



LR 83 White Paper Topic 1

“The roles the state’s public power utilities and private developers play in the generation of wind energy for consumption both in Nebraska and for export.”

Role of Public Power Today

Nebraska is the only totally public power state in America. Nebraska’s public power utilities are not-for-profit. They provide a low-cost, reliable, and essential service to the citizens of the state. Nebraska’s utilities put customers – not stockholders – at the forefront of decisions.

Nebraska’s electric utilities are controlled by publicly elected public power boards, rural electric cooperative boards, and elected or appointed city council representatives. Public power board directors and council members understand that their most important responsibility is to serve the needs of their constituents. These governing representatives set policies, rates, budgets, and service standards. Regularly scheduled meetings of utility boards and councils are open to the public. Public participation and comments are welcomed.

There are 167 independent, publicly owned electric utilities in Nebraska. Less than one-third of these generate all or some portion of the electricity needed by their consumers and also distribute that electricity at retail to those consumers. Others, like Nebraska Public Power District (NPPD), have substantial generation resources that serve not only their own retail customers but also serve many other utilities at wholesale. Approximately 100 electric utilities in the state do not own generation facilities and only distribute electricity at retail to their consumers. They purchase the electricity needed by their consumers at wholesale from other utilities under contracts that may prevent them from buying power from other utilities or generating a significant amount of their own electricity.

The role of public power is to provide low cost, reliable electricity for the ratepayers of Nebraska. Today, Nebraska’s average electric rates are the 5th lowest among all 50 states and millions of dollars are invested annually to maintain and upgrade utility infrastructure. The low cost of electricity is a benefit to the citizens of the state and a significant contributor to economic development.

There are fundamental reasons electric rates are lower in Nebraska. Locally elected boards and councils consider the needs and costs to consumers when approving purchases and electric rates. In addition, the Nebraska Power Review Board (PRB) has historically been required by Neb. Rev. Stat. §70-1014 to base its approval of new generation facilities and transmission lines on necessity, cost, and non-duplication of facilities.

This policy was modified in 2003 to allow the Power Review Board to approve applications filed by the state's publicly-owned utilities to construct small (10 megawatts and smaller) renewable generation facilities without having to find that the project is the lowest cost alternative and does not unnecessarily duplicate existing facilities. A much more significant change in this policy was enacted during the 2009 legislative session in LB 561.

Public power utilities build generation facilities and transmission lines primarily to serve their customers' maximum needs. The state's utilities generally have not built generation facilities or transmission lines in order to export power, although there have been projects involving contracts with participating utilities in other states which have resulted in sales of electricity on a regular basis to out-of-state utilities. In addition, surplus electricity which is not needed for immediate in-state use is regularly sold to out-of-state utilities, which provides financial benefit to Nebraska ratepayers. Although transmission lines are interconnected with other states for reliability purposes, they are not sized for the purpose of exporting large amounts of power out of the state.

Nebraska's power generation portfolio includes a diverse mix of resources including coal, nuclear, natural gas, diesel/oil, wind, hydro, and methane. This mix offers public power utilities the flexibility to draw upon a variety of resources, including the non-emitting sources such as nuclear, hydro, and wind. Currently, 152 megawatts of wind-powered generation exists in the state. Several projects, such as the ones near Ainsworth and Kimball are owned by public power utilities. The wind farm near Bloomfield is owned by private developers, but the generation output of the facility is purchased by NPPD under a 20-year Power Purchase Agreement.

NPPD and the Omaha Public Power District (OPPD) have implemented goals to produce 10% of their energy needs from new renewable resources by 2020. This would amount to approximately 400 megawatts of primarily wind energy for OPPD and approximately 530 megawatts of primarily wind energy for NPPD. It is of utmost importance the utilities' power generation portfolios continue to include a diversity of resources. New generation resources will need to be added in a reasonable and prudent manner.

The development of wind energy provides a hedge against the risk of rising fuel costs and/or carbon tax or caps. Wind energy requires no fuel or water and has no emissions or waste. In addition, wind generation provides income to landowners (economic development in rural Nebraska) and to investors.

Incentives to build renewable resources are significantly greater in areas surrounding Nebraska, and are reflected in larger wind developments constructed in other states. Public power utilities do not qualify for Federal Production Tax Credits (PTCs), or recently expanded tax credits or grants, and Nebraska has not implemented state tax credits for renewable resources or corresponding incentives, for public power, such as are available in neighboring states like Iowa. Most states that are leading the nation in wind-powered generation do so on a subsidized basis. Iowa utilities, for example, have the benefit of nearly 3.5 cents per kilowatt-hour credit, due to federal and state tax incentives and sales tax exemptions. This equates to a 45 percent subsidy of wind development not available to Nebraska utilities.

For many years, Congress funded the Renewable Energy Production Incentive (REPI) for not-for-profit utilities. Although this program initially was funded at a level to be equivalent with Production Tax Credits, the appropriation remained the same, at \$5 million annually, resulting in paying less than 20% of PTCs. The Department of Energy has zeroed out the REPI program as part of President Obama's 2010 fiscal budget.

More recently, Congress has approved funding of Clean Renewable Energy Bonds (CREBs). The concept of CREBs is that a public entity could use "zero" interest bonds to finance their project. The challenges for public power are:

1. The application process is burdensome with no guarantee of funding;
2. The term of the bonds are significantly less than the life of the project resulting in higher annual payments;
3. The savings resulting in the use of CREBs (effective interest rate of 1.5% vs. 5% without CREBs) results in an incentive which is about half of the incentives available to private developers;
4. Only \$800 million has been allocated for public power, severely limiting the number of projects funded; and
5. The recent credit crisis has resulted in a limited number of investors interested in purchasing CREBs, whereas PTCs have been modified to allow grants which can be utilized by any private investor.

Other barriers to wind development in the state include the lack of transmission lines in areas with the best wind sites, rate impacts, and potential environmental issues.

Nebraska's public power utilities are chartered to generate and deliver power to their customers reliably and at the lowest cost. While the state's utilities import and export power as needs and opportunities arise, it is outside their current business models to build merchant venture generation facilities or transmission lines for the sole purpose to export power to remote, out-of-state markets. Because Nebraska has significant potential for the development of wind powered generation, it could become an exporter of wind energy, provided the merchant power sales receipts provide adequate dollars to pay for wind generation plant construction and the required transmission, and help to minimize electric rates for Nebraska customers.

Role of FERC, SPP and RTOs

There is a growing debate at the regional and national levels on the need to enact federal legislation to require a national renewable electricity standard. At the same time there is a tremendous backlog of proposed wind generation interconnection requests that have been submitted to the Regional Transmission Organizations (RTOs), particularly the Southwest Power Pool (SPP) and the Midwest Independent System Operator (MISO), as well as utilities that have their own Open Access Transmission Tariffs (OATTs).

The great majority of these interconnection requests are waiting for transmission planning studies to be completed to determine what transmission expansion is required for interconnection. Most of the wind generation interconnection requests are by independent developers that do not have a power purchase contract with any customer, and the developers are normally not willing to pay for any significant transmission expansion that may be required. There is very little cost to the developers to submit interconnection requests, which has resulted in many speculative requests. The transmission system in Nebraska and the surrounding regions cannot currently accommodate large additions of new wind resources without significant expansion.

The Federal Energy Regulatory Commission (FERC) has jurisdictional authority over the RTOs and certain other utilities with OATTs. FERC has set forth the generator interconnection procedures and agreements, as well as requirements for coordinated transmission expansion planning between regions. FERC has required that wind interconnection requests be studied in the sequential order in which they were submitted, which has resulted in the significant backlog of requests. FERC has further prescribed how the transmission expansion costs are to be paid for due to new generation additions. (There is additional discussion of this in the "NPA White Paper Topic 4".) Proposed national legislation calls for providing FERC further authority to grant eminent domain for construction of transmission facilities and the authority to determine how to allocate costs for the transmission expansion to users of the transmission system.

NPPD, OPPD, and Lincoln Electric System (LES) joined the Southwest Power Pool (SPP) on April 1, 2009. As such, the transmission systems of these Nebraska utilities are now under the operational control of the SPP transmission tariff. SPP will conduct transmission planning studies for wind generation interconnection requests for the Nebraska utilities' transmission systems. Other utilities that own transmission facilities in Nebraska, such as Western Area Power Administration, Tri-State G& T, and certain municipalities have not joined SPP.

SPP has conducted a high level transmission study to determine what transmission expansion is required for large scale wind development. The study concluded that an entirely new transmission system, or overlay, operated at 765 kilovolts (kV) is required to interconnect the tens of thousands of megawatts of wind potential in SPP. The cost for this transmission expansion is estimated at approximately \$8 billion. This estimate does not include costs for transmission expansion in Nebraska, as the study was being completed at the time Nebraska was joining SPP. The study did make some very preliminary assumptions about the transmission expansion required in Nebraska.

SPP has also been involved in another study with other regions that studied wind interconnection for most of the Eastern (United States) Interconnection. This study also concluded that an extensive network of new 765 kV transmission facilities is needed to interconnect the vast potential of wind resources throughout the central plains states for delivery to load centers in the eastern U.S. The estimated cost of this transmission expansion is \$80 billion. This figure does not include lower voltage transmission and distribution lines and substations which will also be required to integrate wind-powered generation into the electric grid.

The most contentious issue to resolve may be how to allocate the cost for the transmission expansion. Many of the eastern states are now raising concerns about paying for the cost of transmission to deliver wind energy from the Midwest to the east coast. On May 4, 2009, governors of ten Northeast and Mid-Atlantic States sent a letter (see attachment) to Congress stating that east coast ratepayers could be negatively impacted by paying for Midwest renewables. They argue that they can develop renewable resources in their own states and regions.

What is required to build 7,800 megawatts of wind for use in Nebraska or for export?

As a starting point for the wind export discussion, 7,800 megawatts was identified in LR 83. This amount of wind-powered generation is nearly equal to all other existing generation resources combined in Nebraska. Cost estimates for building wind generation facilities are approximately \$2.1 million per megawatt of capacity, for a total of approximately \$16.38 billion for 7,800 megawatts. Although no detailed transmission study has been done to determine what transmission expansion is required in Nebraska, it is reasonable to use a preliminary estimate of \$500,000 per megawatt. This would equate to \$3.9 billion for the cost of transmission expansion in Nebraska. This does not include the costs of lower-voltage transmission and related infrastructure mentioned above to interconnect the wind generation resources to the 765 kV network.

For wind export projects to go forward, one of the most critical questions that will need to be answered is: "Who pays for this multi-billion dollar price-tag?" Another question to be answered is: "How will the benefits from these projects be shared and by whom--private wind developers, public power, or the citizens of the state?"

The total debt of the state's public power utilities today is approximately \$5 billion. Due to the significant dollars required, public power will likely not be able to raise the capital needed to build these projects, as it could more than quadruple the Nebraska utilities' existing debt. Under current regulatory structures, public power utilities have long-term contracts with customers allowing for favorable financing terms. That is not the case for venture power plant construction intended for export to remote markets. In addition, public power does not receive federal or state financial incentives to make it feasible to engage in the wind for export business.

Before entering the wind export business, essential information will be required. First, is there a process whereby public power might receive financial incentives for merchant wind power plant investments equivalent to investor owned utilities? How much transmission will be required in Nebraska and nationally, and who will pay for it? Where is the market for wind-powered generation? Is it an exclusive market or will there be competition for the market? What is the long-term future of the market?

How Can Wind for Export be Accomplished?

The export of wind-powered generation will require: massive financial investment, significant time to site and build facilities and transmission infrastructure, changes to state statutes, and the development of a comprehensive plan. A comprehensive plan will be paramount to successful wind-powered generation export. The plan must determine:

- The market outside of Nebraska for wind energy and the long-term viability of that market;
- Best wind site areas;
- Process for siting transmission lines;
- Ownership of the transmission lines;
- Role of public power;
- Function of the Power Review Board;
- Costs – (who pays and who benefits);
- Rate impacts on Nebraskans;
- Eminent domain authority of public power to condemn private property for profit-serving facilities;
- Involvement of the Federal Energy Regulatory Commission, North American Electric Reliability Corporation, Southwest Power Pool, other Regional Transmission Organizations;
- Impact of county and city ordinances; and
- Responsibility of parties to remove retired turbines.

There are a variety of models that could be considered. For the magnitude of wind development contemplated by LR 83, several of these models, or variations thereof, are likely to be utilized. The potential models include:

- All public power;
- All private development and/or ownership;
- New State Entity; or
- Partnerships or combinations of models.

The complex issues of each model must be analyzed in detail to better understand the risks, obstacles, and benefits.

Conclusion

The electric industry in Nebraska commends the Natural Resources Committee for moving ahead with LR 83 and a comprehensive study of wind generation potential in Nebraska. In the future, wind energy for export may prove to be beneficial to the state. Prior to moving forward with wind for export, comprehensive policies need to be developed and the role of Nebraska's public power utilities will need to be determined. The Nebraska Power Association looks forward to the opportunity to work with the Legislature, the Governor, and the State Energy Office to move Nebraska forward in capitalizing on the state's wind resources. However, we advise caution and prudence in doing so.

Leaders of Nebraska's public power industry formed the Nebraska Power Association in 1980 to address industry-wide concerns and interests. This voluntary association represents all segments of the public power industry in Nebraska: municipalities, public power districts, public power and irrigation districts, rural public power districts and rural electric cooperatives engaged in generation, transmission or distribution of electric energy in the state.



Massachusetts



Rhode Island



Delaware



Maine



Maryland



New Hampshire



New Jersey



New York



Vermont



Virginia

May 4, 2009

The Honorable Harry Reid
Majority Leader
U.S. Senate
Washington, DC 20510

The Honorable Mitch McConnell
Minority Leader
U.S. Senate
Washington, DC 20510

The Honorable Nancy Pelosi
Speaker
U.S. House of Representatives
Washington, DC 20515

The Honorable John Boehner
Minority Leader
U.S. House of Representatives
Washington, DC 20515

Dear Senator Reid, Senator McConnell, Speaker Pelosi, Representative Boehner,

As Governors from Northeast and Mid-Atlantic states, we applaud your support for renewable energy and its role in enhancing clean energy job creation, increasing our energy security and curbing greenhouse gas emissions.

We write to encourage you to support strong new federal policies to promote wind resources. In addition to recognizing the potential for wind resources in the Midwest, we believe that the wind resources of the Eastern seaboard states – both onshore and offshore wind – represent one of our nation’s most promising yet underdeveloped source of renewable energy. At the same time, we must express our concern about the significant risks posed by recent proposals regarding transmission that we believe could jeopardize our states’ efforts to develop wind resources and inject federal jurisdiction into an area traditionally handled by states and regions.

Significant onshore or offshore wind projects have been proposed or planned for almost all of the Northeast and Mid-Atlantic states. Several of our states already have significant land-based wind projects installed or well underway and have established aggressive wind development goals. Moreover, the waters adjacent to the East Coast hold potential for developing some of the most robust wind energy resources in the world – enough wind potential to meet total U.S. electricity demand, as Interior Secretary Ken Salazar has recently pointed out. Congress should put its full support behind the development of these resources.

Current legislative proposals focused on transmission, in contrast, would designate national corridors for transmission of electricity from the Midwest to the East Coast, with the costs for that transmission allocated to all customers. While we support the development of wind resources for the United States wherever they exist, this ratepayer-funded revenue guarantee for land-based wind and other generation resources in the Great Plains would have significant, negative consequences for our region: it would hinder our efforts to meet regional renewable energy goals with regional resources and would establish financial conditions in our electricity markets that would impede development of the vast wind resources onshore and just off our shores for decades to come. In addition, the legislative proposals for selective federal subsidy for certain land-based wind resources paired with the practice of dispatching the lowest cost available generation resource could result in surplus transmission capacity or artificially inflated energy prices for Midwest renewables being paid by east coast ratepayers. Such an outcome would have negative consequences for consumers, regional energy sufficiency and the environment. Moreover, it is well accepted that local generation is more responsive and effective in solving reliability issues than long distance energy inputs.

Land-based wind energy projects, which have already proven themselves economical in the Northeast, must have the chance to move forward. And while offshore wind installation costs currently exceed those of onshore installations, these resources are much closer to our load centers and research and development efforts focused on reducing costs and improving reliability promise to make offshore wind competitive with Midwest wind farms on a delivered cost of power basis. As regional onshore projects move forward and offshore wind moves into commercialization in the United States, they all must have the opportunity to compete on an even playing field with on-shore, yet remote, sources of power from the Midwest and not be disadvantaged by upfront transmission subsidies.

If transmission is to be addressed in energy legislation at all, we believe Congress should focus its attention on regional solutions. In our regions, this means continuing to pursue planned wind and other renewable resources within our competitive energy markets framework. For offshore wind, this means a new offshore wind transmission backbone to facilitate the interconnection of offshore renewable energy resources to major load centers along the East Coast. Development of this offshore network will require the attention of the Department of Energy, the Minerals Management Service (MMS) and the Federal Energy Regulatory Commission (FERC), as part of an Outer Continental Shelf energy resource development plan.

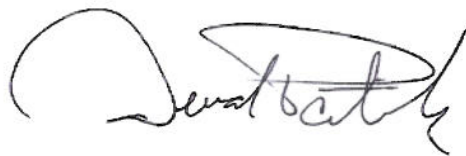
In our view, legislation to promote renewable energy resources on a fair, equitable, and efficient basis should, at a minimum:

- Create strong federal energy efficiency and renewable energy incentives that are simple, transparent and technology neutral – and capitalize on more than a decade of successful direct experience by many states in developing strong efficiency and renewable energy markets;
- Consider new market mechanisms such as regional procurements for renewable energy in the form of long-term power purchase agreements – again, allowing all renewable generation interests to compete on the basis of total cost of power delivered to load centers;

- Encourage that state and regional planners along the Atlantic coast develop a plan within and across regions to accommodate growing availability of onshore wind resources and to establish an offshore wind transmission regime, including new FERC policies tailored to the special circumstances of offshore wind and expedited siting review for offshore lines in federal waters and their interconnection to coastal load centers with appropriate state involvement.
- Encourage FERC and NERC to support and facilitate robust planning within regional transmission organizations that provides and promotes local renewable resources integration and preserves local oversight and review.
- Evaluate whether expanding the federal Investment Tax Credit would be a more effective, simpler, and technology neutral mechanism for promoting renewable energy development across the country than a focus on transmission, which tends to support remote onshore wind, but disadvantage nearby offshore wind.

Thank you for your attention to this critical issue.

Sincerely,



Governor Deval Patrick
Massachusetts



Governor Donald L. Carcieri
Rhode Island



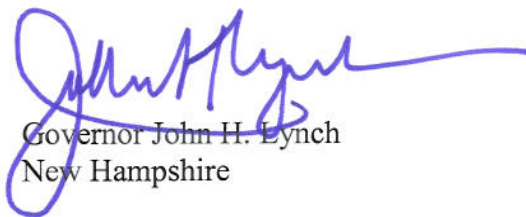
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Delaware



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Governor John H. Lynch
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