

## **DOE Spectrum Managers' meeting**

September 11

Welcome Speech

15-20 minutes

Good morning. The Western Area Power Administration welcomes you to Lakewood, Colorado and the DOE Spectrum Managers' Meeting. We appreciate having you here and hope you find the next two days valuable and informative.

First, a little about WAPA. We are one of four Power Marketing Administrations providing at-cost hydroelectric power across the United States. WAPA's footprint is 1.4 million square miles, comparable in size to the landmass that stretches from Oslo to Athens and from Paris to Athens. We operate a 15-state territory, keeping the lights on for 40 million Americans. We are entrusted with \$4.3 billion in assets including 17,000 miles of high-voltage transmission lines and 479 communication sites. We are responsible for managing communications across all 56 hydroelectric facilities owned and operated by U.S. Bureau of Reclamation, the U.S. Army Corps of Engineers and the U.S. State Department's International Boundary and Water Commission.

Spectrum management and the job you do as Spectrum Managers is important to the Department of Energy. It is because of you that we can perform vital operations necessary to carry out our essential missions. It is important to the U.S. government, important to DOE agencies and important to WAPA. Like water, land, gas and minerals, the radio frequency spectrum is a national resource. Through spectrum



management we ensure that we will continue to make efficient use of this limited resource and maximize the benefit to those that we serve.

Whether it is transportation of nuclear material across the country, the operation of a particle accelerator, medical research, satellite operations, or power transmission, effective management of the DOE radio spectrum to ensure extremely reliable communications for the NNSA, the national labs, power marketing administrations, and other agencies is critical to our success.

At WAPA, we use microwave radio systems as the primary means for monitoring and controlling our power transmission system. Without it, power system dispatchers could not see what our power loads are, they could not open and close breakers, they could not tell if power transformers were overloaded or overheating. The health of the entire power grid is seen through the data transmitted to the dispatching centers by the microwave and fiber optic systems we operate. Likewise, the ability of our linemen, electricians, and other craft personnel to communicate with the dispatchers when constructing, maintaining or repairing power lines, substations, and other facilities is accomplished by using our mobile radio system. We must be confident we can operate at more than a 99.9999% level of reliability, which translates to only 20 seconds of outage time per year.

Spectrum management enables WAPA to control power from a control center, provides visibility on loads and transfers critical data to our control centers. The safety of our craft personnel, helicopter pilots, and construction personnel is dependent on reliable mobile communications in rural areas where commercial communications is not available and in many cases, non-existent. The radio spectrum allows people to talk to each other. It supports communications between operations and maintenance, is necessary in restoration



activities, and provides immediate voice communications to line crews. In essence, the radio spectrum allows us to operate a safe, secure and reliable transmission grid.

The importance of spectrum management is never more evident than when disaster strikes like it did during the recent Carr Fire in northern California. Mobile radio systems allowed crews to utilize communications with each other. When portions of the infrastructure were destroyed, mobile communications allowed us to set up temporary infrastructure to continue operations. In light of this disaster response experience and our relief efforts in Puerto Rico and the U.S. Virgin Islands, mobile voice command systems are vital for emergency restoration capability.

However the Carr fire also identified some gaps and opportunities. The fire revealed that we need radio spectrum across the entire operations area, because during the fire there were areas in the service territory without complete coverage. We need to increase reliability and effectiveness of systems to support the work of our crews and we can accomplish this by having multiple repeaters to move around in emergency situations.

As you know there is a lot of demand for the spectrum and back in 2007 we gave up a portion of it to Advanced Wireless Services providers. The resulting auction funds were used to relocate the federal users of that spectrum into alternate radio spectrum and/or telecommunications technologies. WAPA received \$108.2 million from the Spectrum Relocation Fund to relocate all of the radio systems operating in the 2 GHz band. As a result WAPA has a new hybrid radio/fiber operational telecommunication network that replaced some of our oldest radio networks, paid for by the AWS providers.



In light of the growth in commercial uses of the radio spectrum – particularly mobile phones and wireless computer networks – it is important that spectrum management remains core to our strategy and to our operations. As the radio spectrum becomes increasingly saturated and valuable, the Department of Energy must stay committed to managing this vital resource so we can continue to fulfill our responsibilities to the American public and to the communities, partners and customers we serve.

