



# 3G Energy

Welcomes You  
to the First Public Meeting for the  
**Alfred Solar Project**

September 15, 2010  
6:00 - 8:30 pm

Alfred Recreation Centre  
555 St. Philippe Street, Alfred, Ontario

*Your Opinion is  
important to us,*

*Please Sign in  
and Complete a  
Comment Sheet*

*Thank you.*

# Purpose of this Public Meeting



Stakeholder input is a key component of project planning and the Renewable Energy Approval (REA) process. The purpose of this first Public Meeting is to provide you with an opportunity to:

- Obtain information about 3G Energy's proposed renewable energy project;
- Obtain details about the requirements of the REA Process;
- Ask questions about the proposed development;
- Raise issues and concerns about the proposed Project and have these addressed.

**You** can provide any comments or concerns in the following ways:

1. Via the Comment Sheet provided at this Public Meeting. If you would like to be included on the Project's stakeholder mailing list, please include your name and mailing address on your completed Comment Sheet.
2. Through discussion opportunities with representatives of 3G Energy and Hatch staff at this Public Meeting.
3. Please also feel free to contact the Environmental Coordinator for the Project via the contact information below:

**Paul D. Holmes**, P. Eng.  
Environmental Coordinator  
Hatch Ltd.

Address: 1235 North Service Road West  
5th Floor, Oakville, Ontario,  
L6M 2W2

Phone: 905-465-4906

Fax: 905-469-3404

Email: [pholmes@hatch.ca](mailto:pholmes@hatch.ca)

For more information please visit:

[www.3g-energy.com](http://www.3g-energy.com)

# Our Company



## Experienced, Innovative, Connected

Since 2001 the 3G group of companies have created over 150 megawatts of wind and solar projects—enough clean, green energy to power over 75,000 Canadian homes!

In addition to our Alfred solar project, we are developing one of the first large scale commercial roof top solar projects in Ottawa.

We are recognized in our industry as exceptional project managers and outstanding innovators. In 2004 we received the Sustainable Development Award from the DuPont Corporation and in 2007 we were awarded a grant from the Canadian government for our design of a slip-form concrete tower for wind turbines. Working with a local partner we have developed a small solar system to help small landowners and communities participate directly in the FIT program as project owners.

Working with industry leading suppliers, engineers and contractors, we use our experience and know-how to develop cost effective renewable energy solutions for every environment.



## The Consultant

3G Energy has retained Hatch Ltd. to undertake the Renewable Energy Approval (REA) process, subject to the provisions of the Environmental Protection Act Part V.0.1 and Ontario Regulation 359/09.

Hatch is an Ontario-based consulting, engineering, environmental and management company with operations worldwide and a reputation for excellence acquired over 80 years of continuous service to its clients.



[www.hatch.ca](http://www.hatch.ca)

# Next Steps

## in the Renewable Energy Approval Process

All written comments will be reviewed and issues addressed by 3G Energy in consultation with its project team.

Additional Project Reports (such as the Construction Plan Report and Archaeological Assessment Reports) will be available for public review and comment on the Project website ([www.3g-energy.com](http://www.3g-energy.com)) and within the local municipality.

The Second Public Meeting will be advertised in the local newspaper and information will be sent to all those on the Project mailing list.

If you would like to be included on the Project mailing list, please include your name and mailing address on your completed comment sheet.



**Thank You**  
for attending this First  
Public Meeting.

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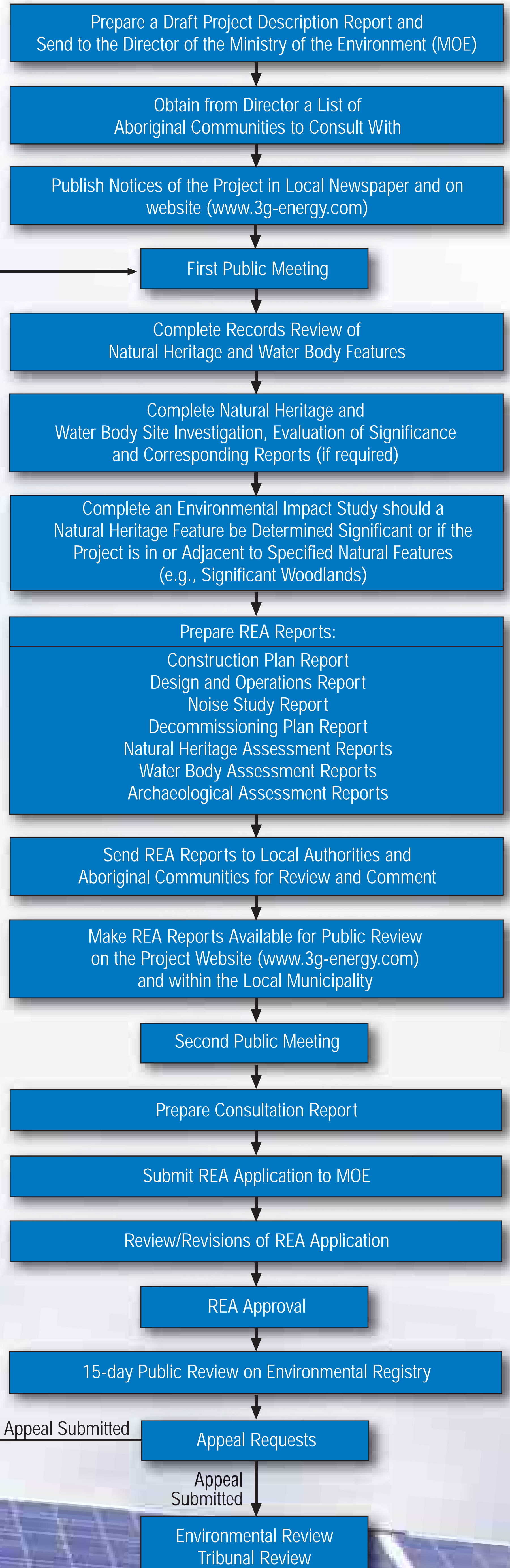
***Please Sign in  
and Complete a  
Comment Sheet***

# Renewable Energy Approval Process



The proposed Project is subject to the Renewable Energy Approval (REA) process, which was enacted by a new regulation (Ontario Regulation 359/09) under the provisions of the Environmental Protection Act Part V.0.1. The main components of this process are illustrated on the right.

**We Are Here**



**Project May Proceed**

# The Advantages of Solar Power



## Neighbour Friendly

- No noise, no stink – solar energy is clean and has zero emissions
- Safe - no magnetic fields, no increase in voltage; no stray voltage
- Out of sight: solar panels are close to ground level & screened by trees and/or fencing
- Low reflectivity because solar panels are designed to absorb not reflect light
- Impact on property values is neutral

## Land Friendly

- No toxic liquids = no surface water or groundwater pollution
- No significant change in site contours or drainage
- Equipment is easy to remove at end of project
- Site is currently zoned as M1 Light Industrial (not prime agricultural)

## Community Friendly

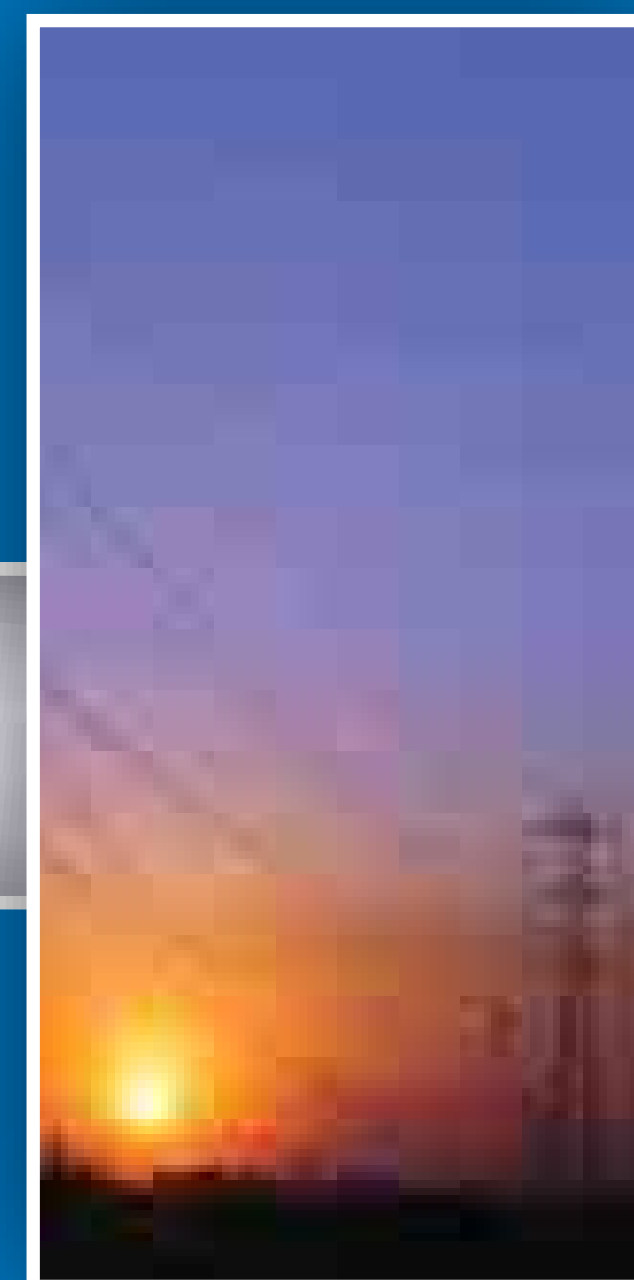
- Provides local employment & procurement
- Increases local property tax revenues without increasing demand on sewer, water or roads



## Solar Technology

A solar PV panel consists of several layers, the top layer of which is glass, providing weather protection for the PV cell. A special coating is applied to the glass to reduce reflected light from the panel, thereby reducing glare. Within the solar PV cell is a grid, (often made of a metal) which conducts electricity.

Electricity is generated when openings in the grid allow sunlight to reach silicon layers of the panel underneath.



## FIT

The Feed In Tariff (FIT) program was enabled by the Green Energy and Green Economy Act (2009), and was officially launched on October 1, 2009. The FIT Program is designed to encourage and promote greater use of renewable energy sources and will help Ontario;

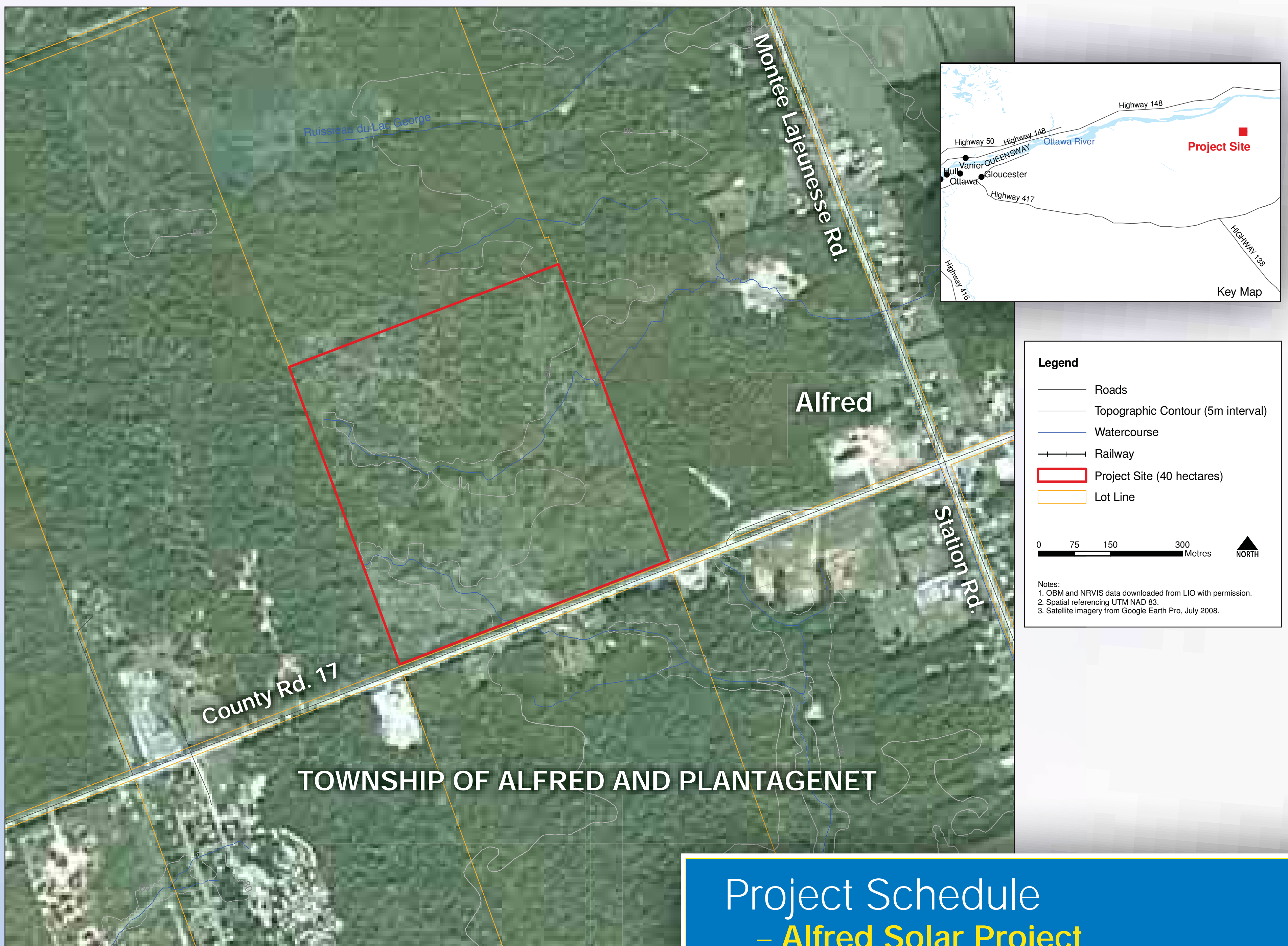
- phase out coal-fired electricity generation by 2014
- boost economic activities and the development of renewable energy technologies
- create new green industries and jobs.

The Ontario Power Authority (OPA) awarded 184 FIT contracts to renewable power developers in Ontario on April 8, 2010. 3G Energy was awarded 2 contracts for proposed solar developments in Ontario. These projects are now proceeding through the Renewable Energy Approval process.

# Project Description



The proposed Project is located north of County Road 17, west of Alfred on part of Lot 4, Concession 5 within the Township of Alfred and Plantagenet, United Counties of Prescott and Russell. If approved, the proposed Project will be constructed on privately owned lands.



## Project Schedule – Alfred Solar Project

- FIT Application
  - **November 2009**
- FIT Contract Award
  - **April 2010**
- Submit Project Description to MOE
  - **June 2010**
- First Public Open House
  - **September 2010**
- Tentative Second Public Open House
  - **February 2011**
- REA Application Submission
  - **March 2011**
- Approval of REA Application
  - **May - August 2011**
- Start of Construction
  - **May - August 2011**
- Commercial Operation Date
  - **April 2012**

The proposed Project would have a total name plate capacity of 10 Megawatts (MW). The amount of energy produced each year is estimated to be 12,000,000 kilowatt hours (kWh), enough to conservatively power 1,200 homes per year.

The proposed Project will consist of photovoltaic (PV) panels installed on ground-mounted rack structures. The panels will be tilted and fixed in place (i.e., they will not move to track the sun). Panels will typically range in height from 2.5 m to 4 m, in rows spaced 6 to 10 m apart. Electricity generated by the panels will be converted from DC to AC by an inverter and then stepped up (via intermediate step-up transformers and an interconnection transformer) prior to connection to the local distribution line.

# Environmental Features

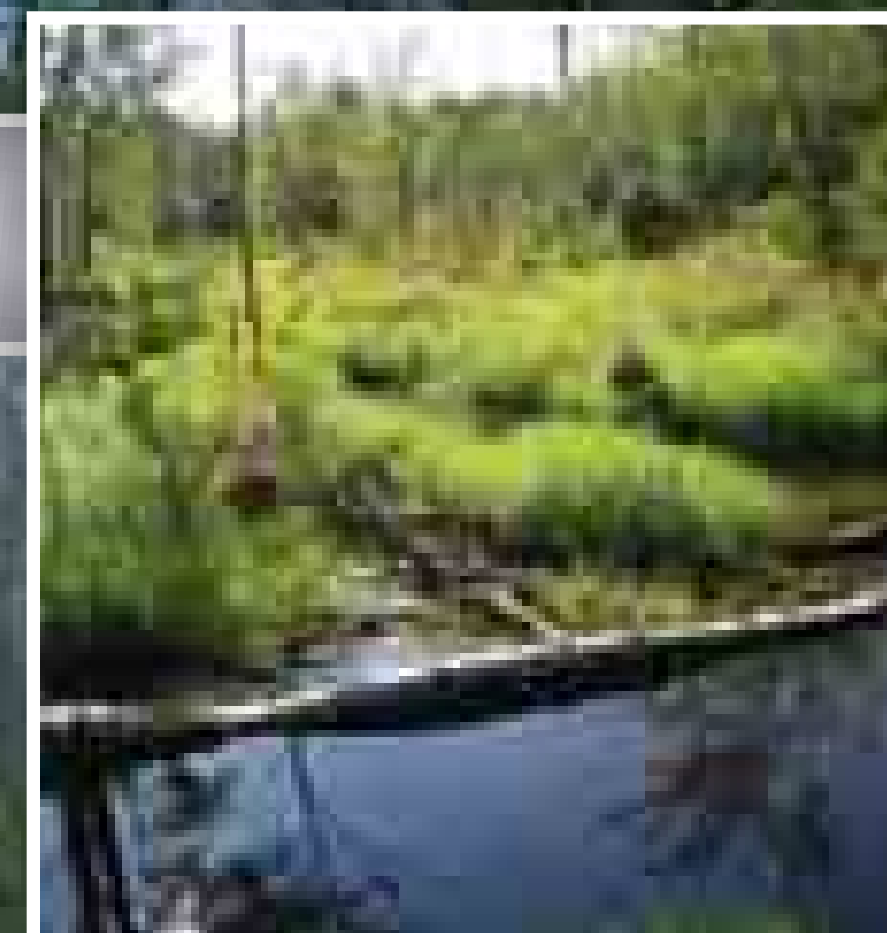
## Natural Heritage Features

A site investigation was completed in order to identify features of the terrestrial and aquatic environment from the area. Specific features that were considered during the site investigation include, but were not limited to:

- Wildlife/Wildlife habitat
- Vegetation communities, including woodlands
- Valleylands
- Species at risk
- Waterbodies

## Land Use

The Project site is surrounded by a mix of land uses including agricultural, commercial and residential. The site is currently undeveloped, but is zoned M1 Light Industrial.



## Terrestrial Environment

The majority of the Project site is heavily disturbed from past logging activities and several large piles of downed woody debris and large trails were observed throughout. The terrestrial features identified include a mix of coniferous and deciduous woodlands. The United Counties of Prescott and Russell Official Plan identifies the woodlands on the Project site as Significant Woodlands.

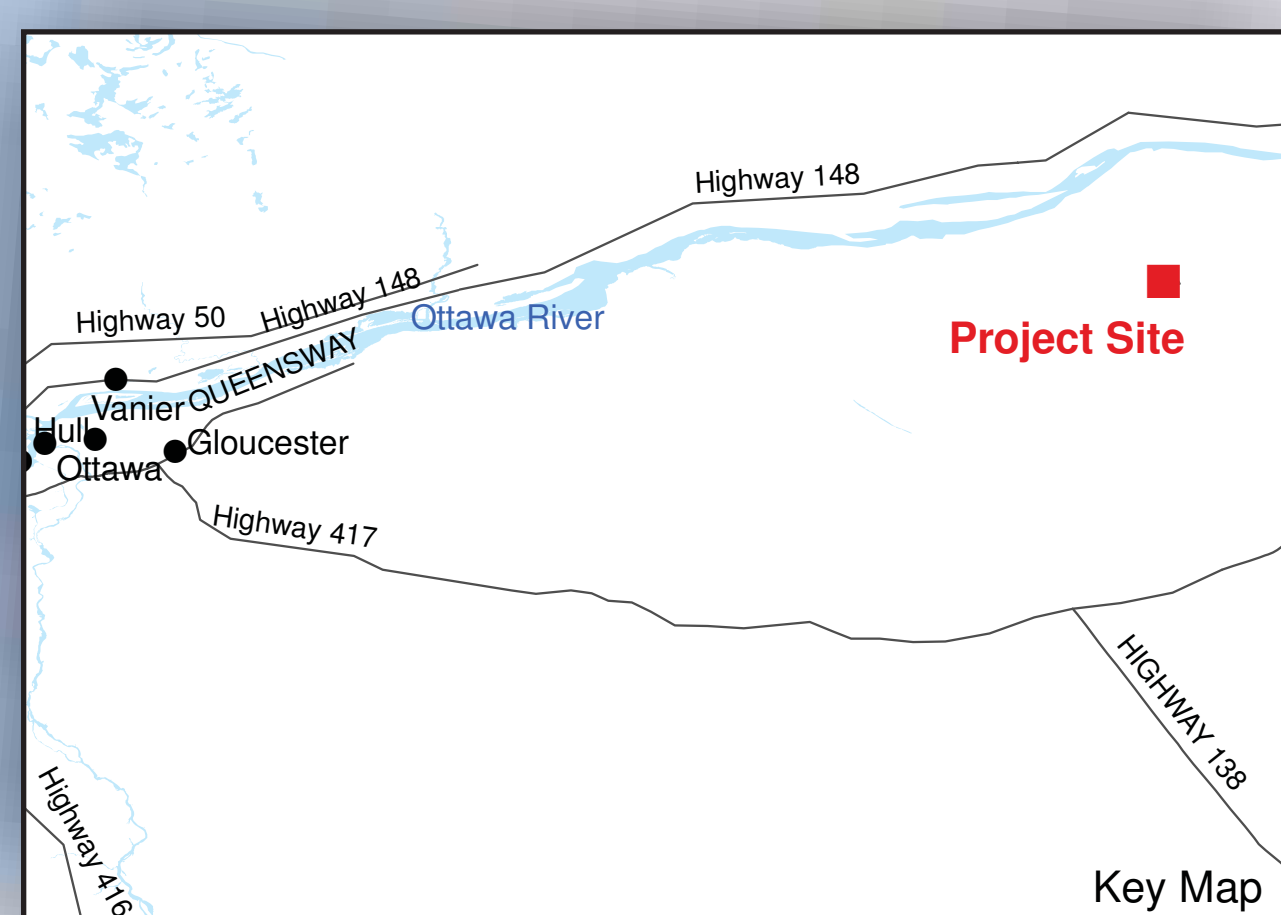
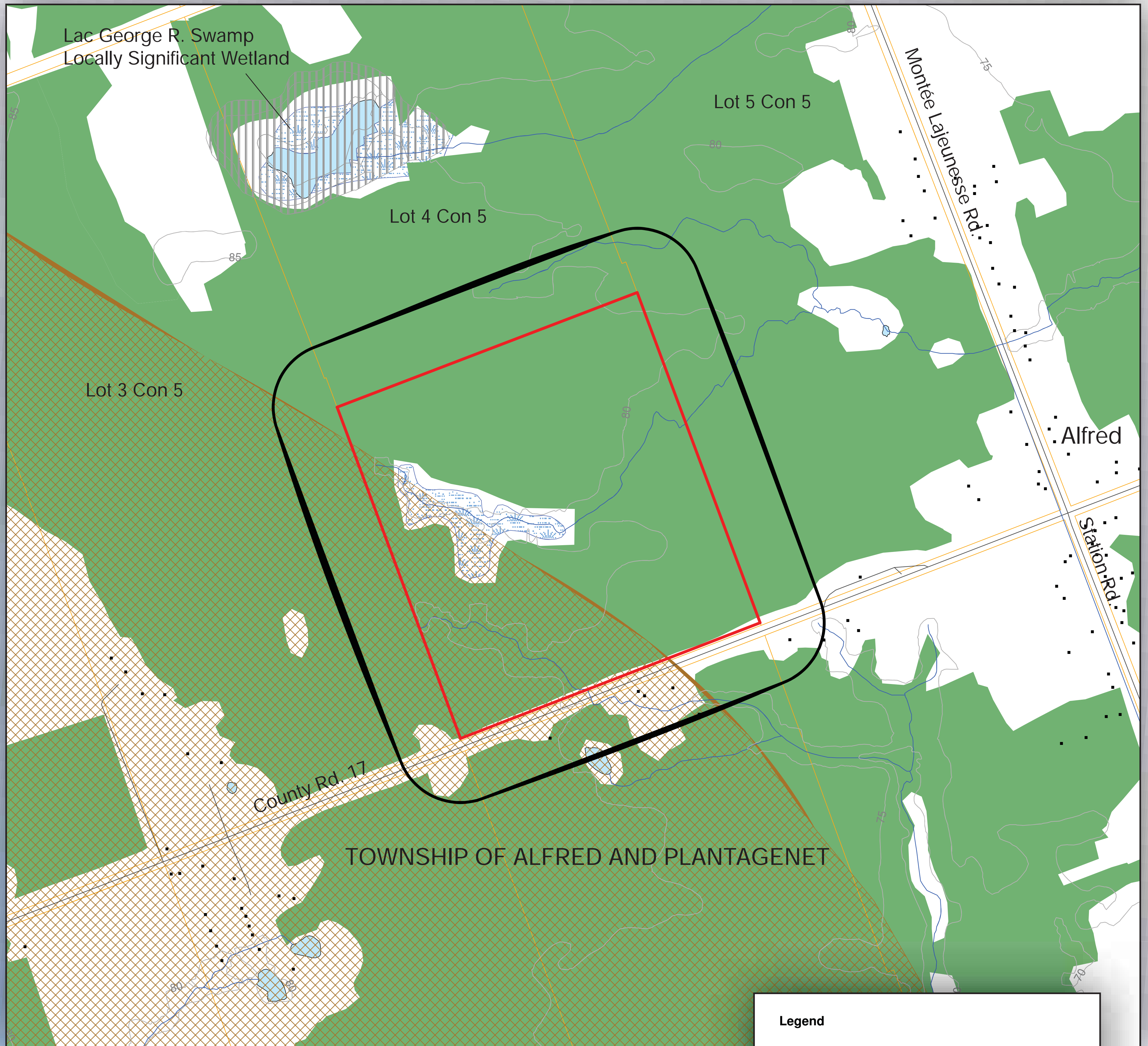
Mapping obtained from The Ministry of Natural Resources identifies the south west portion of the Project site as a deer wintering area. The site investigation determined that there is potential deer wintering habitat within the vicinity of the Project site. Evidence of moose activity was also observed within the woodlands.

## Aquatic Environment

Unevaluated wetlands comprised of wetland community types and areas of open water are present on about 30-40% of the Project Site. Evidence of current beaver activity was also observed. Multiple watercourses were observed on the site which comprised of a network of drainage channels connected to the wetland and woodland vegetation communities.



# Environmental Features



**Legend**

- Building
- Roads
- +— Railway
- Topographic Contour (5m interval)
- Watercourse
- ▭ Project Area (40 hectares)
- ▭ 120m Notification Area
- ▭ Lot Line
- ▭ Wooded Area
- ▭ Waterbody
- ▭ Wetland Area
- ▭ Deer Wintering Area

0 0.1 0.2 0.4 Km

Notes: OBM and NRVIS data downloaded from LIQ, with permission. UTM NAD 83, May 2010.



# Potential Environmental Effects and Mitigation Measures



Environmental Component	Potential Environmental Effect	Mitigation Measures
<b>Natural Environment</b>		
Physiography/Topography	Regrading of excavated soils and minor alterations to local topography may occur.	Areas disturbed will be regraded to match existing topography to the greatest extent possible.
Soils	During construction, some soil compaction by heavy equipment and possibly soil erosion from runoff from exposed areas. Minor potential for effects to soil quality as a result of accidental spills during construction.	Standard construction best management practices and mitigation measures will be implemented to mitigate impacts to soils, including development of an Erosion and Sediment Control Plan and a Spill Response Plan.
Aggregate Resources	Not applicable.	
Surface Water	No negative effects to surface water runoff regime are expected since rainfall runoff from solar panels will be directed to grassed and vegetated areas. Minor potential for effect to water quality as a result of soil erosion during construction or accidental spills.	Solar panels will be set back at least 30 m from all water bodies and groundwater seepage areas (if present). Sediment and erosion control measures and spill prevention and response measures will be implemented during construction.
Groundwater	No negative effects to local availability of groundwater are expected since no major changes to ground water recharge conditions are expected, nor are major excavations involving significant groundwater dewatering. Impairment of groundwater quality by contamination could occur due to accidental spills during construction.	Spill prevention and response measures will be implemented throughout the life of the Project.
Aquatic Habitats/Biota	Potential effects on fish and fish habitat, and mitigation requirements associated with watercourse crossings (if required) will be reviewed during detailed design.	EIS will be conducted for any Project facilities proposed within 120 m of water bodies to ensure no negative effects. All Project components (e.g. solar panels) will be set back at least 30 m from all water bodies. Sediment and erosion control measures and spill prevention and response measures will be implemented during construction.
Areas of Natural and Scientific Interest	Not applicable.	
Wetlands	Encroachment of the unclassified wetland may occur depending on the placement of project components. The wetland may be indirectly affected by Project activities, such as the generation of dust during construction which could impact vegetation communities.	An evaluation of significance for the wetland and if necessary, an EIS, will be conducted to establish whether development encroachment into the wetland will be permitted to ensure no negative effects. Sediment and erosion control measures and spill prevention and response measures will be implemented during construction.
Valleylands	Not applicable.	
Woodlands and Vegetation	Clearing of the woodlands and vegetation on the Project site will be required, which may result in negative impacts to vegetation communities and wildlife habitat. The remaining woodlands and those adjacent to the Project site may be indirectly affected by Project activities, such as the generation of dust during construction which could impact vegetation communities.	An evaluation of significance for the woodlands and if necessary, an EIS, will be conducted to establish the extent of woodland clearing permitted as well as any specific requirements for mitigation measures (see also Terrestrial Wildlife / Wildlife Habitat below).
Terrestrial Wildlife / Wildlife Habitat (including species at risk)	Loss of portions of the identified deer wintering area may occur as a result of land use and vegetation clearing. Potential loss of wildlife habitat associated with woodlands and potential wildlife avoidance of the Project area during construction and operation may occur as a result of disturbance.	Work areas will be flagged to ensure clearing does not extend beyond the marked boundaries. Best management practices with respect to work during the breeding bird season will be followed to ensure no impact to nesting birds. This may include timing of major construction activities outside of the breeding bird period.
Air Quality	Reductions in local air quality from operation of construction equipment and dust displacement may occur due to vehicle traffic.	The use of standard construction best management practices and mitigation measures will be implemented to suppress dust and protect local air quality. These may include use of dust suppressant (i.e. water) and limitation of soil exposure.
<b>Social Environment</b>		
Land Use	Current land use will be discontinued within the Project footprint.	The site is currently zoned M1 Light Industrial. If the solar farm does not proceed, it is possible that other more intrusive uses such as fuel storage facilities, manufacturing and large wholesale/retail development could be put onto the land. Compared to these potential uses, a solar farm will be the most ecological friendly; allowing the ground surface to remain open and vegetated.
Visual Landscape	Installation of the Project will result in a change to the local landscape.	If necessary, mitigation may include retention of existing vegetation around the site and/or inclusion of berms and/or tree plantings.
Sound Levels	Temporary disturbance to neighbouring residents may occur during construction. The operation of inverters and transformers may result in increased ambient sound levels.	Noise studies will be conducted in accordance with O. Reg. 359/09 to ensure adherence to sound level requirements.
Reflectivity	Reflection during early morning and late day when sun is low.	Identify affected areas of human impact and if necessary, screen with vegetation.
Public and Construction Site Safety	During construction, there could be a increased risk to public and workforce safety on the Project site. During operation, potential risks to public safety are limited.	Proper safety procedures will be implemented and followed as per applicable provincial and federal regulations.
Local Traffic	During construction, there may be increased local area traffic resulting from workforce commuters as well as temporary delays during equipment delivery to the site.	Adverse effects to local traffic will be minimized by designating and preparing transportation routes; and facilitation of traffic flow as required.
Municipal Roadways	Construction vehicles may result in damage to local roadways.	Municipal 'half-load' requirements for roads will be adhered to. Any damage to local roadways will be repaired or compensated.
Archaeological Resources	Excavations during Project construction may result in the discovery of archaeological resources.	An Archaeological Assessment will be completed prior to construction to determine potential resources and mitigation requirements.
Cultural Heritage Resources	Construction of the Project may result in negative effects to built heritage and cultural heritage landscapes if present in proximity to project.	Potential heritage resources will be determined and assessed as per the requirements of the Ministry of Tourism and Culture.
Waste Management and Disposal Sites	Construction and operation of the Project will result in the generation of recyclable material, and construction and sanitary waste.	Proper storage and disposal of wastes and recyclables will be practiced.