



April 5, 2007

re: CanWEA comments on the AESO Market and Operational Framework for Wind Integration in Alberta

By e-mail: laura.letourneau@aeso.ca

The Canadian Wind Energy Association (CanWEA) appreciates the opportunity to provide written feedback and comments on the AESO Market and Operational Framework for Wind Integration in Alberta.

We would like to begin by congratulating the AESO on the development of this document. It provides a framework within which multiple tools could be utilized to facilitate the integration of wind energy into the Alberta grid and a positive proposal for allocating the costs associated with such tools. We acknowledge and appreciate the AESO's commitment to integrating as much wind into the Alberta electric system as is feasible without compromising system reliability or the fair, efficient and openly competitive operation of the market.

CanWEA was pleased to see the concluding section of the document state that the AESO believes that the Market and Operational Framework can replace the current 900 MW threshold on wind development in Alberta and allow investment decisions regarding the supply portfolio in Alberta to be driven by market forces. We believe that investor confidence will be further supported when the AESO provides a firm timetable for the removal of the threshold.

We believe that the structure provided by the Market and Operational Framework, coupled with the new policy directions being implemented by the Alberta Government with respect to greenhouse gas emissions and the development of an Alberta renewable energy strategy, provide a basis for the AESO to immediately make a clear and definitive statement that the 900 MW threshold is no longer in place.

Such a statement must be accompanied by a strong commitment to reflect this "new reality" in other aspects of the AESO's responsibilities. For example, it will be important to ensure that the removal of the 900 MW threshold results in more proactive transmission planning and investment to facilitate the connection of wind energy projects being developed across Alberta that currently have no access to the grid.

CanWEA acknowledges that a significant amount of work remains to be done to flesh out the details of the Market and Operational Framework and we are committed to continuing to work constructively with the AESO in this regard. We believe that the final outcome must respect the directive of the Department of Energy that any market refinements should not "...create an uneven playing field or be detrimental to the development of renewable resources". CanWEA believes that this work should focus in four main areas.

First, CanWEA believes that more work needs to be done to better understand and quantify the potential benefits to wind integration from geographic diversity in wind farm siting to inform the development of policy both within the AESO (e.g., queuing) and within the Alberta Government (e.g., siting). Such work is important because a wider geographic distribution of wind facilities can reduce ancillary services costs, facilitate transmission planning and construction, and reduce power management issues.

While CanWEA understands that Ortech will be completing co-variance studies on a site-to-site basis with real time data, we feel that an additional study utilizing readily available historical data is also required. Some of the additional information to be derived from this study would include the combined effects on ramp rate, maximum and minimum production levels, and the identification of the impact of different geographic areas in minimizing variability. The AESO / CanWEA Steering Committee will need to consider if this work can be completed within the scope of the existing Forecasting Working Group or if a new initiative is required. CanWEA believes that such a study can be completed quickly and we would be willing to participate in, and make a contribution to the costs of, such a study.

Second, CanWEA is encouraged by the AESO's use of forecasting to decrease the operational and market issues that arise from integrating wind power into the Alberta electrical system. It is our understanding that forecasting is the primary method for reducing the cost of mitigating measures. All mitigating tools (EMMO, ancillary services & wind power management) will rely heavily on forecasting and, as a result, the approach taken on forecasting is very important in terms of reducing the costs associated with mitigation actions.

Determining the accuracy of wind energy forecasting models is not a simple task and further work may be required to determine the appropriate basket of metrics used to determine the 'best' forecasting methods. We understand that the Wind Power Forecasting Working Group has tabled this issue at this time, but we encourage the Working Group to consider revisiting this issue.

Third, CanWEA believes a significant amount of work needs to be done in the area of wind generator power management. While we agree that this integration tool, if it is to be used, should only be used after all other tools have been implemented, we feel there is a need to better understand the potential contribution this tool can make to the facilitation of wind integration in Alberta.

As a result, CanWEA would like to see the AESO / CanWEA Steering Committee establish a multistakeholder working group to examine this issue in more detail and CanWEA would be an active participant in such a group. Specifically, we believe that such a working group should examine:

- the potential frequency of events where wind generator power management would be required,
- the magnitude of the events where wind generator power management would be required,
- the financial implications of wind generator power management for project economics and wind farm operations, and
- the development of a clear protocol that would transparently define how and when wind generator power management would be exercised.

In the Market and Operational Framework, the AESO specifically seeks input on the question of whether or not “power management” requirements should be applied to existing wind energy facilities in Alberta and CanWEA will consider this issue and report back to the AESO in the near future.

Fourth, it is clear that much work remains to be done in the area of wind power forecasting and we believe that the Wind Forecasting Pilot Project is well positioned to do much of this work. That said, the Market and Operational Framework seems to have created some confusion by implying prematurely that Alberta will move to a decentralized wind forecasting system (i.e., “it is envisioned that all wind power facilities will forecast their power output...”) when the Wind Forecasting Pilot Project is examining a centralized wind forecasting system where wind power facilities provide wind data to a centralized forecasting service. We request clarification from the AESO on this point.

With the work that remains to be done to flesh out the Market and Operational Framework, CanWEA requests that the AESO / CanWEA Steering Committee develop a comprehensive strategy to complete this work, with clear timelines and deliverables.

Thank you for your consideration of our comments and CanWEA looks forward to continuing to work with AESO to flesh out the Market and Operating Framework in the months ahead. We look forward to your response.

Yours sincerely,



Robert Hornung
President