

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

<b>Integrating Renewable Resources</b>	)	<b>Docket No.</b>	<b>AD09-4-000</b>
<b>Into the Wholesale Electric Grid</b>	)		
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**STATEMENT OF GORDON VAN WELIE  
TO SUPPORT ORAL TESTIMONY PRESENTED  
AT THE MARCH 2, 2009 TECHNICAL CONFERENCE REGARDING THE  
INTERCONNECTION OF RENEWABLE RESOURCES**

Good Morning. My name is Gordon van Welie. I am the CEO of ISO New England.  
Thank you for the opportunity to participate in this important discussion.

In my view there is an undeniable link between transparent regional system planning and the successful development of transmission system infrastructure. New England's own success in building reliability-based transmission bears this out. As I explain in these comments, the regional planning process can also be used as an effective means to identify transmission projects needed to interconnect renewable resources and prioritize those projects that make the most sense from an economic, and thus ultimately, a consumer standpoint.

After several decades without any major transmission system investment in the six-state region, needed transmission is actively being developed and nearly \$4 billion of infrastructure has been placed into service since 2002. As of today, four new major bulk transmission projects have been built in Connecticut, Maine, Massachusetts and Vermont. This includes an additional interconnection with Canada from Maine to the province of New Brunswick. In addition, several

other significant transmission projects within New England are in the late stages of development or are under construction.

I firmly believe that it is New England's transparent and open regional planning process that has demonstrated the need, and created the necessary widespread support, for these reliability transmission infrastructure projects to move forward. This process, with Order 890 enhancements to conduct long-term economic analysis, can also work to help identify the value to the region of developing transmission infrastructure for the integration of renewable energy projects. The New England Governors recently asked for ISO New England's assistance in performing this type of transmission planning for renewable resources over a long-term horizon. Specifically, the Governors are creating a regional blueprint for transmission development to access on-shore and off-shore renewable resources.

To the extent that the integration of wind projects can be achieved more easily over a broader geographic area, existing regional processes also serve as a basis for broader planning – including the potential for interconnection-wide planning. This planning can be achieved without losing the input of regional stakeholders needed to gain support and acceptance. In the Northeast region, there are a significant amount of wind resources available. For example, for the combined New York and New England region, there are over 100 projects representing over 12,000 MWs of new wind resources currently in the interconnection queues. This number does not include consideration of the massive off-shore wind potential of the region or other undeveloped wind rich areas of the northeastern United States or eastern Canada. Coordinated planning between ISO New England and the NYISO is currently underway to enhance the development of the wind potential in the combined region. The ISOs have already completed a

prefeasibility study to replace or reinforce the interconnection between Plattsburgh, NY and Burlington, VT. One of the benefits of such a project could be to provide another outlet for the nearly 1300MW of wind energy in service and under development in the northeastern corner of New York State.

Several of our states have established aggressive goals to develop on and off shore wind. In addition, merchant developers have made numerous proposals for biomass and hydro facilities as well as wind proposals in each of the six New England states. There are approximately 3400 megawatts of proposed renewable projects in the ISO New England interconnection queue. Elsewhere in the Northeast, New York also has an aggressive Renewable Portfolio Standard—to achieve a 30% penetration by the year 2015.

I brought along a map to show the location of New England's renewables and their proximity to new renewable developments in Eastern Canada.<sup>1</sup> As this map illustrates it seems fairly obvious that as the six-state New England region takes steps to develop its own internal and off-shore resources it would at the same time consider options for accessing the large renewable and non-carbon resource proposals in close proximity to New England north of our border in Quebec, New Brunswick and the Maritime and Atlantic provinces.

The New England Governors and Eastern Canadian Premiers have spent the past eighteen months establishing an inventory of the renewable and clean energy proposals in the eleven jurisdictions and reviewing conceptual, cost-effective transmission pathways to access these developments. An important part of this effort has been to design these pathways to take advantage of the transmission plans already underway in the respective areas. This is an

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<sup>1</sup> The map is included with these comments as Attachment A.

example of how existing regional plans can play a valuable role in the development of transmission for the integration of large-scale renewable supplies.

Additionally, the Governors and Premiers are in the process of collaborating on appropriate frameworks in which to develop the transmission needed on both sides of the border to access large proposed renewable and nuclear power supplies.

Regional planning also has an important role to play in the development of broad interconnection-wide transmission plans. As this concept is considered at the federal level as a mechanism to address the national need for aggressive renewable energy development, ISO New England, and I can speak for the NYISO here as well, urges that any transmission planning effort for the Eastern Interconnection utilize a bottom up approach to ensure that benefits of existing regional planning efforts are preserved and state energy goals, attributes and regulatory structures are incorporated.

Specifically, an interconnection-wide planning process should follow an iterative process where regional plans serve as the basis and are coordinated and harmonized by a federal entity – but RTOs remain as the primary planning authority for managing the integration of renewables within their footprint. If this is not done, it will be impossible to gauge the true cost impact of integrating renewables, since the injection of bulk quantities of energy at selected points in any transmission network will require expensive additional transmission investment in order to be able to deliver the power to customers.

A great deal of work has been done in the Northeast to date with regard to regional and inter-regional planning. This process has identified that in many instances our richest renewable

resources are geographically remote from the consuming marketplace – and in certain cases far from interconnection to the bulk transmission system. While the region has recognized the need to build transmission to access its renewable resources, it has been challenged to sort out and clarify how the transmission will be paid for and who will benefit from interconnection of the renewable energy projects. This issue of institutional barriers to the construction of transmission to renewable projects is one of critical importance and has been highlighted by the Commission in the notice for today’s technical conference.

I am pleased to report that New Englanders have been hard at work designing possible solutions to overcome this barrier and progress is being made.

There is no doubt that it is very difficult to site transmission lines, however our experience is that once the need has been accepted by state policy makers, it is possible to make it happen. As I noted above, this has been most clearly evidenced in the area of so-called ‘reliability’ projects that are required to meet reliability standards. As you know, we have a regionalized sharing of costs associated with reliability projects and this approach has been accepted by the majority of our stakeholders.

Our experience has been more difficult reaching agreement on so-called “economic” projects. We have had robust discussion in the region on how to move forward in this area. The basic problem is reaching agreement on what is “economic” and who the beneficiary for such a project would be. After some two years of discussion, the region is starting to gravitate towards a model that would overcome concerns about the allocation of benefits mentioned above by bundling energy and transmission costs into delivered energy price contracts and possibly indexing energy contracts to energy market clearing prices. This approach allows for the

comparison of which project can satisfy given renewable policy mandates most economically. I think this is a key point as we enter into a national debate on this issue.

A full economic analysis must be done when considering whether a transmission line is economic. This means taking into account the full amortization of the transmission and generation costs over the life of the projects. The difficulty is reaching agreement on the assumptions surrounding infrastructure costs, fuel costs and delivered benefits over a 30 – 40 year period. Ultimately, ISOs and planning authorities are not well positioned to provide certainty around these assumptions because they are not the contracting authorities for either the infrastructure or the energy. Thus the only way to get a true reading on whether a project is economic is for developers to bring forward a bundled solution to their stakeholders.

Once a model has been established that bundles the costs of transmission and delivered energy, we will quickly find out what is economic and what is not, or which projects are more economic relative to others. This is the point at which policy makers can intervene with additional incentives if needed, since these incentives will be targeted at specific projects that are likely to be economic in their own right, or are close to being economic in addition to satisfying other important policy goals. Federal and state policy makers have a number of tools at their disposal for affecting economic outcomes and lowering the economic threshold for projects, but it is important to apply those tools judiciously.

The benefit this model is that it gets the affected parties to the negotiating table to make an arrangement that is beneficial to all parties involved and it automatically deals with the cost allocation discussion. Existing regional renewable and carbon standards and potential national standards are creating the clear need to pursue an increase in the supply of renewable and non-

carbon energy. The approach outlined here will help ensure that the most economic means of meeting policy directives are selected by allowing the ultimate product, which is the delivered energy provided by these projects, to be competitively priced – one against another. Clearly, there are other solutions for planning, constructing and funding transmission projects to integrate renewable resources and we believe exploring the alternatives is a critical task.

New England is proof that regional planning is essential for developing reliability-based transmission. It can also be a highly effective tool for the development and acceptance of transmission to integrate large-scale renewables in a cost-effective manner and can contribute to the realization of aggressive national renewable energy goals. Finally, the coordination of individual regional plans at a federal level is the most effective path to establishing broad, interconnection wide plans, since it will allow the full costs of integration to become visible prior to making the investment decision.

Thank you for the opportunity to participate in this important discussion today. I look forward to your questions.

Respectfully submitted,

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Dated: February 27, 2009

ATTACHMENT A  
MAP OF NORTHEASTERN RENEWABLES

# New England doesn't need to go far for renewables

*Region is evaluating transmission to neighboring systems*

