STATEMENT FOR THE RECORD
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U.S. DEPARTMENT OF ENERGY
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SUBCOMMITTEE ON WATER, POWER & OCEANS
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EXAMINING THE MISSIONS AND IMPACTS OF THE PRESIDENT'S PROPOSED FISCAL YEAR 2017 BUDGETS OF THE U.S. FISH AND WILDLIFE SERVICE, THE NATIONAL OCEAN AND ATMOSPHERIC ADMINISTRATION, THE BUREAU OF RECLAMATION AND THE POWER MARKETING ADMINISTRATIONS

Mr. Chairman and members of the Subcommittee, thank you for the opportunity to share the highlights of Southwestern Power Administration's (Southwestern) Fiscal Year (FY) 2017 Budget Request.

I am pleased to submit written testimony and look forward to testifying in person next year.

I became the Administrator of Southwestern in November of last year, so this is the first written statement I have submitted to the Subcommittee. While I am new to the Administrator's position, I am not new to Southwestern. I worked as a customer liaison and supervisor in power marketing before being promoted to one of Southwestern's four senior leadership positions in charge of transmission maintenance, engineering, information technology, and communications. Before entering Federal service at Southwestern in 2005, I gained utility experience while providing consulting services and analytical support to domestic and international energy sector stakeholders. My work involved nearly all utility business activities including generation and transmission planning, load forecasting, fuel supply planning, asset acquisitions and divestitures, energy marketing and trading, and optimization of utility operations and power purchase opportunities.

My combined experience in the private industry and government sectors has given me a unique perspective in leading Southwestern. There are many similar challenges, including adapting to a rapidly changing utility business environment, increased regulation, cyber and physical security threats, and an aging workforce. But there are also challenges unique to the government and Power Marketing Administrations (PMAs) in particular, including assurance of funding for purchasing power during below average water years and times of drought, continually balancing the needs of Federal power customers with the needs of other interests at multi-purpose

reservoirs, ensuring Federal generation and transmission assets remain reliable, and maintaining competitive rates for Federal power and related services.

This testimony describes what Southwestern is doing to address these challenges so that we can continue to provide affordable, renewable, reliable hydropower to over eight million electricity users in our region.

SOUTHWESTERN PROFILE

Southwestern markets approximately 2,174 megawatts (MW) of hydroelectric power from 24 U.S. Army Corps of Engineers (Corps) multi-purpose dams. On average, Southwestern markets 5.6 billion kWh of energy annually with revenues of $192.5 million.

Marketing activities involve operating and maintaining 1,380 miles of high-voltage transmission lines, 25 substations and switching stations, and a communications system that includes state-of-the-art digital microwave, VHF radio, and fiber optic components. Our government and contract employees work from offices located in Gore, Oklahoma; Jonesboro, Arkansas; Springfield, Missouri; and Tulsa, Oklahoma.

Around-the-clock power scheduling and dispatching are conducted by staff in Southwestern's Springfield Operations Center. As the Nation's only balancing area (BA) supported solely by hydroelectric generation, Southwestern's dispatch staff deserve accolades for their ongoing success in balancing Corps navigation and flood control needs with the power needs of our customers in real-time and in compliance with all North American Electric Reliability Corporation (NERC) reliability standards.

SYSTEM CONDITIONS

I began my Federal career at Southwestern in 2005 during one of the worst droughts ever experienced by the agency. By contrast, 2015 was one of the wettest years on record. I could try to take credit for the rain since I was Administrator in 2015, but I mention it only to point out the extreme fluctuations in system conditions in Southwestern's marketing area.

I am happy to report that reservoir levels throughout Southwestern's system are currently at or about normal for this time of year, with no appreciably drier than normal conditions predicted by the U.S. Drought Monitor.

TRANSMISSION POLICY AND NERC RELIABILITY COMPLIANCE

I mentioned the rapidly changing utility business and increased regulatory requirements in the introduction to my testimony. One example of the former is the wholesale energy and capacity markets introduced in the past few years by the Regional Transmission Organizations (RTOs) in Southwestern's marketing area. Our customers are participating in these markets, and Southwestern has facilitated their participation in support of the effort to make generation and transmission more efficient and ultimately more affordable for the Nation's end-use electricity consumers. We also continue to participate with the Southwest Power Pool, Inc. (SPP) RTO to make Southwestern's transmission system more efficient and reliable while preserving the value

of Federal hydropower in the SPP, Midcontinent Independent System Operator (MISO), and Electric Reliability Council of Texas (ERCOT) markets.

With the onset of these markets, transmission has become more important than ever. At Southwestern, transmission policy has become a focal point and, last year, we created a senior level position to direct matters relating to RTOs and the agency's transmission assets.

I am happy to report that we continue to maintain excellence in our reliability compliance program. Southwestern has passed two consecutive NERC audits with no findings of non-compliance thanks in large part to a dedicated staff that monitors and educates the agency about compliance with NERC reliability standards. Staff members also updated Southwestern's General Requirements for Interconnection to comply with the Federal Energy Regulatory Commission's (FERC) open access transmission policy and to address certain NERC facility requirements that went into effect in January 2016.

PURCHASE POWER DROUGHT FUND

As I indicated before, Southwestern's 24-project system is entirely dependent on rainfall. Our projects do not have a significant amount of storage. Many are low-head, run-of-river types of projects, unlike the high-head, large reservoir projects found in the west and northwest areas of the Nation. Unless inflow is regularly replenished, the Corps cannot generate hydropower, and Southwestern must purchase power to fulfill its contractual obligations to our customers.

One of the challenges somewhat unique to the PMAs is assurance of funding during below average water years and times of drought. As I mentioned before, 2015 was a particularly wet year, but Southwestern's marketing region experiences its share of droughts as well. For example, the median inflow into our reservoirs during most of 2005-2006 was less than 50%, prompting Southwestern to work with its customers to defer the delivery of Federal energy until our system could recover. We experienced similar, if less severe, water conditions throughout 2011, 2012, and 2013. We were able to compensate for the lack of water by purchasing replacement power, but the cost of prolonged power purchases adds up, and Southwestern needs additional funding flexibility to pay for such purchases so that we can maintain stable rates.

Currently, we have in place authorities that allow access to funds to purchase power when needed, including the Continuing Fund. While these are good resources for Southwestern, the particular requirement of the Continuing Fund to repay funds within 12 months of using them is detrimental to Southwestern's Federal power sales rates, exposing the rates to sudden spikes and placing an undue burden on our customers.

The Administration has proposed, and continues to do so in the FY 2017 Budget Request, to fund anticipated purchases through a new rate component designed to recover costs ahead of time. With congressional authorization of a special receipt and disbursement Treasury account, referred to as Southwestern's "Purchase Power Drought Fund" (PPDF), we can implement this solution and bring greater stability to our customers' rates.

The rate component to collect funds directed to the PPDF would be established and implemented in the same manner as any other Southwestern rate – through a public process involving input from Southwestern's customers, the Department of Energy (DOE), and the public. Southwestern

has already received full support for the PPDF from its customers, which will receive the benefit of leveling rates from prepaying into the fund; however, Congress would need to pass separate language to authorize the PPDF before it can be used by Southwestern.

RATES AND REPAYMENT

Two key components in Southwestern's mission statement are conducting agency business "according to sound business principles" and "at the lowest possible cost." One way we make sure we achieve these objectives is by conducting annual Power Repayment Studies (PRS) for each of the three rate systems in our marketing area.

During the PRS, Southwestern reviews the projected and actual costs of operating and maintaining the generation and transmission facilities to assure that sufficient revenues are being collected to repay our costs, along with the principal and interest on the Federal investment. We work within our own agency to accurately capture expenses and with the Corps to account for expenses related to the hydropower purpose. Through this process, Southwestern develops and prioritizes an annual spending plan to ensure that the revenues projected in our rates are sufficient to fund total program costs.

I am proud to report that Southwestern made some recent headway in putting downward pressure on rates through our efforts to receive credit for water storage reallocations at the Corps projects in our marketing area. Southwestern believes that municipal and industrial water supply is one of the highest purposes of a multi-purpose reservoir, but that Federal hydropower customers should not bear the cost burden of such storage when it is reallocated to another purpose. To address this, we have dedicated staff to review past reallocations, with the goal of better understanding the reasoning behind such allocations and identifying associated credits. We are currently working with the Corps to address Southwestern's findings.

We are also urging the Corps to do its part in keeping Southwestern and other PMAs' rates competitive. By identifying operational efficiencies, improving outage rates, and correctly identifying expenses related to hydropower, the Corps and the PMAs can cut costs and put downward pressure on rates.

Even with these efforts, there is always the threat of prolonged below average inflow or drought causing upward pressure and rate spikes. The PPDF would mitigate such a threat by leveling the expense of purchasing power over multiple years.

CYBER AND PHYSICAL SECURITY

As an electric utility and one of the Nation's PMAs, it's our job to help keep the lights on. Physical and cyber security are two of Southwestern's most important goals. In the past few years, Southwestern has bolstered its cyber and physical security postures using the best-available technologies in cooperation with DOE and industry partners to protect the Federal transmission system and the Nation's power grid.

We have implemented multiple layers of cyber security controls to help detect, defend, and deter attacks within Southwestern's Information Technology (IT) infrastructure. As part of our defense-in-depth approach, the agency uses firewalls, network intrusion detection systems,

enterprise anti-virus programs, malware detection programs, network segmentation techniques, encryption technologies, and content filtering of email, internet, and other programs that allow access outside Southwestern's network.

Our work has obviously paid off, since we received no findings of non-compliance during a March 2015 NERC cyber security audit and we continue to successfully defend against increasing intrusion attempts on our IT systems.

On the physical security side, we have implemented Personal Identity Verification (PIV) logical access at Southwestern headquarters and at its three field sites. We are also currently in the process of installing internal surveillance at the 26 sites designated as Low Impact Sites under NERC's Critical Infrastructure Protection Standards. These measures not only protect our facilities and equipment, they are vital to the safety and security of our people.

GENERATION AND TRANSMISSION RELIABILITY

The generation and transmission assets in Southwestern's marketing area are over a half century old. It's a testament to the builders of the previous century that they are still in operation. Fortunately, through careful planning and in cooperation with our customers and the Corps, we've been able to repair or replace these assets as necessary while concurrently balancing increasing demands for availability and flexibility.

Our 30-year Southwestern customer funding initiative to fund operation, maintenance, rehabilitation, and modernization activities at the hydroelectric power plants in Southwestern's marketing area has been going strong for over 16 years now. To date, Southwestern's customers have approved $535 million to replace or refurbish failing and obsolete equipment at Corps-owned facilities. We have completed two rehabilitations under the program, three are in the construction phase, and six are in the design and planning stage. The initiative contemplates major replacement work at all of the 24 plants in our system.

We conduct similar planning and replacement work on our transmission system. In FY 2015, Southwestern completed the upgrade of 15 miles of 161-kV transmission line in eastern Missouri. This year, we will begin the replacement of 11 miles of transmission line on the west side of the state.

Reliable generation and transmission would not be possible without reliable communications. We plan to install approximately 14 miles of Optical Ground Wire (OPGW) starting in 2017 between three of our stations in Arkansas, which will not only boost the reliability of Southwestern's system, but will also benefit several interconnected utilities.

As an interconnected utility, Southwestern is part of the regional and National bulk electrical grid. It is our job to make sure our system is reliable, available, and flexible enough to do its part in delivering electricity to consumers. I am proud to report that in 2015, Southwestern's transmission system achieved a service availability rate of 99.7 percent.

RENEWABLE AND SUSTAINABLE HYDROPOWER

Our Nation's energy security is enhanced by the renewable and sustainable hydropower marketed by Southwestern. In an average year, the Federal energy marketed by Southwestern could be said to reduce the Nation's use of oil by 9.7 million barrels, coal by 3.0 million tons, or natural gas by 44.7 billion cubic feet. This cost-based energy also prevents the emission of greenhouse gases equivalent to 4.6 million tons of carbon dioxide.[1]

SUSTAINABLE WORKFORCE

My various roles at Southwestern have given me the opportunity to learn what our people do on a day-to-day basis. I believe this will be a huge advantage in planning for Southwestern's future. Our challenge, which is a challenge also faced by so many electric utilities across the country, is to find, recruit, and retain the best and brightest to fill technical and administrative positions as more and more employees retire.

Our hiring record was good in FY 2015, and it's looking good thus far in 2016, with new Federal employees coming on board in financial management, operations, reliability compliance, resources, power marketing, and engineering. We have also hired a number of contract employees under our support-services contracts for administrative, information technology, and technical expertise. I am pleased to report that both contracts were awarded to small business entities, furthering DOE and Southwestern's small business contracting goals.

BUDGET HIGHLIGHTS

Southwestern's FY 2017 request for appropriations is $11.1 million (Attachment 1). This budget request continues to include a proposal for the PPDF and use of alternative financing and offsetting collections to fund annual expenses. The use of alternative financing and offsetting collections authorities to fund expenses and purchase power and wheeling and the proposed PPDF for purchases of replacement power during below average water years and times of drought are all essential to Southwestern accomplishing its mission with minimal congressional appropriations.

CONCLUSION

My first four months as Administrator of Southwestern have been memorable. I've had the opportunity to meet with multiple stakeholders, including DOE officials, the Administrators and staff of other PMAs, and the leadership of the Corps, customer organizations, and regional and National support groups for not-for-profit electricity. I find that we generally share the same goal – keeping Federal hydropower affordable, reliable, and available now and in the future. It's a goal I will remain dedicated to as long as I am Administrator of Southwestern.

Mr. Chairman, this concludes my testimony. I would be pleased to address any questions that you or the Members of the Subcommittee may have.

[1]Emission savings computed using 2004-2013 data from U.S. Energy Information Administration (EIA), assuming a 50/50 Coal/Natural Gas Mix as representative of replacement energy for hydropower in Southwestern's area. Fuel savings based on thermal conversion factors from EIA's annual Energy Review-2014.

Attachment 1

Southwestern Power Administration
FISCAL YEAR 2017 BUDGET REQUEST SUMMARY
(dollars in thousands)

	FY 2015 Enacted	FY 2016 Enacted	FY 2017 Request
Program Direction (PD)	31,089	31,932	31,516
Operation and Maintenance (O&M)	15,174	19,279	13,896
Construction (CN)	13,403	12,012	12,486
Purchase Power and Wheeling[2]	63,000	73,000	83,000
Subtotal, Southwestern Power Administration	122,666	136,223	140,898
Offsetting Collections, PD (annual expenses)	-29,402	-29,938	-29,271
Offsetting Collections, O&M (annual expense)	-5,438	-6,023	-5,315
Offsetting Collections, PPW	-53,000	-63,000	-73,000
Alternative Financing, O&M	-5,934	-8,288	-6,269
Alternative Financing, CN	-7,492	-7,574	-5,986
Alternative Financing, PPW	-10,000	-10,000	-10,000
Total, Southwestern Power Administration	11,400	11,400	11,057

[2]Southwestern's budget request for the Purchase Power and Wheeling subprogram reflects anticipated needs to ensure adequate funding to fulfill its 1,200-hour peaking power contractual obligations based on volatile market prices, limited availability of energy banks, and all but the most severe hydrological conditions.