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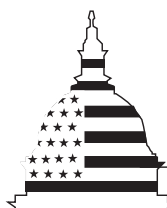
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FEDERAL POWER

The Role of the Power Marketing Administrations in a Restructured Electricity Industry

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Mr. Chairman and Members of the Subcommittee:

We are here today to discuss the role of the federal power marketing administrations (PMAs) in a restructured electricity industry. As we near the close of the first electrified century, vast opportunities face the electricity industry as we proceed into restructured, more competitive markets. Over the last 20 years, competition has been replacing regulation in major sectors of the U.S. economy, including transportation, natural gas, and telecommunications. As we enter the next millennium, new emerging opportunities of a competitive marketplace challenge the electricity industry. As this restructuring proceeds, we must consider how the existing federal system of generating, transmitting, and marketing electricity is managed.

Our statement today is primarily based on the body of PMA work that we have completed for this Subcommittee over the last 4 years. We also discuss our reports concerning the Tennessee Valley Authority (TVA) because they relate closely to the PMA reports. On the basis of our review of the issues, we have identified several broad goals of the effort to restructure the electricity industry—goals that apply to both the private sector and government, including the PMAs. We will also discuss the role of the PMAs in this changing electricity industry.

In summary, Mr. Chairman, our principal observations are the following:

- We have identified several broad goals of the electric industry's restructuring based on the various policymakers' and industry experts' opinions. Today, we will discuss five of these goals that we believe particularly affect the PMAs: (1) encouraging competition for retail consumers, (2) protecting the environment, (3) balancing equity among stakeholders, (4) maintaining the reliability of the transmission grid, and (5) promoting deregulation by redefining federal roles. We will now summarize each goal and discuss its applicability to the PMAs.
- One major goal of deregulating the retail electricity market is encouraging retail price competition. Removing practices that treat potential competitors inconsistently and providing customers with lower electricity prices are two major considerations. The PMAs are generally able to sell power more cheaply than other providers in part because they sell electricity generated almost exclusively by hydropower and because some of the government's costs are not recovered through the PMAs' rates. We estimated net financing costs attributable to the PMAs to be about \$585 million in fiscal year 1996. In addition, unlike the investor-owned

utilities, the PMAS are not required to earn a profit. The PMAS and TVA also have competitive advantages in financing, taxes, and regulatory oversight.

- Protecting the environment is the second broad goal. Because the electricity industry is a major source of air pollution, the debate over restructuring includes the question of how changes in how electricity is generated could affect the environment. Concern exists that competitive markets may result in increased emissions of pollutants from the burning of fossil fuels, such as coal. Although the mix of sources generating electricity may change, currently, over 50 percent of TVA's power is generated from coal, whereas less than 2 percent of the PMAS' power is generated from coal. The PMAS' hydropower, which is about 93 percent of the PMAS' total power, may offer potential environmental advantages over other electricity sources because it is a clean, domestic, and renewable source of energy. However, hydropower facilities can have significant impacts on fish and wildlife habitats.
- Balancing equity among stakeholders is the third broad goal. Legislation has been proposed to require the PMAS and TVA to sell their power at market rates. As we discussed in recent reports, the Congress has the option of requiring the PMAS to sell their power at market rates. This would better ensure the full recovery of the appropriated and other debt of about \$22 billion through the PMAS' power sales. This would also lead to more efficient management of the taxpayers' assets. This debt includes the costs of building and operating the federal electric power network as well as billions of dollars in irrigation-related debt. Such proposals would benefit federal taxpayers by better ensuring the full recovery of debt through the PMAS' rates. One aspect that will require careful consideration is balancing the competing interests of various groups of stakeholders—ratepayers, customers, investors, and taxpayers. Yet, the PMAS are faced with the risk that the federal investment in hydropower will not be recovered if power generated by federal plants ultimately proves to be too unreliable or costly to be competitive.
- The fourth broad goal of restructuring is maintaining the reliability of the interstate transmission grid. An issue that directly relates to the PMAS is the maintenance of reserves that can be called upon to meet planned or unforeseen outages by power providers. As we recently reported, hydropower's inherent flexibility in meeting different levels of demand creates an opportunity for hydropower to play a significant role in meeting demand during peak periods.
- Finally, the last broad goal is promoting deregulation by redefining federal roles, such as those of federal regulatory agencies. While restructuring has focused largely on deregulating the retail market, some segments of the electricity industry may face new or increased regulations to address

market power and consumer protection issues. Recent transmission policies have dealt with the concerns of market power in the ownership and control of transmission facilities. For example, the PMAS' transmission rates and facilities may come under new federal regulation.

Background

In 1997, residential, commercial, and industrial consumers spent about \$215 billion on electricity, making the market for electricity larger than the markets for telecommunications, trucking, or airline transportation services. Over the last 20 years, competition has been replacing regulation in major sectors of the U.S. economy, including transportation, natural gas, and telecommunications. New legislation and technological changes have created a climate for change in traditional electricity markets at both the wholesale and retail levels. Through the Energy Policy Act of 1992 and subsequent rulings by the Federal Energy Regulatory Commission (FERC), the federal government has encouraged competition in the wholesale electricity market. At the retail level, the administration estimates that competition will result in annual savings of \$20 billion for consumers and \$2 billion for the government. Whereas transmission and distribution will remain largely regulated and noncompetitive, the retail market offers great potential for competition. Since 1992, 22 states—representing about 60 percent of the U.S. population—have issued comprehensive deregulation orders or enacted restructuring legislation. Most of the remaining states have the matter under active consideration. The extent to which the federal government should participate in fostering retail competition has yet to be decided.

The federal government—the nation's largest single producer of electric power—generated nearly 10 percent of the nation's electricity in 1998. Since the New Deal, the federal government has established water projects that—in addition to promoting agriculture, flood control, navigation, and other activities—produce electric power. The federal government has played an important role by selling electricity to rural America. The Department of the Interior's Bureau of Reclamation (Bureau) and the Department of the Army's Corps of Engineers (Corps) generate electricity at hydropower plants located at major federal water projects. The Department of Energy's (DOE) four PMAS,¹ along with TVA, generally sell this electricity in wholesale markets mostly to publicly and cooperatively owned utilities that, in turn, sell the electricity to retail consumers. Although not a PMA, TVA is a federal corporation and the nation's largest

¹DOE's PMAs are the Bonneville Power Administration, Southeastern Power Administration, Southwestern Power Administration, and Western Area Power Administration.

single producer of power. As restructuring moves forward, the Congress, states, and the industry are considering how the existing federal power system fits into the new environment and how it is managed. Against the backdrop of restructuring, the Congress is compelled to reconsider the policies used to maintain and manage the federal hydropower system.

Mr. Chairman, we have identified several broad goals of electric industry restructuring. We will now discuss the five goals that particularly affect the PMAs, including their relationship to the PMAs in this changing environment.

Encouraging Retail Competition

One major goal of deregulating the retail electricity market is encouraging retail price competition. Several objectives support the achievement of this goal. These include removing practices that treat potential competitors inconsistently and providing customers with lower electricity prices. Each of these objectives apply to both the private sector and government, including the PMAs. We will now discuss these objectives.

The PMAs and TVA Have Competitive Advantages in Financing, Taxes, and Regulatory Oversight

As the market moves from a regulated to a more deregulated retail environment, it may be necessary to determine whether more consistent treatment of power providers is warranted. Favorable financing for power-related facilities gives some federally assisted potential competitors advantages in the marketplace. For example, we have reported that although the PMAs are generally required to recover all costs, favorable financing terms² and the lack of specific requirements to recover certain costs have resulted in net costs to the federal government each year.³ Net costs include net financing costs, pension and post retirement health benefits, and certain construction costs. We estimated net financing costs attributable to the PMAs to be about \$585 million in fiscal year 1996. In part because the PMAs sell power generated almost exclusively from hydropower, are not required to earn a profit, and do not fully recover the

²"Favorable financing" includes a requirement to repay the highest interest-bearing appropriated debt first and interest rates on appropriated debt that, before 1983, were below market rates. We use the term "appropriated debt" throughout this testimony because the PMAs are required to set their electricity rates at levels that will recover appropriations used for capital improvements by the Bureau and the Corps. These reimbursable appropriations are not considered to be lending by the Treasury. Pursuant to legislation passed in 1996, Bonneville's appropriated debt was refinanced to approximate Treasury's current borrowing costs.

³See *Power Marketing Administrations: Cost Recovery, Financing, and Comparison to Nonfederal Utilities* (GAO/AIMD-96-145, Sept. 19, 1996), *Federal Electricity Activities: The Federal Government's Net Cost and Potential for Future Losses* (GAO/AIMD-97-110 and 110A, Sept. 19, 1997), and *Federal Power: Options for Selected Power Marketing Administrations' Role in a Changing Electricity Industry* (GAO/RCED-98-43, Mar. 6, 1998).

government's costs in their rates, they are generally able to sell power more cheaply than other providers. We reported in January that DOE's Southeastern Power Administration (Southeastern), Southwestern Power Administration (Southwestern), and the Western Area Power Administration (Western) sold wholesale electricity to their preference customers,⁴ from 1990 through 1995, at average rates from 40 to 50 percent below the rates that nonfederal utilities charged.⁵ In the recent past, the rates of the Bonneville Power Administration (Bonneville) were at or above market rates. We also reported that many rural electric cooperatives—many of which are PMA preference customers—have had access to favorable financing (either direct loans or guarantees) through the U.S. Department of Agriculture's Rural Utilities Service (RUS). Such financing did not fully reflect the government's net financing costs. These costs were about \$874 million in fiscal year 1996. Such financing would give these cooperatives a competitive advantage if they were to compete outside their traditional service areas against private competitors that do not have access to such favorable interest rates.

Another example of favorable financing concerns federal entities' bond sales as compared with the criteria applied to other borrowers. Bond-rating services give the higher rating to bonds issued by Bonneville and TVA because they are federal entities. For example, Standard & Poors' credit rating agency's "AAA" rating for TVA bonds is not based on a default, risk-based analysis. Instead, the bonds are generally viewed as government-sponsored debt. The resulting lower bond interest rate gives these entities a competitive advantage.

Also, some electricity suppliers, such as investor-owned utilities, are required to pay federal, state, and local taxes, but the PMAs and TVA generally are not subject to them.⁶ Municipalities and other public power suppliers may also have favorable tax treatment that would give them a competitive advantage if they were to compete outside their traditional service areas. To address this possibility, legislation has been proposed, for example, that would preclude government-owned utilities from using tax-exempt financing to fund facilities if they choose to compete outside their traditional service areas.

⁴Preference customers include cooperatives and public bodies, such as municipal utilities, irrigation districts, and military installations.

⁵See Federal Power: PMA Rate Impacts, by Service Area (GAO/RCED-99-55, Jan. 28, 1999).

⁶TVA was expected to pay about \$264 million in payments in lieu of taxes in fiscal year 1998.

Several inconsistencies also exist in the area of regulatory oversight. First, investor-owned utilities are subject to full review and approval processes by FERC, while TVA is exempt from regulation by FERC. TVA's rates are reviewed only by its board of directors. All rates established by the PMAs are subject to a limited review by FERC. Second, by law, the transmission facilities of Bonneville, Southwestern, and Western, as well as TVA and some other smaller utilities, are exempt from FERC's jurisdiction of transmission rates and open access.⁷ And third, as a federal instrumentality, TVA is not subject to antitrust legislation as are private-sector firms. Some TVA critics assert that this exemption, together with the agency's total discretion in rate setting, allows TVA to control the market by engaging in predatory pricing and other anticompetitive activity.

Protecting the Environment

Because the electricity industry is a major source of air pollution, the debate over restructuring includes how changes in how the industry generates electricity could affect the environment. A relevant question is whether the existing body of environmental law and regulation can accommodate future changes in electricity generation and transmission or whether restructuring legislation should have an environmental component to help ensure that further developments in the electricity industry will be compatible with environmental values.

Fossil-Fuel Generation

The combustion of fossil fuels, which account for about two-thirds of the nation's electricity generation, results in airborne emissions. These emissions include pollutants that directly pose risks to human health and welfare, such as sulfur oxides, nitrogen oxides, particulate matter, carbon monoxide, and certain heavy metals. Other emissions may pose indirect risks; for example, carbon dioxide may contribute to global warming. Of the fossil fuel-fired steam generators, coal-fired facilities contribute a large share of these gases. The Environmental Protection Agency currently regulates these emissions, except carbon dioxide. Any increase in fossil fuel-fired generation may increase carbon dioxide emissions. Some are concerned that competitive markets may result in increased generation and emissions of pollutants because (1) lower prices resulting from restructuring would increase electricity purchases and, as a result,

⁷FERC Order 888 requires utilities under FERC's jurisdiction to file nondiscriminatory open access transmission tariffs and offer comparable transmission services to eligible third parties. Order 889 requires utilities to develop same-time information systems to make simultaneous transmission information available to those entities that are selling power. Bonneville, Southwestern, and Western have voluntarily filed open-access transmission service tariffs with FERC.

(2) older, more polluting coal-fired generating facilities, which are generally exempt from the Clean Air Act's new source emissions standards, will be used more extensively.⁸ Although the generation mix may change, currently, less than 2 percent of the PMAS' power and over 50 percent of TVA's power are generated from coal.

To address these concerns, some have suggested various measures, in addition to the continued enforcement of environmental standards under the Clean Air Act, to counteract the anticipated increase in the emissions of air pollutants after deregulation. These include (1) requiring a renewable portfolio standard, which directs utilities to have a specific percentage of their generation power originating from a renewable (non-air-polluting) source of energy; (2) implementing pollution output controls, which focus on limiting emissions without encouraging any particular kind of generation-type; and (3) ratifying the Kyoto Protocol, which sets targets for greenhouse gas emissions for developed nations.

Yet, disagreements exist on how to control pollution. It is argued that a mandate for a renewable portfolio standard, for example, is contradictory to the spirit of deregulation. Instead, some industry representatives have testified before the Congress that the federal government should establish emissions standards for all generation facilities. These standards would be output-based, not favor a particular fuel source, and allow market forces to determine the most efficient means to develop cleaner coal plants and other technologies, including renewable generation. Any environmental component of restructuring legislation, it is argued, should be market based and incentive driven because in the long run, competition will favor cleaner and more efficient facilities and accelerate the turnover and upgrading of existing power plants.

At least nine states have already adopted renewable portfolio standards that require that specific percentages of the electricity sold in their state be generated from renewable sources. Such sources include geothermal, hydro, solar, and wind energy. The administration's proposed renewable portfolio standard would require electricity suppliers to eventually provide 7.5 percent of their electricity sales from nonhydroelectric renewable technologies. The Congress is considering whether to promote fuel diversity by adopting such a federal renewable portfolio standard. A related issue is whether to prescribe specific technologies or fuel sources as renewable energy. Including hydropower in a renewable portfolio

⁸While plants constructed before August 1971 are exempt, facilities that are modified are subject to the standards.

standard would make achieving the proposed standard easier and less costly for electricity suppliers. It would also increase the importance of the nation's federal hydropower assets if they could be tapped to meet any new requirements.

Non-Fossil-Fuel Generation

The PMAS may offer potential advantages in the generation of electricity from non-fossil fuels. PMA hydropower, comprising about 93 percent of the PMAS' generation, is a clean, domestic, renewable source of electricity. Hydropower plants provide inexpensive electricity and produce no pollution. However, hydropower facilities can have significant impacts on the surrounding area—especially fish migration patterns and wildlife habitats. To mitigate adverse impacts, dams should maintain a steady stream flow and be designed or retrofitted with fish ladders and fishways to help fish migrate. As we reported in September 1997, Bonneville spends hundreds of millions of dollars annually to mitigate damage to fish and wildlife caused by the federal government's hydropower operations. This sum could increase considerably in the future, according to Bonneville. Such costs may compromise Bonneville's ability to compete in a restructured environment. Conversely, TVA relies heavily on coal generation.

Restructuring also has environmental implications for nuclear energy. As we reported in May, industry experts expect that the deregulation and restructuring of the electricity industry could result in the early retirement of from 9 to 40 percent of the nation's nuclear power plants. Such plants may not be competitive with other sources of electricity, in part, because of the high construction costs resulting in part from changes in the Nuclear Regulatory Commission's health and safety regulations issued after the Three Mile Island accident. Additionally, the cost of decommissioning—the disposal of radioactive and other wastes so that the sites comply with environmental standards—is negatively affecting the competitiveness of some nuclear power plants. As we reported in May, competition could result in economic pressures that will affect the availability of adequate funds for decommissioning and affect how utilities address maintenance and safety in nuclear power plants.⁹ Because of restructuring, owners may retire some of the nuclear plants before sufficient decommissioning funds have been accumulated. In fact, 19 of 26 nuclear plants identified as likely to be retired early are owned, in whole or in part, by licensees that have not accumulated sufficient

⁹See Nuclear Regulation: Better Oversight Needed to Ensure Accumulation of Funds to Decommission Nuclear Power Plants (GAO/RCED-99-75, May 3, 1999).

decommissioning funds. More broadly, we also found that nearly half of all the utilities with nuclear plant licenses were not accumulating sufficient reserves through 1997 to pay for decommissioning costs. For example, we reported that TVA had seriously underfunded its decommissioning reserves under certain scenarios. Whereas nearly 20 percent of TVA's power is nuclear, less than 4 percent of the PMAs' power is nuclear.

Balancing Equity Among Stakeholders

One aspect of restructuring that will require careful consideration is balancing the competing interests of various groups of stakeholders that will be affected by the restructuring process. Stakeholders include ratepayers of investor-owned utilities, preference customers of the PMAs, investors who own stock issued by investor-owned utilities or bonds issued by Bonneville and TVA, and federal taxpayers. We will mention these stakeholders as we discuss the recovery of stranded costs for generation assets and the relationship of the PMAs' rates to market rates.

Recovery of Stranded Costs for Generation Assets

As the industry moves to a restructured environment, some costs that were incurred under the traditional regulated structure may not be recoverable under competitive power rates. These are generally referred to as stranded costs, and estimates of their total value have ranged from \$10 billion to \$500 billion. State legislatures and others have defined the specific components of stranded costs differently. Stranded costs may include power plants that are rendered uneconomical by restructuring. Nuclear plants with high fixed costs, such as decommissioning costs, may be particularly vulnerable. Stranded costs may also include long-term, high-cost power supply contracts mandated by federal legislation.¹⁰ To date, states have been responsible for deciding the extent to which utilities can attempt to recover stranded costs for generation. To the extent that stranded costs are not fully recovered, investors and possibly federal taxpayers must make up the difference and suffer the financial consequences. To the extent that customers are not allowed to benefit immediately and fully from reduced retail rates while stranded costs are being recovered, ratepayers suffer from higher rates. Using their discretion, individual states have allowed for varying degrees of stranded cost recovery. The administration's restructuring proposal provides general support for utilities' recovery of stranded costs. Also, the proposal provides for imposing mandatory transmission fees to ensure the recovery

¹⁰The Public Utility Regulatory Policies Act of 1978 requires utilities to buy power offered to them by certain suppliers at rates equal to a utility's cost of providing its own generating capacity. In many cases, such rates are now well above current market costs.

of the power and any other costs assigned for recovery through the PMAS' and TVA's power rates.

A second issue regarding stranded costs that involves federal taxpayers as stakeholders is the recovery of loans or the cost of loan guarantees made by the Rural Utilities Service. These were provided for rural electric cooperatives, many of which are PMA preference customers. To the extent that retail competition may be allowed in electric cooperatives' service areas, the repayment by the cooperatives of over \$32 billion in federal direct or guaranteed loans is increasingly placed at risk. In March 1998, we testified that RUS had written off about \$1.5 billion in loans and that RUS questioned the prospects of full repayment of another \$10.5 billion in loans.¹¹ We also reported that outstanding loans to borrowers that were currently considered viable by RUS may become stressed in the future because of high costs and competitive or regulatory pressures. We concluded that the federal government will probably incur losses on some of these loans in the future.

A third issue concerning stranded costs—the adequacy of accumulating decommissioning reserves—has already been mentioned. From an equity viewpoint, arguments can be made that reserves, when inadequate, should be funded by current ratepayers, future ratepayers, investors, or possibly federal taxpayers.

Market Rates Exceed PMA Rates

On a national scale, the administration estimates that, on average, a typical family of four would save \$232 annually on electricity purchases and the reduced costs of other goods and services if the administration's restructuring plan were implemented. The federal government would also benefit from retail competition. Using various scenarios, we estimated that the federal government could expect cumulative savings in its electricity bills of from \$600 million to \$6.5 billion from 1998 through 2015 because of retail competition.¹² However, although several states have already mandated varying rate reductions in their restructuring plans, not all customers in all states would see price reductions from nationwide retail competition. Residential customers in some states that currently have electricity rates below the national average may see their rates rise, according to several studies. For example, DOE estimates that electricity

¹¹See Rural Utilities Service: Risk Assessment for the Electric Loan Portfolio (GAO/T-AIMD-98-123, Mar. 30, 1998).

¹²See Federal Electricity: Retail Competition Could Create Government Savings (GAO/RCED-97-244, Sept. 30, 1997).

rates averaged across all customer classes would actually increase somewhat in Montana, Oregon, and Washington State under the administration's restructuring proposal.

The PMAs are currently required to set their power rates at the lowest possible level consistent with sound business principles. They generally follow applicable laws and regulations regarding the recovery of costs. We have reported that the PMAs' rates have generally been lower than the market rates. If the PMAs were authorized to charge market rates for power in conjunction with federal restructuring legislation, some preference customers who now purchase power from the PMAs at rates that are less than those available from other sources would see their rates increase. As we recently reported, slightly more than two-thirds of the preference customers, which are located in varying portions of 29 states, that purchased power directly from Southeastern, Southwestern, and Western would experience relatively small or no rate increases—increases of one-half cent per kilowatthour or less—if those PMAs charged market rates.¹³ As we reported, the Congress has the option of requiring the PMAs to sell their power at market rates to better ensure full recovery of the appropriated and other debt¹⁴ that is recoverable through the PMAs' power sales.¹⁵ This debt totaled about \$22 billion at the end of fiscal year 1997 and included nearly \$2.5 billion in irrigation costs that are to be recovered through the PMA's power sales.¹⁶ This option would likely also lead to more efficient management of the taxpayers' assets.

Another issue affecting the future price of PMA power is the reliability of federal generating assets. In March, we reported that the Bureau's and the Corps' hydropower plants are generally less reliable in generating electricity than nonfederal hydropower plants. We concluded that these agencies were unable to obtain funding for maintenance and repairs as needed and therefore delayed repairs. These delays caused frequent, extended outages and inconsistent plant performance. For example, at the Bureau's Shasta plant in California, the need to repair the generating units

¹³See GAO/RCED-99-55 and Federal Power: Regional Effects of Changes in PMAs' Rates (GAO/RCED-99-15, Nov.16, 1998). To estimate potential rate changes, we calculated how much, in cents per kilowatthour, each customer paid, on average, for power purchased from (1) all sources, including the PMAs, and (2) sources other than the PMAs, including the wholesale market, in 1995. Then, we took the difference between the two, considering the latter to be the market rate.

¹⁴"Other debt" is primarily debt for certain irrigation facilities and nonfederal nuclear power plants.

¹⁵See GAO/AIMD-97-110 and 110A and GAO/RCED-98-43.

¹⁶This total does not include any portion of TVA's debt. TVA's outstanding debt totaled nearly \$26 billion, as of March 31, 1999.

was identified in 1983. However, funding did not become available until 1995, when the customers provided advanced funding, and, according to a Bureau official, repairs will not be completed until 2003. The uncertainty of the federal planning and budget processes to provide timely and predictable funding for maintaining and repairing the federal power assets may be seen as evidence that the Bureau and the Corps cannot provide electricity as efficiently as the nonfederal sector. Although PMA power has been generally priced less than other electricity, as wholesale markets become more competitive, the PMAS' customers will have more suppliers from which to buy electricity. As nonfederal electricity rates decline in competitive markets, a portion of the PMAS' debt of about \$22 billion may be at risk of nonrecovery if the market for PMA power is diminished.

Maintaining the Interstate Grid's Reliability

The reliability of the high-voltage transmission system has been the responsibility of the North American Electric Reliability Council (NERC), a not-for-profit entity with voluntary membership from all segments of the electricity industry. NERC reports that the existing system for setting and encouraging compliance with the industry's reliability standards is not sustainable in a new environment where power flows on the grid are changing, the number of transactions is increasing dramatically, and new types of business entities are using the transmission system in ways that have not previously been used. NERC believes that mandatory reliability standards are needed. It also believes that the Congress should authorize a new, independent self-regulating reliability organization with oversight by FERC, a position largely supported by the administration.

Another aspect of reliability that is changing under restructuring is the control or dispatching of power over the transmission lines. An emerging patchwork of regional electric transmission grids, often working at cross purposes, threatens the system's reliability and it is time for federal regulators to address the problem, according to a survey of state regulators completed in March 1999.¹⁷ The survey also reported that uncertainty over the future of transmission management is harming the competitive position of utilities in regions where the issue is unresolved. The problem arose with the implementation of FERC Order 888. Since that time, FERC has encouraged the creation of new, regional transmission groups, such as integrated system operators that would be responsible for ensuring that loads match resources available to the system. These operators are not to be controlled by the power generators. Currently, FERC is strongly encouraging, but not requiring, owners of transmission

¹⁷Crossed Wires, Neil Palmer & Associates and The Terra Group.

facilities to participate in geographically broad transmission organizations. According to FERC, these organizations are expected to improve the efficiencies of transmission grid management by adopting better pricing and congestion management, improving the grid's reliability, removing remaining opportunities for discriminatory transmission practices, improving market performance, and facilitating lighter-handed regulation. In May, FERC issued a notice of proposed rulemaking that seeks comments on proposed minimum characteristics and functions for the regional transmission organizations. Its impact on the PMAs is unclear. As an example, Bonneville has explored participating in a regional transmission group in the Northwest but may need clear legal authority to join. The administration's proposal would provide such clarity.

FERC currently has authority over most of the nation's interstate power grid. But about one-third of the integrated grid is not under FERC's jurisdiction with regard to mandatory open transmission access. For example, over 30,000 miles of transmission lines owned by Bonneville, Southwestern, and Western, as well as 17,000 miles owned by TVA, are not under FERC's jurisdiction. To maximize the economic benefits of restructuring, some proposals would extend FERC's authority to include all of the nation's transmission facilities in the lower 48 states.

The restructured environment also creates uncertainty regarding access to investment capital for new or upgraded transmission capacity. The building of high-voltage transmission facilities is being delayed at a time when the need for additional capacity grows in some areas, according to an April 1999 report on transmission restructuring.¹⁸ For-profit entities may be needed to provide capital if other entities are unwilling or unable to provide enough capital for new or upgraded facilities. On the other hand, a restructured market may reduce the need for new transmission lines by using, for example, distributed generation and cogeneration¹⁹ that would reduce the need to transmit power and that are supported under the administration's restructuring plan.

On a more technical note, reliability encompasses the maintenance of reserves that can be called upon to meet planned and unforeseen outages by power providers. The decisions on how to provide for standby reserves in a restructured environment have not been finalized. Of particular

¹⁸Credit Implications of the ISO-Transco Debate, Duff & Phelps Credit Rating Co. (April 1999).

¹⁹Distributed generation systems include fuel cells, solar cells, and small turbines, which supply power closer to consumers than a central generation station. Cogeneration systems produce electricity and another form of energy, such as heat or steam, using the same fuel source.

relevance for today's hearing is what role the federal government's hydroelectric facilities could play in providing reserves in the restructured market. As we noted in a March 1999 report on the maintenance and repair of federal hydropower plants, hydropower's inherent flexibility in meeting different levels of demand translates into the significant role that hydropower may play in meeting demand during peak periods and providing such services as maintaining reserves.²⁰ Depending on the actions taken by federal and state regulators in the near future, a separate market for such services as maintaining reserves is beginning to develop, and utilities with hydropower could capture a market niche and take the opportunity to earn additional revenues.

Promoting Deregulation by Redefining Federal Roles

While restructuring has focused largely on the generation sector of the electricity industry, some segments of the industry may face new or increased regulations to address market power and consumer protection issues. For example, the PMAS' transmission rates and facilities may come under new federal regulations. We will now briefly discuss the possible new roles of some federal agencies in a restructured electricity industry.

Transmission

FERC recently testified to the Congress that legislation on transmission issues is needed to ensure the full development of competition. The agency recommends (1) bringing all transmission facilities in the lower 48 states within its open access transmission rules, (2) clarifying its authority to promote regional management of the transmission grid through regional transmission organizations, and (3) establishing a fair and effective program to protect the reliability of bulk power.

FERC's open access transmission policies address the concern of market power related to the ownership and control of transmission facilities. Fair and open access to reliable transmission service is essential to competition in power markets. In 1992, the Congress broadened FERC's authority to direct transmission service on a case-by-case basis. Subsequently, FERC has prohibited, through regulatory orders, vertically integrated utilities from discriminating against their competitors by limiting or denying access to their transmission facilities. The administration's restructuring plan would place Bonneville, Southwestern, and Western under FERC's authority to review proposed transmission rates under its "just and reasonable" and "not unduly discriminatory" standard.

²⁰See GAO/RCED-99-63.

FERC has suggested that regional transmission organizations, such as independent system operators and independent for-profit companies, would address barriers to competition by eliminating bias in transmission operations and allowing the efficient and reliable operation and planning of the transmission grid. The administration's bill would authorize FERC to require transmitting utilities to transfer operational control of transmission facilities to a regional system operator to facilitate competition. Bonneville, Southwestern, and Western would be required to participate in the regional transmission organizations, if required by FERC.

Mergers and Acquisitions

FERC believes that it should continue to consider market power issues in reviewing applications for mergers or other asset acquisitions. Last month, FERC testified that the Congress should expand its jurisdiction over the transfers of generation facilities. Currently, FERC can review a transaction involving a public utility only when it involves other facilities over which it has jurisdiction, such as transmission facilities or contracts for wholesale sales. However, transactions involving only generation assets do not necessarily fall under FERC's jurisdiction even though the concentration of generation assets may directly affect wholesale competition. FERC also testified that the Congress should give it explicit, direct jurisdiction over mergers of public utility holding companies—a role historically held by the Securities and Exchange Commission (SEC).

The Public Utility Holding Company Act was enacted in 1935 to break up the large trusts that controlled the nation's electric and gas distribution networks. An important feature of the 1935 Act was that it authorized SEC to break up the massive interstate holding companies, which it regulates, and require them to divest their holdings until each became a single consolidated system serving a specific geographic area. The 1935 Act also permitted holding companies to engage only in business that was essential and appropriate for the operation of a single integrated utility. This latter restriction eliminated the participation of nonutilities in wholesale electric power sales. The law contained a provision that all holding companies had to register with SEC, which was authorized to supervise and regulate the holding company system.

Last month, SEC testified that the Congress should repeal the 1935 Act conditionally. According to SEC, although portions of the 1935 Act largely duplicate other existing regulation and controls imposed by the market, a need to protect consumers continues. Specifically, SEC called for added

flexibility and authority for FERC to engage in more extensive regulation and oversee transactions among affiliates in holding company systems.

The mandatory purchase provision of the Public Utility Regulatory Policies Act of 1978 was partly intended to foster the commercialization of renewable energy by requiring utilities to purchase power from cogenerators and renewable energy facilities. However, the 1978 Act, in some cases, resulted in high prices to consumers because some of the mandatory contracts were based on forecasts of high fuel prices, according to the Congressional Budget Office²¹ and others. These factors rendered the contracts uneconomical for utilities in a competitive market. Legislative proposals, including the administration's, call for the prospective repeal of this provision. The mandatory purchase provision may be replaced with other regulatory requirements to ensure that these sources of energy continue to enjoy market access through, for instance, a renewable portfolio standard and a public benefit program.

This concludes our formal statement. We look forward to working with this Subcommittee in the coming months in discussing options for addressing the PMAS' role in a changing electricity industry. If you or other Members of the Subcommittee have any questions, we will be pleased to answer them.

Contact and Acknowledgment

For future contacts regarding this testimony, please contact Vic Rezendes at (202) 512-3841. Individuals making key contributions to this testimony were Peg Reese, Charles Hessler, and Daniel Garcia-Diaz.

²¹See Electric Utilities: Deregulation and Stranded Costs, Congressional Budget Office (Oct. 1998).

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