PROJECT DESCRIPTION REPORT (Draft)

Project Name: RW Solar Farm

Date: July 19th, 2012

Contact Information:

Person: Chris Henry

Mailing: Hodgson Robert In Trust
2380 Highway 38
Kingston, ON, K7P 2Y7

Email: chris@rwelectric.com

Telephone: 613-634-2341
Table of Contents

1. Introduction ......................................................................................................................... 3
2. General Information .......................................................................................................... 3
3. Project Information ........................................................................................................... 7
4. Potential Negative Environmental Impacts ....................................................................... 10
1.0 Introduction

A 250kW AC ground mount Solar PV System is planned to be installed at 151 Link Road, Loyalist, ON. To date, the project has received a contract offer from the Ontario Power Authority (OPA) and has a completed Connection Impact Assessment (CIA) with Hydro One. As part of the requirements of the OPA’s Notice to Proceed (NTP), the proponent is in the process of completing the Renewable Energy Approval (REA) to characterize the prevailing environmental conditions of the proposed development site.

The Project Location will take up 1.2 hectare (ha) of a 6 hectare parcel of C1I Class 3 land. Loyalist Township has confirmed that the property was zoned to exclude agricultural uses as of 2001.

2.0 General Information

2.1 Important Details

Contract Identification Number - F-001844-SPV-130-505

FIT- Reference Number - FIT-F52QFSQ

Project Name – RW Solar Farm

Applicant – Hodgson Robert In Trust

Owner – Hodgson Robert In Trust

Project Contact –

Chris Henry
2380 Highway 38
Kingston, ON
K7P 2Y7

Phone - 613- 634-2341
E-mail – Chris@rwelectric.com

2.2 Project Location

The project site meets the OPA FIT requirements to be used for this project. Hodgson Robert In Trust owns the proposed site, a 15 acre property located in Link Mills. Figure 1 shows the project area, which is on Link Road off to the south of the hydro corridor and north of the railway line.
Address – 151 Link Road, Loyalist, ON, K0H 1G0

Legal Description of Lot – Lot 18 and 19 of Concession 2

Ecodistrict – 6E-15

Municipality - Loyalist Township

Total Area of Property – 15 acres (6ha)

Total Land Covered by Project – 3 acres

Figure 1 – Proposed Development Site at 151 Link Road, Loyalist, ON.

<table>
<thead>
<tr>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longitude and Latitude</td>
</tr>
<tr>
<td>Site Control Status</td>
</tr>
</tbody>
</table>
### Zoning

<table>
<thead>
<tr>
<th>Agricultural Class Land (CLI)</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLI 3</td>
<td>Cataraqui Region Conservation Authority</td>
</tr>
</tbody>
</table>

The proposed 15 acre site is privately owned vacant land, that is CLI class 3. According to the FIT rules, proposed generation facilities cannot be located on CLI Class 1 Lands, CLI Class 2 Lands or CLI Class 3 Lands that have not been designated on the Website as Class 3 available Lands, unless any such lands were zoned by the applicable municipality to permit non-agricultural uses as of October 1, 2009.

Murray Beckel, the Director of Planning and Development for Loyalist Township, provided confirmation via a letter provided to us on August 19th, 2010 that the property was zoned to permit non-agricultural uses as of 2001. In a letter provided to us Murray outlines that the “The property appears designated as Rural in the Loyalist Township Official Plan and zoned Rural (RU) in Zoning By-law 2001-38, as amended. As prescribed by the Rural (RU) provisions, if the property is less than 10 hectares in size, agricultural activities are not allowed, if the property is over 10 hectares then agricultural activities are allowed.” The proposed site is less than 10 hectares, and is not permitted for agricultural uses.

**Figure 2 – Land Class Map of Site**

#### 2.3 Other Approvals Required

It is anticipated that in addition to the Renewable Energy Approval (REA), the RW Solar Farm will need a Notice to Proceed (NTP) from the Ontario Power Authority, building permits from Loyalist Township, permits from the Electrical Safety Authority (ESA) and the Ontario Energy Board (OEB), possible entrance and road use permits from Loyalist Township, and possibly permits from the Cataraqui Region Conservation Authority.
2.4 Federal Involvement

There is no expectation for requirement of a federal environmental assessment under the Canadian Environmental Assessment Act. Nor is there any expectation for the requirement of federal permits or approvals under the Fisheries Act, Species at Risk Act or any other Act.

2.5 Solar Photovoltaic Technology

Direct current (DC) producing solar photovoltaic panels will be arranged on site in series strings to collect incident solar energy. Their low voltage direct current output will be converted to 3 phase alternating current (AC) by the use of inverters. The DC electricity produced by the solar arrays is collected and is converted into Alternating Current (AC) by inverters and then sent to a transformer to increase the voltage of the electricity to the same level as the local electricity distribution system. The inverters, located at various points throughout the site, are enclosed within housing for noise reduction and weather protection purposes. Metering, safety disconnect and remote trip equipment is located at the utility connection point where the solar farm is connected to the local electricity distribution system. Hydro One can control the solar farm grid connection during power outages or grid disruptions to ensure the safe and reliable operation of the electricity system.

Essential Components: Solar PV panels, racking, inverters, step up transformers and other safety devices.

The distribution lines run entirely on the Link Rd. Property, and the electrical connection between the generator and Hydro One (The LDC) will take place on the property. Hydro One will supply a new transformer, and Hodgson Robert In Trust will install a 400A, 3-phase, 600V service, isolation switch, and PV inverter. The Inverter is expected to be a 250kW Satcon Central inverter designed for commercial generation.

2.6 Visibility

The racking to be used for the installation by Hodgson Robert In Trust will have a low profile so as to limit the visual impact it has on the area. The solar arrays will have a height less than 3m (less than a typical single story building), and will have an adjustable slope that will result in the array being higher in winter and lower in summer. Trees and bushes will be used as visual barriers along the eastern boundary of the property to provide a visual screen from the heavily used County Road 4. This will ensure limited visual impact on residents and visitors to the area.

The physical site (Figure 1) occupies approximately 15 acres of land and is bordered by a rail bed to the south, Link Rd and County Rd #4 to the east, a Hydro One corridor to the north and agricultural fields to the west. The proposed development would not occupy the entire
property but instead only a subsection of this lot in the northeast corner. The only visibility of
the site would be from the East, from people passing by on County Road 4.

### 2.7 Consultations

**List of aboriginal communities:** The MOE has provided the list of aboriginal communities.

According to the MOE’s Director, the following communities may have or have constitutionally
protected aboriginal or treaty rights that may be adversely impacted by the project.

- Alderville First Nation
- Hiawatha First Nation
- Curve Lake First Nation
- Mississauga’s of Scugog Island First Nation
- Kawartha Nishnawbe

The following community may be interested in any negative environmental impacts

- Mohawks of the Bay of Quinte

**Consultation with aboriginal communities:** Hodgson Robert In Trust with the assistance of
Genivar will conduct consultations with the aboriginal communities in accordance with the list
provided by the MOE.

**Notices of project and meetings:** Hodgson Robert In Trust issues the notice at least **30 days**
before the first public meeting is held.

**Consultation with public:** Hodgson Robert In Trust holds at least two public meetings, each on
a separate day.

**Consultation with municipalities, local authorities:** Hodgson Robert In Trust starts consultation
at least **90 days** before the final public meeting is held.

**Consideration of archaeological and Heritage Resources:** Hodgson Robert In Trust shall assess
the potential impacts to the archaeological and heritage resources for the facility. We will
determine if there are archaeological resources present at the location, and this assessment
will be completed by a licensed consultant archaeologist. Through initial consultations it’s
expected that that only a stage 1 assessment will be required, but if the consultant determines
that a more in-depth study is required we are prepared to go through to a 4 stage study.

Heritage resources other than protected properties will be identified by the applicant at the site
location. The heritage assessment report will evaluate any potential heritage resources and
include an evaluation of any impact of the renewable energy project on the heritage resources
and proposed measures to avoid, eliminate, or mitigate the impact, which may include
preparing a heritage conservation plan. If it’s concluded by the consultant that there is no possibility of the project impacting heritage resources, a written summary stating this conclusion and the rationale behind it will be prepared.

**Natural heritage assessment, natural heritage, records review and natural heritage, site investigation, and natural heritage/evaluation of significance:** Hodgson Robert In Trust has completed a Natural Heritage Records review, and the Natural Heritage assessment and investigation has been completed by;

Rob Snetsinger: Ecological Services  
3803 Sydenham Rd. Elginburg, Ontario K0H 1M0

The assessment was completed on July 12th, 2012

**Confirmation from Ministry of Natural Resources:** Hodgson Robert in Trust contacts MNR and provides required documentation.

**Water assessment, water records review, water site investigation:** Hodgson Robert In Trust has completed a water records review and Robert Snetsinger of Ecological Services completed the Water Body assessment on July 12th, 2012.

Hodgson Robert In Trust will collect all details and submits to MOE for REA approval before proceeding on site solar PV system construction.

### 3.0 Project Information

#### 3.1 Facility Components

The exact make, model, size, dimensions, and number of panels has not been determined at this point, and will be largely dependent on the state of the industry in the Province when it is time to order the required materials for the system. There have been several instances of manufacturer’s leaving Ontario due to a drawn out FIT review, and so it’s not plausible to put forth extensive information on the panels, inverter(s), and racking which could change going forward. We can comment on what will likely be used though.

There will likely be 1200 250W solar modules, for a total DC capacity of 300kW, which is a reasonable 120% overbuild of the AC nameplate capacity at 250kW. Our plan submitted to the local LDC (Hydro One), is to include 1x250kW Central inverter. The racking and it’s attributes have yet to be determined, but our intention is to choose racking that will limit visibility to the public to ensure minimal impact on local residents and to discourage theft.
There will be an internal access driveway that will be gravel and will be constructed to provide access to the equipment during the construction phase and later for maintenance access over the project’s life. There will also be a temporary laydown area for the installation of the solar panels.

The electrical system see hydro stuff

Below is a proposed layout of the system;

3.1 Construction and Project Activities

Ensuring the protection and sustainability of the natural environment is a key consideration in any development. As part of our planned construction phase, Hodgson Robert In Trust intends to utilize a variety of native grasses and other plants as groundcover between and under the solar arrays. This ground cover not only benefits soil quality, it improves storm water runoff quality and reduces the potential for erosion.

Due its passive nature and limited land disturbance, the proposed solar farm will have minimal impact on the natural environment. In the recent completion of the Natural Heritage and Water Features assessment it has been determined that the only impact on the natural environment is a seasonally intermittent watercourse identified on and within 120m of the project location. It may be necessary to complete a Water Body Environmental Impact Study Report to address potential negative environmental effects.
It is expected that solid wastes generated from construction could include: wood, earth, rock and plants. The grading and material from temporary road access will also be waste, depending on permanency of road. It is expected that carbon dioxide emissions from transportation and construction equipment will be the only significant gaseous waste generated from construction. Noise will also be produced during the construction process, but this will be limited to business hours as much as possible. No hazardous or toxic materials will be exposed to the site, except for oil-filled transformers. However, every precaution will be taken to ensure that no oil contaminates the site. Water-taking will not occur at the site.

As part of the Renewable Energy Approval process, environmental reports will also be reviewed by the Ministry of Natural Resources. Any needed mitigation will be implemented. More information on managing the waste and emissions from construction will be included in the Environmental Management Plan that will be supplied by Hodgson Robert In Trust for review. Related to the foregoing, Hodgson Robert In Trust has commissioned and will submit for public and government agency review, additional technical reports to ensure that all aspects of the project will minimize potential environmental impacts.

3.2 Brief Description of Construction Activities and Installation

The entire installation will take place on the property except the electrical connection of the solar system to the feeder line (to be completed by Hydro One). After a physical survey is complete, temporary access roads on site may have to be constructed, and a security fence will be installed during the initial construction phase and will remain for the life of the project.

Removal of all tall weeds, trees and shrubbery, as decided through mitigation and discussions with proper authorities from O.Reg. 359/09, Section 25, Table, will occur. Storage areas will have to be defined and secured. Concrete foundations will be poured to support the racks, the inverters and power transformers, which will include some excavation. Care will be taken not to impact bedrock below. Installation of cables and cable ducts will involve some excavation too. The installation of solar panel support racks, and subsequently solar panels, can then occur. The photovoltaic converting station (PVCS) and grid tie-in station will have to be constructed, in conjunction with Hydro One. The transformers and inverters will also have to be installed. Electrical connections will then be installed and commissioned. Performance and safety testing for all components will occur before the system is started. The start date for these activities will depend on REA completion and confirmation from MOE and MNR to begin. The proposed start date for Phase 1 is June, 2013 and the proposed date of operation is August 2013. The table below demonstrates the phasing and scheduling of the construction activities:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Estimated Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1 – Site Preparation</td>
<td></td>
</tr>
<tr>
<td>Physical Survey, potential road access construction</td>
<td>Total Estimated time – 2 weeks</td>
</tr>
<tr>
<td>Security Fencing</td>
<td></td>
</tr>
<tr>
<td>Land Preparation</td>
<td></td>
</tr>
</tbody>
</table>

| Phase 2 – Construction | Total Estimated time – 6-8 weeks |
| - Excavation, foundations laid | - 1 week |
| - Excavation, cable laid, underground infrastructure, grounding | - 1 week |
| - Solar Racking Installation | - 2 weeks |
| - Solar Panel Mounting | - 2 weeks |
| - Transformers, inverters, and grid-tie in station installation | - 1 week |
| - Electric connections, circuit breaker, utility connection | - 1 week |

| Phase 3 – Commissioning | Total Estimated time – 2 weeks |
| - Final Commission, testing | |
| - Site Clean up | |

The total installation time could be considerably less as there is the possibility that certain activities are completed concurrently. There is also the possibility that the installation time could be longer due to uncontrollable circumstances such as poor weather conditions.

4. Potential Negative Environmental Impacts

1.1 Cultural Heritage

Robert Hodgson In Trust will meet the cultural heritage requirements of Sections 19–23 of O. Reg 359/09 and these requirements are outlined in Section 6.1 of Chapter 1. An archaeological study has been initiated and will be completed in the coming months. Cultural Heritage will also be assessed in a separate study, and the Ministry of Tourism, Culture and Sport (MTCS) will be included in the consultation process.

4.2 Natural Heritage

An extensive natural heritage study has been completed, and it was determined that there were no significant impacts on natural heritage features, including but not limited to Areas of Natural and Scientific Interest (ANSI), wetlands, woodlots, valley lands, wildlife habitat, provincial parks, and conservation areas.
4.3 Impacts on Surface and Ground Water

A Water Body Site Investigation Report and a Water Body Records Review Report have been completed, and it was determined that the only potential impact to any water body was a seasonally intermittent watercourse identified on and within 120m of the Project Location. No other risks to surface or ground water were determined.

4.4 Emissions to Air including Odour and Dust

There will be no emissions to air including odour and dust during the operation of the facility, and there will be limited impact during the construction. There will be some dust that will be created during the construction phase which is common for all projects where ground work must be completed, but that will minimal and will have little to no impact on the
surrounding area. There may be some diesel odours from equipment being used in the construction, but no odours will be emitted during the generation phase of the project.

4.5 Noise

A noise study will be completed as part of the REA. There will be noise during the construction phase, but this will be limited to business hours, and will be less disturbing than the noise emitted from the nearby railway.

The project will employ passive solar power generation through the use of ground mount solar modules. These PV modules do not require heat transfer fluids or mechanical equipment, and do not generate noise. The 250kW array occupies approximately 3 acres, and is equipped with a Power Conversion Station (PCS), which includes one inverter and one transformer. A detailed noise analysis will be prepared as part of the process and the project will meet all applicable local and MOE noise standards. The regulatory requirement of noise emissions less than 40 dBA before 7:00 am and after 7:00 pm will be met during construction and operation of the site.

4.6 Local Interests, Land Use, and Infrastructure

During construction of the solar farm, as with any construction project, there will be short term, intermittent traffic generated from the delivery of materials and arrival/departure of construction personnel. Due to the short duration of this phase of development and the lack of need for a full-time employee on site during operation, limited impact on the local road network and community traffic patterns will occur. The site will be accessed from Link Road, which does not provide access to any other properties except the property in question. There may be minor traffic congestion on Country Rd. 4 during the construction phase but coordination with the municipality will ensure that there will be limited effect.

4.7 Public Health and Safety

The construction, operation and decommissioning of the proposed project is not expected to significantly affect public health and safety. The equipment locations will adhere to all regulatory requirements, including those to preserve public safety such as setbacks from roads, property lines and residences. All electrical equipment will be designed and installed in accordance with ESA standards and will be equipped with proper safety signage. Some individuals may find the sound from the equipment, under certain operational conditions, to be somewhat irritating.

The project will connect to the local distribution system, owned and operated by Hydro One Networks Inc. There is no potential for stray voltage to occur. Stray voltage occurs when there is a voltage potential difference between grounded equipment and the customer neutral from the electrical distribution supply at a customer connection. When this Neutral to Earth
Voltage exists, there can be a voltage difference between ground at various locations on the customer’s facilities due to the currents flowing from the distribution system neutral to the ground. At a voltage difference above about 10 volts people may detect a tingle. Livestock such as dairy cattle are sensitive to these small tingle voltages that are not a health hazard to humans. Hydro One has a standard for how they will deal with stray or tingle voltage complaints. The local distribution company is responsible for addressing stray voltage concerns. Moreover, all electrical equipment and design must meet the Ontario Electrical Safety Code and be certified by the ESA. A complaint tracking system will also be documented in the Environmental Effects Monitoring Plan.

4.8 Areas Protected under Provincial Plans and Policies

The project will not impact any lands under Provincial Plans and Policies. The site is not located in an area covered by: the Greenbelt Act or plan; the Oak Ridges Moraine Conservation Area; the Niagara Escarpment Plan Area; or the lake Simcoe Watershed Plan.

4.9 Operational Activities

The proposed facility will operate continuously during the daytime. The power output will depend on seasonal sun activity and weather conditions. Regular inspections of the facility will be conducted and routine maintenance will be performed according to the manufacturer’s specifications. As the efficiency of the solar panels depends on their cleanliness, solar panels will be cleaned as needed via pressure washing with water (no soap or chemicals will be used). It is anticipated that service on the inverters will be done on 6 month intervals. Panels that break or malfunction will be repaired or replaced. The modular nature of photovoltaic systems allows simple repair or replacement of components without major disruption.

4.10 Decommissioning

The lifespan of project is estimated to be 25 years or longer. The facility may be upgraded in 25 years or replaced with newer technology for an additional lifecycle. The decommissioning phase of the project is expected to start in 2038.

Hodgson Robert In Trust is proposing to use solar PV panels with recycling program for its solar modules that enables all substantial components, including the glass and the encapsulated semiconductor material, to be recycled and processed into new solar modules or other products. A specific decommissioning plan for the subject site will be prepared in accordance with Ministry requirements and made available to the public and government agencies for review.