

Transmission Update

October 2007

- Summary**
- ✓ Welcome to the Thirteenth National Wind Coordinating Collaborative (NWCC) Transmission Update! Kevin Porter of Exeter Associates, Inc. led the October 31, 2007, Transmission Update conference call. As always, this written brief is being distributed after the call to conference call participants, other NWCC members and participants, and to interested NWCC observers.
 - ✓ This update features state transmission infrastructure authorities and the role they play in promoting new electricity infrastructure investment in their areas. Speakers from six state transmission infrastructure authorities—Wyoming, South Dakota, Idaho, Kansas, New Mexico, and Colorado—discussed the developments in their respective regions and the plans they had for future projects.
 - ✓ Specific topics covered in this brief include:
 - How the various state transmission infrastructure authorities were created and what role do they play.
 - How each state transmission infrastructure authority differs from the others, how each is organized, and whether they have received state funding or not.
 - What each Authority is currently working on, what has been accomplished to date, and what, if any, obstacles have needed to be, or still need to be, overcome.
 - ✓ The next Transmission Update call is on December 18th at 1:00 p.m. Eastern. Please mark your calendars!

State Transmission Infrastructure Authorities

Background

Investment in new transmission infrastructure has been lagging for many years. Transmission development has been slow and faced with many obstacles such as local opposition, environmental concerns, and allocating costs among multiple entities. Recognizing the need for more investment in transmission, several states have decided to create transmission infrastructure authorities. These authorities are designed to facilitate transmission infrastructure development in their respective regions. Creation of these authorities was driven by the large generation resource potential in these states and the desire to develop and move that generation to market.

The first state to enact a transmission infrastructure authority was Wyoming, with the creation of the Wyoming Infrastructure Authority in 2004. This was followed by the

Wyoming Infrastructure Authority

South Dakota Energy Infrastructure Authority, the North Dakota Transmission Authority, the Idaho Energy Resources Authority, and the Kansas Electric Transmission Authority in 2005, then the New Mexico Renewable Energy Transmission Authority and the Colorado Clean Energy Development Authority in 2007.

The Wyoming Infrastructure Authority (WIA) was created to facilitate Wyoming-based energy generation by improving and expanding the transmission grid and supporting the development of new generation projects. WIA is governed by a five-member board of directors appointed by the Governor, has three full-time staff members, and may issue up to \$1 billion of revenue bonds to finance projects. WIA has received significant funding support from the Wyoming Legislature, with a \$1.6 million operating budget approved for 2007-2008 and \$10 million available for project development support.

Steve Waddington, WIA's Executive Director, said the Authority focuses on promoting Wyoming energy development opportunities and creating partnerships with other entities. This brought two private transmission companies into Wyoming that had not previously been active in the state. WIA and Trans-Elect Corp., along with the Western Area Power Administration (WAPA), are developing the Wyoming-Colorado Intertie Transmission Project. This project consists of expanding the transmission capacity between Wyoming and Colorado in order to tap wind and perhaps coal generation capacity in Wyoming for transmission into Colorado. An open season will be held in 2008 to allocate the 900 MW of capacity on the line; Mr. Waddington expects wind will receive most of the available capacity. WIA and Trans-Elect are also part of a consortium currently studying the feasibility of the High Plains Express line, a proposed 500-kV line that would originate in Wyoming and head south through eastern Colorado to New Mexico and Arizona.

WIA has also formed a partnership with National Grid and, along with WAPA, are assessing the feasibility of the Wyoming West Project, a 345-kV or 500-kV line running from Wyoming through Utah and Nevada and possibly into California. The WIA/National Grid partnership, along with Arizona Public Service, are also heading up a consortium that wants to develop the TransWest Express, a transmission line from Wyoming extending into the Southwest. This project is currently in the design and permitting phase. In August 2007, WIA, National Grid, and Arizona Public Service entered into an agreement with PacifiCorp to cooperate on initial activities to co-develop the Gateway South and TransWest Express transmission projects. Gateway South is a proposed transmission line from PacifiCorp that would begin in Wyoming and extend into Utah and the Desert Southwest.

Mr. Waddington noted that part of WIA's role is to promote advanced coal technologies and to that end, WIA has teamed with PacifiCorp to conduct feasibility studies on four potential alternative integrated gasification combined-cycle (IGCC) technologies for possible future pilot project development. WIA is seeking federal funding for an IGCC plant, but funding has not yet been secured. Mr. Waddington also said that WIA recently had its first successful bonding issuance with \$34.5 million in bonds to help finance a transmission line being constructed by Basin Electric Power Cooperative of Bismarck.

**South Dakota
Energy
Infrastructure
Authority**

The South Dakota Energy Infrastructure Authority (SDEIA) was created to facilitate the development of electric transmission facilities both inside and outside South Dakota. SDEIA is governed by a five-member board of directors and is authorized to hire staff. In January 2007, Hunter Roberts was named as Executive Director. Mr. Roberts said the SDEIA received \$250,000 in 2006 from the state legislature, of which \$100,000 is set aside in a reserve fund if bonding is needed. SDEIA is authorized to issue revenue bonds to finance transmission projects up to a maximum of \$1 billion.

SDEIA is required to submit an annual report to the Legislature and Mr. Hunter said the last report focused on potential for coal, nuclear, and wind development. For the 2007 report, Mr. Hunter and the board spent considerable time conducting interviews with numerous entities concerning the development of South Dakota wind energy resources. These interviews indicated that lack of transmission is the major impediment to wind development. Mr. Hunter noted that utilities were initially skeptical about the SDEIA but recently started expressing interest in getting more involved.

**Idaho Energy
Resources
Authority**

The Idaho Energy Resources Authority (IERA) was created to promote development of and to finance electric generation and transmission facilities for the benefit of Idaho electric utilities and renewable energy project developers. The IERA is governed by a seven-member board appointed by the Governor, and though it is authorized to hire staff, it has not yet done so. The IERA does not have a statutory cap on the amount of bonds it can issue. Ron Williams, legal counsel to the IERA, said the IERA conducted an RFP process resulting in the retention of Lehman Brothers as the IERA's investment banker. Mr. Williams said the IERA was working with the Bonneville Power Administration to assume a major role as a conduit financier in BPA's third party financing program for transmission facilities throughout Idaho and the Northwest. The IERA also hopes to close its first transmission financing in December of this year, a \$6.5 million line for an Idaho electric cooperative. The IERA does not receive any appropriations from the state, but rather anticipates long term funding of its operation with fees from bond issuances. The IERA was established in 2005 with the support of the Idaho Consumer-Owned Utilities Association, representing 22 electric cooperatives and municipalities in Idaho.

**Kansas Electric
Transmission
Authority**

The Kansas Electric Transmission Authority (KETA) was created to develop more transmission for facilitating the growth of Kansas-based generation. KETA is governed by a seven-member board of directors chaired by State Representative Carl Holmes. Rep. Holmes said that in the beginning, the board spent a lot of time educating themselves on the issues surrounding transmission development. He noted that KETA currently has a \$100,000 operating budget and a \$1 million budget for feasibility studies and project development. KETA contracts with the Kansas Development Finance Authority for revenue bonds to finance projects and therefore does not have a maximum bond limit. Rep. Holmes said that unlike most of the other state transmission infrastructure authorities, KETA can only be involved with transmission projects and the legislation only allows for transmission development and ownership; operations must be contracted out. KETA can become involved with projects outside of Kansas but only if the state realizes at least 51 percent of the economic benefit.

KETA has been actively involved in several projects and posted notice in July 2007 of intent to build a line segment within Kansas, including part of the transmission project known as the X-Plan. The X-Plan consists of two transmission lines that form an “X” and run from Spearville, Kansas to Oklahoma City, Oklahoma and from Wichita, Kansas to Potter, Texas. ITC announced its intention to build the Kansas part of the X plan and extend it from Spearville to Axtell, Nebraska. KETA has subsequently stepped back as a developer, ITC, announced their intention to build similar lines. Rep. Holmes noted that the proposed Holcomb coal plant that would have utilized these lines had recently been turned down by the Kansas Department of Health and Environment for air permits, but that ITC indicated it may proceed with the northern part of the X plan regardless.

**New Mexico
Renewable
Energy
Transmission
Authority**

The New Mexico Renewable Energy Transmission Authority (RETA) was created to develop transmission facilities and storage projects. Any transmission project that RETA undertakes must source at least 30 percent of the energy from renewables. RETA is governed by an eight-member board of directors and is seeking to hire an executive director. RETA has received initial funding of \$1 million through July 2008. RETA is also authorized to issue revenue bonds and has no financing cap.

Joanna Prukop, Cabinet Secretary of the New Mexico Department of Energy, Minerals and Natural Resources, noted that RETA was the first infrastructure authority created expressly to promote renewable energy development and that it is considered an economic development tool to get New Mexico renewable energy to market, both inside and outside the state. New Mexico has a large amount of potential solar, biomass, and wind energy, and renewable energy projects are seen as a good rural economic development tool. RETA’s activities will help support the New Mexico Renewable Portfolio Standard (RPS), but load growth in the state is low and therefore RETA is also focused on exporting renewable energy in New Mexico to surrounding states with RPS requirements, especially Arizona and California.

Ms. Prukop said that RETA is very keen to work with the other state transmission infrastructure authorities and is hosting the second meeting of such authorities in Santa Fe on December 7th. The state transmission infrastructure authorities previously met in South Dakota in June 2007. RETA has joined a consortium with WIA that is considering developing the High Plains Express Transmission Project. Ms. Prukop noted that RETA, unlike some other authorities, can own and operate facilities and may very well do so, but prefers to take on the role of facilitator, identifying projects and then turning them over to the private sector to construct and operate.

Colorado Clean Energy Development Authority

The Colorado Clean Energy Development Authority (CCEDA) was created to facilitate the production and consumption of clean energy. CCEDA has a broad focus, encompassing production, transportation, transmission, equipment manufacturing, and storage of clean energy, which includes everything from renewables, biofuels, zero-emissions technologies, and clean coal. CCEDA is governed by a nine-member board of directors. The appointees were announced in September and were due to hold their first meeting on November 1st, the day after the NWCC call. CCEDA is also seeking to hire an executive director.

Morey Wolfson, representing CCEDA on the call, said the creation of the Authority was in concert with the new bill implementing the Colorado Renewable Energy Zones initiative. Zones containing significant renewable energy resources will be established in the state and CCEDA will focus on getting this energy developed and to markets both in Colorado and outside the state. In addition, the Colorado General Assembly enacted separate legislation creating a task force to map renewable resource areas in Colorado. A report identifying these renewable resource areas is due to the Colorado General Assembly and the Governor by the end of 2007. Mr. Wolfson said this will provide a “cookbook” for determining where high-quality wind and solar resources are located and what transmission is needed to access those areas. Mr. Wolfson notes one of CCEDA’s first tasks will be to actively move forward on getting more Colorado wind projects connected to the grid.

Hurdles and Opportunities

Following the presentations, discussion centered on some of the biggest hurdles or challenges that the authorities had (or have) in getting their organizations up and running. Mr. Waddington (WY) said getting adequate funding was a big hurdle because a large amount of money is needed to move a project along. Mr. Wolfson (CO) also cited funding as a hurdle, noting that Colorado has a constitutional constraint that caps growth in government spending at the level of inflation, and that could hinder the CCEDA’s efforts going forward. However, Mr. Wolfson said there is tremendous interest in developing transmission and interconnecting renewable energy projects in Colorado.

Mr. Waddington said that figuring out where the loads and sinks and hence, the opportunities for a state are important to map at the outset. Ms. Prukop (NM) spoke about the challenges involved in convening a new board and getting them informed and educated about the complicated issues surrounding transmission.

All of the representatives saw their authorities as fulfilling the role of catalyst or organizer in getting transmission projects happening in their respective regions. Rep. Holmes (KS) noted that KETA was unique in that KETA could own transmission infrastructure in perpetuity and is not required to sell the transmission facilities, as is required of many of the other state transmission infrastructure authorities. This made utilities in the state view KETA as a serious competitor and prompted them to step up their own transmission investment.

There was some discussion about the disconnect in timing between renewable development and transmission. Many renewable energy projects can be constructed

quite quickly but transmission projects may take several years. Mr. Waddington said WIA has focused on nearer-term transmission projects to gain some immediate success before focusing on the mega-transmission projects that will take more time to develop. He hopes the Wyoming-Colorado Intertie will be an early “win.” Ms. Prukop also endorsed this two-track approach of first pursuing near-term transmission projects before turning to larger, multi-state transmission projects. Craig O’Hare, also of the New Mexico Department of Energy, Minerals, and Natural Resources, said that some solar developers are choosing sites that have a poorer solar resource but are either close to transmission, or transmission is not congested.

Another issue that was discussed was how to build transmission ahead of generation. Rep. Holmes noted the KETA legislation allowed for this, with Kansas having the ability to socialize costs to ratepayers in the interim if a line that KETA has sponsored is not considered cost-effective in the near term but will be over a longer period. Mr. Waddington said the Western Governors Association (WGA) is examining the concept of creating Western Renewable Energy Zones to facilitate transmission planning. Who pays for the transmission is another important issue. Mr. Waddington noted that the WGA is interested in using High Plains Express project as a test case to determine how the transmission costs will be allocated among multiple states and multiple entities. That said, Mr. Waddington also said that transmission cost allocation will be project specific and will be different for each project.

Finally, some of the representatives noted the issue of climate change and how carbon constraints could be a significant driver in the near future. Mr. Waddington said he had observed that wind generators were looking for shorter-term contracts, perhaps with the desire of keeping options open to gain pricing leverage if carbon legislation is enacted.

**For more
Information**

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Next Update: December 18, 2007

The next NWCC Transmission Update will be held on December 18, 2007 at 1 pm Eastern Time.

Please email Kevin Porter (porter@exeterassociates.com) with any suggestions for topics or how to improve the call.