

SCHEDULE 09 – Emergency Response Plan

# Amherst Island Wind Project Emergency Response Plan

c/o Algonquin Power  
354 Davis Road, Oakville, ON, L6J 2X1

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- This Emergency Response Plan will be reviewed on a regular basis and updated as appropriate

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## Definitions

**On-Site Construction Manager** – Third party general contractor involved in the construction of the Amherst Island Wind Project; referred to in the plan as “Construction Manager”.

**ERP** – Emergency Response Plan.

**Facility** – Amherst Island Wind Project.

**Loyalist Township Emergency Services** – Loyalist Township Emergency Services (including the Amherst Island Station).

**Fire Safety Consultant** - Third party competent and qualified individual knowledgeable in fire safety and prevention.

**Fire Watch** – Individual(s) assigned to observe metal grinding work activity to ensure no sparks cause a fire.

**Hot Work** – Any process that can be a source of ignition when flammable material is present or can be a fire hazard regardless of the presence of flammable material in the workplace. Common **hot work** processes are welding, soldering, cutting and brazing.

**Operation Manager** – Management representative of the third party Operation and Maintenance Contractor; referred to in the plan at the “Operations Manager”.

**Operator(s)** – Representative(s) of a third party qualified Operation and Maintenance Contractor.

**Severe Thunderstorm** - A thunderstorm can be classified as severe when one or more of the following hazardous conditions occur:

- a. Winds of 26 m/s (78 kph +) or greater
- b. Hail  $\frac{3}{4}$ " or larger
- c. Lightning
- d. Tornados

**Severe Weather WATCH** - A WATCH is issued by Environment Canada for the area when weather conditions indicate that severe thunderstorm conditions are possible.

**Severe Weather WARNING** - A WARNING is issued by Environment Canada for the area when severe thunderstorm hazardous conditions are imminent or are occurring as reported by a reliable source, or detected by radar.

**Site Manager** – Algonquin Power Operation Management Representative(s).

**Site Safety Representative** – Employee hired to inspect safety work practices during work activities.

**Tornado WATCH** - A WATCH is issued by the Environment Canada when conditions that can produce tornadoes are expected to develop.

**Tornado WARNING** - A TORNADO WARNING is broadcast when an actual tornado has been detected. The warning will tell you the last known location of the tornado, and if possible, it's speed and direction of movement.

## **Introduction and Project Description**

The Amherst Island wind project (“Facility”) is a 75 MW wind project located on private agricultural land on Amherst Island, located in Loyalist Township in the County of Lennox and Addington, in eastern Ontario.

The work is comprised of construction of project infrastructure for 26 Siemens wind turbines.

The project includes a 34.5 kilovolt (kV) underground and/or overhead electrical power line collector system, fibre optic data lines from each turbine and/or wireless technology for the communication of data, a transmission line, truck turnaround areas, a submarine cable, an operations and maintenance building, permanent dock, a substation, a switching station, an un-serviced storage shed, one connection point to the existing electrical system, cable vault areas, meteorological tower(s) (met tower(s)), access road(s) to the met tower site(s), and turbine access roads with culvert installations, as required, at associated watercourse crossings.

Temporary components during construction may include staging areas for the turbines, access roads, met tower(s), collector lines and transmission line as well as crane paths, a temporary dock, site office(s), batch plant, central staging areas, and associated watercourse crossings. The electrical power line collector system will transport the electricity generated from each turbine to the substation, along the submarine cable to the mainland, and then to a switching station located near an existing Hydro One Networks Inc. (HONI) 115 kV transmission line.

## **Emergency Overview**

An emergency is defined as “A situation or an impending situation that constitutes a danger of major proportions that could result in serious harm to persons or substantial damage to property and that is caused by the forces of nature, a disease or other health risk, an accident or an act whether intentional or otherwise.”

This Emergency Response Plan (ERP) is intended to advise on-site personnel, contractors and project landowners on the procedures they must follow and how to communicate in the event of an emergency situation related to the Amherst Island Wind Project (the “Facility”) during the construction and initial operations phase (pre-commissioning) of the Facility. This ERP is to be used by the Construction Manager and Operations Manager, or designate, of the Amherst Island Wind Project, in coordination with Loyalist Township and the County of Lennox and Addington emergency services (i.e. Fire / Police / Paramedics) as a guideline for emergency response during the construction and operations phase of the Facility.

This ERP has been developed in consultation with Loyalist Township, the County of Lennox and Addington, and will be implemented prior to the start of construction and does not replace provincial regulations. During construction and operation the contractors and operator will adhere to provincial Ministry of Labour regulations (including safety, for example: complying with construction excavation safety requirements (if required - fencing)).

## **Facility Monitoring**

During the construction phase of the project, the Facility area will be monitored by security when work crews are not on site. Once turbines become operational, the SCADA (Supervisory Control and Data Acquisition) software will monitor all turbines for any variances in operation. All construction work areas will be restricted to authorized personnel only including installation of gates at all private access road entrances.

## **Emergency Communications**

If there is an emergency, first responders (Police, Fire, and Paramedics) will be contacted first via the 9-1-1 Operator or Loyalist Township Emergency Services can be contacted directly at 613-548-4001. Emergency responders will then be expected to respond following their established procedures and guidelines.

If a potentially unsafe situations arise, the person observing the situation must intervene and stop the activity and contact their direct Supervisor or designate.



## **Emergency Response Plan Holders**

This plan will be held both in the Construction Manager and Operation Manager, or designate, Facility trailers. In addition:

- A copy of the plan shall be sent to the Loyalist Township Emergency Services Office;
- A copy of the plan will be placed in each contractor work truck; and
- A copy of the plan will be placed in the on-site operations and maintenance building.

## **Signage**

Permanent emergency contact signs will be posted throughout the Facility, and emergency contact numbers (including turbine identification numbers) will be established as communicated to with Loyalist Township, the County of Lennox and Addington.

## **Emergency Notification Procedure**

The following emergency procedures shall be followed in the event of an emergency or operational exceedance that occurs at the Facility during construction or pre-commissioning:

1. Stop work and “freeze” the scene
2. Notification of Direct Supervisor or Construction Manager or Operation Manager:
  - a. Immediately contact the nearest management representative and describe the situation, including:
  - b. The nature of the emergency such as a fatality, major illness (i.e. heart attack, not breathing, unconscious, etc.), or minor injury (i.e. twisted ankle, minor cuts, etc.);
  - c. Potential risks of injury to persons at or near the site;
    - i. Potential risks to the environment;
    - ii. Potential risks to property; and
    - iii. The need for personnel and other resources to respond to the emergency.

3. Identify the location of emergency by referring to the closest turbine, structure or road junction.
4. The Construction Manager or Operation Manager, or designate, will notify on-site personnel, including any visitors, of the emergency via an alarm system, by telephone, two-way radio or sirens, and then call 9-1-1 or Loyalist Township Emergency Services can be contacted directly at 613-548-4001. The Construction Manager or Operation Manager, or designate, will describe the emergency to the 9-1-1 Operator or Loyalist Township Emergency Services can be contacted directly at 613-548-4001. For non-urgent incidents the Construction Manager or Operation Manager, or designate will coordinate the transportation of the person to the hospital and notify the hospital of the incoming patient.
5. If the Construction Manager or Operation Manager, or designate cannot be immediately reached then employees will call 9-1-1 or Loyalist Township Emergency Services can be contacted directly at 613-548-4001.
6. The Construction Manager or Operation Manager, or designate, will notify the Algonquin Site Manager and the Algonquin Safety Representative.
7. If required, the Construction Manager or Operation Manager, or designate, will designate an employee to go to the nearest access point to meet the Loyalist Township Emergency Services and escort them to the location of the accident.
8. If required, to prevent further potential injury, the Construction Manager or Operation Manager, or designate, will evacuate the Facility area where the accident occurred.
9. The Construction Manager or Operation Manager, or designate will identify any need for security measures at the Facility during the emergency, and designate one person to coordinate these measures.
10. Any excessive delays or delay resulting from an unforeseen circumstances that blocks any roads must be relayed to the Loyalist Township Emergency Services department immediately.

In addition to the above noted emergency notification procedures, the Municipal and Provincial Officials noted below will be contacted by the Construction Manager or Operation Manager, or designate, via phone or in person within four hours or sooner of the occurrence of an emergency or operational exceedance. (See Appendix D and E for contact numbers).

An incident report on the emergency will be submitted to the same organizations within 24 hours of first notification and on an ongoing basis until the incident is resolved:

- The Ministry of Environment (including the Spills Action Centre, if applicable)
- Lennox and Addington County (Designated Representative)

- Loyalist Township (Designated Representative and Public Works Manager)

## Emergency Preparedness

The Construction Manager and Operation Manager, or designate, will ensure the following preparatory measures are undertaken during construction and pre-commissioning:

This Emergency Response Plan will be included in the construction contractor's orientation program.

Contractor will ensure that any open excavation are clearly identified and barricaded so the safety risk is minimized.

- Provide all workers and work vehicles with a copy of emergency numbers and emergency procedures to be carried and/or easily accessed within vehicles at all times.
- Provide all workers with location of muster point for emergency situations. (See Appendix G).
- Provide signage at each turbine location showing the turbine site ID number.
- Review training requirements for all personnel involved in the project, including contractors and subcontractors.
- Review the contents of this plan with all personnel involved in the project to familiarize them with their duties and responsibilities.
- Ensure all workers are aware of the communication devices for emergencies, including emergency horns, cellular phones, two-way systems, etc.
- Ensure all workers know the location of the turbine they are working at. (See Appendix H – Detailed Site Plan Map)
- Conduct practice drills to train on-site personnel to carry out the correct response to an emergency condition.
- Ensure all adequate safety equipment is available on-site and all personnel are using the appropriate Personal Protective Equipment (PPE).
- Ensure all workers on site have WHMIS training.

## Emergency Preparedness Training

Training is an integral part of the emergency preparedness and response program at this Facility, and it is the responsibility of the Construction Manager and Operation Manager, or designate, to ensure that all personnel (administrative or field, permanent or temporary) are properly trained on this ERP.

At this Facility, the ERP is initially presented to each employee during their site orientation and again if/when the plans or employees' responsibility changes. It is the responsibility of each employee to become familiar with the Facility, learn the evacuation routes, muster and shelter areas, and to attend all safety training events.

When required, and as a supplement to the training, the Construction Manager and Operation Manager, or designate, will conspicuously post pertinent information to ensure all employees and/or site visitors can safely respond during an emergency. The Construction Manager and Operation Manager, or designate, will make this ERP and other health and safety related information available to all site employees.

Training provides site employees with information and guidelines to assist them in recognizing, reporting and controlling hazards and risks. Employee training is provided at no cost to the employee and must be conducted during the employee's normal work week.

### **Emergency Drill Training**

Mock Emergency Drills will be completed during the early stages of construction and again during the early stages of operations to review the effectiveness of the ERP so that any deficiencies in the plan can be identified and corrected.

### **Emergency Response**

The Construction Manager (construction phase) or Operations Manager (operation phase), or designate, is designated as the "Emergency Response Coordinator" during an emergency situation and will be responsible for ensuring that all contractors, staff, on-site visitors and others adhere to the appropriate emergency response procedures as stated in this ERP.

Any visitor present at the site must report to the Construction Manager or Operations Manager, or designate.

In the event of an emergency, contractors, project participating landowners and others who may be present at the site are responsible for immediately notifying the Construction Manager or Operations Manager, or designate, who will then call 9-1-1 or Loyalist Township Emergency Services can be contacted directly at 613-548-4001. If the Construction Manager or Operations Manager, or designate, cannot immediately be reached call 9-1-1 or Loyalist Township Emergency Services can be contacted directly at 613-548-4001.

All personnel who work in or on the wind turbines during the construction or operation of the project will undergo training to ensure a high level of safety competency and an understanding of the protocols to be followed in the event of an emergency situation.

The Construction Manager or the Operation Manager, or designate, will designate competent and qualified personnel, or hire a third party competent and qualified contractor trained in High Angle and Confined Space Rescue procedures to assist coworkers who are injured or are in dangerous situations and are unable to utilize the self-rescue procedures. Such training will occur prior to the commencement of the construction and operation phases of the Facility.

### **Emergency Events and Response Protocols**

Emergency events impacting the Facility may include:

- Fire / Explosion
- Road Safety
- Injury / Trauma
- High Angle Rescue / Confined Space Rescue
- Structural Damage Chemical - Environmental Spill
- Severe Weather
- Site Evacuation

### **Fire Hazard and Prevention**

Possible fire situations include grass fires due to lightning, failure of overhead lines, electrical situation in the turbine, and construction related accidents such as sparks from cutting operations and vehicular operation over dry vegetated areas. The most common Hot Work will be grinding, and will be overseen by a Fire Watch. Construction and contractor personnel shall follow all Hot Work procedures at all times. Personnel shall be made aware of other risks and rules upon site orientation, which is required prior to being allowed to work onsite.

In order to minimize fire risk, the following measures will be implemented:

- **Personnel (contractor) training** – All site personnel will be trained to make them aware of the dangers associated with fires, and how to respond in case of a fire.
  - Fire safety training, including the use of Fire Extinguishers, must be presented by either a competently trained Site Safety Representative or a Fire Safety Consultant.
  - Fire safety training must be documented using appropriate safety training attendance record forms, and filed in the Site Safety Records.

- **No open fires** – There are no exceptions to this rule.
- **Hot Work** – To be carried out in accordance with approved procedures and within graveled areas only. Each contractor shall ensure suitable fire extinguishing equipment is readily available where welding, cutting, burning or soldering is being performed.
- **Fire-breaks** – Each access road will be at a minimum 10 feet wide with no vegetation. Each turbine location shall have an area to allow the assembly of rotors and erection of the turbine without the need for vehicles to travel off-road. This area will be rolled flat with the majority of significant vegetation removed. The road shoulders will most likely be returned to farmland upon completion of the Facility construction. Each turbine and transformer shall be left with a minimum 5-foot wide gravel path surrounding them.

In order to suppress possible fires, the following measures will be implemented:

- **Portable Fire Extinguishers** – Must be held on site by individual sub-contractors. Each site vehicle shall have at least one (1) ten (10) pound ABC fire extinguisher. No foam fire suppressants or fire extinguishing equipment is currently planned for use during the construction period, nor will they be used unless prior approval has been obtained from the Loyalist Township Fire Chief. See section(s) to follow regarding use of foam during ongoing operation of the turbines.
- Containers used for flammable/ combustible material storage shall be of CSA Approved material and construction to ensure containment of the contents, and shall be properly labeled.
- All ignition sources are prohibited within 25 feet of fuel supplies.
- Smoking is prohibited while refueling equipment.
- **Off-Site Loyalist Township Emergency Services Support** – Any fire not immediately contained and/or suppressed will require a 9-1-1 call for Loyalist Township Emergency Services support or Loyalist Township Emergency Services can be contacted directly at 613-548-4001.

In order to suppress possible fires once the wind turbines are operational, the following measures may be implemented:

- The wind turbines are not supplied by the original equipment manufacturer with any type of factory-supplied fire suppression system; they are equipped with fire detection and notification instruments and systems other than appropriately rated and sized and manually-operated fire extinguishers.

- The wind turbine service technicians are trained in the proper use of the fire suppression and extinguishing hardware supplied with the turbine unit.
- As prescribed by the Ontario Fire Marshall, any fire in a turbine should be allowed to burn itself out while staff and fire personnel maintain a safe area around the turbine and protect against the potential for spot ground fires that might start due to sparks or falling material.
- Large quantities of flammable liquids will not be stored on site; either at the wind turbine nor at the project's Operation & Maintenance building.
- The turbine original equipment manufacturer will also act as the long-term service entity on-site for the wind turbines; they are contractually required to supply and maintain their wind turbines in compliance with the Ontario Fire Code, including Part 4. Foam banks or foam-based fire suppressing equipment is not planned for the project's wind turbines.

### **Emergency Response Protocol – Fire/ Explosion**

- Evaluate further risks of explosion; evacuate area in case of doubt.
- If you are trained in fire safety, and the fire is small, locate extinguisher gear and attempt to extinguish the fire, if possible. Do NOT put yourself at risk.
- If safe extinguishing is not possible, then immediately evacuate the building or structure if inside and clear the area of all personnel, and if possible, vehicles and flammables.
- Immediately notify the Construction Manager or Operations Manager, or designate, who will then call 9-1-1 to activate the Loyalist Township Emergency Services Call or Loyalist Township Emergency Services can be contacted directly at 613-548-4001 and give location of fire. If the Construction Manager or Operations Manager, or designate, cannot immediately be reached call 9-1-1.
- Loyalist Township Emergency Services Inform other applicable management personnel.
- Secure the area and direct traffic, as applicable.
- Await the arrival of the Loyalist Township Emergency Services.

### **Emergency Response Protocol – Road Safety**

- Construction staff or Algonquin personnel discover a road accident involving the public vehicle or construction vehicle(s):
  - Immediately contact Construction Manager or Operation Manger, or designate

- If the situation is an immediate threat to life and health call 9-1-1 or Loyalist Township Emergency Services can be contacted directly at 613-548-4001.
- Traffic management safety mitigation please see Traffic Management Plan section 5.3

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### **Emergency Response Protocol – Injury/ Trauma**

- Remove any hazards. Stop tools and machinery.
- Summon a First Aid Attendant.
- First aid supplies including AEDs will be in the Construction trailer and Operation and Maintenance building and a traveling first aid kit will be available in personnel vehicles
- Treat any life threatening injuries and care for other injuries.
- Immediately notify the Construction Manager or Operations Manager, or designate, who will then call 9-1-1 or Loyalist Township Emergency Services can be contacted directly at 613-548-4001 to activate Paramedics, if necessary. If the Construction Manager or Operations Manager cannot immediately be reached call 9-1-1 or Loyalist Township Emergency Services can be contacted directly at 613-548-4001.
- Inform other applicable management personnel

### **Emergency Response Protocol - High Angle / Confined Space Rescue**

- Remove any hazards. Stop tools and machinery.
- Bring injured person to ground level or a safe area for evaluation.
  - Construction – contractor shall maintain competent and qualified representative(s) responsible for this action on site
  - Operation – service contractor(s) shall use competent and qualified technicians or call in competent Third Party High Angle Rescue contractors, prior to work commencing(See Appendix D)
- Treat any life threatening injuries.
- Immediately notify the Construction Manager or Operations Manager, or designate, who will then call 9-1-1 or 613-548-4001 to activate the Loyalist Township Emergency Services and/ or Paramedics, if necessary. If the Construction Manager or Operations Manager cannot immediately be reached call 9-1-1.



- Inform other applicable management personnel

### **Emergency Response Protocol – Structural Damage**

- Evaluate further risks; evacuate area in case of doubt.
- Remove any hazards (stop work).
- Immediately notify the Construction Manager or Operations Manager, or designate who will then call 9-1-1 to activate the Loyalist Township Emergency Services and/ or Paramedics, if necessary. If the Construction Manager or Operations Manager, or designate cannot immediately be reached call 9-1-1 or Loyalist Township Emergency Services can be contacted directly at 613-548-4001.
- Secure the area and direct traffic as applicable.

### **Environmental Spill**

#### **Spills Response - Petroleum, Oil, Lubricants and Chemicals**

Federal and Provincial legislation place the responsibility for spill prevention and mitigation on the owner or controller of products or materials that can be spilled.

Spills are defined under these Acts, but not limited to:

- Environmental Protection Act
- Fisheries Act
- Gasoline Handling Act
- Ontario Pesticides Act
- Ontario Water Resources Act
- Transportation of Dangerous Goods Act.

Spills can include:

- Spills from containers including drums and tanks.
- A spill resulting from breaks in hydraulic or transfer hoses or piping.
- Spills resulting from traffic accidents and fire fighting.

Various lubricants, oils and fuels will be required during the Facility operations phase. Although unlikely, any leakage of oils from the turbines would be captured within the turbine itself and would be cleaned up using spill containment kit, this kit will contain

spill absorbent pads and/ or socks. The absorbed material will be disposed of at an appropriately regulated facility.

In accordance with the above noted Acts, the Operator has an obligation to:

- Prevent, eliminate or remediate an adverse affect resulting from a spill.
- Report the spill to the Ontario Ministry of the Environment - Spills Action Centre.

### **Material Safety Data Sheets**

Each contractor is required to maintain listings of all materials that they are using which may be flammable or hazardous to health. Therefore, refer to each contractor for the most comprehensive and up-to-date listing, together with the Material Safety Data Sheets for each one. The location of these within each contractor's trailer should be clearly indicated.

### **Spill Prevention**

The following preventative measures will be implemented at the Facility:

- The delivery, storage, use and disposal of these hazardous materials will be handled only by trained personnel in accordance with government laws and Regulations.
- To prevent accidental spills, liquid wastes will be labeled, handle and stored in secure areas to ensure containment in the event of a spill.
- To ensure proper storage and disposal of waste, and to prevent contamination, the Operator will be required to remove all waste materials during maintenance activities. There will be a systematic collection and separation of waste materials within on-site storage areas and in weather protected areas.
- Refueling and equipment maintenance would occur in designated areas and in compliance with TSSA regulations.
- Spill kits will be provided on-site during maintenance activities.
- The transport of fuel will be conducted in compliance with the Transportation of Dangerous Goods Act.
- Mobile fuelling trucks will be used to minimize the requirements for onsite storage of petroleum, oils and lubricants. Fuel drums will be stored upright on a deck with drip trays for the collection of spilled substances.
- On-site petroleum, oil and lubricant storage will be in a ventilated, lockable steel container, on level terrain, at least 30 m from any water body or wetland. The

container will be equipped with galvanized steel drip trays for the collection of spilled substances.

- Spill decks will be used for transferring products to smaller containers.
- Fire extinguishers and a spill kits will be located near petroleum, oil and lubricant storage areas.
- “No Smoking” signs will be displayed at all petroleum, oil and lubricant storage sites and refueling areas. Smoking will not be permitted within 50 metres of these areas.
- On-site signage will indicate the location of designated smoking areas.
- Equipment used will be mechanically sound with no oil or gas leaks. The Contractor or Operator shall undertake frequent inspection of equipment and repair leaks immediately.
- Fuelling, storage and servicing of vehicles and construction equipment is not allowed within 30 m of a watercourse, drainage ditch, areas with a high water table, or exposed and shallow bedrock.
- No equipment shall be washed within 30 m of a watercourse.
- All storage and distribution/dispensing areas will comply with the Ontario Fire Code (Fire Protection and Prevention Act)
- As described in the Construction Plan Report the above ground storage tanks would be at, a minimum, steel double walled for leak protection. The tank(s) will also be placed in a 20 mil blended linear polyethylene lined secondary containment basin which can hold a volume of 125% of the volume of the largest tank.
- All tanks shall be protected from collision damage by the use of snow fencing to alert operators, or by the placement of barriers to impede equipment movement near the tank.
- Handling and fuelling practices shall ensure that contamination of groundwater will not occur.
- Fuel storage areas and transfer lines shall be clearly marked or barricaded to prevent damage from vehicles.
- Drum storage areas shall be marked or fenced with temporary fence to avoid impacts.
- All stained soil resulting from the use of chemicals or fuels shall be cleaned-up and disposed of prior to leaving the work area.
- Waste oils and lubricants will be retained in a closed container, and disposed of in an environmentally acceptable manner.

- Only equipment that is not easily transported will be refueled on site. All other vehicles and equipment will be refueled at a central fuelling station.
- When refueling equipment, trained operators will:
- Use designated fuelling locations where practical
- Use drips trays
- Use leak free containers and reinforced rip and puncture proof hoses and nozzles
- Be in attendance for the duration of the procedure
- Seal all storage container outlets except the outlet currently in use.

### **Emergency Response Protocol - Spills**

Immediately upon a release or a spill, steps should be taken to implement procedures for containment, control and cleanup of the spill, as follows:

- In the event of a spill, and only if it is safe to do so, stop the spill and remove all ignition sources.
- Immediately notify the Construction Manager or Operation Manager, or designate, who in turn will notify other regulatory authorities, as required.
- In instance of a reportable spill, call the Ministry of Environment Spills Action Center. (See Appendix D) as well as Loyalist Township.
- Ensure the safety of all individuals in the area and evacuate the area as necessary.
- Secure the area.
  
- Contain the spill either by constructing containment dikes, by using spill absorption materials, or by other appropriate methods.
- If possible, identify the material released.
- If the material can be identified, use the Material Safety Data Sheet (MSDS) for detailed procedures.
- If the release is an airborne vapor spill, gas or a large uncontrollable spill of liquid, call 9-1-1 to request Loyalist Township Emergency Services or Loyalist Township Emergency Services can be contacted directly at 613-548-4001.
- In most cases, clean-up procedures should start as soon as possible to prevent further spread of the substance into flowing water, ground water or sewer systems.

- For small spills or spills of vehicle fluids, follow the guidelines and procedures set forth in the Material Safety Data Sheets (MSDS) for proper clean up and disposal.
- Arrange for clean-up and proper disposal of all collected waste materials at an authorized regulated facility.
- In instances where remediation is required, call Quantum Murray or
- Dedicated Environmental Services Inc. (See Appendix D).
- Take all necessary precautions to ensure that the incident does not reoccur.
- The Operations Manager shall submit a written report to appropriate regulatory authorities as required by applicable legislation

### **Emergency Response to Scheduled Maintenance**

Scheduled maintenance occurs not less than every 6 months and includes visual inspection, grease maintenance, mechanical and electrical maintenance. The Operation Manager will provide the Loyalist Township Emergency Services with a detailed schedule of maintenance activities prior to commencing the operational phase of the Facility. The Township will be provided, as information only, with a regular maintenance schedule at the beginning of each calendar quarter. Unplanned maintenance could occur at any moment and the planned schedule may be altered because of weather conditions. The Operation Manager will work to keep the Township updated.

Any possible emergency events and subsequent response would be identical in nature to those identified in above response protocol sections.

### **Severe Weather**

A variety of severe weather conditions and/or natural disasters may affect the Facility, including:

- a. Severe thunderstorms, hail and heavy rains
- b. Lightning strikes
- c. Tornadoes

### **Thunderstorms**

During the spring and summer months (May through October) thunderstorms have the potential for producing damaging winds, hail, lightning and tornados.

The Construction Manager or Operation Manager, or their designated representatives, are responsible for monitoring area weather, and specifically Environment Canada

Severe Weather Watches and Warnings and related emergency broadcasts. The Construction Manager or Operation Manager, or their designated representatives, shall announce a temporary work interruption, site evacuation, or other emergency action, if deemed necessary.

## **Lightning**

Any thunderstorm can produce lightning. Lightning can strike people directly or it can start fires. Lightning will usually strike the highest object in the area of the discharge and it is particularly attracted to metal. The highest object might be a wind turbine, a met tower, a crane, or a grain silo. It can also be a person standing in an open field.

## **Lightning Weather Alert Service - Telvent**

Unlike most weather phenomena, specific lightning warnings are not issued by the National Weather Service. The Site Manager subscribes to a weather alert service called Telvent. Notification will be sent to site personnel to alert them to any dangerous weather within the site area (80 KM range). Telvent will also send an all clear message when no lightning has been detected in the last 30 minutes, which indicates it is now safe to go back to outside or up tower work. (See Appendix D).

## **Emergency Response Protocol - Severe Thunderstorm and Lightning**

### Wind Site

- Get out of a wind turbine.
- Stop all heavy construction equipment, especially when moving metal components, get out, and seek shelter. (Tractors and other implements having metal contact with the ground are often struck).
- Stop work actions and relocate to the identified muster point. (See Appendix G)
- When there is no shelter, avoid the highest object in the area. If only isolated trees are nearby, your best protection is to crouch out in the open, while minimizing your contact with the ground (do not lie flat), and keeping twice as far away from isolated trees as the trees are high.
- Avoid hilltops, open spaces, wire fences, metal clothes lines, exposed sheds, and any other above ground electrically conductive objects.
- Inform Construction Manager or Operation Manager, and other applicable management personnel, and take census of personnel.
- All personnel remain at muster point until accounted for by Construction Manager or Operation Manager.
- Stay inside and do not venture outside until it is deemed safe to do so (i.e. No lightning with 48 KM of the Facility for at least 30 minutes).

- Do not approach a wind turbine until there has been no lightning within 48 KM of the Facility for at least 30 minutes. Do NOT approach if you hear a hissing or crackling sound coming from the blades. Assess the situation from inside the vehicle.
- Telvent will send the “All Clear” notification to site personnel phones.

### On-site Office Buildings

- Stay away from open doors and windows, stoves, metal pipes, sinks, and plug-in electrical devices including corded phones.
- Shut down and unplug computers, modems, phones, and other valuable electronic equipment.

### Person Struck By Lightning

- Persons struck by lightning receive a severe electrical shock and may be burned; however, they carry no electrical charge and can be handled safely.
- Prompt artificial respiration and/or CPR with an AED can often revive a person without vital signs after being struck by lightning.
- Call 9-1-1 to request Loyalist Township Emergency Services or Loyalist Township Emergency Services can be contacted directly at 613-548-4001.
- Administer first aid.

### **Tornado**

A tornado, is a rotating column of air ranging in width from a few yards to more than a mile and whirling at destructively high speeds, usually accompanied by a funnel-shaped downward extension of a cumulonimbus cloud. Winds of 300-450 kph can occur with the most violent tornadoes.

### **Emergency Response Protocol - Tornado**

- Continue normal activities during the WATCH but be aware of the possibility of tornadoes.
- There is not always an official tornado warning.
- If you see or hear a tornado, or if you are told to evacuate the wind turbine because of a tornado, seek shelter immediately. (See Appendix G for Designated Shelter Locations)
- Inform the Construction Manager or Operation Manager, or designate and other applicable management personnel, and take census of personnel.

- Temporary Office Buildings / Portable Office Trailers are particularly vulnerable to overturning and destruction during strong winds. Tie-downs will generally NOT protect the trailer from a tornado. Occupants should evacuate the office trailer immediately and proceed to the nearest shelter.
- (See Appendix G for Designated Shelter Locations)

### **Evacuation Protocol**

- Stop work actions and relocate to the identified muster point.
- Construction Manager or Operation Manager, or designate, takes census of personnel.
- All personnel and any visitors to the site remain at muster point until accounted for by Construction Manager or Operation Manager, or designate.
- Construction Manager or Operation Manager, or designate, investigates any missing personnel and any visitors to the site.
- Call 9-1-1 to request Loyalist Township Emergency Services or Loyalist Township Emergency Services can be contacted directly at 613-548-4001.

### **Post Emergency Actions and Reporting**

Any incident or accident will be reported to the Construction Manager or Operation Manager, or designate immediately.

The scene of the emergency must be preserved until approval to resume normal operations is obtained from the relevant authorities. These authorities may include local Loyalist Township Emergency Services and authorities with jurisdiction, including the Ministry of Labour. With all emergency events, the necessary paper work/incident forms shall be completed by the Construction Manager or Operation Manager, or designate, in conjunction with any other applicable on-site personnel. Sub-contractors may also wish to report all accidents or incidents with their own company, as required. The Construction Manager or Operation Manager, or designate, will subsequently investigate all reported events.

An accident investigation report shall be submitted to the applicable authorities, as required. Accidents involving the general public, fatalities, or that are considered a threat to public or environmental health shall be reported to the appropriate authorities with jurisdiction, as applicable, including but not limited to:

- Loyalist Township Emergency Services (Police, Fire, Paramedics);
- Ministry of Labour;
- Ministry of Environment.



## **Marine Safety**

### **Barge Activity and Dock Construction**

The contractor must comply with Transport Canada communication protocols when equipment and materials are being transported from the mainland to the island, and used in the waterway. In addition, similar to other marine vessels (recreational and commercial using the northern channel), the marine contracting company must communicate, as per Transport Canada regulations, with the Loyalist Township ferry personnel when approaching the ferry and to not interfere with the ferry's travel when transporting ambulance and fire services in emergency situations.

### **Barge Offload**

Equipment and supplies will be carried to and from the mainland to the Facility by barge.

A barge may be offloaded at the site from 7 am to 8 pm (Monday through Saturday), as dictated by weather and tidal conditions.

The Construction Manager or Operations Manager will schedule offloading personnel to meet the barge on arrival at the site.

The barge will be berthed and secured by trained (Barge Operator or Facility) personnel prior to unloading by trained (Barge Operator or Facility) personnel.

If adverse weather or safety conditions are encountered, such conditions will be reported to the Construction Manager or Operations Manager, or designate. Barge offloading will not commence or will be suspended in the event of severe weather.

To maintain a clean and safe work environment during the unloading of supplies, Facility personnel will follow strict environmental and safety procedures prior, during, and after unloading operations.

### **Barge Offloading - Environmental and Safety Procedures**

Barge offloading activities commence, require strict procedures to ensure the health and safety of unloading personnel, while reducing or eliminating any potential impacts on the environment.

The Barge Operator and Construction Manager or Operations Manager, or designate, will review weather conditions before offloading activities commence, to identify if severe weather may be expected using Environment Canada's web site or by calling

Environment Canada's Marine Forecasting service. (See Appendix D for contact information). This service provides the most up-to-date information, and also provides information beyond the 24-hour period.

The Construction Manager or Operations Manager, or designate, will take steps to reduce or eliminate any potential impacts to the marine environment.

Safety is paramount during offloading procedures. All unloading personnel are required to wear approved safety equipment (steel-toed boots, high visibility vest) and life jackets (as per the appropriate regulation) must worn by waterside personnel.

The dock will be equipped with safety equipment such as a ladder, life preserver rings (throw rings), lighting, and an emergency alarm.

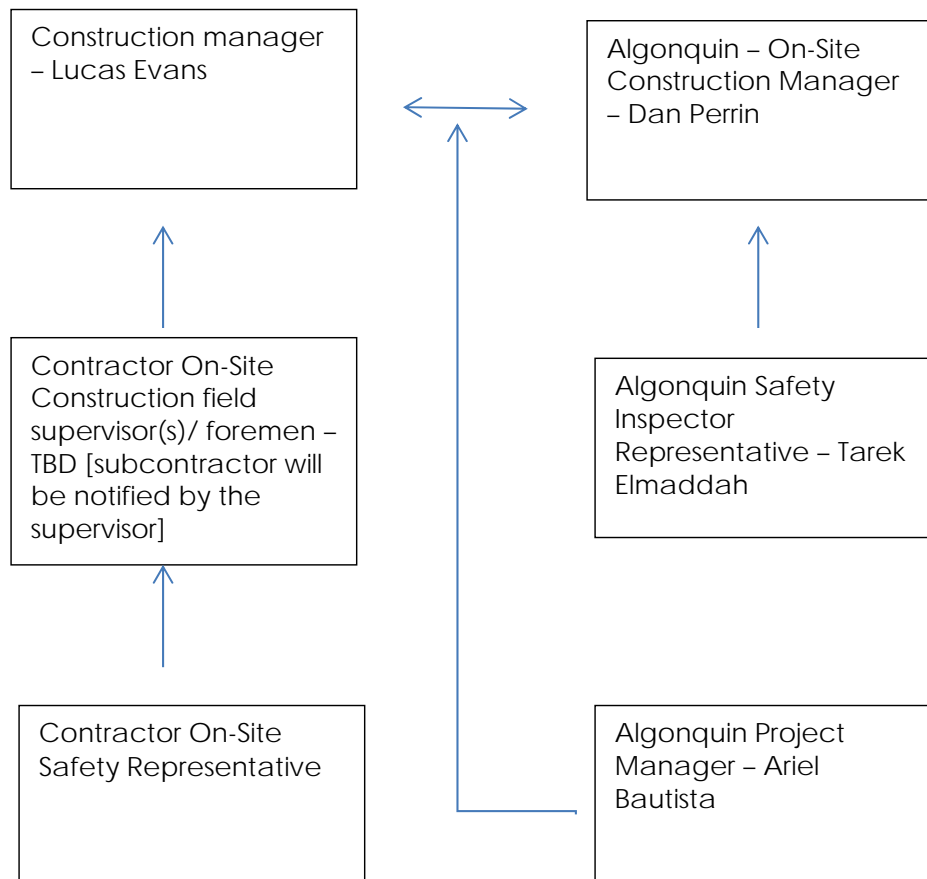
Equipment will be offloaded at low speed, by properly trained operators, and with the use of safety and directional "spotters".

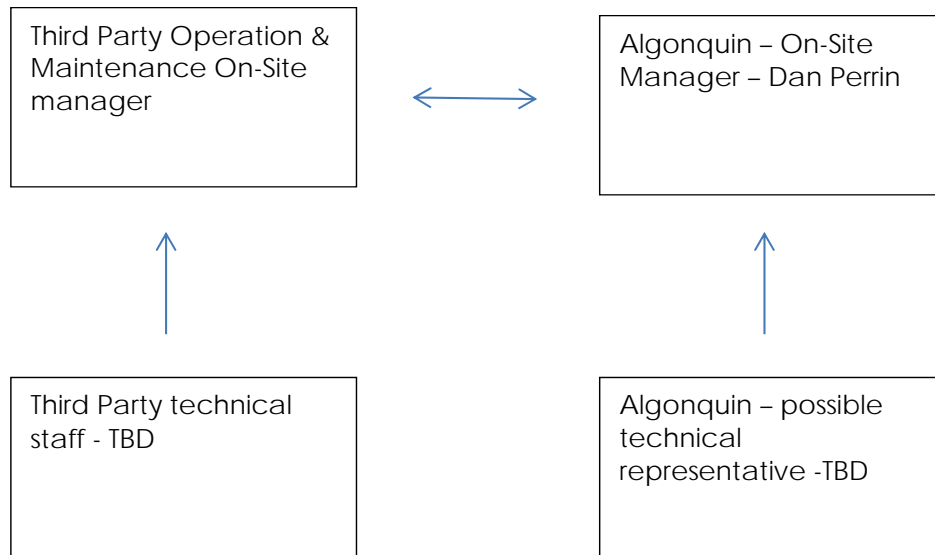
In the event of strong tidal or wave motion, at the discretion of the Barge Operator, Construction Manager or Operations Manager, or designate, offloading operations will be halted if the unloading personnel is subjected to unsafe movement, or pitch, of the barge.

Should a spill occur, the Construction Manager or Operations Manager, or designate, in consultation with the Site Manager, Barge Operator and authorities of jurisdiction, will direct the proper procedure for clean-up and reporting.

**Appendix A: Amherst Island Wind Project - Organizational Charts**

## Construction - Organization Chart



**Operation – Organizational Chart (Draft)**

## Appendix B: Amherst Island Wind Project Contact Information

This contact information will naturally change over the duration of the construction and operation phase of the Facility. This contact list will be actively managed and updated with all revisions forwarded to the Loyalist Township Loyalist Township Emergency Services.

Company	Name	Office	Cell
Algonquin	Ariel Bautista (Senior Project Manager)	905-465-6756	289-981-0171
Algonquin	On-Site Construction Manager	844-379-7740	613-985-4466
Algonquin	On-Site Safety Representative	647-232-9389	647-232-9389
Algonquin	Jim Stewart (Director, Project Management)	905-287-2054	416-523-1887
Algonquin	Sean Fairfield (Director, Project Planning and Permitting)	905-465-4518	905-466-1360
Pennecon	Lucas Evans (Project Manager)	Office #	Cell # 709-725-6749
Pennecon	Earl Dunphy (Site Superintendent)	Office #	Cell # 613-217-9227
Pennecon	Scott Miller (Safety Advisor)	Office #	Cell # 613-328-6592
Pennecon	Candace Hartley (Office Manager)	Office # 613-766-9360 (Kingston Office, will be updated when on site)	Cell # 613-328-9435

## Appendix C: Emergency Call Procedures, Contact Numbers and Service Locations

In an emergency, dial 9-1-1 to access fire, police or ambulance, and identify yourself as being on Amherst Island in Loyalist Township. Loyalist Township Emergency services can be contacted directly at 613-548-4001 - 0 for accident or spill reporting."

When calling the 9-1-1 Emergency Dispatcher, **remain calm, speak slowly and clearly.**

Include the following information in your communication:

- State the facility address or turbine coordinates;
- State the type of emergency (fire, medical, etc.);
- Stay on the phone until the responding agency releases you, answer all questions; and
- Advise the 9-1-1 Emergency Dispatcher if you need to evacuate the turbine and temporarily clear the area around the turbine

### Non-Emergency Contact Numbers and Service Locations:

Loyalist Township Fire Stations	Odessa Station 51 Main Street, Odessa 613-386-3762	Amherst Island Station 955 Stella Forty-Foot Road, Stella	Amherstview Station 363 Amherst Drive, Amherstview	Bath Station 241 Church Street, Bath
Ontario Provincial Police	Non-Emergency Call 1-888-310-1122			
Lennox and Addington Ambulance Service	Loyalist Township Base (Bath Fire Station County Road No./ 7 Bath	Northbrook Base To be inserted - address and #)	Denbigh Base To be inserted -address and #)	

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### Appendix D: Service Provider Contact Numbers

Call Before You Dig (Ontario One Call)	1-800-400-2255
Environment Canada – Marine Forecasting	www.weatheroffice.ec.gc.ca. 1-900-565-6565.
Hazard Spills:  Spills Action Centre	Toll Free: 1-800-268-6060  Tel: 416-325-3000  Fax: 416-325-3011
High Angle Rescue Contractor(s)	– Siemens Canada Limited (905) 465-8000 Updated contact details will be provided once Siemens Canada Limited service personnel deployed at site in Q1, 2018. NOTE – high angle rescue of personnel located up-tower or in nacelle or hub or blades of fully-erected wind turbine generator is self-performed by the original equipment manufacturer who has been retained by Windlectric Inc. to also perform long-term service and maintenance, and will have full-time active technicians at site whenever any persons are up-tower.
Hydro-One Control Centre	1-800-664-9376
Spill Remediation	Quantum Murray – 1-800-251-7773

Services	Dedicated Environmental Services Inc. 1-613-888-0950
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**Appendix E: Municipal and Regulatory Contacts**

Loyalist Township	Bob Maddocks (CAO)	(613) 386-7351 ext 111
Loyalist Township	David Thompson (Director of Engineering)	(613) 386-7351 ext 118
Loyalist Township	David MacPherson (Public Works Manager)	(613) 386-7351 ext 117
Loyalist Township	Murray Beckel (Director of Planning and Development Services)	(613) 386-7351 ext 130
Loyalist Township	Gary Filson (Supervisor Amherst Island)	613-384-2579
Loyalist Township	Fire Chief	613-386-3762 ext 102
Ministry of Environment & Climate Change	Kingston District	613-549-4000
Ministry of Natural Resources & Forestry	Andy Baxter (Supervisor)	(705) 755-3304
Cataraqui Region Conservation Authority	Jason Messenger (Development Officer)	(613) 546-4228 ext 286

## **Appendix F: Local Walk-In Clinics and Hospitals**

“Walk-In” clinics are available in Loyalist Township. These clinics can be used for non-emergency work related injuries or illnesses.

### **Bayridge Plaza**

Phone: 613-546-5506

Address: 769 Bayridge Drive, Kingston

Hours: Monday-Friday 6pm–9pm, Saturday,  
Sunday and Holidays 9:30am–4:30pm

### **Lakeview Medical, Family Medicine & Walk-In Clinic**

Dr. Shalini Jain

Phone: 613-634-9597,

Address: 6 Speers Blvd, Unit Q, Amherstview,

Hours: Monday-Thursday 8:30am - 5:30pm

Hospitals in the Loyalist Township area:

### **Hotel Dieu Hospital**

Phone: 613-544-3310

Address: 166 Brock Street, Kingston

Website: <http://www.hoteldieu.com/>

### **Kingston General Hospital**

Phone: 613-548-3232

Address: 76 Stuart Street, Kingston

Website: <http://www.kgh.on.ca/en/Pages/default.aspx>

### **Lennox and Addington County General Hospital**

Phone: 613-354-3301

Address: 8 Richmond Park Drive, Napanee

Website: <http://www.lacgh.com/>



**Appendix G : Designated Emergency Muster Point**

Muster point is at the laydown area – see project map.

## **Appendix H : Amherst Island Wind Project – Detailed Site Plan Map**