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NEXTERA ENERGY CANADA, ULC SUMMERHAVEN WIND ENERGY CENTRE APPLICATION FOR A RENEWABLE ENERGY APPROVAL

Infrastructure Design Change Report

Submitted to:
Director, Ministry of Environment
2 St. Clair West, Floor 12A
Toronto, Ontario
M4V 1L5

REPORT



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1.0 INTRODUCTION

This Infrastructure Design Change Report (the Report) has been prepared to identify and describe recent changes made to the Project design of the Summerhaven Wind Energy Centre since the last Public Open House held on January 10, 2011 and submission of the Renewable Energy Approval (REA) Application to the Ministry of Environment on June 13, 2011. This Report is provided so that the public, Aboriginal communities and interested stakeholders can be made aware of the Project design changes and the rationale for these changes.

The design modifications are a direct result of ongoing and detailed consultation efforts with local landowners, the public, Haldimand County council and department staff, Haldimand County Hydro and other utilities (e.g., Union Gas, Bell). Based on consultation to date with the aforementioned parties, improvements were made to the design to accommodate landowner requests, address conflicts with other utilities and reduce visual impacts by placing collector cables underground.

2.0 DESCRIPTION OF DESIGN CHANGES

In the June 13, 2011 REA Submission for the Summerhaven Wind Energy Centre, the Project Location was provided in the Site Plan Report. Appendix A provides an updated Site Plan with the current Project design, reflecting the design changes discussed below. Appendix B provides a comparison of Project Location changes between the June 13, 2011 REA design and the current design.

2.1 Design Change 1 – Meteorological Tower Adjustment

In consultation with local landowners, one of the SCADA (Site Control and Data Acquisition) meteorological towers (SMT02) was moved 115 m to the east to optimise the location. Relative to the June 13, 2011 REA Submission, it was determined that there were no changes to the potential environmental effects.

Figure 1 depicts an aerial image of the revised location of the meteorological tower. A comparison of the previous and current designs are provided in Appendix C.



SUMMERHAVEN REA DESIGN CHANGE



Figure 1: Aerial image showing the meteorological tower adjustment



2.2 Design Change 2 – Substation Adjustment

At the request of the host landowner, the Project substation was moved to the west to avoid conflict with potential future land use on adjoining land parcels. The western boundary was moved 233 m and the eastern boundary was moved 332 m, resulting in an overall reduction in the disturbance footprint size from 5.8 ha to 3.5 ha. This design change has reduced the area of agricultural land impacted by the Project relative to the June 13, 2011 REA Submission. No other changes to the potential environmental effects were predicted.

Changes to the Noise Impact Assessment as a result of this infrastructure move have been summarized in a revised Noise Study Report provided to the Ministry of Environment for their review. Landowners residing in the closest non-participating noise receptors in relation to the new substation location (approximately 800 m away) were consulted with and informed of the change.

Figure 2 depicts an aerial image of the revised location and dimensions of the Project Substation. A comparison of the previous and current designs are provided in Appendix C.



Figure 2: Aerial image showing the revised location and dimensions of the Project substation



2.3 Design Change 3 – Burying of the Electrical Collector System

Based on feedback from the public, Haldimand County Hydro and Haldimand County council and department staff, NextEra Energy Canada has relocated the overhead sections of the Project electrical collector system (34.5 kV) from the June 13, 2011 REA design such that it will now be buried underground within the road right-of-way or on private lands. The rationale for the design changes were primarily associated with reducing visual impacts of additional overhead lines and utility poles, and electrical design considerations, as follows:

- Moving the collector system underground eliminated the need to upgrade the smaller local distribution lines to taller than standard electrical poles that would otherwise be required to allow for safe distances between the two circuits;
- Joint use or pole sharing (whereby NextEra Energy Canada and Haldimand County Hydro would use the same utility poles) would no longer be required (see Figure 3); and
- In some locations, poles would no longer have to be erected on both sides of the road and overhead cables would not have to cross over public right-of-ways.

Although land access and utility conflicts of shifting the collector system from overhead to underground have largely been resolved, some minor shifts within the road right-of-ways or onto optioned private lands may still be required. NextEra Energy Canada is currently working with the previously noted stakeholders to create construction-level design details at these locations. To the extent required, further consultation and approval of these changes will be obtained.



Figure 3: Example of joint use or pole sharing



2.4 Design Change 4 – Turbine 62 Removed

As a result of a landowner no longer interested in participating in the Project, Turbine 62 and the associated access road and collector cable were removed from the Project design. Specific to the Noise Impact Assessment, this design change has resulted in two noise receptors being changed from participating to non-participating.

Relative to the June 13, 2011 REA Submission, removal of this infrastructure will result in a reduction of 480 m of access road and cable route and a disturbance area of 50 m² will no longer be required for the turbine base.

Figure 4 depicts an aerial image of the removal of Turbine 62 from the Project design. A comparison of the previous and current designs are provided in Appendix C.

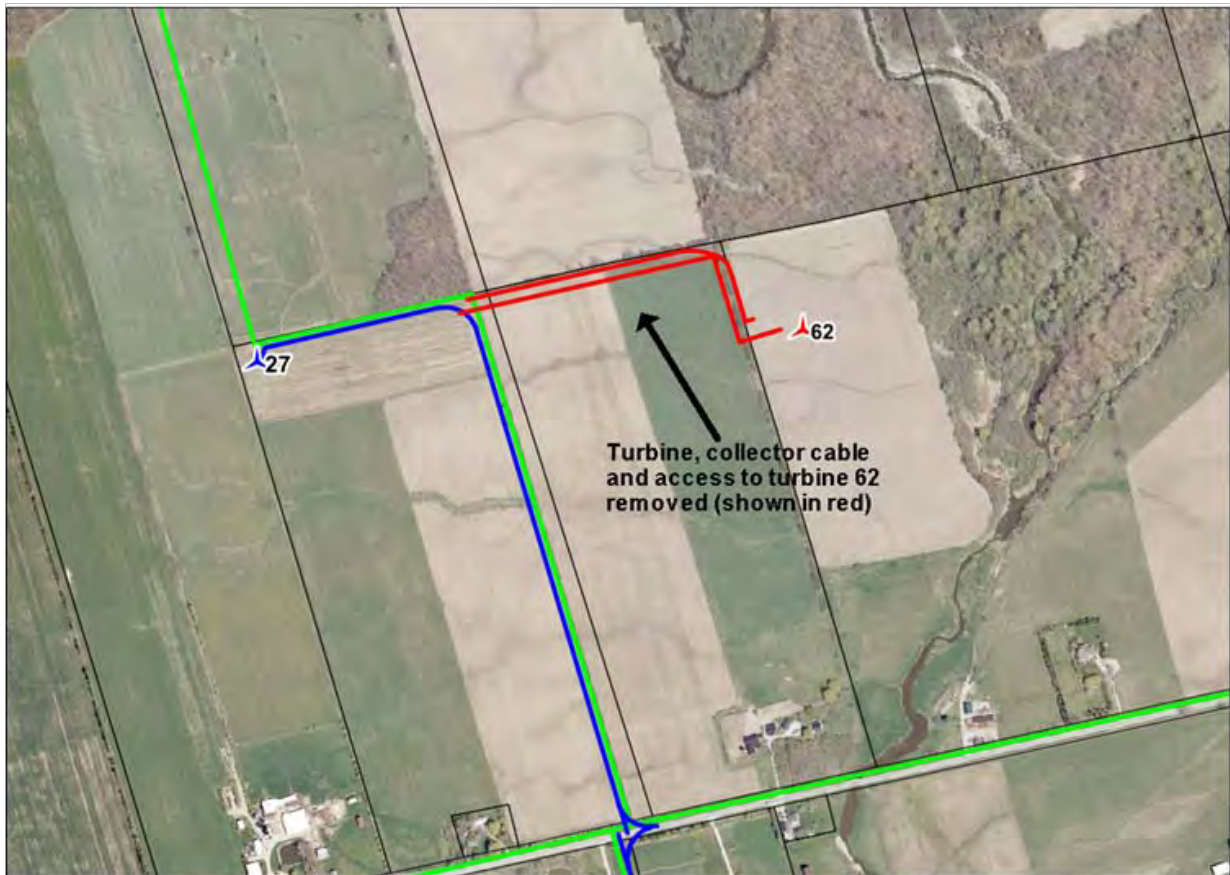


Figure 4: Removal of Turbine 62 from the Project design



2.5 Design Change 5 – Re-Routing Access Road and Collector Cable Route for Turbines 55 & 56

As a result of a landowner formerly hosting the access road and collector cable route to Turbines 55 and 56 no longer being interested in participating in the Project, the access road and cable were re-routed to run east from Turbine 56, then north to Rainham Road at which point it turns west along Rainham Road and continues underground along the road right-of-way (see Figure 5). Specific to the Noise Impact Assessment, this design change has resulted in five noise receptors being changed from non-participating to participating.

The modification has resulted in an additional 280 m of new access road and collector cable. A Stage 2 Archaeological Assessment is currently being completed for the new infrastructure areas which were previously unassessed, and additional information will be reported as necessary and provided to MTC for their review (only a Stage 1 Archaeological Assessment Report is required for the REA Submission for this Project). A Natural Heritage Assessment has been completed on the natural feature within 120 m of the new Project Location and an amendment report will be provided to MNR for their review. No additional changes to the potential negative environmental effects relative to those outlined in the June 13, 2011 REA submission are anticipated.

Figure 5 depicts an aerial image of the re-design of access roads and collector cable routes to Turbines 55 and 56. A comparison of the previous and current designs are provided in Appendix C.

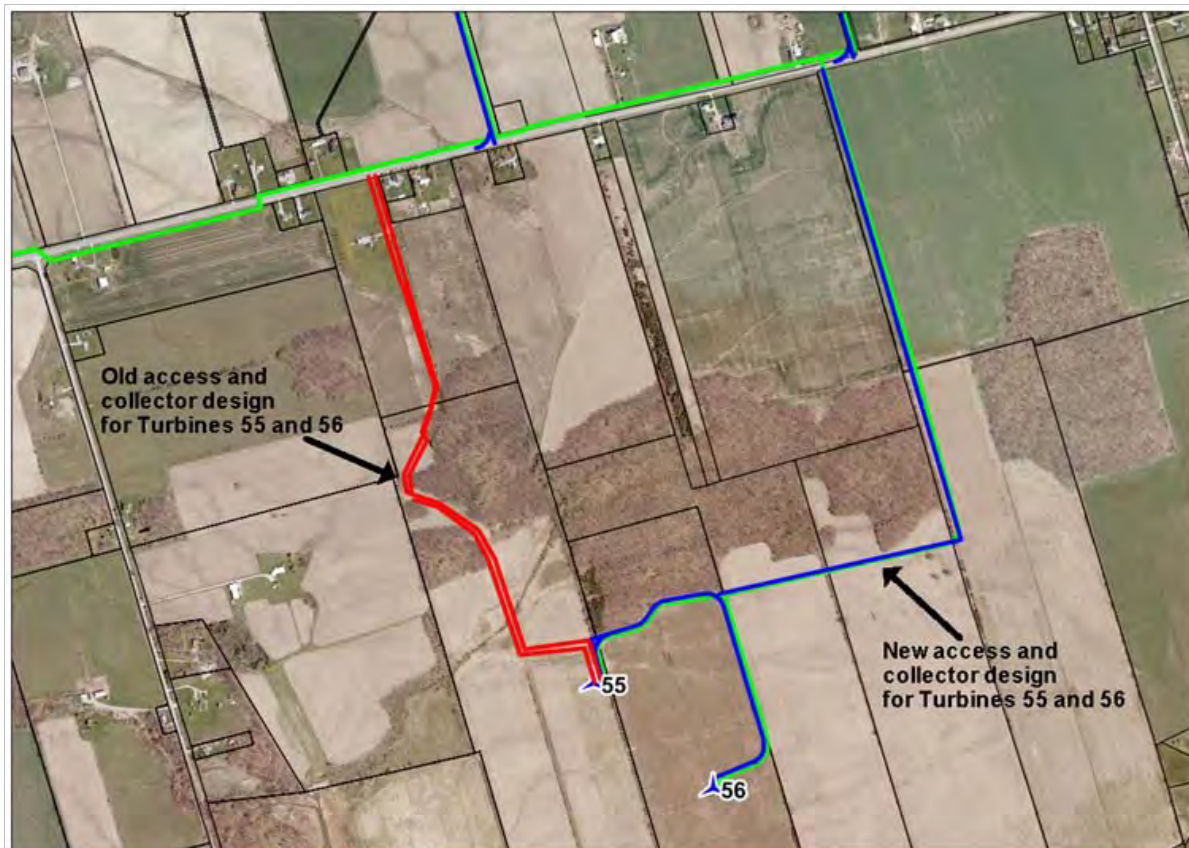


Figure 5: Re-design of access roads and collector cable routes to Turbines 55 & 56



3.0 CONCLUSION

Considering the scale and complexity of the Project, and the engagement of diverse groups of stakeholders, NextEra Energy Canada recognizes that consultation is a dynamic part of the development and approvals process. Consistent with MOE guidance and the REA consultation process, NextEra Energy Canada has taken the direct feedback received in recent months and used this information to adjust the Project design in an attempt to minimize or mitigate impacts to the public and other stakeholders.

Some of the infrastructure changes (Design Changes 1, 2 and 5) are relatively minor in the context of the Project as a whole, and are unlikely to affect anyone other than the host landowners. The shift of the overhead collector system to underground (Design Change 3) will have a generalized reduction in visual impacts of the Project. Considering all of the design changes discussed in this Report, there is a net reduction of 2.7 ha of land impacted by the Project relative to the June 13, 2011 REA Submission.



Report Signature Page



Jeff Wright
R.P. Bio., A.Sc. T.

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