3	*Does the program demonstrate improved efficiencies and cost effectiveness in achieving program goals each year?*	Yes	Southwestern meets its safety and reliability goals every year under average water conditions. Repayment of the Federal investment (principal plus interest) is achieved. Due to cost control efforts, Southwestern's annual power repayment studies have identified the need for only minor payment increases. The only uncontrollable external variable that impacts repayment is water conditions. Southwestern's budget has remained at the same level over the last three years without any financial relief for new initiatives or cost of living adjustments. Southwestern has reduced its staff and cut costs in non-direct program areas to achieve program goals. Efficiencies and cost savings are evident in that Southwestern has been able to meet its program goals.	Annual Performance and Accountability Report; Annual Performance Plan; Annual Budget Requests; and Annual Power Repayment Studies.	20%	0.2
4	*Does the performance of this program compare favorably to other programs with similar purpose and goals?*	Yes	Southwestern has successfully marketed all Federal power in its region. Southwestern has not missed a required payment on a Federal power investment within the required repayment period and is on target to meet its overall repayment requirement. Southwestern has been and continues to be one of the top NERC performers, consistently exceeding the "Pass" rating. Southwestern's long-term safety performance is better than industry average.	Bureau of Labor Statistics; NERC Reports; Annual Report; and Annual Power Repayment Studies.	10%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
5	*Do independent and quality evaluations of this program indicate that the program is effective and achieving results?*	Yes	Southwestern has operational and financial reviews on an ongoing basis, which provide evidence that our program is accomplishing its mission.	NERC Quarterly Compliance Ratings; The DOE IG's survey of Transmission Line Maintenance; DOE's Physical Security Audit in August 2001; Southwestern's Independent Financial and IT Audit; DOE Cyber Security Audit; PMA Peer Review of IT Controls at our Power Dispatch Center; DOE Personnel and Procurement Reviews; NERC Compliance Surveys and Audits; Annual Power Repayment Studies; Rates Public Forums; FERC Rate Reviews; DOE Reviews; Safety and Environmental Audits; Customer Surveys; DOE Fiber Optic Study; and OPM Review.	20%	0.2
6	*Were program goals achieved within budgeted costs and established schedules? (Addresses capital assets only)*	Large Extent	The majority of projects are completed on time and within budget. For those projects which include rights-of way or real property acquisition and/or site work, both project scope and schedule may be adversely impacted by site conditions or negotiations with land owners. Weather conditions and outages on adjacent facilities owned by the Government or other utilities may occasionally delay project completion.	Construction Program Budget Execution Report; Facility/Project Data Sheets; and Financial Management System Data.	10%	0.1
Total Section Score					**100%**	**70%**

PART Performance Measurements

Program: State Energy Programs
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy (EERE)
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Results Not
100%	25%	89%	17%	Demonstrated

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The statutory purpose of this program is to provide grants and related technical assistance to States to promote the conservation of energy and to reduce the rate of growth of energy demand.

Evidence: Program authority is contained in PL 94-163, Title III, Section C., as revised by PL 101-440. Governing regulations are contained in 10CFR 420.1.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The program contributes to improved energy security and reliability by reducing energy consumption (and associated negative environmental impacts) and improving energy efficiency. The program provides the resources to enable States to plan and implement programs tailored to their individual energy situation and needs, to directly influence the energy use of their citizens.

Evidence: State Energy Program's Strategic Plan for the 21st Century, February 2000, page 2; and SEP Implementation Plan, November 2000, page v - vi.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: SEP provides resources to coordinate State, local, and Federal programs to reduce duplication and increase effectiveness. Some of these state programs, such as those run by the CEC in California, NYSERDA in New York, and Wisconsin's Focus on Energy, have similar objectives, but in these places, SEP serves the unique role to help plan for the use of these state resources and to integrate these programs into DOE objectives.

Evidence: April 2, 2004 testimony of the National Association of State Energy Officials (NASEO) before the House Appropriations Subcommittee. Annual SEP State Plans.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The SEP grant program is designed to allow the States maximum flexibility in developing programs that address their needs, thus achieving greater effectiveness. A more prescriptive categorical program design would be much less effective, since no single set of measures could effectively address the varying energy situations and needs of every State across the nation. Program managers regularly review SEP's effectiveness with its Regional Offices and the States and make policy and program changes as necessary.

Evidence: Two earlier Federal grant programs, the Energy Extension Service and the Institutional Conservation Program, have been consolidated into SEP in view of its flexible design and effectiveness. DOE Headquarters and Regional SEP managers meet semi-anually and conduct monthly conference calls to review policy and operational issues. Regional SEP managers meet at least annually with their States for the same purpose, and DOE holds a national "All-States" meeting every 18 months. In addition, State feedback on program operations and effectiveness is requested on the SEP Program Managers' website, The Corner Cafe.

PART Performance Measurements

Program: State Energy Programs
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy (EERE)
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Results Not
100%	25%	89%	17%	Demonstrated

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: SEP's funds are provided to the States through a negotiated equitable formula that takes into account population, energy consumption and equal shares. Working through the States is the most effective way to closely target the program to the individual needs of all citizens.

Evidence: Allocation in 10CFR 420.11. NASEO April 2, 2004 testimony before the House Appropriations Subcommittee.

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: NO Question Weight 13%

Explanation: The program is in the process of developing better and specific national programmatic long-term objectives for SEP through the update of the SEP Strategic Plan for the 21st Century. Ideally, long-term measures will be outcome-oriented (e.g., MBtu of energy saved, energy cost savings, tons of reduced pollutant emissions, oil imports displaced, all per annum). The program is in the process of discussing these measures with the States.

Evidence: The program is in the process of developing specific long-term performance measures for SEP. Current long-term goals for the program provided in the program's Strategic Plan for the 21st Century (February 2000) will be updated in FY 2004-2005 to include goals that are more quantifiable.

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: NO Question Weight 13%

Explanation: The program is in the process of developing specific national annual and five-year objectives as part of updating the SEP Strategic Plan. Long-term and short-term measurement of these objectives is being developed as part of ongoing evaluation work.

Evidence: FY 2004 Annual SEP Team Work Plan.

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: NO Question Weight 13%

Explanation: The program is in the process of developing better and specific national programmatic long-term objectives for SEP through the update of the SEP Strategic Plan for the 21st Century. Ideally, long-term measures will be outcome-oriented (e.g., MBtu of energy saved, energy cost savings, tons of reduced pollutant emissions, oil imports displaced, all per annum). The program is in the process of discussing these measures with the States.

Evidence: The program is in the process of developing specific long-term performance measures for SEP. Current long-term goals for the program provided in the program's Strategic Plan for the 21st Century (February 2000) will be updated in FY 2004-2005 to include goals that are more quantifiable.

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: NO Question Weight 13%

Explanation: Annual targets, and baselines for SEP are under development as part of long-term planning effort that is part of updating the SEP Strategic Plan. The States maintain their own baselines and establish individual targets for their annual measures.

Evidence: Program regulations in 10CFR 420. State Energy Program Operations Manual. Annual SEP State Plans. Headquarters and Regional Office SEP Work Plans.

PART Performance Measurements

Program: State Energy Programs
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy (EERE)
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Results Not
100%	25%	89%	17%	Demonstrated

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: NO Question Weight:13%

Explanation: Annual and long-term goals for SEP are under development with participation from States and their associations. The goals in the SEP Strategic Plan for the 21st Century were developed by a committee of State Energy Office directors and reviewed in draft by all the States and their associations. States use SEP funds to establish and carry out their own individual annual goals.

Evidence: SEP Strategic Plan for the 21st Century, pages 3-11, page 16. Information on State goals and activities is contained in the the Department's WinSAGA database. State Energy Advisory Board periodic and annual reports.

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: NO Question Weight:13%

Explanation: Although progress is being made, independent evaluations of sufficient scope and analysis are not yet in place. Oak Ridge National Laboratory has conducted a preliminary assessment. However, the States self-reported many of the facts for this assessment. To ensure quality data, every State should have auditable field measurement mechanisms. More importantly, Oak Ridge National Lab is not considered independent.

Evidence: The initial assessment of actual SEP performance was performed by Oak Ridge National Laboratory and published as ORNL/CON-487, "Estimating Energy And Cost Savings And Emissions Reductions For The State Energy Program Based On Enumeration Indicators Data," Schweitzer, et.al., January, 2003. In FY 2004 DOE has instructed ORNL to expand the number of activities areas assessed under the methodology and to seek responses of nonrespondent states to the metrics solicitation.

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: YES Question Weight:13%

Explanation: The 2005 Budget highlights the energy savings (Btus) and cost savings estimated for each dollar of grant funding provided under this program. It is noteworthy, however, that the estimates are based on extrapolation from figures in an Oak Ridge National Lab study that relies on incomplete data and methodologies that may require significant refinement.

Evidence: FY 2005 Budget Justifications. Annual SEP Program Guidance. Annual SEP State Plans.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:13%

Explanation: In November of 2000 an implementation plan for the SEP Strategic Plan for the 21st Century was published and highlighted nine suggested activities that, if implemented within the States' plans, would enhance the achievement of three primary program goals. DOE, in cooperation with the States, plans to update the Strategic Plan in FY 2004-5. The new plan will contain specific long-term and annual objectives consistent with the program's statutory objectives and outcome measures. In FY 2002-3, DOE provided technical assistance to the States in strategic planning, to strengthen the process at the State level.

Evidence: State Energy Program's Strategic Plan for the 21st Century, February 2000 and SEP Implementation Plan, November 2000.

PART Performance Measurements

Program: State Energy Programs
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy (EERE)
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Results Not
100%	25%	89%	17%	Demonstrated

3.1 Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance? Answer: YES Question Weight:11%

Explanation: States are required to report to DOE semi-annually on their progress toward meeting the goals and milestones included in their State Plans. These reports are captured in the WinSAGA database and are reviewed by DOE to identify operational and financial issues that need to be addressed. However, the State's choose their own goals and measures, which may not exactly reflect the measures used by DOE.

Evidence: Information on State activities and progress toward meeting their goals is contained in WinSAGA, the program's automated database system.

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight:11%

Explanation: The program's headquarters (HQ) staff, the Regional Offices (ROs) and the States are all responsible and accountable for different aspects of SEP operations. HQ staff is responsible for budget formulation, policy development, annual SEP program guidance, resolution of programmatic issues, design and implementation of nationwide technical assistance, program evaluation and liaison with and annual monitoring of the ROs. The ROs are responsible for dealing directly with the States, reviewing annual grant applications and awarding grants, reviewing semi-annual programmatic and financial status reports, monitoring the States' implementation of SEP, and providing specific or region-focused technical assistance. States are responsible for developing and submitting their annual grant applications (which includes selecting the annual energy measures that best fit their needs); submitting semi-annual programmatic and financial status reports to the DOE ROs; and for monitoring their sub-grantees. In addition, States are subject to an annual independent audit of their activities.

Evidence: Responsibilities of program HQ staff, Region Offices, and States are spelled out in the SEP Operations Manual, pages 3-9 thru 3-13. Grant documentation including assurance of compliance is maintained by DOE's contracting officer at each Regional Office. Quarterly reports are filed on the WINSAGA grants management data system.

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: NO Question Weight:11%

Explanation: All Federal grant funds are obligated within the federal fiscal year to coincide with the States' fiscal year. In FY 2003-5 DOE is working with a number of States to reduce their high balances of unobligated funds carried forward at the end of the fiscal year. After a strategic program review identified this problem, Annual SEP Guidance for FY 2003-2004 required States with carryover balances over 25% to include in their annual State Plans a plan for reducing those balances. In FY 2004, a team of HQ/Regional SEP Managers is developing specific step-by-step procedures to be followed to resolve this problem with a State. In addition to reviewing the semi-annual reports, the Regional Offices monitor the States to ensure that SEP funds are spent for their intended purpose. HQ SEP staff, in turn, monitor Regional SEP operations annually.

Evidence: The WinSAGA system tracks grant awards and funds obligations. HQ and Regional Office monitoring schedules and reports are on file. State Energy Program Strategic Review, 2002

PART Performance Measurements

Program: State Energy Programs
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy (EERE)
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Results Not
100%	25%	89%	17%	Demonstrated

3.4 **Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?** Answer: YES Question Weight:11%

Explanation: DOE has taken steps to improve the efficiency of SEP operations. Contracts awarded for technical assistance are awarded competitively. IT improvements have reduced time, travel and other costs associated with grants administration. Ultimately, the program will transition to Grants.gov, a cross-agency e-government initiative that will establish one system for all customers of federal grants to find, apply for, and manage grants.

Evidence: EERE Annual Broad-Based Solicitations; Annual Task Plans for WinSAGA database design and operation; State Energy Program Operations Manual; Grant.gov. Applications previously submitted by mail can be signed and uploaded electronically. With DOE HQ, Regional Offices and the States all part of the same electronic system, problems can be resolved and issues clarified in real time. Activities that used to require face-to-face meetings involving travel by large groups of people are now be carried out by web-cast. For example, HQ and the Regional Offices used to meet face-to-face quarterly, and now with the IT improvements such meetings are necessary only once per year. Program meetings with all of the States have been changed from annual to once per 18 months .

3.5 **Does the program collaborate and coordinate effectively with related programs?** Answer: YES Question Weight:11%

Explanation: The Program has ongoing collaborative efforts with Environmental Protection Agency (EPA) to promote State Energy Office and State Air Quality Offices to develop Energy Efficiency & Renewable Energy (EERE) solutions to environmental problems. For example, Utah used SEP funds for a project jointly directed by staff from the State Office of Energy and Resource Planning, Office of Energy Services, and the Division of Air Quality, to design, develop and adopt ways to incorporate energy efficiency and renewable measures into Utah's State Implementation Plan under the EPA's Clean Air Act. States also work with EPA to promote consumer purchases of EnergySTAR energy efficient products.

Evidence: Through collaboration efforts between the EERE Technology Offices and the States, over 200 State Energy Program Special Projects are presently being implemented at the State level. Information on these projects is available in the program's WinSAGA database.

3.6 **Does the program use strong financial management practices?** Answer: YES Question Weight:11%

Explanation: The program complies with all DOE Financial Directives. Oversight is provided by the National Energy Technology Laboratory.

Evidence: No evidence of poor financial practices.

3.7 **Has the program taken meaningful steps to address its management deficiencies?** Answer: YES Question Weight:11%

Explanation: The program continually reviews its management and operational procedures. DOE HQ and Regional Office SEP managers meet semi-annually and conduct monthly conference calls to review operational issues. Regional Office SEP managers meet at least annually with their States for the same purpose, and DOE holds a national "All-States" meeting every 18 months. In addition, State feedback on program operations and effectiveness is requested on the SEP Program Managers' website, The Corner Cafe. Recently, procedures for approving Regional SEP Annual Operating Plans were streamlined, so that funds are made available more quickly, and Regional Offices have more discretion in their use.

Evidence: Annual Program Guidance. SEP 21st Century Strategic Plan.

PART Performance Measurements

Program: State Energy Programs
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy (EERE)
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Results Not
100%	25%	89%	17%	Demonstrated

3.BF1 **Does the program have oversight practices that provide sufficient knowledge of grantee activities?** Answer: YES Question Weight:11%

Explanation: HQ SEP staff monitors and provides technical assistance to the Regional Offices, which, in turn, oversee grantee activities, and are in regular contact with the grantees. Regional SEP Managers closely review annual State Plans, semi-annual financial and progress reports, track progress against milestones, and conduct site monitoring to ensure compliance with approved State Plans and soundness of State financial systems, so that federal funds are tracked and expended properly.

Evidence: State semi-annual reports are on file in the program's WinSAGA database system. Reports of on-site monitoring are on file at Regional Offices.

3.BF2 **Does the program collect grantee performance data on an annual basis and make it available to the public in a transparent and meaningful manner?** Answer: YES Question Weight:11%

Explanation: Oak Ridge National Lab (ORNL) developed an energy savings reporting system for SEP and used it to develop estimates of program benefits for various program activities. The program plans to expand the number of activity areas assessed under the methodology and to seek responses of non-respondent states to the metrics solicitation. The program anticipates that annual reporting and publication of reporting results will be conducted from this point forward.

Evidence: ORNL/CON-487, "Estimating Energy And Cost Savings And Emissions Reductions For The State Energy Program Based On Enumeration Indicators Data," Schweitzer, et.al., January, 2003. ORNL SEP Support Task Plan for FY 2004

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: NO Question Weight:25%

Explanation: The program and States have not agreed to long-term performance goals. ORNL's 2003 study reported on SEP's annual progress related to its statutory intent of saving energy and energy costs, and reducing harmful emissions. The program has begun the collaborative process of expanding the number of activity areas assessed under the methodology and to seek responses of non-respondent states to the metrics solicitation. The data will inform development of meaningful long-term goals.

Evidence: Annual SEP Work Plans for HQ and Regonal Offices. Moitoring Reports on file at RO's. HQ Technical Assistance Plans and records. Oak Ridge National Laboratory , ORNL/CON-487, "Estimating Energy And Cost Savings And Emissions Reductions For The State Energy Program Based On Enumeration Indicators Data," Schweitzer, et.al., January, 2003. ORNL FY 2004 SEP Task Plan

4.2 **Does the program (including program partners) achieve its annual performance goals?** Answer: NO Question Weight:25%

Explanation: Annual goals for the program are still under development as part of SEP's strategic planning process.

Evidence: Annual SEP Work Plans for HQ and RO's. Moitoring Reports on file at RO's. HQ Technical Assistance Plans and records. Oak Ridge National Laboratory , ORNL/CON-487, "Estimating Energy And Cost Savings And Emissions Reductions For The State Energy Program Based On Enumeration Indicators Data," Schweitzer, et.al., January, 2003. ORNL FY 2004 SEP Task Plan

PART Performance Measurements

Program: State Energy Programs
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy (EERE)
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Results Not
100%	25%	89%	17%	Demonstrated

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?

Answer: SMALL EXTENT

Question Weight 25%

Explanation: Grants administration efficiencies are achieved each year through increased use of IT technology, consolidating/reducing meetings to reduce travel requirements and streamlined operational procedures. Required reports have been streamlined and the program has moved from quarterly to semi-annual reporting, to reduce the reporting burden on the States. Specific measurable efficiency goals are under development.

Evidence: WinSAGA Grants Administration Database. SEP Operations Manual. Annual Program Guidance. Applications previously submitted by mail can be signed and uploaded electronically. With DOE HQ, Regional Offices and the States all part of the same electronic system, problems can be resolved and issues clarified in real time. Activities that used to require face-to-face meetings involving travel by large groups of people are now be carried out by web-cast. For example, HQ and the Regional Offices used to meet face-to-face quarterly, and now with the IT improvements such meetings are necessary only once per year. Program meetings with all of the States have been changed from annual to once per 18 months .

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?

Answer: NA

Question Weight: 0%

Explanation: There are no other block grant programs with similar purpose and goals. In some States, State funding augments Federal funding provided by this program. But State funding is not used to operate a separate, comparable progam.

Evidence:

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?

Answer: SMALL EXTENT

Question Weight 25%

Explanation: Oak Ridge National Laboratory developed an evaluation methodology for the SEP program and reported positive results. However, the data were incomplete, and the methodology may need refinement, and ORNL is not considered independent. The long-term plan for the evaluation of the program calls for the gradual expansion of measured activities from the current 14 categories to 18 and of participation of almost all states compared to the previous 20. The nature of some SEP activities does not easily lend itself to specific measurement by the three criteria used in the ORNL methodology and the resulting metrics are therefore only a partial reflection of program performance. It is intended that metrics be refined and expanded on an annual basis to produce not only more accurate results but assessment of program activities over time. Data collection is performed on a voluntary basis in cooperation with National Association of State Energy Officials (NASEO).

Evidence: The initial assessment of actual SEP performance was performed by Oak Ridge National Laboratory and published as ORNL/CON-487, "Estimating Energy And Cost Savings And Emissions Reductions For The State Energy Program Based On Enumeration Indicators Data," Schweitzer, et.al., January, 2003. The program will expand the number of activities areas assessed under the methodology and seek responses of non-respondent states to the metrics solicitation.

PART Performance Measurements

Program: State Energy Programs
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy (EERE)
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Results Not
100%	25%	89%	17%	Demonstrated

Measure: Energy savings
Additional Information:

Year	Target	Actual	**Measure Term:** Annual
	Baseline		

Measure: Emissions reductions
Additional Information:

Year	Target	Actual	**Measure Term:** Annual
	Baseline		

Measure: Energy cost savings
Additional Information:

Year	Target	Actual	**Measure Term:** Annual
	Baseline		

Measure: Oil consumption avoided
Additional Information:

Year	Target	Actual	**Measure Term:** Annual
	Baseline		

Measure: Ratio of program direction/contractor management funding to total program funding.
Additional Information:

Year	Target	Actual	**Measure Term:** Annual
	Baseline		

PART Performance Measurements

Program: Strategic Petroleum Reserve (SPR)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	88%	100%	87%	

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The purpose of the program is to acquire and maintain a petroleum stockpile for emergency distribution to "diminish the vulnerability of the United States to the effects of a severe energy supply interruption, and provide limited protection from the short-term consequences of interruptions in supplies of petroleum products."

Evidence: Energy Policy and Conservation Act (P.L. 94-163, as amended), Part B, Section 151); National Energy Policy.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: U.S. (and trading partner) reliance on oil and U.S. net oil import levels (forecast to increase) combined with location of significant global oil reserves in regions of the world subject to political unrest, have made the US vulnerable to supply disruptions. The Strategic Petroleum Reserve (SPR) provides protection from supply disruptions.

Evidence: When the 1991 SPR drawdown was announced in conjunction with Operation Desert Storm, the price of oil immediately dropped $8/bbl.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The industry generally relies on just-in-time inventories to maintain their minimum operating level. Industry has no incentive to incur costs for holding adequate additional supplies in the chance that a supply disruption might occur, since potential public benefits would not solely accrue to the industry.

Evidence: The 1999 National Petroleum Council Refining Study.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The program seeks to minimize acquisition costs and impacts on supply levels and market forces and encourage competition, consistent with meeting program goals (e.g., in the event of a drawdown, SPR oil is distributed by competitive sale). Also, the Department of Energy (DOE) has committed to conducting a study to determine the optimal amount of oil to maintain in the SPR. Some analyses suggest that the program might be more cost effective if allowed to acquire oil when prices are low rather than through the current royalty-in-kind program (although current policy considers deferral of RIK acquisitions under certain circumstances).

Evidence: Standard Sales Provisions (www.fe.doe.gov/spr); Energy Deputy Secretary McSlarrow's March 5, 2003 testimony before the House Committee on Energy and Commerce, Subcommittee on Energy and Air Quality; Senate Committee on Governmental Affairs; S Prt. 108-18: U.S. Strategic Petroleum Reserve: Recent Policy has Increased Costs to Consumers but not Overall U.S. Energy Security (March 5, 2003).

PART Performance Measurements

Program: Strategic Petroleum Reserve (SPR)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	88%	100%	87%	

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: In a drawdown, competitive sales would place the oil with U. S. consumers (the statute prevents the oil from being exported). All potential drawdown decisions are discussed with international organizations established to coordinate response in the event of severe supply disruptions. The system has been tested by one emergency sale and one competitive exchange.

Evidence: SPR Plan

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight 12%

Explanation: Readiness to drawdown when directed by the President is the program's long-term goal. The associated outcome is energy and economic security against supply disruptions.

Evidence: See "Measures" section in this PART. The program uses a strategic management system to set its course (SPR Strategic Plan), establish expectations (SPR Annual Performance Plan), and review organizational performance (Program Reviews). The SPR Strategic Plan outlines seven core values and nine supporting success factors at which the program must excel to ensure success of the long-term readiness goal.

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight 12%

Explanation: The targets are to achieve the maximum designed draw down rate given the SPR inventory level of 700 MB.

Evidence: See Measures section of this PART.

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight 12%

Explanation: The SPR is maintained in a high state of readiness. Annual assurance is measured by how quickly the program can respond to a Presidential direction to draw down; how much of the oil inventory in SPR storage is available; and the cost efficiency of operations.

Evidence: See Measures section of this PART.

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight 12%

Explanation: All targets are baselined and consider various strategies to improve performance and effectiveness. Fill-to-capacity efforts are influencing the increased drawdown rate and the vapor mitigation program was implemented to ensure the maximum availability of oil while meeting all safety and environmental standards.

Evidence: See Measures section of this PART.

PART Performance Measurements

Program: Strategic Petroleum Reserve (SPR)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	88%	100%	87%	

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:12%

Explanation: Operational measures are established annually to support higher-level programmatic measures. Currently, there are 76 operational measures for the Management & Operating (M&O) contractor and 49 measures for the Management & Technical Support Services (M&TSS) Contractor. Performance against targets is used to monitor and track ongoing achievement and is considered when determining contractor performance fee. This approach has been successful in ensuring that all levels of the Government and contractor organizations are aware of SPR goals and objectives and that their achievement is incorporated into daily operations.

Evidence: Work Authorization Directives for the M&O contractor and Performance Evaluation Plan for the M&TSS contractor. The measures are maintained in the program's automated performance tracking tool (PB-Views).

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:12%

Explanation: Although product is not regularly delivered to customers, there are periodic requests for public input, and two test sales have been conducted. When the SPR has been drawn down under presidential direction (1991, 2000), the SPR met performance expectations. The last independent evaluation was conducted as part of an application for a 2001 Energy Performance Excellence Award. A site examination team performed the assessment using Malcom Baldridge criteria.

Evidence: Measurement of customer satisfaction has been made using post-surveys of participants in SPR drawdown tests, responses to questionnaires used for refiners/traders customer visits, participant surveys at industry trade conferences, and Employee Climate Surveys. In 2001, the SPR applied for the Energy Performance Excellence Award and received input from the field examiners as part of their assessment of the program.

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:12%

Explanation: DOE has not provided Budget documents that link performance goals to budget levels.

Evidence: Budget documents (e.g., FY 2004 Budget Congressional Justification).

PART Performance Measurements

Program: Strategic Petroleum Reserve (SPR)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	88%	100%	87%	

2.8 Has the program taken meaningful steps to correct its strategic planning deficiencies? Answer: YES Question Weight:12%

Explanation: Program reviews, project reviews, staff meetings and Strategic Plan working sessions are used to discuss, review, and revise objectives, plans, and measures. These meetings are designed to keep planning and performance measurement current, to communicate performance status throughout the organization (so all parts of the organization will act in concert), and to encourage widespread input into improving performance. A Strategic Plan Working Group updates the SPR Strategic Plan annually in a six-month participative process. This group takes the lead in review and assessment of the SPR Strategic Plan to validate its currency, relevance, and completeness in light of: program mission, vision, federal mandates, & major public policy issues.

Evidence:

3.1 Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance? Answer: YES Question Weight:14%

Explanation: SPR has a hierarchy of performance information. The Department collects & tracks the "critical few" measures. The SPR Program Office monitors the limited, specific, short- and long-term measures. The SPR Project Management Office manages the detailed, operational measures that are implemented by the contractors. Organizational and action plans are reviewed and analyzed at quarterly Program Reviews. Monthly Project Assessments and Project Reviews are conducted to analyze performance against all milestones and contracts. Data from the PBViews system is used during these sessions to ensure all operational areas are covered. These reviews provide an opportunity to discuss performance and provide direction to contractors. These same measures are reviewed daily during the site managers' site status meetings.

Evidence: PBViews System and Joule system.

3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results? Answer: YES Question Weight:14%

Explanation: The program considers performance against targets when determining contractor performance fee. The current M&O contract contains changes to the fee structure that increased the amount of fee incentive for cost control from 5% to 25%.

Evidence: The program's automated performance tracking tool (PB Views) reflects the individual responsible for each of the 76 operational performance measures.

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:14%

Explanation: After receipt of the annual appropriation, a time-phased Annual Operating Plan is developed that outlines obligation requirements on a monthly basis. To ensure a seamless transition from budget formulation to execution, the Annual Operating Plan is developed using the functional cost detail from the budget formulation process. Variance analysis is performed on a monthly basis to ensure all funding is spent for its intended purpose.

Evidence: FY 2004 Budget; Annual Operating Plan.

PART Performance Measurements

Program: Strategic Petroleum Reserve (SPR)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	88%	100%	87%	

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:14%

Explanation: Program efficiencies and cost effectiveness are assessed by operating cost per barrel of oil capacity. Incentives (25% of the total award fee) are built into the contract's award fee structure to encourage efficiencies that improve performance. An example is the Service Enterprise Resource Planning project, which is a 4-year reengineering of material management, acquisition, property management, maintenance, cost management, and many other administrative processes utilizing enterprise resource planning software. The M&O contractor streamlined processes using modern information technology and extensive benchmarking in the commercial sector.

Evidence: PB Views system and Joule system.

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:14%

Explanation: SPR participates in International Energy Agency activities including the presentation and exchange of management, technical and operational information on the U.S. government experience with emergency oil stocks so as to lead by example in encouraging member states to fulfill and maintain their stockholding responsibilities, including the effective use of stocks in crises.

Evidence: SPR has made presentations and participated in the Asian Pacific Economic Cooperation (APEC) Energy Working Group conference in Taiwan (April 2002), the Beijing Oil Forum in China (October 2001) and the APEC Energy Security Workshop in Korea (March 2001).

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:14%

Explanation: Budget formulation/execution sessions are routinely conducted to assess progress in development of budgets and in executing approved budgets that provide the financial resources to accomplish goals. There is an annual validation of the assumptions used to develop budget estimates and how these assumptions are reflected in cost and schedule baselines. During budget execution, variance analyses are performed on a monthly basis to monitor and track expenditures. Finally, the program prepares audited financial statements as part of the Department's Accountability Report.

Evidence: DOE annual Performance and Accountability report

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:14%

Explanation: SPR's leaders use a structured program management system to set the SPR's course (Strategic Plan and subsidiary plans), establish expectations (annual Performance Plan), and review organizational performance (Program Reviews). Drawdown Readiness Exercises are conducted to test all levels of program involvement and ensure that any management deficiencies are addressed.

Evidence: Quarterly Program Reviews with the Project Management Office; Project Management Office monthly Project Reviews with the management and operations contractor and other key suppliers. SPR Strategic Plan; Annual Performance Plan; Program Reviews.

PART Performance Measurements

Program: Strategic Petroleum Reserve (SPR)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	88%	100%	87%	

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: YES Question Weight 20%

Explanation: The SPR is maintained in a high state of readiness and continues to make strides in assuring full mission capability. Drawdown and distribution can begin within 15 days of notification. Readiness is assured through periodic assessments, training, tests, and exercises. Various program intiatives have addressed how quicklythe prgram can respond to Presidential direction to draw down; availability of oil; and the cost efficiency of operations.

Evidence:

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: YES Question Weight 20%

Explanation: The program has met or exceeded all programmatic measures in each year since establishing the SPR Annual Performance Plan in 1998.

Evidence: Annual Performance Report.

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: LARGE EXTENT Question Weight 20%

Explanation: Cost per barrel of storage capacity. The 1994 budget request for the SPR reflected requirements over $200 million. The current request for facilities and management has leveled to $ 172 million reflecting implementation of cost saving efficiencies (I.e., Life Extension Program, Enterprise Resource Planning System, etc). M&O contract contains a Cost Savings Plan to achieve further savings in the next six years.

Evidence: M&O Contract.

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: YES Question Weight 20%

Explanation: SPR compares well with industry in areas such as environmental protection, safety, and employee satisfaction. Storage costs are roughly 10 percent of private industry and 4 percent of Japan. Germany also stores strategic reserves in salt caverns, and their annual operating costs are believed to be on the same order of magnitude as the SPR's.

Evidence: DOE Analysis

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: LARGE EXTENT Question Weight 20%

Explanation: Last independent evaluation was for the 2001 Energy Performance Excellence Award. A site examination team used the Malcolm Baldrige Criteria to evaluate the program's Leadership, Strategic Planning, Customer Focus, Information and Analysis, Human Resource Focus, Process Management and Business Results. Overall score was 647 out of a possible 1,000 demonstrating efficient and effective performance. When the SPR was used in conjunction with military operations during the Persian Gulf War, it operated as expected and the price of oil fell (although it is difficult to attribute price effect solely to SPR use.)

Evidence: 2001 Energy Performance Excellence Award application and evaluation (Executive Summary).

PART Performance Measurements

Program: Strategic Petroleum Reserve (SPR)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	88%	100%	87%	

Measure: Capability to draw down the Reserve (million barrels/day).

Additional Information: The maximum achievable rate is 4.4 MB for 90 days.

Year	Target	Actual
2002	4.1	4.2
2003	4.3	
2004	4.4	
2010	4.4	
2015	4.4	
2005		
2006		

Measure Term: Long-term

Measure: Percentage of monthly "maintenance and accessibility goals" achieved.

Additional Information: Equipment inspections (pumps, motors, etc.)

Year	Target	Actual
2002	95%	98%
2003	95%	
2004	95%	
2005	95%	
2006	95%	

Measure Term: Annual

PART Performance Measurements

Program: Strategic Petroleum Reserve (SPR)
Agency: Department of Energy
Bureau:
Type(s): Direct Federal

Section Scores				Rating
1	2	3	4	Effective
100%	88%	100%	87%	

Measure: Barrels of Oil Degassed (million barrels).

Additional Information:

Year	Target	Actual
2004	23	
2005	30	
2006	14	
2007	27	
2008	30	

Measure Term: Annual

Measure: Operating Cost per barrel of oil capacity ($ per barrel).

Additional Information:

Year	Target	Actual
2002	0.2058	0.1981
2003	0.213	
2004	0.207	
2005	0.207	
2007	0.199	

Measure Term: Annual (Efficiency Measure)

PART Performance Measurements

Program: Vehicle Technologies
Agency: Department of Energy
Bureau: FreedomCAR and Vehicles Technology
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	90%	100%	75%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The Vehicle Technologies (VT) Program mission is to develop more energy efficient and environmentally friendly highway transportation technologies that enable America to use less petroleum. The long-term aim is to develop "leap frog" technologies that will provide Americans with greater freedom of mobility and energy security, with lower costs and lower impacts on the environment.

Evidence: EERE Strategic Plan, p. 12 http://www.eere.energy.gov/office_eere/pdfs/fy02_strategic_plan.pdf

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The Vehicle Technologies program develops hybrid vehicle and other advanced automotive technologies and materials that can improve fuel economy of light- and heavy-duty vehicles in the near term and can contribute to the development of hydrogen fuel cell vehicles in the long-term. Highway vehicles account for 54% of the Nation's oil use (the largest of any sector). The U.S. imports more than half of the oil it consumes, and imports are expected to increase absent major technological improvements or policy changes.

Evidence: Transportation Oil Gap Analysis conducted by EIA and presented in the National Energy Policy (2001).

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: Nearly all of the program's activities are coordinated with vehicle manufacturers and suppliers through either the FreedomCAR partnership or 21st Century Truck partnership. Program partners collaborate on pre-competitive research beyond the scope of what the industry would do alone. The program coordinates as appropriate with other agencies (DoD, DOT, EPA) conducting similar or related work.

Evidence: FreedomCAR Partnership Plan

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The program coordinates with industry to develop vehicle technologies that can improve fuel efficiency and lead to reduced oil consumption. A regulatory program (Corporate Average Fuel Economy, or CAFE) and a tax incentive program for hybrid/fuel cell vehicles (changes/extensions pending) currently exist. However, there is no evidence that either of these approaches alone would be a more efficient means to achieve the goal.

Evidence:

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: NO Question Weight 20%

Explanation: DOE currently estimates benefits of its applied R&D programs, but needs to improve consistency in methodology and assumptions help allocate resources based on costs and benefits. Furthermore, external peer reviews curently underway may help assess whether some program resources may benefit the private sector.

Evidence: FY 2005 EERE GPRA Benefits Estimates p. 13-14 through 3-16 (www.eere.energy.gov/office_eere/gpra_estimates_fy05.html)

PART Performance Measurements

Program: Vehicle Technologies
Agency: Department of Energy
Bureau: FreedomCAR and Vehicles Technology
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	90%	100%	75%	Effective

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight:10%

Explanation: The program has established three long-term performance measures. These measures are focused on program outputs (not process-oriented) that could enable significant oil savings. However, success is dependant on the rate and level of market penetration, which are strongly affected by other policy instruments (such as fuel economy standards) and market conditions (such as fuel prices). The program also tracks progress against additional goals with its industry partners from the FreedomCAR and 21st Century Truck partnerships.

Evidence: Vehicle Technologies Multi Year Program Plan (draft Nov. 2003), p. 3-1 through 3-8.

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight:10%

Explanation: The VT Program has articulated ambitious but achievable technical targets associated with the long-term measures.

Evidence: FreedomCAR Partnership Plan, p. 9-12, http://www.eere.energy.gov/vehiclesandfuels/pdfs/program/freedomcar_partnership_plan.pdf); Vehicle Technologies Multi Year Program Plan (draft Nov. 2003), p. 4-27 through 4-30; EERE FY 2005 Congressional Budget, Vehicle Technologies, p. 258-259

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight:10%

Explanation: Long-term performance measures can either be measured directly on an annual basis or are supported by a limited number of annual targets that are discrete, quantifiable, and relate to outputs that can enable reduced oil consumption. Many additional measures and targets not reported in this PART are represented in internal program documents.

Evidence: EERE FY 2005 Congressional Budget, Vehicle Technologies, "Annual Performance Results and Targets," p. 258-259; DOE Summary Program Plans, Vehicle Technoloies, p. 3-8

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: YES Question Weight:10%

Explanation: All measures have baselines and ambitious targets.

Evidence: EERE FY 2005 Congressional Budget, Vehicle Technologies, Annual Performance Results and Targets, p. 258-259. http://www.eere.energy.gov/office_eere/budget.html; Office of FreedomCAR and Vehicle Technologies Multi-year Program Plan, p. 4-44

2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program? Answer: YES Question Weight:10%

Explanation: The FCVT Program's approach to planning and implementing its R&D programs emphasizes jointly funded partnerships with industry to develop and validate technologies. These teams and industry interactions have provided input to the program's R&D roadmaps and portfolio priorities. Awards of grants are predicated on awardee's contractual commitment to overall performance goals and to meeting specific progress targets.

Evidence:

PART Performance Measurements

Program: Vehicle Technologies
Agency: Department of Energy
Bureau: FreedomCAR and Vehicles Technology
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	90%	100%	75%	Effective

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: A FreedomCAR review (conducted by the National Academy of Sciences [NAS] through the DOE IG's Office) will be completed in 2005; a similar review is planned for the 21st Century Truck Partnership for 2006. In additional to technical merit, these reviews will address the appropriateness of the Federal support for program activities. DOE highway transportation research had been reviewed annually (1994 -2001) by the NAS and other peer groups. Periodic peer and merit reviews are held for projects at the national laboratories and for contractor projects. EERE policy as of FY 2004 is for programs to have a minimum of biennial reviews at the project level. A peer review of the VT draft multiyear plan was held in December 2003. Project peer reviews are organized by the program, but the panel is comprised of industry and university experts who recuse themselves in cases of potential conflicts of interest.

Evidence: Review of the Research Program of the PNGV, Seventh Report, 2001, p.9-12; Peer Review of the Office of FreedomCAR and Vehicle Technologies Multi-year Program Plan, Dec. 2003; Merit Review and Peer Evaluation of FY 2003 DOE Advanced Combustion Engine R&D, May 2003.

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: YES Question Weight:10%

Explanation: Budget activities are linked directly to performance goals and targets and program technical needs. Program direction costs, i.e. the cost of implementing and managing the technical effort, is approximately proportional to the sub-program technical budgets although this has not been explicitly stated in the budget.

Evidence: EERE FY 2005 Congressional Budget, Vehicle Technologies.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: EERE programs dynamically evaluate their strategic planning processes. For example, the recent EERE restructuring included a comprehensive evaluation of this program's analytical capabilities and the creation of an EERE-wide planning and analysis team. Similarly, recommendations by peer reviewers have been incorporated into program plans. For example, a key recommendation from the final PNGV peer review led to DOE's redefining of the PNGV program activities and objectives, which led to the FreedomCAR partnership.

Evidence: Presentation slide, EERE FY 2006 Pre-budget Summit, "(OFCVT) Strategic Actions"; EERE Strategic Action Plan (outlines corrective action steps to address deficiencies defined by the 2000 NAPA review). Review of the Research Program of the PNGV, Seventh Report, "Selected Recommendations", recommendation #1 p. 11-12.

PART Performance Measurements

Program: Vehicle Technologies
Agency: Department of Energy
Bureau: FreedomCAR and Vehicles Technology
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	90%	100%	75%	Effective

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NO Question Weight:10%

Explanation: DOE currently estimates benefits of its applied R&D programs, but needs to improve consistency in methodology and assumptions help allocate resources based on costs and benefits. The program cannot currently make meaningful comparisons of its costs and benefits to other programs with similar goals.

Evidence: EERE GPRA Benefits Estimates, www.eere.energy.gov/office_eere/gpra_estimates_fy05.html

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: The program uses a prioritization process for making budget decisions, relying heavily on peer review results. The program also determined that there are new rationale-based decision tools that would serve to enhance decision making and provide clearer documentation. The program is currently evaluating these tools for future implementation.

Evidence: OFCVT Decision Process for Research and Development, February 2004

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:13%

Explanation: The EERE Strategic Management System -- which establishes at the beginning of each fiscal year a 18-month schedule for key planning, budget formulation, budget execution, and analysis / evaluation functions -- requires that each EERE program establish and track long-term and near-term program performance milestones on a monthly and quarterly basis. Program results are used annually and throughout the year to assess partners' performance.

Evidence: DOE Summary Program Plans, Vehicle Technologies, p. 4-8; DOE Joule performance tracking system

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:13%

Explanation: The Performance Appraisal and Management Plan for each Technology Development Manager includes an element to provide technical direction to industry, laboratories and universities to support the achievement of program level milestones and to keep projects on schedule and within cost. Solicitations identify the key technology challenges and associated technical targets. Proposals are evaluated on their ability to contribute solutions to these key technology challenges. Projects (including cooperative agreements and national laboratory efforts) are negotiated to include milestones and go/no-go decision points that support the achievement of the program performance goals.

Evidence: Performance Plan and Performance Appraisal Form for Performance Management System Employees; Sample contract documents.

Program: Vehicle Technologies
Agency: Department of Energy
Bureau: FreedomCAR and Vehicles Technology
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	90%	100%	75%	Effective

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:13%

Explanation: Each year, the program develops an Annual Operating Plan, which is reviewed internally to ensure that new funding is planned to be obligated consistent with the appropriated purpose. EERE also develops a Spend Plan for all of its programs. The program uses data from Departmental procurement and financial systems -- and similar data from National Laboratory partners -- to assure that actual expenditures occur for intended purposes and on a schedule consistent with the Spend Plan. The program reports that cooperative agreement invoices are paid only after verification that the costs are in accordance with the approved budget.

Evidence: FY 2003 Annual Operating Plan. FY 2004 Apportionment. FY 2003 Spend Plan.

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:13%

Explanation: EERE's reorganization in 2002 clarified lines of responsibility and eliminated organizational "stovepipes" by consolidating planning, budgeting, and analysis into a single business administration office. The reorganization reduced management layers, although staff levels remained the same. EERE developed a new IT report to improve program managers' access to EERE cost, obligation, and procurement data. EERE plans to consolidate several legacy IT systems into a single program management system that is intended to track all required information on a project by project basis (cost share, type of contract according to A-11 definitions, etc.). EERE has developed a measure to reduce uncosted balances, i.e. obligated funds will be put to use more quickly. This should achieve efficiency and improve cost effectiveness.

Evidence: EERE Reorganization "All Hands" presentation: http://www.eere.energy.gov/office_eere/pdfs/eere_reorg.pdf; IT Investment Plan (EERE IT Business Case Number 019-20-01-12-01-1011-00-304-101); http://www.eere.energy.gov/office_eere/budget.html.

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:13%

Explanation: The program coordinates closely with the Hydogen, Fuel Cell, and Infrastructure Technology Program to ensure its FreedomCAR activities complements related work supporting the President's Hydrogen Fuel Initiative. Technical activities among EERE Offices having common needs are being coordinated through crosscut teams so as to leverage these efforts and avoid unneeded duplication. The proram also coordinates as appropriate with related programs at DoD, NASA, EPA, and DOT.

Evidence: FreedomCAR Partnership Plan http://www.eere.energy.gov/vehiclesandfuels/pdfs/program/freedomcar_partnership_plan.pdf; Renewable Fuels Crosscut Team: 21st Century Truck Partnership (members list)

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:13%

Explanation: Each year, EERE develops and maintains a Spend Plan and a Measures spreadsheet that links the Spend Plan to annual and long-term goals and measures for each EERE program. The program requires monthly cost reports that are evaluated against progress and used the make financial adjustments. The program works with the NETL Field Office to manage cooperative agreements, audit partners, ensure invoices are in accordance with the agreements and to issue reimbursement. There is no evidence of erroneous payments or statutory violations.

Evidence: FY 2003 Spend Plan and Measures spreadsheet. Sample quarterly costing report.

PART Performance Measurements

Program: Vehicle Technologies
Agency: Department of Energy
Bureau: FreedomCAR and Vehicles Technology
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	90%	100%	75%	Effective

3.7 **Has the program taken meaningful steps to address its management deficiencies?** Answer: YES Question Weight:13%

Explanation: The National Association of Public Administrators (NAPA) found dozens of management deficiencies in the program's bureau (EERE) in a review published in 2000. EERE provided evidence that it addressed some of management deficiencies identified by NAPA, and has prepared a Management Action Plan to address many of the remaining findings. While a few NAPA recommendations have not been addressed (e.g., that EERE conduct periodic audits to assure that cost-sharing partners actually provide funding they agree to), in general, EERE has taken meaningful steps to address most deficiencies. At the program level, the program has drafted a Management and Operations Plan that links the research, development, demonstration, and education activities to policies, requirements and the process for selecting options; organizing the program; and managing and monitoring the program. The program also developed a Systems Integration Plan to provide a disciplined approach to the design, development, and validation of complex systems.

Evidence: A Review of the Management in the Office of Energy Efficiency and Renewable Energy (NAPA, 2000). Letter Report from Assistant Secretary Garman to Chairman of the House Subcommittee on Interior and Related Agencies on Implementation of NAPA recommendations (July 11, 2001). EERE Management Action Plan (August 2003). "Reorganizing for Results (Final NAPA on EERE Management), September, 2004.

3.RD1 **For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality?** Answer: YES Question Weight:13%

Explanation: Competitive procurement processes are used for all financial assistance awards, with the exception of earmarks when they occur, such that all proposed activities are evaluated for scientific and technical merit. In addition, the program conducts annual reviews using the EERE scorecard criteria to guide peer evaluations as well as merit reviews by DOE project leaders and staff. These reviews are used to monitor the progress and quality of funded activities. Program funding is tracked and allocated through a funding data base such as the Program Spend Plan.

Evidence: Fiscal Year Spend Plan and Measurements Spread Sheet. Sample solicitation.

4.1 **Has the program demonstrated adequate progress in achieving its long-term performance goals?** Answer: LARGE EXTENT Question Weight:25%

Explanation: A "large extent" is supported by recent performance against targets and other progress, such as the transfer of technology to commercial use. While the program has met most of its recent performance targets, a full "yes" answer requires a longer track record.

Evidence: EERE FY 2005 Congressional Budget, Vehicle Technologies, Annual Performance Results and Targets p. 257-258, 270, 280 http://www.eere.energy.gov/office_eere/budget.html; Annual project reviews (e.g. FY 2003 Advanced Combustion Engine R&D Annual Progress Report; Merit Review and Peer Evaluation of FY 2003 DOE Advanced Combustion Engine R&D, December 2003 http://www.eere.energy.gov/vehiclesandfuels/resources/fcvt_publications.shtml; Review of the Research Program of the PNGV, Seventh Report, 2002, p. 2-10;

PART Performance Measurements

Program: Vehicle Technologies
Agency: Department of Energy
Bureau: FreedomCAR and Vehicles Technology
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	90%	100%	75%	Effective

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: YES Question Weight 25%

Explanation: Program perfomance on three of annual performance goals are listed on the "Measures" tab. Additional progress is documented in annual progress reports, independent peer reviews, and through other sources. In additional to annual goals, progress also includes the transfer of technology to commercial use.

Evidence: EERE FY 2005 Congressional Budget, Vehicle Technologies, Annual Performance Results and Targets p. 258-259, http://www.eere.energy.gov/office_eere/budget.html; Annual project reviews; e.g. FY 2003 Advanced Combustion Engine R&D Annual Progress Report, http://www.eere.energy.gov/vehiclesandfuels/resources/fcvt_publications.shtml; Review of the Research Program of the PNGV, Seventh Report,2002, "Progress and Major Achievements", p. 2-10.

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: SMALL EXTENT Question Weight 25%

Explanation: The Department has set as its efficiency measure for this program to reduce the ratio of program direction/management funding (DOE and comparable contractor costs) to total program funding. The reduction will be based on a completed assessment of fully defined and costed program management activities currently underway. The baseline and targets are under development.

Evidence:

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NA Question Weight: 0%

Explanation:

Evidence:

4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? Answer: YES Question Weight 25%

Explanation: Independent evaluations have shown that the program is generally effective in achieving technical targets. The most recent National Academy of Sciences peer review of the PNGV program (2002) suggested that the program would probably not achieve its 2004 goal of a passenger vehicle capable of 80 mpg, but the report also criticized the goal.

Evidence: Review of the Research Program of the PNGV, Seventh Report,2002, "Progress and Major Achievements", p. 2-10; Merit Review and Peer Evaluation of FY 2003 DOE Advanced Combustion Engine R&D, May 2003.

PART Performance Measurements

Program: Vehicle Technologies
Agency: Department of Energy
Bureau: FreedomCAR and Vehicles Technology
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	90%	100%	75%	Effective

Measure: "Parasitic" losses (e.g., aerodynamics, cooling, compressed air) in heavy vehicles. (Reducing parasitic losses can improve fuel economy.)

Additional Information: Improving fuel economy contributes to the Department's goal of improving energy security by developing technologies that can improve energy efficiency.

Year	Target	Actual
1998	Baseline	39%
2002	36%	36%
2003	30	29.5
2004	27%	26.5%
2005	25	
2006	24%	

Measure Term: Annual

Measure: Cost of a pound of carbon fiber. (Reducing the production cost of carbon fiber can increase its use in vehicle manufacturing, making vehicles lighter and potentially more fuel efficient.)

Additional Information: Improving vehicle fuel efficiency contributes to the Department's goal of improving energy security by developing technologies that can improve energy efficiency.

Year	Target	Actual
2003	$7.00	$6.80
2004	$5.00	$5.00
2005	$4.50	
2006	$3.00	

Measure Term: Annual

PART Performance Measurements

Program: Vehicle Technologies
Agency: Department of Energy
Bureau: FreedomCAR and Vehicles Technology
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	90%	100%	75%	Effective

Measure: Internal combustion engine efficiency for light-duty vehicles. (Engine efficiency improvements can improve vehicle fuel economy.)

Additional Information: Improving vehicle engine efficiency contributes to the Department's goal of improving energy security by developing technologies that can improve energy efficiency.

Year	Target	Actual	**Measure Term:** Long-term
2002	Baseline	30%	
2005	39%		
2006	41%		
2010	45%		

Measure: Internal combustion engine efficiency for heavy-duty vehicles. (Engine efficiency improvements can improve vehicle fuel economy.)

Additional Information: Improving vehicle engine efficiency contributes to the Department's goal of improving energy security by developing technologies that can improve energy efficiency.

Year	Target	Actual	**Measure Term:** Long-term
2002	Baseline	40%	
2004	45%	45%	
2005	46%		
2006	50%		
2010	55%		

Measure: Production cost of high-power, 25 kW battery. (Storage batteries are a key cost and performance component for hybrid vehicles, which offer improved fuel economy.)

Additional Information: Improving vehicle fuel economy contributes to the Department's goal of improving energy security by developing technologies that can improve energy efficiency.

Year	Target	Actual	**Measure Term:** Long-term
1998	Baseline	$3,000	

Program: Vehicle Technologies
Agency: Department of Energy
Bureau: FreedomCAR and Vehicles Technology
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	90%	100%	75%	Effective

2003	$1,180	$1,180
2005	$900	
2006	$750	
2010	$500	

Measure: Weight of an unloaded tractor/trailer. (Reducing the weight of a tractor/trailer can increase fuel economy of heavy-duty trucks.)

Additional Information: Improving vehicle fuel economy contributes to the Department's goal of improving energy security by developing technologies that can improve energy efficiency.

Measure Term: Annual

Year	Target	Actual
2003	Baseline	23000 lbs
2005	22000 lbs	
2006	21500 lbs	
2007	21500 lbs	
2010	18000 lbs	

PART Performance Measurements

Program: Weatherization Assistance
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Moderately
100%	88%	78%	75%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The statutory purpose of the program is to increase energy efficiency, reduce total residential expenditures, and improve the health and safety of qualifed low-income persons.

Evidence: 42 U.S.C. 6851-6872. Program was last reauthorized in 1998 for 5 years in Public Law No. 105-388. Program is up for reauthorization in 2003. Funding has been appropriated every year since inception in 1976.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: Low-income families do not have resources for capital investments in energy efficiency that will return savings over a long time period (20 years or more). Low-income persons spend 4x more on energy (proportion of income) than others.

Evidence: Weatherization Works: Final Report of the National Weatherization Evaluation 1994 (ORNL/CON-395).

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The program is not completely distinct from LIHEAP, which allows 15 percent of funds to be used for energy conservation measures. However, the weatherization program is the only one to solely address energy retrofits for low-income families. States are unable to support such a program alone, although many provide significant cost sharing.

Evidence: Most State offices transfer LIHEAP funds to their weatherization offices, and use DOE Weatherization regulations to implement the program.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: The Weatherization Assistance Program infrastucture has been in place for more than 25 years and has generally served those within the network well. Program has made improvements over the years as appropriate, and the Department's Inspector General (IG) has recently suggested other modest improvements.

Evidence: DOE IG audit found the program was properly administered, but recommended improvements in reporting administrative costs and reporting performance data on the number of homes weatherized. DOE IG Audit Report Number OAS-L-03-15.

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight 20%

Explanation: The program prioritizes elderly, families with children, persons with disabilities, high residential energy users, and households with high energy burden. State and local agencies may choose among these groups.

Evidence: State and local agencies can select the most appropriate eligibility priority to target those most in need. It also permits them to target the priorities of their leveraging partners to maximize avaiilable resources.

PART Performance Measurements

Program: Weatherization Assistance
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Moderately
100%	88%	78%	75%	Effective

2.1 **Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?** Answer: YES Question Weight:12%

Explanation: The program established long term objective of weatherizing 1.2 million low-income family homes by 2011. The program also added long-term efficiency goals, including maintaining a positive benefit-cost ratio and maintaining relatively constant energy savings per household. While 10 percent of program funds are set aside for training and technical assistance, these activities are considered a program support function, and are therefore not captured in a separate performance measure.

Evidence: FY 2004 Budget. The goal assumes outyear funding according to constant maximum cost per home weatherized.

2.2 **Does the program have ambitious targets and timeframes for its long-term measures?** Answer: YES Question Weight:12%

Explanation: The program sets targets for and tracks the number of homes weatherized annually, which directly measures progress toward the long term goal.

Evidence: FY 2004 Budget. The goal assumes outyear funding according to constant maximum cost per home weatherized.

2.3 **Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals?** Answer: YES Question Weight:12%

Explanation: The program's main annual performance measure is the number of homes weatherized. The program has also adopted a new annual measure, the average cost per home weatherized, to compare to statutory limits.

Evidence: FY 2004 Budget.

2.4 **Does the program have baselines and ambitious targets for its annual measures?** Answer: YES Question Weight:12%

Explanation: The program has baseline performance data and has set reasonable targets for the number of homes weatherized.

Evidence: FY 2004 Budget.

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:12%

Explanation: The program has specific application and reporting requirements for State and local agencies to report on a quarterly basis on the expenditure of funds and performance in terms of number of homes weatherized. The program does not publish this information, but uses it internally for management of the program.

Evidence: Quarterly Financial Status Reports on Production and Expenditure of Weatherization Funds.

PART Performance Measurements

Program: Weatherization Assistance
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Moderately
100%	88%	78%	75%	Effective

2.6 Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?

Answer: YES Question Weight:12%

Explanation: The program does not conduct annual evaluations on a national basis because of the high cost of such evaluation and the limited amount of change that occurs in program activities from year to year. The program has contracted with Oak Ridge National Laboratory (ORNL) to devise evaluation methodologies and report periodically on program results based on state grantee-level performance evaluation. ORNL has also conducted selective evaluation activities designed to inform program management of performance characteristics in areas in which the program performance has been below average (hot climate zones) or in areas in which there has been growing strategic program interest but little evaluation data. The latter includes base load electric measures as well as nonenergy benefits. To assure independence, the program should consider using an alternative contractor in future assessments, or at least having future ORNL reports assessed by a third party. (Peer reviewers of ORNL weatherization reports are generally employees of ORNL or DOE.)

Evidence: State-level Evaluation of WAP 1990-1996: A Meta Evaluation of 17 States Evaluations - 1997 (ORNL/CON-435); Metaevaluation of National Weatherization Assistance program Based on State Studies, 1996-1998 (ORNL/CON-467); Metaevaluation of National Weatherization Assistance Program Based on State Studies, 1993-2002 (ORNL/CO-488); Nonenergy Benefits from the Weatherization Assistance Program: A Summary of Findings from the Recent Literature, 2002 (ORNL/CON-484)

2.7 Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?

Answer: NO Question Weight:12%

Explanation: Budget requests reflect the program's needs to achieve the performance target for the number of homes weatherized. However, budget documents do not clearly indicate the full costs of achieving the program goals. Salaries, benefits, and other admininstrative expenses to support the program are included in a separate budgetary line item ("Policy and Management"). EERE does not report the allocation of Policy and Management funding to the various programs it supports. In addition, a 2003 Inspector General report found that "certain organizations inappropriately charged expenses such as administrative staff, office rent, and administrative supplies as direct program costs and thus understated total administrative costs."

Evidence: FY 2003 Congressional Budget Justification identifies program funding allocated for training and technical assisstance (10 percent, including 1.5 percent for DOE and 8.5 percent for States), but not the amount of Policy and Management funding used to implement the program. DOE IG Audit Report Number OAS-L-03-15.

2.8 Has the program taken meaningful steps to correct its strategic planning deficiencies?

Answer: YES Question Weight:12%

Explanation: The program has taken steps to address deficiencies. For example, the current strategic plan (Weatherization PLUS, 1999) does not adequately address weatherization improvements in hot-climate areas. The program has undertaken a Hot-climate Initiative designed to improve program performance in those States where targeting cooling measures may provide greater energy savings. The Hot-climate Initiative will be worked into an updated strategic plan.

Evidence: Senior Headquarters and Regional Office program staff have met to discuss updates to the strategic plan to address new issues, such as targeting cooling measures. In the fall of 2003, program staff will meet with weatherization network stakeholders to update and revise, as necessary, the program strategic plan.

PART Performance Measurements

Program: Weatherization Assistance
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Moderately
100%	88%	78%	75%	Effective

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:11%

Explanation: The program collects data quarterly on the production and expenditures of DOE funds. Regional Offices review these reports and monitor production performance and fiscal performance as well as through site visits to State and local offices. DOE and the States use the information on these reports to implement remedies and to direct future training and technical planning activities to correct any deficiencies noted.

Evidence: Quarterly Reports on Production and Expenditure of Weatherization Funds.

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:11%

Explanation: DOE regulations do not permit setting production quotas on the States. Each State's Annual Plan indicates the level of production the State will attain, which must generally be consistent with levels of production in previous years, considering funding levels and policy changes as appropriate.

Evidence: Application and Reporting Requirements for the DOE Weatherization Assistance Program.

3.3 **Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?** Answer: YES Question Weight:11%

Explanation: DOE grants to States are made "on time," meaning before State program years commence (April 1 for 33 States, July 1 for 17 States). Quarterly reports on expenditures generally indicate that State awards to local agencies are made within a reasonable time. Unobligated balances brought forward from FY 2003 were $97,000, less than one percent of the FY 2003 appropriation of approximately $224 million.

Evidence: Quarterly Reports on Production and Expenditure of Weatherization Funds.

3.4 **Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?** Answer: YES Question Weight:11%

Explanation: The program has three efficiency measures which can be used to assess programmatic efficiency and cost effectiveness.

Evidence: See Measures Tab.

3.5 **Does the program collaborate and coordinate effectively with related programs?** Answer: YES Question Weight:11%

Explanation: DOE staff communicate regularly with staff of related programs in HHS (Low-Income Home Energy Assistance Program) and HUD (Lead Paint Removal Program). At the State and local levels, there are many instances of shared resources and joint projects.

Evidence: LIHEAP regulations. HUD's Energy Action Plan (May, 2002). Joint Research Project on Lead with HUD designed to evaluate the impact of lead in homes weatherized under the program (2003).

PART Performance Measurements

Program: Weatherization Assistance
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Moderately
100%	88%	78%	75%	Effective

3.6 Does the program use strong financial management practices? Answer: NO Question Weight:11%

Explanation: DOE Regional Offices and the Golden Field Office have financial management systems in place and Headquarters staff use a customized IT system (WinSAGA) to provide oversight and mangement of financial expenditures by the States. However, a recent Inspector General report found that some organizations inappropriately charged administrative expenses as direct program costs, a practice which DOE's systems apparently were unable to identify.

Evidence: DOE IG Audit Report Number OAS-L-03-15.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: NO Question Weight:11%

Explanation: The National Association of Public Administrators (NAPA) found dozens of management deficiencies in the program's bureau (the Office of Energy Efficiency and Renewable Energy, or EERE) in a review published in 2000. EERE provided evidence that it addressed some of management deficiencies identified by NAPA, and has prepared a Management Action Plan that will address many of the remaining findings. While a few NAPA recommendations have not been addressed, in general, EERE has taken meaningful steps to address most deficiencies. However, the Department's Inspector General (IG) found that some organizations receiving weatherization funds inappropriately charged administrative-type expenses as program operating costs, and that some States combined the results of weatherization efforts completed with HHS Low Income Home Energy Assistance Program (LIHEAP) funds with those completed with Departmental funds, which could distort reported program results. It is too early to evaluate the impact of the program's corrective actions to the IG report.

Evidence: DOE IG Audit Report Number OAS-L-03-15. A Review of Management in the Office of Energy Efficiency and Renewable Energy (NAPA, 2000). EERE Letter Report in Response to NAPA Review (July 11, 2001), EERE Management Action Plan (August 2003). DOE IG Audit Report Number OAS-L-03-15.

3.BF1 Does the program have oversight practices that provide sufficient knowledge of grantee activities? Answer: YES Question Weight:11%

Explanation: DOE has specific program oversight requirements that the DOE Regional Office monitor State compliance and that the State, in turn, monitor the local agancy compliance with program regulations.

Evidence: Weatherization Program Notice 01-6: Updated Weatherization Assistance Program Monitoring Policy (January, 2001), Sample monitoring report

3.BF2 Does the program collect grantee performance data on an annual basis and make it available to the public in a transparent and meaningful manner? Answer: YES Question Weight:11%

Explanation: The program summarizes annual performance data on State-by-State basis and publishes it on the internet. While the key measure (number of homes weatherized) is reported for each State, the program should consider (1) reporting on efficiency measures on a State-by-State basis as well, and (2) drafting the summaries using more objective language.

Evidence: www.eere.energy.gov/weatherization/state_activities.html

PART Performance Measurements

Program: Weatherization Assistance
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Moderately
100%	88%	78%	75%	Effective

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: YES Question Weight 25%

Explanation: The program is on target to meet the long-term goal for number of homes weatherized by 2011.

Evidence: FY 2002 Performance and Accountability Report.

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: LARGE EXTENT Question Weight 25%

Explanation: In recent years, the program has met its annual performance targets for number of homes weatherized. For example, in 2001, the performace estimate was 75,350 and the actual units completed by the States was 77,697. However, a 2003 Inspector General report notes that some States combined the results of weatherization efforts funded by the HHS Low Income Home Energy Assistance Program (LIHEAP) with those completed with Departmental funds, which may distort upwardly the programs reported results.

Evidence: FY 2001 Performance and Accountability Report. DOE IG Audit Report Number OAS-L-03-15.

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: SMALL EXTENT Question Weight 25%

Explanation: Benefit-cost ratio rose from 1.06 in 1989 to 1.79 in 1996, and then declined to 1.51 and 1.30 in 1999 and 2002, respectively. These estimates depend largely on EIA estimated long-term energy prices. Given the 90 percent confidence range of actual energy savings per household (which followed a similar pattern), the benefit-cost ratios are statistically similar (except for 1989, which is lower). However, there are two factors that contribute to a lower rating on this question than would otherwise be expected. (1) The benefit-cost ratio calculations do not include administrative expenses appropriated under "Policy and Management" portion of the appropriation. It is also not clear whether the Training and Technical Assistance portion of program funds (10 percent) are included the calculation. (2) The Department's 2003 Inspector General report notes that some States combined the results of weatherization efforts funded by the HHS Low Income Home Energy Assistance Program (LIHEAP) with those completed with Departmental funds, which may distort upwardly the programs reported benefit-cost ratio.

Evidence: State-level Evaluation of WAP 1990-1996: A Meta Evaluation of 17 States Evaluations - 1997 (ORNL/CON-435); Metaevaluation of National Weatherization Assistance program Based on State Studies, 1996-1998 (ORNL/CON-467); Metaevaluation of National Weatherization Assistance Program Based on State Studies, 1993-2002 (ORNL/CO-488); DOE IG Audit Report Number OAS-L-03-15. Internal program memo on the benefit-cost ratios for the Weatherization Assistance Program (Joel Eisenberg, April 8, 2003).

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NA Question Weight: 0%

Explanation: State, non-profit, and private sector funding is used to augment Federal funding provided for weatherization services. There does not appear to be a weatherization program operating independent of Federal support to which the Weatherization program can be compared.

Evidence:

PART Performance Measurements

Program: Weatherization Assistance
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Moderately
100%	88%	78%	75%	Effective

4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: YES Question Weight 25%

Explanation: Despite concerns noted in reponse to Question 4.3, Oak Ridge National Lab (ORNL) reports on program performance generally indicate that the program is effective. The Vermont State Auditor generally gave a positive assessment of the Weatherization program based on that State's perspective and performance. A 2002 ORNL report attempting to quantify additional non-energy benefits suggests that the societal benefit-cost ratio of the program is 2.7 (but such studies can be controversial).

Evidence: State-level Evaluation of WAP 1990-1996: A Meta Evaluation of 17 States Evaluations - 1997 (ORNL/CON-435); Metaevaluation of National Weatherization Assistance program Based on State Studies, 1996-1998 (ORNL/CON-467); Metaevaluation of National Weatherization Assistance Program Based on State Studies, 1993-2002 (ORNL/CO-488); Vermont State Auditor's Review of the Weatherization Assistance Program (19998); Nonenergy Benefits from the Weatherization Assistance Program: A Summary of Findings from the Recent Literature, 2002 (ORNL/CON-484)

PART Performance Measurements

Program: Weatherization Assistance
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Moderately
100%	88%	78%	75%	Effective

Measure: Cumulative number of low-income family homes weatherized starting in 2002, in thousands.

Additional Information: Weatherizing homes saves money for low-income families and energy for the nation

Year	Target	Actual	**Measure Term:** Long-term
2002	105.0	104.5 (prelim.)	
2003	221.5		
2004	340.9		
2005	459.8		
2011	1,200.0		

Measure: Number of low-income family homes weatherized annually.

Additional Information: Annual targets are adjusted based on appropriations and policy changes, such as the decision to fund the lead-safe weatherization protocol in 2003, which increased the cost per home.

Year	Target	Actual	**Measure Term:** Annual
2000	67,340	74,316	
2001	75,350	77,697	
2002	105,000	104,500 (prelim.)	
2003	93,750		
2004	94,450		
2005	118,900		

PART Performance Measurements

Program: Weatherization Assistance
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Moderately
100%	88%	78%	75%	Effective

Measure: Average DOE cost per home weatherized

Additional Information: The maximum average cost per home weatherized is determined by statute formula and is shown in the Target column. Actual average costs should not exceed these values.

Year	Target	Actual
1999	2,032	1,413
2000	2,085	1,589
2001	2,500	1,524
2002	2,568	1,608
2003	2,614	

Measure Term: Annual (Efficiency Measure)

Measure: Program benefit-cost ratio excluding non-energy benefits. (This ratio represents the discounted value (3.2 percent discount rate) of energy saved divided by total program costs.)

Additional Information: The ratio depends in part on EIA-estimated long term energy prices and average energy savings per household of 29.1 MBtu. Estimates of the B/C ratio tested for the 90 percent confidence range of MBtu savings and various price scenarios range from 1.19 to greater than 2 but in no event are less then 1.

Year	Target	Actual
1989		1.06
1996		1.79
1999		1.51
2002		1.3
2005	1.19 - 2.0	

Measure Term: Long-term (Efficiency Measure)

PART Performance Measurements

Program: Weatherization Assistance
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Block/Formula Grant

Section Scores				Rating
1	2	3	4	Moderately
100%	88%	78%	75%	Effective

Measure: Average household natural gas savings after weatherization (90 percent confidence interval in parentheses) in thousands of British thermal units (MBTU)

Additional Information: Point results for the the 1996, 1999, and 2002 Metaevaluations all fall within the 90 percent confidence range of the most recent Metaevaluation of weatherization program results.

Year	Target	Actual
1989		17.3 (15.1-19.5)
1996		31.2 (22.0-38.6)
1999		26.1 (19.4-32.8)
2002		29.1 (25.6-31.6)
2005	29.1 (25.6-31.6)	

Measure Term: Long-term (Efficiency Measure)

OMB Program Assessment Rating Tool (PART)

Capital Assets and Service Acquisition Programs

Name of Program: Western Area Power Administration

Section I: Program Purpose & Design (Yes,No, N/A)

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
1	*Is the program purpose clear?*	Yes	Western's mission is to cover all costs of producing, transmitting marketing and delivering reliable, cost-based hydroelectric power and related services generated at Federal dams within a 15-state marketing area (MN, IA, NE, KS, CO, UT, WY, ND, SD, MT, TX, NM, AZ, NV, CA,). Western is to transmit and dispose of power and energy in such manner as to encourage its most widespread use, at the lowest possible rates to consumers consistent with sound business principles. To achieve repayment of Federal power investment, Western establishes cost-based rates to recover costs of providing power service, including principal and interest owed the U. S. Treasury, Various laws require preference be given to cooperatives, municipalities and other public corporations or agencies seeking to purchase Federal power.	Public Law 57-161, "The Reclamation Act of 1902" Public Law 66-389, "Sundry Civil Appropriations Act" (1922) "Interior Department Appropriation Act of 1928" (44 stat. 957) Public Law 76-260, "The Reclamation Project Act of 1939" Public Law 78-534, "Flood Control Act of 1944" Public Law 80-790, "Emergency Fund Act of 1948" Public Law 95-91, "Department of Energy Organization Act" (1977); Public Law 102-486, "Energy Policy Act of 1992" GAO AIMD-00-114, "Power Marketing Administrations: Their Ratesetting Practices Compared with Those of Nonfederal Utilities" GAO AIMD-97-110, "Federal Electricity Activities: The Federal Government's Net Cost and Potential for Future Losses"	20%	0.2
2	*Does the program address a specific interest, problem or need?*	Yes	Western is responsible for marketing and transmitting power generated at Federal dams in portions of the western half of the United States. This power is generated at dams built for multiple purposes, including navigation, irrigation, flood control, power, fish and wildlife, recreation and municipal and industrial water supply. This responsibility, previously managed by the Bureau of Reclamation and transferred to Western in 1977 under Section 302 of the Department of Energy Organization Act, still exists today.	Western markets and delivers about 45 billion kilowatt-hours of Federal hydropower annually to over 600 customers. Combined with power from other suppliers these customers provide retail electric service to millions of consumers. Western's service area covers 1.3 million square miles in 15 western states.	20%	0.2

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
3	*Is the program designed to have a significant impact in addressing the interest, problem or need?*	Yes	Western's program is designed to market power and operate, maintain, upgrade and rehabilitate its extensive, integrated and complex high-voltage power transmission system. This nearly 17,000-circuit-mile system provides reliable power to customers and is an integral part of the Western United States electrical grid. Western enhances its impact pursuant to the Energy Policy Act of 1992 by requiring customers to establish and report integrated resource plans in support of demand-side management and renewable energy programs.	The majority of Western's resources are focused on marketing power and maintaining reliability of its transmission system. As one of the largest provider of bulk electricity in the western United States (about 40 percent of regional hydroelectric generation) and the operator of one of the largest transmission system in the Nation, Western is considered a key presence in the wholesale power market. With that presence comes a responsibility to provide leadership in the electric utility industry, primarily as an advocate for power system reliability and security.	20%	0.2
4	*Is the program designed to make a unique contribution in addressing the interest, problem or need (i.e., not needlessly redundant of any other Federal, state, local or private efforts)?*	No	The generation and transmision of power is a well developed technology, largely provided by municipalities and independently-owned utilities across the country. The function could be performed under contract or through non-federal ownership of transmissionlines and generation capacity at the dams. However, the Power Marketing Administrations were established to market and deliver Federally generated power. No other entities have this authority. Based on Federal Energy Regulatory Commission (FERC) rules that apply to transmitting utilities, Western opens its available transmission to all wholesale power generators and marketers.	Private entities across the country own and operate many hydropower facilities. These facilities are licensed by FERC and provide substantial amounts of dependable hydropower to customers. Western voluntarily participates in regional transmission organization formation efforts consistent with FERC's rules for standard transmission practices. Western is a member of the Mid-Continent Area Power Pool, as well as Western Electricity Coordinating Council and their Reliability Management System. Western plays a key role in assuring reliability of the interconnected transmission system.	20%	0.0

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
5	*Is the program optimally designed to address the interest, problem or need?*	No	Western benefits from subsidized loans that place part of the cost of hydropower construction on the Treasury. In addition, the application of preference in the sale of power creates administrative inefficiencies and restricts market activity. Market pricing of power and unrestricted sales would improve opportunities for more efficient operations. Western also conducts a purchase power and wheeling program that, to some degree, duplicates available private sector services. Western believes this program enhances the value of its power though it does not capture that value in its rates. Western's rates are set to recover much of the costs associated with the marketing and transmission of electric power. However, the budgeting of resources does not always allow Western to operate in an efficient manner. Western is often forced to delay replacements or upgrades, thereby requiring more staff to maintain our aging infrastructure.	Various reports: GAO/AIMD -97-110, The Governmentr's Net Cost and Potential for Future Losses and GAO/AIMD- 00-114, Power Marketing Administrations - their Rate setting Practices Compared with those of Non-Federal Utilities.	20%	0.0
Total Section Score					**100%**	**60%**

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
Section II: Strategic Planning (Yes,No, N/A)						
1	*Does the program have a limited number of specific, ambitious long-term performance goals that focus on outcomes and meaningfully reflect the purpose of the program?*	No	Western has extended its short term goals to the long term. Long term goals should be output oriented, i.e., to the service provided or the impact of the service that clientele want on their lives. Western's stated long-term goals are: Maintain system reliability and transmission availability in the evolving electric utility industry; Promote employee awareness and commitment to working safely by providing the necessary training and equipment to assure a safe working environment; Achieve the required repayment on the Federal investment.	Western's Strategic Plan, Sept. 1999 Annual Performance Plan for FY 2002 Annual Performance Report for FY 2001 FY2004 Congressional Budget Request, DOE Energy Resources Strategic Objective ER9-1, "Ensure Federal hydropower is marketed and delivered while passing the North American Electric Reliability Council's Control Compliance Ratings, meeting planned repayment targets, and achieving a recordable accident frequency at or below our safety performance standard". Prior to updating Western's Annual Performance Plan, Western's Senior Management Team reviews the results outlined in the latest Annual Performance Report to determine if the objectives of the Strategic Plan are being met.	11%	0.0
2	*Does the program have a limited number of annual performance goals that demonstrate progress toward achieving the long-term goals?*	No	Western's annual performance goals are: Maintain reliability and transmission availability in the evolving electric utility industry Promote employee awareness and commitment to working safely by providing the necessary training and equipment to assure a safe working environment Establish and meet planned annual repayment for each Federal power system	Western's Strategic Plan, Sept. 1999 Annual Performance Plan for FY 2002 Annual Performance Report for FY 2001 FY2004 Congressional Budget Request DOE Energy Resources Strategic Objective ER9-1, FY 2004	11%	0.0
3	*Do all partners (grantees, sub-grantees, contractors, etc.) support program planning efforts by committing to the annual and/or long-term goals of the program?*	Yes	Western works closely with the U. S. Bureau of Reclamation and U. S. Corps of Engineers hydropower programs to ensure that their operations impacting Western's mission do not conflict with its program. In addition, Western's customers are involved in the rate setting process and prioritization of work plans to assure that costs are kept to a minimum.	U. S. Bureau of Reclamation U. S. Corps of Engineers Over 600 Power Customers, including DOE labs and military bases	11%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
4	*Does the program collaborate and coordinate effectively with related programs that share similar goals and objectives?*	Yes	The Power Marketing Administrations work closely together on initiatives that impact their agencies, and between DOE and their Washington offices coordinating these efforts. In addition, Western works closely with the generators to ensure that their operations impacting Western's mission do not conflict. Western is actively involved with the North American Electric Reliability Council, Federal Energy Regulatory Commission, Western Electricity Coordinating Council, and other organizations to ensure the reliability of and the nondiscriminatory access to transmission in the western interconnection.	PMA Washington Liaison Office Southwestern Power Administration Southeastern Power Administration Bonneville Power Administration U. S. Bureau of Reclamation U. S. Corps of Engineers	11%	0.1
5	*Are independent and quality evaluations of sufficient scope conducted on a regular basis or as needed to fill gaps in performance information to support program improvements and evaluate effectiveness?*	Yes	Western financial statements, along with the power portion of the Bureau of Reclamation's and Corps of Engineers', are independently reviewed annually by a contract audit firm. These audits are done for each power system. Also, rate proposals are independently reviewed and approved by FERC. In-house Audit and Compliance staff continually review Western's processes and controls, including compliance with the Federal Managers Financial Integrity Act. In collaboration with DOE, the Bonneville Power Administration and Western conducted peer reviews of each other's mission critical computer systems to comply with the Government Information Security Reform Act. Western's control areas are reviewed every three years by the Western Electricity Coordinating Council and Mid-Continent Area Power Pool. Western continues to meet or exceed the NERC standards to measure the ability of control areas to match generation to load.	Independent audit of Western's financial statements Bonneville/Western Peer Review Inspector General Reports General Accounting Office Reports WECC Proprietary Reports Internal review audits by in-house Audit & Compliance Office NERC Annual Control Area Compliance Standards Mid-Continent Area Power Pool	11%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
6	*Is the program budget aligned with the program goals in such a way that the impact of funding, policy, and legislative changes on performance is readily known?*	Yes	Western's budget request supports Western's short- and long-term performance goals. It is based on Western's best estimate of its program needs. Therefore, any funding, policy, and legislative changes would impact Western's ability to meet its performance goals. Western conducts an annual review of rates based on actual expenditures and budget requests.	Western's budget structure is composed of four critical activities: program direction (PD) which is a distinct requirement of the appropriations committee, operation and maintenance (O&M), construction and rehabilitation (C&R) and purchase power and wheeling (PP&W). Funding for PD, O&M, and C&R directly impact Western's reliability and safety performance. Funding for PP&W is critical to the continuity of Western's contractual sales agreements with customers.	11%	0.1
7	*Has the program taken meaningful steps to address its strategic planning deficiencies?*	Yes	Western annually prepares a performance plan that is developed under the guidelines of the Government Performance and Results Act. It outlines key strategies and results needed for Western to achieve its goals. Following execution, an annual performance report is prepared which compares the planned to the actual and evaluates performance against targets. Western internally publishes monthly updates showing the status of our key performance goals against the target set in the plan. An annual power repayment study is run to ensure revenues are sufficient to recover costs within required timeframes. Western's Maintenance, Design, and Construction Council (MDCC) prepares and annually reviews 5- and 10-year plans for upgrades and replacements of our infrastructure.	FY 2001 Annual Performance Report FY 2002 Annual Performance Plan Power Repayment Studies 5- and 10-year Construction Plans Prior to updating Western's Annual Performance Plan, Western's Senior Management Team reviews the results outlined in the latest Annual Performance Report to determine if the objectives of the Strategic Plan are being met. If Western does not achieve its annual performance goals, then its long-term goals will suffer.	11%	0.1

Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
8 (Cap 1.) *Are acquisition program plans adjusted in response to performance data and changing conditions?*	Yes	Western's construction and rehabilitation program consists primarily of replacements and upgrades to its existing system. Priorities are placed on those situations that pose the highest risk to safety and system reliability. Western's Maintenance, Design, and Construction Council prepares 1-, 5-, and 10-year plans. An evaluation is made each year to determine if deviations from the plan are based on reliability and/or industry orders. Due to Western's aging infrastructure, program plans are adjusted frequently due to these changing conditions. Facility/Project Data Sheets are prepared. Detailed program plans are prepared for major upgrades to multiple systems (such as wood pole replacement, communication upgrades). Western's Project Management program evaluates all major projects and applies a performance rating to each.	5- and 10-year Construction Plans MDCC Annual Review Plan Facility/Project Data Sheets Project Evaluation Reports	11%	0.1
9 (Cap 2.) *Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule and performance goals?*	Yes	Western's 5- and 10-year construction plans are updated yearly to determine if priorities have changed. Facility/Project Data Sheets are updated annually. These Sheets provide cost estimates, schedules, justifications, alternatives, benefits, etc.	5- and 10-year Construction Plans MDCC Annual Review Plan Facility/Project Data Sheets	11%	0.1
Total Section Score				**100%**	**78%**

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
Section III: Program Management (Yes,No, N/A)						
1	*Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?*	Yes	Western collects data on a daily, monthly, quarterly, or yearly basis. This data is used for operating and managing Western's program. Examples of this data are: budget execution and other financial reports from Western's business system, water conditions, market conditions, generation, loads, unit maintenance, power schedules, power outages and other data. Annual power repayment studies are run to ensure revenues are sufficient to recover costs within required timeframes. Quarterly progress is published internally to notify employees of progress in meeting our goals. Western's Maximo system is used as the maintenance management data repository and the maintenance work management system. Work Orders are used to provide work management, cost tracking, equipment history and performance reporting. It integrates maintenance activities directly with finance and warehouse functions, is used as a tool to plan and schedule work activities, access all equipment history, cost, material usage, and labor data and provide associated reports to allow management to make time meaningful business decisions.	Western constantly monitors its data and other resources to control costs and maintain reliability. Western monitors its costs carefully to ensure that low-cost rates will continue. The rate targets for all projects are monitored to assure cost-recovery requirements as well as meet repayment requirements. Western evaluates its reliability goal to make sure it meets or exceeds national and regional operating criteria. Western continuously updates and implements Western's safety action plan to effectively integrate safety throughout the organization.	9%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
2	*Are Federal managers and program partners (grantees, subgrantees, contractors, etc.) held accountable for cost, schedule and performance results?*	Yes	Each of Western's Senior Managers has an annual performance contract with the Administrator. Each of these managers are held accountable for the performance standards spelled out in these agreements. These standards are reviewed annually and modified as necessary. In turn, these Senior Managers have Individual Performance Standards for each of their managers who are also held accountable for meeting their annual performance. In addition, Western's strategic goals are used to ensure accountability. For example, Western maintains data by region and power system to place responsibility on specific managers. In addition, Western's Project Management program evaluates all capitalized projects over $500,000 and applies a performance rating to each. Also in FY 2003, Western is initiating performance-based contracts that provide for minimum performance levels and incentives for strong performance.	Individual Performance Agreements Annual Performance Report Quarterly Progress Reports Project Evaluation Reports	9%	0.1
3	*Are all funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?*	Yes	Western manages its obligations by region and power system. Western performs periodic reviews of obligations and outlays. Western aligns the purchase of equipment with the design schedule, if appropriate, to assure timely receipt of the equipment. Automated and manual controls of funds are in place to ensure all funds are spent for their intended purpose. Sometimes equipment replacement planned during budget formulation may have to be delayed due to discovery of a failing piece of critical equipment during budget execution. Western's Maintenance, Design, and Construction Council prepares 1-, 5-, and 10-year plans. An annual review report is evaluated each year to determine if deviations from the plan are based on reliability and/or industry orders.	MDCC Annual Review Plan Periodic obligations and outlay reviews Annual Financial Audits Budget execution (SF133) to DOE/OMB Status of Appropriations Report to Congress	9%	0.1

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
4	*Does the program have incentives and procedures (e.g., competitive sourcing/cost comparisons, IT improvements) to measure and achieve efficiencies and cost effectiveness in program execution?*	Yes	A primary incentive for efficiencies and cost effectiveness is Western's goal to maintain low rates. One of Western's bonus goal incentives relates to cost savings. Western uses cost comparisons and competitive sourcing whenever applicable. Recent procurement of support services has focused on performance-based contracts. Cost estimates are prepared during project planning and then monitored during execution. Facility/Project Data Sheets are prepared prior to budget formulation. Detailed program plans are prepared for major upgrades to multiple systems (such as wood pole replacement, communication upgrades).	Customer evaluation of costs Procurement files Project Evaluation Report Facility/Project Data Sheets Bonus Goal Incentives	9%	0.1
5	*Does the agency estimate and budget for the full annual costs of operating the program (including all administrative costs and allocated overhead) so that program performance changes are identified with changes in funding levels?*	No	Western's budget request and associated execution includes most of its annual costs for operating its program but assumes some debt subsidies. Separate rates are developed for the estimated administrative costs and the direct overhead costs for all four of Western's Regions plus the Corporate Services Office. These rates are then applied against the total estimated direct labor. During execution, rates are reviewed monthly to determine if all overhead is being recovered through direct charging. Rates are adjusted as necessary so that the overhead is completely accounted for at year-end.	Annual Budgets Budget formulation and execution reports. Monthly clearing reports Annual repayment studies See also GAO/AIMD Reports 96-145 and 97-110	9%	0.0

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
6	*Does the program use strong financial management practices?*	Yes	Western's financial statements for all of its power systems are independently audited on an annual basis. In the past two years, Western has addressed several weaknesses with its automated accounting system and also has implemented a series of internal controls to increase both the accuracy and reliability of its financial information. While the auditors identified one reportable condition for Western in FY01, Western has taken steps to ameliorate this condition in FY02, and expects its auditors to find no reportable conditions upon the completion of their audit in early FY03. Based on these efforts, Western has had a clean audit for FY 1999 and FY 2000, and expects to have one in both FY 2001 and FY 2002.	Western's audited financial statements for FY 2001 and FY 2000. DOE Internal Control Review In FY02, Western corrected a major cash-matching program deficiency with its automated accounting system. Also, new reconciliations and procedures were adopted to timely analyze the accounts and permit immediate corrective action. Increased management oversight was applied to the accounting function to ensure proper procedures were practiced. Desktop procedures were established and documented to ensure continuity of controls.	9%	0.1
7	*Has the program taken meaningful steps to address its management deficiencies?*	Yes	Western has entered a multiyear effort to recruit and maintain highly qualified employees. Western continuously improves its business systems and follows sound business practices by leveraging the capabilities of business systems to achieve functional efficiencies and process improvements. For instance, Western uses Maximo for maintenance planning, inventory control, and to establish a comprehensive maintenance database for reliability-centered maintenance principles. Oracle Financials are used to ensure that Western's complex business is accurately accounted for. Western rigorously uses project management principles and practices. Western sets annual targets to ensure desired result.	Human Capital Management Plan. Process documentation is continuously updated for both Oracle Financials and Maximo by using a complex testing and verification process to assure accuracy and user-friendliness. A comprehensive documentation of performance (cost/time/results) has begun to assure project management principles are followed.	9%	0.1
8 (Cap 1.)	*Does the program define the required quality, capability, and performance objectives of deliverables?*	Yes	Western's design staff prepares a statement of work (Specifications of technical requirements) for the installation and procurement of equipment. This statement of work is used to prepare an Information for Bid (IFB) and a Request for Bid (RFB).	Statement of Work IRB/RFB Procurement Package	9%	0.1

Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
9 (Cap 2.) *Has the program established appropriate, credible, cost and schedule goals?*	Yes	Prior to approval by management, cost estimates and life-cycle cost benefits are prepared to justify a project. Western's 5- and 10-year construction plans are updated yearly to determine if priorities have changed. Approved projects are evaluated and updated annually. These evaluations provide revised cost estimates, schedules, justifications, alternatives, benefits, etc.	Proposals for projects 5- and 10-year Construction Plans MDCC Annual Review Plan	9%	0.1
10 (Cap 3.) *Has the program conducted a recent, credible, cost-benefit analysis that shows a net benefit?*	Yes	Prior to approval by management, cost estimates and life-cycle cost benefits are prepared to justify a project. Western's 5- and 10-year construction plans are updated yearly to determine if priorities have changed. Approved projects are evaluated and updated annually. These evaluations provide revised cost estimates, schedules, justifications, alternatives, benefits, etc.	Proposals for projects 5- and 10-year Construction Plans MDCC Annual Review Plan	9%	0.1
11 (Cap 4.) *Does the program have a comprehensive strategy for risk management that appropriately shares risk between the government and contractor?*	Yes	Western follows the standard procurement rules in the purchase of capital assets. The Design Specifications clearly outline the requirements; the procurement is usually based on a fixed price, and the contract is written so that the delive	Procurement Packages Design Specifications	9%	0.1
Total Section Score				**100%**	**91%**

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
Section IV: Program Results (Yes, Large Extent, Small Extent, No)						
1	*Has the program demonstrated adequate progress in achieving its long-term outcome goal(s)?*	No	These are not long tem goals. Western needs to continue its effort to define output oriented long-term goals. Currently, Western's stated long-term goals are: Maintain system reliability and transmission availability in the evolving electric utility industry Promote employee awareness and commitment to working safely by providing the necessary training and equipment to assure a safe working environment Achieve required repayment on Federal investment	Annual Performance Plan Power Repayment Studies North American Electric Reliability Council Standards Bureau of Labor Statistics Prior to updating Western's Annual Performance Plan, Western's Senior Management Team reviews the results outlined in the latest Annual Performance Report to determine if the objectives of the Strategic Plan are being met.	17%	0.0

Long-Term Goal I:	Maintain system reliability and transmission availability in the evolving electric utility industry
Target:	Meet or exceed North American Electric Reliability Council standards to measure the ability of control areas to match generation to load.
Actual Progress achieved toward goal:	Western continues to exceed reliability standards (Control Performance Standards [CPS]) and industry averages. In FY 2001: CPS1: Standard--100; North America Industry wide average of load-generation control areas--168.57; Western--186.93 CPS2: Standard--90; North American Industry wide average of load-generation control areas--95.65; Western--98.48
Long-Term Goal II:	Promote employee awareness and commitment to working safely by providing the necessary training and equipment to assure a safe working environment
Target:	FY 2001: Meet or exceed average accident frequency reported by Bureau of Labor Statistics.
Actual Progress achieved toward goal:	Western accident frequency rates during the past few years are as follows: 1997: Industry 5.7; Western 1.9 1998: Industry 5.1; Western 1.7 1999: Industry 4.9; Western 2.4 2000: Industry 4.8; Western 1.9

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
	Long-Term Goal III:	Achieve required repayment on Federal investment				
	Target:	Unpaid Federal Investment is to be less than the Allowable Unpaid Federal Investment				
	Actual Progress achieved toward goal:	The Allowable Unpaid Federal Investment was 29.5 percent higher than the Unpaid Federal Investment at the end of FY 2001.				
2	*Does the program (including program partners) achieve its annual performance goals?*	arge Exte	Western's annual performance goals are: Maintain system reliability and transmission availability in the evolving electric utility industry Promote employee awareness and commitment to working safely by providing the necessary training and equipment to assure a safe working environment Establish and meet planned annual repayment for each Federal power system	Annual Performance Plan Power Repayment Studies North American Electric Reliability Council Standards Bureau of Labor Statistics Prior to updating Western's Annual Performance Plan, Western's Senior Management Team reviews the results outlined in the latest Annual Performance Report to determine if the objectives of the Strategic Plan are being met.	17%	0.1

Key Goal I:	Maintain system reliability and transmission availability in the evolving electric utility industry
Performance Target:	Meet or exceed North American Electric Reliability Council standards to measure the ability of control areas to match generation to load.
Actual Performance:	Western continues to exceed reliability standards and industry averages. In FY 2001: CPS1: Standard--100; North America Industry wide average of load-generation control areas--168.57; Western--186.93 CPS2: Standard--90; North American Industry wide average of load-generation control areas--95.65; Western--98.48
Key Goal II:	Promote employee awareness and commitment to working safely by providing the necessary training and equipment to assure a safe working environment
Performance Target:	FY 2001: Meet or exceed average accident frequency reported by Bureau of Labor Statistics.
Actual Performance:	Western accident frequency rates during the past few years are as follows: 1997: Industry 5.7; Western 1.9 1998: Industry 5.1; Western 1.7 1999: Industry 4.9; Western 2.4 2000: Industry 4.8; Western 1.9

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
	Key Goal III:	Establish and meet planned annual repayment for each Federal power system				
	Performance Target:	Western's power repayment studies established the FY 2001 target as $137 million.				
	Actual Performance:	Actual principal repayment for FY 2001 was $16 million. Although Western did not achieve its targeted repayment for FY 2001, we continue to repay the Treasury in accordance with legislative requirements. The Allowable Federal Investment was 29.5 percent higher than the Unpaid Federal Investment at the end of FY 2001. Below-average hydro generation due to a drought in the West, combined with high purchase power market prices, were the primary reasons for Western's failure to make the planned repayments.				
3	*Does the program demonstrate improved efficiencies and cost effectiveness in achieving program goals each year?*	Yes	Western's management continually evaluates its targets and measures to ensure its mission is met; the senior managers keep "raising the bar", making it more challenging to meet targets. Although Western's self-imposed targets are not always met, Western continues to be below the industry average for recordable injuries, lost or restricted workdays, and motor vehicle accidents; and Western exceeds North American Electric Reliability Council's statistical measure for frequency error and large net unscheduled power flows. Western continues to meet its principal repayment to the Treasury. However, annual repayment is affected by hydrological conditions, i.e., wet, dry, or average, which may result in periodic project deficits on its interest and annual expense payment.	Bureau of Labor Statistics North American Electric Reliability Council Standards Annual Performance Plan Prior to updating Western's Annual Performance Plan, Western's Senior Management Team reviews the results outlined in the latest Annual Performance Report to determine if the objectives of the Strategic Plan are being met.	17%	0.2

	Questions	Ans.	Explanation	Evidence/Data	Weighting	Weighted Score
4	*Does the performance of this program compare favorably to other programs with similar purpose and goals?*	Yes	Western is comparable to the other PMA's in its ability to market and deliver reliable, cost-based hydroelectric power and related services. In addition, Western exceeds reliability standards and industry averages: CPS1: Standard--100; North American Electric Industry-wide average of load-generation control areas--168.57; Western--186.93 CPS2: Standard--90; North American Electric Industry-wide average of load-generation control areas--95.65; Western--98.48 Western accident frequency rates during the past few years are as follows: 1997: Industry 5.7; Western 1.9 1998: Industry 5.1; Western 1.7 1999: Industry 4.9; Western 2.4 2000: Industry 4.8; Western 1.9	Bureau of Labor Statistics North American Electric Reliability Council Standards Annual Performance Plan	17%	0.2
5	*Do independent and quality evaluations of this program indicate that the program is effective and achieving results?*	Yes	Western's activities are reviewed annually by an independent audit firm. Western prepares an Annual Performance Plan and follows with an Annual Performance Report which documents results of performance targets. In addition, Western is actively involved with North American Electric Reliability Council, Federal Energy Regulatory Commission, National Energy Policy, Western Electricity Coordinating Council, and other organizations to ensure the reliability of and the non-discriminatory access to transmission in the western interconnection. An annual power repayment study is run to ensure revenues are sufficient to recover costs within required timeframes.	Audited Financial Statements Annual Performance Plan Annual Performance Report Reliability Councils Power Repayment Studies	17%	0.2
6 (Cap 1.)	*Were program goals achieved within budgeted costs and established schedules?*	Yes	Western follows the standard procurement rules in the purchase of capital assets. The Design Specifications clearly outline the requirements; the procurement is usually based on a fixed price, and the contract is written so that the deliverable is clearly defined.	Procurement Packages Design Specifications	17%	0.2
Total Section Score					**100%**	**78%**

PART Performance Measurements

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The wind energy program conducts research and development to enhance the level of technology development and deployment of wind energy systems. The wind energy program leads the Nation's efforts to improve wind energy technology through public/private partnerships that enhance domestic economic benefit from wind power development, and to coordinate with stakeholders on activities that address barriers to the use of wind energy.

Evidence: FY 2004 Budget; Program first authorized in 1975 by P.L. 94-163, "Energy Policy and Conservation Act" (EPCA). At least six subsequent public laws relevant to program authorization or purpose.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The program aims to expand the use of wind energy, which can increase domestic energy supplies and avoid emissions of pollutants and greenhouse gases associated with conventional methods of power production. These potential benefits support the Administration's National Energy Policy, as well as the Administration's climate change goals. The wind energy program specifically targets activities that address the barriers - energy cost, energy market rules and infrastructure, and energy sector acceptance - to wind power competing without disadvantage to serve the Nation's energy needs.

Evidence: The program focuses R&D on activities that it considers too technologically risky for the private sector to undertake alone. Risk levels vary on a project-by project basis.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The program coordinates with States and industry to develop R&D roadmaps for guiding research, and has jointly funded several projects that respond to Federal program national objectives as well as State-level interests. No other Federal programs support R&D on wind power.

Evidence: The program considers the following factors as market barriers to sufficient private sector investment in wind R&D: market uncertainty from electric restructuring; inability of small businesses to afford full costs of R&D; externalities (i.e. environmental, energy security, and price stability) whose benefits are not captured in the marketplace.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: A federal wind energy production tax credit (PTC) is in place until the end of 2003 that is currently highly influential in the rate of U.S. wind power development. While extension of the tax credit may obviate the need for further research in high wind speed areas, the tax credit will not affect commercial viability of low wind speed and distributed generation wind energy technologies, which the program currently focuses on and which are not yet cost competitive.

Evidence: There is no evidence that a production tax credit is a more cost effective approach to advancing development and deployment of wind technologies.

PART Performance Measurements

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: NO Question Weight: 20%

Explanation: The wind program primarily provides funding to leverage R&D dollars through public/private partnerships with U.S. based wind companies and key energy sector partners, both public (e.g., States, federal power administrations) and private. In support of the Administration's R&D Investment Criteria initiative, the program was asked to prepare "bubble charts" that plot key program variables (e.g., expected public benefits, funding levels, years to commercialization). Bubble charts can serve as an informational tool to help determine, along with other considerations, whether the program appropriately targets its R&D funding. While the program has made progress estimating public benefits, the Department has not yet developed a methodology to estimate benefits consistently within and across programs. Therefore, the program could not prepare meaningful bubble charts.

Evidence: While unable to prepare bubble charts, the program did estimate years to commercialization for each of the major R&D activities within the program: low wind speed turbines - 9 years (2012); distributed wind turbines - 4 years (2007); systems integration components - 7 years (2010). The program's estimates have not been peer reviewed. In general, the program appears to target its resources wisely, but a lack of ability to provide appropriate evidence mandates a "no" response. EERE continues to work internally and with other DOE program offices to improve consistency and accuracy in estimating benefits.

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight: 10%

Explanation: The program has defined four long-term goals that directly support reducing the cost of wind energy, which can increase deployment and thus ties to the Department's outcome objectives of increased domestic energy production and reduced emissions of pollutants and greenhouse gases (from conventional power production).

Evidence: FY 2004 Budget. Wind Energy Program DRAFT Multi-Year Technical Plan (2003).

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight: 10%

Explanation: The program strategy for achieving its long-term targets centers on a series of phased public-private partnerships for concept studies, component, and system development, each structured with periodic review against analytically-based criteria to verify performance needed for contribution to the overall portfolio. Periodic review points include completion of preliminary design, final design, testing of major components such as blades and drivetrains, test readiness reviews, and prototype test result reviews. These review points provide input for adjusting resource allocations within the portfolio, as well as serving as potential off-ramps for each partnership activity. Supporting research activities are also subjected to periodic critical assessment and prioritization based on criteria developed via the low wind speed technology development pathways analysis. All of the program's current goals and associated program elements inherently define termination points for all of the program's activities by virtue of specific performance targets to be achieved by definite dates.

Evidence: Wind Energy Program DRAFT Multi-Year Technical Plan (2003). FY 2003 Program Execution Plan.

PART Performance Measurements

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

2.3 **Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals?** Answer: YES Question Weight:10%

Explanation: The program has identified annual cost of energy targets that tie directly to its long-term cost of energy targets. While the key annual measures for the program have been defined, other measures concerning systems integration R&D and outreach activities are still under development.

Evidence: FY 2002 Annual Operating Plan. FY03 Wind and Hydropower Technologies Program Execution Plan (PEP).

2.4 **Does the program have baselines and ambitious targets for its annual measures?** Answer: YES Question Weight:10%

Explanation: Targets for cost of energy - the key measure - seem reasonably ambitious. Measures and targets for systems integration R&D and outreach activities are under development.

Evidence: Wind Energy Program DRAFT Multi-Year Technical Plan (2003).

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:10%

Explanation: All program funding participants recipients commit to goals stipulated in the Program Execution Plan (PEP), which defines plans for all funded program activities, including the program's Laboratories, addressed by their Annual Operating Plans (AOPs). The program performance goals are reflected in all contractor and sub-contractor requirements. The National Renewable Energy Laboratory (NREL) and the Sandia National Laboratory (Sandia) are rated annually according to performance in attaining program milestones, as well as other requirements under the operating contracts. Projects are subject to semi-annual or annual reviews and status reports to assess progress toward meeting these long-term goals.

Evidence: FY03 Wind and Hydropower Technologies Program Execution Plan (PEP), Solicitation RFP's and financial assistance agreements (explicitly or via statements of work tailored to support program strategies to achieve goals).

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:10%

Explanation: The program uses a formal peer and industry stakeholder review process to benefit from the guidance of industry and the research community, and to provide an outside view of the program. Both the technical assessment and peer review provide inputs that the Program Management Team considers in making decisions about strategic program directions and funding priorities. The wind program also has an on-going Technical Assessment activity -- to monitor the current status of wind technology and progress in achieving program cost goals, to evaluate that status within the context of the needs of the marketplace, and to identify technological pathways that will lead to wind's successful competition in the marketplace.

Evidence: US DOE Wind Energy Program FY2002 Peer Review and Stakeholder Report, December 2002. US DOE Wind Energy Program FY 2001 Peer Review. (Full description of the peer/stakeholder review and technology assessment/pathways analysis process is provided in the Wind Energy Multi-year Technical Plan and Annual Program Execution Plan.)

PART Performance Measurements

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:10%

Explanation: All program activities described in the program's budget (except systems integration and outreach activities, such as "Windpowering America") can be linked with an acceptable annual target and, in turn, a longer-term program goal. However, budget documents do not clearly indicate the full costs of achieving the program goals. Salaries, benefits, and other admininstrative expenses to support the program are included in a separate budgetary line item ("Program Direction"). EERE does not report the allocation of Program Direction funding to the various programs it supports.

Evidence: FY 2004 Budget.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:10%

Explanation: The program has established a Multi-Year Technical Plan. The program conducts three meetings per year to assure peer and industry involvement and feedback. The March meeting is devoted to strategic planning, and it is timed directly in advance of initial planning and development for the upcoming budget year. This meeting is followed by the May/June meeting, when the sub-program holds its formal peer review. During the summer, peer review efforts are incorporated into the portfolio evaluation effort. In the Fall, the sub-program reconvenes the peer review team to reach an understanding about program priorities and direction.

Evidence: US DOE Wind Energy Program FY2002 Peer Review and Stakeholder Report, December 2002. Wind Energy Program DRAFT Multi-Year Technical Plan (2003).

2.RD1 **If applicable, does the program assess and compare the potential benefits of efforts within the program to other efforts that have similar goals?** Answer: NO Question Weight:10%

Explanation: Each year, the program estimates the public benefits of its activities in support of the Government Performance and Results Act (GPRA) and the Administration's R&D Investment Criteria initiative. However, the program has not yet developed a consistent and reliable methodology for comparing potential benefits within and across programs with similar goals.

Evidence: FY 2004 Congressional Budget Justification materials.

PART Performance Measurements

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

2.RD2 **Does the program use a prioritization process to guide budget requests and funding decisions?** Answer: YES Question Weight:10%

Explanation: The wind program uses a technical assessment process, in conjunction with formal and routine expert, peer, and stakeholder review and input, that ensures that research activities can be demonstrated to have a direct link to achieving the highest priority objectives and goals of the Wind Program. The program participated in an EERE-wide zero-based budget exercise in which priorities at the activity level were clearly laid out.

Evidence: The technical assessment process consists of three steps: Step 1 focuses on identifying areas of possible cost reduction or performance enhancements to the baseline configuration. These areas are then further assessed to quantify their potential contribution to improving the technology's cost-effectiveness. Step 2 focuses on identifying research activities that would be necessary to achieve the technology improvement opportunities identified in Step 1. Activities with the highest potential contribution are given the highest funding and management priority, intangibles relative to benefits are factored into prioritization and include several of the R&D criteria, e.g risks, barriers, and years to commercialization. Step 3 focuses on using the prioritized list from Step 2 to formulate the program's research plan over the planning horizon. Wind Energy Program Multi-Year Technical Plan, Wind Program 2002 Peer Review and Stakeholder Report (December 2002). EERE Priority Ranking Tool, Zero Based Budget Exercise.

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?** Answer: YES Question Weight:12%

Explanation: The EERE Strategic Management System -- which establishes at the beginning of each fiscal year an 18-month schedule for key planning, budget formulation, budget execution, and analysis / evaluation functions -- requires that each EERE program establish and track long-term and near-term program performance goals and measures. Program results as evaluated through the goals and measures are used annually and throughout the year to assess partners' performance, adjust funding, and re-align R&D portfolios. At the program level, recent examples of management action include early closeout of two Next Generation Turbine public-private partnerships. In one case, the partner had achieved sufficient progress toward the project cost of energy goal prior to the final prototype development stage. In the second case, the partner could not provide sufficient evidence of cost reduction progress to warrant continuing, particularly in light of technical setbacks.

Evidence: SMS Implementation Letter for FY 2002 - 2005 (October 2001). Joule correspondence documenting management action on the early closeout of Next Generation Turbine projects. In general, milestones in the Department's Joule system are not necessarily meaningful or fully reflective of program progress. Thus, the Department's Joule system provides little value-added. The new I-MANAGE system, currently under development, will better integrate budget and performance.

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?** Answer: YES Question Weight:12%

Explanation: The Annual Performance Appraisals of all EERE Program Managers include criteria directly related to cost, schedule, and performance results. EERE reviews these criteria monthly in the EERE Monthly Management Reviews. Most EERE contracts include award fee and other performance criteria to hold those partners accountable.

Evidence: Performance Plan and Performance Appraisal Form for Performance Management System Employees. EERE Award Fee and Performance Based contracts.

PART Performance Measurements

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose? Answer: YES Question Weight:12%

Explanation: Each year, the program develops an Annual Operating Plan, which is reviewed internally to ensure that new funding is planned to be obligated consistent with the appropriated purpose. EERE also develops a Spend Plan for all of its programs. The program uses data from Departmental procurement and financial systems -- and similar data from National Laboratory partners -- to assure that actual expenditures occur for intended purposes and on a schedule consistent with the Spend Plan. Unobligated balances brought forward to FY 2004 were $48,000, less than one percent of the program's FY 2003 appropriation of approximately $41 million.

Evidence: FY 2003 Annual Operating Plan. Wind Technology Program FY 2003 Financial Status Report (June 2003). FY 2004 Apportionment. FY 2003 Spend Plan.

3.4 Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution? Answer: YES Question Weight:12%

Explanation: EERE's reorganization in 2002 clarified lines of responsibility and eliminated organizational "stovepipes" by consolidating planning, budgeting, and analysis into a single business administration office. The reorganization reduced management layers, although staff levels remained the same. EERE developed a new IT report to improve program managers' access to EERE cost, obligation, and procurement data. EERE plans to consolidate several legacy IT systems into a single program management system that is intended to track all required information on a project by project basis (cost share, type of contract according to A-11 definitions, etc.). EERE is also developing a measure to reduce uncosted balances, which means obligated funds will be put to use more quickly. These recent actions should achieve efficiencies and improve cost effectiveness, although it will be difficult in some cases to demonstrate definitively.

Evidence: EERE Reorganization "All Hands" presentation: http://www.eere.energy.gov/office_eere/pdfs/eere_reorg.pdf. EERE IT Business Case Number 019-20-01-12-01-1011-00-304-101. Wind Technology Program FY 2003 Financial Status Report (June 2003).

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: The program interacts with other DOE programs, including the energy storage, hydrogen, distributed energy, power systems, electric transmission and distribution, industrial technologies programs, and the Federal Energy Management Program. Outside the Department, the program works with the Department of Interior on increased use of renewables on Federal lands, the National Science Foundation to develop and test wind turbines for the Antarctic, Department of Defense for use of wind to supply electricity for DOD facilities, and the Department of Agriculture on implementation of the renewable energy elements of the Farm Bill.

Evidence: FY2003 Program Execution Plan. 'Assessing the Potential for Renewable Energy on Federal Lands', DOE/GO-102003-1704. 'White House Report In Response to the National Energy Policy Recommendations to Increase Renewable Energy Use on Federal Lands', Department of Energy/Department of Interior (August 2002). USDA: Program is directly supporting Farm Bill Renewable Energy Program implementation, Ag Research Center collaboration. NSF: testing of 100 kW cold weather wind turbine at NWTC and in Alaska for future Antarctic research station use. DOE Hydrogen program coordination: jointly funded FY 2003 analytic task at NREL. BPA/WAPA hydro/wind coordination meetings, joint projects. EPA/DOE/EIA Wind Energy Modeling Meetings, October 2, 2002, February 12, 2003 and June 13, 2003. See: http://www.epa.gov/cleanenergy/renew_series.htm

PART Performance Measurements

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: Each year, EERE develops and maintains a Spend Plan and a Measures spreadsheet that links the Spend Plan to annual and long-term goals and measures for each EERE program. The program reviews quarterly costing reports and weekly project status reports. There is no evidence of erroneous payments or statutory violations.

Evidence: FY 2003 Spend Plan and Measures spreadsheet. Sample quarterly costing report and weekly project status report.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:12%

Explanation: The National Association of Public Administrators (NAPA) found dozens of management deficiencies in the program's bureau (the Office of Energy Efficiency and Renewable Energy, or EERE) in a review published in 2000. EERE provided evidence that it addressed some of management deficiencies identified by NAPA, and has prepared a Management Action Plan that will address many of the remaining findings. While a few NAPA recommendations have not been addressed (e.g., that EERE conduct periodic audits to assure that cost-sharing partners actually provide funding they agree to), in general, EERE has taken meaningful steps to address most deficiencies.

Evidence: A Review of the Management in the Office of Energy Efficiency and Renewable Energy (NAPA, 2000). Letter Report from Assistant Secretary Garman to Chairman of the House Subcommittee on Interior and Related Agencies on implementation of NAPA recommendations (July 11, 2001). EERE Management Action Plan (August 2003)

3.RD1 For R&D programs other than competitive grants programs, does the program allocate funds and use management processes that maintain program quality? Answer: NO Question Weight:12%

Explanation: The program reports that most of its funding is competitively awarded. In addition, the program views the formal peer and industry stakeholder review annual process (three meetings/year) as a key investment in assuring quality of the program in terms of strategic direction and goals, and effectiveness of activities planned and completed each year to reach these goals. Despite these practices, the program could not document the conduct of its R&D activities in accordance with OMB Circular A-11 definitions (e.g., merit-reviewed with limited competitive selection, Congressionally directed, etc.). Program could also not demonstrate that research stage (basic, applied, development, demonstration) correlated with statutory and Administration guidelines for cost sharing.

Evidence:

PART Performance Measurements

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: YES Question Weight 25%

Explanation: The program is on track to meet each of long-term cost-of-energy (COE) goals. When the program meets its FY 2004 COE target for high wind speed areas, that activity will be completely "graduated" to the private sector. This year, the wind program has instituted a new process to report annually on progress made from the 2003 baseline toward program technology performance goals. It includes a new peer-reviewed annual assessment of COE for its low wind speed and distributed wind speed activities that will serve as an indicator of performance achievement toward the longer-term goals. Determining the COE impact of improvements in individual components and subsystems will be based on comparisons against a baseline design with a well established cost of energy. Forecasts of COE impact will be based on progress of existing subcontracts and development efforts at the time of the assessment, thereby allowing a clear picture of the impact of improvement against the overall goals and objectives.

Evidence: FY 2004 Budget. Wind Program DRAFT Multi Year Technical Plan (2003). Class 6 2003 Baseline COE, Class 4 2003 Baseline COE, Princeton Energy Resources International (July 2003).

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: LARGE EXTENT Question Weight 25%

Explanation: The program's annual measure and long-term measures (cost-of-energy) are one and the same. The program reports that it achieved its annual targets towards its long term goals. The program's measures related to systems integration and outreach activities are under development.

Evidence: FY 2004 Budget. Wind Program DRAFT Multi Year Technical Plan (2003). Class 6 2003 Baseline COE, Class 4 2003 Baseline COE, Princeton Energy Resources International (July 2003).

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: NO Question Weight 25%

Explanation: The program identified several activities that would seem to promote efficiency and cost-effectiveness, including: integrated planning and identification of most cost effective investments/roles in R&D consortia; shifting work previously done by labs that the private sector; and developing electronic collection, storage, management and reporting systems that eliminate historic but unneeded reporting, and integrate performance, planning, fiscal and management data. The program could not provide evidence that these activities have improved efficiency and cost effectiveness.

Evidence:

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NA Question Weight: 0%

Explanation: The program is unique in its support for the development of advanced wind technology and its efforts to reduce barriers to technology application.

Evidence:

PART Performance Measurements

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: YES Question Weight 25%

Explanation: The National Academy of Sciences concluded "The Wind Energy Program, combined with temporary substantial federal and state renewable energy subsidies, have been responsible for the U.S. lead in technology development." The program's annual peer reviews have been largely positive, although several areas need to be addressed, such as better communication among national lab staff conducting their own experiments.

Evidence: National Academy of Sciences: "Renewable Power Pathways: A Review of The U.S. Department of Energy's Renewable Energy Programs" (2000). US DOE Wind Energy Program FY 2002 Peer Review and Stakeholder Report (December 2002). US DOE Wind Energy Program FY 2001 Peer Review.

PART Performance Measurements

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

Measure: Cost of wind power in Class 4 wind speed areas (i.e., 13 mph annual average wind speed at 33 feet above ground), in cents per kilowatt-hour (cents/kWh).

Additional Information: Reducing cost of wind power diminishes a major barrier to domestic use of wind energy resources, which will contribute to the Department's goal of increased domestic energy supplies. When cost of energy assessments are not available from actual prototype turbine systems developed through the program's partnerships, annual cost of energy improvements will be based on expert assessment of R&D and partners' progress to provide needed input for turbine system cost modeling. The 2001 baseline is based on conversion of pre-existing Class 6 wind speed turbine data.

Year	Target	Actual
2001		6.0
2002	5.5	5.5
2003	5.0	5.0
2004	4.6	
2005	4.3	
2006	4.0	
2012	3.0	

Measure Term: Long-term

Measure: Cost of wind power for residential-sized (3 to 10 kilowatt) distributed energy applications in Class 3 wind speed areas (i.e., 12 mph annual average wind speed at 33 feet above ground), in cents per kilowatt-hour (¢/kWh).

Additional Information: Reducing cost of wind power can help increase domestic use of wind energy resources, which will contribute to the Department's goal of increased domestic energy supplies. When cost of energy assessments are not available from actual prototype turbine systems developed through the program's partnerships, annual cost of energy improvements will be based on expert assessment of R&D and partners' progress to provide needed input for turbine system cost modeling.

Year	Target	Actual
2002	22	22
2003	20	
2004	19	

Measure Term: Long-term

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

2005	18
2006	16
2010	15

Measure: Number of States that have at least 20 megawatts (MW) wind power capacity installed

Additional Information: This measure tracks success of program outreach activities. Since each State is a unique regulatory, policy, and economic entity, reaching 20 MW installed capacity is a critical introductory threshold whereby initial barriers to development are overcome, and further wind development on a greater scale can proceed and thus contribute to the DOE goal of increased domestic energy supply.

Year	Target	Actual	**Measure Term:** Annual
2002		13	
2003	19		
2004	25		
2005	32		

Measure: Number of States that have at least 100 megawatts (MW) of wind power capacity installed

Additional Information: This measure tracks success of program outreach activities. As wind capacity in a state approaches the 100 MW scale, the scale of investment enters a new regime in the financial community, and utilities must account for the effects of variable generation. Reaching 100 MW installed capacity threshold shows that wind is being accepted as a true large-scale generating option by the State's utilities, regulators, and investors, and thus can further contribute to the DOE goal of increased domestic energy supply.

Year	Target	Actual	**Measure Term:** Annual
2002		8	
2003	10		
2004	12		
2005	16		
2006	19		

PART Performance Measurements

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

Measure: Systems Integration Index (under development). The index will be based on a scorecard in which an expert panel provides ratings for the status of the four key issues specified in the goal statement, in each of approx. six distinct regions of the Nation. The status of the issues are considered 'outcome' level based on the high dependency upon actions of a number of other Federal, Regional, and State organizations. The program's contribution to influencing these outcomes - outputs - will also be tracked in coordination with the outcome status. (Note: Systems Integration represents less than 8% of program funding)

Additional Information: After cost of energy, issues associated with integrating windpower into grid systems, including transmission planning and technology for distributed power applications, represent the major barrier to wind power development, and hence its contribution to helping meet the Department's goal for increasing domestic energy supply.

Year	Target	Actual	**Measure Term:** Annual

Measure: Cost of wind power for commercial-sized (100 kilowatt) distributed energy applications in Class 3 wind speed areas (i.e., 12 mph annual average wind speed at 33 feet above ground), in cents per kilowatt-hour (¢/kWh).

Additional Information: Reducing cost of wind power can help increase domestic use of wind energy resources, which will contribute to the Department's goal of increased domestic energy supplies. When cost of energy assessments are not available from actual prototype turbine systems developed through the program's partnerships, annual cost of energy improvements will be based on expert assessment of R&D and partners' progress to provide needed input for turbine system cost modeling. Targets represent low end of cost range.

Year	Target	Actual	**Measure Term:** Long-term
2002	17	17	
2003	14		
2004	13		
2006	11		
2005	12		
2007	10		

PART Performance Measurements

Program: Wind Energy
Agency: Department of Energy
Bureau: Energy Efficiency and Renewable Energy
Type(s): Research and Development

Section Scores				Rating
1	2	3	4	Moderately
80%	80%	88%	67%	Effective

Measure: Cost of wind power in Class 6 wind speed areas (i.e., 15 mph annual average wind speed at 33 feet above ground), in cents per kilowatt-hour (¢/kWh).

Additional Information: Reducing cost of wind power can help increase domestic use of wind energy resources, which will contribute to the Department's goal of increased domestic energy supplies. When cost of energy assessments are not available from actual prototype turbine systems developed through the program's partnerships, annual cost of energy improvements will be based on expert assessment of R&D and partners' progress to provide needed input for turbine system cost modeling. This activity will be completely "graduated" to the private sector once the 2004 target is achieved.

Year	Target	Actual
2000	2.5	4
2002	4	4
2003	3.3	3.3
2004	3	

Measure Term: Long-term

PART Performance Measurements

Program: Yucca Mountain Project
Agency: Department of Energy
Bureau: Office of Civilian Radioactive Waste Management
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	67%	75%	17%	

1.1 Is the program purpose clear? Answer: YES Question Weight 20%

Explanation: The purpose of the Civilian Radioactive Waste Management (OCRWM) Program is to implement the Federal policy for the siting, licensing, construction, operation, and decommissioning of repositories for the disposal of spent nuclear fuel and high-level radioactive waste, including the transportation of such wastes to the repositories.

Evidence: The purpose of the program is articulated in Section 111(b)(1)-(4) of the Nuclear Waste Policy Act of 1982 (NWPA). This purpose is reflected in OCRWM's mission statement, which is presented in OCRWM's Program Manual, Final - Phase 3 (DOE/RW-0555), April 2003.

1.2 Does the program address a specific and existing problem, interest or need? Answer: YES Question Weight 20%

Explanation: The Congress determined that radioactive waste requires safe and environmentally acceptable methods of disposal, that the accumulation of such waste has created a national problem, and that Federal efforts to devise a permanent solution had not been adequate. The Secretary of Energy's letter transmitting his site recommendation report to the President, and the President's transmittal of that recommendation to the Congress, articulated the importance of the Yucca Mountain repository to national security, US non-proliferation objectives, energy security, homeland security, and environmental protection.

Evidence: Section 111(a)(1)-(7) of the NWPA articulates the interests, problem, and needs addressed by the Civilian Radioactive Waste Management Program. Secretary Abraham's February 14, 2002, letter to President Bush, forwarding the Yucca Mountain Site Recommendation. President's letter to the Speaker of the House of Representatives and the President of the Senate, February 15, 2002.

1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, state, local or private effort? Answer: YES Question Weight 20%

Explanation: The Civilian Radioactive Waste Management Program is a single-purpose Federal program. There are no other Federal, state, or local programs to address the problem identified in Question 1.2. Private efforts to develop waste disposal capacity have been sporadic and of limited scope.

Evidence: Section 302(d) of the NWPA defines the authorized activities of the Program. Section 304(b) of the NWPA assigns to the Director, OCRWM, the responsibility for carrying out the functions of the Secretary of Energy under the NWPA.

1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency? Answer: YES Question Weight 20%

Explanation: This is a direct Federal program financed by user fees.

Evidence: Alternative Means of Financing and Managing the Civilian Radioactive Waste Management Program, (DOE/RW-0546), August 2001. Draft OCRWM Capital Asset Management Plan, June 19, 2002.

PART Performance Measurements

Program: Yucca Mountain Project
Agency: Department of Energy
Bureau: Office of Civilian Radioactive Waste Management
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	67%	75%	17%	

1.5 Is the program effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly? Answer: YES Question Weight: 20%

Explanation: Program expenditures are effectively and specifically targeted, in that they are statutorily limited to the activities authorized in Section 302(d) of the NWPA. Diversion of Program resources for purposes not specifically authorized by the NWPA would be a violation of the statute. Expenditure of Program funds for their intended purposes is independently audited each year by a certified public accounting firm. The Program has received unqualified ("clean") auditors' opinions since inception.

Evidence: Section 302(d), NWPA. Independent auditors' opinions on OCRWM's financial statements since 1985.

2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program? Answer: YES Question Weight: 11%

Explanation: The Yucca Mountain repository is licensed, constructed, and operating; the national and Nevada waste transportation system is in place; receipt and emplacement of spent nuclear fuel and high-level radioactive waste at the repository are proceeding at the planned annual rate by 2014.

Evidence: DOE FY 2004 OMB budget request. DOE FY 2004 Congressional Budget Annual Performance Plan (DOE/ME-0024, February 2003). Draft CAMP, July 15, 2003.

2.2 Does the program have ambitious targets and timeframes for its long-term measures? Answer: YES Question Weight: 11%

Explanation: The Program's targets and timeframes for its long-term performance goals are ambitious. Since the specific steps and processes the Program must undertake to achieve waste receipt and emplacement at the repository are prescribed by statute, these activities provide the foundation for the Yucca Mountain Project's schedule. The major milestones on that schedule are the performance measures that are used to monitor progress against long-term goals. Once initial waste receipt and emplacement are achieved, progress will be measured in terms of the amounts of waste received and emplaced annually.

Evidence: Report to Congress on Reassessment of the Civilian Radioactive Waste Management Program, November 1989 (DOE/RW-0247). Office of Civilian Radioactive Waste Management Strategic Plan, May 2003 (DOE/RW-0558). CAMP. Gary Jones, "Nuclear Waste: Uncertainties about the Yucca Mountain Repository Project," GAO-02-765T, May 23, 2002.

2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals? Answer: YES Question Weight: 11%

Explanation: The Program is working to refine these.

Evidence: DOE FY 2004 Congressional Budget Annual Performance Plan (DOE/ME-0024, February 2003). Draft CAMP.

2.4 Does the program have baselines and ambitious targets for its annual measures? Answer: NO Question Weight: 11%

Explanation: Detailed performance baselines and specific targets will flow from final definition of annual measures.

Evidence: Yucca Mountain Performance Measurement Baseline. DOE Joule tracking system. DOE Performance and Accountability Reports. OCRWM Annual Report to Congress.

PART Performance Measurements

Program: Yucca Mountain Project
Agency: Department of Energy
Bureau: Office of Civilian Radioactive Waste Management
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	67%	75%	17%	

2.5 **Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?** Answer: YES Question Weight:11%

Explanation: The Program's management and Operating (M&O) contractor is committed by the Statement of Work in its contract to integrate the efforts of all Program participants toward accomplishment of the Program's goals.

Evidence: OCRWM Performance Evaluation Management Plan for FY 2003. Management and Technical Support (MTS) contract. M& Statement of Work.

2.6 **Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?** Answer: YES Question Weight:11%

Explanation: Nuclear Regulatory Commission-approved quality assurance program serves to identify and track corrections to technical deficiencies. The NWTRB conducts ongoing reviews of the Project's technical work. Recommendations contained in NWTRB reports require a formal Departmental response. The GAO and DOE IG conduct frequent topical audits and reviews of Program activities. External reviews and cost estimates are performed by the Department through an independent contractor prior to critical decisions. An Independent Cost Estimate (ICE) of the 2001 TSLCC report was conducted by Burns & Roe. In 2003, Burns & Roe conducted an external Independent review (EIR) of the Yucca Mountain CD-1 documentation and an ICE of the Program baseline. Peer reviews of technical work are conducted on an as-need basis. The Program Director reviews the progress and schedule and cost performance of the Yucca Mountain Project approximately quarterly. An annual internal FMFIA review ensures that management controls are working effectively and that program functions are being performed economically and efficiently.

Evidence: Quality assurance audit reports. FY 2002 Quality Assurance Management Assessment Report, January 22, 2003. Integrated Safety Management System Reports. Nuclear Waste Technical Review Board Reports. External Independent Review Reports. Peer Review Reports. GAO and DOE IG reports relating to OCRWM. Evidence of PSIR's is available on request. OCRWM Annual Assurance Memorandum to the Secretary of Energy for FY 2002.

2.7 **Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?** Answer: NO Question Weight:11%

Explanation: The relationship between the Program's Work Breakdown Structure (WBS) and goals and the Department's budget requests to date is unclear. The Department is working to integrate the two in its FY 2005 budget request.

Evidence: Program budget request for FY 2004. The YMP resource-loaded schedule, which contains over eleven-thousand activities between October 2002 and December 2010, is available on request.

2.8 **Has the program taken meaningful steps to correct its strategic planning deficiencies?** Answer: YES Question Weight:11%

Explanation: The Program has made several changes in senior management and is undertaking numerous management improvement efforts to address its management deficiencies.

Evidence: OCRWM Strategic Plan, 2003-2013. Monthly Operating Reports.

PART Performance Measurements

Program: Yucca Mountain Project
Agency: Department of Energy
Bureau: Office of Civilian Radioactive Waste Management
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	67%	75%	17%	

2.CA1 **Has the agency/program conducted a recent, meaningful, credible analysis of alternatives that includes trade-offs between cost, schedule, risk, and performance goals and used the results to guide the resulting activity?**
Answer: NO Question Weight:11%

Explanation: A completed analysis will be included in the CAMP.

Evidence: Draft CAMP.

3.1 **Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?**
Answer: YES Question Weight:12%

Explanation: The Program regularly collects performance data that senior management use to manage and improve the program. Completion of the CAMP and validation of the EVMS will enhance public confidence in these data.

Evidence: Performance information is suspect without EVMS validation.

3.2 **Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?**
Answer: YES Question Weight:12%

Explanation: Federal and contractor management and procedural changes have been made to improve cost, schedule, and performance results.

Evidence: Yucca Mountain Project Responsibility Assignment Matrix (RAM). OCRWM Annual Work Plans for FY 2003. OCRWM policy on performance standards for Federal managers. M&O PEMP for FY 2003. MTS contract. Monthly Operating Reports.

3.3 **Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?**
Answer: YES Question Weight:12%

Explanation: The Program obligates funds in a timely manner, as they are made available. In FY 2002, the Department's CFO retained 15% of the Program's appropriation, and OCRWM had to justify the need for the 15% hold-back before the CFO released the final funds. The total unobligated funds represented less than 2.5% of the total Program budget in FY 2002. The Program is audited annually by an independent public accounting firm and has secured an unqualified audit opinion every year.

Evidence: DOE Financial Information System, year-end reconciliation for FY 2002. FY 2002 audit report of OCRWM

3.4 **Does the program have procedures (e.g. competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?**
Answer: NO Question Weight:12%

Explanation: Acquisition strategy incomplete. EVMS uncertified. No other efficiency measures available.

Evidence: Draft CAMP.

PART Performance Measurements

Program: Yucca Mountain Project
Agency: Department of Energy
Bureau: Office of Civilian Radioactive Waste Management
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	67%	75%	17%	

3.5 Does the program collaborate and coordinate effectively with related programs? Answer: YES Question Weight:12%

Explanation: Program is making significant improvements in this area. It has recruited a new Quality Assurance (QA) manager to improve coordination with NRC in resolving QA issues, as well as new managers to improve coordination with NRC on other aspects of its license application, including accelerated resolution of NRC's key technical issues. Failure to fully evaluate a low-temperature repository option reduced Nuclear Waste Technical Review Board confidence in technical basis for DOE's repository performance estimates.

Evidence: GAO, "Nuclear Waste: Preliminary Observations on the Quality Assurance Program at the Yucca Mountain Repository, GAO-03-826T, May 28, 2003. NWTRB 2002 Annual Report.

3.6 Does the program use strong financial management practices? Answer: YES Question Weight:12%

Explanation: The annual independent audit of the Program has resulted in an "unqualified" opinion and has not revealed any material internal control weaknesses. Similarly, the Program's annual internal controls reviews conducted under the Federal Managers' Financial Integrity Act have not disclosed any internal control weaknesses. However, these audits provide little information on the financial management practices of the M&O contractor upon whom the program is heavily dependent.

Evidence: Audit report for FY 2002 by KPMG, LLP, dated 09/30/02. OCRWM Director's Annual Assurance Memorandum to the Secretary of Energy for FY 2002.

3.7 Has the program taken meaningful steps to address its management deficiencies? Answer: YES Question Weight:12%

Explanation: The Program has taken a number of steps, including (1) realigned the organization, bringing in senior management and nuclear licensing expertise, (2) implemented a Management Improvement Initiative, (3) implemented a "Safety Conscious Work Environment," and (4) developed a Program Manual that identifies federal and contractor roles and responsibilities. The Project also has established a risk management plan and procedures to identify and handle risks and uses a database system to track risks and remediation and trends identified through management reviews. Program lacks an acquisition strategy for the repository, however, which is key to successful achievement of its long-term goals.

Evidence: New OCRWM organization chart (OCRWM web site at www.ocrwm.doe.gov). Management Improvement Initiative (PLN-CRW-AD-000007). OCRWM Program Manual, Final -- Phase 3, (DOE/RW-0555, April 2003). Training manual for "Safety Conscious Work Environment." OCRWM Annual Assurance Memorandum to the Secretary of Energy for FY 2002. Yucca Mountain Risk Management Plan and Procedure - December 2002.

3.CA1 Is the program managed by maintaining clearly defined deliverables, capability/performance characteristics, and appropriate, credible cost and schedule goals? Answer: NO Question Weight:12%

Explanation: The Program is working to complete these tasks in its final CAMP.

Evidence: Draft CAMP.

PART Performance Measurements

Program: Yucca Mountain Project
Agency: Department of Energy
Bureau: Office of Civilian Radioactive Waste Management
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	67%	75%	17%	

4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals? Answer: SMALL EXTENT Question Weight:16%

Explanation: The Program has experienced severe funding shortfalls, totaling $712 million in the aggregate, between FY 1995 and FY 2003. This has forced the Program to adjust its priorities year after year, and to defer planned work to future fiscal years. In spite of this funding shortfall, the Program achieved a key programmatic objective by submitting a Yucca Mountain site recommendation report in 2002, and is currently on track to submit a license application for a repository construction authorization to the Nuclear Regulatory Commission in 2004. The Yucca Mountain Project has met all its FY 2001 and FY 2002 annual performance targets, completed one of its FY 2003 performance targets, and is on track for completion of the remainder in the 4th quarter, FY 2003

Evidence: FY 1995-FY 2003 OCRWM budget requests vs. FY 1995-FY 2003 Energy and Water Development Appropriations Bills. The Secretary of Energy's site recommendation report can be found on the DOE web site at www.energy.gov. House Joint Resolution 87, signed by President Bush on July 23, 2002, designates Yucca Mountain as the repository site. FY 2001 and FY 2002 performance is documented in the Department of Energy's Performance and Accountability Report for the respective fiscal years (DOE/ME-0011, February 21, 2002; and DOE/ME-0014, January 31, 2003), as well as in OCRWM's Annual Report to the Congress for those fiscal years (DOE/RW-0556, October 2002; and draft DOE/RW-xxxx, March 7, 2003). Status of FY 2003 performance targets is contained in the Department's JOULE commitments tracking system (http://www.joule.doe.gov/go.html). GAO-02-765T.

4.2 Does the program (including program partners) achieve its annual performance goals? Answer: SMALL EXTENT Question Weight:16%

Explanation: The Yucca Mountain Project has met all its annual performance measures for FY 2001 and FY 2002, completed one of its FY 2003 performance targets, and is on track to complete the remainder of its FY 2003 performance targets during the 4th quarter; however, baselines have shifted frequently with funding shortfalls.

Evidence: Draft CAMP; prior year budgets and appropriations.

4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year? Answer: NO Question Weight:16%

Explanation: The program's EVMS, which would provide a basis for such demonstrations, is not yet certified. M&O did not accept most Burns and Roe recommendations for efficiency and cost-effectiveness improvements.

Evidence: Bechtel SAIC, Total System Life cycle Cost for Site Recommendation Letter Report, TDR-CRW-AD-000001 REV 00, February 2002.

4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals? Answer: NO Question Weight:16%

Explanation: Program has been slow to complete its acquisition strategy and adopt competitive contracting methods. It has done only limited bench-marking to identify best practices in similar government and private sector projects.

Evidence: CAMP.

PART Performance Measurements

Program: Yucca Mountain Project
Agency: Department of Energy
Bureau: Office of Civilian Radioactive Waste Management
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	67%	75%	17%	

4.5 **Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?** Answer: NO Question Weight:16%

Explanation: Evaluations by independent reviewers like NWTRB, Burns and Roe, and GAO have been critical of program strategy and management.

Evidence: Robin Nazarro, "Nuclear Waste: Preliminary Observations on the Quality Assurance Program at the Yucca Mountain Repository," GAO-03-826T May 28, 2003; Gary Jones, "Nuclear Waste: Uncertainties About the Yucca Mountain Repository Project," GAO-02-765T May 23, 2002; NWTRB, Report to the Secretary of Energy and the Congress, April 2003; Burns and Roe reports.

4.CA1 **Were program goals achieved within budgeted costs and established schedules?** Answer: SMALL EXTENT Question Weight:16%

Explanation: The Program has experienced severe funding shortfalls, totaling $712 million in the aggregate, between FY 1995 and FY 2003. This has forced the Program to adjust its priorities year after year, and to defer planned work to future fiscal years. In spite of this funding shortfall, the Program achieved a key programmatic objective by submitting a Yucca Mountain site recommendation report in 2002, and is currently on track to submit a license application for a repository construction authorization to the Nuclear Regulatory Commission in 2004.

Evidence: FY 1995-FY 2003 OCRWM budget requests vs. FY 1995-FY 2003 Energy and Water Development Appropriations Bills. The Secretary of Energy's site recommendation report can be found on the DOE web site at www.energy.gov. House Joint Resolution 87, signed by President Bush on July 23, 2002, designates Yucca Mountain as the repository site. FY 2001 and FY 2002 performance is documented in the Department of Energy's Performance and Accountability Report for the respective fiscal years (DOE/ME-0011, February 21, 2002; and DOE/ME-0014, January 31, 2003), as well as in OCRWM's Annual Report to the Congress for those fiscal years (DOE/RW-0556, October 2002; and draft DOE/RW-xxxx, March 7, 2003). Status of FY 2003 performance targets is contained in the Department's JOULE commitments tracking system (http://www.joule.doe.gov/go.html).

PART Performance Measurements

Program: Yucca Mountain Project
Agency: Department of Energy
Bureau: Office of Civilian Radioactive Waste Management
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	67%	75%	17%	

Measure: Begin acceptance of spent nuclear fuel & high-level radioactive waste at the repository in 2010.

Additional Information: Yucca Mountain Project long-term goal #1 (supports OCRWM Program Goal)

Year	Target	Actual	**Measure Term:** Long-term
2004	License Applicatn		
2008	Constrxn Authorized		
2010	Waste Accept		

Measure: (5) Complete development and ORD internal review of draft license application chapters

Additional Information: For FY 2004

Year	Target	Actual	**Measure Term:** Annual

Measure: (1) Complete and submit to NRC a license application for repository construction authorization

Additional Information: For FY 2005

Year	Target	Actual	**Measure Term:** Annual
2005	1		
2006			

Measure: (2) Complete repository preliminary design

Additional Information: For FY 2005

Year	Target	Actual	**Measure Term:** Annual

PART Performance Measurements

Program: Yucca Mountain Project
Agency: Department of Energy
Bureau: Office of Civilian Radioactive Waste Management
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	67%	75%	17%	

Measure: Complete detailed work plan, cost estimate and schedule, and performance measurement baseline

Additional Information: For FY 2005

Year	Target	Actual	**Measure Term:** Annual
2005	1		

Measure: Complete cost, schedule and performance baseline; complete CAMP; certify EVMS.

Additional Information: Yucca Mountain Project long-term goal #2 (supports OCRWM Program Goal)

Year	Target	Actual	**Measure Term:** Annual
2004	Baseline complete		
2005	CAMP complete		
2005	EVMS certified		

Measure: Variance from cost, schedule and performance baselines

Additional Information: For FY 2003

Year	Target	Actual	**Measure Term:** Annual
2004	<=10%		
2005	<=10%		
2006	<=10%		

PART Performance Measurements

Program: Yucca Mountain Project
Agency: Department of Energy
Bureau: Office of Civilian Radioactive Waste Management
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	67%	75%	17%	

Measure: Complete repository conceptual design and request Acquisition Executive approval to start preliminary design, which will be used in the license application.

Additional Information: For FY 2003

Year	Target	Actual	**Measure Term:** Annual
2003	1		
2005			
2006			

Measure: Complete and issue Total System Life Cycle Cost and Fee Adequacy reports.

Additional Information: For FY 2003

Year	Target	Actual	**Measure Term:** Annual

Measure: (1) Complete, review and approve the safety analyses for Department-owned spent nuclear fuel and high-level radioactive waste, Naval spent nuclear fuel, and plutonium waste forms for license application,

Additional Information: For FY 2004

Year	Target	Actual	**Measure Term:** Annual
2004	1		

Measure: Address all major NRC key technical issues to support license application

Additional Information: For FY 2004

Year	Target	Actual	**Measure Term:** Annual
2004	1		

PART Performance Measurements

Program: Yucca Mountain Project
Agency: Department of Energy
Bureau: Office of Civilian Radioactive Waste Management
Type(s): Capital Assets and Service Acquisition

Section Scores				Rating
1	2	3	4	Adequate
100%	67%	75%	17%	

Measure: (3) Prepare, review and approve required elements of the preliminary design for the waste package, surface facilities, and subsurface facilities in support of the license application

Additional Information: For FY 2004

Year	Target	Actual	**Measure Term:** Annual
2004	1		
2005			
2006			

Measure: (4) Complete the Licensing Support Network and certification consistent with the requirements of 10 CFR Part 2, Subpart J, at least 6 months prior to submitting the LA

Additional Information: For FY 2004

Year	Target	Actual	**Measure Term:** Annual
2004	1		