

STATEMENT OF
MR. MARK A. GABRIEL
ADMINISTRATOR
WESTERN AREA POWER ADMINISTRATION
U.S. DEPARTMENT OF ENERGY
BEFORE THE
SUBCOMMITTEE ON WATER, POWER AND OCEANS
COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

APRIL 12, 2018

“EXAMINING THE PROPOSED FISCAL YEAR 2019 SPENDING, PRIORITIES AND MISSIONS OF THE BUREAU OF RECLAMATION, THE U.S FISH AND WILDLIFE SERVICE, THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION AND THE FOUR POWER MARKETING ADMINISTRATIONS”

Thank you, Mr. Chairman and Members of the Committee. My name is Mark A. Gabriel. I am the Administrator of the Western Area Power Administration (WAPA). I am pleased to speak to you today regarding WAPA’s small portion of the President’s Fiscal Year (FY) 2019 budget, the budget authority request, and WAPA’s overall role in the energy industry.

WAPA is one of four Power Marketing Administrations (PMAs) within the U.S. Department of Energy (DOE). Our role is to fulfill three lines of business outlined in WAPA’s mission: to market and transmit wholesale electric power from 14 multi-use water projects; to provide a backbone transmission system for delivering that power; and to manage the Transmission Infrastructure Program (TIP), all to the benefit of the American public. WAPA markets and transmits hydropower from 56 federal dams operated by the Bureau of Reclamation, U.S. Army Corps of Engineers, and the International Boundary and Water Commission (IBWC). Last year, we celebrated our 40th anniversary providing renewable, reliable, cost-based hydroelectric power and related services to 700 customers, including 93 Native American Tribes, who, in turn, serve more than 40 million Americans in the West. It is a legacy to be proud of and a strong foundation to build upon for the future.

In this testimony, I present WAPA’s continuing commitment to its federal mission through business, technology and organizational excellence; mutually beneficial partnerships; and evolution of services. Today, I will share WAPA’s contributions to the physical and cyber defense of the nation’s grid, our efforts to maintain affordable costs for customers, and our commitment to be transparent as we embark on a measured and thoughtful reinvestment in assets that will prepare our customers and the nation for a dynamic energy frontier.

Hydropower Product

WAPA’s footprint encompasses about 1.4 million square miles of diverse ecosystems and populations, from urban to rural, plains to mountains, and deserts to forests. Spanning 15 states, the communities WAPA serves have a wide variety of energy interests and needs; we are always

cognizant of the fact that what works in Montana will not work in California, and the needs of Arizona customers are different than those of customers in Utah.

As WAPA's administrator for the past five years, I have seen the organization embrace changes in the industry, devise solutions to be more efficient, and respond quickly to assist power restoration within WAPA's territory and most recently, in the U.S. Virgin Islands and Puerto Rico. I am so proud of what the organization has accomplished and continues to accomplish.

The hydropower WAPA markets, and the infrastructure that delivers it, provides unparalleled benefits to customers and citizens. WAPA's rates are often lower than or equal to industry averages.

In Water Year 2017, WAPA delivered 26,148 gigawatt hours of hydroelectric power to its customers, which is 101 percent of average power sales. This accomplishment was aided by better than average hydrology conditions across most of WAPA's territory, including California. The power WAPA sold is capable of fulfilling 100 percent of annual energy needs for more than 2.4 million average American homes, and all of this power is sold at cost.

We are also entrusted to steward more than \$4.3 billion in assets, which include 177,000 structures, more than 17,000 miles of high-voltage transmission line, 665 buildings, 479 communication sites, 319 substations, and 297 transformers. Operating, maintaining, and safeguarding these assets is an enormous responsibility and privilege.

Through responsible fiscal management, planning and innovation, and transparent communication, the value of the hydropower and services we provide will continue to grow. Today's activities, built on the wise investments of yesterday, will benefit future generations of Americans for decades to come.

Physical and Cyber Security

One of the most significant challenges facing the energy industry is the targeting of electrical infrastructure by those wishing to disrupt the economy and society. WAPA's vast systems are tantalizing targets for these people.

During the past few years, WAPA has focused its attention on safeguarding these valuable assets and improving the resilience of the entire system. In the arena of physical security, WAPA has completed more than 270 security assessments since 2014, resulting in 225 completed remediation plans and the procurement of five mobile surveillance trailers that can be rapidly deployed to monitor susceptible facilities.

In 2017, WAPA also resolved 99.61 percent of cyber incidents within three days, and did not experience a single significant cyber event. Aggressive education and training programs continue to strengthen employees' ability to recognize and defend against phishing, the primary technique used by hackers to access secure systems.

WAPA works closely with its industry counterparts to collaborate on threat information, response and recovery planning, and threat mitigation strategies. The agency participates in biannual national exercises, run by the North American Electric Reliability Corporation, designed to help electric utilities test continuity of operations, communication, and emergency response and restoration plans, as well as the ability to maintain service under what amounts to a doomsday event.

Recovery is also a key component of resilience, and WAPA must be prepared to restore normal business operations in the event of a worst-case scenario. WAPA is well prepared for traditional operational failures of one or two large power transformers during a single event under normal operating conditions; however, the organization must also be able to recover from a catastrophic loss of all transformers at any one of its key substations. To that end, WAPA is evaluating strategies for transformer reserves and sharing, and plans to share options and recommendations with customers and other stakeholders in the near future.

Energy Secretary Rick Perry has frequently shared DOE's strong commitment to protecting the grid from cyber threats, a responsibility WAPA carries out through its daily management of the bulk electric system. WAPA and the other PMAs play a valuable and unique role in bridging the needs and differences between the Federal Government and energy industry. The subsequent improved information sharing and coordination create a safer, more secure grid for Americans.

None of the measures described here are inexpensive, but they are absolutely imperative. We have no option but to make these investments. Utilities across the country need to invest in similar monitoring, hardening, and reconstitution efforts. We all work together to identify best practices, most efficient deployment of security resources, and, where possible, share in the costs of safeguarding the electric grid.

National Security

WAPA is unique in its energy, transmission, and power marketing support several military installations and national labs, helping guarantee reliable power.

WAPA partners with the military to provide power marketing arrangements that extend beyond the maximum contract terms the military can execute alone. These long-term contracts ensure secure, affordable energy for decades, so men and women in service to the country can concentrate on their primary mission.

WAPA also supports the military and its facilities, as well as the national labs, through its ability to procure renewable generation. In 2014, WAPA and the Navy collaborated on a long-term renewable energy purchase that would support 18 naval installations in Southern California. These services, funded by the Navy, supply valuable, reliable, and affordable power, and are serving as a model for similar arrangements within WAPA's territory.

Black Start

In the event of a major, widespread power outage, WAPA has the ability to provide off-site emergency power to generating sources. The capability to energize a non-operating generating facility with no on-site power is called black start.

WAPA, in conjunction with the Bureau of Reclamation and the Army Corps of Engineers maintains black-start resources. These resources are tested every year during industry-wide training events. Following restoration of generating stations, WAPA's transmission infrastructure and highly trained personnel then perform vital functions in restoring transmission service, which would enable local utilities to connect to the grid with distribution systems.

WAPA continues to collaborate with neighboring utilities to ensure if an actual event occurs the electrical grid will be restored in a safe and efficient manner.

Best Practices and Accomplishments

Power Rates

WAPA's rates recover annual operations and maintenance costs and the original investment in the infrastructure, plus interest. The preference power and transmission customers shoulder these financial responsibilities on behalf of their consumers and American taxpayers. Repaying the U.S. Treasury for the investments exerts downward pressure on the federal debt. Over the past five years, WAPA has returned \$1.65 billion to Treasury and lowered its unobligated balances from \$767 million to \$708 million. WAPA continues to work with customers, DOE, and the Office of Management and Budget to find the right level of unobligated balances that protect customers and consumers from wildly fluctuating prices due to drought, and help fund annual operations, maintenance, and capital construction projects.

In addition to sound financial practices, services continue to evolve, in concert with our customers, to maintain affordable power and transmission rates. The recent rate decrease due to the drought-adder reduction is one example of these innovative partnerships in action. The drought-adder charge was levied to help repay deferred drought costs accrued during the 2000s in the Rocky Mountain and Upper Great Plains regions. The balance was paid a year ahead of schedule and, as of this year, has resulted in \$40 million annual savings for more than 50 percent of WAPA's customers in Colorado, Wyoming, Montana, Kansas, Nebraska, the Dakotas and the western sections of Minnesota and Iowa. This is the second year that 417 of WAPA's customers, out of 700, have had a rate reduction.

The drought-adder component of the rate remains available to WAPA to adjust to the variable hydropower resource—a lasting risk as, even now, drought conditions exist across much of WAPA's territory.

Another 20 percent of WAPA's customers have experienced flat rates for nine consecutive years. More than 130 public power customers, including 44 in Arizona, 23 in Colorado and 16 in Utah, are realizing the benefits of tight management of operation and maintenance costs, as well as reduced purchase power needs due to water releases from Glen Canyon Dam. The regional office that oversees the power and transmission contracts reduced its building space by 30 percent this year, which is anticipated to result in reduced energy and

other facility costs. These savings will cascade to customers for potential future reductions in annual operations and maintenance expenses.

BCP Remarketing

Last year, WAPA welcomed 31 new customers to the Boulder Canyon Project (BCP). These customers, including 23 Native American tribes, join 15 legacy contractors in receiving at-cost, clean, renewable, reliable federal hydropower from Hoover Dam for the next 50 years. Our BCP customers serve 1 million consumers in southern Nevada, Arizona and Southern California, who will also benefit from these new contracts.

As part of this nine-year remarketing effort, the Desert Southwest region, with assistance from WAPA's Information Technology office, developed a web-based application that allows customers to schedule their capacity and energy needs. This application serves as a model for increasing and improving customer choice and flexibility in an ever-more-automated world.

Asset Management Program

WAPA's Asset Management program evaluates assets based on condition indicators, risk, and system criticality. In the coming year, WAPA will focus on further leveraging information to make data-driven decisions and maximizing the value of the enterprise's assets.

The goal of asset management at WAPA is to completely integrate all assets into the program to better understand necessary investments for just-in-time capital projects. A comprehensive asset strategy incorporates asset management, field knowledge, budget, procurement, and customer support as one big picture, not separate activities. Equipment age is neither a general indicator of asset health, nor is it a reliable indicator of risk to the system. With more than 177,000 structures and 300 substations in WAPA's purview, the organization needs to be making the right investments, at the right time, and in the right place to maximize the value of maintenance and capital efforts.

WAPA has also deployed a lifecycle management strategy for the agency's information technology assets. The strategy will increase reliability, improve financial planning for procuring up-to-date hardware and software, and help WAPA meet compliance requirements mandated by the industry and Federal Government.

Asset Management program results are presented to customers annually to collaborate on 10-year work plans that prioritize projects and equitably distribute expenditures. By increasing transparency and background knowledge of proposed investments, WAPA strives to share with customers the "why behind the why" for projects estimated at more than \$1 million. Through this collaboration, meaningful and responsible decisions on investments will be made based on an asset's condition, role, and value in the greater system.

In the next 10 years, WAPA anticipates investing \$1.6 billion in its assets. It is the largest investment since the infrastructure was originally built in the middle of the 20th century, and will require significant coordination with customers. WAPA continues to work with customers to flatten peaks in anticipated spending and provide measured and attainable financial expectations.

Power Repayment Study

WAPA will move toward a single, secure software solution for its various Power Repayment Studies. The new system will provide a reliable and transparent means to calculate rates and track repayment for rate-setting systems. With today's advances in technology, WAPA is better able to leverage modern tools that provide consistency in processes, while accounting for and respecting project differences. WAPA will continue to work with customers to identify appropriate opportunities for automating processes that will ultimately save customers money in annual costs.

Purchase Power & Wheeling Program

Maintaining rates in the face of extended drought is of the utmost importance to WAPA and its customers. Unlike many other business factors, drought cannot be predicted or alleviated by our actions. The Purchase Power and Wheeling (PPW) program is the source of non-appropriated funds that WAPA draws on to supply customers with other, typically more expensive, sources of power when there is not enough hydropower. During a drought, WAPA uses this fund more frequently. Congress permanently authorized the use of receipt authority for PPW expenses in 2000. The receipt authority, combined with alternative customer financing methods, has provided flexible and sustainable sources of funding for the PPW program. One-hundred percent of the costs of the \$567.4 million program is funded by customers through offsetting collections and alternative financing methods. The PPW program is a vital part of WAPA's mission, stabilizing both the highly variable hydropower product and customer rates.

Public-Private Partnerships

The Administration has stressed the importance and value of public-private partnerships in revitalizing the nation's infrastructure. Public and private organizations each bring unique strengths toward infrastructure development and modernization. WAPA has embarked on a number of public-private partnerships designed to improve grid reliability and security, relieve congestion, and replace aging infrastructure under advantageous business plans.

WAPA signed a participation agreement on the Southline Transmission Project—a critical energy infrastructure effort that will support grid reliability in the southwest U.S. The Southline project will provide about 1,000 megawatts of transmission capacity along a 360-mile path between southern New Mexico and Arizona. The project combines upgrades to WAPA's existing electrical infrastructure and construction of new transmission line.

In a partnership with Duke American Transmission Company, the Bureau of Reclamation and the San Luis Delta-Mendota Water Authority. WAPA signed a preliminary agreement which contemplates that WAPA would construct the San Luis Transmission Project (SLTP). SLTP will power Bureau of Reclamation water deliveries to agricultural and water users in the Central Valley. By supplying power to federal water deliveries at sustainable and affordable rates, SLTP will support agriculture and water customers responsible for growing a majority of produce in the U.S.

WAPA executed a letter agreement with SunZia, setting forth terms and options for future potential participation in the proposed 500-mile, 500-kilovolt line that will enable the delivery of

3,000 megawatts of primarily wind energy from New Mexico to Arizona. The agreement allows SunZia to potentially apply for construction financing through WAPA's borrowing authority.

It is important to note that none of these projects are expected to result in increased costs for customers or the government. Financing is provided by third parties and recouped by power and transmission rates paid for by only the project beneficiaries.

Savings and Controls

WAPA has a number of programs dedicated to monitoring, evaluating, and improving its processes and activities to ensure it is operating efficiently and effectively. In the past three years, the Continuous Process Improvement program, based on the Lean Six Sigma methodology, has completed 25 efforts, resulting in \$55 million of primarily cost avoidance. Since 2014, the program has experienced a 172-percent return on investment.

One project involved a WAPA team working with the U.S. Fish and Wildlife Service to proactively fund programs that support conservation activities for endangered species, rather than paying reactive mitigation costs. The result is an avoidance of more than \$20 million dollars for customers, which positively affects power rates.

WAPA's Office of Internal Audit and Compliance evaluates the agency's projects, programs, and initiatives; tracks and monitors the implementation of audit recommendations; provides guidance on the adequacy of internal controls; and serves as WAPA's audit liaison for all external audits and reviews. In the past two years, the office has issued seven internal audit reports containing 19 recommendations on subjects ranging from government credit cards to overtime expenditures to recruitment, retention, and relocation incentives. Additionally, WAPA has closed out 41 audit recommendations from previous audits, coordinated 19 audits with other government agencies, and implemented a continuous monitoring program to review Government Purchase Card (GPC) transactions on a quarterly basis.

In March 2017, the DOE Inspector General (IG) recognized WAPA's corrective actions on its limited GPC misuse. WAPA continues to work with DOE's IG on individual investigations and have put additional checks in place to improve management oversight and internal controls over the program.

WAPA recognizes the seriousness of responsibly executing the mission entrusted to it. As internal and external audits proceed, WAPA will continue to incorporate best practices and lessons learned to ensure every dollar spent is appropriate and creates value for customers.

Transparency Efforts

Over the past few years, WAPA has diligently worked to improve transparency at the organization, both with customers and with other branches of government, including the members of this subcommittee. "The Source" website, launched two years ago, displays accurate and up-to-date operational information in one convenient location. The site includes meeting slides and scripts, notices to customers, updates on key activities, rate information, and more. WAPA continues to build and develop the site based on feedback from customers with a

considerable expansion scheduled for May.

WAPA works closely with Congressional representatives to ensure the shared data and information is consistent with the proposed WAPA Transparency Act. We welcome the opportunity to share and discuss transparency, and look forward to working with customers to leverage and improve on existing efforts.

Markets

The advent of markets in the West has been one of the most significant regional changes for energy utilities. In response to ongoing industry change and movement toward regionalized electricity markets, WAPA has engaged its customers and other stakeholders that ensure the ongoing reliability and economic efficiency of the bulk electric system.

On Oct. 1, 2015, WAPA's Upper Great Plains (UGP) region became the first PMA to join Southwest Power Pool (SPP), a Regional Transmission Organization. As members, WAPA transferred functional control of UGP's eligible transmission facilities to SPP under its Membership Agreement. Benefits to-date have significantly exceeded the original estimate of \$11.5 million per year.

Two other WAPA regions, along with six utilities, are discussing SPP membership as well. The goal is to increase flexibility, remove rate pancaking, and ensure WAPA can continue to deliver on its mission consistent with sound business principles. If a decision is made to move forward, integration into SPP could potentially occur in early 2020.

Program and Financing Accounts

WAPA's accomplishments and operations are primarily supported through management of three program and financing accounts: Construction, Rehabilitation, Operation, and Maintenance (CROM); Falcon and Amistad Operating and Maintenance Fund; and the Colorado River Basins Power Marketing Fund. Only the CROM and Falcon and Amistad program and financing accounts request funds from appropriations.

CROM is WAPA's largest account and includes four components: Construction and Rehabilitation (C&R); Operation and Maintenance (O&M); PPW; and Program Direction. C&R supports the replacement, upgrade, and modernization of the electrical system infrastructure to bring continued reliability, improved connectivity, and increased flexibility and adaptability to the power grid. The O&M program supports continued reliability of the Federal power system by replacing aging equipment, removing constraints that would impede power flows, and ensuring WAPA's transmission system at or above industry standards. The PPW program continues to support WAPA's marketing efforts and delivery capacity and acts as a financial bulwark against drought. Program Direction provides compensation and all related expenses for WAPA's workforce, including those employees who operate and maintain WAPA's high-voltage interconnected transmission system and associated facilities.

The Falcon and Amistad Operating and Maintenance Fund was established in Treasury as directed by the Foreign Relations Authorization Act for FY 1994 and 1995. It is administered by WAPA's Administrator for use by the Commissioner of the U.S. Section of the IBWC to defray administrative, O&M, replacement, and emergency costs for the hydroelectric facilities at the Falcon and Amistad dams, the U.S. portions of which IBWC owns and operates.

Colorado River Basins Power Marketing Fund is used to operate and maintain the transmission system for the Colorado River Basin projects to ensure an adequate supply of reliable electric power in a clean and environmentally safe and cost effective manner.

FY 2019 Budget Request

In its budget request tendered to Congress in February 2018, WAPA asked for authorization to spend a total of \$1.2 billion budget during FY 2019. Both budget and employee counts are flat from last year. WAPA has contained costs and staffing levels while at the same time addressing new mandatory regulations and physical and cybersecurity requirements. This demonstrates an appropriate realignment of resources to meet the most critical needs facing the agency today.

Only six percent of the \$1.2 billion budget comes from appropriated dollars; the remainder comes from offsetting collections and alternative financing. The FY 2019 net appropriation requirement for WAPA is \$66.6 million. All appropriations being requested for FY 2019 will be repaid to Treasury with interest.

Offsetting Collections and Alternative Financing

For FY 2019, WAPA anticipates \$1.1 billion in offsetting funding sources, financing nearly 94 percent of the organization's total budget. Offsetting collections and alternative financing are used instead of annually appropriated funds for a variety of WAPA activities, including annual expenses, purchase power and wheeling, and construction. These financing efforts are pursued proactively and collaboratively with customers to address funding needs.

The Operations and Maintenance Annual Expense Fund source, sometimes referred to as Net Zero, is a budget-neutral financing tool that begins the year with an appropriation, which is then offset once collections are received.

WAPA's FY 2019 budget request for the Colorado River Basins Power Marketing Fund account is estimated at \$220 million with no request from appropriations, funded instead through offsetting collections.

Closing Statement

WAPA has grown significantly over its 40-year history. The industry is experiencing a wave of changes and opportunities the likes of which have not been seen in the past 50 years. Through business, technology, and organizational excellence; mutually beneficial partnerships; and evolving new approaches to services and industry trends as they emerge, WAPA is traveling a clear path toward future success.

The legacy of WAPA has been one of powering the energy frontier, providing power to homes, business, and towns. That valuable service continues today in the form of reliable, renewable, and cost-based electricity that helps keep the economy of small, rural America running. Together, we will move forward in a secure, affordable, and dependable energy future that charts the course toward achieving WAPA's historic mission in a dynamic and complex energy frontier.

Thank you, Mr. Chairman. I would be pleased to answer any questions that you or the Subcommittee members may have.