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Fact Sheet for the Honorable Richard M. Burr, House of Representatives

October 1995

FEDERAL ELECTRIC POWER

Operating and Financial Status of DOE's Power Marketing Administrations

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GAO

United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-265626

October 13, 1995

The Honorable Richard M. Burr
House of Representatives

Dear Mr. Burr:

This report responds to your request for information on the Department of Energy's (DOE) five power marketing administrations (PMAs). Specifically, we are providing you with operating and financial information that covers fiscal years 1985 through 1994. We are also providing information on competitive issues facing the PMAs.

The first section of this letter—operating information—includes a description of facilities used by the PMAs to sell power and the customers served by the PMAs. With some exceptions, the PMAs sell and transmit electricity from multipurpose federal hydropower facilities that are owned and operated by other federal agencies. The PMAs give preference in the sale of power to publicly owned power systems; such sales accounted for about 63 percent of the PMAs' power sales in 1993.

The second section—financial information—discusses the manner in which the PMAs finance their operations, the revenues and expenses associated with their operations, and the manner in which they repay their debts. The PMAs have financed all capital investments through appropriations, other indebtedness to the U.S. Treasury, and financial obligations to nonfederal power projects—all of which comprise the PMAs' debt. About two-thirds of the PMAs' cumulative debt (approximately $23 billion) was outstanding, as of September 30, 1994. The PMAs are required to repay their debt, with interest, using revenues generated from power sales. The weighted average interest rates on the portion of the PMAs' outstanding debt owed to the Treasury (approximately $15 billion) are below the average rate on the outstanding long-term debt paid by the nation's largest investor-owned utilities.

The final section—competitive issues—describes the increasingly competitive markets in which the PMAs operate and the potential effect of these markets on the PMAs. In general, the PMAs remain among the sellers of electricity at the lowest cost. Their ability to operate as low-cost sellers stems from several factors, including the inherent low cost of hydropower relative to other generating sources, federal financing at relatively low interest rates, flexibility in the repayment of principal on the Treasury

portion of the PMAs' debt, the PMAs' tax exempt status, and operating budgets that seek to break even rather than earn a profit or a return on investment. Because the PMAs' debt is at low interest rates, four of the five PMAs have been able to carry high levels of debt without a corresponding increase in financial risk. However, high levels of debt currently pose problems for one PMA and could pose problems for other PMAs in a more competitive environment.

Operating Information

The PMAs—Alaska Power Administration (Alaska), Bonneville Power Administration (Bonneville), Southeastern Power Administration (Southeastern), Southwestern Power Administration (Southwestern), and Western Area Power Administration (Western)—were established from 1937 through 1977 to sell and transmit electricity generated mainly from federal hydropower facilities.[1] With the exception of Alaska, the PMAs do not own or operate any of the power generation facilities.[2] Most of these facilities were constructed and continue to be owned and operated by the Department of the Interior's Bureau of Reclamation (Bureau) or the U.S. Army Corps of Engineers (Corps).[3] The Bureau and the Corps constructed these facilities as part of a larger effort in developing multipurpose water projects that have other functions in addition to power generation, including flood control, irrigation, navigation, and recreation.[4]

The PMAs, with the exception of Southeastern, have constructed and continue to own and operate a combined total of nearly 33,000 miles of transmission lines to carry out the PMAs' role in selling and transmitting electric power. Power sold by the five PMAs accounted for about 3 percent of all power generated in the United States in 1993.

The PMAs vary widely in their operating characteristics and scope of activities. Alaska has 88 miles of transmission lines, and sales are limited to two areas in the State of Alaska. Southeastern owns no transmission

[1]Nuclear-fired and coal-fired power plants account for less than 5 percent of the generating capacity used to generate the power sold by the PMAs. Table I.1 of app. I includes the generating capacity for all PMA-related facilities.

[2]For financial reporting purposes, all power-related capital expenditures made by the PMAs or the operating agencies are shown as assets on the consolidated financial statements of the PMAs and the operating agencies.

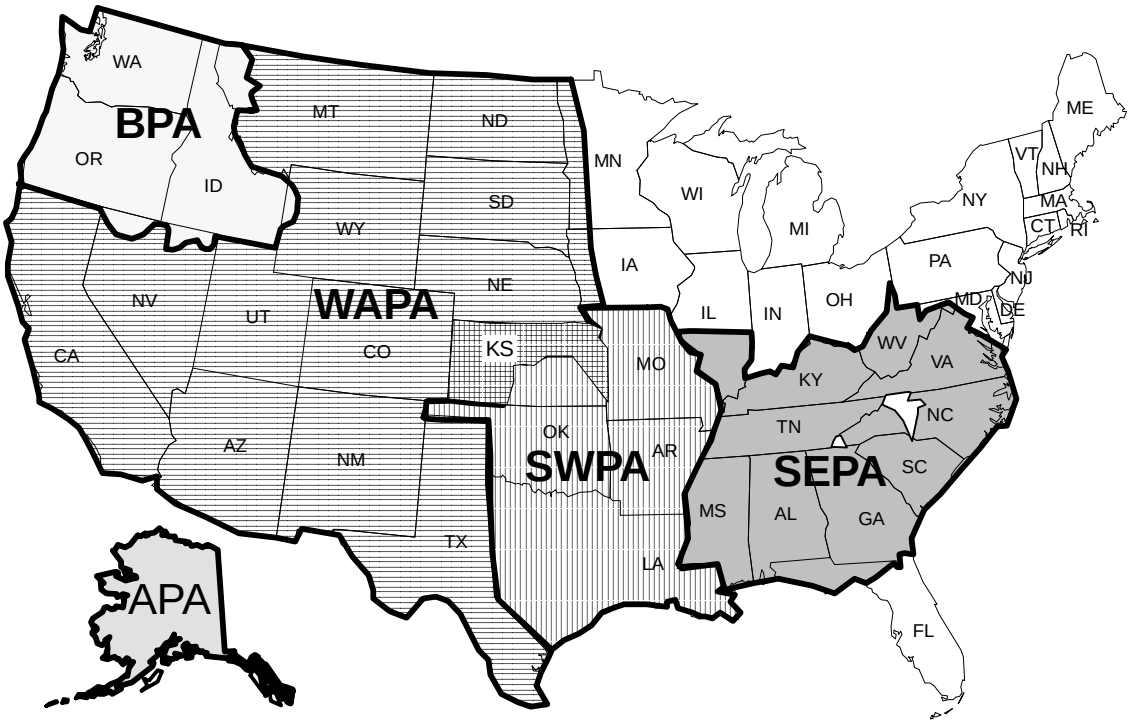
[3]In addition to the Bureau and the Corps, four other agencies are responsible for the day-to-day operations of 5 of the 135 facilities used for generating power that the PMAs market. These other agencies are shown in table I.1 of app.I. We refer to these six agencies as the operating agencies.

[4]Responsibility for all functions of the facilities resides with the operating agencies of the hydropower facilities.

facilities and relies on the transmission services of other utilities to transmit the power that it sells to customers in all or parts of 11 states. Southwestern is comparable to Southeastern in terms of sales volume but owns and operates about 1,400 miles of transmission lines in all or parts of six states. Western owns and operates over 16,000 miles of transmission lines serving customers in all or parts of 15 states. Bonneville owns and operates over 14,000 miles of transmission lines and sells to customers in all or parts of eight states. In 1994, Bonneville accounted for about 69 percent of total PMA revenues.

Figure 1 presents the service area and fiscal year 1994 operating revenue for each PMA. In addition, table I.2 in appendix I shows some operating statistics including the amount of generating capacity used to generate the power sold by the PMAs, and the number of power plants, miles of transmission lines, and employees for each PMA, as of September 30, 1994.

Figure 1: PMAs' Service Areas



Fiscal Year 1994 Revenues
(Dollars in millions)

APA	Alaska Power Administration	$ 10.2
BPA	Bonneville Power Administration	2,195.9
SEPA	Southeastern Power Administration	158.1
SWPA	Southwestern Power Administration	109.4
WAPA	Western Area Power Administration	713.8

Both Western and Southwestern market power in Kansas.

Source: Developed by GAO from data provided by DOE and the PMAs' 1994 annual reports.

Each PMA has an administrator who is appointed by the Secretary of Energy. Each administrator is authorized to make decisions regarding the operation of the PMA, although the authority and duties of the administrator are subject to the supervision and direction of the Secretary.

The administrators testify before the Congress on the PMAs' budgets, which are submitted as part of DOE's annual federal budget. DOE establishes each PMA's personnel limits as part of DOE's total personnel ceiling. The administrator also has authority to propose rate adjustments to meet projected revenue needs. Except for Bonneville, the Deputy Secretary of Energy is responsible for approving rate adjustments for the PMAs on an interim basis. The Federal Energy Regulatory Commission has authority over final approval for all of the PMAs' rates. In addition, the administrators work with numerous federal, state, and local agencies on issues such as flood control, fish and wildlife protection, and irrigation. For example, Bonneville is required to work with the Pacific Northwest Electric Power and Conservation Planning Council, which the Congress created in 1980 to coordinate power planning and fish and wildlife protection in the Pacific Northwest, among other things.[5]

As required by law, all PMAs give preference in the sale of power to public power customers—customer-owned cooperatives, public utility and irrigation districts, and municipally owned utilities.[6] Public power customers purchased about 63 percent of the power sold by the PMAs in fiscal year 1993.[7] The remainder of the power is purchased by state and federal agencies and nonpreference customers, such as investor-owned utilities and industrial companies. Figure 2 shows the percentage of power sold by all the PMAs to each type of PMA customer during fiscal year 1993 in megawatt (MW) hours (MWh).[8] (Table I.3 of app. I shows the quantity of power sold and associated revenues for all PMAs for each type of customer during fiscal year 1993.)

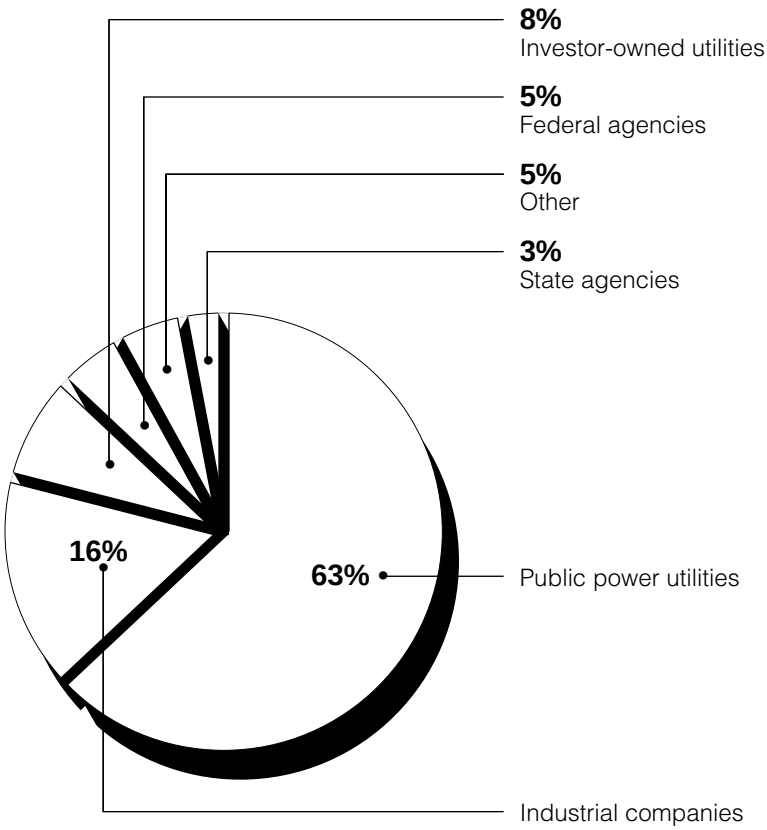
[5]All of Bonneville's proposals involving major resource decisions must be consistent with the Council's plan—those plans that are inconsistent must receive specific congressional authorization.

[6]The PMAs may also give preference to units of state governments and the federal government.

[7]We focused on public power customers because (1) public power customers generally purchase the majority of PMA-provided power, (2) investor-owned utilities generally only supplement their power needs with purchases from the PMAs, and (3) end users (generally state and federal agencies and industrial customers) do not report information to DOE on energy usage and thus data are not available to determine whether these customers purchase power from sources other than the PMAs.

[8]A megawatt is 1 million watts; a watt is the basic unit used to measure electrical power. A megawatt hour is equal to 1 megawatt of power applied for 1 hour.

Figure 2: Percentage of Total Power Sold by PMAs to Each Type of Customer During Fiscal Year 1993



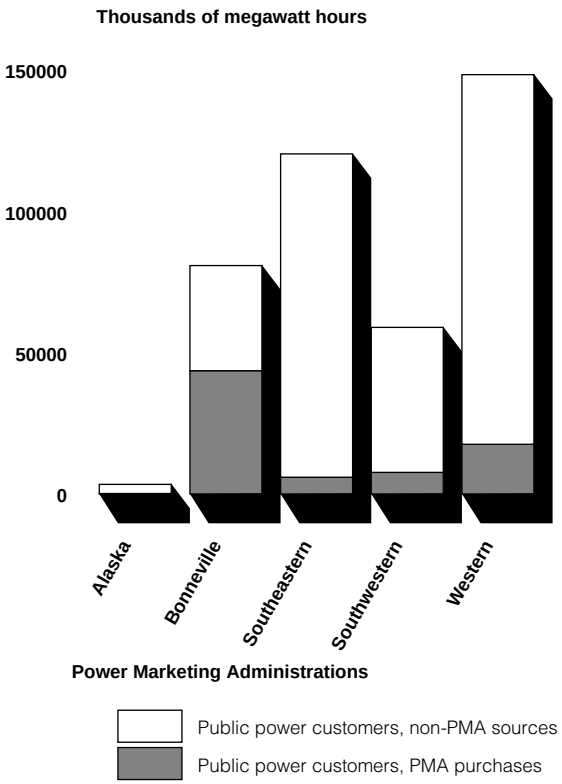
Source: GAO's analysis of data provided by DOE's Energy Information Administration.

As shown in figure 3, as a whole, public power customers are not dependent on the PMAs as their sole source of power. For example, as shown in figure 3, in fiscal year 1993, Bonneville's public power customers obtained about 46 percent of their overall power needs from sources other than Bonneville, while Southeastern's public power customers obtained about 95 percent of their total power needs from sources other than Southeastern.[9] At the same time, however, some of the PMAs' public power customers purchase a large percentage of their power from PMAs. For example, during fiscal year 1993, more than 80 percent of Bonneville's

[9]The amount of power purchased from the PMAs by the PMAs' customers varies from year to year depending on conditions such as water flow that may affect the amount of power that a PMA can sell.

public power customers obtained more than 75 percent of their total power needs from Bonneville. Table I.4 of appendix I shows the quantity of power purchased by public power customers from PMAs and the total quantity of power obtained by the same customers from all sources during fiscal year 1993. Table I.5 of appendix I shows the number of public power customers for each PMA and the percentage of the customers' overall power needs that were purchased from the PMA.

Figure 3: PMAs' Public Power Customers' Purchases of PMA Power Versus Total Power Obtained From All Sources for Fiscal Year 1993



Note: Non-PMA sources include customers' self-generation and power purchases from other sources.

Source: GAO's analysis of the PMAs' and the Energy Information Administration's data.

Financial Information

The Congress appropriates money each year to the PMAs for power-related purposes and to the federal operating agencies for both power and nonpower purposes. The PMAs, other than Bonneville, generally receive

appropriations annually to cover operations and maintenance expenses and capital investments in their transmission assets.[10, 11, 12] In fiscal year 1994, the PMAs received about $328 million in appropriations. The operating agencies receive appropriations for all aspects of the multipurpose hydro projects, including operations, maintenance, and capital expenses related to power and also to other functions, such as irrigation and navigation. The operating agencies expended about $409 million on power-related operating and capital expenses and allocated these expenses to the PMAs for repayment during fiscal year 1994. The PMAs have no control over the amount of generation investment incurred by the operating agencies, which, by law, becomes repayable through rates charged by the PMAs.

PMAs, unlike most other federal agencies, are required by law to repay their appropriations as well as appropriations expended by the operating agencies for power-related purposes.[13] The PMAs repay appropriations expended for operations and maintenance expenses in the same year that the expenses are incurred. In contrast, the PMAs repay appropriations expended for capital investments and other debt, with interest, over the repayment period as prescribed by law and/or DOE order.[14] Figure 4 shows the appropriations received by each PMA for operations and maintenance expenses and for capital investments in transmission facilities in fiscal year 1994. Figure 4 also shows the appropriations that were expended by the operating agencies for operations and maintenance expenses and for

[10]In 1974, the Congress stopped providing Bonneville with annual appropriations and instead provided it with a revolving fund maintained by the Treasury and permanent Treasury borrowing authority, now limited to $3.75 billion. However, Bonneville remains responsible for repaying its debt stemming from appropriations expended by Bonneville prior to 1974 and debt stemming from appropriations expended by the operating agencies on power-related expenses.

[11]Although most of Western's projects are funded by appropriations, three projects—the Fort Peck Project, which is included in the Pick-Sloan Missouri Basin Program; the Colorado River Storage Project; and the Central Arizona Project—have revolving funds for operational, maintenance, and replacement costs. Western's Boulder Canyon Project has permanent authority for the same types of costs as well as emergency expenditures. Nonfederal financing has been obtained for the Parker Dam, the Hoover Power Plant upratings, and the Buffalo Bill Power Plant. Nonfederal financing has been obtained for transmission construction through participation agreements with regional utilities.

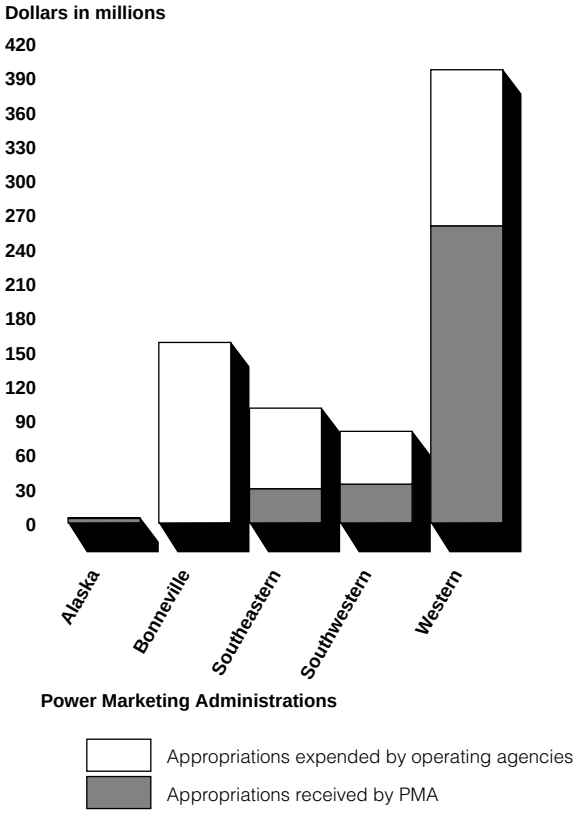
[12]Because Alaska owns and operates its facilities, it directly receives appropriations for capital investments in generation facilities.

[13]In addition to appropriated debt, Bonneville's debt includes Treasury bonds and obligations in nonfederal power projects. Bonneville is to repay all these debts with interest.

[14]The PMAs are generally required to repay the investments in (1) transmission assets within 35 to 45 years of initial operation, (2) generation assets generally within 50 years of initial operation, and (3) replacements within their estimated useful service life, but not exceeding 50 years.

capital investments in generation facilities during the same fiscal year.[15] Table II.1 of appendix II shows this same information for fiscal years 1985-94.

Figure 4: Appropriations Received by PMAs and Appropriations Expended by the Operating Agencies on Power-Related Costs During Fiscal Year 1994



Source: Developed by GAO from the PMAs' data.

Legislation requires the PMAs to set their power rates at the lowest possible level consistent with sound business principles. The PMAs do not set their rates to earn a profit. Instead, they attempt to generate revenues sufficient

[15]Because the operating agencies generally receive appropriations annually to cover the costs associated with all functions of the multipurpose projects that they operate and maintain, we were not able to present the amount of appropriations received at the beginning of the fiscal year for power-related purposes. Instead, in fig. 4 we present the appropriations that were expended by the operating agencies during the year on power-related activities. These are the costs that are allocated by the operating agencies to the PMA for repayment.

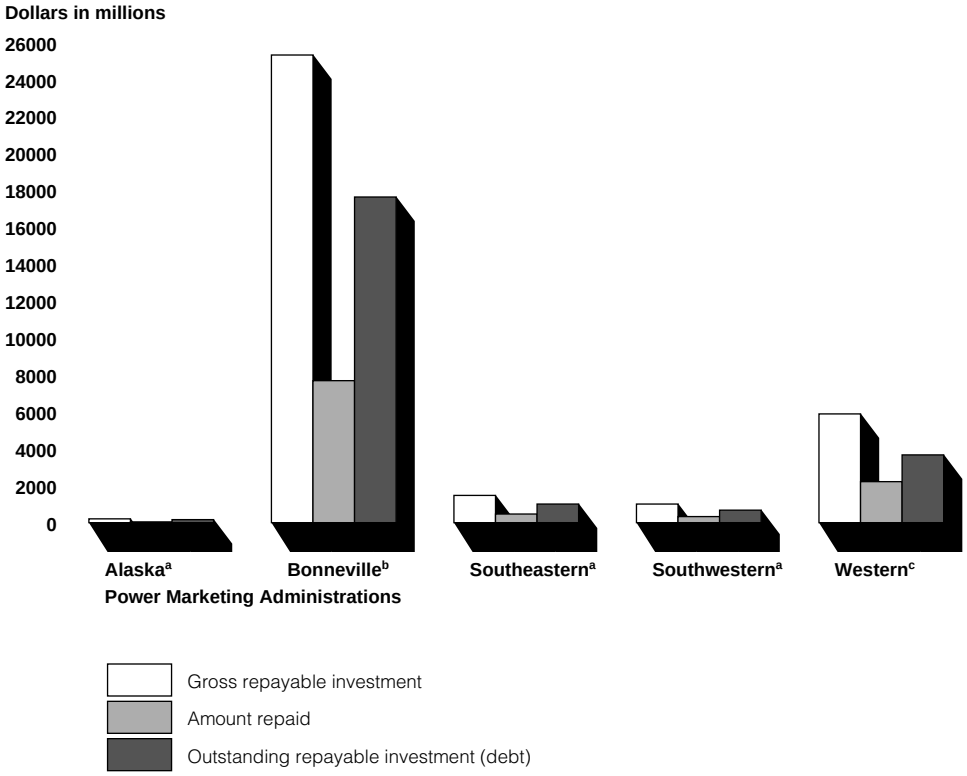
to recover all costs incurred as a result of producing, marketing, and transmitting electric power, including repayment of the federal investment and other debt with interest. DOE requires each PMA to annually prepare a repayment study to test the adequacy of their rates and to show, among other things, estimated revenues and expenses, estimated payments on the federal investment, and the total amount of federal investment to be repaid.

The gross repayable investment assigned to be repaid by power revenues totaled nearly $34 billion, as of September 30, 1994.[16] This amount includes $2.4 billion stemming from costs related to irrigation that Bonneville and Western must repay.[17] PMAs had repaid about $11 billion (32 percent) of the gross repayable amount leaving more than $23 billion of outstanding debt, as of September 30, 1994. Figure 5 shows the gross repayable investment, the amount repaid, and the outstanding repayable investment (debt) for each PMA, as of September 30, 1994. Table II.2 in appendix II shows this information for fiscal years 1985-94.

[16]Gross repayable investment includes (1) cumulative appropriations expended to construct and upgrade generation and transmission facilities, (2) certain costs related to irrigation (Bonneville and Western only), (3) cumulative borrowings from the Treasury (Treasury bonds)(Bonneville only), and (4) cumulative obligations in nonfederal power projects (Bonneville only).

[17]As directed by law, in addition to the costs of the power portion of the hydropower projects from which they sell and transmit power, Bonneville and Western are responsible for repaying, through power revenues, a portion of the irrigation costs associated with the hydropower projects. Irrigation costs are to be repaid without an interest charge.

Figure 5: Gross Repayable Investment, Amount Repaid, and Outstanding Repayable Investment, as of September 30, 1994



[a]This debt comprises appropriated debt only.

[b]Bonneville's outstanding debt comprises (1) appropriated debt ($6.8 billion), (2) Treasury bonds ($2.6 billion), (3) nonfederal projects ($7.4 billion), and (4) irrigation expenses ($832 million).

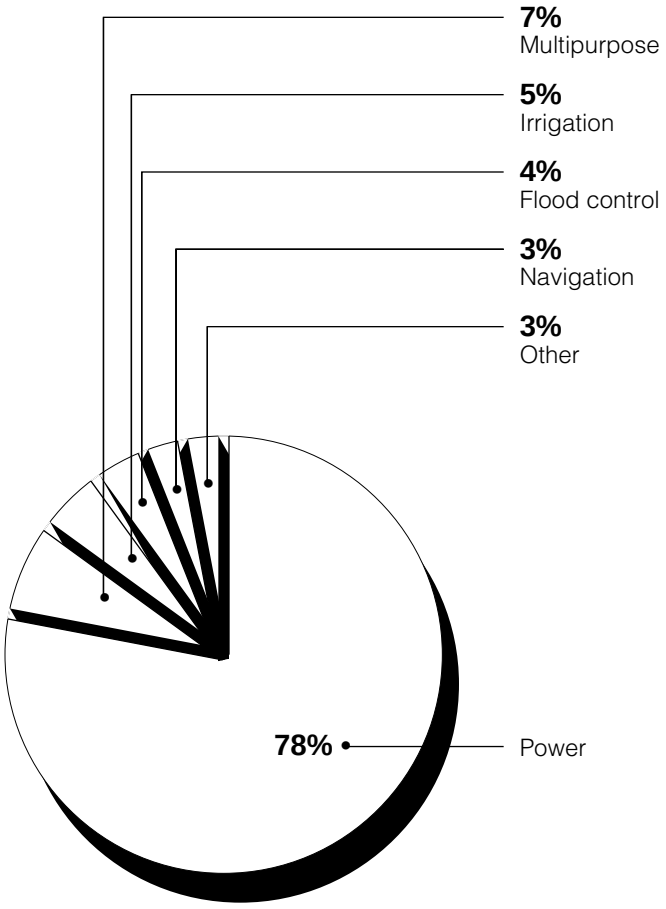
[c]Western's outstanding debt comprises (1) appropriated debt ($2.1 billion) and (2) irrigation expenses ($1.6 billion).

Source: The PMAs' data.

The federal dams from which the PMAs sell electricity also serve a variety of nonpower purposes including flood control, irrigation, navigation, and recreation. The PMAs seek to balance the concerns of the authorized competing uses of the projects in scheduling and delivering power to their customers. In addition to the $34 billion invested in generation and transmission facilities, another $9.5 billion in appropriations has been expended to date by the operating agencies for these nonpower purposes. Unlike the appropriations used for power generation and transmission,

appropriations expended for nonpower purposes are not repaid through power-related revenues. Figure 6 shows the percentage of appropriations expended by the PMAs and the operating agencies for both power and nonpower purposes, as of September 30, 1994. Figure II.1 and table II.6 of appendix II show appropriations expended by the PMAs and the operating agencies.

Figure 6: Gross Appropriations Expended for Power and Nonpower Purposes for All PMAs, as of September 30, 1994



Source: The PMAs' annual reports for fiscal year 1994 and other PMA data.

The PMAs generated about $3.2 billion in power-related revenues in fiscal year 1994.[18] In accordance with legislation, the PMAs deposit their annual revenues in the Treasury. These receipts are generally applied to expenses in the following order: (1) operations and maintenance expenses, (2) purchased and exchanged power costs, (3) transmission service fees, (4) interest expense, and (5) any debt service on Treasury bonds (Bonneville only). Any remaining revenues are applied to any remaining balance due on unpaid or deferred annual expenses, if any, and then toward the repayment on the federal investment.[19] DOE requires the PMAs to pay their highest interest-bearing debt first whenever possible, consistent with applicable law.[20]

The financial characteristics of the PMAs, in many respects, are a reflection of the various statutes and DOE policies and procedures that govern their operations. For example, except for Bonneville, the PMAs, as described earlier, receive appropriations annually to cover their operating and maintenance expenses and to finance capital investments.[21] These financing methods differ from those used by investor-owned utilities. Such utilities generally pay for their operating expenses from operating revenue and finance capital investments by (1) issuing debt, (2) selling common or preferred stock, or (3) using cash generated from operations.

In addition, the PMAs' weighted average interest rates on their outstanding debt to the Treasury ranged from 2.7 to 4.6 percent in fiscal year 1994.[22] This compares with an average interest rate of 8.1 percent on outstanding long-term debt for the nation's 179 largest investor-owned utilities in 1993, according to a DOE report.[23] These utilities accounted for more than 97 percent of all revenues earned by investor-owned utilities in 1993. As a

[18]Table II.3 of app. II shows revenues, expenses, and other financial information for each PMA for fiscal years 1985-94.

[19]Bonneville and Alaska have exceptions to this priority of revenue application. Bonneville first makes payments on debts associated with obligations related to its nonfederal power projects. Revenues from Alaska's Snettisham project are first applied to the required principal payment for the Long Lake portion of the project.

[20]As we noted in a 1983 report, the practice of paying the highest interest-bearing debt first (rather than first paying the oldest outstanding debt) results in a savings for the PMA but imposes an additional cost to the Treasury. See Policies Governing Bonneville Power Administrations' Repayment of Federal Investment Still Need Revision (GAO/RCED-84-25, Oct. 26, 1983).

[21]Legislation directs Bonneville to deposit its revenues into a revolving fund maintained by the Treasury and authorizes Bonneville to use this fund to finance its operations and capital investments.

[22]Table II.4 in app. II shows interest rates on appropriated debt for each PMA.

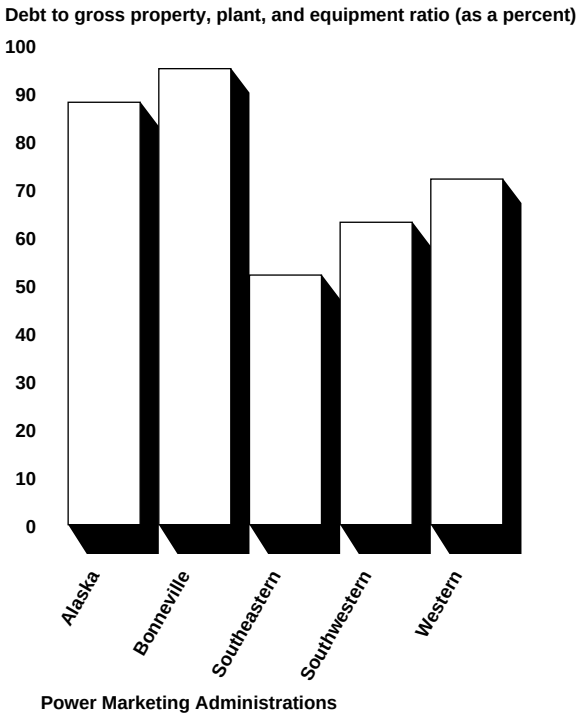
[23]See Financial Statistics of Major U.S. Investor-Owned Electric Utilities, 1993 by DOE's Energy Information Administration.

comparison to the average cost of the PMAs' debt in relation to the average cost of the Treasury's debt, the Treasury's weighted average interest rate on the outstanding marketable interest-bearing public debt was 6.9 percent as of July 31, 1995.

As shown in figures 7 and 8, the PMAs' financing methods and terms of repayment have led to a high amount of outstanding debt in comparison to total investment. These figures present two financial ratios that highlight the amount of debt that the PMAs have outstanding. The first ratio—debt to gross property, plant, and equipment—shows the outstanding portion of the PMAs' debt, as a percentage of the total amount invested in these facilities.[24] The second ratio—debt service to revenue—shows the amount of annual revenues used to pay principal and interest on outstanding debt (debt service) as a percentage of total revenues. Table II.5 of appendix II shows this information for each PMA during the period 1985-94.

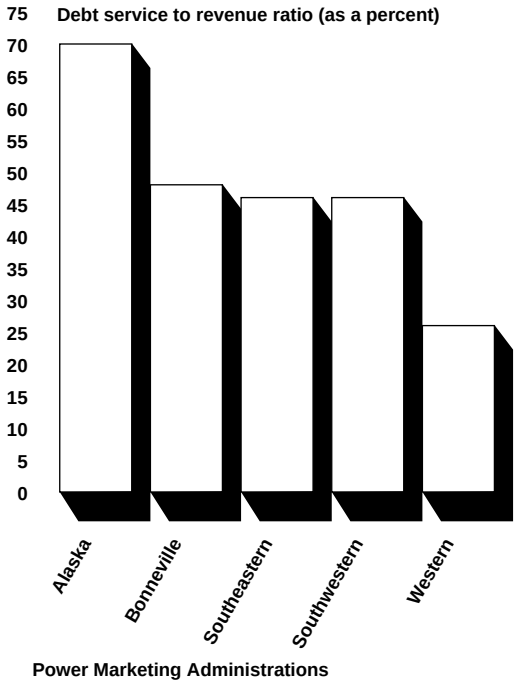
[24]Gross property, plant, and equipment includes the original cost of generation and transmission facilities and the cost of construction work in progress. For Bonneville, we also included its other capital investments and obligations in nonfederal projects, such as energy conservation measures and costs associated with operating and terminated nuclear plants.

Figure 7: Debt as a Percentage of Gross Property, Plant, and Equipment for All PMAs, as of September 30, 1994



Source: The PMAs' data.

Figure 8: Debt Service as a Percentage of Revenue for All PMAs, as of September 30, 1994



Source: The PMAs' data.

Because the PMAs' debt is at low interest rates, four of the five PMAs have been able to carry high levels of debt without a corresponding increase in financial risk. However, as explained in the following discussion on competitive issues, high levels of debt currently pose problems for Bonneville and could pose problems for other PMAs in a more competitive environment.

Competitive Issues

PMAs have been and generally remain among the sellers of wholesale electric power at the lowest cost.[25] Their ability to operate as low-cost sellers stems from several factors, including the inherent low cost of

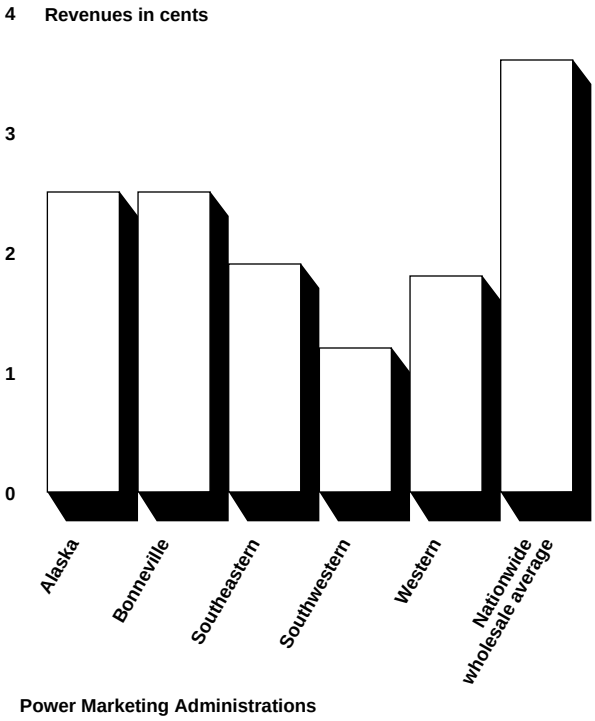
[25]The wholesale segment of the electric power industry comprises utilities and other suppliers that sell power to other utilities for resale to the consumer. In contrast, the retail segment comprises utilities that sell power directly to the end users including industrial, commercial, and residential consumers. During 1993, about 80 percent of the combined PMA sales were to wholesale customers. The remainder of these sales was to end users, such as federal military installations, aluminum smelters, and other industrial customers.

hydropower relative to other generating sources, federal financing at relatively low interest rates, flexibility in the repayment of principal on the Treasury portion of the PMAs' debt, the PMAs' tax exempt status, and operating budgets that seek to break even rather than earn a profit or a return on investment. Partly because of these factors, the average revenue earned per unit of wholesale power sold by the PMAs is low in comparison to the national average for wholesale power sold by all utilities. The average revenue per kilowatt hour (kWh)[26] sold by each PMA ranged from 1.2 to 2.5 cents in 1993. This was less than the national average for wholesale power in 1993 which, according to DOE's Energy Information Administration, ranged from 3.3 to 4.1 cents, depending on the type of electric utility. The overall average was 3.6 cents.[27] Figure 9 shows the average revenue earned per kilowatt hour of wholesale power sold for each PMA compared with the national average for wholesale power during fiscal year 1993. Table III.1 of appendix III shows (1) the total kilowatt hours of wholesale power sold and the associated power revenues by each PMA and (2) the nationwide total of kilowatt hours of wholesale power sold and associated revenues earned during fiscal year 1993.

[26]A kilowatt hour is 1,000 watt hours. A watt hour is equal to 1 watt of power applied for 1 hour.

[27]The Energy Information Administration cautions that average revenue per unit of energy sold should not be used as a substitute for the price of power. The price that any one utility charges another for wholesale energy comprises numerous transaction-specific factors including the fee charged for reserving a portion of capacity, the fee for the energy actually delivered, and the fee for the use of the facilities. These fees are influenced by factors such as time of delivery, quantity of energy, and reliability of supply.

Figure 9: Average Revenue Earned Per Kilowatt Hour of Wholesale Power Sold for Each PMA During Fiscal Year 1993



Source: Developed by GAO from the Energy Information Administration's and the PMAs' data.

According to PMA officials, as of June 1995, with the exception of Bonneville, each PMA had rates that remain the lowest in its service area. These PMAs have experienced no major problems in terms of customers' switching to other suppliers or having to negotiate new rates because of competition from other suppliers. On the other hand, Bonneville has experienced financial difficulty attributable to many factors including investments in nuclear plants.[28] These difficulties coincide with other suppliers in Bonneville's service area offering electric power service at rates at or below the rate at which Bonneville sells much of its power. Several of Bonneville's customers have recently signed contracts with other suppliers, and other customers have indicated their willingness to

[28]Because, unlike the other PMAs, Bonneville is responsible for meeting the future demands of its customers, it assumed partial financial responsibility for investments in nuclear plants in the early 1970s. Of Bonneville's approximately $17.6 billion in outstanding debt, about $7.4 billion is attributable to obligations to repay the costs of these plants. Bonneville is obligated to repay more than $4 billion for plants that have been terminated and thus produce no electricity.

negotiate with other suppliers. As noted in our 1994 report, Bonneville's high debt and associated fixed costs and low financial reserves provide it with little flexibility to respond to any further operating losses, increasing the possibility that Bonneville would be unable to make its annual Treasury payment.[29]

The circumstances in which Bonneville finds itself are part of a larger trend in the wholesale segment of the electric power industry. This segment of the market has grown increasingly competitive in recent years, in part, because of industry changes stemming from the Energy Policy Act of 1992, which allows easier access to power generation markets and promotes greater use of electric transmission lines. As part of the trend toward competition, the Federal Energy Regulatory Commission expects nationwide wholesale rates to decline. Because the PMAs sell most of their power at wholesale, they could be directly affected by this trend.

A PMA's financial condition will play a role in determining whether it can compete with other suppliers. As mentioned earlier, a high debt-to-gross property, plant, and equipment ratio and a high debt service-to-revenue ratio could limit the flexibility of a PMA to match the rates of a competitor while still meeting financial obligations, including repayment of the federal investment. A PMA with rates below other suppliers' rates in its service area has some flexibility to increase rates if necessary to meet its financial obligations. Conversely, a PMA with rates at or above the level offered by other suppliers in its service area, combined with a high level of debt, would have limited flexibility in reducing rates.

Agency Comments

We provided copies of a draft of this report to DOE for its review and comment. We received comments from DOE's Bonneville Power Administration and DOE's Power Marketing Liaison Office, which is responsible for the other four PMAs, and have included their comments and our response in this report as appendixes IV and V, respectively.

Bonneville stated that our report was factually correct and fairly reflected its competitive situation. For the other four PMAs, DOE commented that our report implied that the PMAs were inefficient and used inappropriate operating techniques that could leave the PMAs in a precarious position in the future. We did not evaluate the efficiency of the PMAs' operations and have drawn no such conclusion. DOE also commented that it is

[29]Bonneville Power Administration: Borrowing Practices and Financial Condition (GAO/AIMD-94-67BR, Apr. 19, 1994).

inappopriate to compare investor-owned utilities' method of operating at a profit with that of the PMAs. Our report does not make this comparision. Rather, it compares the PMAs' average interest rates and the PMAs' method of financing capital investments with those of investor-owned utilities. DOE suggested that we include several additional facts in our report that it believed should help explain more fully how the PMAs operate. We have expanded certain descriptive data to include facts suggested by DOE. DOE also provided technical corrections and clarifications that we incorporated where appropriate.

Scope and Methodology

To develop the financial information presented in this report, we interviewed officials of each PMA and reviewed data from the five PMAs' annual reports and financial statements for fiscal years 1985 through 1994.[30] To develop certain financial indicators, we used applicable repayment studies and financial statements. As appropriate, we interviewed officials of each PMA and used the PMAs' data to develop operating information on the PMAs and to discuss competitive issues. We did not independently verify the accuracy of the PMAs' data. In developing operating information, we also used available data from sources, such as the Congressional Research Service, DOE, the Federal Energy Regulatory Commission, and the National Academy of Public Administration. We used data from the Energy Information Administration to develop information on the extent to which the PMA's public power customers purchase PMA-provided power.

We performed our review from April through September 1995, in accordance with generally accepted government auditing standards.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 7 days after the date of this letter. At that time, we will send copies to appropriate congressional committees, federal agencies, and other interested parties. We will also make copies available to others on request.

This report was prepared under the direction of Victor S. Rezendes, Director of Energy and Science Issues in the Resources, Community, and Economic Development Division, who may be reached at (202) 512-3841

[30]Most of the financial statements were independently audited by certified public accounting firms or, in the case of Alaska, DOE's Office of Inspector General. Western's financial statements were not audited for fiscal years 1985 through 1990. Southwestern's financial statements were not audited for fiscal years 1988 and 1989.

and Lisa Jacobson, Director of Civil Audits in the Accounting and Information Management Division, who may be reached at (202) 512-9508, if you have any questions. Major contributors to this report are listed in appendix VI.

Sincerely yours,

Victor S. Rezendes
Director, Energy and
Science Issues

Lisa G. Jacobson
Director, Civil Audits
Accounting and Information
Management Division

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Abbreviations

APA	Alaska Power Administration
BPA	Bonneville Power Administration
DOE	Department of Energy
EIA	Energy Information Administration
GAO	General Accounting Office
IBWC	International Boundary and Water Commission
kWh	kilowatt hour
MW	megawatt
MWh	megawatt hour
PMA	power marketing administration
PP&E	property, plant, and equipment
PWUA	Provo River Water Users' Association
SEPA	Southeastern Power Administration
SRP	Salt River Project
SWPA	Southwestern Power Administration
WAPA	Western Area Power Administration
WPPSS	Washington Public Power Supply System

Operating Information

Table I.1: Plant-Operating Characteristics, as of September 30, 1994

Operating agency	Plant's name	Existing number of generating units	Primary energy source	Generator nameplate capacity (MW)[a]	Fiscal year of initial operation
Alaska					
APA	Eklutna	2	Hydro	30	1955
APA	Snettisham	3	Hydro	78	1975 & 1991[b]
Subtotal		5		108	
Bonneville					
Bureau	Grand Coulee	27	Hydro	6,188	1941
Bureau	Grand Coulee #2[c]	6	Hydro	314	1973
Bureau	Hungry Horse	4	Hydro	392	1952
Bureau	Palisades	4	Hydro	142	1957
Bureau	Anderson Ranch	2	Hydro	27	1950
Bureau	Minidoka	7	Hydro	13	1909
Bureau	Roza	1	Hydro	11	1958
Bureau	Black Canyon	2	Hydro	8	1925
Bureau	Chandler	2	Hydro	12	1956
Corps	Chief Joseph	27	Hydro	2,069	1955
Corps	John Day	16	Hydro	2,160	1968
Corps	The Dalles	22	Hydro	1,780	1957
Corps	Bonneville	18	Hydro	1,050	1938
Corps	McNary	14	Hydro	980	1953
Corps	Lower Granite	6	Hydro	810	1975
Corps	Lower Monumental	6	Hydro	810	1969
Corps	Little Goose	6	Hydro	810	1970
Corps	Ice Harbor	6	Hydro	603	1961
Corps	Libby	5	Hydro	525	1975
Corps	Dworshak	3	Hydro	400	1974
Corps	Lookout Point	3	Hydro	120	1954
Corps	Detroit	2	Hydro	100	1953
Corps	Green Peter	2	Hydro	80	1967
Corps	Lost Creek	2	Hydro	49	1975
Corps	Albeni Falls	3	Hydro	43	1955
Corps	Hills Creek	2	Hydro	30	1962
Corps	Cougar	2	Hydro	25	1964
Corps	Foster	2	Hydro	20	1968
Corps	Big Cliff	1	Hydro	18	1954
Corps	Dexter	1	Hydro	15	1955

(continued)

Operating agency	Plant's name	Existing number of generating units	Primary energy source	Generator nameplate capacity (MW)[a]	Fiscal year of initial operation
WPPSS[d]	Project 2	1	Nuclear	1,100	1984
Subtotal		205		20,704	
Southeastern					
Corps	Allatoona	3	Hydro	74	1950
Corps	Buford	3	Hydro	86	1957
Corps	Carters	4	Hydro	500	1975
Corps	J. Strom Thurmond	7	Hydro	280	1953
Corps	Walter F. George	4	Hydro	130	1963
Corps	Hartwell	5	Hydro	344	1962
Corps	Robert F. Henry	4	Hydro	68	1975
Corps	Millers Ferry	3	Hydro	75	1970
Corps	West Point	3	Hydro	73	1975
Corps	Richard B. Russell[e]	4	Hydro	300	1984
Corps	John H. Kerr	7	Hydro	204	1953
Corps	Philpott	3	Hydro	14	1952
Corps	Barkley	4	Hydro	130	1966
Corps	J. Percy Priest	1	Hydro	28	1970
Corps	Cheatham	3	Hydro	36	1959
Corps	Cordell Hull	3	Hydro	100	1973
Corps	Old Hickory	4	Hydro	100	1957
Corps	Center Hill	3	Hydro	135	1950
Corps	Dale Hollow	3	Hydro	54	1948
Corps	Wolf Creek	6	Hydro	270	1951
Corps	Laurel	1	Hydro	61	1976
Corps	Jim Woodruff	3	Hydro	30	1957
Subtotal[f]		81		3,092	
Southwestern					
Corps	Beaver	2	Hydro	112	1965
Corps	Blakely Mountain	2	Hydro	75	1956
Corps	Broken Bow	2	Hydro	100	1970
Corps	Bull Shoals	8	Hydro	340	1953
Corps	Clarence Cannon	2	Hydro	58	1985
Corps	Dardanelle	4	Hydro	124	1965
Corps	DeGray	2	Hydro	68	1972
Corps	Denison	2	Hydro	70	1945
Corps	Eufaula	3	Hydro	90	1965
Corps	Ft. Gibson	4	Hydro	45	1953

(continued)

Operating agency	Plant's name	Existing number of generating units	Primary energy source	Generator nameplate capacity (MW)[a]	Fiscal year of initial operation
Corps	Greers Ferry	2	Hydro	96	1964
Corps	Harry S. Truman[g]	2	Hydro	53	1982
Corps	Keystone	2	Hydro	70	1968
Corps	Narrows	3	Hydro	26	1950
Corps	Norfork	2	Hydro	81	1944
Corps	Ozark	5	Hydro	100	1973
Corps	Robert D. Willis	2	Hydro	7	1989
Corps	Robert S. Kerr	4	Hydro	110	1971
Corps	Sam Rayburn	2	Hydro	52	1966
Corps	Stockton	1	Hydro	45	1973
Corps	Table Rock	4	Hydro	200	1959
Corps	Tenkiller Ferry	2	Hydro	39	1954
Corps	Webbers Falls	3	Hydro	60	1974
Corps	Whitney	2	Hydro	30	1955
Subtotal		67		2,051	
Western					
Bureau	Hoover	19	Hydro	2,074	1936
Bureau	J. F. Carr	2	Hydro	154	1963
Bureau	Folsom	3	Hydro	215	1955
Bureau	Keswick	3	Hydro	105	1950
Bureau	New Melones	2	Hydro	383	1979
Bureau	Nimbus	2	Hydro	14	1955
Bureau	O'Neill	6	Hydro	29	1968
Bureau	W. R. Gianelli	8	Hydro	202	1968
Bureau	Shasta	7	Hydro	578	1944
Bureau	Spring Creek	2	Hydro	200	1964
Bureau	Trinity	3	Hydro	140	1964
Bureau	Mount Elbert	2	Hydro	206	1982
Bureau	Big Thompson	1	Hydro	5	1969
Bureau	Estes	3	Hydro	50	1950
Bureau	Flatiron	3	Hydro	95	1954
Bureau	Green Mountain	2	Hydro	26	1943
Bureau	Mary's Lake	1	Hydro	8	1951
Bureau	Pole Hill	1	Hydro	33	1954
Bureau	Yellowtail	4	Hydro	288	1966
Bureau	Alcova	2	Hydro	36	1955
Bureau	Boysen	2	Hydro	15	1952

(continued)

Operating agency	Plant's name	Existing number of generating units	Primary energy source	Generator nameplate capacity (MW)[a]	Fiscal year of initial operation
Bureau	Buffalo Bill	3	Hydro	18	[h]
Bureau	Fremont Canyon	2	Hydro	66	1961
Bureau	Glendo	2	Hydro	38	1959
Bureau	Guernsey	2	Hydro	5	1927
Bureau	Heart Mountain	1	Hydro	5	1949
Bureau	Kortes	3	Hydro	36	1950
Bureau	Pilot Butte	2	Hydro	2	1925
Bureau	Seminoe	3	Hydro	45	1939
Bureau	Shoshone	1	Hydro	3	1922[i]
Bureau	Canyon Ferry	3	Hydro	60	1954
Bureau	Davis	5	Hydro	269	1951
Bureau	Parker	4	Hydro	69	1943
Bureau	Glen Canyon	8	Hydro	1,356	1964
Bureau	Blue Mesa	2	Hydro	96	1967
Bureau	Crystal	1	Hydro	28	1978
Bureau	Flaming Gorge	3	Hydro	152	1964
Bureau	McPhee	1	Hydro	1	1993
Bureau	Morrow Point	2	Hydro	156	1971
Bureau	Towaoc	1	Hydro	11	1993
Bureau	Upper Molina	1	Hydro	9	1963
Bureau	Lower Molina	1	Hydro	5	1963
Bureau	Elephant Butte	3	Hydro	28	1941
Bureau	Fontenelle	1	Hydro	13	1968
Bureau	Stampede	1	Hydro	3	1987
Corps	Fort Peck	5	Hydro	218	1943
Corps	Garrison	5	Hydro	546	1956
Corps	Big Bend	8	Hydro	538	1965
Corps	Fort Randall	8	Hydro	387	1954
Corps	Gavins Point	3	Hydro	122	1956
Corps	Oahe	7	Hydro	786	1962
IBWC	Amistad	2	Hydro	66	1983
IBWC	Falcon	3	Hydro	32	1955
PWUA	Deer Creek	2	Hydro	5	1958
SRP	Navajo	3	Coal	547[j]	1974
Subtotal		180		10,577	
Total[f]		**538**		**36,532**	

(Table notes on next page)

Legend

APA = Alaska Power Administration
IBWC = International Boundary and Water Commission
MW = megawatt
PMA = power maketing administration
PWUA = Provo River Water Users' Association
SRP = Salt River Project
WPPSS = Washington Public Power Supply System

[a]The generator nameplate capacity refers to the full-load continuous rating under specified conditions, usually indicated on a plate attached physically to the equipment. Because water flow largely dictates the amount of water available for generation, the average megawatts available for power generation from a hydro facility may differ from the nameplate capacity. These numbers are rounded to the nearest megawatt.

[b]For the Snettisham project, the Long Lake portion was placed in service in 1975, and the Crater Lake portion was placed in service in 1991.

[c]The units at Grand Coulee #2 are pump generators.

[d]Bonneville acquired all or part of the generating capability of three nuclear power plants owned by WPPSS. One plant is in commercial operation, and two have been terminated.

[e]Four additional units at the Richard B. Russell project are being tested.

[f]We do not include Southeastern's 300-kilowatt Stonewall Jackson Project, which was energized in 1994. No power bills were issued for this project in fiscal year 1994.

[g]The Harry S. Truman project has six units installed, but only two were commercially operable.

[h]Power plant was not yet in commercial operation.

[i]Power plant is being modified and tested prior to resuming commercial operation.

[j]Federal government's share (24.3 percent) of 2,250-MW plant capability.

Source: The PMAs' annual reports and other data provided by the PMAs.

Table I.2: Operating Statistics of PMAs, as of September 30, 1994

	APA	BPA	SEPA	SWPA	WAPA	Totals
Generator nameplate capacity (MW)	108	20,704	3,092	2,051	10,577	36,532
Number of power plants[a]	2	31	22	24	55	134
Transmission lines (miles)	88	14,800	0	1,380	16,727	32,992
Annual federal employment (full time equivalent)[b]	35	3,322[c]	41	189	1,467	5,054

Legend

APA = Alaska Power Administration
BPA = Bonneville Power Administration
MW = megawatt
PMA = power marketing administration
SEPA = Southeastern Power Administration
SWPA = Southwestern Power Administration
WAPA = Western Area Power Administration

[a]Power plants can include more than one generation unit.

[b]Employment numbers do not include contractors.

[c]As of April 27, 1995.

Source: The PMAs' annual reports for fiscal year 1994 and other data provided by DOE.

Table I.3: PMA Sales by Customer Type for Fiscal Year 1993

Dollars in thousands

		Preference customers				Nonpreference customers			
		Sales for resale		Sales to end-users		Sales for resale		Sales to end-users	
	Customer type	MWh	Revenues	MWh	Revenues	MWh	Revenues	MWh	Revenues
APA	Municipalities	92,197	$1,500	[a]	[a]	[a]	[a]	[a]	[a]
	Public utility districts	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Cooperatives	80,746	1,314	[a]	[a]	[a]	[a]	[a]	[a]
	Irrigation districts	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	State agencies	[a]	[a]	1,170	$38	[a]	[a]	[a]	[a]
	Federal agencies	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Investor-owned utilities	[a]	[a]	[a]	[a]	232,888	$7,265	[a]	[a]
	Aluminum companies	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Other industry	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Counties	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Outside region	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Interdepartmental[b]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Project use[c]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Totals	**172,943**	**$2,814**	**1,170**	**$38**	**232,888**	**$7,265**	**[a]**	**[a]**
	Total sales for resale (MWh)		**405,831**						
	Total resale revenues		**$10,079**						
	Average revenue per kWh		**$0.025**						
BPA	Municipalities	11,747,223	268,058	[a]	[a]	[a]	[a]	[a]	[a]
	Public utility districts	22,821,312	536,253	[a]	[a]	[a]	[a]	[a]	[a]
	Cooperatives	9,960,407	226,875	[a]	[a]	[a]	[a]	[a]	[a]
	Irrigation districts	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	State agencies	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Federal agencies	[a]	[a]	1,165,482	25,103	[a]	[a]	[a]	[a]
	Investor-owned utilities	[a]	[a]	[a]	[a]	7,821,531	299,952	[a]	[a]
	Aluminum companies	[a]	[a]	[a]	[a]	[a]	[a]	19,465,057	351,178
	Other industry	[a]	[a]	[a]	[a]	[a]	[a]	1,358,188	31,348
	Counties	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Outside region[d]	[a]	[a]	[a]	[a]	4,894,643	75,262	[a]	[a]
	Interdepartmental[b]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Project use[c]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Totals	**44,528,942**	**$1,031,186**	**1,165,482**	**$25,103**	**12,716,174**	**$375,214**	**20,823,245**	**$382,526**
	Total sales for resale (MWh)		**57,245,116**						

(continued)

Dollars in thousands

		Preference customers				Nonpreference customers			
		Sales for resale		Sales to end-users		Sales for resale		Sales to end-users	
	Customer type	MWh	Revenues	MWh	Revenues	MWh	Revenues	MWh	Revenues
	Total resale revenues		**$1,406,400**						
	Average revenue per kWh		**$0.025**						
SEPA	Municipalities	1,815,260	46,453	a	a	a	a	a	a
	Public utility districts	a	a	a	a	a	a	a	a
	Cooperatives	4,093,934	90,418	a	a	a	a	a	a
	Irrigation districts	a	a	a	a	a	a	a	a
	State agencies	328,530	5,856	a	a	a	a	a	a
	Federal agencies[e]	2,451,401	21,080	a	a	a	a	a	a
	Investor-owned utilities	a	a	a	a	17,588	214	a	a
	Aluminum companies	a	a	a	a	a	a	a	a
	Other industry	a	a	a	a	a	a	a	a
	Counties	38,104	836	a	a	a	a	a	a
	Outside region	a	a	a	a	a	a	a	a
	Interdepartmental[b]	a	a	a	a	a	a	a	a
	Project use[c]	a	a	a	a	a	a	a	a
	Totals	**8,727,229**	**$164,653**	**a**	**a**	**17,588**	**$214**	**a**	**a**
	Total sales for resale (MWh)		**8,744,817**						
	Total resale revenues		**$164,867**						
	Average revenue per kWh		**$0.019**						
SWPA	Municipalities	2,227,454	19,840	a	a	1,134	5,897	a	a
	Public utility districts	a	a	a	a	a	a	a	a
	Cooperatives	5,701,043	70,873	a	a	a	a	a	a
	Irrigation districts	a	a	a	a	a	a	a	a
	State agencies	a	a	a	a	a	a	a	a
	Federal agencies	a	a	189,117	3,722	7,030	37	a	a
	Investor-owned utilities	a	a	a	a	9,455	49	a	a
	Aluminum companies	a	a	a	a	a	a	a	a
	Other Industry	a	a	a	a	a	a	a	a
	Counties	a	a	a	a	a	a	a	a
	Outside region	a	a	a	a	a	a	a	a
	Interdepartmental[b]	a	a	a	a	a	a	a	a
	Project use[c]	a	a	a	a	a	a	a	a
	Totals	**7,928,497**	**$90,713**	**189,117**	**$3,722**	**17,619**	**$5,983**	**a**	**a**

(continued)

Dollars in thousands

		Preference customers				Nonpreference customers			
		Sales for resale		Sales to end-users		Sales for resale		Sales to end-users	
	Customer type	MWh	Revenues	MWh	Revenues	MWh	Revenues	MWh	Revenues
	Total sales for resale (MWh)		**7,946,116**						
	Total resale revenues		**$96,696**						
	Average revenue per kWh		**$0.012**						
WAPA	Municipalities	9,871,704	187,912	[a]	[a]	[a]	[a]	[a]	[a]
	Public utility districts	4,252,111	101,605	[a]	[a]	[a]	[a]	[a]	[a]
	Cooperatives	7,745,483	123,805	[a]	[a]	[a]	[a]	[a]	[a]
	Irrigation districts	1,709,781	24,116	[a]	[a]	[a]	[a]	[a]	[a]
	State agencies	3,624,445	55,811	566,892	9,408	[a]	[a]	[a]	[a]
	Federal agencies	156,131	2,270	2,116,764	53,267	[a]	[a]	[a]	[a]
	Investor-owned utilities	[a]	[a]	[a]	[a]	1,998,715	40,040	[a]	[a]
	Aluminum companies	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Other industry	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Counties	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Outside region	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
	Interdepartmental[b]	[a]	[a]	14,185	0	[a]	[a]	[a]	[a]
	Project use[c]	[a]	[a]	1,383,235	8,085	[a]	[a]	[a]	[a]
	Totals	**27,359,655**	**$495,519**	**4,081,076**	**$70,760**	**1,998,715**	**$40,040**	**[a]**	**[a]**
	Total sales for resale (MWh)		**29,358,370**						
	Total resale revenues		**$535,559**						
	Average revenue per kWh		**$0.019**						
All PMAs	Municipalities	25,753,838	523,773	[a]	[a]	1,134	5,897	[a]	[a]
	Public utility districts	27,073,423	637,858	[a]	[a]	[a]	[a]	[a]	[a]
	Cooperatives	27,581,613	513,285	[a]	[a]	[a]	[a]	[a]	[a]
	Irrigation districts	1,709,781	24,116	[a]	[a]	[a]	[a]	[a]	[a]
	State agencies	3,952,975	61,667	568,062	9,446	[a]	[a]	[a]	[a]
	Federal agencies[e]	2,607,532	23,350	3,471,363	82,092	7,030	37	[a]	[a]
	Investor-owned utilities	[a]	[a]	[a]	[a]	10,080,177	347,520	[a]	[a]
	Aluminum companies	[a]	[a]	[a]	[a]	[a]	[a]	19,465,057	351,178
	Other industry	[a]	[a]	[a]	[a]	[a]	[a]	1,358,188	31,348
	Counties	38,104	836	[a]	[a]	[a]	[a]	[a]	[a]
	Outside region[d]	[a]	[a]	[a]	[a]	4,894,643	75,262	[a]	[a]
	Interdepartmental[b]	[a]	[a]	14,185	0	[a]	[a]	[a]	[a]

(continued)

Dollars in thousands

	Preference customers				Nonpreference customers			
	Sales for resale		Sales to end-users		Sales for resale		Sales to end-users	
Customer type	**MWh**	**Revenues**	**MWh**	**Revenues**	**MWh**	**Revenues**	**MWh**	**Revenues**
Project use[c]	[a]	[a]	1,383,235	8,085	[a]	[a]	[a]	[a]
Totals	**88,717,266**	**$1,784,885**	**5,436,845**	**$99,623**	**14,981,850**	**$422,819**	**20,823,245**	**$382,526**
Total sales for resale (MWh)		**103,699,116**						
Total resale revenues		**$2,207,704**						
Average revenue per kWh		**$0.021**						

Legend

APA = Alaska Power Administration
BPA = Bonneville Power Administration
kWh = kilowatt hour
MWh = megawatt hour
PMA = power marketing administration
SEPA = Southeastern Power Administration
SWPA = Southwestern Power Administration
WAPA = Western Area Power Administration

[a]Not applicable.

[b]Interdepartmental sales are sales to the facilities that play an integral role in the operation of WAPA's projects.

[c]Project use is mainly sales of electricity necessary to pump water at federal irrigation projects.

[d]By law, BPA first serves customers located in the Pacific Northwest (legislatively defined as Oregon, Washington, and portions of Montana, Nevada, Utah, and Wyoming). BPA sells electricity that is surplus to the needs of the Pacific Northwest to customers outside the region, mainly those located in California. In 1993, these customers included public- and investor-owned utilities and one federal agency.

[e]All of SEPA's sales to federal agencies in 1993 were to the Tennessee Valley Authority.

Source: Derived by GAO from data provided by the PMAs.

Table I.4: PMA Public Power Customers' Purchases of PMA Power Versus Total Power Obtained From All Sources for Fiscal Year 1993

PMA	Public power customer purchases from PMA (MWh)	Total power obtained from all sources[a] (MWh)
Alaska	172,943	3,416,744
Bonneville[b]	43,671,980	80,902,370
Southeastern[c]	5,944,700	120,457,936
Southwestern	7,662,077	59,011,084
Western	17,613,180	148,512,732
Total	75,064,880	412,300,866

Legend

EIA = Energy Information Administration
MWh = megawatt hour
PMA = power marketing administration

[a]Includes customer generated power and purchases from sources other than the PMAs.

[b]For the purpose of our analysis, we excluded 10 public power customers located outside the Pacific Northwest. These customers accounted for less than 1 percent of Bonneville's revenues in fiscal year 1993.

[c]For the purpose of our analysis, we excluded the Tennessee Valley Authority from Southeastern's sales to public power customers. The Tennessee Valley Authority accounted for about 13 percent of Southeastern's revenues in fiscal year 1993.

Source: Developed by GAO from the PMAs' fiscal year 1993 annual reports and EIA's data.

Table I.5: Power Purchases From PMAs by Public Power Customers as a Percentage of Their Total Power Obtained From All Sources in Fiscal Year 1993

	Total number of public power customers[a]	Percent of customers purchasing 0-25 percent	Percent of customers purchasing 26-50 percent	Percent of customers purchasing 51-75 percent	Percent of customers purchasing 76-100 percent
APA	3	100	0	0	0
BPA	119	7	1	5	87
SEPA	263	98	1	0	0
SWPA	53	36	19	13	32
WAPA	315	30	23	25	22

Legend

APA = Alaska Power Administration
BPA = Bonneville Power Administration
EIA = Energy Information Administration
PMA = power marketing administration
SEPA = Southeastern Power Administration
SWPA = Southwestern Power Administration
WAPA = Washington Public Power Supply System

Note: Percentages may not total 100 because of rounding.

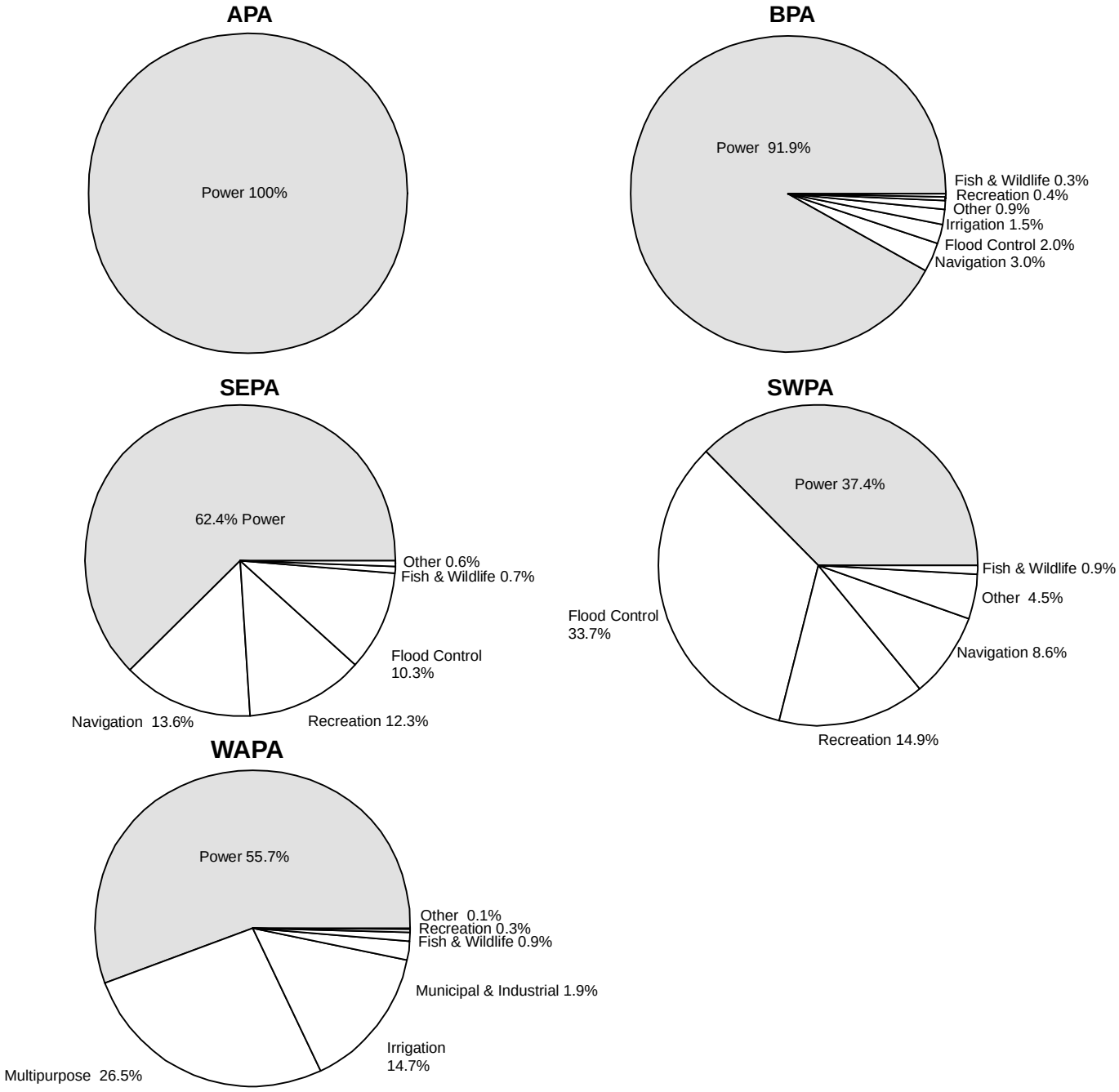
Eleven public power customers received power from two PMAs; these customers are included in the total number of customers for each PMA from which they purchased power.

[a]This information excludes 46 irrigation districts that purchased power from WAPA and 1 irrigation district that purchased power from BPA. These customers were not listed in EIA's database used to construct this information.

Source: Derived by GAO from data provided by EIA and the PMAs.

Financial Information

Figure II.1: Appropriations Expended for Power and Nonpower Purposes, as of September 30, 1994



(Figure notes on next page)

Legend

APA = Alaska Power Administration
BPA = Bonneville Power Administration
PMA = power marketing administration
SEPA = Southeastern Power Administration
SWPA = Southwestern Power Administration
WAPA = Western Area Power Administration

Note: Although we categorize appropriations expended for both power and nonpower purposes, as appropriate, under the heading of each PMA, the PMAs, with the exception of some costs related to irrigation, are responsible for repaying only those costs related to power. The operating agencies are responsible for the appropriations expended for nonpower purposes, and these expended funds are not reimbursable through power revenues. The accounts of BPA, SEPA, and SWPA and their respective operating agencies are collectively referred to as power systems or programs. BPA is part of the Federal Columbia River Power System. SEPA is part of the Southeastern Federal Power Program. SWPA is part of the Southwestern Federal Power System.

Percentages may not total 100 because of rounding.

Source: The PMAs' annual reports for fiscal year 1994 and other data provided by the PMAs.

Table II.1: Appropriations Received by the PMAs and Appropriations Expended by the Operating Agencies on Power-Related Costs for Fiscal Years 1985 Through 1994

Dollars in millions

	1985		1986		1987		1988		1989	
PMA	PMA	Operating agency	PMA	Operating agency	PMA	Operating agency	PMA	Operating agency	PMA	Operating agency
APA	$2	$0.6	$2	$0.7	$2	$0.7	$3	$0.7	$3	$0.0
BPA	0	185.8	0	127.0	0	161.9	0	139.4	0	149.4
SEPA	36	97.6	(19)[a]	50.6	16	61.0	24	71.3	39	57.1
SWPA	31	25.8	30	34.1	25	33.4	17	39.3	15	34.3
WAPA[b]	218	60.6	188	121.6	215	60.0	235	163.2	250	131.1

1990		1991		1992		1993		1994	
PMA	Operating agency	PMA	Operating agency	PMA	Operating agency	PMA	Operating agency	PMA	Operating agency
$3	$0.0	$3	$65.3	$3	$(0.1)[c]	$4	$5.8	$4	$0.5
0	168.4	0	185.6	0	198.0	0	219.3	0	158.5
18	68.5	8	57.6	24	81.8	32	79.2	30	70.5
25	35.6	20	37.3	28	38.3	22	31.8	34	46.2
264	239.0	266	182.8	278	143.0	312	116.0	260	133.0

Legend

APA = Alaska Power Administration
BPA = Bonneville Power Administration
DOE = Department of Energy
PMA = power marketing administration
SEPA = Southeastern Power Administration
SWPA = Southwestern Power Administration
WAPA = Western Area Power Administration

[a]In 1986 DOE transferred about $19 million of carried over appropriations from SEPA to another DOE agency. SEPA used remaining carried over appropriations to fund operations.

[b]Operating agency appropriation amounts are estimates provided by WAPA.

[c]APA did not have documentation needed to explain the negative balance.

Source: Developed by GAO from PMA-provided data.

Table II.2: Gross Repayable Investment, Amount Repaid, and Total Outstanding Repayable Investment for Fiscal Years 1985 Through 1994

Dollars in millions

PMA	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
APA										
Gross repayable investment	$131	$131	$132	$133	$133	$134	$198	$200	$205	$206
Amount repaid	21	22	24	27	31	34	37	38	40	42
Total outstanding repayable investment	110	109	108	106	102	100	161	162	165	164
Percent repaid	16%	17%	18%	20%	23%	25%	19%	19%	20%	20%
BPA										
Gross repayable investment	$19,059	$19,764	$20,337	$20,088	$21,141	$21,456	$22,376	$23,648	$24,343	$25,331
Amount repaid	4,291	4,860	5,100	5,645	5,733	5,545	6,263	7,238	7,064	7,691
Total outstanding repayable investment	14,769	14,904	15,237	15,243	15,409	15,911	16,113	16,410	17,279	17,640
Percent repaid	23%	25%	25%	27%	27%	26%	28%	31%	29%	30%
SEPA										
Gross repayable investment	$1,303	$1,398	$1,406	$1,410	$1,419	$1,422	$1,428	$1,434	$1,442	$1,476
Amount repaid	310	306	311	289	293	316	352	387	435	468
Total outstanding repayable investment	993	1,092	1,095	1,121	1,126	1,106	1,076	1,047	1,007	1,008
Percent repaid	24%	22%	22%	20%	21%	22%	25%	27%	30%	32%
SWPA										
Gross repayable investment	$903	$921	$931	$941	$951	$961	$979	$993	$997	$1,008
Amount repaid	84	114	135	155	179	203	224	252	298	330
Total outstanding repayable investment	819	807	796	786	772	758	755	741	699	678
Percent repaid	9%	12%	15%	16%	19%	21%	23%	25%	30%	33%
WAPA										
Gross repayable investment	$4,014	$4,032	$4,978	$4,714	$4,974	$5,021	$5,156	$5,335	$5,631	$5,891
Amount repaid	1,760	1,876	2,080	2,097	2,120	2,077	2,143	2,114	2,198	2,221
Total outstanding repayable investment[a]	2,254	2,156	2,898	2,617	2,854	2,944	3,013	3,221	3,433	3,670
Percent repaid	44%	47%	42%	44%	43%	41%	42%	40%	39%	38%

Legend

APA = Alaska Power Administration BPA = Bonneville Power Administration PMA = power marketing administration SEPA = Southeastern Power Administration SWPA = Southwestern Power Administration WAPA = Western Area Power Administration

[a]The total outstanding repayable investment amounts for WAPA do not include deferred expenses. Deferred expenses totaled $238 million, as of September 30, 1994.

Source: Derived by GAO from data provided by the PMAs.

Table II.3: PMAs' Revenues, Expenses, and Accumulated Net Revenue (Deficit) for Fiscal Years 1985 Through 1994

Dollars in millions

PMA	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
APA[a]										
Revenues	$7.0	$7.4	$8.3	$9.1	$9.0	$9.6	$9.4	$9.4	$10.2	$10.2
Operating expenses	3.2	3.5	3.7	3.5	3.6	3.9	5.9	6.5	6.5	6.5
Net interest expense	2.5	3.2	3.2	3.1	3.1	3.0	2.9	4.8	4.8	4.9
Adjustments	0	0	0	0	0	0	(16.0)	0	(0.3)	0
Net revenue (deficit)	1.3	0.7	1.4	2.4	2.3	2.8	(15.4)	(1.9)	(1.4)	(1.2)
Accumulated net revenue (deficit)	13.6	14.2	15.6	18.1	20.4	23.2	7.7	5.8	4.4	3.2
BPA										
Revenues	2,881.9	2,625.8	1,674.0	1,946.9	2,063.9	2,080.8	2,220.2	1,928.8	1,942.5	2,195.9
Operating expenses	1,760.5	1,841.3	965.3	1,008.0	1,131.5	1,133.6	1,256.4	1,516.8	1,514.6	1,500.0
Net interest expense	897.9	849.4	921.0	913.6	892.5	670.5	538.7	685.6	724.8	756.7
Adjustments	0	0	0	20.0	0	0	0	0	0	0
Net revenue (deficit)	223.4	(64.9)	(212.6)	5.3	39.9	276.7	425.1	(273.6)	(296.9)	(60.7)
Accumulated net revenue (deficit)	(308.6)	(373.5)	(586.0)	(580.8)	(540.9)	(264.2)	160. 9	(112.7)	(409.6)	(470.3)
SEPA [b]										
Revenues	94.4	106.7	121.1	113.4	131.4	140.8	152.4	155.3	169.3	158.1
Operating expenses	61.5	80.8	82.3	100.5	97.8	88.6	88.8	93.0	99.3	102.6
Net interest expense	27.7	37.4	42.1	42.4	45.2	45.6	44.2	42.7	40.5	38.9
Adjustments	0	0	0	0	0	0	0	0	0	0
Net revenue (deficit)	5.2	(11.5)	(3.3)	(29.5)	(11.6)	6.6	19.4	19.6	29.5	16.6
Accumulated net revenue (deficit)	214.3	202.8	199.5	170.0	20.3	26.9	46.3	65.9	95.4	112.0
SWPA [c,d]										
Revenues	110.8	102.8	90.8	91.2	91.0	95.5	94.9	103.1	115.7	109.4
Operating expenses	54.9	54.4	51.8	57.2	52.9	60.8	66.0	66.7	63.3	70.7
Net interest expense	20.3	20.6	21.8	20.3	19.8	19.7	19.5	19.4	17.3	18.1
Adjustments	0	0	0	0	0	114.4	0	0	0	0
Net revenue (deficit)	35.6	27.8	17.2	13.7	18.3	(99.4)	9.4	17.0	35.1	20.6
Accumulated net revenue (deficit)[e]	23.0	43.8	61.1	75.6	93.8	(14.2)	(4.9)	12.0	47.1	67.8
WAPA [f,g]										
Revenues	583.4	609.8	627.4	500.0	532.9	547.7	586.0	707.2	673.9	713.8
Operating expenses	287.7	346.4	390.7	395.8	484.6	515.0	519.0	555.7	674.1	579.4
Net interest expense	56.7	52.7	49.6	47.6	60.0	74.1	89.0	131.5	148.4	184.6
Adjustments	0	0	0	0	0	0	0	0	130.5	0
Net revenue (deficit)	239.0	210.7	187.1	56.6	(11.7)	(41.3)	(22.0)	20.0	(18.1)	(50.2)
Accumulated net revenue (deficit)[e]	1,291.0	1,456.2	1,689.9	1,774.6	1,760.0	1,715.3	1,564.1	1,451.9	317.2	267.1

(Table notes on next page)

Legend

APA = Alaska Power Administration
BPA = Bonneville Power Administration
PMA = power marketing administration
SEPA = Southeastern Power Administration
SWPA = Southwestern Power Administration
WAPA = Western Area Power Administration

Notes: Financial data are rounded to the nearest hundred thousand.

Accumulated net revenue (deficit) is as of September 30, 1994.

Differences may occur in amounts as stated in the financial statements because of rounding.

[a]In fiscal year 1991, APA changed its method of computing depreciation on utility plants from the compound-interest to the straight-line method. The change was applied retroactively to utility plant additions of prior years. The cumulative effect of this change for years prior to 1991 was a decrease in the accumulated net revenue (deficit) of about $16.0 million.

[b]In fiscal year 1990, SEPA changed its method of computing depreciation on utility plants from compound-interest to the straight-line method. The change was applied retroactively to utility plant additions of prior years. The cumulative effect of this change for years prior to 1990 was a decrease in accumulated net revenues (deficit) by $138.2 million. The 1989 financial data for SEPA is as reflected in the 1989 financial statements. The 1989 financial data for SEPA were extracted from the 1989 financial statements in SEPA's 1990 annual report. The financial statements were restated to reflect the change in the method of computing depreciation.

[c]SWPA's financial data for fiscal years 1985, 1986, 1988, 1989, and 1990 were extracted from the restated financial statements in SWPA's annual reports.

[d]In fiscal year 1990, SWPA changed its method for calculating depreciation on utility plants from the compound-interest to the straight-line method. The change was applied retroactively to utility plant additions of prior years. The cumulative effect of this change for years prior to 1990 was a decrease in accumulated net revenue (deficit) of about $114.4 million.

[e]Because of prior year adjustments or revenue transfers, the accumulated net revenues (deficit) for certain years may not equal the prior year's balance in this account plus current year net revenue (deficit).

[f]WAPA's financial data for fiscal year 1993 were extracted from the restated financial statements in WAPA's 1994 annual report.

[g]In fiscal year 1993, WAPA changed its method of accounting for depreciation of utility plant assets from the compound-interest method to the straight-line method. The cumulative effect of this change for years prior to 1993 was a decrease in accumulated net revenues (deficit) by $1.054 billion.

Source: The PMAs' annual reports.

Table II.4: Interest Rates on Appropriated Debt for Each PMA in Fiscal Year 1994

Rates in percent	APA	BPA[a,b]	SEPA[a]	SWPA[c]	WAPA
Range of rates	2.5-8.5	2.5-8.5	2.5-9.5	2.5-7.875	0-12.375
Nominal weighted average rate	2.98[d]	3.5	4.6	2.7	4.45[d]

Legend

APA = Alaska Power Administration
BPA = Bonnevillle Power Administration
PMA = power marketing administration
SEPA = Southeastern Power Administration
SWPA = Southwestern Power Administration
WAPA = Western Area Power Administration

[a]Obtained from BPA's 1994 annual report.

[b]Does not include interest rates on Treasury bonds or nonfederal projects.

[c]Provided by the PMA, as of September 30, 1994.

[d]Calculated by GAO for fiscal year 1994.

Source: The PMAs' annual reports for fiscal year 1994 or material developed by GAO from other data provided by the PMAs.

Table II.5: Financial Ratios for PMAs, as of September 30, 1994

Figures in percent

	1985		1986		1987		1988		1989	
PMA	Debt to gross PP&E	Debt service to revenue	Debt to gross PP&E	Debt service to revenue	Debt to gross PP&E	Debt service to revenue	Debt to gross PP&E	Debt service to revenue	Debt to gross PP&E	Debt service to revenue
APA	96	67	95	62	92	63	90	68	88	69
BPA	98	58	98	73	99	66	98	61	97	54
SEPA	65	42	71	39	70	38	70	39	68	37
SWPA	87	51	84	49	83	47	80	44	78	42
WAPA	64	48	58	24	75	34	66	10	67	14

1990		1991		1992		1993		1994	
Debt to gross PP&E	Debt service to revenue	Debt to gross PP&E	Debt service to revenue	Debt to gross PP&E	Debt service to revenue	Debt to gross PP&E	Debt service to revenue	Debt to gross PP&E	Debt service to revenue
86	67	87	57	89	64	89	68	88	70
96	44	95	34	94	55	95	55	95	48
64	49	61	52	57	50	54	52	52	46
75	46	74	42	72	46	67	55	63	46
66	5	63	24	67	15	70	32	72	26

Legend

APA = Alaska Power Administration BPA = Bonneville Power Administration PMA = power marketing administration PP&E = property, plant, and equipment SEPA = Southeastern Power Administration SWPA = Southwestern Power Administration WAPA = Western Area Power Administration

Note: Gross property, plant, and equipment includes the original cost of generation and transmission facilities and the cost of construction work in progress. For BPA, we also included other investments and obligations such as energy conservation measures and costs associated with operating and terminated nuclear plants.

The ratio of debt to gross property, plant, and equipment was calculated by dividing outstanding repayable investment (debt) by gross property, plant, and equipment.

The ratio of debt service to revenue was calculated by dividing principal debt repayments plus net interest expense by operating revenues.

Source: Derived by GAO from the PMAs' annual reports and other data provided by the PMAs.

Table II.6: Gross Appropriations Expended for Power and Nonpower Purposes, as of September 30, 1994

Dollars in millions

Purpose	APA	Percent of total	BPA	Percent of total	SEPA
Power[a]	$206.1	100.0	$25,331.0	91.9	$1,476.0
Flood control	[b]	[b]	559.3	2.0	244.3
Irrigation	[b]	[b]	409.2	1.5	[b]
Navigation	[b]	[b]	815.8	3.0	320.9
Recreation	[b]	[b]	113.8	0.4	291.3
Fish and wildlife	[b]	[b]	80.0	0.3	16.7
Multipurpose[c]	[b]	[b]	[b]	[b]	[b]
Municipal and industrial[d]	[b]	[b]	[b]	[b]	[b]
Other	[b]	[b]	244.2	0.9	14.3
Total	**$206.1**	**100.0**	**$27,553.3**	**100.0**	**$2,363.5**

Percent of total	SWPA	Percent of total	WAPA	Percent of total	Totals	Percent of total
62.4	$1,007.6	37.4	$5,891.0	55.7	$33,911.7	78.1
10.3	910.0	33.7	0.3	0.0	1,713.9	3.9
[b]	[b]	[b]	1,558.4	14.7	1,967.6	4.5
13.6	231.7	8.6	[b]	[b]	1,368.4	3.2
12.3	402.3	14.9	28.6	0.3	836.0	1.9
0.7	24.6	0.9	97.4	0.9	218.7	0.5
[b]	[b]	[b]	2,801.6	26.5	2,801.6	6.5
[b]	[b]	[b]	197.6	1.9	197.6	0.5
0.6	121.1	4.5	6.1	0.1	385.7	0.9
100.0	**$2,697.3**	**100.0**	**$10,581.0**	**100.0**	**$43,401.2**	**100.0**

Legend

APA = Alaska Power Administration
BPA = Bonneville Power Administration
PMA = power marketing administration
SEPA = Southeastern Power Administration
SWPA = Southwestern Power Administration
WAPA = Western Area Power Administration

Note: Percentages may not total 100 because of rounding.

[a]Power-related costs includes all power-related and all irrigation-related costs incurred by the PMA and the operating agency that must be repaid to the federal government through power revenues.

[b]Not applicable.

[c]Multipurpose costs refer to costs incurred by the operating agency that can be allocated to any purpose of the project. Different multipurpose costs are allocated to each project, and the operating agency at each project then determines how to allocate these costs to the appropriate purposes at the project.

[d]Municipal and industrial costs refer to costs associated with providing water to cities for their use, such as for drinking purposes.

Source: The PMAs' fiscal year 1994 annual reports and data provided by the PMAs.

Competitive Issues

Table III.1: Average Revenue Per Kilowatt Hour of Wholesale Power Sold for Each PMA During Fiscal Year 1993

PMA	Energy delivered in kilowatt hours	Revenue from sales in dollars	Average revenue (in cents per kilowatt hour sold)
APA	405,831,000	$10,079,000	2.5
BPA	57,245,116,000	1,406,400,000	2.5
SEPA	8,744,817,000	164,867,000	1.9
SWPA	7,946,116,000	96,696,000	1.2
WAPA	29,358,370,000	535,559,000	1.8
Nationwide-wholesale	1,202,901,697,000	$43,383,572,000	3.6

Legend

APA = Alaska Power Administration
BPA = Bonneville Power Administration
EIA = Energy Information Administration
PMA = power marketing administration
SEPA = Southeastern Power Administration
SWPA = Southwestern Power Administration
WAPA = Western Area Power Administration

Source: Developed by GAO from the PMAs' fiscal year 1993 annual reports and EIA's data.

Comments From the Department of Energy's Bonneville Power Administration

Department of Energy
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

September 15, 1995

United States General Accounting Office
Victor S. Rezendes
Director, Energy and Sciences Issues
441 G Street NW.
Washington, DC 20548

Dear Mr. Rezendes:

Staff of the Bonneville Power Administration have reviewed the September 7, 1995, draft General Accounting Office report entitled "Federal Electric Power: Operating and Financial Status of DOE's Power Marketing Administrations" (GAO/RCED/AIMD-95-256FS, Code 307335) and found the draft report to be by and large factually correct and to fairly reflect that Bonneville does face significant competition in the wholesale electric power market. We have provided suggested technical corrections and clarifications that we believe are appropriate and will enhance the information provided in the report.

If you have any questions, please contact Pete Lossner of my staff at (503) 230-3435.

Sincerely,

Roger E. Seifert

Jack L. Strayer, Manager for
Internal Audit Services

Enclosure

Comments From the Department of Energy's Power Marketing Liaison Office

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

Department of Energy
Power Marketing Liaison Office
Washington, DC 20585

September 15, 1995

Victor S. Rezendes
Director, Energy and
Science Issues
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Rezendes:

Deputy Secretary Charles Curtis has requested that we respond directly to you with comments on your September 7, 1995, Federal Electric Power: Operating and Financial Status of DOE's Power Marketing Administrations (GAO/RCED/AIMD-95-256FS, Code 307335). We appreciate the opportunity to comment and to suggest technical corrections to improve the fact sheet. Our comments reflect those of Alaska Power Administration, Southeastern Power Administration, Southwestern Power Administration, and Western Area Power Administration. The Bonneville Power Administration will provide separate comments directly to you.

See comment 1.

See comment 2.

The GAO fact sheet seems to infer that the Power Marketing Administrations (PMAs) generally use inefficient and inappropriate operating techniques that could leave them in a precarious position in the future. We believe that it is inappropriate to compare investor owned utilities' (IOUs) methodology of operating for a profit as the only standard by which the PMAs are judged.

See comment 3.

These comparisons, as stated in the report, lead to some incorrect conclusions. The following items should be clearly recognized in the report to avoid these incorrect conclusions.

- Congress never intended for the PMAs to make a profit on their operations; the law provides only for the recovery of power-related costs.
- The PMAs have lower imbedded costs because most of the Federal hydroelectric facilities were constructed at a time when the costs of construction were lower and these facilities have no subsequent fuel costs.
- The PMAs have a high debt ratio because hydroelectric facilities have more capital-intensive start-up costs, longer service lives, and a resulting capital investment repayment period of nearly 50 years. The investor owned facilities typically have lower start-up costs and an investment payoff period of closer to 20 years, based on their shorter useful lives.

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See comment 3.

- The PMAs are marketing a water-based resource subject to the vagaries of uncontrolled rainfall, therefore comparisons of a particular year's revenues and generation to a non-hydro based system, such as most area IOUs, is misleading.

See comment 4.

The PMAs operate efficiently within the Congressional guidelines, as indicated in part by the following:

- The PMAs normally return more funds to the Treasury than the annual Congressional appropriations for the operating costs of the PMAs and for the power-related costs of the operating agencies.

- The PMAs seek to balance the concerns of the authorized competing uses of the projects in scheduling and delivering power to their customers.

Other aspects of the GAO fact sheet of concern to us include:

See comment 5.

- The magnitude of Bonneville Power Administration's data overshadows that of the other PMAs and distorts any conclusions formed on a PMA-wide basis. Policy decisions based on PMA-wide data are inappropriate for any PMAs other than Bonneville.

See comment 6.

- Generally, the PMAs have no control over the amount of generation investment incurred by the operating agencies (U. S. Army Corps of Engineers and Interior's Bureau of Reclamation), which, by law, becomes repayable through rates charged by the PMAs. Excluding Alaska, the PMAs neither own nor operate the generating facilities, which represent a sizable majority of their total repayable investment. This fact was not clearly conveyed and is critical to an accurate understanding of PMA operations and financing.

See comment 7.

- The two ratios of debt to gross plant and debt service to revenue, as cited by themselves, do not accurately reflect PMA financial conditions. The PMAs' debt is generally at lower interest rates than those available today, allowing the PMAs to carry higher debt ratios without a corresponding increase in financial risk.

See comment 8.

- Most PMA technology is state-of-the-art and is competitive with others in the electric utility industry.

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We welcome the exploration and dissemination of factual information about the PMAs. With few exceptions, the GAO fact sheet contains accurate information developed with the assistance of PMA staff. However, our enclosures contain specific changes or comments we would like to see incorporated into the GAO fact sheet.

Sincerely,

Joel K. Bladow
Assistant Administrator,
for Power Marketing Liaison

Enclosures

The following are GAO's comments on the Power Marketing Liaison Office's letter dated September 15, 1995.

GAO's Comments

1. The Power Marketing Liaison Office stated that our report implies that the PMAs generally use inefficient and inappropriate operating techniques that could leave them in a precarious position in the future. We disagree. Our report notes that the PMAs embody the various statutes and DOE policies that govern their procedures. Our report also points out that with the exception of Alaska, the PMAs do not own or operate the hydropower facilities from which they sell power nor do they have control over the amount of investment incurred by the agencies that operate and maintain the facilities. We did not attempt to assess the efficiency or appropriateness of the current operating techniques used by the PMAs or the operating agencies.

2. The Liaison Office stated that it is inappropriate to use investor-owned utilities' methodology of operating for a profit as the only standard by which to judge the PMAs' operations. Our report did not compare the fact that investor-owned utilities use a profit-based methodology with the fact that the PMAs' are not allowed to earn a profit. We compared investor-owned utilities with the PMAs in two cases, both of which we believe are appropriate. First, concerning the manner in which the hydropower facilities and transmission assets were financed, we compared the PMAs' cost of borrowing from the Treasury with investor-owned utilities' cost of borrowing from private markets. We believe that this comparison allows the reader to independently assess the relative borrowing costs and potential financial advantages of PMAs versus private sector operations. Second, we explain that most capital investments in federal hydropower and transmission facilities are made through appropriations, which are essentially debt because they must be repaid through power revenues. We compare the PMAs' method of financing with that of investor-owned utilities that can issue common or preferred stock in addition to debt. Because the PMAs cannot issue stock, it is reasonable to expect that they would have higher levels of debt than investor-owned utilities. We do not assess the levels of the PMAs' debt in comparison to investor-owned utilities but rather in terms of competitive pressures and how the PMAs' debt may affect their competitive situation.

3. The Liaison Office suggested several items that should be recognized in the report in order to avoid incorrect conclusions stemming from our comparison of PMAs with investor-owned utilities. The Liaison Office

suggested that (1) the Congress never intended the PMAs to make a profit, (2) PMAs have a lower operating cost because their facilities were constructed at a time when construction costs were lower and the facilities have no fuel costs, (3) the PMAs' high debt ratio results from the capital- intensive start-up costs associated with hydropower facilities and the longer service lives of these facilities and resultant longer repayment periods, and (4) the PMAs' revenues can vary from year to year depending on water flow, and thus comparisons to nonhydro- based systems, such as those of investor-owned utilities, are misleading. First, our report acknowledges that the PMAs do not set their rates to earn a profit. Rather, they attempt to generate power revenues sufficient to cover all capital and operating costs. Second, although our report lists several reasons why the PMAs remain among the sellers of power at the lowest cost, our list was not intended to be exhaustive. Our intent was to inform the reader that, for many reasons the PMAs have been and generally remain among the sellers of power at the lowest cost. In addition, our report notes the inherent low cost of hydropower relative to other generating sources. Third, we do not compare the PMAs' high levels of debt with the debt of investor-owned utilities. Instead, we explain how the PMAs' debt, which is a fixed cost, may constrain the PMAs from adjusting to the increasingly competitive wholesale power markets in which they operate. Fourth, we do not compare any particular year's revenues or generation of any of the PMAs with a nonhydro-based system of an investor-owned utility. Instead, our report notes that the PMAs' revenues can vary depending on conditions, such as water flow, which may affect the amount of power that a PMA can sell.

4. The Liaison Office commented that the PMAs operate efficiently within congressional guidelines. The Liaison Office supported this comment by suggesting that the PMAs (1) normally return more funds to the Treasury than the annual congressional appropriations provided for the operating costs of the PMAs and the power-related costs of the operating agencies and (2) seek to balance the concerns of authorized competing uses of the projects and scheduling and delivering power to their customers. While PMAs may normally return more funds to the Treasury than they receive each year in annual appropriations, the repayment does not cover the Treasury's interest expense associated with the PMAs' debt. Second, our report notes that in addition to the $34 billion invested in power-related capital investments, more than $9.5 billion has been expended by the operating agencies for nonpower-related purposes, such as flood control, irrigation, and navigation. We revised our report to note that the PMAs must

recognize and balance the concerns of these competing uses against the needs of their power customers.

5. We agree with DOE that because Bonneville accounts for the majority of the PMAs' sales and revenues, its data tend to overshadow the other PMAs' and may lead to inappropriate conclusions about all of the PMAs when the conclusions only apply to Bonneville. We have limited our presentation to factual material only. Our discussion of Bonneville's competitive situation was not meant as a reflection on the other PMAs but instead was intended to show what can happen when a PMA with high fixed costs faces a competitive environment. Our report explains that as of the date of our report, the other PMAs were the low-cost sellers of power in their areas.

6. The Liaison Office commented that our report should reinforce the fact that the PMAs have no control over the amount of appropriations expended by the operating agencies for power generation equipment. We agree and have revised our report accordingly.

7. We agree with the Liaison Office that the two financial ratios we cite in our report (debt to gross property, plant, and equipment and debt service to revenue) should not be used alone to accurately assess the PMAs' financial condition. We use these ratios only as indicators of the PMAs' financial condition. However, for Bonneville, which now faces significant competition, the high debt service ratio is a critical indicator of its financial condition. Bonneville's high debt and resultant fixed costs leave it with little flexibility to respond to competitive challenges. The substantial debt of the other PMAs is not currently a problem because they remain the sellers of power at the lowest cost in their service areas. However, competition is expected to result in a general decline in wholesale rates and, if they do not remain low-cost sellers, other PMAs could face a situation similar to Bonneville's. We agree with the Liaison Office that the PMAs' debt is at lower interest rates than those available today and that this has allowed PMAs to carry higher debt ratios without a corresponding increase in financial risk. However, as stated above, increased competition in wholesale power markets is a relatively new development and could pose serious challenges for each of the PMAs.

8. The scope of our review did not include an assessment of the quality of the power equipment employed by the PMAs.

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