

Green Energy FAQ's

The following *Frequently Asked Questions* (FAQ's) answer some common inquiries regarding green energy projects. Please review the FAQ's below and if you require further information on the projects taking place within Haldimand County, feel free to contact us at: greenenergy@haldimandcounty.on.ca.

General Questions

1. What is the "Community Vibrancy Fund Agreement"?

- The Community Vibrancy Fund Agreement (CVA) will see that the renewable energy companies in Haldimand County contribute over \$40 million dollars over the next two decades to a fund that will benefit the residents of the county. Expenditures from the CVA fund will be utilized for community related projects such as (Note – see Report CS-GM-15-2011):
 - land stewardship initiatives
 - development and construction of County recreational facilities
 - improvement of community and protective services
 - roads and public municipal infrastructure
 - other community related activities as agreed to by the parties

2. How will decisions on CVA funds expenditures be made?

- Community Vibrancy funds will be directed towards approved community related projects and other community needs as determined by Council
- Process for prioritizing and approving projects to be determined by Council during the second quarter of 2013

3. What is the FIT program?

- The Province of Ontario's FIT Program is North America's first comprehensive guaranteed pricing structure for renewable electricity production.

- The Feed-in Tariff (FIT) Program was enabled by the *Green Energy and Green Economy Act, 2009*. The Ontario Power Authority (OPA) is responsible for implementing the FIT Program.
- The program provides a way to contract for renewable energy generation. It includes standardized program rules, prices and contracts for anyone interested in developing a qualifying renewable energy project.
- Prices are designed to cover project costs and allow for a reasonable return on investment over the contract term.
- Qualifying renewable technologies include biogas, renewable biomass, landfill gas, solar photovoltaic (PV), waterpower and wind power.
- The FIT website, at <http://fit.powerauthority.on.ca/> contains all available information for those interested in the program.

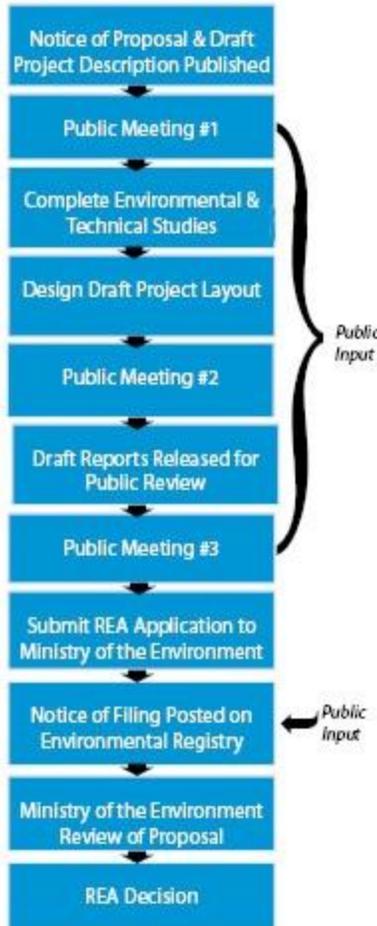
4. Do landowners / land lease operators pay a different tax rate for land with turbines or solar panels? How is this calculated?

	Small (Up to 10kW)	Medium (over 10kW up to 500 kW)	Large (over 500 kW)
Rooftop	No new assessment or taxes. The assessment and tax classifications of property will not change due to the addition of a renewable energy installation on the rooftop of a building.		
<u>Ground - Ancillary Use:</u> Generation is not performed by a corporation power produced and is secondary to main activity on the property	No new assessment or taxes.	Land, buildings and structures used for electricity generation are taxed at the rate of the surrounding land use. This treatment also applies to large (over 500kW) on farm digesters that are operated by farmers.	Land, buildings and structures used for electricity generation are taxed at the rate of the surrounding land use for the proportion of assessment up to 500kW, and taxed at the industrial rate* for the proportion over 500kW.
<u>Ground - Professional Generation:</u> Generation is conducted by a corporate power producer	Land, buildings and structures used for electricity generation are taxed at the industrial rate.		
* The municipal portion of the tax rates for industrial properties/assessment is currently 2.3274 times the residential municipal tax rate.			
NOTE: Wind Turbine Towers: Consistent with the treatment that has been in place since 2005, wind turbine towers will continue to be assessed at the rate of \$40,000 per MW of installed capacity, except in the two situations noted above where the assessment would not be affected by the installation (rooftop installations and ground-based installations up to 10kW).			

Construction Related:

1. What is involved in the permitting process in Ontario? Do all municipalities and other local bodies have to follow the same process?

At a Glance



- Green Energy Act in Ontario requires renewable energy projects to undertake a Renewable Energy Approval (REA) process
- Under this approval process, assessment is made on whether proposed projects will have impacts on cultural and heritage resources and the natural environment
- Municipalities comment on the impacts on municipal infrastructure through a Municipal Comment Form that forms part of the REA submission to the Province
- Ontario Ministry of Natural Resources and Ontario Ministry of the Environment review the results of the impact assessment
- The chart provides an overview of the process
- Setbacks (the distance between a proposed turbine location and a specific feature) have been established under the Green Energy Act for people's homes, roads, wetlands, watercourses, woodlots, parks and conservation areas, and a variety of other landscape features

- It is the responsibility of the Green Energy company to ensure that they have a complete understanding of the local environment and of the human landscape in the project areas

2. What can I expect to see during the construction phase for a wind turbine?

- Pre Construction - During this phase there will be geotechnical studies, layout surveys, and archeological studies. It will be common to see flagging, marking and areas of turned up soil during this phase. This phase will generally take a few months to complete for each site

- Access road construction - This is the first phase of actual on site construction. The developer will be mobilizing their construction forces that would include dump trucks, excavators, gravel trucks and other construction equipment. It will be common to see flagmen on the road right of way, and temporary disruption to traffic. This phase generally will be completed in a few weeks for each site.
- Site preparation and foundation construction - In this phase, the foundation for the turbine is constructed. There will be several deliveries of steel rebar, and it takes approximately 40 loads of concrete to pour each foundation. This phase takes approximately 1 week per site.
- Delivery of components and installation - This phase begins approximately 1 month after the foundation is poured, and consists of several large deliveries of wind turbine components and crane components to the site and the construction of the turbine. During this time it is expected to see large delivery trucks, and support equipment to site. The construction of the crane, and the assembly of the turbine components. This phase is expected to take approximately 3 weeks, and is heavily dependant on weather conditions.
- Final Construction and Testing - During this phase, the final construction of the turbine components takes place, cabling is constructed and connected to the project. The access roads and entrances are completed to their final configuration; site cleanup is completed. During this phase the turbine is put through operational testing and optimization prior to commissioning.

3. What is the procedure if I have a question regarding property damage from a Green Energy project?

If you have a question regarding the Green Energy project construction in Haldimand County, contact: greenenergy@haldimandcounty.on.ca

4. How is Haldimand County ensuring that any road damage as a result of the Green Energy projects is repaired? Who is responsible for these repairs?

It is expected that there will be damage to the county's road infrastructure due to the increase in traffic, and the general construction activities. Haldimand County has entered into Road Use Agreements with each of the Green Energy developers that outline the conditions that permit the Green Energy developers to utilize the county road Right of Way (ROW). In the agreements, there is language that ensures that all damage done to the county's road infrastructure is repaired in a manner that is consistent with the existing condition of the road at the cost of the Green Energy Developer. To ensure that the road is properly restored, a pre-condition survey of the road network was completed, and following the construction a post condition survey will be completed. Haldimand County is holding considerable security deposits from each developer to ensure that the road network is restored correctly.

If you wish to report damage to the road right of way due to the construction of Green Energy projects, please send an email to greenenergy@haldimandcounty.on.ca.

As the construction is still ongoing, it is likely that a temporary repair will be completed and a full comprehensive restoration will be completed at the end of the construction of the project.

5. Where are the Capital Power projects?

See map [here](#)

6. Where are the NextEra projects?

See map [here](#)

7. Where are the Niagara Regional Wind Corporation projects?

See map [here](#)

8. Where are the Samsung projects?

See map [here](#)

Solar Projects

1. Where are the solar projects in Haldimand County?

The Samsung combined wind and solar project that is proposed within Haldimand County is generally bound by Townline Road to the north, Haldimand Road 20 to the west, the Grand River to the east and Lake Erie to the south. The solar component of the project will be constructed in an area bound by Mount Olivet Road, Meadows Road, Sutor Road, and Bains road.

The First Solar development is being constructed on a parcel of land west of Haldimand Road 55 between Concession 11 and Concession 12.

2. What can I expect to see during the construction phase for a solar project?

- Pre Construction - See Question #2 under “Construction Related”
- Access road construction - This is the first phase of actual on site construction. The developer will be mobilizing their construction forces that would include dump trucks, excavators, gravel trucks and other construction equipment. It will be common to see flagmen on the road right of way, and temporary disruption to traffic. This phase generally will be completed in a few weeks.
- Site preparation and grading - In this phase, the site will be levelled and prepared, and the storm water management and drainage controls are installed and there will be many deliveries to site. This phase is expected to last for several months.
- Delivery of components and installation - This phase begins immediately after the site preparation is complete. During this time it is expected to see large delivery trucks, and support equipment to site. The construction of large racking for the panels and the installation of kilometers of cabling. This phase is expected to take longer than 6 months and will be the bulk of the construction time.
- Final construction and testing - During this phase, the final construction of the solar installation takes place. Cabling is constructed and tested, and several computer

simulations and system checks are completed. Site cleanup is also completed in this phase. It is expected that this phase will take approximately one month.

3. What is the energy output of a solar panel & how many homes can that power?

- Typically one of the ground mounted panels you will see along the side of the road is actually made up of about 10 panels wide by 15 panels long, 150 panels in total. There are approximately 450,000 panels in the Samsung project here in Haldimand County. The solar facility will provide 100MW in total output or enough electricity to supply about 22,000 homes.

4. What is the life expectancy of the solar panel and what happens to them at end of life?

- The Decommissioning Plan Report provides a description of the plans for the decommissioning of the solar project including:
 - pre-dismantling procedures
 - procedures for equipment dismantling and removal
 - activities related to the restoration of land affected by the Project
 - procedures for managing excess materials and waste
 - removal of all components from the sites
- The components used for the Project have a typical operational lifespan of approximately 25 years. At the end of the equipment's useful life, the Project components are expected to be decommissioned. If project economics and need remain viable at that time, the facility could be "repowered" with new technology. This process may include the replacement and/or upgrading of Project components, however specific details are unknown at this time as technological improvements over the next 20+ years are currently unknown.
- It should be noted that the Project proponent has a decommissioning bond available at commencement of construction for each of the land owners to remove works from their private property, in the unlikely event that such action is necessary.

- The costs for removal of Project infrastructure would be the responsibility of the owner of the Project or the purchaser of the reusable materials. At the time of decommissioning, the restoration plan would be updated as necessary based on the standards and best practices at the time of decommissioning, and in consultation with the landowner and appropriate regulatory and government bodies.
- The decommissioning plan would involve restoration of agricultural lands, areas not in agricultural production, municipal road allowances and water crossings, contingency measures for potential contamination, and a monitoring period which allows for the Project area to experience seasonal changes and help determine if additional restoration is required

Wind Projects

1. What are the environmental benefits to wind energy?

- No air emissions such as greenhouse gases, sulphur oxides or nitrogen emissions.
- No water pollution
- No radioactive emissions
- No natural resources consumed during operation
- Land use per KW generated is low

2. What are some of the economic benefits to wind energy?

- No fuel costs
- Tax base increase
- New revenue for land lease holders
- New local jobs created and added
- Revenue sharing through the Community Vibrancy Funds
- No hidden costs, such as health care tax burden or pollution clean-up

- Income to local businesses including motels, caterers, office supply companies, construction firms, rental companies and others, also add to the economic development of the local area.
- Wind farms increase the economic return on agricultural operations in the area, preserving traditional land use.

Specific benefits to Haldimand County include:

- 200 turbines are expected with approximately 8 truck loads per turbine; that will equal approximately 1600 loads. An oversize load fee is \$89. Given the number of loads, Haldimand County can expect to accrue approximately \$140,000 in oversize load fees during the course of these projects.
- Other revenue during the project construction will be realized from various County fees such as road occupation, entrance, civic address and building permits which could be in the range of \$9,000 per turbine.
- Community Vibrancy Agreement funds from green energy companies operating in Haldimand County will provide \$2m annually for community related projects.

3. What is the energy output of a wind turbine & how many homes can that power?

- A 1.5-MW turbine would produce enough electricity to supply 330 households over a year.

4. Is an environmental review performed of the projects?

- An environmental review is performed for every project.
- Wind projects are sited in areas where there is good wind, the ability to transmit the energy, a market for the energy, and land use is compatible with a wind farm.

5. What is the long term impact on property values from having wind projects in the area?

- There is no evidence to show a decline in property values from the siting of a wind farm.
Excerpt from the Chatham-Kent property value study 2010:

"In the study area, where wind farms were clearly visible, there was no empirical evidence to indicate that rural residential properties realized lower sale prices than similar residential properties within the same area that were outside of the view shed of a wind turbine. No statistical inference to demonstrate that wind farms negatively affect rural residential market values in Chatham-Kent was apparent in this analysis."

Excerpt from the Berkeley Lab property value study 2009:

"Specifically, neither the view of the wind facilities nor the distance of the home to those facilities is found to have any consistent, measurable, and statistically significant effect on home sale prices. Wind facilities have had no widespread and statistically identifiable impact on residential property values."

6. What happens when wind turbines are removed?

- Siting of wind turbines is governed by long-term agreements that can cover periods of up to 20 to 30 years, depending upon the expected life span of the turbine.
- When turbines are removed, the land is returned to virtually its original condition.
- Typically, tower foundations and other structures are removed to a specified below-ground depth.
- NextEra Decommissioning plans for Summerhaven project:
<http://www.nexteraenergycanada.com/pdf/summerhaven/2011-06-13%20Decommissioning%20Plan%20Report.pdf>

- Samsung Decommissioning Report:

http://www.samsungrenewableenergy.ca/sites/default/files/pdf/haldimand/GREP_DecommissioningPlanReport_Draft.pdf

- CPC Decommissioning Report:

http://www.capitalpower.com/community/consultationengagement/Documents/PDN/05_Decommissioning%20Plan%20Report/PDN-Decommissioning.Plan.Report.pdf

- NRWC Decommissioning Report – not public at this time.