

**Mr. Mark A. Gabriel, Administrator,  
Western Area Power Administration  
Remarks before the  
Senate Energy and Natural Resources Committee  
March 11, 2021**

Thank you, Mister Chairman and members of the Committee. My name is Mark A. Gabriel. I am the Administrator of Western Area Power Administration, a federal power marketing administration responsible for selling and delivering wholesale hydropower from 57 hydroelectric dams to about 700 utilities, military bases, Native American Tribes and National laboratories in 15 central and western states.

WAPA's territory spans 1.3 million square miles, and our 17,236-mile transmission system—one of the largest in the U.S.— is an integral part of the high-voltage power grid in the west that ensures reliable electricity for more than 40 million Americans.

A mentor once told me early in my career that electrons follow the laws of physics; electricity follows the laws of politics. Only one of these can be amended.

**Our accomplishments**

WAPA's system experiences 99.999 percent uptime. America possesses the most reliable grid in the world thanks to our professional utility industry overseen by industry and government regulatory agencies and a common commitment to keeping the lights on, all while a deregulated, competitive grid keeps costs as low as possible.

We also operate a resilient system, weathering disruptions, like storms, wildlife interactions, vehicle accidents, routine maintenance and emergency situations, and safely returning power to citizens.

However, when the system is pushed beyond its limits due to extreme weather, such as Winter Storm Uri or the August 2020 heat wave in California, we experience the consequences of operating and maintaining a competitive, deregulated grid focused only on low cost.

On February 15 and 16, SPP directed rolling blackouts across much of its territory to protect the grid, and the communities that rely on it, from damaging and prolonged outages. At WAPA, 21 customers experienced outages for an average of 55 minutes and up to two hours. WAPA and the Army Corps of Engineers sent 27,150 megawatt-hours of additional hydropower to SPP between February 15 and 18, enough to power nearly 800,000 homes.

In the August 2020 heat wave, WAPA did not lose power. Between August 14 and 15, WAPA and the Bureau of Reclamation supplied 5,400 megawatt-hours of surplus federal hydropower to California to limit the effects of the energy emergency without affecting our customers.

In both cases, and in Texas, the markets worked according to their design: the grid did not collapse, load shedding and conservation appeals helped, all available resources were generating and the prices increased when megawatts were scarce.

The system's weaknesses were also revealed. First, every form of generation can be disrupted by extreme temperatures. Second, a deregulated, competitive market can discourage long-term capital investment in reliability and resilience measures. Finally, costs move in both directions in competitive markets, and electricity will flow to the highest bidder at impractical prices, not where it is needed most. WAPA prepares for price fluctuations as well as drought by maintaining a financial reserve at Treasury carefully coordinated with our customers. This avoids rate shock.

Increasingly severe natural disasters are straining the grid, including at WAPA such as 2018's Carr Fire. We are responding to more destructive ice and snowstorms, tornadoes, wildfires and high-wind events. We have deployed personnel, equipment and materials to restore power after hurricanes, typhoons and volcanoes.

Looking forward, we anticipate investing \$1.3 billion in our system over the next decade to ensure reliability. Reliability is the confidence that the lights will turn on when we need them. Resilience is the ability to prevent, withstand and recover from disruptive threats and events.

Ideally, we would invest more in resilience, emphasizing defense-critical electric infrastructure, artificial intelligence, hardening facilities, redundant services, black-start capabilities, replacing wood with steel and increasing the movement of energy between the Eastern and Western grids through seven interties.

Integrating AI, machine learning and advanced technology solutions into grid operations can improve real-time situational awareness, including knowing what is losing power when electricity is proactively cut to protect the grid, a shortfall today.

Today's market structure in some ways disincentivizes utilities from necessary resilience and modernizing investments because they negatively impact today's profits and increase costs.

### **Closing Statement**

In conclusion, power and gas markets throughout the U.S. are marvelously efficient in driving out inefficient generating units, increasing financial liquidity and expanding the sale of energy to new parties. The real question is whether electricity, and to a lesser extent natural gas, are logical commodities to participate in free markets. Unlike pork bellies and orange juice, trading electrons has consequences far greater than the availability of bacon or morning refreshments.

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