

TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION, INC.

Comments on

DOE / WAPA Joint Outreach Team: Defining the Future

August 17, 2012

In response to the Department of Energy (DOE) and Western Area Power Administration's (WAPA) outreach effort to determine how the power marketing administrations (PMAs) could facilitate the transition to a more resilient and flexible grid while reducing cost to consumers as described in Secretary Chu's memorandum (the "Memo") of March 16, 2012, Tri-State Generation and Transmission offers the following comments.

INITIAL CONCLUSIONS AND RECOMMENDATIONS

- Tri-State is concerned about the costs of DOE's proposed initiatives. The federal power program is based on the principle that the beneficiary/user pays for the initiatives from which it benefits. The Memo does not state how these program costs are to be recovered and by whom.
- Cost-based rates mean the lowest possible cost, consistent with sound business principles. Some of the Memo's initiatives clearly don't meet this test.
- Existing customers should see no harm to their rates as a result of new initiatives; if the initiatives do not benefit the preference customers, then the funding should come through Congress and be non-reimbursable appropriations. There should be no subsidization of one type of customer by another type of customer.
- Should DOE's report present initiatives for WAPA to implement, these initiatives should be non-reimbursable appropriations unless they can be demonstrated to be of direct benefit to the preference customers.
- For any of these initiatives, cost / benefit analyses should be conducted which will clearly identify the human and capital resources needed to accomplish the initiatives; the beneficiaries of the initiative will need to be identified.
- Tri-State supports the involvement of preference customers and other appropriate stakeholders on searching for initiatives that would provide benefits to the customers which can be implemented through an evolutionary process.
- DOE and WAPA's obligation is to operate the federal transmission system paid for by preference customer dollars to market and deliver to preference customers electricity generated at the federal hydroelectric facilities (Bureau of Reclamation and Corps of Engineers) at cost-based rates which ensure recovery of operation, maintenance, and investment costs (principal and interest to Treasury). Should there be excess transmission capacity that can be sold, it is WAPA's obligation to offer it on a non-discriminatory basis via the OASIS. The revenues derived from such sales should reduce the monies required from the preference customers in their rates.
- The electricity being generated at the federal facilities are under long-term contract to the preference customers. Much of the output has been curtailed as a result of programs that have been legislated or litigated. The preference customers invested in those contracts when the cost of the hydroelectricity was higher than what it cost to generate using other fuels. The preference customers paid then and under existing long-term contractual arrangements, take title to the electricity from WAPA at a multitude of delivery points.

TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION, INC. (Tri-State)

Tri-State is a not-for-profit wholesale electric generation and transmission cooperative based in Colorado. Its mission is to provide reliable, cost-based wholesale electricity to its forty-four not-for-profit distribution cooperative and public power district member systems while maintaining high environmental standards.

Tri-State's members serve over six hundred thousand predominately rural consumers over 200,000 square miles of territory in Colorado, Wyoming, Nebraska and New Mexico. Many of these members' consumers which include tribal consumers reside in the poorest local economies in the United States. To meet its members' electricity needs, Tri-State generates or purchases power produced by coal, natural gas and hydropower as well as intermittent renewables such as wind and solar. Tri-State has integrated thirty megawatts of solar from the Cimarron solar facility in northern New Mexico, fifty megawatts of wind from Kit Carson's wind farm in Burlington, Colorado and has signed a twenty year agreement to purchase the output of the sixty-seven megawatt Colorado Highlands Wind Project located in Logan County, Colorado.

Through its policies, Tri-State has also encouraged its member systems to develop local renewable projects and its members have added or are scheduled to add another forty-two megawatts of distributed local renewable resources to the Tri-State portfolio.

Tri-State Statistics:

- Serves 44 distribution cooperatives and a public power district, for a
- Load of approximately 2,500 megawatts and 14 million megawatt-hours, over
- 5,000 miles of transmission lines, going through
- 200 Substations, within
- 200,000 square miles¹ which equates to approximately
- 5 customers per mile of line², sourced from
- 2,350 megawatts of its own generation resources, augmented by
- Purchases from Basin Electric and lastly,
- 12% of the resources sold to its membership are renewable hydroelectric generation marketed by the Western Area Power Administration.

In the remainder of this document, Tri-State offers information on WAPA, comments on Secretary Chu's March 16, 2012 Memo, Ms. Azar's posted and verbalized comments and the DOE / WAPA Joint Outreach Team: Defining the Future Workshop Pre-Read Materials. We also provide Observations from the various workshops attended by Tri-State, followed by our Further Conclusions and Recommendations.

WESTERN AREA POWER ADMINISTRATION³

¹ Internal statistical information

² As compared to an average of 37 customers per mile of line for the investor owned utilities

³ Information from Western's 2011 Annual Report

WAPA is a Federal agency under the Department of Energy that was created in 1977 to market and transmit *wholesale* electrical power generated at federal facilities through a high-voltage loosely connected transmission network across a 15-state marketing area. In the Western Interconnection, WAPA operates and maintains over 9,000 miles of 69 kV to 500 kV transmission with 628 miles of 500 kV being part of the NW – SW Intertie. The other approximate 7,800 miles of transmission reside in WAPA’s Eastern Division.

WAPA is responsible for engineering, operating and maintaining the transmission system and selling power under long-term contracts to:

- Cooperatives
- Federal and state agencies
- Municipalities
- Native American tribes
- Public utility and irrigation districts
- Other energy service providers

In turn, WAPA’s preference customers provide electric service to millions of people from as far south as Texas to the Dakotas, and from the plains of Minnesota to the California coastline. The customers are responsible for meeting the load growth of its end-use members and consumers.

Recently WAPA’s role was expanded by Congress to include the Transmission Infrastructure Program, or TIP. Through funding partnerships, the TIP was established to develop transmission infrastructure that delivers renewable energy across the grid in the West.

WAPA, in partnership with its wholesale preference customers, has been dedicated to promoting environmental stewardship, energy efficiency and renewable energy, as well as implementing new technologies to ensure its transmission system continues to be as reliable as possible.

WAPA sets power rates to recover all costs associated with its reimbursable activities, such as annual operating costs, the specific and allocated multipurpose costs associated with recovering the Federal investment in the generation facilities (with interest) and certain other costs assigned to power for repayment, such as aid to irrigation development.

WAPA’s 2011 (and prior) annual reports identify the initiatives, projects and activities WAPA has been involved in. These initiatives, projects and activities mirror many of the initiatives identified in Secretary Chu’s memo. WAPA’s annual report discusses almost every item in the Memo, Ms. Azar’s comments at the meetings and the Pre-Read Materials, including but not limited to intra-hour scheduling, system maintenance, construction of new facilities, working with utilities throughout the West to improve the power delivery system, meeting the reliability standards, integrating renewables and TIP.

WAPA’s 2012 Strategic Targets and reports which provide updates on the pursuit of those targets are also on WAPA’s web page. This further emphasizes their plan to move forward into the future, to keep the public informed and to work in concert with their customers.

COMMENTS

Secretary Chu's March 16, 2012 Memorandum

- Background Information

In the Background Information, the Memo implies that by improving the PMA existing infrastructure, implementing the PMA's new transmission authorities, improving the PMA's rate design, improving collaboration with other owners and operators of the grid and working with Congress to modernize oversight of the PMAs, DOE can stimulate job creation along with local and regional economic development, accelerate the introduction of new technologies ranging from cyber-security to alternative energy generation, take greater advantage of the US' indigenous and inexhaustible resources, improve public health, reduce strategic vulnerabilities, price and supply risk, and environmental liabilities and advance the US' competitiveness in international markets.

The Memo's goals are laudable but it is clear that the Secretary was not provided with information related to what WAPA and the load-serving electric utilities are already doing. For example when the Memo states "stimulate job creation along with local and regional economic development" and "reduce strategic vulnerabilities, price and supply risk", WAPA's 2011 annual report provides a perfect example in the following: "Project Spotlight – Bringing more capacity to N.D. Boom Area: The Williston area in western North Dakota is experiencing a large amount of non-forecasted load growth because of an oil boom. To keep pace with the growing population and increased industrial load in the area, WAPA has been upgrading capacity to some of its lines and substations. Along with transmission line construction contractors, WAPA line crews worked closely with engineering staff to upgrade the Charlie Creek-to-Watford City transmission line from a 115 kV rating to a 230 kV rating. This upgrade will allow WAPA to reliably deliver more energy to the local utilities that power homes and businesses in western North Dakota." WAPA and its customers are very supportive of economic development and energy independence for the US.

DOE does not have jurisdiction over the myriad of utilities in the West nor in the other PMA regions. The utilities are providing reliable electricity to millions of residents, businesses and industries. They have developed resources which include but are not limited to nuclear, coal, gas combined cycle, gas turbines, hydroelectric, wind and solar, biomass, geothermal and other. WAPA assists these utilities in meeting their power and energy requirements by transmitting electricity generated at federal facilities operated by the Bureau of Reclamation and the Corps of Engineers to agreed upon points of delivery.

All the utilities are regulated by various entities, whether it be the Federal Energy Regulatory Commission, their state commissions, their local commissions, boards or directors, city councils, county commissions, water and air quality regulations, the North American Electric Reliability Corporation and in the West, the Western Electricity Coordinating Council.

WAPA and the federal generating agencies are further constrained in their operations by the large body of regulations (particularly environmental) that exist related to the rivers that supply the federal hydropower resource. These restrictions include legal and environmental regulations and

research and experimentation associated with fish recovery, sediment deposition, cultural resources, etc.

Considering all those limitations, western electric utilities with their responsibilities to provide reliable energy at the lowest possible cost, consistent with sound business principles, are doing a good job. The utilities are following the NERC and WECC standards, which includes cyber security standards; they are sharing information with their neighboring utilities; they are looking for innovative ways to make the system more flexible within the bounds of all the regulations; they are integrating renewables; they are maintaining their systems for the delivery of power and energy to the consumer; they are building or upgrading infrastructure; and, they are planning for the future.

- Improving the PMA Existing Infrastructure

The raison d'être of WAPA is to deliver the hydroelectricity generated at the federal facilities to WAPA's preference customers. The rates paid by customers for that wholesale hydroelectricity are used to operate, maintain, renew and construct facilities, transmission and generation, needed to deliver that power and to repay to Treasury the original and continuing investment in the facilities plus interest. The preference customers are very engaged in this process with regular meetings occurring to review work plans.

For the past fifteen to twenty years, funding has become more difficult to obtain. Nevertheless, understanding their responsibilities for reliable cost based energy, the preference customers have partnered with WAPA to fund their programs to ensure the maintenance and expansion of the system to assure that reliability.

During that period of time, WAPA has interconnected slightly over 1,000 megawatts of wind and has 8,577 megawatts of wind, 2,585 megawatts of solar and 35 megawatts of biomass in its queue.

As it relates to the PMAs being uniquely positioned to serve as test beds for innovative cyber security technologies taking advantage of that opportunity, our response is: just because we are preference customers and beneficiaries of the generation from federal facilities transmitted over WAPA's facilities constructed for that very purpose, does not mean we want to be laboratory creatures whose reliability may be diminished on the one hand and costs may be increased on the other for the privilege of being a test bed. Laboratories are the environment for testing, not electric utilities where the end-use consumer has an expectation of having electricity when a light switch is turned on or an attempt is made to remotely operate the garage door. The provision of electricity is an essential service and should not be a "test bed" for anything.

- Implementing the PMA's New Transmission Authorities Section 1222 and TIP

Not that we support WAPA being portrayed as the engineer, designer, contractor, builder, operator or maintainer of facilities constructed for purposes other than delivering hydroelectricity from federal facilities to preference customers, it is clear in their 2011 Annual Report they are engaged in the Transmission Infrastructure Program (TIP) with an allocation of \$3.25 billion which they portray as "an opportunity for WAPA to stimulate and support the continuing

development of emerging renewable generation resources.” In CY 2011, the following projects were supported: TransWest Express - \$25 million; Electrical District No. 5, Palo Verde Hub Project - \$91 million; and, the Montana Alberta Tie Limited Project - \$161 million.

- Improving the PMA’s Rate Design

In this particular section of the Memo, Secretary Chu states “I am directing the PMAs to create rate structures that incentivize the following:

- Energy efficiency programs
- Demand response programs
- Integration of variable resources, and
- Preparation for electric vehicle deployment.

Implementation of rates that support these programs is not in the purview of the wholesale supplier; they are responsibilities of the load-serving entity with the necessary approvals from various boards, regulatory agencies and commissions to authorize their implementation. This cannot be emphasized enough. Furthermore, one size does not fit all with any of these programs. Many utilities have already implemented energy efficiency programs and demand responses programs whereby the next increment may not have a lot of value – some programs are over twenty years old – hence the low hanging fruit and most likely the mid-hanging fruit have all been picked.

As it relates to the integration of variable resources, utilities have a general obligation to interconnect and provide transmission service under open access transmission tariff provisions on a non-discriminatory basis without regard to the type of resource.

Lastly, in areas of the West, electric vehicles are not a practical concept. Each utility understands its customers best and if requested has already taken steps to accommodate electric vehicles and if not, when asked, they will do so. It is in the utilities’ best interests to provide the services needed and wanted by their customers.

- Improving Collaboration With Other Owners and Operators of the Grid

WAPA is a “partner” in organizations in the West. They are active in WECC, NERC, NWPP, SRSG, RMRSG, WestConnect and others. They regularly attend meetings, actively participating when needed, contributing and shouldering their share of the work. These activities are funded through rates paid by the preference customers and our expectation is that they these efforts advocate their obligations as set by Congress in statutes.

Throughout the Workshops, many participants talked about their relationships with WAPA including large transmission owners and operators.

- Working with Congress to Modernize Oversight of the PMAs

Customers have worked closely with WAPA to improve and modernize the transmission system in existence today. The organizations have evolved to meet the requirements of the times in which they exist and even though complex, the preference customers do not see a need to re-do the extensive body of statutes and laws that govern the organizations. It is DOE’s duty to obtain

congressional support and approval to any changes they may want to make to the program prior to implementing such changes or new initiatives.

Ms. Azar's Strategy Identified on March 16 on the Web

- Strategy: upgrading and replacing aging electricity infrastructure and utilizing new tools and technology that would better utilize our existing infrastructure. These efforts will not only save consumers money but will also make the grid more reliable for the families and businesses which depend on it each and every day.

Response: DOE can support the on-going working relationship between WAPA and its customers by ensuring funds are appropriated by Congress and OMB for the PMAs to perform the needed maintenance, repairs and replacements for poles, transformers and other needed field infrastructure. Customers are supportive of this work because of our common interest in delivering reliable power to our consumers.

Furthermore, to be more flexible and adaptable, WAPA has implemented intra-hour scheduling to facilitate the integration of intermittent resources. At this time, the users of the transmission system have chosen not to use or minimally use that service.

- Strategy: leveraging all available resources and tools – including private-public partnerships, increased collaboration with grid owners and operators and loan financing for critical, job creating transmission projects – to build a stronger, more resilient electric grid for the long-term security and efficiency of America's critical infrastructure.

Response: over the past few weeks, many comments and much testimony was provided about the collaboration that exists between WAPA, its preference customers and other electric utilities. All appreciate the contributions made by WAPA and will continue to depend on their participation and partnership.

We continue to state that the principles that need to be adhered to are:

- The beneficiary pays, meaning the user of the facilities;
 - No operational or financial harm should be incurred by the existing preference customers who have paid for the development, operation and maintenance of the existing facilities through long-term existing contracts;
 - Preference customers are not to be used as test-beds for DOE research; and,
 - Leave retail decisions to retail utilities rather than wholesale utilities.
- Strategy: developing new rate structures that save consumers money by promoting energy efficiency and demand response programs that will reduce costs by better managing the electrical load at times when demand for electricity is highest. These rate structures will also help ensure that new clean energy resources from wind and solar power are efficiently and effectively integrated into the grid.

Response: Whether in Rapid City, Billings, Phoenix, Folsom or in Loveland, many preference customers commented on what they have done to reduce the use of electricity through energy efficiency programs; about their participation in demand side management and their integration of wind and solar generation. Tri-State would like to clearly emphasize that energy efficiency, demand side management, and the deployment of electric vehicles are issues that have to be dealt with at the retail level.

DOE / WAPA Joint Outreach Team: Defining the Future Workshop Pre-Read Material and Workshops
Most utilities in the West work with WAPA as partners in planning organizations, associations, contracts, reserve sharing groups and reliability council. The most important message to be shared from this particular document is that the word “leadership” was used many times. Tri-State views WAPA as a *partner* taking a leadership role when necessary but not inserting itself in that role unless requested or having the particular skill set needed. WAPA’s opinions and input are valued and respected.

DOE discussed evaluating potential improvements in a number of areas one of which was centralized dispatch. Neither in the document nor in the Outreach sessions was “centralized” defined as to whether it meant centralized in one region such as the SLCA/IP region, the LAP region, the Sierra Nevada region or across all regions. Each region is very different from the other and operates under different statutes and environmental regulations. WAPA and its preference customers will continue to review initiatives put forth by WAPA to determine the value of those initiatives for their consumers. Working cooperatively, with mutual respect, while understanding what is of value to the end-use consumers, will enhance the relationship between WAPA and its preference customers.

Some of the potential initiatives listed such as “Responding to Solar Flares”, “Minimizing Cyber-Security Vulnerabilities” and “Responding to the Recommendations in the FERC / NERC report” were not even discussed during the sessions by the stakeholders. Statements were made by attendees that no matter what initiatives DOE were to put in place, outages will still occur. All three of these potential initiatives are being addressed through FERC, NERC and WECC. Tri-State is not supportive of DOE trying to direct or manage activities in these areas. DOE should support FERC, NERC and WECC in implementing the recommendations in the outage report and their efforts associated with solar flares and cyber security. There will probably be new standards developed to implement better coordination between utilities throughout the US. DOE in partnership with the customers should ensure funds will be available to WAPA to implement the standards and any recommendations made in the report.

At the first workshop, it was stated the workshops were not meant to be cumulative but it does appear that is what occurred. The material changed based upon the previous workshop(s), the formats changed, questions posed were different. It was a costly exercise for all the participants. Even though there weren’t any pre-workshop conceptions, SAIC, a consultant to DOE attending that first session, stated they were there to formulate new transmission rates. This left many of the participants thinking there was a pre-determined outcome.

OBSERVATIONS

- General concern over the lack of knowledge of the DOE personnel about WAPA, the statutes guiding WAPA and the individual projects.

- DOE did not educate itself prior to embarking on this venture.
- Lack of consultation with the preference customers.
- As can be seen from WAPA's map, their transmission system does not overlay the entire transmission system in the Western Interconnection; it is a very loosely connected system. There are states such as New Mexico and Arizona where the WAPA transmission system just interconnects in one or two locations within the state.
- Prior to publishing the March 16th memo, legal research should have been conducted to determine whether DOE's strategy could be implemented under existing statutes and regulations.
- Following legal analysis, DOE and WAPA should have met with WAPA's customers (including Tribes) to determine what initiatives could and should be given serious consideration; a cost/benefit analysis of each initiative should be performed and in direct and meaningful ongoing consultation with customers, determinations on how best to incrementally implement the changes or initiatives could be developed.
- If DOE / WAPA did not have the statutory authority, a collaborative process with the customers and Tribes should be conducted to explain how the changes and / or initiatives would be of value to the utilities and their consumers.
- Even though it was claimed the process was open and transparent it was not. It was not collaborative, it was not well designed, the information provided was sometimes inaccurate, the DOE participants were not knowledgeable and the note taking during some of the breakout sessions won't provide much input into the report because it was very poor. At the Rapid City, Phoenix and Loveland meetings, there was more time allotted to the "listening" session than there were speakers; the extra time at the end, could have been returned to those that did not have an opportunity to complete their comments.
- In Secretary Chu's Memo and by Ms. Azar in her public comments, preference customers have been portrayed as being behind the times and resistant to change. Such a comment was made by a NRDC representative posting the following in a blog: "Though they will complain loudly at the workshops in the coming week, preference customers have to understand that their grid is changing all around them and they will need to change too." Nothing could be further from the truth. During the "Defining the Future" Outreach Process, DOE should have heard two things from the preference customers: 1) they have been changing with the times and are often on the forefront of new initiatives; and 2) it is not change that is the issue, but who pays for it. We are sure there are many who would be happy for WAPA and its preference customers to pay for their agendas.
- Participants were told that WAPA is paying for the workshops. If this is the case, then Ms. Azar spent consumer money flying from DC to various locations in the West, to spend a couple of hours "listening"; and as observers, many would say she was not "listening".
- Some of the Memo's initiatives are nothing more than an exercise in trying to find ways to allow access to the federal transmission system which is paid for by the preference customers by the wind and solar developers at reduced costs.
- WAPA's Strategic Goal 6.1 "investigate, evaluate and report on potential new WAPA-wide transmission products and services." WAPA knew what their goals were; WAPA should pursue their strategic goals in partnership with their customers without the process being driven from Washington, DC.

FURTHER CONCLUSIONS AND RECOMMENDATIONS

- DOE and the customers should be advocates of the development of hydroelectric resources throughout the US regardless of size and support such bills as H.R 5892 the Hydropower Regulatory Efficiency Act which would direct DOE to complete a study of 1) the technical flexibility and potential of pumped storage facilities and technology to support intermittent renewable generation and provide grid reliability benefits and 2) the range of opportunities for hydropower from conduits.
- DOE and the customers should be advocates and the interface for WAPA with Congress to obtain the necessary appropriations (to include personnel, equipment and materials) to reliably carry out its mission of marketing and transmitting the hydroelectric resources from the Bureau of Reclamation or the Corps of Engineers to the preference customers and to meet all its obligations in carrying out its duties of being a wholesale provider of federal hydropower resources.
- Tri-State recommends DOE and WAPA review the Pre-Read Materials and coordinate them with WAPA's Strategic Plan to determine what is or is not included and in consultation with the preference customers determine what is or is not of benefit to the customers.
- The comment period for the draft report should be a minimum of 60 days.
- All comments on the draft report should be posted in the Federal Register.
- DOE and WAPA should respond to each comment provided on the draft report as to why it is or is not incorporated into the report.
- DOE should heed the comments and concerns expressed in the Congressional Letter signed by 166 Senators and Representatives of both parties and letters from Western Governors.
- DOE should review H.R. 6247, Saving Our Dams and New Hydropower Development and Jobs Act which among many points prohibits federal funding from being used for new activities proposed in Energy Secretary Chu's March 16, 2012 memorandum mandating new missions for the Power Marketing Administrations until an agency report is completed to justify such activities and Congress authorizes the new activities.
- Tri-State Generation and Transmission Association, Inc. thanks you for the opportunity to comment.