

What to Expect Once Your Wind Power Project Has Been Approved

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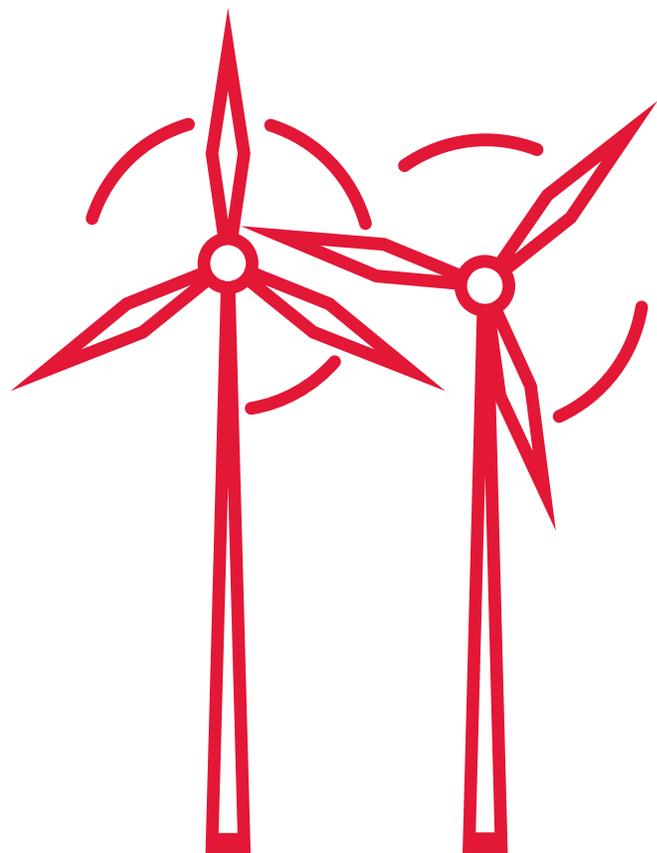
2016 has been full of promising news for Canadian wind power developers. In July 2016, Environment and Climate Change Minister Catherine McKenna announced that Canada will have a national price on carbon before the end of the year. The federal government's announcement comes on the heels of those by the governments of Alberta, Saskatchewan, Ontario, and British Columbia regarding climate change action plans at the provincial level. This is coupled with the recent publication of a report commissioned by the Canadian Wind Energy Association, which concludes that Canada could get up to 35 per cent of its energy from wind power while maintaining grid reliability.

In Alberta and Ontario in particular, competitive financial incentive programs supported by the provincial governments are expected to spur the development of wind and other renewable energy projects. These programs were discussed in our August 2016 [Blakes Bulletin: September Deadline: Last Chance to Participate in Ontario's Large Renewable Procurement Program](#) and in our June 2016 [Whitepaper: Predictions for Alberta's Renewable Electricity Program](#).

Successful bidders in the aforementioned programs will be required to obtain the regulatory, environmental, municipal and ancillary approvals necessary to construct and operate their proposed renewable energy projects.

In Alberta, wind power proponents have sometimes encountered opposition to their projects on a range of issues, including potential noise, infrasound and environmental impacts, including effects on wetlands and wildlife. Even if successful in the face of such opposition in obtaining principal approval of their projects from the Alberta Utilities Commission (AUC), wind power proponents are faced with a number of potential regulatory hurdles on the path to construction, operation and interconnection.

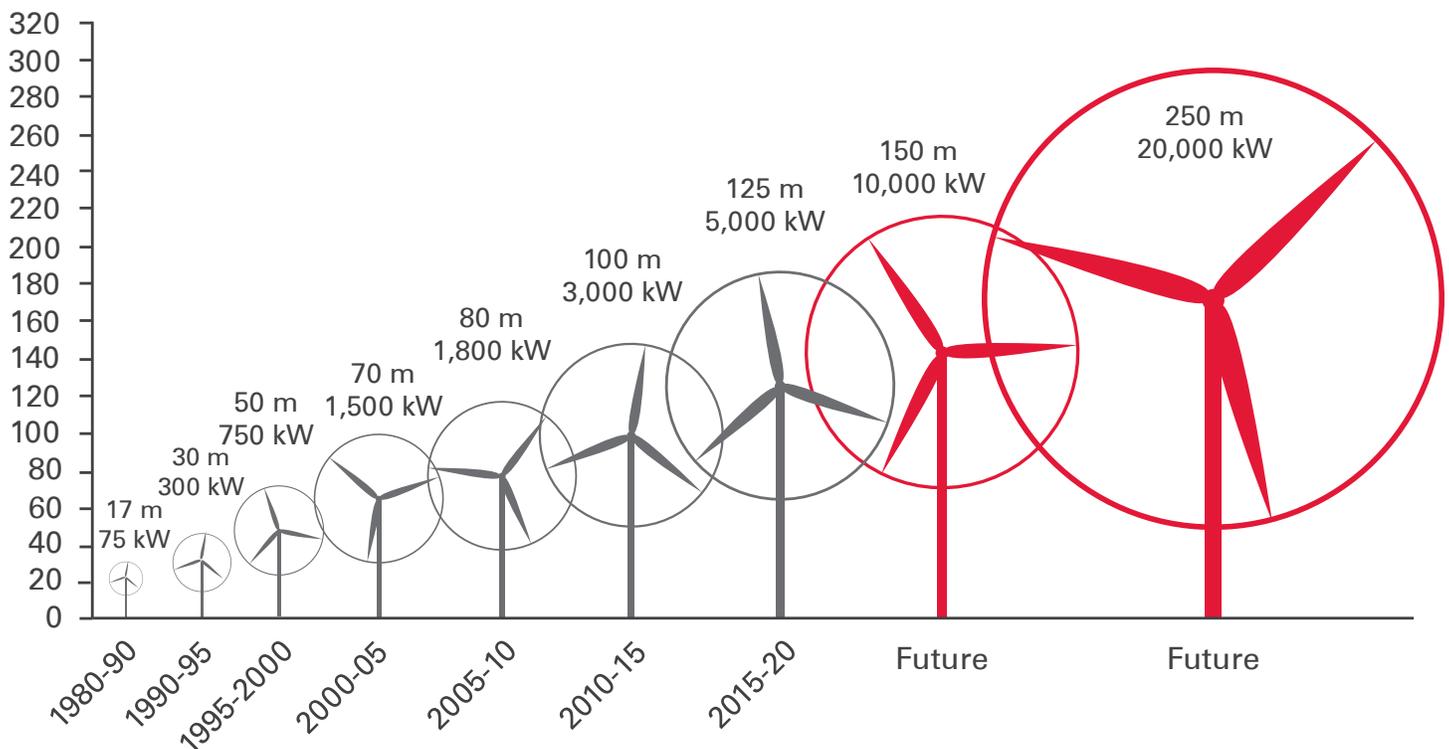
This article seeks to identify and provide insight into two such challenges that arise in the time between receiving regulatory approval and the commencement of construction: (1) responding to and incorporating technological developments and (2) the potential for intervening residential developments within a project area.



1. TECHNOLOGICAL DEVELOPMENTS

Wind turbine design and efficiency has dramatically evolved since Canada’s first commercial wind power project was constructed in Pincher Creek, Alberta in 1993. The Cowley Ridge wind farm, decommissioned earlier in 2016, consisted of 57 375-kilowatt (kW) turbines, mounted on 24.5-metre lattice towers, and had a generation capacity of 16 megawatts (MW). Conversely, the AUC’s most recent wind power plant approval was issued in respect of a project consisting of 50 2.4-MW turbines mounted on 91-metre towers, with a generation capacity of 120 MW. Proposals for projects utilizing turbines of three MW or more are increasingly common, with even larger capacity turbines being utilized in offshore projects.

WIND TURBINE SIZE GROWTH SINCE 1989 AND PROSPECTS Hub Height (metres) and rating (kW)



Source: Graphic recreated with statistics from the SBC Energy Institute.

Improvements in turbine design and efficiency often outpace regulatory, project financing and construction timelines, and it is not uncommon for more efficient and economic turbine designs to become available in the time between submitting an application to the regulator and the commencement of construction. In some cases, the applied-for turbine model may no longer be produced by the manufacturer at the time that the project construction is set to begin, thus forcing the power proponent to revise the project.

Project Revisions

A wind power proponent who wishes to, or is required to revise the turbine model selected for a project, will typically face delays, regardless of whether the change is made before or after having received AUC approval. Here are a few things to keep in mind:



1. If the change is implemented after authorization has been granted, the proponent will typically need to seek an amendment to its AUC power plant approval. (It may also be necessary to seek amendments to ancillary approvals such as municipal development permits, environmental approvals, NAV Canada and Transport Canada authorizations, etc.).
2. While the *Hydro and Electric Energy Regulation* (HEEA Regulation) exempts certain minor alterations — which are essentially limited to “like-for-like” replacements — from the requirement to obtain an amendment, turbine design improvements often involve increases to rated capacity and associated changes to rotor diameter and hub height. Such changes may result in revisions to the number and locations of the turbines within the project, and will likely require noise impact assessments and environmental studies to be updated or redone. Accordingly, a turbine model change will, in most cases, not be considered a “like-for-like” replacement.
3. Depending on the extent of the post-AUC approval changes required, a wind power developer will either have to apply for an amendment by a letter of enquiry (LOE) pursuant to sections 11 and 12 of the HEEA Regulation, or file an amended facilities application for a new approval. The AUC has provided some guidance regarding which of these tracks to follow in the *Electric Power Plant Facilities Process Guidelines*. While not insignificant, the information that must be submitted to the AUC in support of an LOE is typically less extensive than that required for an amended facilities application. However, depending on the extent of the required amendments, the scope of information (and associated expert reports) for LOEs and amendment applications may be equivalent in practice.
4. Further, the AUC retains the discretion to issue a notice of application, and thereby create the potential for a public hearing to be triggered, in respect of both an LOE and an amended application. While we are not aware of any wind power plant LOEs or amendment applications that have proceeded to a full hearing, that potential exists particularly if the initial project approval faced significant opposition and the adverse impacts of the project to any potentially affected party or the environment are perceived to have changed for the worse.

If a hearing is triggered by the requested amendments, power proponents may expect further delays in the construction timetable, which may offset the economic gains sought to be realized by the change in selected turbine model.

2. INTERVENING RESIDENTIAL DEVELOPMENTS

Another obstacle power proponents may face is post-approval encroachment of residential developments on the project area.

A recent AUC decision regarding a noise complaint highlights a disconnect between the municipal development approval and the provincial power plant approval processes, potentially posing a risk to the wind power plants’ ability to operate at full capacity. In this case, the proponent received AUC approval to build and operate a wind farm 10 kilometres northeast of Pincher Creek within the Municipal District of Pincher Creek No. 9 (MD) and was required to complete construction within 18 months. However, the proponent subsequently applied for, and received, two extensions from the AUC and obtained extensions to its development permits for the project from MD’s Municipal Planning Commission, pursuant to the governing Land Use bylaw. Construction of the wind farm began in November 2013 and was completed over the summer of 2014.

In the time between the issuance of the initial AUC and municipal approvals and the construction of the wind farm, two properties in the project area were sold and developed by the new owners for residential use. Shortly after the start of wind farm operations, both landowners filed noise complaints with the AUC. The AUC instructed the wind farm to conduct a comprehensive sound level survey at the residences, which revealed nighttime noise levels that slightly exceeded the baseline permissible sound level (PSL) of 40 dBA Leq (i.e. the average sound pressure level measured in A-weighted decibels over the nighttime period) and subsequently ordered the wind farm to restrict the nighttime operation of one of its turbines. The wind farm argued that the PSL under the AUC's noise control rule (Rule 012) should be greater than 40 dBA Leq in the circumstances. Section 2.4(1) of Rule 012 states: "[T]he permissible sound level at the new dwelling, **will be the greater of** the cumulative sound level existing at the time of construction of the new dwelling, or the permissible sound level as determined in Section 2 of this rule."



"Cumulative sound level" is defined to include noise from approved but not yet constructed energy-related facilities. As such, the wind farm argued that the PSL at the new receptors should include the predicted noise levels from its facility because it was an approved but not yet constructed energy facility at the time the residences were constructed.

The AUC disagreed, affirming its decision on review, focusing on the purpose of Rule 012 to protect persons living near power facilities from noise rather than the specific wording. In so doing, the AUC held that the onus was on the approval holder to ensure any subsequent land purchasers had notice of the project. The AUC stated that "it is the responsibility of the approval holder to be aware of the activities in its affected area" and suggested that the proponent could have learned of the change in land ownership by undertaking land title searches while applying for extensions.

The AUC's expectations raise issues such as:

1. Land title searches will typically only identify a change in ownership after it is completed, or within a short period of time prior to the change, making it difficult for approval holders to notify a prospective land buyer of the project.
2. Whose duty is it to exercise due diligence, particularly in an area that already has seen significant wind farm development and in respect of which zoning approvals and development permits would have been issued relative to the project area? (Consider that the seller would have received notice of the AUC and municipal approval applications, for example).
3. What responsibility does the MD have when reviewing a residential development permit application to consider the approved zoning and industrial development permits issued for a wind power project on adjacent lands?

By not directly addressing the interpretation of "cumulative sound level," the AUC has arguably given itself some leeway to arrive at a different conclusion in other circumstances. However, at this time, the decision exposes wind power projects to generation capacity restriction risks as a result of residential encroachment during the period between receiving AUC approval and the start of construction.

While Alberta holds significant promise for renewable energy developers in the near to medium terms, to maximize on that promise, wind power proponents need to consider and manage various risks, including those arising after the regulatory, environmental, municipal and ancillary approvals are already in hand.

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