

Transmission Update

February / March 2006

Summary

- ✓ Welcome to the Seventh NWCC Transmission Update! Kevin Porter of Exeter Associates, Inc., led the February 24, 2006 Transmission Update Conference Call, which featured expert speakers providing their insights on issues affecting wind energy, with an opportunity for discussion and questions. 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 focuses on the wind power and transmission recommendations that were formulated as part of the Clean and Diversified Energy Advisory Committee (CDEAC) process and feeding into the Western Governors Association's Clean and Diversified Energy Initiative. Specific topics covered in this brief include:
 - Overview of the CDEAC process
 - CDEAC Wind Task Force Draft Report
 - CDEAC Transmission Task Force Draft Report
 - Discussion on CDEAC Recommendation Implementation
- ✓ Rich Halvey from the Western Governors Association (WGA) led off the call with background information on the CDEAC initiative and its aims.
- ✓ Ron Lehr with the American Wind Energy Association (AWEA) provided details on the recommendations made by the CDEAC Wind Task Force. Tom Carr from Western Interstate Energy Board (WIEB), the energy arm of WGA, shared the CDEAC Transmission Task Force Recommendations. Various members of the Wind and Transmission Task Forces also shared insights on this call.
- ✓ The conference call closed with call participants discussing how implementation of the wind and transmission recommendations might work more efficiently.
- ✓ The next Transmission Update call will be Monday, April 24, 2006, at 1 pm Eastern. Please mark your calendars!

Overview of the CDEAC Process

CDEAC Formation In June 2004, the WGA adopted a resolution to investigate the feasibility of:

- Developing 30,000 MW of clean and diverse energy by 2015
- Increasing energy efficiency 20 percent by 2020
- Providing adequate transmission to meet the region's needs through 2030

To this end, the WGA formed the Clean and Diversified Energy Advisory Committee (CDEAC) in 2005. The CDEAC is a diverse group representing business, academic, governmental, and environmental organizations, among others.

Energy resources considered during this process include advanced coal, advanced natural gas, biomass, energy efficiency, geothermal, solar, transmission, and wind. Nuclear energy was not included in the governors' resolution, as the governors have divergent views on nuclear power. A task force was formed for each of the selected technologies, as well as a quantitative group to help ensure data and methodological consistency across the task forces. Three white papers were also developed on combined heat and power (CHP), wave power, and hydropower.

The governors thought that 30 GW may be ambitious, but judging from the task force reports, there is considerable potential beyond 30 GW. The wind report suggests a potential of 9 to 54 GW, depending on transmission. There could be as much as 8 GW of solar; 10-15 GW of biomass and 5.6 to 13 GW of geothermal.

CDEAC Status

Most of the task force reports are complete and posted on the CDEAC website, <http://www.westgov.org/wga/initiatives/cdeac/index.htm>. The wind and transmission reports are still being updated and will be posted online soon. The natural gas report is not on target for completion at the same time as the other reports; natural gas recommendations therefore will not be included as part of CDEAC's recommendations to the Western Governors.

CDEAC met for the final time on March 7, 2006, in Denver and formed a drafting committee to write up recommendations to forward to the governors. Ultimately, the governors will consider CDEAC's recommendations at the WGA's annual meeting on June 11-13, 2006, in Sedona, Arizona. At that meeting, it is anticipated that the governors will enact a resolution describing how to implement the CDEAC recommendations. The governors may collectively endorse some recommendations, while some individual governors may act to develop some CDEAC recommendations into programs or policies for their state.

The next two sections of this update will focus on the recommendations in the draft wind and transmission task forces, recognizing that CDEAC will not forward all of the recommendations to the governors. We thank the Western Interstate Energy Board for providing near-final drafts of the wind and transmission task force reports

For More Information

Rich Halvey, Western Governors Association, rhalvey@westgov.org

Tom Carr, Western Interstate Energy Board, tcarr@westgov.org

Western Governors Association website, <http://www.westgov.org/>

CDEAC website, <http://www.westgov.org/wga/initiatives/cdeac/index.htm>

CDEAC Wind Task Force Draft Report

Background

The CDEAC Wind Task Force is comprised of about 25 people from a variety of sectors including utilities, state energy offices, wind industry, federal government, and academia—see <http://www.westgov.org/wga/initiatives/cdeac/wind-members.htm> for a complete listing. The task force met twice in 2005.

The draft wind task force report is over 120 pages in length and contains information on wind resources in the West; a summary of studies of integrating wind into the utility grid; siting of wind projects; distributed wind; and transmission issues of importance to wind, among other things. Given the length of the task force report, this update will only highlight the recommendations. Readers are referred to the wind task force report for documentation supporting the recommendations.

Wind Recommendations

Recommendations made by the Wind Task Force include:

Federal Incentives

- Long-term extension of the federal Production Tax Credit (PTC)

Efficient Use of the Existing Transmission System

- Conditional firm, redispatch tariff reform, including review and assessment of Available Transfer Capability (ATC)
- Reform imbalance penalties and link to near-term scheduling and wind forecasting

Transmission Expansion

- Urge Public Utility Commissions (PUCs) to recognize that transmission projects needed to support state RPS requirements are a public benefit and should be granted rolled-in cost recovery
- Coordinate federal, state, local, and tribal siting for transmission and wind projects
- Develop transmission corridors on federal lands
- Encourage state commissions, state legislatures, and FERC to expand transmission services and facilities, building on Texas and Minnesota legislation and the Tehachapi trunk line model
- Improve regional transmission planning to better identify beneficiaries of

transmission expansion, recognizing that some benefits of transmission expansion are widely distributed

Integration Costs & Reliability

- Support studies on integration costs for higher levels of wind penetrations and allow utilities to recover the costs of such studies in rates
- Support studies for federal Power Marketing Administrations to consider integrating greater amounts of wind
- Support studies and R&D on storage options that complement the variability of wind energy

Regulatory and Procurement Policies

- Require that state utility commissions implement incentives that make wind resource acquisitions a profitable endeavor through performance based regulatory systems
- Encourage changes to federal and state financing tools or tax laws that would allow municipal and cooperative utilities to provide financial incentives for increased use of renewable energy
- Support acquisitions of wind power by local governments, educational institutions and tribes through green marketing programs or green power purchases
- Support small-scale wind generation through net metering and other tools

Other Recommendations

- Link regional transmission planning to the plans of load serving entities (LSE) and generators
- Coordinate regional reviews of multi-state transmission projects
- Extend a rebuttable presumption of prudence for projects deemed economically efficient for a region
- Support future research on turbine designs, wind farm layouts, and wildlife impacts, to reduce the risk of wind projects to birds and bats
- Establish state inter-agency working groups to coordinate and ensure consistent state energy policy
- Support reforms in utility regulation and planning that acknowledge natural gas price volatility, provide rate of return incentives for renewable energy purchases, and provide policies that include renewable energy in cap-and-trade and other environmental programs

Beyond the recommendations, the Wind Report also contains information on wind scenarios and wind cost curves. A sense is given of the wind resources available in each state and at what level of transmission they will be available in various markets.

**For more
Information**

Ron Lehr, AWEA, rlehr@msn.com

CDEAC Wind Task Force website,
<http://www.westgov.org/wga/initiatives/cdeac/wind.htm>

CDEAC Transmission Task Force Draft Report

Background

Approximately 35 people took part in the CDEAC Transmission Task Force, with the list of participants available at <http://www.westgov.org/wga/initiatives/cdeac/transmission-members.htm>. This group also had two in-person meetings in 2005.

**Transmission
Recommendations**

The Transmission Task Force report is still under revision. In its current form, there are about 30 recommendations: 8 for FERC, 8 for governors and legislatures, and 5 for public utilities. A few of these recommendations were highlighted on the call, including:

- Establish tiered standards for prudence of transmission planning, e.g. a low standard of prudence for screening studies and planning, medium prudence for reducing line risk, and high prudence for investment in construction
- Urge Congress to fund transmission corridor planning
- Collaborate with state infrastructure authorities

The draft transmission task force report is also a lengthy document and contains information on transmission tariffs, transmission planning in the West, generator interconnection, transmission cost allocation, and transmission siting, among other things. As with the draft wind task force report, this update will only present the recommendation of the transmission task force. Readers are referred to the transmission task force report for documentation supporting the recommendations.

The full list of the recommendations in the draft transmission task force report appears below and is grouped by the federal, regional, state and industry parties that the task force believes are best positioned to implement the recommendations.

Federal Energy Regulatory Commission

- Promote conditional-firm, priority non-firm and other transmission service products
- Encourage transparent review and assessment of available transfer capability (ATC) levels
- Eliminate transmission rate pancaking in a manner that addresses concerns about financial impacts during a transition, recovery of costs, and cost shifting
- Promote control area consolidation on a case-by-case basis where an analysis finds that benefits exceed the costs, and that there are no significant adverse impacts on reliability

- Encourage congestion management systems that allow access to least-cost generation within reliability security constraints
- Encourage common Open-Access, Same-time Information Systems (OASIS) sites to facilitate transmission transactions
- Clarify code-of-conduct rules to allow transmission planners and resource planners of a vertically integrated utility to participate in joint discussions at transparent regional planning meetings and state-approved resource planning and acquisition processes
- Convene a technical conference to develop needed reforms of interconnection and transmission queuing processes

Western Governors (in collaboration with Western State Legislatures)

- Ensure resources to enable state participation in regional transmission planning
- Encourage the electric power industry to prioritize pro-active and transparent transmission planning on an interconnection-wide basis
- Review, and if necessary, amend state laws to require state PUCs and public power boards to consider regional transmission needs
- Support a regional planning capability that can allow rigorous evaluation of large long-term investments in transmission
- Bring together stakeholders and forge solutions to regional transmission needs, cost allocation, and siting
- Promote an open season for new transmission projects
- Urge FERC and state PUCs to form joint panels on transmission cost recovery
- Consider adopting funding mechanisms to support research, development, and demonstration of advanced technologies
- Urge transmission operators to develop workable seams agreements between ISO and non-ISO systems
- Ensure resources and political commitment for implementation of the WGA's Transmission Permitting Protocol and the Midwest Electric Transmission Protocol for new interstate transmission proposals
- Consider forming an interstate compact for the potential creation of a regional siting agency, as authorized by EPACT

State Public Utility Commissions

- Establish tiered standards of review for prudence and application of transmission incentives for transmission expansion costs featuring a lower standard for screening studies and planning, a moderate standard for permitting and the acquisition of rights-of-way, and a higher standard for construction costs
- Make public interest findings associated with cost-effective transmission projects for states with RPS policies
- Expand transmission in advance of generation to enable the modular development of location-constrained, clean and diversified resource areas to meet cost-effective RPS, IRP and state goals

- Coordinate the multi-state review of transmission projects by developing common principles for cost allocation and cost recovery and common procedures for transmission applications
- Promote cost-effective transmission expansion by accommodating both non-dispatchable and dispatchable resources

Western Governors and Federal Agencies

- Commit state agency resources to participate in the federal transmission corridor effort and to identify contiguous corridors on adjacent state lands
- Urge Congress to fund federal land management agency corridor planning efforts
- Foster designation of corridors on lands not owned by the federal government or the states to ensure continuity in corridors

Electric Power Industry

- Synchronize regional transmission planning efforts to load-serving entity resource planning efforts and generator development plans
- Support and collaborate with state infrastructure authorities
- Ensure institutional homes for regional transmission planning

The task force also investigated three different modeling scenarios that might influence future transmission needs:

- High renewables model (including wind, solar, geothermal, & biomass)
- High fossil case (with more coal replacing natural gas)
- High efficiency case

The Seams Steering Group – Western Interconnect (SSG-WI) modeled the three scenarios, and the task force met to identify the transmission needed for each scenario. The high renewables case required less new transmission than the high fossil case, as the model assumed economic dispatch and no pancaked transmission rates, and that wind does not operate much at peak demand. Refinements are being made to the high coal and high renewables scenarios, and the final scenarios and transmission task force report should be available by the end of March 2005.

For more Information

Tom Carr, Western Interstate Energy Board, tcarr@westgov.org

CDEAC Transmission Task Force website

<http://www.westgov.org/wga/initiatives/cdeac/transmission.htm>

SSG-WI website, <http://www.ssg-wi.com/>

Discussion on Implementing the CDEAC Recommendations

Summary

Some callers asked what happens once the Governors meet in June 2006, and what are the logical next steps. Mr. Lehr remarked that several of the recommendations are not entirely new and have been implemented in some states and can be transported to other states. He said two questions should guide post-CDEAC plans. First, where are the near-term opportunities? Mr. Lehr noted that labor and monetary resources are thin and need to be allocated carefully.

Mr. Lehr's second question concerns timing. His view is to spread out the CDEAC recommendations over a period of time, and focus first on the "early and easy victories" before moving on to what could be more difficult and protracted measures. He nominated moving ahead with conditional firm transmission service at Bonneville Power Administration and PacifiCorp as an early implementation measure.

Mr. Halvey said there is some discussion about keeping the CDEAC task forces as a technical and advocacy resource for implementing the CDEAC recommendations. He noted that the solar task force already is heading in this direction. Mr. Halvey also suggested other post-CDEAC outcomes such as governors grouping together on common strategic issues such as transmission or to interact with FERC. In addition, governors may take the information from CDEAC and work to implement the CDEAC recommendations in their own state.

The CDEAC process is yet another example of market participants and states in the West working together on future scenarios for resource acquisition and transmission planning. The recommendations in the CDEAC task force reports make CDEAC different from what stakeholders in the West did previously. The recommendations are nearly a call to action and suggest who is best positioned to implement the recommendations. As callers suggested, labor and financial resources are thin throughout the West, and it will be interesting to see who first picks up on the recommendations and puts them into action. Another challenge for the West is whether the regional planning that has largely been done on a volunteer basis can be successfully institutionalized and supported with staff and resources. WECC has agreed to take over the SSG-WI work of modeling regional transmission options and has allocated funding and organized a board level committee to manage this work. It remains to be seen whether this effort will sustain SSG-WI's record of openness to all stakeholders.

Proposed NWCC Workshop

The NWCC is planning a Western Transmission Workshop, tentatively scheduled for July 18th and 19th, at a location to be determined, and the focus of the workshop will be on how to implement the CDEAC recommendations. Those interested in helping to plan the workshop are encouraged to participate in the workshop planning conference calls. Contact Katie Kalinowski (kkalinowski@resolv.org) for further information.

Next Update: April 24, 2006

The next NWCC Transmission Update will be held on April 24, 2006, at 1 pm Eastern.

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