

STATEMENT OF
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COMMITTEE ON NATURAL RESOURCES
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EXAMINING SPENDING PRIORITIES AND MISSIONS OF THE BUREAU OF
RECLAMATION, THE POWER MARKETING ADMINISTRATIONS AND THE USGS
WATER DIVISION IN THE PRESIDENT'S FY 2016 BUDGET PROPOSAL

Thank you, Mr. Chairman and Members of the Committee. My name is Mark Gabriel. I am the Administrator of the Western Area Power Administration (Western). I am pleased to represent Western today as we discuss the agency's portion of the President's Fiscal Year (FY) 2016 Budget.

Western is one of four Power Marketing Administrations (PMAs) within the U.S. Department of Energy (DOE). It is Western's role 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, all to the benefit of the American public.

In this testimony I introduce Western's spending priorities and its commitment to delivering on its federal mission as tied to its on-going support of powering the energy frontier in cooperation with customers and stakeholders. I also demonstrate Western's dedication to business, technology and organizational excellence and provide an overview of how that dedication is supported by the FY2016 budget and Western's financial responsibility. The testimony concludes with a significant accomplishment summary for calendar year 2014 and the start of the 2015 fiscal year.

Spending Priorities

At Western, the highest goal is to safely and securely support clean, renewable, low cost federal hydroelectric power and a backbone transmission system while at the same time reducing risk to American taxpayers by using economically and environmentally responsible business practices. Agency spending priorities and planning support this mission.

Western's FY 2016 appropriation request represents only eight percent of Western's total funding sources. Western added no additional staffing to its FY 2016 budget. Over the past five years, more than \$457 million has been returned to the general fund of the U.S. Treasury and nearly \$900 million has been returned to the Reclamation Fund.

Western's delivery of Federal hydropower, at the lowest cost consistent with sound business principles, is critical to preference power customers. Western developed its sustainable funding strategy to ensure Western and its customers have the right funding tools in place and the capacity to cover the needs of the future.

Western is constantly looking at its infrastructure and processes and working with customers to address those needs. The energy industry, power generation sources and how power is shipped is changing. Aging infrastructure, intermittent and behind-the-meter generation, changing system operations and changing markets have broad impacts.

Through its spending and operational priorities, Western has been able to continue to fulfill its mission, successfully negotiate partner support for alternative financing, and achieve accomplishments in changing markets across an evolving energy landscape.

Delivering its Mission

Western markets and delivers reliable cost-based hydro power and related services from 56 federal hydroelectric powerplants owned and operated by the Bureau of Reclamation, the Army Corps of Engineers, and the International Boundary and Water Commission. Together, these plants have an installed capacity of 10,479 megawatts delivered to customers over Western's vast transmission system whose combined physical assets represent just more than 4 percent of the U.S. transmission system. Although the agency primarily markets hydropower, one exception exists: marketing part of the energy output of the coal-fired Navajo Generating Station near Page, AZ.

In addition to marketing power, Western also operates as an open access transmission provider. Its advanced and complex grid has fueled rural electrification throughout the West, a grid made possible through management of a substantial communications network. The continuous operation of four balancing areas and one sub-balancing area with multiple control centers requires system balancing and resilience 24 hours a day, seven days a week, 365 days a year. By providing constant vigilance over these systems and controls, Western maintains power flow across vast tracks of the Western U.S., all the while coordinating with multiple states.

To fulfill these essential parts of its federal mission, Western's more than 1,400 employees manage over 17,000 circuit-miles of transmission, 315 substations and 177,000 structures that cover a footprint of more than 1.3 million square miles in 15 states. Such an encompassing system makes Western one of the 10 largest transmission providers in the nation.

Employees work around the clock to sell power and operate and maintain the transmission system that provides energy to around 700 preference customers a year including municipalities, public utilities, cooperatives, irrigation districts, Native American tribes, military installations, federal and state agencies, investor-owned utilities and other energy service providers. Customers served range from Great River Energy in Minnesota to the Kansas Municipal Energy Agency to the Sacramento Municipal Utility District in California; in total, more than 40 million Americans every year receive Western hydropower—and this number is growing.

Recent tabulations show energy provided by the Western Area Power Administration now powers nearly 70,000 homes in Wyoming, 2.3 million households in Arizona, and 6.7 million homes in California. Through last year's remarketing on the Boulder Canyon Project out of Nevada and Arizona, Western added 59 new customers including tribes, municipalities and electric cooperatives. Future growth is being harnessed through Western's Transmission Infrastructure Program where current projects and proposals hold the potential to connect renewable energy with numerous customer bases across states like Arizona, Nevada, California, Wyoming, New Mexico, Montana and Texas.

Business, Technology, and Organizational Excellence

We are facing a continually changing energy frontier, a frontier represented by myriad new regulations, the growing presence of interruptible and intermittent resources, pressures on hydropower resources, expansion of customer-side options, an accelerating rate of change in markets, as well as the continuing need for system reinvestment. In this time of change, it is imperative Western be prepared for success by continuing to deliver on its mission and fulfilling the needs of its customers.

Business Excellence: Strategic Roadmap 2024

This is why Western began exploring how its mission will best be implemented in a changing world. Vision and innovation are crucial to establishing a model for the future. For the past two years, Western engaged active collaboration with customers, stakeholders, DOE, and its employees in the development of a business enhanced strategic plan.

In May 2014 Western published the Strategic Roadmap 2024 to guide the organization and its mission through a changing and dynamic industry. Contained within the Roadmap are four foundational goals, called Critical Pathways that define Western's journey in meeting its mission and evolving as a leader and important partner in the new energy frontier. The first three Critical Pathways are:

- Business, Technology and Organizational Excellence
- Mutually Beneficial Partnerships
- Evolution of Services

These three goals culminate into the final Critical Pathway that sets Western's desired role in the industry: Powering the Energy Frontier. Today, the Strategic Roadmap 2024 creates a clear vision of Western's role in the industry, with customers, and within Federal Government over the

next 10 years. It serves as the guide to deliver on Western's federal mission in a changing industry through 2024 and beyond.

Technology Excellence: Asset Management and Innovation

One of the most critical issues facing Western is technology excellence, defined as the ability to clearly articulate investment needs and acquire adequate funding to sustain reliability while maintaining affordable services. Western reformulated and refined its asset management, capital planning and budget development. The relationship between these three programs provides an analytical basis for discussing Western's short- and long-term needs in sustaining a strong and reliable infrastructure that is instrumental to electric power delivery across the West.

Asset management reached a milestone in June 2014 when the Asset Management Program Improvement Project unveiled its first set of risk reports illustrating quantitatively the health, importance and risk of Western's most critical assets. Asset Management Program Improvement Project reports covered Western-owned and partially-owned and maintained assets, including:

- 1,582 circuit breakers over 100 kilovolts
- 558 transmission line segments, breaker to breaker
- 406 transformers over 100 kilovolts

Updated annually with maintenance information, these data-driven and risk-based analyses trend asset condition and risk changes over time, prioritize maintenance activities, maximize an asset's useful life, and identify strained or stressed equipment in need of replacement or additional supporting infrastructure, all of which is then included in 10-year plans and budget requests.

In July 2014, Western designed a new budget formulation process to incorporate annual risk reports and 10-year plan activities into the budget planning process to better understand future infrastructure investment needs. As funding requests are met, Western will execute the 10-year plans, which will change the asset management report information and begin the cycle anew each year.

Organizational Excellence: Markets, Customers, and Costs

Central to organizational excellence is the role of mutually beneficial partnerships. In today's interconnected, interdependent energy landscape, events in one part of the energy sector can have rippling effects that resound throughout the entire industry. At the same time, individual utilities are limited in how they can impact the direction of the industry. Collaboration is important because there is much change impacting Western and its customers.

Western provides industry leadership by participating in the Electricity Subsector Coordinating Council, continuing support for irrigation, recreation, environmental protection, flood control, and navigation, and working closely with customers and stakeholders to plan for a dynamic future.

Energy markets are a central piece of the power industry's changing landscape. Energy Markets in the West are rapidly evolving, creating a new operational paradigm for public power entities.

Western, along with its customers and partners, continuously evaluates the benefits and costs of joining in these markets to ensure the agency is following the best guidance for participation.

The pace of doing business today has changed and Western's decision paths must accelerate to meet that new pace. As a result, any decision to participate in an energy imbalance market or regional transmission organization would be based on sound business principles and uniqueness of the legislated power projects. It must also be consistent with Western's statutory requirements, including Western's mission to provide cost-based hydropower to preference customers.

To better understand new opportunities and move forward into the future in a collaborative manner with its partners, Western further engaged its beneficiaries. A year ago, Western hosted a "Markets in the West" meeting where more than 100 preference power customers and Western staff gathered in Phoenix, Arizona, to share information on the potential status of various marketing activities in the Western Interconnection. The pace and impacts of Western's eventual market moves mean continual assessment of the situation is necessary.

To make that assessment more meaningful, over the course of last year Western launched a formal Continuous Process Improvement Program using the Lean Six Sigma business process improvement methodology. Lean Six Sigma focuses on improving customer service while reducing the cost of that service by identifying and eliminating waste in processes and reducing variation in the quality of the products and services delivered.

Implementation of Lean Six Sigma strategies helped create more efficiency and cut costs in Western's Information Technology division. In 2014, Western consolidated the purchase of middleware tools and leveraged buying power, rather than purchasing independently by Region. IT also consolidated software license upgrades, optimized its routing program, rolled out agency-wide use of Video Teleconferencing, and provided overall network improvements helping eliminate wasted time spent on-line trouble-shooting.

Although some of the overall avoided expenditures were small, small savings added up over time, creating net cost savings of more than \$4 million.

Western's FY 2016 Budget Request

A critical challenge Western faces today is the ability to acquire adequate capital funding to make infrastructure investments and sustain the level of reliability that Western and its customers have historically enjoyed and expect, while at the same time maintaining affordable services. Much of Western's 17,000 miles of integrated high-voltage transmission infrastructure was constructed in the 1940s through 1960s, with an anticipated useful lifespan of 50 years. More than half of Western's infrastructure has reached or exceeded its original service life and reinvestment in the system is required to maintain reliable power delivery.

For FY 2016, the Western Area Power Administration is requesting appropriations of \$93.4 million for its Construction, Rehabilitation, Operation, and Maintenance Account and \$228,000

for the Falcon and Amistad Operating and Maintenance Fund, as shown in Attachment 1. Western's FY 2016 budget request represents no change from Western's FY 2015 new budget authority request.

A considerable portion of Western's mission requirement is dependent upon a combination of offsetting collections and alternative financing. These practices are used to fund a variety of Western activities including annual expenses, purchase power and wheeling and construction. These alternative financing efforts are pursued proactively and collaboratively with our customers to address funding needs. We continue to pursue and use alternative financing to meet our power delivery obligations.

Western estimates the Construction and Rehabilitation (C&R) program need is \$58.4 million. Of this amount, the agency will seek alternative financing of \$53.6 million, or approximately 92 percent of the FY 2016 requirement.

Fiscal Responsibility

It is important to emphasize the self-sufficiency that exists across many of the programs, partnerships and collaborations in which Western is engaged. The majority of the funding comes through close work with Western's beneficiaries: preference customers, partners and stakeholders.

One way this is accomplished is the Operations and Maintenance Annual Expense Fund, a dollar-for-dollar budget-neutral business practice which results in a more business-like environment for Western. The Annual Expense Fund begins the fiscal year with an appropriation warrant from Treasury to fund expenses. Throughout the fiscal year, Western collects and deposits sufficient revenues into its Annual Expense Fund account to repay Treasury and reverse the warrant.

Western's FY 2016 Request for Purchase Power and Wheeling (PPW) also requires no appropriations. One hundred percent of the costs of the \$566 million program will be funded by customers through offsetting collections and alternative financing methods. The PPW program is a vital part of Western's mission, firming the highly variable hydropower product that Western markets, leading to revenues in excess of \$1 billion annually. Western increased its estimate of PPW in FY 2016 by \$125 million, or 28 percent. The increase provides for areas of known cost growth, as well as greater certainty that Western can respond to highly variable risk factors including drought, changes in market pricing, and generation constraints.

Recognizing the highly variable nature of the hydropower product, Congress permanently authorized the use of receipt authority for PPW expenses in FY 2000. This receipt authority, combined with alternative customer financing methods has provided flexible and sustainable sources of funding for the PPW program. The flexible, sustainable sources of funding ensures Western is able to meet its contractual power sale commitments to customers and able to secure the revenue stream necessary to meet Western's Federal repayment obligations.

The C&R program provides for needed replacements, upgrades, and modernization of the electrical system infrastructure, bringing reliability, improved connectivity, and increased flexibility and capability to the interconnected power grid. Western continues to ensure the integrity of the Nation's power grid by operating in compliance with the North American Electric Reliability Corporation (NERC) reliability standards. Western is making substantial efforts to plan and prioritize its capital program requirements with customers and other stakeholder involvement through our 10-Year Plan process. The increased collaboration is yielding greater transparency, understanding, and stakeholder support for Western's capital program needs and priorities.

Transmission Infrastructure Program

The Transmission Infrastructure Program (TIP) was established in 2009 from borrowing authority authorized by Congress to facilitate the delivery of renewable resources our West.

This year, TIP enjoyed a major success in the completion and electrification of its second project, the Electrical District No. 5-to-Palo Verde Hub. The project connects the Palo Verde market hub, a major electrical trading hub in the western United States serving customers in Arizona, southern California and Nevada, to a renewable-rich zone south of Phoenix, AZ and to a collection of public power companies under the Southwest Public Power Resources Group, including Electrical Districts in Pinal and Maricopa counties, the Aguila Irrigation District, and tribal utilities like the Navajo Tribal Utility Authority and the Gila River Indian Community Utility Authority. It also increases transmission capacity to deliver renewable energy, primarily solar, to consumers in Arizona, southern Nevada and southern California, adding enough capacity to power 30,000 homes. The project was developed in coordination with the Southwest Public Power Resource group, a collection of public power companies that include several Western firm electric and transmission service customers, and the Parker-Davis Project customers.

Currently, TIP has advanced funding agreements with three other projects under development: Centennial West Clean Line; Southline; and TransWest Express. Several additional projects are working their way through the complex TIP application and evaluation process towards what Western anticipates will be an active FY 2016.

Summary of Accomplishment

Western's business decisions as a steward of public resources and federal property serve customers as diverse as Missouri River Energy Services, the Northern Iowa Electric Power Cooperative, Wyoming Municipal Power Agency, and the NASA Ames Research Center. Recent accomplishments reflect the agency's leadership in energy initiatives around the country and how Western continues to build and sustain strong communities throughout the western United States by employing responsible business models and financial management.

Safety and Security

As important as it is for Western to keep the lights on and power flowing, the most important accomplishment is to ensure the safe return, every night, of all employees to their respective families. Safety is at the forefront of all that Western does each day. This is evidenced by a milestone reached by the Desert Southwest Region last year, which celebrated four years without a lost-time accident. The region's program is being emulated across Western to improve overall safety consciousness and safe work habits.

Keeping pace with the rapidly changing status of industry is the highest priority for physical and cyber security across the Western Area Power Administration. Rising threats, increased attempts of attack, and the status of Western's vast transmission system make security more important than ever before.

Western is focused on the critical cyber security threats that the agency and the industry face. Additionally, in the coming year, Western staff will spend more than 30,000 person-hours to ensure compliance with new NERC Critical Infrastructure Protection V5 standards, which adopt new cyber security controls and extend the scope of systems protected by Critical Infrastructure Protection standards.

With that in mind, Western has continued to evolve its physical and cyber security testing and assessment platforms. In 2014, the agency conducted 65 security assessments. For 2015, Western has scheduled 75 security assessments and another 75 in FY 2016. Completed and scheduled testing covers most of Western's critical sites evaluating, per site, which measures to consider and implement to improve incident prevention, deterrents, detection, response and recovery.

Findings from recent assessments were corrected and processes improved. Using its own examples as a platform, Western is working to raise the conversation across the industry to a higher level. In doing so, Western hopes to lead the way in nation-wide grid security by bringing about optimized event reporting and more efficient implementation of incident preparedness and response.

Leadership Training

An important part of Western's business model is its Electric Power Training Center located in Golden, CO. The EPTC sets a standard for the industry by providing high quality power system operation training. In August 2014, Western partnered with the Bureau of Reclamation and the U.S. Army Corps of Engineers in a cost-sharing agreement to jointly fund the EPTC for the next five years. The EPTC is the only training facility of its kind in the Western Interconnection, providing students with hands-on experience in grid and powerplant operations. Coursework at the EPTC can also be used to meet North American Electric Reliability Corporation continuing education requirements. In FY 2014, the center trained 249 students from 31 agencies and utilities from all across the country.

Loveland Area Projects 2025 Power Marketing Initiative

Western has completed the Loveland Area Projects 2025 Power Marketing Initiative, a program benefitting 125 preference power customers across a four-state area of Nebraska, Kansas,

Wyoming and Colorado. Preference customers include public utilities and municipalities like the Municipal Energy Agency of Nebraska, Native American tribes like the Kickapoo in Kansas, irrigation districts like Midvale and Goshen districts in Wyoming and military installations like the U.S. Air Force Academy in Colorado. Through the contracts, customers gain assurance their highly valued power allocations will continue well into the future.

The first hydropower deliveries under the plan will begin Oct. 1, 2024, and continue through Sept. 30, 2054. Almost all of the new contracts will be signed this fiscal year. In an age of uncertainty and volatility, the contracts guarantee access to clean, renewable at-cost federal hydropower with rate stability on which customers can rely through mid-century.

Boulder Canyon Project remarketing

The Boulder Canyon Project, which markets power from Hoover Dam, entered the final stages of its remarketing effort as FY 2014 ended. In 2011, Congress established several parameters for Western's remarketing effort, including, and perhaps most importantly, how much power to set aside for new customers.

This requirement prompted years of discussion to determine a fair and equitable way for Western to evaluate and choose new customers. On December 18, 2014, Western issued Boulder Canyon Project final allocations allocating 80.68 megawatts to 59 new customers. A wide range of customers benefit from the remarketing, including cities like Rancho Cucamonga, CA, Las Vegas, NV, and Phoenix, AZ, irrigation districts and cooperatives like the Imperial Irrigation District in California and the Mohave Electric Cooperative in Arizona, and Native American tribes across the Southwest like the Hualapai, Timbisha Shoshone, the Navajo Tribal Utility Authority and the San Luis Rey River Indian Water Authority.

Closing Statement

Providing clean, renewable, reliable and affordable hydropower, transmission and related services is the heart of both Western's long-standing mission and its 10-year Roadmap to Powering the Energy Frontier. Western strives to maintain its status as an appreciative learning agency, with agile business practices aimed at reducing risks to the American public while supporting accomplishment across its massive infrastructure. Planning for changing hydropower conditions and increased demands on the nation's waterways creates opportunities for forward long-term thinking and immediate action to ensure valuable hydropower resources remain available to American communities for decades to come.

Working together with its customers Western fulfills its role as good steward of the public's resources, repaying its expenses with interest, ensuring the beneficiary pays, and keeping costs down through sound business practices. In its role as a power marketer, Western continues to ensure customers can depend on low-cost Federal hydropower. As a transmission provider, Western is a leader both in improving the reliability of the Nation's grid and in safety.

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

Attachment 1

**Western Area Power Administration
Overview
Appropriation Summary by Program**

Fund	(dollars in thousands)			
	Appropriation	Offsetting Collections ^{1/}	Alternative Financing	Total
Western CROM				
PPW	0	352,813	213,114	565,927
O&M and PD	88,583	221,686	7,030	317,299
C&R	4,789	0	53,585	58,374
Subtotal, Western CROM	93,372	574,499	273,729	941,600
Falcon/Amistad	228	4,262	460	4,950
Colorado River Basins Power Marketing Fund	0	215,647	0	215,647
Transmission Infrastructure Program	0	5,699	2,500	8,199
Total, Western Mission	93,600	800,107	276,689	1,170,396
Source as percent of total	8.0%	68.4%	23.6%	

^{1/} Offsetting collections includes the Colorado River Dam Fund