



**Comments of NRDC
Western Area Power Administration
Defining the Future
August 1, 2012**

WAPA Can Help Improve Reliability and Reduce Costs Today

I am writing on behalf of the Natural Resources Defense Council in support of the direction and guidance made by Secretary Chu regarding the modernization of the grid operated by Power Marketing Administrations (PMAs) and its better coordination with the rest of the nation's power grid.

NRDC is a national, non-profit organization of scientists, lawyers, and environmental specialists, dedicated to protecting public health and the environment. Founded in 1970, NRDC serves more than one million members, supporters and environmental activists with offices in New York, Washington, Los Angeles, San Francisco, Chicago and Beijing. NRDC has a long history of efforts to protect and conserve the nation's natural resources, including in particular the nation's air, water, lands and resources. NRDC also has a long history of advocacy promoting the increased use of energy efficiency and renewable energy sources to meet America's energy needs both at the national level and in various states, including California.

The grid of the future will not be the grid we have today. Evolving a more flexible and resilient interconnected grid is in the interest of all Americans. The electricity grid has been called the largest machine ever developed, yet it is a machine operated by dozens of utilities and "balancing authorities" in an inefficient, expensive and wasteful way. We can do better, integrating renewable resources while improving system reliability and lowering transmission customer and ratepayer costs. That's why environmental organizations, transmission operators, technology advocates and present and former utility regulators support making the grid more coordinated, flexible and reliable by adopting improvements to the way the grid is operated. The provisions of Secretary Chu's memo to the PMAs are valuable, common sense changes needed to keep service rates low for PMA customers while increasing grid reliability and security and ushering in the new array of home-grown generation resources that are being developed across the nation.

PMAs are a key part of the grid. To keep America competitive, wasteful operational practices on the nation's electrical grid have to change and PMAs need to be a part of the transition. The PMAs are part of the Department of Energy, and are responsible for more than 33,000 miles of transmission that connect with utilities in 20 states, which represents about 42% of the continental United States. They provide service to over 1500 large-scale customers. In the West, the Western Area Power Administration (WAPA) infrastructure extends over 15 states, and is crucial for development of efficient, clean, secure and inexhaustible resources. As the rest of the grid modernizes it is imperative that all of its components keep pace. A failure to do so will make the grid—and the PMA's operations – inefficient, insecure, less reliable and more costly to operate.

Proposed improvements are common sense and inevitable and not a departure from the mission and core obligations of the PMAs. As the entire grid has aged, so too has the PMA system. Upgrading and replacing aging electricity infrastructure and utilizing new tools and technology would better utilize our existing infrastructure. Moreover, all grid operators have to make similar changes.

- Crucial investments to protect our infrastructure from cyber security threats; the adoption of synchrophasors (devices providing data for more precise grid management); the upgrading and consolidation of control centers; and the exchange of scenarios and models for operational planning are now urgently needed.
- Leveraging all available resources and tools avoids the construction of unneeded and duplicative infrastructure, and allows for the sharing of reserve resources, saving everyone money and avoiding environmental impacts related to duplicative construction, air pollution, excessive water withdrawals and other impacts.
- Increasing coordination between grid operators and better sharing information can enhance what is known as “situational awareness” – the ability to see and understand problems in neighboring areas that could affect all parts of the grid and respond in time to protect reliability. The proposed improvements would help avoid blackouts like the one that occurred in Arizona and California on September 8, 2011.
- Developing new rate structures will save consumers money by promoting energy efficiency and demand response programs that will reduce costs.

In an improved and updated system, everybody wins.

Public resources created PMAs and public benefits are part of their mission. The PMA system and grid is a public asset, built with public money. Western’s preference customers, in return for the cheap federal power they have received for decades, have done the country a great service by helping pay off federal investments in the public hydro system. This low cost power has been put to use in service of mainly rural economies to good effect. Current customers are benefitting from legacy investments that have built industries and provided services to rural consumers. The fundamental mission of the PMAs to provide electricity at cost-based rates -- equal to the cost of generation and transmission -- will not change. PMA customers will continue to have access to affordable and reliable hydroelectric power for decades to come. However, this fundamental mission will be at risk if we fail to make sensible investments to ensure the long-term security of our electrical system.

Updating the PMA system and making it more interactive with the rest of the grid helps accomplish other national goals. Modernizing the grid and grid operations supports the integration of renewable resources and is the most cost-effective way of integrating these resources. Federal efforts to slow climate change and minimize the impacts for global warming will benefit from these operational changes, which makes the integration of America’s vast supply of renewable energy resources less expensive. Similarly, these resources because they are produced here, enhance our nation’s energy security and provide a zero fuel-cost source of energy for present and future generations. Because the jobs renewable energy development creates cannot be outsourced, investing in the grid of the future helps bolster our fragile economic recovery. The economic activity this supports is already enormous.

For example, the 15 states either wholly or partially within the Western Area Power Administration’s service area have over 30,000 MW of wind power, representing approximately \$60 billion in capital investment and 65% of all the wind built to date in the U.S. In addition, the 4,400 MW of wind presently under construction in this 15-state region represents approximately one-half of all ongoing wind projects in the U.S. These projects will yield another \$8 billion in investment in American produced energy and jobs in the high plains and western states. This in turn produces annual economic benefits to the rural economies these WAPA service area states well above \$210 million in county property taxes and close to \$90 million in lease payments to landowners – an important factor in continuing the region’s rich heritage in farming and ranching. The \$60 billion in capital investment in wind projects has reinvigorated the manufacturing sector in the region with the creation of 128 permanent manufacturing facilities in 13 of the 15 states in WAPA’s service area. In 2011 alone, the wind industry provided over 30,000 good paying manufacturing, construction and other jobs in these states.

According to data from the Solar Energy Industries Association, as of August 2011, there were over 100,000 solar workers in the U.S., more than double the estimated employment in 2009. These workers are employed at 5,600 businesses operating at over 6,500 locations in every state. The increasing value of solar installations has injected life into the U.S. economy as well. In 2011, solar installations were valued at \$8.4 billion, compared to \$6 billion in 2010. This trend continues in 2012, which is shaping up to be a record year for solar energy, with more than 500 Mw of capacity installed in the first quarter of 2012.

Thank you for considering these comments.

Respectfully submitted,

A handwritten signature in blue ink that reads "Carl Zichella". The signature is written in a cursive style with a prominent loop at the end of the last name.

Carl Zichella
Director of Western Transmission