



The Corporation of Loyalist Township  
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April 12, 2017

Algonquin Power Co.  
354 Davis Road  
Oakville, ON  
L6J 2X1

Attn: Ariel Bautista, Senior Project Manager

Dear Mr. Bautista:

**Re: Review of Draft Operations Plan Revision 3 – Windlectric Project**

As we have recently reiterated in our comments regarding the Pre-Construction Study, the Township expects a high level of detail in the Operations Plan in order to complete a thorough review of the plan and assess the mitigation measures being proposed. It is expected that the Operations Plan and all supporting studies will provide a current assessment of municipal infrastructure, identify impacts to the same, and identify mitigation measures to ensure the protection and maintenance of municipal infrastructure, preservation of Amherst Island heritage, minimalizing impacts on residents, and ensuring continued and effective emergency services during construction.

Of foremost relevance and importance is the transposition of the legal survey of all municipal road allowances impacted by the proposed construction onto all design drawings submitted in support of or as part of the Operations Plan. As essentially all of the operations and procedures being proposed are contingent on the limits of the municipal road allowances, it is unfathomable to think that that these limits have not been established. If municipal infrastructure has not been established, a practical assessment of the potential impacts and proposed mitigation measures cannot be made.

In the most recent submission of the Operations Plan Section 2.1.4, Windlectric commits to 'restore the travelled surface of the municipal roads on Amherst Island to a 6m width so that bi-directional traffic can easily take place...' To date, this is the first real indication by Windlectric, of the nature of road modifications that are being proposed for the project and certainly information to build on. However, while this may address many concerns regarding traffic management, it also leads to many other questions. This commitment assumes that it is possible to implement the road modifications within the municipal road allowance. As previously stated, this cannot be

verified as the limits of the existing municipal road allowances have not been confirmed by Windlectric. Specific details, which should be provided in the recommendations of the Municipal Roads Geotechnical Borehole Investigation, are still needed regarding the depth of granular material to be placed as part of the road modifications. Granular depths relate directly to the overall width of the improved cross section as match slopes are proposed to extend, at 3H:1V, from the travelled surface to the existing ground. The match slope of a widened road may impact the roadside drainage. Further widening the improved cross section width may create a requirement to realign the existing drainage facilities. Realigned drainage facilities will impact fencing and may encroach on private lands, which the Township is not currently in a position to improve.

The details of the proposed improvements must be considered in the preparation of the Operations Plan, as it relates to the components of the Plan, and these details must be provided in the Plan itself.

Building on the additional information that has been provided, we provide the following comments:

### **Comments**

A plan to evaluate and mitigate impacts on grading, drainage, and drainage facilities is a requirement of the Road Use Agreement. As stated above, a full assessment of the impacts on drainage and drainage facilities cannot be made without confirmation of proposed roadway modifications.

All submissions still do not include revision blocks to facilitate version control.

### **Section 2 – Traffic and Construction Management Plan**

At all times, all roads or individual lanes that are open to public use must meet the requirements of Ontario Regulation 47/13, "Minimum Maintenance Standards".

- Winter Control refers to the Township's snowploughing and removal operations and the application of sand/salt on municipal roads; roads must be maintained to accommodate all island transportation needs, including allowing residents to get to the ferry and school buses to pick up and drop off the children. The plan must consider delays to the start of daily operations to allow municipal roads to be cleared as well as other scenarios that will require Windlectric to stop construction operations;
- Drifting snow is a concern on Amherst Island; even though the forecast may not be calling for snow, municipal forces may be out due to snow drifting onto the road;
- Snowbanks at the intersection of access roads and municipal roads will reduce visibility; Windlectric must include appropriate actions in the Operations Plan to ensure adequate sightlines are maintained;

- Snowbanks will likely further reduce space within the road allowance – this does not appear to have been considered in the Operations Plan;
- Has the possibility of heavy loads passing a snowplough been considered? With snowbanks along the side of the road, it will be much more difficult to determine a location to allow construction vehicles to pull over to the side of the road if necessary;
- The Traffic Management Plan is a separate schedule (02). This chapter of the Operations Plan should include a statement that all mitigation measures identified in the TMP are part of the Operations Plan (or not);
- Operations Plan should clarify how temporary turn widenings and Windlectric access roads intersecting with public roads are to be maintained during a winter weather event.

## **Section 2.1 – Haul Routes for Oversized and Heavy Loads**

- 2.1.1 Major Turbine Component Deliver Routes
  - States that routes are in Schedule 19 but we were not provided with a new Schedule 19, the previous Schedule 19 was Tree Removal in Municipal Road Allowance. The Transportation Plan refers to this drawing as Schedule 20, we did not receive a new schedule 20 either.
  - Describes an alternate delivery route to avoid Stella, this route will only be used if no road modifications are required. States that blades and tower sections cannot use this route. Why not?
- 2.1.2 Heavy Load Delivery Routes
  - Heavy loads are anything bigger than a pickup truck or crew van. A list of examples of heavy loads is provided. Does this list include all of the anticipated 'Heavy Loads'? Movement of excavated material for tower base construction has not been included. How will this material be managed? What about movement of gravel?
  - For "Delivery Routes for Heavy Loads" - reference is made to AMHST-206 in Schedule 02 – should this be to AMHST 207 in Schedule 03?
  - Reference at end of 1st paragraph should be to AMHST-207, not 206.
- 2.1.3 Other Large Transports
  - Section discusses route assessment prior to beginning movement of over-width deliveries; similar to comments regarding road width, it is assumed this assessment would be made well in advance of the delivery and that the necessary improvements would have been made (all road travelled surfaces to 6.0m as stated in 2.1.4)
- 2.1.4 Management of Inoperable Equipment in the Public Right of Way
  - This section states "The planned Public Road Modifications will restore the travelled surface of the municipal roads...to a 6m width..." The feasibility of these modifications within the municipal road allowances must be

considered. These modifications have not been indicated on the construction drawings that have been provided.

- Use of a tow truck is not an acceptable solution for an emergency situation; detour routes must be identified and available prior to moving any equipment that may slow or prevent access for emergency services; discussion on this must be included in the Communications Plan.
- 2.2 Public Road Profile Modifications
  - Refer to comments provided regarding the Pre-Construction Study.
- 2.3 Public Road Closures and Delays
  - States that a summary of all planned road closures is in Schedule 14. Schedule 14 provides proposed detour routes but offers nothing regarding frequency, timing or duration of road closures. This information should be coordinated with the Communications Plan.
  - As previously noted, we have concern that maintaining traffic around trenching for collection system, construction of road improvements and installation of culverts at site accesses may not be feasible, even if the roads are improved to 6.0m. Additional details on the trenching for the collector system must be provided, including roadway cross culvert locations.
  - Proponent makes commitment that oversized loads will only follow designated routes. But what about heavy loads, will they use detours? Proposed detour routes are in worse condition than roads proposed for heavy traffic but the geotechnical report offers no advice regarding improvements.
  - Proponent commits that road closures will only be performed during daylight hours, but have they considered feasibility of this on short winter days?
  - Proponent commits that road closures will only be performed when detour route is available. Availability of detour route should be confirmed by inspection before it is considered for use similar to Section 2.1.3.
  - Operations Plan should indicate how the proponent will comply with seasonal half-load restrictions.
  - Proponent commits that traffic interruptions will not be planned where the road is required as a detour, but may occur due to unexpected changes to project. This is not an acceptable solution for an emergency situation; detour routes must be identified and available prior to beginning any work that may result in a scenario where emergency services are delayed or prevented from getting through; discussion on this must be included in the Communications Plan.
  - Detouring onto roads like Emerald 40' will not occur when road is closed to due to seasonal issues. This statement should be amended to include 'and during half load restrictions'.
  - Construction activities that will require road closure are listed:

- Collector system installation on Concession 3 will result in one half day road closure, but collection system map does not indicate any collection system on Concession 3
- 15 day closure of South Shore Road for collector system – schedule only indicates two periods of eight days for collection system on South Shore. Still, this is a very long road closure and right at Christmas time.
- 2 day closure of Stella 40' at St. Paul's, if necessary. The proposed improvements at St. Paul's will have significant impact. The necessity of doing this has to be determined before public meeting. Proponent should consider directional boring in this area.
  - Proponent should commit to keeping heavy traffic off detour routes.
  - Proponent shall commit to compliance with half load season.
  - Proponent shall stay off all other roads, including workers' private vehicles.

#### **Section 2.4 – Waste Management and Hazardous Materials**

- There are no estimates of quantity or number of collection trips required. We have concern that demand for barge transport will be much greater than five or six trips per day.
- Will other vehicles be allowed on the barge when transporting hazardous material?
- Does the barge require a specific permit/license to transport hazardous waste? If so, will both barges have this license?
- Is Windlectric currently aware of hazardous material that will be encountered?

#### **Section 2.6 – Road Maintenance**

- Bullet Two - Daily inspections will be undertaken at end of each day. It should be clear that this is in addition to the frequent inspections by construction personnel indicated by eighth bullet. Windlectric should also commit to pre-inspections and daily inspections of detour routes.
- The tone of bullets one and three is that the Township Manager will direct Windlectric to complete repairs when repairs are required. Windlectric should commit to keeping road system is operable and in safe condition, in compliance with O.Reg. 47/13, at all times and without instruction from Township staff. The Operations Plan should clarify how Windlectric will monitor and ensure compliance.
- From the Operation Plan, "By-passes and intersection widening built for project purposes will be blocked off with barricades when not in use for Project traffic and will not be available for public use." This appears to be a strange way to operate a roadway. Can the proponent explain why the road improvements need to be blocked from local traffic use?

- Use of intersection improvements by non-construction traffic conflicts with Section 2.2

### **Section 2.7 – Impact Mitigation**

- Intro – words like “mitigation measures... which will be employed as necessary...” should not be used. Author should indicate when the measure will be used.
- The proponent proposes a procedure for requesting parking restrictions – Township has consistently stated that it will not implement parking restrictions on Windlectric’s behalf.
- Community Events – Fish fry date must be wrong, September 3 is a Sunday.
- 2.7.1 - How will traffic be monitored? Will this be a reactive approach based on complaints? If so, residents may not be able to provide adequate information to allow the enforcement procedures.
- 2.7.2 – Is the “traffic safety monitor” in a vehicle or on the ground? Discusses OPP or a pilot vehicle.
- 2.7.3 - No discussion on the drop off timing and routes for the senior school. Has this been considered?
- Additional information is required for the proposed school bus turnarounds
- 2.7.6 – States that Windlectric will request that the Township grant specific and limited permission to implement parking restrictions – this is not an acceptable solution; alternatives must be considered
- 2.7.7 - There is no work currently permitted outside of the municipal by-law
- Windlectric should include church in communications plan

### **Section 2.9 – Hours of Operation**

- REA states that the Concrete Plant can only operate between 7:00 and 19:00 and that trucks can only arrive and leave the plant within these hours of operation; the Operations Plan discusses operations that cannot be stopped once they have started, including turbine foundation placement; the Operations Plan must consider the conditions of the REA
- It is indicated that construction activity will be according to the Municipality’s noise bylaw 2011-6 as amended by bylaw 2012-046. It would be preferable to avoid lane reduction or traffic interruptions after dusk since safety risks increase in dark conditions. Illumination will be required at lane reductions and for traffic interruptions at and after dusk. The Traffic Management Plan indicates that road closures will not be left in place overnight. Further clarity should be provided to indicate that road closures will be dismantled at dusk.

### **Section 2.11 – Road Dust Control**

- Proponent must commit to dust control until all activities are complete. Roadways must be maintained dust-free at all times.

### **Section 2.12 – Impacts to Trees and Vegetation along Municipal Road Allowance**

- Report lists over 30 places where tree trimming may be needed – these need to be shown on construction drawings.
- The trees on Stella Forty Foot are not described in the transport clearance assessment – these trees must be considered and added as required
- What is the status of the arborist’s review of trees requiring trimming?
- Are there trees on private property which overhang the road that require trimming?

### **Section 2.13 – Cultural Heritage Features**

- The monitoring program in the Operations Plan must be consistent with the conditions of the REA, in particular for any buildings designated under the Ontario Heritage Act
- There are properties identified in the Road Use Agreement that have not been included in the monitoring program
- Proposed detour routes impact sites identified in the Road Use Agreement; these sites must be added to the chart included in this section
- 2.13.1 General Preventative and Mitigation Efforts - heritage features that will be indicated on the site map issued to all site personnel – should also be on detailed construction drawings
- With a proposed road width of 6.0m and a fill depth of approximately 1.5m at Station 41+200 (St. Paul’s Presbyterian Church), the toe of the fill slope will be approximately 4.5m from the edge of the widened road likely burying the roadside trees – this would likely result in “changes to the resources” and warrants further investigation; this modification to the roadway will also impact installation of the collector system – has this been considered?
- Please confirm that the individuals designated to complete the structural analysis of the identified Heritage features have appropriate professional designation and experience.

### **Section 2.14 – Drainage Grading and Fencing**

- Commits to sharing documents produced for MOE with Loyalist. Proponent is committed, by RUA, to preparation of “A plan to evaluate and mitigate impacts on grading, drainage, drainage facilities and fencing;” Sharing reports that have been submitted to MOE does not satisfy this commitment. The Township’s concerns regarding concentration of sheet runoff and adequacy of outlets must be addressed.

- Fencing in the road allowance may be moved back to property line – locations need to be indicated on construction drawings.
- Commits to ensuring erosion and sediment controls “are constructed as per the contractor’s engineered plans” – should be as per the APPROVED plans

### **Section 2.17 – Electrical and Phone Interruptions**

- Township to be included in notifications immediately and directly

### **Section 3 – Communications Plan**

- The communications plan, as presented, is lacking in detail. As a minimum, proponent should summarize all of the commitments for contacts and notices made in chapter 2.
- 1-800 number should be included in the final Operations Plan

### **Section 3.2 – Complaint Response Protocol**

- The complaints protocol requires some form of transparency so that the Township and residents can be assured that complaints are being dealt with on a timely basis. At the same time, personnel information regarding the complainants must be concealed. The Proponent should propose a reporting function that satisfies these objectives.
- The complaint form should include proposed actions to prevent the same complaint from occurring again
- The plan should confirm that the responses requiring immediate action will receive immediate action

### **Section 4 - Public Safety Plan**

#### **Section 4.1 – Emergency Services**

- Second bullet should refer to “single lane closure” rather than “single road closure”
- Emergency services should not have to contact the Contractor in an emergency
- Emergency services should not and will not be directing traffic
- What radio equipment will project personnel have? Truck mounted? Handheld? Is there a possibility they may be unreachable if they are away from their vehicle? Or otherwise?
- Each site on the island must be assigned an identification number and shown on a map – this is an interim measure until building permits are issued and civic addresses assigned

## Section 5 – Operations Plan Evaluation and Revision

- This would be a good place to note the process for approval of the Operations Plan. The plan will be presented at a public meeting and revised afterwards prior to submission to Council for approval.

### Schedules

#### Schedule 02 – Traffic Management Plan

- Commitments made in this plan are not always repeated in the operations plan. For example, 3.3.2 discusses reduced speed zones; 3.3.14 discusses snow removal – these commitments do not appear in Operations Plan
- 3.3.2 – Simultaneous road closures will not be permitted and deliveries of major components will be planned to avoid active road closure detour routes – deliveries of major turbine components on active detour routes should not be permitted and deliveries of large loads should be limited to what is required for activity that caused detour.
- 3.3.12 – a mobile speed tracking system will be utilized – this is an important point and should be repeated, for emphasis, in the operations plan. The unit employed should be able to capture speeding data and this should be available for review by township.
- Figure 2: It is unclear how TC-10BL and TC-10 BR will be effective in detouring vehicles on South Shore Road when there are no alternative roads for vehicles to turn onto. Will there be the ability for vehicles to turn around should they get to the road closure point?
- An access road to S26 and S30 is to be constructed adjacent to Marshall 40 Foot road. Signage in this area must make it clear to drivers which road is a private access road. The construction drawing provided (MR218) seems to indicate that the radius for the access road overlaps with the intersection of Marshall 40 Foot Road and Front Road. This is not an acceptable construction design. Details are apparently on Sheet C213-ENT which was not provided.
- Section 3.3.10 It is mentioned that road restriction notice signs will be placed a minimum of one week prior to lane or road closures. If the road construction schedule changes, these signs should be removed immediately to avoid signs erroneously indicating a road or lane close that has been rescheduled.
- Section 3.3.12 and Section 3.3.13 These sections mention traffic pattern monitoring but do not indicate who will be monitoring and the frequency of the monitoring. More specific details are required regarding the monitoring task.
- Drawing MR231 indicates a new roadway will be constructed joining Concession Road 2 and Stella 40 Foot Road. There is reference to drawing MR300, which has not been provided, so details concerning this newly constructed roadway appear to be missing. Is this for construction traffic only? How will local vehicles be prevented from using this roadway?

#### **Schedule 04 - Site Orientation**

- This is well written but it is very generic. It requires more details specific to this project.
- Slide 41 has 7 bullets regarding the Traffic Management Plan and closes with “Refer to Traffic Management Plan for additional information.” It is doubtful that most employees would have access to the Traffic Management Plan. Specific commitments made in the operation plan should be conveyed to the employees, such as:
  - The location of the school and commitment to clear of, location of bus routes commitment to stay clear of before and after school.
  - Commitment to stay off ferry and to avoid ferry traffic
  - Commitment to slow down for cyclists
  - Commitment to pull over and stop, back up if necessary, for agricultural traffic
  - Commitment to have regard for heritage features such as stone fences, note that trucks may need to slow down.
- All safety measures committed to in the Operations Plan and the Traffic Management Plan need to be carried over into this document.

#### **Schedule 06 – Renewable Energy Approval Condition M**

- Schedule H deals only with construction runoff, erosion and sediment, and does not deal with permanent changes to drainage patterns. This is not a drainage plan as required by the RUA.

#### **Schedule 08 - Public Safety Plan**

- This document needs to be reviewed for discrepancies with TMP, Operations Plan and Communications Plan.
- Emergency Response - Emergency response times can be impacted by construction activities and made worse by poor conditions on alternate routes. The contractor must ensure adequate maintenance of alternative emergency response routes. The condition of alternative routes must be inspected before any construction activity that has the potential to block, or partially block the road allowance is commenced – work should not commence until the good condition of alternate routes has been confirmed.

#### **Schedule 09 - Emergency Response Plan**

- The title on this document is Emergency Response and Communication Plan, but this is not a communication plan as envisioned by the Road Use Agreement.
- This document was previously reviewed by AECOM (letter dated May 19, 2016). The following items remain outstanding:

- Maintenance of emergency routes – has not been addressed in either of the operations plan or this plan.
- Windlectric has not addressed the Fire Chief's concern regarding the need for foam fire suppressants.
- All appendices – there are still many gaps in contact information (i.e. the term TBD is used extensively)
- Appendix A – the organizational charts are not clear on the notification process for emergencies and decision making.

### **Schedule 11 - Public Road Modifications**

- Comments on public road modifications have been provided with comments for Pre-construction Plan

### **Schedule 13 - Arborist's Collector System Tree Impact Assessment**

- Arborist looked at tree impacts due to collection system installation. Tree impacts due to road improvements, turbine movements and access road construction have not been assessed by arborist, tree removals have not been provided by Algonquin Power.
- It is difficult to imagine a collector trench in the vicinity of St. Paul's Church that does not significantly impact tree roots. We need more detailed drawings of trench dimensions and locations before we can accept this assessment.
- The arborist should also look at tree impacts due to trimming for turbine movements
- The most recent (March 28, 2017) Operations Plan submission has included a new memo by the arborist in Schedule 13, but this memo does not contain all of the information that was in the previous memo (October 13, 2016). Both memos, along with the additional information requested, should be in the final report.

### **Schedule 14 Road Closings and Recommended Detour Routes**

- AMHST-240a is going to cause concern because "typical working area" appears to be in an area where Windlectric committed to no construction.
- Detours include use of Emerald 40 Foot Road. Windlectric should acknowledge that this is not a year-round road.

### **Schedule 17 – Cultural Heritage Monitoring Program**

- Schedule must be updated to include the sites identified in the Road Use Agreement
- The heritage landscape for St. Paul's Presbyterian Church includes the tree line on Stella Forty Foot – the collector line must be installed in a manner that protects the tree lines on both sides of the road; the Operations Plan must be updated to include this

### **Schedule 18 – Form of Daily Public Road Inspection Report**

- This form would be greatly improved if there were cells for the inspector to input observations for each road on Amherst Island. The inspection of every road is not required every day (only roads used that day), so a record of which roads were inspected is important.

### **Schedule 19 – Trees to be Removed**

- This schedule appears redundant given the new memo from the arborist only addresses tree removal or damage as it relates to construction of the underground electrical collection system.

### **Schedule 20 – Delivery Routes for Turbines**

- This is a new schedule referenced in the March 28, 2017 submission, but it has not yet been submitted for review.

### **Geotechnical Comments**

- The soil encountered in the boreholes were classified using the Unified Soil Classification System as well as MTO methods, which are the methods commonly used in practice.
- Particle size distribution tests of the granular base/sub-base materials indicated an average fines content of 18.5% that exceeds the maximum allowable fines content of 8% (OPSS 1010).
- The subgrade (native soil) underlying the granular materials are mainly sandy clay, clay with sand and silty clayey sand with the characteristics that cannot provide sufficient support to the road base and anticipated traffic loading.
- The method adopted in the evaluation of existing road and for design of new road is based on AASHTO Guide of Design of Pavement Structure (1993) which is one of the standard methods of pavement design in our practice.
- The report concluded that the current conditions of the existing roads (except a portion of Front Road) will not be able to support the anticipated future construction traffic.
- What are the specific improvements planned by Windlectric to address the roadway structural deficiencies identified in the geotechnical reports?

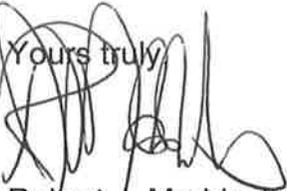
### **Electrical Comments**

- The information related to electrical work in trenches, Figure E-406, was not included in the submission

## Summary Comments

When Windlectric has addressed the Township's written concerns related to the Pre-construction Study, this may result in modifications to the Operational Plan. The Township will expect an opportunity to review, request and/or approve any amendments to the Operational Plan in a reasonable time frame.

We look forward to receiving a future version of the draft Operations Plan which addresses these important points.

Yours truly,  


Robert J. Maddocks  
Chief Administrative Officer

CC: Mayor Lowry and Members of Council  
David C. Thompson, Director of Infrastructure Services  
David MacPherson, Public Works Manager  
Murray Beckel, Director of Planning and Development Services  
Chris Raffael, Senior Environmental Officer, MOECC  
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