

Citizen Memorandum

TO: Legislative Electric Energy Task Force Members
FROM: Laura and John Reinhardt
DATE: July 9, 2004
SUBJECT: Interim 2004 Work Plan

I. OBJECTION TO SCOPE.

In 2003, the Minnesota Legislature outlined comprehensive instructions for work to be completed by its Legislative Electric Energy Task Force ("LEETF"). Minn. Stat. § 216C.051 sets forth explicit directives for task force study, to include the following critical issues:

Subd. 3(a). ...The task force **must** gather information on **at least** the following electric energy resources:

- (1) wind energy
 - (2) hydrogen (produced from renewable and fossil fuel resources)
 - (3) biomass
 - (4) decomposition gases produced by solid waste management facilities
 - (5) solid waste as a direct fuel or refuse-derived fuel
 - (6) clean coal technology
- (b) In evaluating these electric energy resources, the task force **must** consider **at least** the following:
- (1) how much electric generation capacity and demand for electric energy is necessary to maintain a strong economy and a high quality of life **in the state** over the next 15 to 20 years; how is this demand level affected by achievement of the maximum reasonably feasible and cost-effective **demand-side management and generation and distribution efficiencies**;
 - (2) what alternative forms of energy can provide a **stable supply of energy** ... and **at what cost**;
 - (4) what are implications for delivery systems for energy produced in areas of the state that do not now have high-volume transmission capability; are new transmission technologies being developed that can address some of the concerns with transmission; can a more dispersed electric generation system lessen the need for long-distance transmission;
 - (6) are there benefits to be had from ... developing an exportable technology and/or commodity;
 - (7) are there taxation or regulatory barriers to developing more sustainable and less problematic electric energy generation; what are they **specifically** and how can they be **specifically addressed**;
 - (9) in what specific ways can the state assist ... in developing and implementing **base load energy production** that both prevents or minimizes by its nature adverse environmental and human health effects and utilizes resources that are available or producible in the state.

- (c) The task force must also gather information on at least the following factors:
- (1) Minnesota's actual and projected electricity demand;
 - (2) electricity export potential;
 - (3) inventory of energy resources currently used to generate all electricity sold in Minnesota and an analysis of the social, economic, and environmental benefits and burdens associated with each energy resource;
 - (4) electricity demand savings from greater efficiency; and
 - (5) job growth and economic development potential.

It is not possible for our lawmakers, regulators, utilities and citizens to develop a rational state energy policy before these issues are fully addressed—which is obviously why the statute calls for such detailed analyses. Yet, despite the clear instructions codified in law, the LEETF's "Steering Committee" has somehow decided to ignore the Legislature's specific directives and narrow its focus to a single policy assessment:

The overarching question is what policy, if any, the state should have regarding the type of wind energy facility developer and/or development that should be encouraged in Minnesota.

June 29, 2004 meeting handout on task force scope. The LEETF and its Steering Committee have offered no rationale for their radical departure from statutory mandates, nor have they explained why they procrastinated until a few months before the 1.15.05 reporting deadline (more than a year after the Legislature issued its study directives) to begin work. As long-time citizen participants in Minnesota's unfolding energy policy debates, we have frequently pressed legislators and regulators to address the very issues outlined in this statute, and we profoundly object to this task force's seeming indifference to statutory requirements.

How did wind industry advocates remodel this undertaking to serve their own narrow business interest? We note that the LEETF *Steering Committee*—which is attempting to limit the scope of task force analysis solely to wind energy production—is heavily weighted with Wind Industry Advocates and does not include a single citizen or state regulatory participant.

At the Steering Committee's June 29, 2004 meeting, Mr. John Fuller, Senate Counsel, stated that this task force is not working in a policy setting role. That is correct. The state's policy to carefully study specific energy issues and impacts is set forth with crystal clarity in the law. Minnesota's policymakers cannot properly formulate future energy policy before considering the information it has requested, and this task force is obligated to undertake its legislative assignment. We hereby call upon the Legislative Electric Energy Task Force to refocus its efforts towards fulfilling the requirements set forth in Minn. Stat. § 216C.051.

II. WIND-ONLY WORK PLAN.

Without waiving our objection to the wind-development-only scope adopted by the LEETF Steering Committee, we will present our comments on the interim work plan, and add our wind energy questions to the Steering Committee's 6.29.04 list, as requested by Mr. Fuller.

A. Where's The Market?

The Steering Committee's 6.29.04 handout states that the "overarching question" is whether wind facility development should be encouraged in Minnesota. This question is followed by a list of 11 additional wind development questions. However, the real "overarching" question is absent from the committee's work plan and handout:

Where is the market for significant new wind energy development?

In 2003, the Minnesota Legislature adopted "renewable energy objectives" (Minn. Stat. § 216B.1691) whereby it asked Minnesota's electric utilities to make a "good faith effort" to obtain 10% of their electric energy from eligible renewable resources in the time period from 2005 to 2015. The Minnesota Public Utilities Commission has been working to set criteria and standards to implement the REO; utilities, industry advocates, state agencies, local government units, environmental/community organizations and others are active in this process. In the most recent round of comments (6.30.04), most of the entities subject to the REO reported that they expect to comply with the objectives. These comments reveal that the REO will not lead to significant new wind energy development in Minnesota.

So the wind industry must look to the wholesale bulk power market for potential purchasers of any significant additional wind generation development in our state. However, any state's policies relating to interstate wholesale power markets is advisory only, because our nation's wholesale power market is governed by federal—rather than state—regulators.

One commenter at the 6.29.04 task force meeting cautioned that we shouldn't get into a state/federal debate. How could we not? The work plan subject matter is potential to develop additional wind energy facilities in our state. Absent an in-state market for the output from such facilities, any *state* policy is fully constrained by interstate transmission provisions governed by *federal* laws.

B. Transmission Needed for Significant Wind Energy Development.

At its 6.24.04 hearing regarding southwest Minnesota transmission issues, LeRoy Koppendrayner, Chairman of the Minnesota Public Utilities Commission, gave voice to issues that can no longer be avoided by the wind industry:

At some point we've all got to start thinking about some of the facts of wind ... the intermittency, when it's going to be available, and when it is available what you need and what you can use, and that all adds into the cost of wind. So we have to get a handle on that and be realistic about it.

Commissioner Marshall Johnson recommended that wind industry advocates organize meetings with transmission owners and federal transmission authorities to bring these issues to the table for a wider discussion.

Since wind industry advocates report at every public hearing or meeting that they want to develop thousands of megawatts of wind energy in our state, the discussion has clearly moved beyond our state's electricity needs and our state's jurisdiction:

- Minnesota ratepayers cannot provide per kilowatt hour production payments for wind power that would be exported into wholesale national energy markets.
- Minnesota ratepayers cannot pay for transmission infrastructure for wind power that would be exported into the wholesale marketplace. In fact, our Legislature has specifically prohibited cost recovery "for that portion of power generated from [renewable] sources that the utility sells into the wholesale market." (Minn. Stat. § 216B.1645, subd. 2)
- The State must vigorously protect its citizens and ratepayers from interstate power markets (and transmission infrastructure) that may siphon off our native generating resources (built at ratepayer expense), as such a move would increase Minnesota's energy costs and jeopardize the reliability of our energy supplies and systems.
- The State must vigorously protect its citizens' private property rights in the regional frenzy for new interstate transmission rights-of-way designed to serve bulk power export markets.

The "scope" for any sizeable wind industry development has obviously migrated far outside our own state's borders (and laws). Because individual states do not and cannot regulate interstate power markets, the wind industry must turn to federal regulators with their expansion plans:

However, the question of who pays for transmission expansions continues to be a major barrier to large-scale exploitation of the abundant wind (and coal) resources in the Upper Midwest. Until the question of who pays (which includes issues of cost recovery and cost allocation) is answered, there can be no major expansion of transmission capacity to support wind energy development in the Upper Midwest.

Conclusions: Report to Congress on Analysis of Wind Resource Locations and Transmission Requirements in the Upper Midwest, U.S. Department of Energy, Office of Electric Transmission and Distribution, May 2004.

Building and operating a transmission line can have economic and reliability consequences that go beyond any single State. Therefore, questions about who should pay for those consequences must, of necessity, be considered in ways that fully protect customers and citizens of the affected states.

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“Merchant” transmission differs from traditional transmission in that its costs are not recovered through regulated rates, but through negotiated arrangements between the transmission line owner and the customer. This is important because the risks of merchant transmission are borne by the project’s investors, and not captive ratepayers.

Testimony of Pat Wood, III, Chairman, Federal Energy Regulatory Commission, before the Subcommittee on Energy and Air Quality of the Committee on Energy and Commerce, United States House of Representatives, May 19, 2004.

Wind Industry Advocates are asking for favors in the wrong venue—and they know it. It’s time for a legitimate analysis regarding wind energy development to replace feel-good platitudes and clichés (and ridiculous statements such as “wind energy has zero cost” that were offered at the task force’s 6.29.04 meeting). The interstate wholesale power market is competitive by design, and the wind industry cannot avoid the impacts of open access competition for interstate transmission service.

C. List of Questions Regarding Wind Development.

Mr. Fuller invited meeting participants to add any questions they believe appropriate to the work group’s list of questions (6.29.04 handout). We submit the following:

- Why did the LEETF adopt a wind-only-development focused work plan in defiance of statutory requirements?
- What is the goal behind the Task Force’s 2004 interim work plan?
- Why does the work plan exclude all renewables except for wind?
- What is the potential market for substantial new wind development in Minnesota? Does the industry seek to force additional wind energy purchase obligations on Minnesota’s electricity providers and ratepayers? If so, what level of wind energy penetration is desired in Minnesota?
- Since Xcel Energy accredits existing wind energy production on Buffalo Ridge at only 10% of nameplate capacity, how much money do wind curtailment payments (payments for wind energy that is not delivered) presently cost Minnesota ratepayers?
- Are ratepayers currently paying wind generators the difference between the potential production at 30% nameplate capacity and the 10% that is accredited by Xcel?

- Why is Xcel Energy inserting curtailment provisions into new wind contracts after the Public Utilities Commission authorized four new transmission lines specifically to provide wind outlet transmission capacity for new wind contracts in southwest Minnesota? Why would wind power producers still face curtailments following transmission construction that was authorized for wind's sole use?
- What are the estimated potential curtailment payments that ratepayers may be exposed to following installation of 825 megawatts of wind energy in southwest Minnesota for which Xcel's transmission lines were authorized?
- Is the public interest served by paying for undeliverable wind energy?
- Do Minnesota legislators or regulators claim legislative or regulatory authority to decide the amount of wind generated electricity to receive access to interstate transmission lines built in Minnesota?
- Does the State claim legislative or regulatory authority to dictate any terms of use for interstate transmission facilities under FERC's open access requirements?
- Will interstate export transmission lines siphon native power generation resources out of Minnesota to the detriment of the ratepayers who built them?
- If so, what steps can Minnesota's lawmakers/regulators take to protect our own affordable and reliable power generating resources?
- What are the cost and efficiency attributes/drawbacks of intermittent and variable wind-generated electricity as compared to other forms of renewable energy that are available on demand and during periods of peak demand?
- Can intermittent wind-generated electricity compete in an open access transmission environment with base load, dispatchable generating resources?
- Will Minnesota's wind generators be able to compete on the open market against higher capacity wind and coal regimes located in North Dakota?
- Will Minnesota utilities need to construct equal amounts of dispatchable electric generation resources to back up wind to fulfill their reliability obligations? If so, how much extra will it cost ratepayers to construct redundant facilities to cover for wind power that is not available?
- What costs and risks would be associated with purchasing generation from wholesale power markets rather than building and owning generating capacity sufficient to back up the intermittency problems associated with wind energy?
- What specific generation and transmission operational impacts are related to wind's variability and intermittency?
- What methods of analysis are used to measure such impacts? What are the ratepayer costs associated with such impacts?

- What grid stability issues may be created by injecting variable wind generation at a penetration level of 5%? 10%? 20%? How are these problems to be monitored and mitigated?
- Does intermittent and variable wind energy create bottlenecks in the transmission system?
- How can intermittent and variable wind generators reliably fulfill a new 100 megawatt capacity requirement?
- Why are small wind generators paid 3.3¢ per kilowatt hour in Minnesota without any competitive bidding requirements?
- Is wind generated electricity viable in Minnesota without direct federal (1.8¢/kilowatt hour) and state (1.5¢/kilowatt hour) subsidy payments?
- What is the true cost of remotely-located wind-generated electricity after interconnection, substation and transmission costs are factored in, and price props and subsidies removed?
- Can wind generators attract customers without purchase mandates placed on electricity providers?
- When will the wind industry be considered mature enough to take its place in a competitive market independent of federal and state production subsidies, guaranteed purchase prices, no-bid contracts, cost-free transmission expansion and tax preferences?
- What is the cost/benefit comparison (affordability, reliability, security, dispersal of intermittency over larger system) between (a) remotely located wind turbines that enjoy higher wind speeds but need large investments in transmission infrastructure and (b) wind turbines located at or near a customer's load in lower wind speed areas? At what cost/benefit threshold does (a) outweigh (b)? At what cost/benefit threshold does (b) outweigh (a)?
- How much land would be necessary to site 5,000-10,000 megawatts of nameplate capacity wind generation in southwest Minnesota?
- How much new transmission infrastructure would need to be constructed to serve 5,000 megawatts of new wind generation in southwest Minnesota? To serve 10,000 MW?
- How much will RTOs charge wind generators for transmission service (a) within our own state, and (b) outside our state in the wholesale energy market?
- How much electricity is exported from the state of Minnesota to other jurisdictions at the present time?
- Are Minnesota ratepayers paying for higher-priced electric resources while our lower-cost resources are sold into wholesale power markets? If so, what is the cost premium paid by Minnesota ratepayers as a result of this practice?

- What potential impacts to migratory birds and bats would result from concentrating significant amounts of wind generation in the southwest corner of Minnesota? What are the impacts at 1,000 megawatts of nameplate capacity? 5,000 megawatts? 10,000 megawatts? Who will monitor these impacts and what reporting requirements would be necessary? What mitigation techniques could lessen bird and bat kills?
- Can new base load coal facilities sited in North Dakota gain priority on interstate transmission facilities over intermittent wind generating facilities due to full-time availability to cover peak power demands?
- What are the pollution implications in Minnesota if proposed new coal-fired electric generators are developed in North Dakota (and elsewhere in the Upper Midwest) for export into regional power markets?
- What strategies can the State employ to protect its air and water quality from the pollution impacts related to neighboring states' fossil fuel generation for sale into distant power markets?

CONCLUSION

Minnesota has given the wind industry an incredibly generous hand up inside our state's borders through power purchase mandates, guaranteed purchase prices, no-bid contracts, curtailment payments, renewable energy objectives, tax preferences, production incentive payments, etc. The wind industry simply cannot look to Minnesota ratepayers and taxpayers to prop up its viability in competitive wholesale energy markets.

Minnesota legislators and regulators need to focus on protecting our state's ratepayers and citizens in the fast-changing energy marketplace. Our policymakers, utilities and citizens need the critical information sought by Minn. Stat. § 216C.051 to enable development of a rational and affordable energy policy that will serve the needs of our state. Thus, the Electric Energy Task Force must refocus its efforts and tend to the tasks outlined in its legislative mandate.

s/ _____
 Laura A. Reinhardt

s/ _____
 John C. Reinhardt

3552 26th Avenue South
 Minneapolis, MN 55406
 612.724.0740
 johnandlaurar@yahoo.com