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CLIMATE CHANGE

Observations on the April 1999 Report on Climate Change Programs

Statement of Peter F. Guerrero, Director,
Environmental Protection Issues,
Resources, Community, and Economic
Development Division



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Messrs. Chairmen and Members of the Committees:

Our testimony today discusses activities relating to climate change programs. Specifically, it responds to your request that we comment on (1) the administration's April 20, 1999, report¹ on federal expenditures for climate change activities and (2) a limitation—set forth in the Environmental Protection Agency's appropriations act for fiscal year 1999—that was designed to prevent the agency from taking specified regulatory actions to implement the Kyoto Protocol on climate change.

In summary, we found the following:

The administration's report, as required by law, provides multiyear spending data and describes climate change programs and activities. However, it was delivered to the Congress on April 20, 1999, about 2-1/2 months after the specified due date. Also, the report did not always link its discussion of activities and performance goals to the specific line items shown in the President's budget. Finally, the report did not always provide a clear picture of intended performance across federal climate change activities, for example, by specifying—in measurable and quantifiable terms—the outcomes expected to be achieved by federal spending.

A provision in the Environmental Protection Agency's appropriations act for fiscal year 1999 prohibited the agency from taking certain regulatory actions—for example, proposing regulations—to implement the Kyoto Protocol on climate change. To assess the scope of the prohibition, we reviewed the legislative history of the provision. Based on this review, we believe that the provision does not limit the agency's ability to undertake activities that are otherwise authorized by law. (See the appendix for an analysis of this issue.)

Background

Climate change policy has been a key congressional concern recently, focusing especially on the Kyoto Protocol, which was agreed to—in principle—by the United States and 37 other countries in December 1997. Under the protocol, the United States agreed to substantially reduce its greenhouse gas emissions during the 5-year period beginning in 2008. The protocol will become binding upon the United States only if the Senate ratifies it. The protocol would amend the United Nations Framework Convention on Climate Change, which was agreed to in 1992 and ratified by the Senate in the same year. Under the convention, the voluntary goal

¹Report to Congress on Federal Climate Change Expenditures, Apr. 20, 1999.

for the United States is to reduce greenhouse gas emissions by 2000 to their 1990 level. Under the Kyoto Protocol, the requirement for the United States would be to reduce emissions to 7 percent below their 1990 level. Meeting this target would require a reduction of 30 percent relative to the level of emissions that would otherwise be anticipated in 2010, the midpoint of the 5-year period (2008-12), according to the Energy Information Administration.²

In February 1998, as part of the fiscal year 1999 budget submission, the President proposed a Climate Change Technology Initiative, designed to reduce greenhouse gas emissions. Among other things, the initiative proposed additional funding primarily for (1) the Department of Energy's research and development activities; (2) tax credits—to be administered by the Department of the Treasury—to encourage the purchase of certain energy-efficient cars and houses, among other things; and (3) the Environmental Protection Agency's (EPA) voluntary programs to encourage businesses and others to conserve energy. The President also proposed increased funding for the U.S. Global Change Research Program, which includes efforts by the National Aeronautics and Space Administration and other agencies to study climate change.

As part of the fiscal year 1999 appropriations process, the Congress included a number of mandates (in laws) and directives (in committee reports) to various executive agencies. One law, enacted in October 1998, required the President to provide detailed information on climate change programs and activities. The law also stated that this should be provided in conjunction with the President's budget submission for fiscal year 2000. That budget was transmitted to the Congress on February 1, 1999. A complementary Senate committee report directed the administration to provide the Congress with a detailed plan for implementing key elements of the President's proposal on climate change. In response to the law and committee report, the President transmitted a report to the Congress on April 20, 1999. Another law—providing appropriations for EPA for fiscal year 1999—was designed to prevent EPA from taking certain regulatory actions, for example, proposing regulations, to implement the Kyoto Protocol.

To assess the April 20 report, we reviewed agencies' budget documents. We also compared the report with an August 1998 report by the Congressional Budget Office (CBO), which was prepared, in part, to

²Energy Information Administration, International Energy Outlook—1999, 1999, Table 20.

document current U.S. efforts in the area of global climate change.³ We did not independently verify the expenditure information or performance measures in the April 20 report. To assess the spending limitation, we reviewed the provision and its legislative history and discussed these matters with officials at EPA. We performed our work in April and May 1999 in accordance with generally accepted government auditing standards.

The Report Provided the Information Required by Law but Only Some Information on Performance Goals

The administration's April 20 report, as required, provides detailed information on climate change programs and activities. In addition, as directed in a Senate committee report, the April 20 report, in some but not all cases, (1) linked its discussion of activities and performance goals to the specific line items shown in the President's budget, and (2) provided a clear picture of intended performance across federal global climate change activities.

The requirement for the report is contained in the Omnibus Consolidated and Emergency Supplemental Appropriations Act, enacted in October 1998.⁴ That act required the administration to provide a detailed accounting of federal obligations and expenditures for climate change programs and activities. The report was to cover domestic and international activities for fiscal years 1998 and 1999 and any plan for programs thereafter related to the Kyoto Protocol. The report was also required to include an accounting of expenditures by agency, with each agency identifying climate change activities and associated costs by line item, as presented in the President's budget.

In addition, a Senate report directed the administration to provide the Congress with a detailed plan for implementing key elements of the President's proposal on climate change.⁵ The plan was to include performance goals for the reduction of greenhouse gases that had objective, quantifiable, and measurable target levels and was to provide evidence on the effectiveness of these programs in meeting the performance goals. In setting out this directive, the report said that the administration must do a better job of explaining the components of the programs, their anticipated goals and objectives, the justification for any funding increases, a discussion of how success would be measured, and a

³CBO, Climate Change and the Federal Budget, Aug. 1998.

⁴P. L. 105-277, Oct. 21, 1998, sec. 573(b).

⁵S. Rept. 105-251, "Treasury and General Government Appropriation Bill, 1999," July 15, 1998, p. 6.

clear definition of how these programs were justified by goals and objectives that were not linked to implementing the Kyoto Protocol.⁶

**The Report, as Required,
Provides Detailed
Information on Programs**

The administration's report provides a detailed accounting of domestic and international expenditures on climate change. It does so in several ways. For example, it distinguishes activities that are directly related to climate change, such as the U.S. Global Change Research Program, from activities that are not directly related, such as the Department of Energy's weatherization and state energy grant programs. It also lists programs and tax policies related to climate change, by appropriation account. This listing shows line items for 14 departments or agencies, including the Department of Energy, EPA, and 12 others.

To check the completeness of the administration's report, we compared it against a similar CBO report, prepared at the request of Senate Committee on the Budget and issued in August 1998. We found that the two reports generally identified the same programs as being directly related to climate change. One exception is that CBO included activities under the Montreal Protocol because of the "close link" between ozone-depleting gases (addressed by the Montreal Protocol) and greenhouse gases (addressed by climate change programs), but the administration's report does not include those activities.

For programs that are classified in both reports as indirectly related to climate change, there are similarities and differences between the reports. For example, both reports include the Department of Energy's weatherization and state energy grant programs. But only CBO includes the Department of Transportation's Congestion Mitigation and Air Quality Improvement Program.

**The Report Was Not Issued
on Time**

The act required the report to be provided with the President's submission of the fiscal year 2000 federal budget, which occurred on February 1, 1999.⁷ The accompanying Senate report stated that the administration's report was expected to be included as part of the affected agencies' fiscal year

⁶Language about the need to improve budget submissions appears in two other congressional reports. See H. Rept. 105-769, "Making Appropriations for the Department of Veterans Affairs and Housing and Urban Development, and for Sundry Independent Agencies, Boards, Commissions, Corporations, and Offices for the Fiscal Year Ending September 30, 1999, and for Other Purposes," Oct. 5, 1998, p. 274. Also, see S. Rept. 105-227, "Department of the Interior and Related Agencies Appropriations Bill, 1999," June 26, 1998, p. 7.

⁷Because the law requiring this report was enacted on Oct. 21, 1998, the administration had less than 3-1/2 months to prepare the report.

2000 budget submissions, which also occurred in early February 1999. Because the report was issued on April 20, 1999, it was not available to the Congress for the first 2-1/2 months of annual budget process, although it was available for the balance of the process.

The Report Was Not Always Linked to the President's Budget

As required by law, the administration's report provides a detailed accounting of federal spending for climate change programs and activities, both domestic and international. In a series of tables, it provides this information by agency and by line item in the President's budget, as specifically required by the act. It also provides the information by program or program element. However, the report's discussion of climate change activities and the performance goals set out in the report are organized by program or group of programs. This organization does not correspond to either the line items in the President's budget nor completely to the tables in the report itself on spending by program or program element.

For example, the discussion of EPA's activities and performance goals is organized by program or group of programs as follows: (1) buildings programs; (2) transportation programs; (3) industry programs; (4) carbon removal programs; (5) management, planning, analysis, and outreach programs; and (6) Clean Air Partnership Program. The report presents three line items for EPA: (1) environmental programs and management; (2) science and technology; and (3) state and tribal assistance grants—Clean Air Partnership Fund.

This organizational inconsistency limits the report's usefulness. For example, congressional and other users of the report cannot identify line items in the President's budget—for example, those with large dollar amounts or those for which an increase in funding is being requested. Nor can users easily identify in the report what activities are planned and what performance goals have been established. Including a crosswalk, or a connection, between the programs as discussed in the report and the budget line items would have made the report more useful.

The Report Did Not Always Provide a Clear Picture of Intended Performance

The administration's report sets out 78 performance goals for its climate change activities across the various programs discussed in the report. In covering this wide range of activities, the report did not provide complete information to congressional decisionmakers on the results to be achieved for the proposed level of resources. Specifically, the report did not

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- explain why certain programs were discussed, even though no performance goals were established for them;
 - establish quantifiable goals in all cases;
 - establish results-oriented goals in all cases; and
 - provide baseline and trend data to support these goals.

However, we recognize that establishing useful performance goals for research programs can be especially challenging.

Lack of performance goals was not always explained. The administration's report organizes its discussion of climate change activities around 32 programs or groups of programs—17 under the Climate Change Technology Initiative, 7 under the U.S. Global Change Research Program, 2 under international assistance, and 6 that are indirectly related to climate change. In some cases, individual programs under the groups of programs are briefly discussed. However, the performance goals set out in the report generally apply to the groups of programs.

We found that the report contained performance goals for 19 of the 32 programs or groups of programs, but not for the 13 others. Among the programs lacking performance goals are the Department of Housing and Urban Development's Partnership for Advancing Technology in Housing program, Energy's fossil energy programs, and the six programs indirectly related to climate change.⁸ The report does not explicitly state why performance goals were not provided or were not considered appropriate for these programs.

The report does note that the six programs indirectly related to climate change exist primarily for another purpose, such as energy conservation, or have multiple environmental benefits, but have the additional effect of reducing fossil fuel use. For these programs, it is understandable that the performance goals would have been expressed in terms of their primary purpose, such as energy conservation, and not necessarily included in this report. For the other programs, the rationale for omitting performance goals is not as clear.

About one-third of performance goals were expressed in quantifiable terms. Performance goals help translate agencies' uses of resources into results by establishing target levels for performance expressed as tangible,

⁸Other programs for which no goal was established are the National Institute of Standards and Technology's industry programs; the carbon sequestration or removal programs of the departments of Agriculture and Energy and EPA; and Energy's programs related to the management, planning, and analysis of its climate change activities.

measurable objectives against which actual achievement can be compared. If performance goals and measures include a quantifiable, numerical target level or other measurable value, they more easily allow for progress toward the goal to be assessed. An example of a quantifiable goal would be reducing by 80 percent the amount of lead in the air or reducing by 15 percent the number of children with dangerous levels of lead in their blood.

About two-thirds of the performance goals were not expressed in quantifiable terms. For example, one goal for fiscal year 2000 is to “use ecosystem-scale experiments involving increased CO₂ [carbon dioxide] and other environmental factors to determine how atmospheric change and potential climatic change may affect forest productivity, forest health, and species distributions.” Another goal for the same year is to “document land-use and land-cover change in regions where rapid change could potentially alter the sensitivities/vulnerabilities of the region to climate change.” Although it may be possible to determine whether these goals actually occurred, they are difficult to use to assess the programs’ progress toward achieving their longer-term goals and overall purposes. Because such goals would involve different events each year, overall progress may be hard to measure.

About one-seventh of goals are results-oriented. Performance goals are most useful to congressional and other decisionmakers in judging the results to be achieved for a proposed level of resources if they are expressed as program outcomes and are quantifiable. Outputs are the direct products and services delivered by a program, such as a regulation, inspection, or enforcement action. Outcomes are the results of these products and services.

Outcome goals could be expressed in terms such as reductions in the number of people developing respiratory diseases or cancers or dying as a result of being exposed to pollutants in the air. Performance goals based on target levels of reductions in air pollutants would also be outcome goals. These intermediate outcome goals are not as reflective of the program’s ultimate purpose, but may be the best an agency can do if sufficient data on health and environmental effects are not available.

While it is appropriate to have a mixture of outcome- and output-oriented performance goals, the administration’s report contains a relatively small percentage of outcome-oriented performance goals. By our count, 11 (or 14 percent) of the 78 performance goals set out in the report are

outcome-oriented. All of these are goals for intermediate outcomes—such as reduced emissions of greenhouse gases believed to contribute to or cause global climate change—rather than ultimate outcomes—such as effects on health and the environment. However, given the state of our understanding of climate change science, these intermediate outcome goals may be appropriate at this time. In addition, five of the goals are for the year 2010, which may be too far away for congressional decisionmakers to judge the intended performance for the funds that are being requested for fiscal year 2000.

Baseline and trend data were not provided. Baseline and trend data also provide a basis for comparing the actual results of a program with the performance goals. These data would provide a context for drawing conclusions about whether performance goals are reasonable and appropriate. Decisionmakers could also use such data to gauge how the programs' anticipated performance levels compare with past performance. The administration's report, however, does not include either baseline or trend data.

An example of the usefulness of such data is the Department of Transportation's fiscal year 2000 performance plan under the Government Performance and Results Act. That plan includes graphs that show baseline and trend data, as well as the targets for fiscal years 1999 and 2000, for nearly all of its performance goals and measures. For instance, the performance goal for hazardous materials incidents is to reduce the number of serious hazardous materials incidents in transportation to 411 or fewer in 2000 from a peak of 464 in 1996. The goal has a graph that shows the number of serious hazardous materials incidents in transportation from 1985 through 1997 and target levels for fiscal years 1999 and 2000.

Establishing useful performance goals for research programs can be especially challenging. More than half of the performance goals are for activities related to research and development. During our reviews of the implementation of the Government Performance and Results Act, we have found that federal agencies have had difficulty measuring research annually and providing quantitative measures of the useful outcomes of research. Earlier this year, the Committee on Science, Engineering, and Public Policy issued a report that may be helpful to the agencies as they work to develop more useful performance goals and measures for their

research activities.⁹ The study's purpose was to identify and analyze the most effective ways of assessing the results of research and to help the federal government determine how its agencies can better incorporate research activities into strategic and performance plans and improve the management and effectiveness of research programs.

After holding a series of workshops, the committee concluded that research programs, no matter what their character and goals, can be evaluated meaningfully on a regular basis in accordance with the spirit and intent of the Results Act. The committee said that, if, for example, Energy adopted the goal of producing cheaper solar energy, it could annually measure the results of the research designed to decrease the cost of solar cells against specific milestones. Basic research, on the other hand, requires a different method of assessment since the ultimate outcomes are seldom identifiable while the research is in progress. For this reason, the committee suggested a three-pronged expert review process that may apply to many of the climate change research programs. We anticipate that the guidance provided by this report will help agencies develop more meaningful performance goals and measures for research programs and activities.

This concludes our prepared statement. We would be pleased to respond to questions from you or Members of the Committees.

⁹Committee on Science, Engineering, and Public Policy of the National Academy of Sciences, National Academy of Engineering, and Institute of Medicine, Evaluating Federal Research Programs: Research and the Government Performance and Results Act, 1999.

Analysis of the Limitation on EPA Expenditures

A proviso in the appropriations act that provides fiscal year 1999 funds for EPA states that those funds may not be used for certain purposes related to the Kyoto Protocol.¹⁰ Specifically, the law says that funds shall not be used “to propose or issue rules, regulations, decrees or orders for the purpose of implementation, or in preparation for implementation” of the Kyoto Protocol.

The scope of the proviso was both clarified and narrowed during the legislative process. First, the scope of the proviso was clarified in the conference report discussion, to make it clear that the limitation applies to those activities of EPA that are predicated “solely” on implementing, or preparing to implement, the Kyoto Protocol.¹¹ Thus, an EPA activity justified by some other authority, even if it also facilitated the implementation of the protocol, would not be covered by this proviso.

Also, the scope was narrowed during the legislative process. The House-passed version would have prohibited EPA from using funds to “develop, propose, or issue” rules “in contemplation of implementation” of the Kyoto Protocol. However, the law, as enacted, prevents EPA only from using funds to “propose or issue” rules whose purpose is implementation, or “preparation” for implementation, of the protocol. The law, as enacted, is thus narrower in two respects. First, it prohibits EPA from proposing or issuing rules, rather than more broadly preventing EPA from developing rules. Second, the prohibition extends only to “preparation” for implementing the Protocol, rather than “contemplation” of its implementation. Accordingly, the final statutory language would apply only to proposing or issuing rules or similar requirements having a demonstrable relationship to implementing the protocol.

In summary, in light of the clarification and narrowing of the proviso’s scope during congressional consideration, we conclude that the limitation does not preclude EPA from engaging in activities that are otherwise authorized by law.

¹⁰P. L. 105-276, “Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 1999,” Oct. 21, 1998.

¹¹H. Rept. 105-769, Conference Report, “Making Appropriations for the Department of Veterans Affairs and Housing and Urban Development, and for Sundry Independent Agencies, Boards, Commissions, Corporations, and Offices for the Fiscal Year Ending September 30, 1999, and For Other Purposes,” Oct. 5, 1998, pp. 273 and 274.

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