

**APPENDIX F**

**APRIL 2012 INTERIM SESSION MATERIALS**

## Frequently Asked Questions

### Samsung

#### 1. What incentives has Samsung received from the government?

Samsung signed the Green Energy Investment Agreement (GEIA) with the Government of Ontario in January 2010. This Agreement commits Samsung and our partners to generate 2,500 megawatts of electricity, construct four manufacturing facilities and create 16,000 direct and indirect jobs. Due to Samsung's proven ability to manage projects of this scale and complexity, we have been able to secure partnerships with Siemens, CS Wind and SMA Solar Technology – the Agreement included an “Economic Development Adder” (EDA). This amount was re-negotiated in August 2011 to a total maximum value of \$110 million, payable over 20 years. This EDA will only be paid if all conditions under the contract are met.

#### 2. What is Samsung's agreement with the Ontario government?

On January 21, 2010, Ontario Premier Dalton McGuinty and Ontario Minister of Energy and Infrastructure, Brad Duguid were joined by Samsung C&T President and CEO Sung-ha Chi to officially announce and sign the Green Energy Investment Agreement (GEIA) to develop and build the Ontario Alternative Energy Cluster, deemed to be the largest of its kind in the world. According to the terms, Samsung C&T will establish and operate a series of wind and solar power clusters over the next several years. The entire project will have a combined power-generating capacity of 2,500 megawatts – enough to power 600,000 Ontario homes – by 2016, increasing dramatically the amount of renewable power generated in Ontario and providing clean energy for generations to come.

Under the terms of the GEIA, Samsung and its partners will invest \$7 billion in new investment in Ontario to create 16,000 direct and indirect jobs, create four new manufacturing facilities to produce wind towers (Windsor) and blades (Tillsonburg), as well as solar modules (London) and inverters (Toronto) for their projects in Ontario. These facilities will also export Ontario-made products around the world.

#### 3. Is Samsung from North or South Korea?

Samsung is from South Korea.

#### 4. Why was a Canadian company not awarded the project?

As announced by Premier McGuinty and the Ontario government on January 21, 2010, the opportunity to discuss similar projects or investment agreements existed for other companies including Canadian firms. We will not speculate as to why the government did not choose a Canadian company, however, it is worth noting that in 2008 and 2009, when the GEIA was being negotiated, the world including Canada was facing a financial crisis. Many municipalities in Ontario were reporting unemployment rates above 15%. Faced with credit crunch, negative economic outlook, and uncertainties, it would have been a daunting and difficult task for any large company to commit a \$7 billion dollars investment into an industry and a jurisdiction to create up to 16,000 jobs and establish manufacturing facilities while developing and permitting world class wind and solar facilities.

**5. How financially stable is Samsung to build such a project?**

Samsung is a global conglomerate with over \$343 billion (2011) in assets. We have been in operations for over 70 years. Currently we have over 100 offices worldwide.

**6. Samsung makes great flat-screen TV and semiconductors. But clean energy?**

Leading the world in high-tech electronics is one of the many things Samsung does. Since the company began in 1938, we have brought advanced technology and product excellence to fields as diverse as resource development, textiles, plastics, finance, and construction – even fashion. Increasingly, we have shifted our focus to alternative energy in line with global aspirations for a greener world.

Samsung is comprised of many companies, one of which is Samsung C&T, which is building and operating the wind and solar power cluster here in Ontario. In a world that is constantly evolving, our company mission remains constant: To create superior products and services, thereby contributing to a better global society. This vision has helped Samsung C&T emerge as a leading player in the new and alternative energy sector, offering solutions to customers worldwide through a network of over 100 offices in 44 countries, with renewable energy projects in countries including the United States, Italy and Australia.

**Solar Energy**

**7. What is solar energy?**

Solar energy is heat, light and other radiation emitted from the sun. It is responsible for providing the necessary energy to power almost all natural processes on earth, including wind.

For more interesting facts about solar energy, visit [www.cansia.ca](http://www.cansia.ca)

**8. How powerful is the sun?**

If you took all the energy generated by man and planet earth in a day, it only amounts to 1/10,000th of the sun's energy as it hits the earth.

**9. When was solar power first used as an energy source?**

The ancient Greeks and Native Indians built their houses into hillsides to take advantage of heat storage from the sun. Romans were the first to build glass windows to trap the warmth of the sun. It wasn't until 1776 that the first solar collector was built. The actual silicon photovoltaic cell was invented by Bell laboratories in 1954.

**10. How is solar power collected?**

Solar energy is collected by silicon photovoltaic cells. When the photons from the sun beat down on the PV cells, they knock electrons out of the silicon. These negatively charged electrons are then trapped in magnetic fields, then harvested by tiny wires in the silicon that, when connected to a circuit, form an electric current.

**11. Do you have to live in a hot country to harness solar energy?**

No. So long as there is a good amount of sunshine per day you can generate solar power.

**12. Where in Canada is the largest single solar farm currently in operation?**

In Sarnia, Ontario. It covers 950 acres (385 ha) and can produce up to 80 megawatt enough to power 12,000 homes

**13. Which province in Canada has the most useable hours of sunshine a year?**

Saskatchewan

**14. Where is the world's largest solar market?**

Germany followed by Spain.

**15. What is a solar photovoltaic (PV) system and how do solar panels work?**

A solar photovoltaic (PV) system uses the energy from the sun to produce electricity. This technology uses semiconductors to generate the electricity. Energy from the sun, in the form of photons, bumps the semiconductor's electrons out of orbit creating a flow of electricity called direct current (DC) electricity.

Semiconductors are used to make solar cells. The solar cells are connected together in a framed panel to create a solar module. The cells are protected on top by a clear sheet of tempered glass or a laminated layer of plastic and, on the bottom, by a layer of material to strengthen it. Then all the components are framed in aluminum.

The electricity generated from solar PV systems can be used to power a number of commercial and residential electrical devices or can be fed back into the provincial electricity grid.

Southern Ontario is especially well situated for using this technology. There is plenty of sunlight in the summer and the winter to create electricity and the temperature range in southern Ontario allows the technology to work efficiently.

For more information check out the Ontario government's website <http://www.mei.gov.on.ca/en/energy/renewable/>

**General**

**16. What exactly will Samsung C&T be doing in Ontario?**

In a nutshell, Samsung will be using its expertise to oversee the entire renewable energy cluster project including site preparation, the manufacturing of renewable energy components and equipment, operation, maintenance, construction and project financing. A project on this scale requires a company with the necessary experience in delivering renewable energy projects on ambitious timetables, and one that is able to develop partnerships with other leading renewable energy companies. On both counts, Samsung has, and will continue to deliver. More project details can be found under our Projects: <http://www.samsungrenewableenergy.ca/our-projects>.



**17. What is Samsung C&T's involvement in the solar energy portion of the project?**

Samsung C&T will be overseeing the construction and operation of solar power clusters over a 20 year period that will generate up to 500 megawatts of energy. We will facilitate all project operations, procuring equipment and assist with financing requirements. Samsung will also create new jobs by bringing local manufacturing facilities for solar modules and inverters with proven industry partners.

**18. What are the objectives and potential challenges?**

There has been a recent flurry of interest in solar energy in Ontario. Everyone from homeowners to farmers to shopping centres are installing panels on their roofs to take advantage of the province's Feed-In-Tariff (FIT) program. This grass roots approach can only help large-scale projects like ours phase out coal power plants by 2014 and make Ontario a new solar hotbed. FIT have the added advantage of making the market more predictable and attractive to investors, as does the easy access to the growing U.S. market. Already, large global suppliers of solar equipment are establishing operations in Ontario. We will do our best to help to spur the growth of domestic suppliers.

**19. What does the project entail?**

In brief, this project involves establishing wind and solar power generation in strategic locations throughout Ontario. Samsung C&T will oversee the entire project, and has signed contracts with some of the world's leading renewable energy companies to construct plants; they will provide the renewable energy equipment required to meet the terms of our Agreement. Samsung C&T will also secure land for the construction of the clean energy clusters. Once the clusters are established, the Ontario Power Authority will purchase the clean power that will be generated.

**20. Where is this all happening?**

There will be multiple phases of the project that will be built throughout Ontario in communities such as Chatham-Kent, Haldimand, Kincardine, Kingston, Loyalist, and Ashfield-Colborne-Wawanosh. More project details can be found on our website under our Projects: <http://www.samsungrenewableenergy.ca/our-projects>.

**21. Did someone say 'new jobs'?**

Over the next six years, we expect the Alternative Energy Cluster project to generate approximately 16,000 jobs, thus revitalizing Ontario's economy while providing opportunity to communities hard hit by the global recession. Additionally there are domestic content guidelines that Samsung C&T, along with our partners, must follow. Those guidelines require us to use Ontario-sourced materials and expertise, including Ontario steel in the construction of the wind towers.

**22. How long will the project go on for?**

The first two phases the project is scheduled to be constructed by 2014 and will include 200 megawatts (MW) of solar electricity generation, and 870 MW of wind generation. Each subsequent phase will build 500 MW of renewable energy over the next five to six years. Each phase will have an operational life of twenty years.

### **23. What permits or approvals does Samsung need to develop the solar facility?**

Samsung will require various permits and approvals for the project, including:

- Renewable Energy Approval (REA) from the Ministry of the Environment (MOE) – it is an environmental approval of all Project works and activities.
- Where necessary, Species at Risk (SAR) permits from the Ministry of Natural Resources (MNR).
- Connection Approval System Impact Assessment from the Independent Electricity System Operator – it is required to register with IESO and meet requirements for grid connection.
- Generator License from the Ontario Energy Board – it provides Samsung with a permission to operate.
- Customer Impact Assessment from Hydro One Networks – it assesses the effects of grid connection.
- Certificate of Inspection from the Electrical Safety Authority.
- Notice of Project Construction from the Ministry of Labour – it is required to meet labour codes and regulation.
- Interference with Wetlands, and Alterations to Shorelines Permit from the Conservation Authority – it is required for development of works within floodplains such as water crossings.
- Work permit/ agreement for municipal Right of Way, Building Permit, and Entrance Permit are required from the municipality – these are required for work within road allowance and use of road allowance for power lines; to meet local and provincial codes; and acquire permission to connect to municipal roads.

### **24. How much do I pay as a taxpayer?**

Samsung and our partners are investing \$7 billion in Ontario – an unprecedented investment in Ontario's future, thanks to the Green Energy Act which was a signal to the world that the province was open for business and took seriously the need to create jobs in a new industry. Samsung is proud to partner with the government to deliver 2,500 megawatts of clean power – enough to power 600,000 Ontario homes. Samsung has not yet received one cent from the Government, in fact as of today Samsung and its partners have invested over \$200 million and we will only begin to recoup a portion of our investment once we begin producing power. Under the contracts signed with the Ontario Power Authority (OPA), we expect the initial phases of our renewable energy facilities to reach commercial operation in 2014. Samsung and our partners are assuming all the risk and liability for the possible cost-overruns of our projects and taxpayers are not on the hook for the construction of our wind and solar projects.

**25. What are the domestic content rules for the project?**

Domestic content rules are outlined in the Feed-In-Tariff (FIT) Program. Domestic content is an integral part of the *Green Energy and Green Economy Act, 2009*. The Ontario Power Authority is responsible for implementing this Program.

Developers will be required to have a certain percentage of their project costs come from Ontario goods and labour at the time they reach commercial operation. For larger solar Photovoltaic (PV) projects (greater than 10 kilowatt), the requirement is 60%.

When designated activities (such as manufacturing, labour, consulting) are done in Ontario, the developer receives a qualifying percentage towards the requirement.

**26. How are First Nations and Métis made aware of the project?**

The Ministry of the Environment identified a list of the potentially impacted Aboriginal communities. Samsung has contacted all of these communities to determine how they wish to be involved in the Project and provided copies of the Project Description.

**27. How big will the solar facility be and how much power will it produce each year?**

Samsung's proposed solar facility is 100 megawatt (subject to REA approval). It will cover approximately 800 acres and generate 120 gigawatt hour per year.

**28. Will the solar facility include wind turbines?**

No wind turbines are considered to be included within the solar facility.

**29. Will Samsung consider expansion of the solar facility in the future?**

Currently, Samsung is not considering future expansion; however, if in the future this need arises, Samsung will inform the community.

**30. How many tons of greenhouse gas will be offset each year as a result of the solar facility?**

Approximately 800 tons per megawatt (MW) is offset each year. For this 100 MW solar facility, Samsung anticipates that between 80,000 and 90,000 tons of greenhouse gas will be offset annually.

**31. What are solar setbacks?**

Setbacks are distances that the solar panels will be placed away from specific features such as roads or water bodies. Samsung is working with Ontario Ministries of the Environment, Natural Resources, and Tourism, Culture and Sport to ensure that regulated setbacks are identified and incorporated into the planning process. Setbacks for properties may be determined with individual landowners on a property-specific basis.

## KINGSTON SOLAR LP

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### 32. How many houses will be powered on a daily, weekly, monthly or yearly?

The power generated from the project will be delivered to the grid, so it will be distributed to all users, not just homes. On an annualized basis, an average home uses 10,000 to 12,000 kilowatt hours of power. Considering the solar array is expected to generate 120 gigawatt hours of power in an average year, this is equivalent to the total power used by 10,000 to 12,000 homes.

### 33. How do we get more information about the project?

Additional information about the Project is available on the website. To keep up-to-date on the Project, please join our mailing list.

E-mail: [solucekingston@samsungrenewableenergy.ca](mailto:solucekingston@samsungrenewableenergy.ca)

Website: [www.samsungrenewableenergy.ca/low/pages/projects\\_kingston.php](http://www.samsungrenewableenergy.ca/low/pages/projects_kingston.php)

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## Consultation

### **34. Can you please provide the details of consultation plans for local residents?**

Samsung held open houses with the community on August 30 (Loyalist Township) and August 31 (City of Kingston), 2011 to provide an opportunity for the community to learn more about the proposed solar development project. The session also provided an opportunity for the community to ask questions of the project team. A website ([www.samsungrenewableenergy.ca](http://www.samsungrenewableenergy.ca)) and email address ([solucekingston@samsungrenewableenergy.ca](mailto:solucekingston@samsungrenewableenergy.ca)) have also been setup to provide additional information.

An Interim Community Session has been scheduled for April 17, 2012 at the INVISTA Centre in Kingston from 3:00 – 8:00 pm. This session will be advertised in local newspapers and individuals on the mailing list will receive notices. To be added to the mailing list, please send your contact details to the email address above.

Another set of open houses will be conducted in the late summer or early fall (2012).

### **35. What information will Samsung be presenting at the upcoming open house on April 17, 2012? Will it include a discussion with local residents about setbacks?**

The April 17th Interim Community Session will provide short formal presentations on the status of the project and provide additional information through posters. Technical experts such as biologists, hydrogeologists, and construction will be on hand to help answer questions related to the Renewable Energy Approvals process and related studies. As well, roundtable discussions on specific topics such as groundwater, plants and animals, and construction will provide an opportunity for the community to engage with the project team and the technical experts. Setbacks outside of existing regulations will not be discussed at this session. Samsung may discuss separately with individual landowners on a property-specific basis.

### **36. Will Samsung be responding to the recommendations made at the Rural Affairs meeting?**

Samsung was pleased to accept the invitation by the City of Kingston's Rural Affairs Committee to attend the February 28th session. We took the opportunity to listen to the questions and concerns identified by the community and have recently issued a "What We Heard" letter to the Committee and individuals on our mailing list. As with all comments and recommendations received, the project team evaluates them as part of the ongoing studies. Many of the questions raised on February 28th will be addressed at the April 17th Interim Community Session; however, due to the fact that some studies are ongoing, Samsung will not be able to answer other questions until those studies are complete.

### **37. When will residents hear about when the proposed meeting in March/April will occur?**

An Interim Community Session has been scheduled for April 17, 2012 at the INVISTA Centre in Kingston from 3:00 – 8:00 pm. This session will be advertised in local newspapers and individuals on the mailing list will receive notices. To be added to the mailing list please, send your contact details to the project email address ([solucekingston@samsungrenewableenergy.ca](mailto:solucekingston@samsungrenewableenergy.ca)).

**38. Will Samsung be installing new poles or using existing poles for hydro lines?**

Samsung intends on routing collector (co-locate) lines through the existing distribution poles, where possible. Within individual properties Samsung intends to route the cables underground where possible.

**39. How do we know when the project team will be in the area?**

There are professionals in the project boundary area conducting field work. The dates will be weather dependant and often on an as needed basis. Our consultants usually have signs attached to the side of their vehicles that are easily identifiable.

**40. What is Samsung's current position regarding setbacks?**

Setbacks are regulated by the Province of Ontario and are listed in Ontario's Regulation 359/09. Setbacks to all natural and heritage features such as Provincially Significant Wetlands apply for solar projects. Additionally a Noise Study Report is required, by the Ministry of the Environment, to ensure that the transformers associated with the solar panels are located in strategic areas. Under this regulation, there are no setbacks to features such as public roads, property lines.

**41. Could you please provide us with more information?**

Additional information about the Project is available on the website. To keep up-to-date on the Project, please join our mailing list.

E-mail: [solucekingston@samsungrenewableenergy.ca](mailto:solucekingston@samsungrenewableenergy.ca)

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**Agriculture and Other Land Uses**

**42. Will agricultural land be used? If so, what are the effects on agriculture?**

Samsung is currently following the guidelines established on the Feed-In-Tariff (FIT) rules. These guidelines clearly state that any solar project with a Contract Capacity greater than 100 kW cannot be located (built) in Canadian Land Inventory (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. Therefore Samsung or any other proponent is not allowed to build in prime agricultural lands.

There is an opportunity for soil investigations to be conducted to confirm the classification of soil and where applicable seek re-classification from the Ontario Power Authority. Samsung or any other proponent is not allowed to build in prime agricultural lands.

**43. What are the effects on soil quality once the solar panels are removed?**

Based on the types of soil in the Project area and the proposed construction, minimal impact on soil quality is anticipated (i.e., compaction).

**44. Why not use rooftops instead of agricultural land for the solar facility?**

In the Project area, there is not enough rooftop space to produce 100 megawatts. Only a very limited number of buildings in Ontario have sufficient structural capacity to be considered for rooftop solar development.

**Visual Impact of the Project**

**45. How will Samsung address the visual impacts of the project? Will there be visual screening (e.g. fencing, panels, trees, and berms) from roads and homes? Will there be berms? If yes, how high will they be and where will the soil come from to create them?**

As part of the planning process, Samsung will be evaluating mitigation measures for potential visual impacts and the scope of visual screening may be established as the detail design progresses.

**46. Can you provide more details about setback distances and adequate buffering between neighboring property lines and panel installations?**

Samsung is currently evaluating setback distances and buffering on a property specific basis. However, setbacks to all natural and heritage features such as provincially Significant Wetlands are regulated by the Province of Ontario and are listed in Ontario Regulation 359/09. Additionally, a Noise Study Report is required by the Ministry of the Environment, to ensure that the transformers associated with the solar panels are located in strategic areas. Setbacks to features such as public roads, property lines are not regulated. Samsung may work with individual landowners on a property-specific basis to determine setbacks.

**Health**

**47. Is there a risk or impact to human health?**

Potential impacts to human health and safety are minimal and generally related to construction activities such as noise, vibration and dust. The levels of noise, vibration, dust and emissions during the construction phase are expected to be minimal, localized and temporary in nature. Mitigation measures for these potential impacts will be part of the construction plan and health and safety plan.

**48. What are the effects of electromagnetic fields (EMFs) on human health due to the proximity of high voltage cables that carry high impedance (Amperage)?**

Electromagnetic fields or EMFs are invisible fields that surround electrical equipment, power



cords, and power lines. You cannot see or feel EMFs; however, every time you use electricity – either from power lines or appliances (e.g., television, computer, coffee maker, hair dryer, monitors, cellphones, microwaves) – you are exposed to EMFs at extremely low frequencies. These forces are strongest when you are close to the source. As you move away from the source, the strength of the fields fades rapidly. When you are indoors at home, the magnetic fields from high voltage power lines and transformer boxes are weaker than those from household electrical appliances.

Research has shown that EMFs from electrical devices and power lines can cause weak electric currents to flow through the human body. However, these currents are much smaller than those produced naturally by your brain, nerves and heart, and are not associated with any known health risks.

When all of the studies are evaluated together, the evidence suggesting that EMFs may contribute to an increased risk of cancer is very weak.

**49. What are the noise impacts from construction and operation of the facility including, but not limited to, impacts from transformers?**

Sound levels from the Project operations were modeled using an industry standard and Ministry of the Environment (MOE) accepted noise modeling program which simulate the sound levels from the inverters and the sub-station transformers. The predicted sound levels from the inverters based on manufacturer's data were determined to not exceed the MOE guideline limits at the points of reception (i.e., nearest residences).

Construction noise will primarily come from mobile equipment. Work hours are planned to occur between 7:00 AM and 7:00 PM.

**50. What are the construction and operational impacts related to any use of chemicals (e.g., detergents, cleaning chemicals, and herbicides) to prevent vegetation shading of panels?**

Appropriate environmentally-friendly vegetation control methods will be used by local contractors as administered by the operations and maintenance contractor. There is no cleaning regime for the panels (i.e., naturally through rainwater).

**51. What air quality impacts can be expected during construction and operation? What plans are there for dust control during construction and operation of the facility?**

Dust control during construction will primarily come from applying dust suppressants (mostly water) in work areas that are subject to dusting. There will be efforts to minimize bare earth exposure by revegetating as quickly as possible. Operation of a solar array does not impact air quality.



**52. What are the local benefits of the project?**

Local benefits that may be realized as a result of this Project include:

- Employment including direct (engineering, construction, suppliers, and service providers) and indirect (accommodations, restaurants, and retail).
- Income to property owners where leases have been established.
- New property and sales tax revenues for the local tax base.
- Environmental benefits through the reduction of greenhouse gas emissions.

**53. Will property insurance or property taxes change?**

As identified in the lease agreements, Samsung will cover the incremental taxes for landowners where these agreements exist. Property taxes are controlled by the municipality, but Samsung does not anticipate any property tax increase for non-participating landowners.

There is no existing evidence of an effect of solar facilities on property insurance. Property insurance is regulated by the insurance industry.

**54. What are the impacts on property values from solar development? And, what will Samsung do to assure no property value loss due to the Solar Installation?**

Landowners (lessor) that have lease agreements with Samsung (lessee) will be compensated. The increase in revenue per acre for the lessor could potentially result in an increase in property value. The solar facility may be designed to minimize any potential visual effects on nearby landowners and thus any potential impact to property values.

With regards to a property being within visual distance of the solar facility and the potential effects to property values, there is no available evidence to date (via systematic reviews of property value impacts) which links the location of a solar facility within impacts on property value.

**55. What jobs will be sourced locally?**

Where possible, Samsung will be sourcing jobs locally. Some of the direct jobs will include ploughing, construction, operation and maintenance. Local indirect jobs are anticipated due to an increase in work in the area.

**56. How many jobs will be created for the Project?**

The 100 megawatt solar facility project is expected to create the employment of approximately 100 people on a monthly basis during the construction phase and 5-10 people during the operation and maintenance phase; however, the accurate number and types of position is not known at this time and will be assessed as part of the planning process. For instance, the construction report for the Renewable Energy Approval will address the estimated number of jobs to be created, but more accurate figure of employment can be estimated after the detailed engineering stage.

**57. Who owns that land that the project is being constructed on?**

Samsung has entered into lease agreements with various landowners throughout the Project area. Samsung has an option to purchase less than 5% of the total properties required for the solar facility.

**58. Will Samsung guarantee home owners value on their properties? If not, why not considering Samsung has previously stated that property values will not decline...if Samsung is so confident of this statement, why not guarantee our property values?**

The solar facility will be designed to minimize any potential visual effects on nearby landowners and thus any potential impact to property values. With regards to a property being within a visual distance of the solar facility and the potential effects to property values, there is no available evidence-to-date (via systematic reviews of property values impacts) which links the location of the solar facility with impacts on property value. Landowners (lessor) that have lease agreements with Samsung (lessee) will be compensated. The increase in revenue per acre for the lessor could potentially result in an increase in property value.

**59. What will Samsung do for the loss of amenity for neighboring properties including landscape impacts and destruction of views?**

As part of the planning process, Samsung will be evaluating mitigation measures for potential visual impacts and the scope of visual screening may be established as the detail design progresses.

## Surface and Ground Water Resources

**60. What are the effects of construction and operation of the project on the quality and quantity of groundwater resources (e.g., impacts from post hole drilling on groundwater aquifers and well water in the surrounding properties)? What will Samsung do to assure no water loss or water contamination?**

No water loss is expected during the construction or operation phases. It is very unlikely that anything more than minimal dewatering will be required during construction. If water is taken for dewatering during construction, it can be allowed to soak back into the ground close to the point of taking to prevent a net water loss.

In terms of construction, this facility does not require any new or unusual construction techniques. Larger excavations into bedrock or near the bedrock are likely typical in the area for the construction of house basements. The construction of post holes will be similar to those created for the installation of telephone poles.

After construction is complete, no water taking is expected at the facility, with the possible exception of a small water well at the Operations and Maintenance Building to supply water for employee washrooms.

These corrective measures would follow the Ministry of the Environment (MOE) guidelines on addressing groundwater water interference. As per s.13 of the Environmental Protection Act, all spills that could potentially have an adverse environmental effect, are outside the normal course of events, or are in excess of the prescribed regulatory levels would be reported to the MOE's Spills Action Centre and clean up measures will be implemented immediately.

**61. In the draft report it is stated that: "Aquifers can be susceptible to land use impacts depending on the type and thickness of the overburden and/or shallow depth to groundwater. Dewatering of aquifers is not anticipated as part of the project". If dewatering does happen what is Samsung's plan?**

The necessary precautions will be taken to avoid the potential impacts on groundwater levels; however, in the event that well water quality or quantity is disturbed as a result of construction, corrective measures would follow the Ministry of the Environment guidelines on addressing groundwater water interference. The subsurface work at the site is primarily limited to post hole construction, and no dewatering is anticipated.

*(please refer to page 13 Environmental Components/Potential Effects in the draft Project Description Report (July 2011) to view the quoted text above)*

**62. How will the installation and disturbance of existing soil (i.e., holes in the ground for the racking systems) impact the natural water filtration through the multiple soil passages (layers) to the wells?**

The shallow post holes required for the solar panels will be backfilled around the posts with concrete grout where open spaces around the posts are created. As such no open conduit will be created through the soil layers.

**63. What are the potential effects of the storm water runoff during construction and operation (i.e., impacts on surface water resources, erosion, flooding, etc.)?**

No significant impact on erosion or flooding due to the solar panel is anticipated; however, a stormwater management plan will be submitted as part of the regulatory requirements.

Erosion and sedimentation control measures will contain excavated soils on site and prevent related sediment from entering watercourses. Standard techniques will be used to control runoff (e.g. temporary ponds and silt fences).

After construction, water and snow will run off the solar panels and fall on to the ground, where it is expected to soak into the ground. During large storm events, some surface runoff will occur, however the net storm runoff is expected to be similar to pre construction due to the limited impermeable cover created on the ground. Vegetated areas disturbed during construction will be re-vegetated as soon as conditions allow, to prevent erosion and to restore habitat functions. Erosion and sediment control measures will not be removed until vegetation has been re-established to a sufficient degree (or surface soils stabilized using other measures) so as to provide adequate erosion protection to disturbed work areas and help retain water onsite. Tilling of compacted soils may also occur if necessary to assist water infiltration.

Erosion and sediment control measures will include the application of structures such as:

- Runoff Controls – diversion berms, cross trenches, chutes, check dams, interceptor swales;
- Erosion Control – diversion ditch and dispersion aprons, gravel sheeting, mulch, erosion control blankets; and
- Sediment Control – sediment fence, straw bale barriers, filter berms, sediment traps, settling ponds.

**64. The Cataraqui Region Conservation Authority has classified the entire area as having a "highly vulnerable aquifer". How will Samsung ensure the safety and integrity of ground water wells within the project area?**

The entire CRCA watershed is classified as being underlain by a highly vulnerable area (<http://www.cleanwatercataraqui.ca/publications/draftSourceProtectionPlan/ScheduleA.pdf> ). The classification of the area as being underlain by a highly vulnerable aquifer will be based on the presence of limited to no overburden cover over the bedrock. The construction of the facilities does not require any unusual or special techniques, and will comply with best management practices and regulations that cover all construction activities. The construction of the facility will not involve the permanent removal of soil and vegetative cover from the site, and the vulnerability of the aquifer is expected to be unchanged following construction.

The necessary precautions will be taken to avoid the potential impacts on groundwater levels; however, in the event that well water quality or quantity is disturbed as a result of construction, corrective measures would follow the Ministry of the Environment guidelines on addressing groundwater water interference. The subsurface work at the site is primarily limited to post hole construction and no dewatering is anticipated.

**65. Which local companies and/or experts has Samsung consulted with in their studies regarding local wildlife, wells in the area, our vulnerable aquifer?**

AMEC Environment & Infrastructure (AMEC) has been retained by Samsung to conduct studies related to local wildlife and to review potential impacts on the local aquifer. As part of these studies, AMEC has consulted with the Ministry of Natural Resources and Cataraqui Region Conservation Authority with respect to wildlife, fisheries, surface water, and groundwater. As well, Samsung has retained third-party expertise to peer review findings related to local wildlife and habitat.

**Biology**

**66. Is there a risk or impact to the environment and wildlife?**

Samsung and its consultant have completed baseline studies in the area to identify any potential risks or impacts to the environment and wildlife. Samsung, through its consultant (AMEC), is currently conducting field work and generating reports that are an integral part of the application for the Renewable Energy Approval (REA). The REA is a lengthy and comprehensive process which takes into account multiple critical items that are reviewed by several ministries and the final approval is adjudicated by the Ministry of the Environment. The studies involve an assessment of items such as, Species at Risk (SAR), wildlife corridors, significant wetlands. We work in conjunction with the ministries to eliminate, minimize and/or mitigate for identified risks or impacts.

**67. Is Samsung proposing to remove all trees and forested areas? And, what specific considerations is Samsung giving to mitigate the effects this will have on ground water?**

Tree removal within the project footprint will be minimal as the vast majority of the selected properties for the project are open fields with little to no vegetation. In addition, there is limited forest in the Project area and therefore removal will largely include minor hedgerows and regrowth areas. No riparian buffer areas will be removed and no changes in groundwater patterns are expected as a result of tree removal.

**68. Are natural heritage/environmental impact assessments being completed prior to ploughing archaeological resources to protect habitat from being lost?**

Natural heritage and environment impact studies on the fields that were to be ploughed were completed prior to the ploughing. The findings of the studies were reviewed with Ministry of Natural Resources who then provided conditions under which the ploughing could occur.

**69. What microclimatological effects can be expected due to removal of tree cover and the natural cooling it provides (e.g., creation of local heat sinks, regional implications, etc.).**

Since minimal to no vegetation removal is required it will not have a significant impact on tree covered areas and is not expected to measurably affect local or regional climate.

**70. What are the plans for permanent ground cover within the project footprint (e.g., gravel/grass/wildflowers)?**

Permanent ground cover will be accomplished with seeding or by gravel on permanent maintenance roads.

**71. Could you please address the following ecological concern:**

- a. Assessment of existing habitats within the project footprint including a minimum four season ecological assessment of significant woodlands, effects on nesting and grazing, potential disruption of wildlife movements including but not limited to impacts on threatened, endangered and species at risk. Additional examples would be deer, coyotes, and wolves, will not have the ability to travel freely throughout the property boundary due to the fences that will be put in place.**

A full habitat assessment has been conducted for all natural areas occurring within the Project Location (where the project components will occur) and 120 metres beyond. All habitat features outlined by the Ministry of Natural Resources (MNR) as requiring assessment including habitat of species at risk were included in this assessment. Among the habitat types assessed was the availability of suitable habitat linkages and animal corridors.

The Study Area is laterally bisected by Unity Road which acts as the most disruptive feature within it. The Study Area is further bounded by Highway 401 to the south which will limit movement of most species to lands closer to Lake Ontario. No habitat linkages were found within the Study Area that met the MNR definition of "significant animal movement corridors". Significant animal movement corridors are areas of natural habitat that link two significant wildlife habitat features. In southern Ontario, only corridors for deer and amphibians are considered significant.

Panel placement within the Project Location occurs such that large breaks occur between blocks of panels. Within these breaks occur areas of forest and/or regenerating agricultural lands (shrublands/grasslands) which may be used by any wildlife occurring in the local area. As a result, no physical impediments will be constructed that disrupt wildlife movement across Unity Road.

**72. Could you please address the following ecological concern:**

- a. Potential habitat destruction to adjacent lands during the construction period.**

All areas of direct impact from project activities are addressed in the Natural Heritage Assessment. In many cases, fencelines of agricultural fields already bound natural habitat features and will result in no loss of habitat. Due to the fragmented or checkered nature of agricultural fields being separated by hedgerows and patchwork of varying land uses, constriction of grassland or shrubland habitat will be minimal. Habitat features occurring within leased properties may experience the removal edge habitat.

**73. Could you please address the following ecological concern:**

- a. Potential loss of habitat for the endangered Loggerhead Shrike which is known to breed in the area, including consideration of adequate acreage required for breeding habitat.**

Eastern Loggerhead Shrikes prefer pasture or other grasslands with scattered low trees or shrubs. This species lives in fields or alvars with short grass (15-35 centimetres). Territory size for the prairie subspecies averages 13.4 hectares (ha) and can be as small as 6.5 ha (COSEWIC, 2004). This species builds its nest in short trees (most commonly hawthorn and red cedar) and perches atop these short trees while hunting for prey. Spiny tree species such as hawthorns are used to impale prey items (mice, small birds, frogs, and large insects), though barbed wire is also used.

Loggerhead Shrike habitat areas have been provided by Ministry of Natural Resources. This identified habitat will not be developed for this project and project components including panels, fences, roads, underground transmission lines, inverter stations, or buildings will occur greater than 120 metres (m) away. No additional potential shrike habitat was identified by AMEC to occur within 120 m of the Project location.

The protection of Loggerhead Shrike habitat has also lead to the protection of high quality grassland bird habitat.

**74. Could you please address the following ecological concern:**

- a. Potential impacts on Alvar habitat.**

Alvar habitat can be defined as areas of shallow soils (15 centimetre or less) occurring over limestone with areas of exposed limestone bedrock (Lee et al, 1998). In addition to sparse soil, alvars display sparse vegetation and host special plant communities. In Ontario, alvar-indicating plant species included Prairie Smoke, Early Buttercup, Indian Paintbrush and Balsam Ragwort.

Areas of shallow soils and exposed bedrock were observed within the Study Area, though such areas were not accompanied by the presence of rare vegetation. It was determined by AMEC biologists that such areas should be classified as bedrock meadow rather than alvar. Areas of bedrock meadow were dominated by agricultural plant species, reflecting their recent use as agricultural land or the agricultural influences of adjacent lands. Given the absence of rare vegetation communities in the Study Area, no alvar habitat was recorded within the Study Area.

**75. Will there be an Arborist's report including detailed tree inventories listing species and numbers for consideration of compensatory plantings by the City of Kingston arborist in accordance with the requirements of the Tree Bylaw?**

Samsung will work with the City of Kingston, Loyalist Township and Cataraqui Region Conservation Authority to identify appropriate mitigation plantings to meet the requirements of municipal tree bylaws.



**76. Has Samsung studied the riparian buffers? Has Samsung consulted with local experts? Who?**

Only one riparian corridor falls within 120 metres of the project. A 30 metre buffer has been proposed for this area. Aside from the Ministry of Natural Resources and the Cataraqui Region Conservation Authority, we have consulted with the Kingston Naturalist Society, local landowners, and the local loggerhead shrike naturalist.

**77. Due to the loss of riparian buffers in the area, Mud Lake and surrounding water channels develop algae blooms, how will Samsung address this?**

These areas will not be affected by the project as they are not within the project footprint nor is it expected to affect local hydrological patterns. Algae blooms occur naturally and the annual pattern of these blooms is not expected to change as a result of the project.

**78. Could you please provide information regarding Solar Farm Site/Landscaping (Topsoil Replacement)?**

During site preparation, topsoil will be removed and temporarily stockpiled on-site. The topsoil will be then be re-placed and reused to the extent possible onsite in areas disturbed by construction but not required for access roads.

**79. Have any endangered species been within the project footprint?**

Samsung has been working closely with the Ministry of Natural Resources (MNR) to identified endangered species within the draft proposed project area and mitigate where there are constraints. MNR restricts proponents from disclosing the endangered species and their locations identified in the studies to ensure their safety.

**80. What date did Samsung complete their ecological study?**

The study began in January 2011 and is ongoing.

**81. Can you provide details about the follow-up environmental monitoring and audit programs?**

The *Endangered Species Act* Permit currently being prepared will detail post-construction monitoring requirements for Species at Risk. Further follow-up environmental monitoring may be required following regulatory review of the Renewable Energy Approval reports.

**Archaeological and Cultural Heritage**

**82. Why do you need to plough the fields? When will this be done?**

The REA process requires proponents to undertake an archaeological investigation of the project lands. In order to determine whether there are artifacts beneath the soil, fields need to be ploughed to expose the sub-soil. Archaeologists then walk over the fields and look for artifacts that may indicate past occupation of the lands. The first round of ploughing was conducted in October and November of 2011. A second round of ploughing will occur (weather



permitting) throughout Spring 2012.

## Construction – Planning & Design

### 83. Why did Samsung choose this location?

This location was selected by Samsung based on multiple factors, including:

- a) On solar radiation data.
- b) Proximity to the transmission line.
- c) Available capacity on Hydro One's transmission system.
- d) Readily available Canadian Land Inventory Class 4 to 7 lands.
- e) Landowners willing to participate in this project.

### 84. Are the solar panels fixed and how high are they?

The proposed solar facility involves a fixed tilt installation. Each rack is typically constructed of footings and panels, where the entire unit stands approximately two metres above ground surface

### 85. How does the power get from the project to the grid?

Samsung intends on routing collector (co-locate) lines through the existing distribution poles, where possible. Within individual properties Samsung intends to route the cables underground where possible. Collector lines will be routed to a substation and connected to the 230 kilovolt (kV) transmission line through a tab overhead (cable) located within the Hydro One corridor.

### 86. Are new transmission lines required? And will transmission lines be overhead or underground?

Samsung intends on routing collector (co-locate) lines through the existing distribution poles, where possible. Within individual properties Samsung intends to route the cables underground where possible. Collector lines will be routed to a substation and connected to the 230 kilovolt (kV) transmission line through a tab overhead (cable) located within the Hydro One corridor.

### 87. What is the communication and fault setup scheme?

There will be supervisory control and data acquisition (SCADA) to ensure communications of faults and a relay protection scheme will be set up in conjunction with Hydro One requirements.

### 88. Who are the module and inverter manufacturer?

Samsung has partner with SMA Solar Technology which is a worldwide market leader for solar inverters. These inverters will be manufactured in Toronto, Ontario. The solar module (panel) company has not been chosen yet. We anticipate that a panel manufacturer will be chosen by the end of the second quarter of 2012. Once an agreement is executed, the panel company is expected to set up a manufacturing facility in London, Ontario.

**89. How deep will the rack posts be? And how deep will the holes be to support the racking system in place?**

The depth of the rack posts will depend on the geotechnical study and equipment selection. This will be determined during detailed design.

The rack foundations must be founded on or in bedrock. With the exception of one test hole, the results from the sub-surface investigation showed that the bedrock is located less than 2 meters below the surface. Consequently, it is expected that the vast majority of rack foundations will be less than 2 meters below the existing grade.

**90. How will Samsung mitigate for any risks or impacts?**

Samsung is currently conducting baseline studies to identify any risks or impacts. Risks or impacts identified during the studies or identified by stakeholders will be assessed and efforts will be made to eliminate, minimize and/or mitigate them.

**91. Will blasting be required due to the bedrock?**

It is anticipated that drilling will be the method used.

**92. Does the solar facility require battery backups? Explain in detail.**

Solar facilities do not require battery backup. When the solar facility is not operating, electricity on Ontario's grid is provided by other sources such as wind, hydro, natural gas, nuclear and biomass.

**93. How will SRE mitigate inverter or transformer leaking?**

For the transformers at the substation, a "double containment system" will be implemented. In addition to the "first stage" of containment, namely the transformer enclosures (conservator, tank, etc.), a "second stage" of containment will be in the form of a transformer containment pit system. The containment pit around the transformer will be sized to hold a volume of water in the amount of the transformer oil held in the unit plus fire suppression water plus stormwater runoff.

Drainage from the transformer pit would be removed by either manually or automatically operating a sump pump to discharge the liquid. In either case, an oil/grease sensor would be mounted on the pump to detect any oil/grease in the liquid. If oil/grease is detected, the liquid would be removed from site via a licensed waste hauler and the source of the leakage would be identified. If no oil/grease is detected in the liquid, discharge would be via the stormwater collection system.

Inverters are enclosed in a housing which will contain any unexpected leaks from the inverters.

**Construction - Construction**

**94. Who will build the solar facility and how long will construction take?**

Samsung will work with a Construction Contractor once the designs are finalized and approvals are received. The construction schedule is currently estimated to be 1 ½ years.

**95. How much and what types traffic will there be during construction and operation?**

Trucks and combination vehicles would include ready-mix concrete trucks, dump trucks, flat-bed semis, and low-bed combinations (for construction equipment).

Traffic will be evaluated as part of the construction and operation planning process.

**96. Does the public get to see all applications and final construction plans before they are sent in for assessment? Explain when and where?**

Samsung will hold one open house in each of the municipalities, subsequent to the submission of the applications. The open houses will provide an overview of the supporting documentation for the applications including project layout, construction techniques, operations, and measures to be taken to address comments received from the public and environmental protection measures that will be implemented during construction and operation of the facility. The reports and plans submitted as part of the Renewable Energy Approval application will be available on the project website.

**97. What are the anticipated traffic impacts during construction including but not limited to impacts from construction trucks and damage to roads.**

Construction would occur mostly in the fair weather months of 2013 and 2014. The overall impact of construction traffic will be minimal. There will be a transportation plan developed for the project that will minimize the impact of the added traffic. Special delivery routes and times will be imposed for incoming trucks.

Roadway conditions will be assessed prior to construction and after construction is complete. A ny road repair required as a result of the work would be corrected.

**98. What are the planned hours of operation during construction? Is it possible that construction will be undertaken 24 hours a day, 7 days a week?**

Normal work hours for contractors will be limited to 7:00 AM – 7:00 PM, Monday through Friday. Hours outside of this window would need to be justified and approved prior to performing. Special provisions would need to be implemented during these off-hour work periods to minimize noise and other possible disturbances to the residents in the area.

**99. Where will Samsung route their vehicles during construction? Will most of the traffic run along the 401 and on service roads to avoid local roads?**

During construction, Samsung will make use of the existing infrastructure in the area for transportation purposes. This includes but is not limited to Highway 401.

**Construction - Operations**

**100. Do we have enough sunlight to get the power? What if it is cloudy or snowy? Do they work in the winter?**

Yes, Natural Resources Canada has an existing solar map and Samsung has conducted additional research. The solar radiation mapping is based annual data and not the day-to-day fluctuations. Even during the winter season, the solar facility still generates the electricity. In fact cold temperatures during the winter months naturally cool the panels which provides for a more efficient operation. However, if it is cloudy or snowy, there are limited amounts of generation to occur.

(<http://atlas.nrcan.gc.ca/site/english/maps/archives/5thedition/environment/climate/mcr4076>)

**101. What are the effects of weather, such as snow, rain, ice, hail or lightning?**

Solar panels are designed to withstand various types of weather. Depending on the manufacturer, the solar panels are designed to withstand specific weather conditions (including hail, ice, rain, snow, etc.). The solar panels will be installed on a tilt to maximize power generation; moreover this tilt naturally assists with ice, snow, or water removal.

**102. Who will own the solar facility? Who will operate and maintain it?**

Samsung Renewable Energy, through its subsidiary Kingston Solar LP, will own the solar installation. The operations and maintenance contractor for the solar facility has not been determined

**103. What are the warranties on the structures?**

Warranties on the solar panels and structure will be covered by the Engineering Procurement Construction Management (EPCM) contractor.

**104. What happens when project life ends?**

Samsung is in the process of preparing a decommissioning plan as part of the REA process.

After 20 years, Samsung will decide whether to continue operating the Project. This depends upon several factors including but not limited to power purchase agreements as well as the operations and maintenance costs. Alternatively, Samsung will fully decommission the Project which will involve removal and clean up of the project site and restoration of the lands to their original conditions.

**105. What happens if the solar facility trips out?**

There will be no impact to residents and businesses if the solar facility trips out since power to the main electricity grid is fed by multiple sources.

**106. Will there be a glare from the panels?**

The anti-reflection coating (AR coating) applied to the solar panels, any glare is minimized. Mitigation for glare is part of the solar facility design process.

**107. Will the panels be washed? Where will the water come from and how will it be treated?**

It is anticipated that the rain and snow would generally be sufficient for cleaning the solar panels; however, depending on the quantity and frequency of rain and snow at the Project sites, the modules may require periodic cleaning. If required, water trucks would bring water to the project site to supply the water. No chemical cleaning would be used.

**108. Does the City of Kingston have a bond in case SRE goes bankrupt? If not, why is Samsung not providing one? (i.e.: who will be responsible for decommissioning the Solar Facility in case SRE goes bankrupt?)**

Samsung is not required to have a decommissioning bond. As mandated by the Ministry of the Environment, Samsung will be submitting a decommissioning plan as part of the Renewable Energy Approval process.

**109. Could you please provide the details of the decommissioning plans to rehabilitate the land when the project is abandoned?**

Decommissioning activities would include removal of all fencing, equipment, supports, foundations, above ground cabling and underground cabling with 1 metre of the final surface, poles (except those with other services on them), and maintenance road improvements. Landowners would be able to retain maintenance roads if requested.

**110. During operation and maintenance, who will be responsible for the facility? What types of response mechanisms are in place for emergencies? How will emergency vehicles access the facility?**

The operation and maintenance team will be in charge of monitoring the facility for the lifetime of the facility (20 years) and will determine appropriate emergency response plans in consultation with emergency service providers in the City of Kingston and Loyalist Township.



**KINGSTON SOLAR LP**

**WELCOME**

**SOL-LUCE KINGSTON SOLAR  
PV ENERGY PROJECT**

**INTERIM COMMUNITY  
SESSION**

Invista Centre  
1350 Gardiner's Road  
Kingston, Ontario

3:00 pm to 8:00 pm

Tuesday, April 17, 2012






# **WELCOME**

**Thank you for coming to our Interim Community Session. We are happy to share our enthusiasm for this clean, renewable energy Project with you.**

**We also understand that you have questions about the Project and how it will be built in your community. As such, we invite you to view the display boards, speak to members of the study team, participate in a roundtable discussion and leave us with your questions and comments.**




## WHO ARE WE?

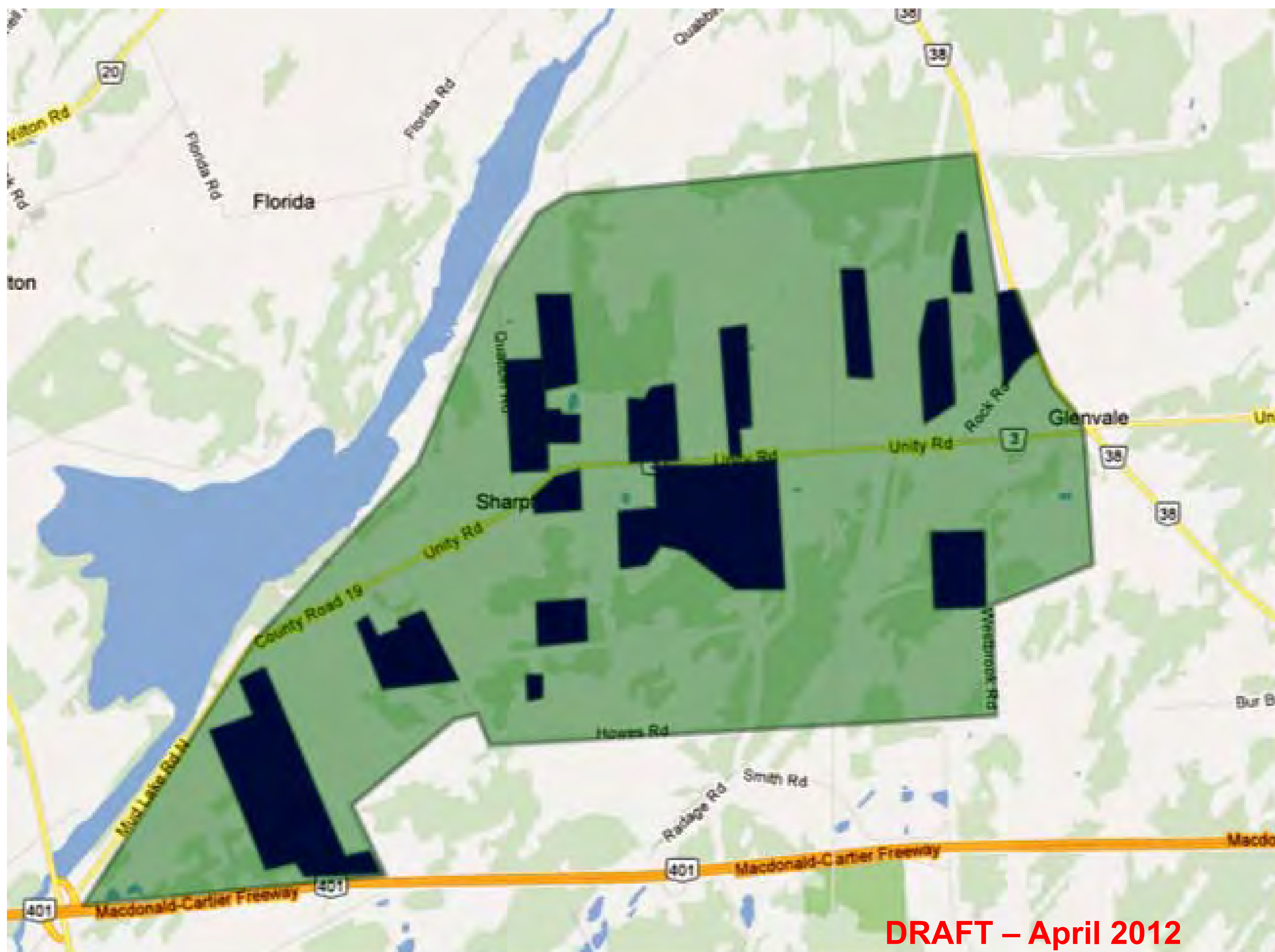
- Samsung C&T Corporation was founded in 1938 and is the parent company of the SAMSUNG Group, which has been the driving force behind the astonishing growth of the Korean economy.
  - Samsung C&T Corporation plan to build and operate the world's largest renewable energy clusters in Ontario. Samsung C&T Corporation is proud to be part of this Project in the City of Kingston and Loyalist Township that will bring renewable energy, investment, and new jobs to the Province of Ontario.
- 



## PROJECT INTRODUCTION

- The proposed facility is to be known as the *Sol-luce Kingston Solar PV Energy Project*
  - Sol-Luce Kingston will be built, owned and operated by Samsung Renewable Energy Inc. (a subsidiary of Samsung C&T Corporation). Sol-Luce Kingston will have the capacity to generate up to 100 megawatt (MW) of solar renewable energy in the City of Kingston and Loyalist Township. Samsung C&T will invest significant resources to build this Project thus playing an important role in revitalizing Ontario's economy, creating hundreds of jobs not only locally but throughout the Province.
  - This proposed facility will convert solar energy into electricity. The power generated by the Project will be collected through existing distribution lines and connected to a 230 kilovolt (kV) Hydro One transmission line.
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## PROJECT LOCATION



■ Area Proposed as of August 2011

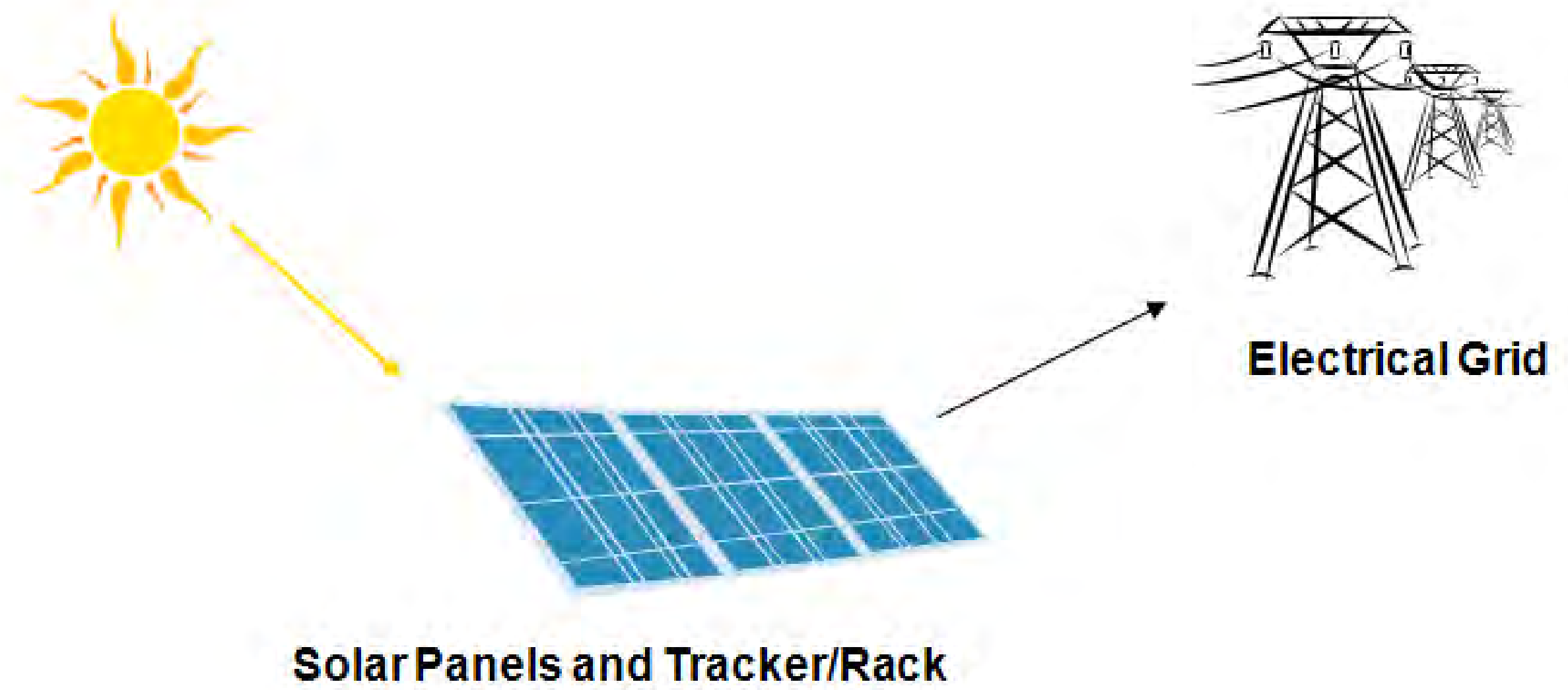
■ Area Proposed as of April 2012

- The study area is situated within two communities: City of Kingston (Countryside District) and Loyalist Township.
- Based on ongoing studies the study area has been refined.



## SOLAR TECHNOLOGY

- Solar Power involves harnessing energy from sunlight and converting it into electricity.



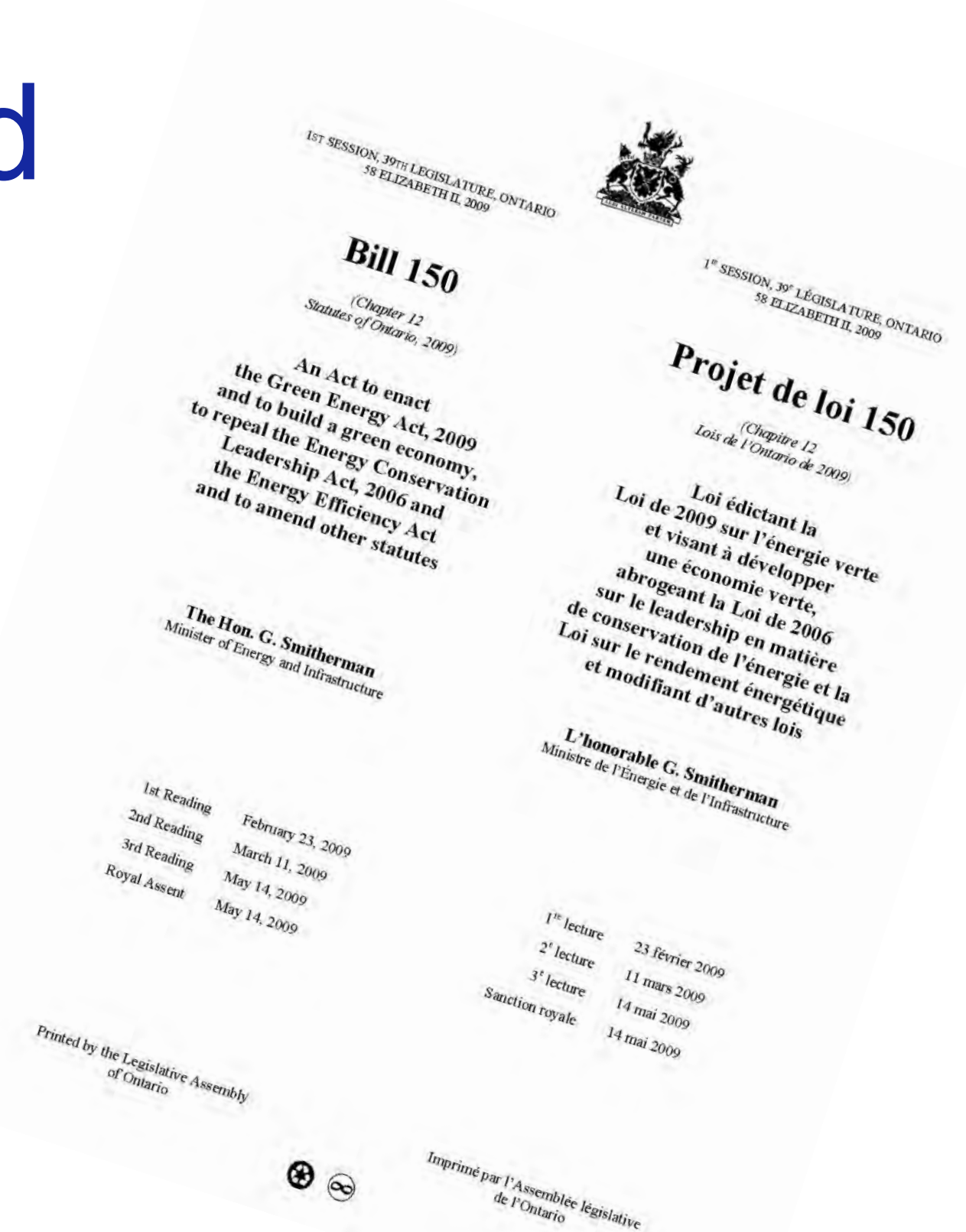
- Photovoltaic cells, distributed in a solar panel, convert sunlight into electric current.
- Solar panels can be installed on rooftops, as free-standing structures, or as rows of mounted panels.





## ONTARIO'S GREEN ENERGY ACT

- The *Green Energy Act* received Royal Assent in the Ontario Legislature on May 14, 2009. According to the Government of Ontario, this legislation is part of Ontario's plan to become a leading green energy centre in North America.
- This Act is intended to:
  - Spark growth in clean and renewable sources of energy like solar, wind, hydro, biomass and biogas.
  - Reduce energy consumption and create savings for households.
  - Create 50,000 jobs in Ontario in its first three years.
- Samsung C&T is developing the Sol-luce Kingston Solar PV Energy Project in response to the policies and programs created through the Act.



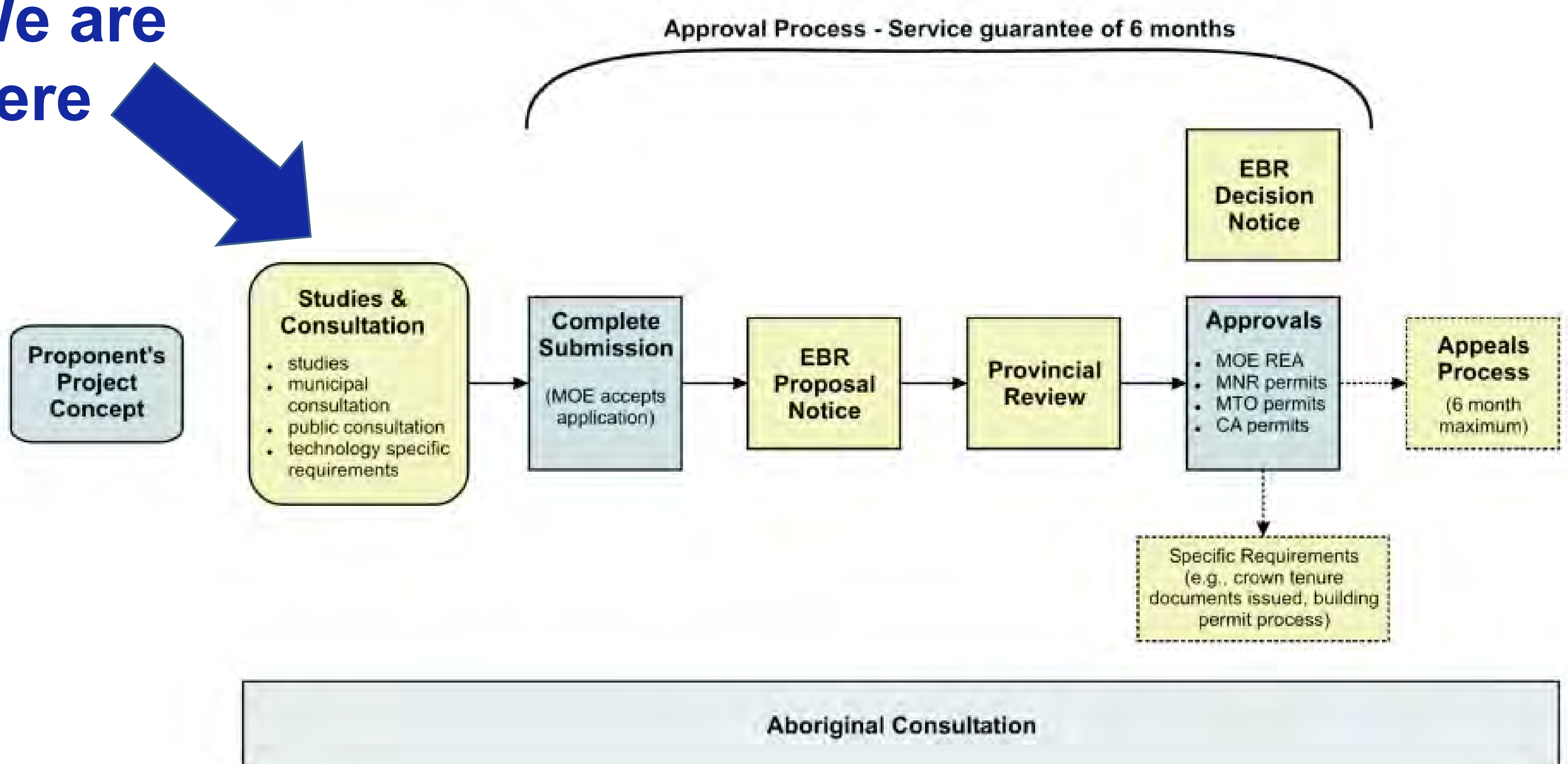


## RENEWABLE ENERGY APPROVAL

- The Renewable Energy Approval (REA) is issued under the *Environmental Protection Act* under Ontario Regulation 359/09 (Renewable Energy Approvals under Part V.0.1 of the Act).
- The REA process is a detailed environmental approval process that Samsung will satisfy before constructing the Project.
- The REA approval will specify how this Project will be designed, built, operated, and decommissioned to ensure that the local community and environment are protected.
- **CURRENT STATUS:** consultation activities are ongoing and the detailed studies, analyses, and work required to obtain a REA for the Project are being completed.

### Renewable Energy Approval Process

We are here






## REA REQUIRED REPORTS

- The following reports will be prepared and submitted as part of the REA application:

Reports	Summary
Project Description	Outlines the Project boundary, generation equipment, capacity, development activities, land ownership and environmental effects.
Construction Plan	Provides further details on construction and installation activities including their location and schedule, as well as environmental effects and mitigation measures.
Design and Operations	Provides maps and plans for detailed project location, design, operation, environmental monitoring, and emergency response (including stormwater management plan).
Decommissioning Plan	Outlines procedures for dismantling the facility, restoring the land and managing waste.
Consultation	Summarizes all communication with the public, municipalities, Aboriginal communities and other interested stakeholders.
Natural Heritage Assessment	Provides an assessment of potential impacts on natural heritage resources (including birds and bats, Species at Risk, wildlife habitats, vegetation and sensitive features).
Archaeological and Heritage Assessment	Describes archaeological and heritage resources, potential impacts and mitigation.
Water Assessment and Water Bodies	Describes waterbodies, fish and fish habitat, potential impacts and mitigation.
Environmental Impact Study	Describes any impacts, positive or negative, that the Project may have on the natural environment. Includes the following Environmental Studies: Birds and Bats, Species at Risk, Fish and Waterways, Wildlife and Habitats, Vegetation and Sensitive Features.
Noise Study	Environmental Study- Noise Assessment.

All reports, with the exception of the Consultation Report, will be made available in draft form for public review and comment at least 60 days prior (tentative: July 2012) to the Final Public Open House (tentative: September 2012). Notification of the release of the draft reports will be provided.

## **PROJECT DESCRIPTION REPORT**

- Describes the Project (facilities, equipment or technology to be used)
  - Outlines the activities that will be engaged as part of the Project
  - Identifies any negative environmental effects resulting from Project
  - Identifies required permits and approvals
  - Provides an overview of the consultation activities
  
  - Draft available on the Project website
  - Final Report will be available 60 days prior to the Second Open House
- 



## CONSTRUCTION PLAN REPORT

- Details the construction or installation activities (e.g. site preparation, materials brought on site, construction equipment used, site restoration)
- Provides the location and timing of any construction/installation activities for the duration of the construction
- Identifies any negative environmental effects that may result from construction/installation activities
- Identifies mitigation measures in respect of any negative environmental effects

***Public Health and Safety will be incorporated into all phases of the Project including: development, construction, operation and decommissioning.***

- Implementing transportation planning and safety measures during construction will minimize the potential for traffic related safety concerns.
- Built-in safety measures and standard procedures help protect physical safety.




## DESIGN & OPERATIONS REPORT

- Provides:
  - Site Plan
  - Facility Design Plan
  - Facility Operational Plan
  - Environmental Effects and Monitoring Plan
  - Emergency Response and Communications Plan





## NATURAL HERITAGE ASSESSMENT REPORT

- ***Protecting habitat from being lost.*** Studies on natural heritage and environmental impact were completed prior to ploughing the fields. Findings were reviewed with Ministry of Natural Resources who then provided conditions under which the ploughing could occur.
  - All biological studies were conducted following very strict Ministry of Natural Resources protocols.
  - A Records Review and Site Investigation were undertaken to identify:
    - Wildlife species and wildlife habitat types present.
    - Natural features including rare vegetation communities, woodlands, wetlands, and valleylands.
  - The final Project layout will be determined based on these results and was designed to protect as much habitat and natural features as possible.
  - An application for an Overall Benefit Permit under the Endangered Species Act is in progress; the outcome of overall benefit actions is more than steps to minimize negative impacts but rather is meant to improve the relative standing of a species.
- 



## ENVIRONMENTAL IMPACT STUDY REPORT

- An Environmental Impact Study (EIS) identifies and assesses potential impacts on the natural features found within the Project location, and within 120 metres (m) of the proposed Project location.
  - Mitigation measures aimed at avoiding or minimizing the recognized potential effects associated with all Project phases.
  - Prescribed mitigation measures are expected to result in minimal to no net residual effects on the wildlife, wildlife habitat, and significant natural features identified and assessed.
- ***Mitigating Risk to the Environment.*** Baseline studies in the area have been completed to identify any potential risks or impacts to the environment and wildlife. Working with Ministries of the Environment, Natural Resources, and Tourism, Culture and Sport, efforts will be made to eliminate, minimize and/or mitigate for identified risks or impacts.
- ***Minimizing Tree Removal.*** Tree removal within the proposed Project footprint will be minimized as the vast majority of the proposed paneled areas are open fields. Removal will largely include minor hedgerows and regrowth areas. No riparian buffer areas will be removed and no changes in groundwater patterns are expected. While some vegetation removal is proposed this only represents a small portion of tree cover in the area and is not expected to measurably affect local or regional climate.
- ***Effects on Endangered Species.*** A couple of Species at Risk have been located in the Project footprint. The Endangered Species Act Permit currently being prepared will detail post-construction monitoring requirements for Species at Risk. Further follow-up environmental monitoring may be required following regulatory review of the REA reports.



## ARCHAEOLOGICAL & HERITAGE REPORT

- Stage 1 and partial Stage 2 archaeological investigations were completed on participating properties within the study area to identify any archaeological resources. Stage 2 will be finalized during Spring 2012.

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**Stage 1** - Background research of to gather physiographic, historical and land use information

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**Stage 2** - Two methods:

1. Ploughed fields were walked and visually inspected fields at 5-metre intervals
2. Elsewhere, shovel test surveys at 5 to 10-metre intervals where the soil from hand dug test pits was processed through 6-millimetre mesh screening in order to facilitate artifact recovery



### ***Why are fields ploughed and when is this done?***

The Ministry of Tourism, Culture and Sport's standards state that current/former agricultural fields must be ploughed and disced, wherever possible, and then allowed to weather through at least one substantial rainfall or several light rainfalls prior to being subjected to a walking survey at closely spaced intervals. This is because the most effective way of identifying an archaeological site is to conduct a visual inspection for artifacts that have been brought to the surface by the plough.

The first round of ploughing was conducted in October and November of 2011. A second round of ploughing will occur in April 2012.



## ARCHAEOLOGICAL & HERITAGE REPORT

- Stage 2 investigations resulted in the identification of six previously undocumented archaeological sites:
  - Five sites represent mid-nineteenth century to early/mid twentieth century farmsteads. Further work has been recommended at these locations.



- The sixth site consisted of a single projectile point dating to between circa 1,000 B.C. and 400 B.C. This isolated artifact is thought to have been lost during a transitory hunting event and, as such, no further archaeological work is required at this location.
- Further Stage 2 investigations are planned for April/May 2012.



- All assessments were conducted to Ministry of Tourism, Culture and Sport's standards and the resulting reports have been accepted by the Ministry for inclusion into the Provincial Registry of Reports.





## WATER ASSESSMENT & WATER BODIES REPORT

- Summaries the results of records review and site investigation to determine the presence and boundaries of water bodies within 120 metres of the Project study area.
  - Records review completed by consulting with the Ministry of Natural Resources, Cataraqui Region Conservation Authority, Fisheries and Oceans Canada, and Natural Resources Canada.
  - Site investigations were completed in October 2011.





## GROUNDWATER


- No groundwater reports or studies are required for solar projects under REA.

### *How will the Project address local community concerns related to groundwater?*


- Based on the final layout, the plan is to prepare a report on well water conditions.
- While no impacts to well water quality are expected, a well water quality assessment will be conducted pre- and post-construction, under the guidance of local ministry offices.
- Materials used in panels are silicon-based and do not contain liquid chemicals that can leak. They are also designed not to melt in the event of a grass fire.
- Grass cutting or herbicides are not planned to control plants. Instead the area around the panels will be seeded with native species which only grow to a limited height. This has been successfully done at other solar panel sites in Ontario. In other locations, this has led to the area around the panels to become a naturalized habitat for native species pushed out by agriculture.
- Simple steps to backfill holes around the posts with concrete grout will effectively seal the holes, while securing the panels to the ground. The same technique can be used when the posts are removed at the end life of the Project.
- Only limited areas will have gravel roads and the potential for affect will only be slight. The use of gravel will allow more rain into the ground than a grassed area, resulting in slightly higher recharge of rainwater.
- A stormwater management plan is a requirement of the planning process.



## NOISE STUDY REPORT

- Completed to ensure that the transformers and inverters associated with the solar panels are located in strategic areas (i.e., final locations determined by this report).
  - Sound levels were modeled using an industry standard and Ministry of the Environment accepted noise modeling program.
  - Predicted sound levels were determined to not exceed the Ministry of the Environment guideline limits at the points of reception (i.e., nearest residences).
  - Modern transformer and inverter design has significantly reduced the noise levels associated with the units.
  - Construction noise will primarily come from mobile equipment. Work is expected only between the hours of 7:00 AM and 7:00 PM.
- 

## DECOMMISSIONING PLAN REPORT

- Identifies procedures for dismantling or demolishing components of the facility.
  - Outlines activities related to the restoration of any land and water to bring the site into a condition consistent with the probable future use.
  - Identifies procedures for managing (i.e., recycling) excess materials and waste.
  - Anticipated Project lifetime is 20 years.
  - After 20 years, Kingston Solar LP will decide whether to:
    1. Continue to operate the Solar installation depending upon several factors including but not limited to power purchase agreements as well as the operations and maintenance costs, or
    2. Alternatively, Kingston Solar LP will fully decommission the Project which will involve removal and clean up of the Project site and restoration of the lands to their original conditions.
  - All potentially affected stakeholders will be notified prior to decommissioning activities.
  - Kingston Solar LP will be responsible for the decommissioning.
- 



## OTHER KEY REQUIRED PROJECT APPROVALS

- Building a project such as the Sol-Luce Kingston PV Solar Energy Project requires significant planning and work to obtain all relevant approvals and permitting. Some of the key approvals and permits are listed in the table below:

<b>Permit/Authorization</b>	<b>Issuing Authority/Point of Contact</b>	<b>Regulated Activity</b>
Renewable Energy Approval	Ministry of the Environment	Environmental approval of all Project works and activities.
Connection Approval System Impact Assessment	Independent Electricity System Operator	Required to register with IESO and meet requirements for grid connection.
Generator Licence	Ontario Energy Board	Permission to operate.
Customer Impact Assessment	Hydro One Networks	Effects of grid connection.
Certificate of Inspection	Electrical Safety Authority	Construction or modification of electrical systems.
Notice of Project Construction	Ministry of Labour	Required to meet labour codes and regulation.
Interference with Wetlands, and Alterations to Shorelines Permit	Conservation Authority	Development of works within floodplains such as water crossings.
Work permit/ agreement for municipal Right-of-Way	Municipality	Work within road allowance and use of road allowance for power lines.
Building Permit		Need to meet local and provincial codes.
Entrance Permit		Permission to connect to municipal roads.



## TENTATIVE PROJECT SCHEDULE

Notice of Proposal	July 2011 (Completed)
First Public Open House	August 2011 (Completed)
Interim Community Session	April 2012
Draft REA Notice (Municipality)	June 2012 (Tentative)
Draft REA Notice (Public)	July 2012 (Tentative)
Final Public Open House	September 2012 (Tentative)
REA Approval	November 2012 (Tentative)
Start of Construction	2013
Commercial Operation	2014
Decommissioning	2034





## **WE WANT YOUR FEEDBACK**

Please share your thoughts with us by filling out a feedback form.

Please contact the following for more information:

**A. José De Armas**

Manager, Project  
Development

Samsung Renewable  
Energy Inc.

55 Standish Court, 9th Floor  
Mississauga, Ontario  
L5R 4B2

**Rob Young**

Associate Environmental  
Scientist

AMEC Environment &  
Infrastructure

160 Traders Blvd E, Suite 110  
Mississauga, Ontario  
L4Z 3K7

**E-mail:**

[solucekingston@samsungrenewableenergy.ca](mailto:solucekingston@samsungrenewableenergy.ca)

**Website:**

[www.samsungrenewableenergy.ca/kingston](http://www.samsungrenewableenergy.ca/kingston)





FEEDBACK FORM

Sol-luce Kingston Solar PV Energy Project

Interim Community Session – April 2012

1. How did you learn about the Sol-luce Kingston Solar PV Energy Project?

- Newspaper Advertisement       Word of Mouth       Other (please specify) \_\_\_\_\_  
 Delivered Letter       Project Website

2. Are you a resident or business in:

- Loyalist Township       Kingston       Other (please specify) \_\_\_\_\_

3. Why did you decide to attend? (to learn more, with a group, etc.)

*With hope this would be a productive meeting. It was Not!  
Nothing has changed -> Never any definite answers.*

4. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?

*Concerns of well water, habitat, Set back from property  
House values, lists have been submitted*

5. Do you have any local information that might be relevant to the proposed development?

*Our area consists of endangered species which it appears  
Samsung is going to kill  
on the list goes on... Please read our complaints  
Submitted by our rural committee "Unity Road Rate Payers  
Association!"*

6. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?

*Extremely poor lack of concern where consideration for  
residents!*



**7. How would you like to receive future information about the proposed Project?**

- Open houses
- Direct Mail
- E-mail
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**8. Did the Open House meet your information needs?**

- Yes
- No

**9. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

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**Optional Contact Information (please print clearly)**

<b>Name</b>	[REDACTED]
<b>Street Address</b>	[REDACTED]
<b>Town/City</b>	[REDACTED]
<b>Postal Code</b>	[REDACTED]
<b>E-mail</b>	[REDACTED]
<b>Phone</b>	[REDACTED]
<b>Organization (if applicable)</b>	[REDACTED]

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- Delivered Letter
- Project Website

2. Are you a resident or business in:

- Loyalist Township
- Kingston
- Other (please specify) URRPA

I LIVE IN THE COMMUNITY THAT WILL BE DIRECTLY AFFECTED

3. Why did you decide to attend? (to learn more, with a group, etc.)

I was hoping for answers to the questions we have asked in many ways: written, public, individual mtgs with Samsung and on many questions. Many of your FAR are our questions!

4. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?

I need guarantees that our well water will not be affected. Contamination of quantity - the pace of this project is too fast for the necessary water studies, given our "vulnerable" aquifer

5. Do you have any local information that might be relevant to the proposed development?

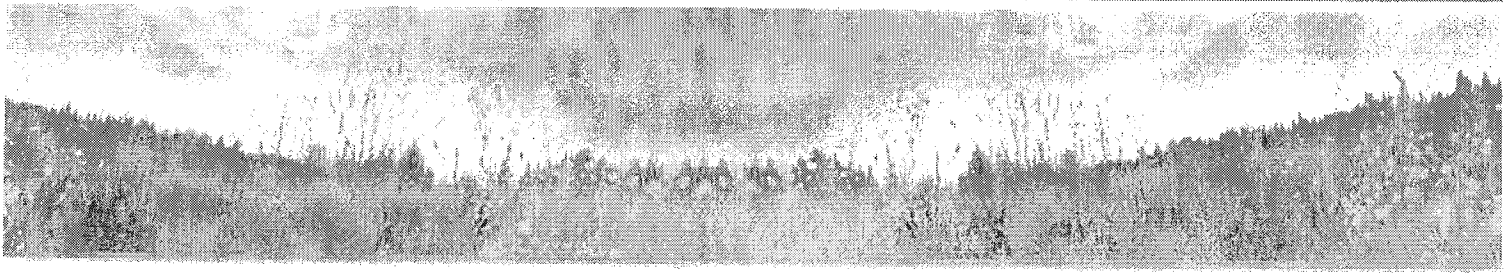
Absolutely - the Unity Road Rate Payers Association has provided considerable information & asked many questions but we have received no answers, only delays and soft assurances.

6. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?

Many - 2011, which have been detailed in our Unity Rate Payers Association communication. Gord Taylor and I met w/ Simon and Jose and sent a letter and still have received no response. guaranteed

I need to have the value of my 230 year old home & our property - where we have lived for more than 30 years. If you cannot guarantee the value you must compensate!

Set back from our property line - I do not want to see any evidence of the solar panel fields, which start about 130 feet from the top of our driveway



7. How would you like to receive future information about the proposed Project?

- Open houses
- Direct Mail
- E-mail
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

8. Did the Open House meet your information needs?

Yes

No *ABSOLUTELY NOT - I DID NOT RECEIVE THE ANSWERS I NEED*

9. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):

*We expect a response to our letter from late 2011 and would like to meet.*

Optional Contact Information (please print clearly)

Name	[REDACTED]
Street Address	[REDACTED]
Town/City	[REDACTED]
Postal Code	[REDACTED]
E-mail	[REDACTED]
Phone	[REDACTED]
Organization (if applicable)	[REDACTED]

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### Sol-luce Kingston Solar PV Energy Project

Interim Community Session – April 2012

1. How did you learn about the Sol-luce Kingston Solar PV Energy Project?

- Newspaper Advertisement  
 Delivered Letter

- Word of Mouth  
 Project Website

Other (please specify)

I live next to the giant

2. Are you a resident or business in:

Loyalist Township

Kingston

Other (please specify) \_\_\_\_\_

3. Why did you decide to attend? (to learn more, with a group, etc.)

I want to hear what Samsung is going to offer residents as a  
commitment to safety and protection of investment

4. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?

- Guarantee my well water will not be adversely affected
- Guarantee I don't have to see the evidence of the panels
- Compensation in lieu of my disruption to our lives

5. Do you have any local information that might be relevant to the proposed development?

- Well Water is the premium out here.
- Real Estate is the premium out here.
- Country Air + sounds are the premium out here.

6. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?

- Take the concerns of residents seriously!
- Make a commitment to those stakeholders  
who will lose more than others
- You have all of our concerns and  
then some!



7. How would you like to receive future information about the proposed Project?

- Open houses
- Direct Mail
- E-mail
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

8. Did the Open House meet your information needs?

- Yes
- No
- More of the same

9. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):

Who is going to compensate me for the loss of everything we hold dear!

Optional Contact Information (please print clearly)

Name	[REDACTED]
Street Address	[REDACTED]
Town/City	[REDACTED]
Postal Code	[REDACTED]
E-mail	[REDACTED]
Phone	[REDACTED]
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- Newspaper Advertisement       Word of Mouth       Other (please specify) \_\_\_\_\_  
 Delivered Letter       Project Website

**2. Are you a resident or business in:**

- Loyalist Township       Kingston       Other (please specify) \_\_\_\_\_

**3. Why did you decide to attend? (to learn more, with a group, etc.)**

TO SEE IF ANYTHING CHANGED IN SAMSUNG'S APPROACH TO RESIDENTS,  
IF THEY WERE PREPARED TO DISCLOSE PROJECT LOCATION, PROJECT  
DETAILS, EFFECTS ON GROUNDWATER (HOW IT WILL BE DEALT WITH).  
ETC. ETC.

**4. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?**

ALL OF THE ABOVE. I WAS HAPPY TO SEE A MAP FINALLY, BUT  
NOTHING ELSE SEEMS TO HAVE CHANGED!  
HOW ARE YOU ADDRESSING GROUNDWELL WATER CONCERNS...???

**5. Do you have any local information that might be relevant to the proposed development?**

YES!

**6. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?**

STAY AWAY FROM PEOPLE'S HOMES.  
THERE IS A BETTER PLACE FOR YOUR PROJECTS!!  
TOO BAD YOU WILL BE DISPLACING (AT BEST) OUR BIRDS.



**7. How would you like to receive future information about the proposed Project?**

- Open houses
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- E-mail
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**8. Did the Open House meet your information needs?**

- Yes
- No

**9. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

I THINK YOU SHOULD HAVE THEM ALL  
THIS IS SAID!

**Optional Contact Information (please print clearly)**

<b>Name</b>	[REDACTED]
<b>Street Address</b>	[REDACTED]
<b>Town/City</b>	
<b>Postal Code</b>	
<b>E-mail</b>	[REDACTED]
<b>Phone</b>	[REDACTED]
<b>Organization (if applicable)</b>	

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Interim Community Session – April 2012

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Newspaper Advertisement  
 Delivered Letter

Word of Mouth  
 Project Website

Other (please specify) \_\_\_\_\_

2. Are you a resident or business in:

Loyalist Township

Kingston

Other (please specify) \_\_\_\_\_

3. Why did you decide to attend? (to learn more, with a group, etc.)

TO LEARN MORE ABOUT PROJECT; TO GET INFORMATION ABOUT MY CONCERNS

4. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?

THE WHOLE PROJECT IN MY OPINION IS NOT GREEN IN ANY SHAPE OR FORM. MY RESEARCH I HAVE DONE TELLS ME THAT MORE POLLUTION OR POTENTIAL POLLUTION FROM THIS PROJECT IS NOT WORTH THE INVESTMENT. WHY USE GOOD FARMLAND - CHECK OUT EUROPE & UK WITH PROTECTABLE LAND.

5. Do you have any local information that might be relevant to the proposed development?

CHECK THE GROUND WATER RESULTS FOR THE AREA - THEY SHOULD TELL YOU THAT THE PROJECT IS JUST WRONG.

6. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?

I AM COMPLETELY AND UTTERLY FRUSTRATED BY THE PRESENT GOVERNMENT GREEN ENERGY INITIATIVE - I HOPE THE GOV'T FALLS BEFORE THIS IS AN ENVIRONMENTAL DISASTER.



**7. How would you like to receive future information about the proposed Project?**

- Open houses  
 Direct Mail  
 E-mail  
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 News media  
 In-person discussions with Samsung representatives

**8. Did the Open House meet your information needs?**

- Yes  No

**9. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

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**Optional Contact Information (please print clearly)**

<b>Name</b>	
<b>Street Address</b>	
<b>Town/City</b>	
<b>Postal Code</b>	
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1. How did you learn about the Sol-luce Kingston Solar PV Energy Project?

- Newspaper Advertisement       Word of Mouth       Other (please specify) \_\_\_\_\_  
 Delivered Letter       Project Website

2. Are you a resident or business in:

- Loyalist Township       Kingston       Other (please specify) \_\_\_\_\_

3. Why did you decide to attend? (to learn more, with a group, etc.)

CONCERNED ABOUT DESTRUCTION OF RESIDENTIAL  
NEIGHBORHOOD  
HOPE TO CURTAIL OR STOP THIS MISUSE OF OUR AGRICULTURAL  
LAND.

4. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?

THE PROJECT ABUTTS OUR PROPERTY - LOSS OF VALUE WHICH IS  
OUR RETIREMENT SAVINGS (OUR FARM)  
THIS PROJECT WILL SERIOUSLY AFFECT OUR BUSINESS AT OUR  
HOME.

5. Do you have any local information that might be relevant to the proposed development?

THERE ARE ENDANGERED SPECIES ON OUR LAND, INCLUDING  
BLUE SPOTTED SALAMANDERS.  
THE WATER TABLE IN OUR AREA IS STRICTLY SURFACE WATER &  
VERY VULNERABLE.

6. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?

THE SETBACKS TO ROADS & NEIGHBORING PROPERTIES SHOULD BE  
GREATER THAN 30 METERS & BARRIERS SHOULD BE WELL  
FORESTED AS A SCREEN. TRANSFORMERS SHOULD BE FAR  
ENOUGH AWAY FROM RESIDENCES & OUTBUILDINGS TO NOT BE  
HEARD.

LOCAL WELLS SHOULD BE TESTED BEFORE & AFTER THE  
PROJECT IS COMPLETED.

COMPENSATION SHOULD BE AWARDED FOR LOSS OF LAND  
VALUES TO RESIDENTS & PROPERTY TAXES REFUNDED.

WILL SAMSUNG SUPPLY ALL OF OUR WATER NEEDS SHOULD THE  
WATER TABLE BE AFFECTED?



**7. How would you like to receive future information about the proposed Project?**

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- Direct Mail
- E-mail
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**8. Did the Open House meet your information needs?**

Yes

No

**9. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

THE QUALITY OF LIFE IN OUR NEIGHBOURHOOD IS GOING TO BE SEVERELY AFFECTED BY THIS PROJECT.  
 A RESIDENTIAL RURAL AREA SHOULD NOT BE TURNED INTO AN INDUSTRIAL DEVELOPMENT AFTER THE FACT.  
 LOCAL RESIDENTS & GOVERNMENT SHOULD BE THE ONES WHO DECIDE WHAT THEY WANT IN THEIR NEIGHBOURHOODS RATHER THAN THE PROVINCIAL GOVERNMENT.

**Optional Contact Information (please print clearly)**

Name	[REDACTED]
Street Address	[REDACTED]
Town/City	[REDACTED]
Postal Code	[REDACTED]
E-mail	[REDACTED]
Phone	[REDACTED]
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2. Are you a resident or business in:

- Loyalist Township       Kingston       Other (please specify) \_\_\_\_\_

3. Why did you decide to attend? (to learn more, with a group, etc.)

↓ VOICE OBJECTIONS  
TO TRY TO MAKE YOU UNDERSTAND THAT YOU  
ARE RUINING MY FUTURE WITH THIS PROJECT

4. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?

GO AWAY & PUT THIS SOMEWHERE ELSE.

5. Do you have any local information that might be relevant to the proposed development?

THERE ARE ENDANGERED BIRDS + SALAMANDERS  
HERE

6. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?

WHAT WILL THE NOISE LEVELS BE  
HOW WILL WE BE COMPENSATED FOR THE LOSS  
OF PROPERTY VALUES



**7. How would you like to receive future information about the proposed Project?**

- Open houses  
 Direct Mail  
 E-mail  
 Samsung Renewable Energy Website  
 News media  
 In-person discussions with Samsung representatives

**8. Did the Open House meet your information needs?**

- Yes  No

**9. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

NO BARBED WIRE OR RAZOR WIRE OR  
ANY KIND OF SHARP FENCING.

**Optional Contact Information (please print clearly)**

Name	[REDACTED]
Street Address	[REDACTED]
Town/City	[REDACTED]
Postal Code	[REDACTED]
E-mail	
Phone	
Organization (if applicable)	

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- Newspaper Advertisement       Word of Mouth       Other (please specify) \_\_\_\_\_  
 Delivered Letter       Project Website

2. Are you a resident or business in:

- Loyalist Township       Kingston       Other (please specify) \_\_\_\_\_

3. Why did you decide to attend? (to learn more, with a group, etc.)

*to learn*  
*express concerns*

4. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?

*Will the project affect wells on Mud Lake #1?  
Will there be any detrimental effects to Odessa Lake?  
Will landscaping surrounding projects be  
maintained in a visually pleasant manner?*

5. Do you have any local information that might be relevant to the proposed development?

*We cherish our natural surroundings of  
grass, trees, wild flowers, birds, fields  
basins.*

6. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?

*That any clearing solutions or herbicides  
used be organic and non toxic*



**7. How would you like to receive future information about the proposed Project?**

- Open houses
- Direct Mail
- E-mail
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**8. Did the Open House meet your information needs?**

- Yes
- No

**9. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

*I totally support renewable energy especially solar and trust that the project can be carried out to the satisfaction of local residents.*

**Optional Contact Information (please print clearly)**

Name	[REDACTED]
Street Address	[REDACTED]
Town/City	[REDACTED]
Postal Code	[REDACTED]
E-mail	[REDACTED]
Phone	
Organization (if applicable)	

Information will be collected and used in accordance with the Renewable Energy Approvals under the Environmental Protection Act, and solely for the purpose of assisting Samsung Renewable Energy Inc. in meeting environmental assessment and local planning requirements. This material will be maintained on file for use during the study and may be included in project documentation. All comments will become part of the public record. Personal information is protected under authority of the Freedom of Information and Protection of Privacy Act, Section 32, and is used solely for the purpose of completing this environmental assessment. Individuals will not be identified in any public documents or used for any purpose other than this project.

**THANK YOU FOR YOUR FEEDBACK**

**Kingston Solar LP**  
**Sol-luce Kingston Solar PV Energy Project**  
 55 Standish Court, 9<sup>th</sup> Floor  
 Mississauga, ON L5R 4B2  
[solucekingston@samsungrenewableenergy.ca](mailto:solucekingston@samsungrenewableenergy.ca)  
[www.samsungrenewableenergy.ca/kingston](http://www.samsungrenewableenergy.ca/kingston)



**FEEDBACK FORM**

**Sol-luce Kingston Solar PV Energy Project**

**Interim Community Session – April 2012**

**1. How did you learn about the Sol-luce Kingston Solar PV Energy Project?**

- Newspaper Advertisement       Word of Mouth       Other (please specify)  
 Delivered Letter       Project Website      Lot Council

**2. Are you a resident or business in:**

- Loyalist Township       Kingston       Other (please specify) \_\_\_\_\_

**3. Why did you decide to attend? (to learn more, with a group, etc.)**

EDUCATE.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**4. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?**

- SET BACKS VISIBILITY, BARRIERS, GROUND WATER, VEGETATION COVERED  
- GIVE INFORMATION, NO INFORMATION GENERATES FRUSTRATION.  
\_\_\_\_\_  
\_\_\_\_\_

**5. Do you have any local information that might be relevant to the proposed development?**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**6. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?**

NOTED IN #4.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**7. How would you like to receive future information about the proposed Project?**

- Open houses
- Direct Mail
- E-mail
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**8. Did the Open House meet your information needs?**

- Yes
- No

**9. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

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**Optional Contact Information (please print clearly)**

<b>Name</b>	
<b>Street Address</b>	
<b>Town/City</b>	
<b>Postal Code</b>	
<b>E-mail</b>	
<b>Phone</b>	
<b>Organization (if applicable)</b>	

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FEEDBACK FORM

Sol-luce Kingston Solar PV Energy Project

Interim Community Session – April 2012

1. How did you learn about the Sol-luce Kingston Solar PV Energy Project?

- Newspaper Advertisement  
 Delivered Letter

- Word of Mouth  
 Project Website

Other (please specify) \_\_\_\_\_

2. Are you a resident or business in:

Loyalist Township

Kingston

Other (please specify) \_\_\_\_\_

3. Why did you decide to attend? (to learn more, with a group, etc.)

to get added potential info, so we can  
put the puzzle together to have an understanding  
and clearer picture

4. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?

on your next open house you should have  
other main contractor along to superimpose  
their layout template

5. Do you have any local information that might be relevant to the proposed development?

not at this time

6. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?

not at this time





7. How would you like to receive future information about the proposed Project?

- Open houses
- Direct Mail
- E-mail
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

8. Did the Open House meet your information needs?

- Yes
- SOME
- No

9. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):

While information session were schedule at 4 and 6 PM, perhaps 7pm would suit more lifestyle

- suggest to have short video from previous site depicting various construction stage.

Optional Contact Information (please print clearly)

Name	[REDACTED]
Street Address	[REDACTED]
Town/City	[REDACTED]
Postal Code	[REDACTED]
E-mail	[REDACTED]
Phone	[REDACTED]
Organization (if applicable)	[REDACTED]

Information will be collected and used in accordance with the Renewable Energy Approvals under the Environmental Protection Act, and solely for the purpose of assisting Samsung Renewable Energy Inc. in meeting environmental assessment and local planning requirements. This material will be maintained on file for use during the study and may be included in project documentation. All comments will become part of the public record. Personal information is protected under authority of the Freedom of Information and Protection of Privacy Act, Section 32, and is used solely for the purpose of completing this environmental assessment. Individuals will not be identified in any public documents or used for any purpose other than this project.

THANK YOU FOR YOUR FEEDBACK

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**FEEDBACK FORM**

**Sol-luce Kingston Solar PV Energy Project**

**Interim Community Session – April 2012**

**1. How did you learn about the Sol-luce Kingston Solar PV Energy Project?**

- Newspaper Advertisement  
 Delivered Letter

- Word of Mouth  
 Project Website

Other (please specify) \_\_\_\_\_

**2. Are you a resident or business in:**

Loyalist Township

Kingston

Other (please specify) \_\_\_\_\_

**3. Why did you decide to attend? (to learn more, with a group, etc.)**

TO LEARN MORE

**4. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?**

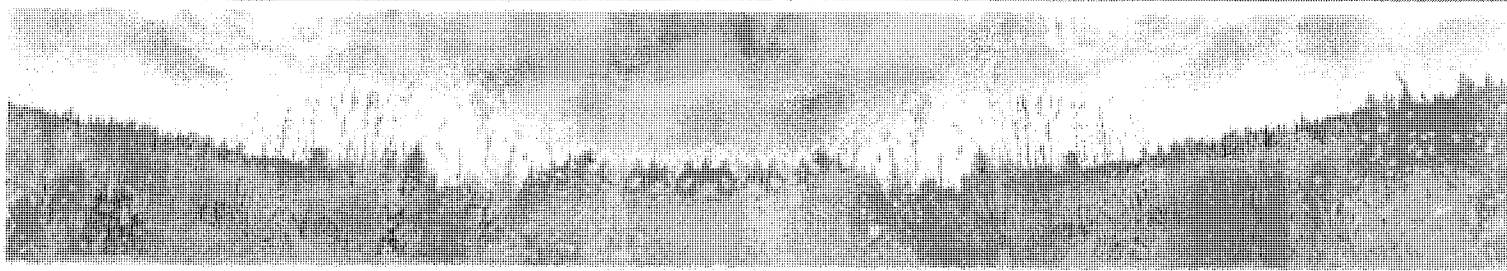
GROUND WATER / SET BACKS

**5. Do you have any local information that might be relevant to the proposed development?**

WE ARE NOT HAPPY TO BE THROWN INTO AN INDUSTRIAL AREA/DEVELOPMENT

**6. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?**

IT SHOULD BE BACK FROM THE ROAD & PEOPLES HOMES



**7. How would you like to receive future information about the proposed Project?**

- Open houses
- Direct Mail
- E-mail
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**8. Did the Open House meet your information needs? EXPECTATIONS**

- Yes
- No

**9. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

WE WOULD LIKE TO SEE THE PROJECT  
SCALED BACK

**Optional Contact Information (please print clearly)**

<b>Name</b>	[REDACTED]
<b>Street Address</b>	[REDACTED]
<b>Town/City</b>	[REDACTED]
<b>Postal Code</b>	[REDACTED]
<b>E-mail</b>	[REDACTED]
<b>Phone</b>	[REDACTED]
<b>Organization (if applicable)</b>	

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**APPENDIX G**  
**AUGUST 2012 OPEN HOUSES MATERIALS**



**KINGSTON SOLAR LP**

**WELCOME**

**SOL-LUCE KINGSTON SOLAR  
PV ENERGY PROJECT**

**SECOND OPEN HOUSE**

**Invista Centre  
1350 Gardiners Road  
Kingston, Ontario**

**4:00 pm to 8:00 pm**


**Wednesday, August 15, 2012**





# **WELCOME**

Thank you for coming to our Open House. We are happy to share our enthusiasm for this clean, renewable energy project with you. We also understand that you have questions about the Project and how it will be built in your community. As such, we invite you to view the display boards, speak to members of the study team, and leave us with your questions and comments.



## PURPOSE OF THE OPEN HOUSE

- Present the findings of the Draft REA Reports.
- Update on the status of the Project.
- Answer questions regarding the Draft REA Reports and the Project in general.
- Collect input regarding the Project and best address your concerns.

## WHO WE ARE

- Samsung C&T Corporation was founded in 1938 and is the Mother company of the SAMSUNG Group, which has been the driving force behind the astonishing growth of the Korean economy.
  - Samsung C&T Corporation plan to build and operate the world's largest renewable energy clusters in Ontario. Samsung C&T Corporation is proud to be part of this Project in the City of Kingston and Loyalist Township that will bring clean energy, investment and new jobs to the Province of Ontario.
- 



# **BUILDING THE ECONOMY**

## **Creates Jobs**

- The Project will create local jobs and economic development from construction and operation activities. On average, it is expected that up to 100 persons/month will be employed during construction.


## **Supports Farmers & Landowners**

- Lease payments for farmers and landowners would benefit the local agricultural industry and promote economic stability in the region.

## **Revitalizes the Local Economy**

- The Project will provide taxes to support local services and place the City of Kingston and Loyalist Township as leaders in green energy.

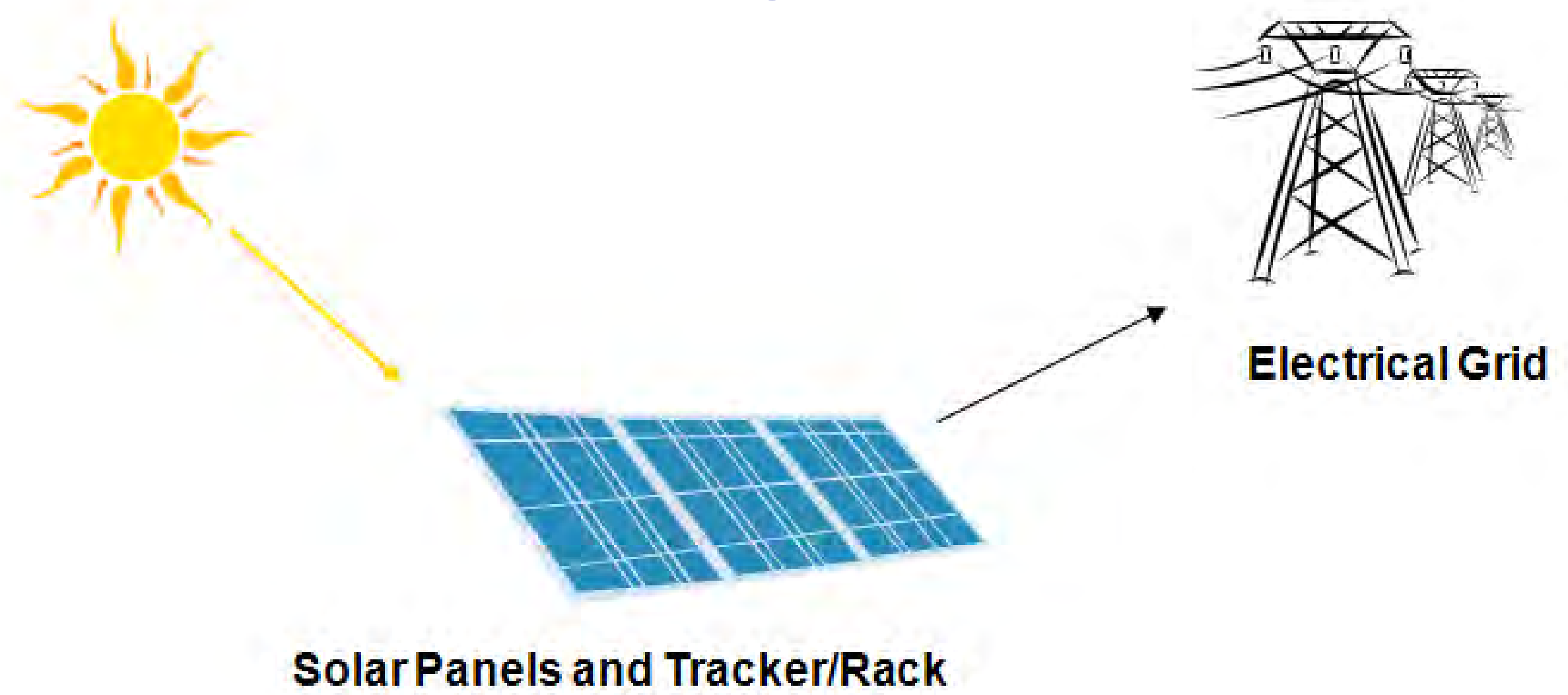
## **Benefit the Province**

- Samsung C&T is developing the Sol-luce Kingston Solar PV Energy Project in response to the policies and programs created through the Green Energy Act.
  - Samsung Renewable Energy Inc. and its partners will create 16,000 direct and indirect jobs as a result of their investment.
- 



## SOLAR TECHNOLOGY

- Solar power involves harnessing energy from sunlight and converting it into electricity.



- Photovoltaic cells, distributed in a solar panel, convert sunlight into electric current.
- Solar panels can be installed on rooftops, as free-standing structures, or as rows of mounted panels.





## PROJECT OVERVIEW


### Project Location

- The Project is situated in the City of Kingston (Countryside District) and Loyalist Township.
- Located on approximately 261 ha of land.

### Nameplate Capacity

- Up to 100 MW AC (megawatts alternating current).

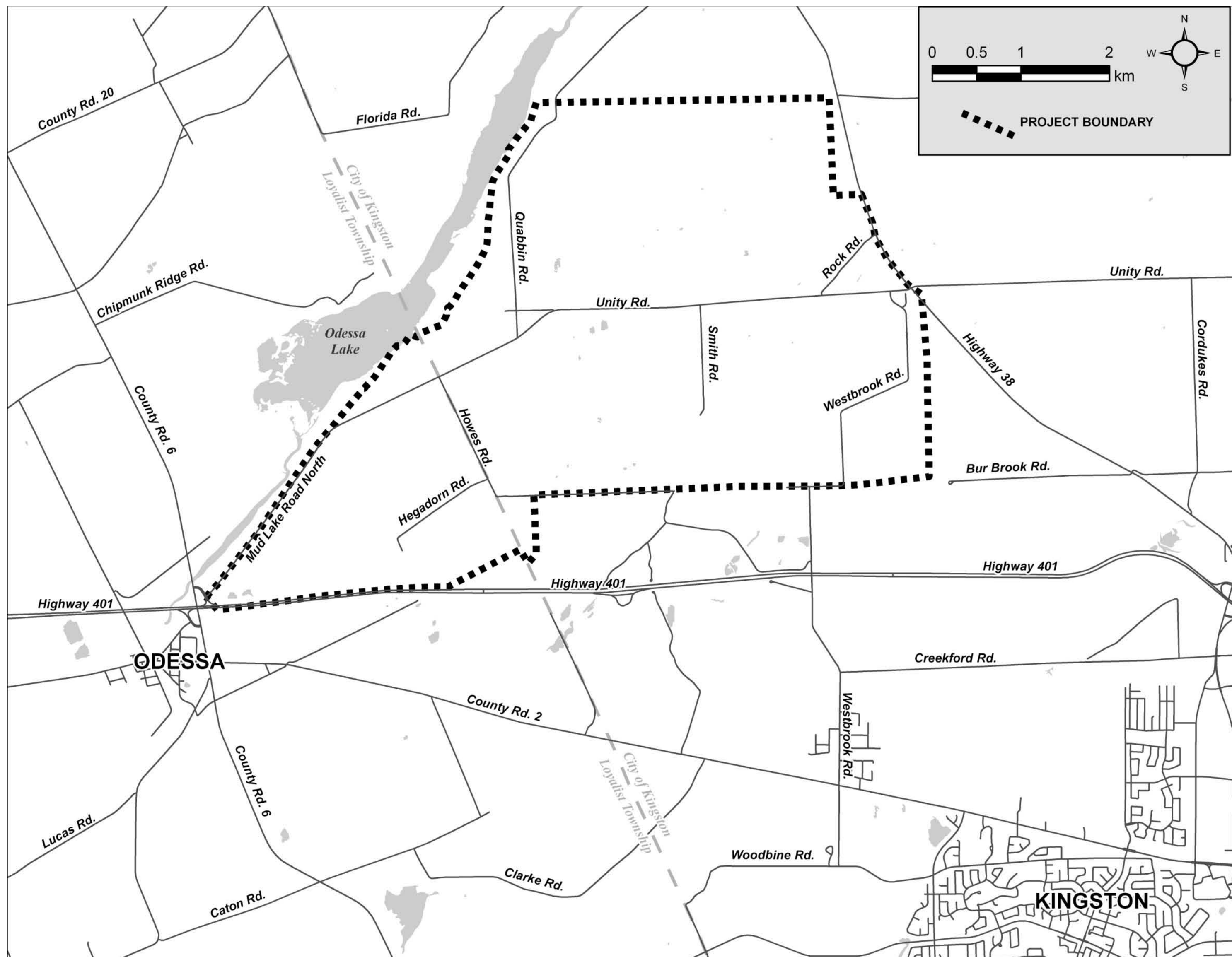
### Facility Component

- Solar photovoltaic panels will be mounted on ground-based racking systems.
  - Underground and/or overhead collector lines to transmit power from the solar panels to a substation.
  - Transformers to convert the collected power to 230 kV for interconnection with the Hydro One Networks Inc. transmission line.
  - Operations & Maintenance and control building located at the substation site.
- 



# KINGSTON SOLAR LP

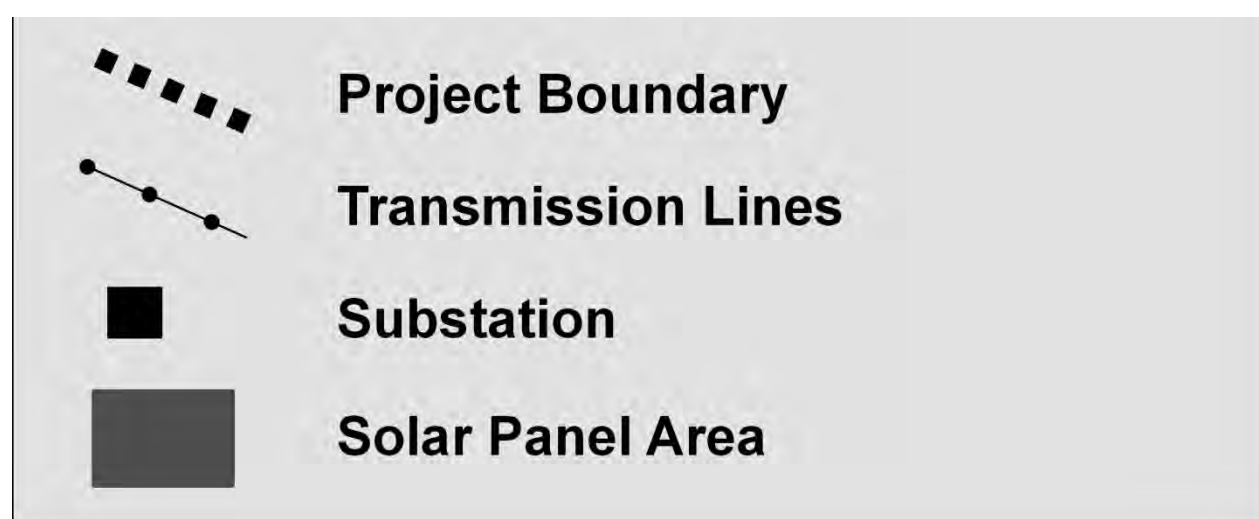
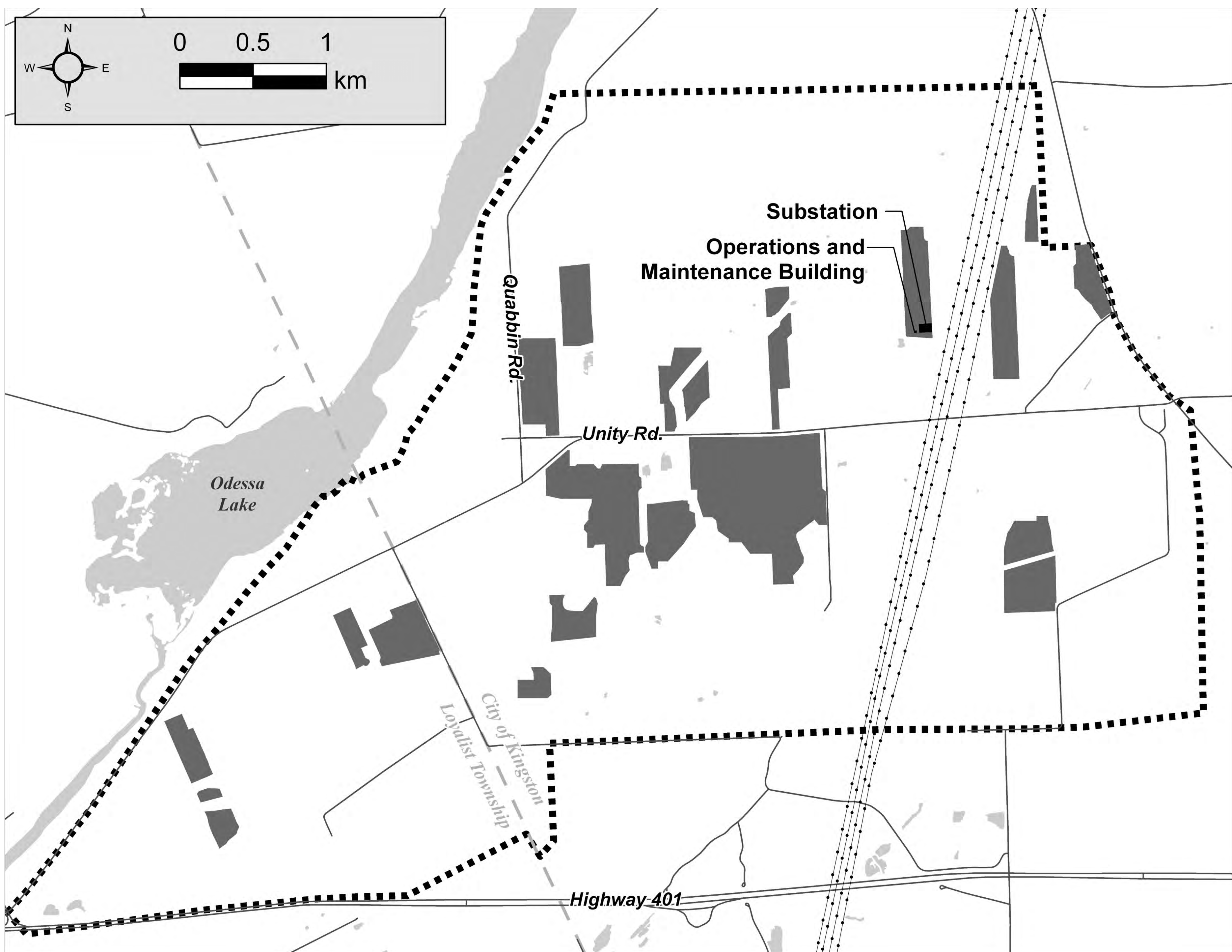
## PROJECT LAYOUT



- Numerous factors are considered when determining a project layout including:
  - Land options (i.e., Land that has been leased to Kingston Solar LP for project development);
  - Regulatory requirements (i.e., setback, sound modeling);
  - Natural and socio-economic features (i.e., endangered species, wetland, etc);
  - Archaeological and cultural heritage features;
  - Public input; and
  - Municipal consultation.

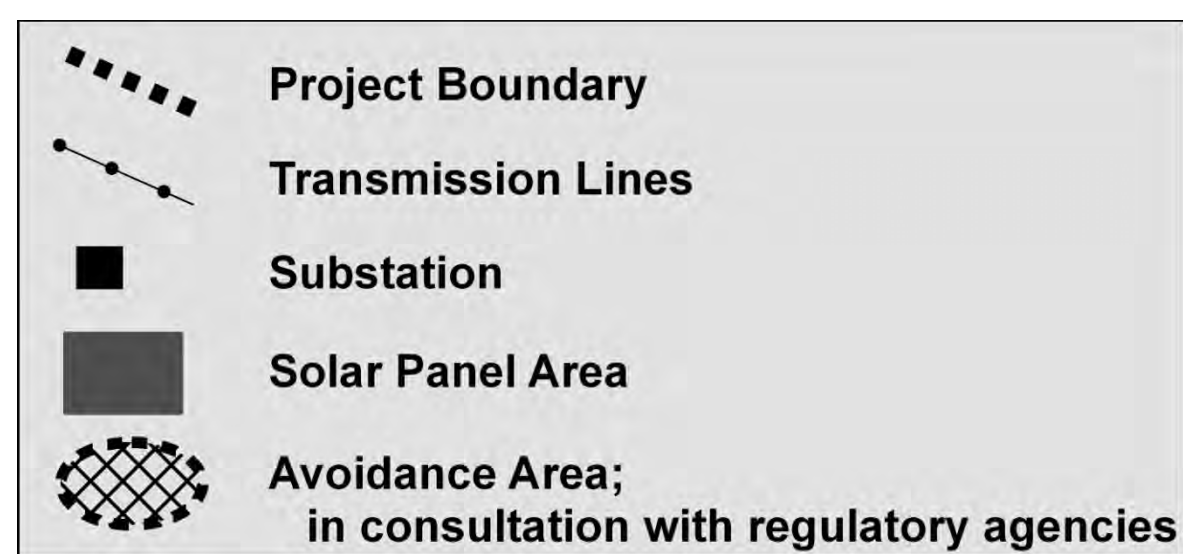
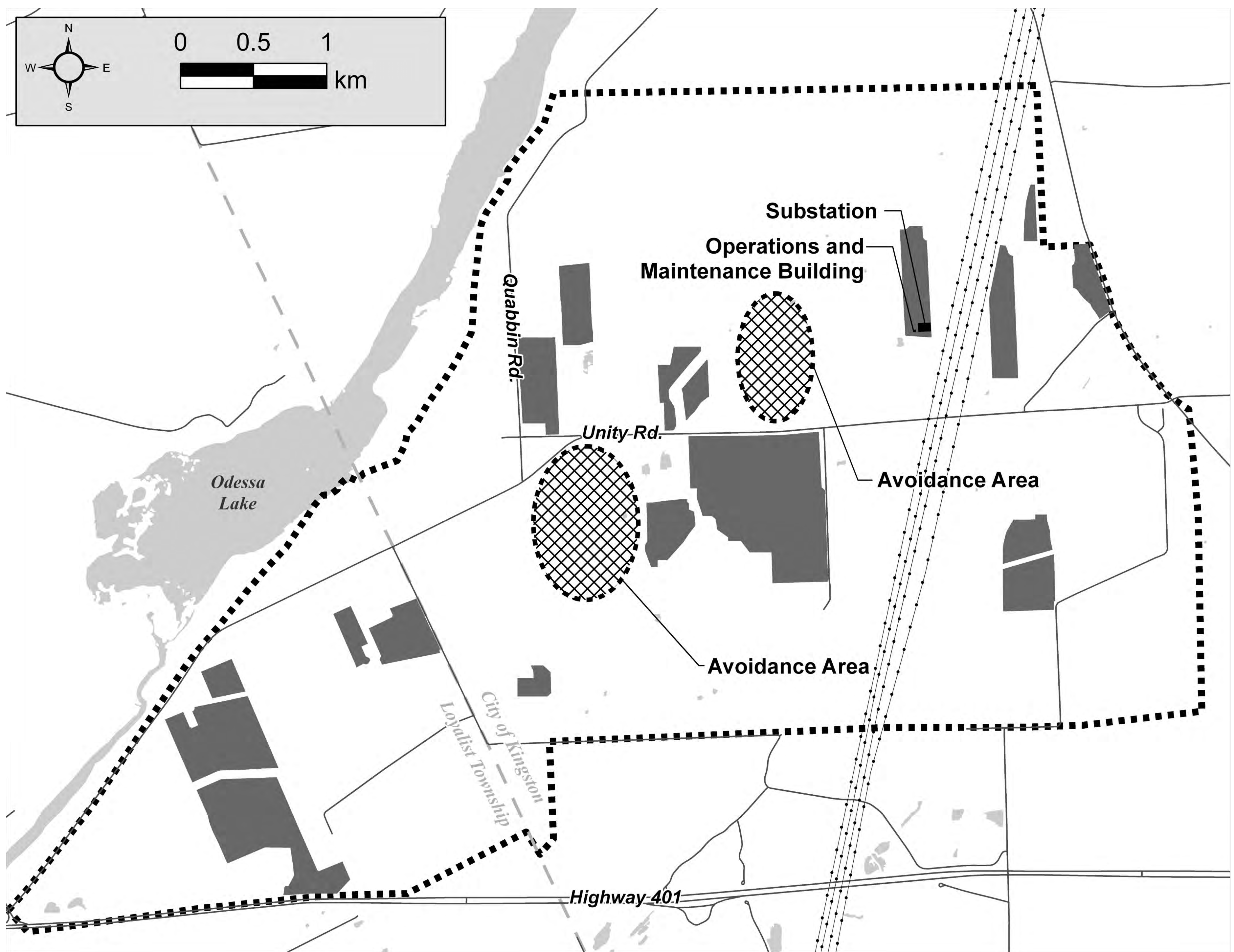


## PROJECT LAYOUT *(Beginning of Field Studies)*



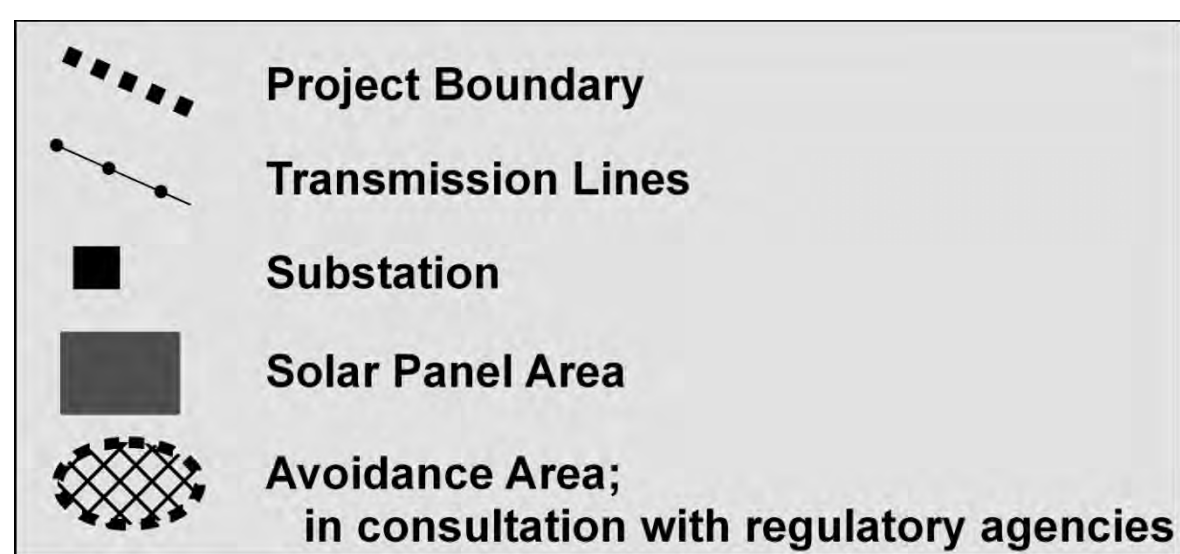
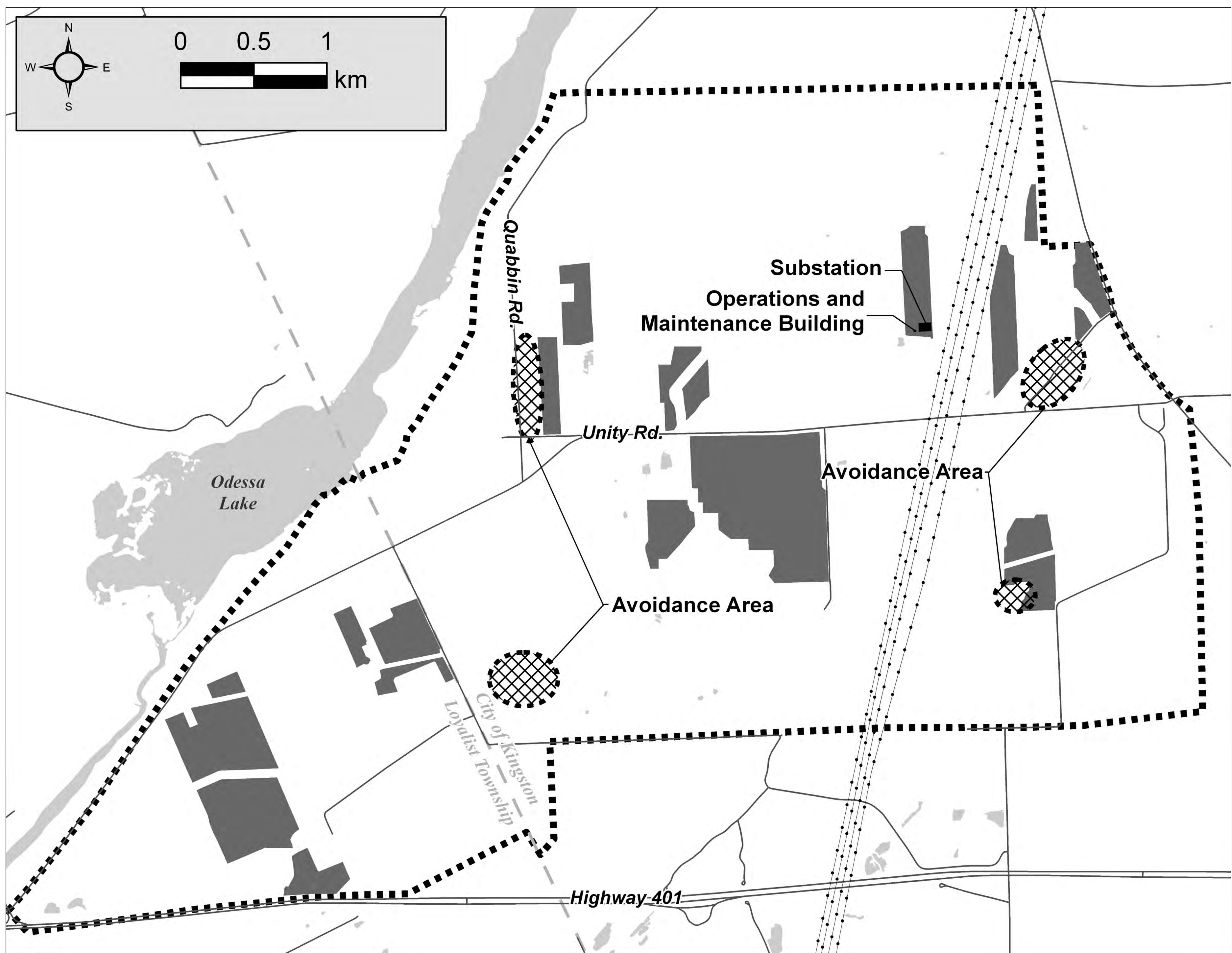


## PROJECT LAYOUT (Middle of Field Studies)





## PROJECT LAYOUT (Crystallization of the Layout)

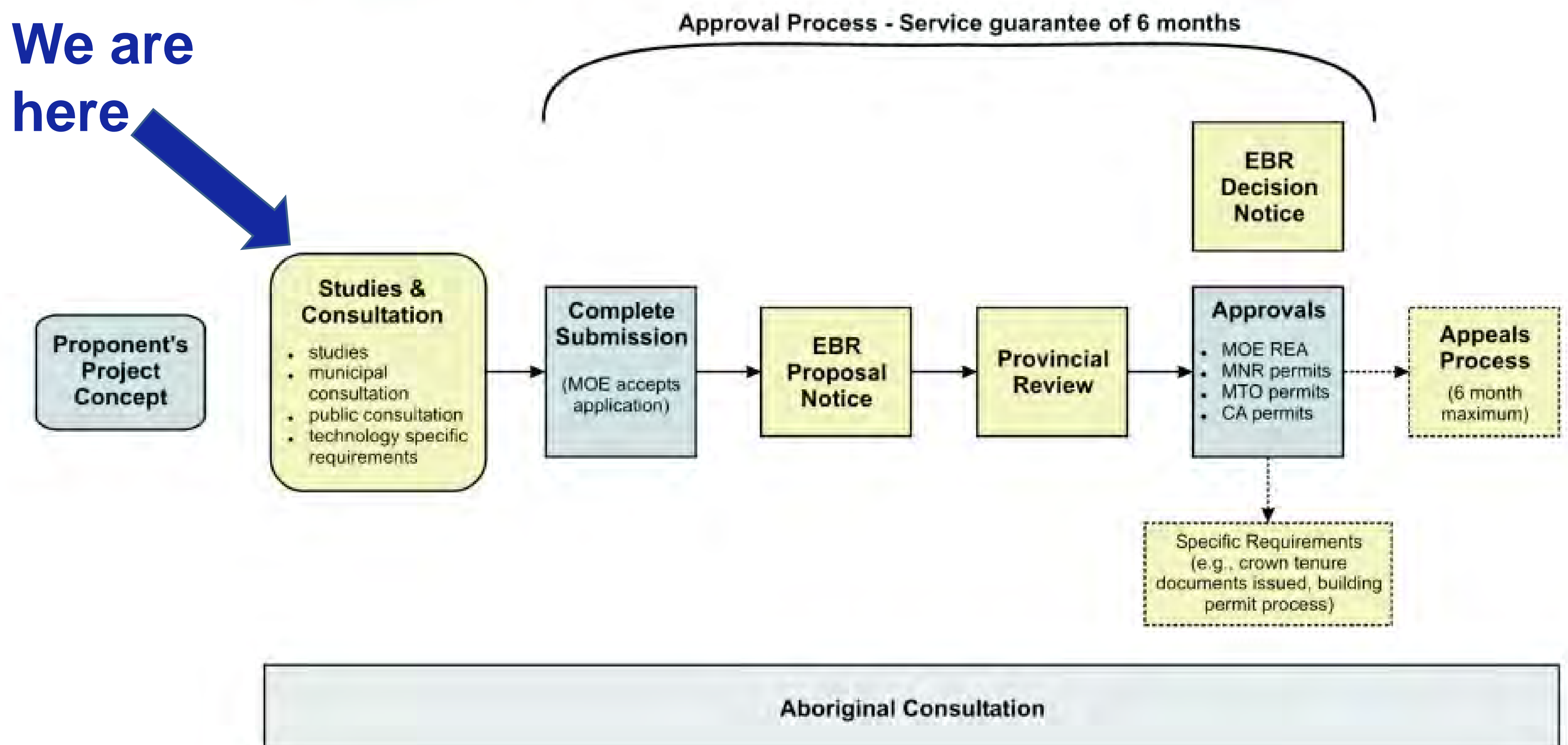




## RENEWABLE ENERGY APPROVAL (REA)

- The Project will require a REA, issued by the Ontario Ministry of the Environment, in accordance with Ontario Regulation 359/09 under Part V.0.1 of the Environmental Protection Act.
- The Project is considered Class 3 solar facility, and has specific study and information requirements under the REA process.
- The REA reports will provide information on:
  - project design, construction, operation & decommissioning ;
  - assessment of potential environmental effects of the proposed Project; and
  - mitigation measures and monitoring plans where required.
- The REA reports were made available for public review 60 days prior to this open house.

### Renewable Energy Approval Process





## REA & PROJECT SCHEDULE

Notice of Proposal to Engage in a Renewable Energy Project and Notice of Public Open House – July

**2011**

Public Meeting No. 1 – August

Rural Affairs Committee Meeting – February

Loyalist Township and City of Kingston Technical Meeting – March

Interim Community Session – April

**2012**

Draft REA Notice (Municipality) – May

Draft REA Notice (Public) – June

Public Meeting No. 2 – August

We are here

Public comments on Draft REA Reports due – August 31<sup>st</sup> [Tentative]

REA submission to MOE – September [Tentative]

Anticipated REA Approval – March [Tentative]

**2013**

Start of Project Construction – 2<sup>nd</sup> quarter [Tentative]

Commercial Operation – 3<sup>rd</sup> quarter [Tentative]

**2014**

Decommissioning or Repowering – after 20 years

**2034**

Ongoing consultation with local community, Aboriginal communities, and County

Draft REA Studies Completed

Final REA Studies Completed

Project Approval


## OTHER REQUIRED APPROVALS

Building a Project such as the Sol-luce Kingston PV Solar Energy Project requires significant planning and work to obtain all relevant approvals and permitting. Some of the key approvals and permits are listed in the table below:

<b>Permit</b>	<b>Issuing Authority</b>	<b>Regulated Activity</b>
Renewable Energy Approval	Ministry of the Environment	Environmental approval of all Project works and activities.
System Impact Assessment	Independent Electricity System Operator	Required to register with IESO and meet requirements for grid connection.
Generator License	Ontario Energy Board	Permission to operate.
Customer Impact Assessment	Hydro One Networks	Effects of grid connection.
Certificate of Inspection	Electrical Safety Authority	Construction or modification of electrical systems.
Notice of Project Construction	Ministry of Labour	Required to meet labour codes and regulation.
Interference with Wetlands, and Alterations to Shorelines Permit	Conservation Authority	Development of works within floodplains such as water crossings.
Work permit/ agreement for municipal Right-of-Way	Municipality	Work within road allowance and use of road allowance for power lines.
Building Permit		Need to meet local and provincial codes.
Entrance Permit		Permission to connect to municipal roads.



## PROJECT DESCRIPTION REPORT

- Describes the Project (facilities, equipment, and technology to be used).
  - Provides details about the activities that will be engaged in as part of the Project.
  - Identifies any negative environmental effects resulting from Project.
  - Identifies required permits and approvals.
  - Provides an overview of the consultation activities.
- 

## NHA/EIS REPORT

The Natural Heritage Assessment (NHA) and Environmental Impact Study (EIS) describes the natural heritage features and evaluates the environmental impact on those features.

Potential Environmental Effects	Mitigation Measures
<p><b>Breeding Bird Habitat</b></p> <ul style="list-style-type: none"><li>• Direct impact to some areas of breeding bird habitat but will not affect the overall availability of habitat as large areas of habitat will remain.</li><li>• There is potential for indirect (short-term construction) impacts to birds due to construction noise and increased human presence.</li></ul>	<p>In areas where breeding birds are expected to be nesting, initial vegetation removal may occur outside the active breeding bird season (May - August).</p> <p>Three years of post-construction bird monitoring will be completed.</p>
<p><b>Amphibian and Reptile Habitat</b></p> <ul style="list-style-type: none"><li>• Direct impact on small areas of amphibian habitat; however, there is greater than 100 ha of suitable habitat available.</li><li>• There is potential for indirect (short-term construction) impacts to wildlife due to construction noise and increased human presence.</li></ul>	<p>Minimize construction activities in reptile and overwintering snake habitat during fall congregation of reptiles and during snake overwintering.</p> <p>Conduct pre-construction surveys in Spring 2013 to confirm habitat use by amphibians.</p>
<p><b>Woodlands and Wetlands</b></p> <ul style="list-style-type: none"><li>• The Project results in the removal of 3.4 ha of important woodlands.</li><li>• 16 wetlands identified as provincially significant will not be impacted by the Project.</li><li>• There is potential for indirect (short-term construction) impacts to birds and wildlife due to construction noise and increased human presence.</li></ul>	<p>Install silt fencing around active construction sites to contain sediment and reduce potential for wildlife injury.</p> <p>Noise control equipment will be used on construction equipment.</p> <p>Educate construction workforce about the potential for wildlife and measures for avoiding wildlife when possible. If wildlife is injured or killed as a result of construction activities, a trained biologist will conduct a survey in the area of the incident before construction can continue.</p> <p>Daily visual monitoring of mitigation measures will be completed and changes made to the measures where necessary.</p>



## ARCHAEOLOGICAL ASSESSMENT REPORT

Stage 1 and Stage 2 archaeological investigations were completed on participating properties within the study area.

Stage	Findings
<p><b>Stage 1 :</b></p> <p>Background research to gather historical and land use information</p>	<p>Stage 1 inspection showed that portions of the Project area have archaeological potential. This conclusion was based on three main factors:</p> <ul style="list-style-type: none"><li>• Closeness to water;</li><li>• Closeness to early historic settlement centres and historic roadways; and</li><li>• Prior identification of three pre-contact archaeological sites (about 1 km southeast of the Project area).</li></ul>
<p><b>Stage 2 :</b></p> <ul style="list-style-type: none"><li>• Ploughed fields were walked and visually inspected fields at 5-metre intervals</li><li>• Shovel test surveys at 5 to 10-metre intervals where the soil from hand dug test pits was sifted through a mesh screening</li></ul>	<p>Two historic Euro-Canadian finds and six archaeological sites. One of the sites consisted of a solitary pre-contact Aboriginal find that was thoroughly investigated and then removed. The remaining five sites represent mid-19<sup>th</sup> century to early/mid-20<sup>th</sup> century features.</p>

- **Conclusions:** Based on the results of Stage 1 and 2 assessments, it was recommended that before Project construction activities Stage 3 assessments (site-specific assessments) be conducted for four sites.

## CULTURAL HERITAGE REPORT

<b>Purpose</b>	Purpose was to determine the potential for heritage resources within the Project area.
<b>Conclusions</b>	<p>None of the properties within the Project area are considered Protected Properties under Ontario Regulation.</p> <p>While all the properties within the Project area possess some value due to historical linkages with their surroundings, none are of sufficient cultural heritage value.</p>
<b>Mitigation Measures</b>	<p>Existing vegetation in the Project area will provide visual buffering or filtering of extended views to the Project on interior lands and this vegetation will be kept where possible. Additional visual buffering will be considered for interior properties as detailed design proceeds.</p> <p>Where the solar panels are closer to the roads, mitigation of views may be provided by the installation of screening devices. The locations of screening devices will be determined during detail design and considering the findings of public and municipal consultation, engineering and property constraints.</p>



## CONSTRUCTION PLAN REPORT

Provides details about the construction activities (e.g. site clearing and levelling, access roads installation, trenching of underground cables, installing foundations, transporting materials, erecting/wiring of solar arrays, site restoration). For examples;

Potential Effects	Mitigation Measures
<b>Natural Environment</b> Loss of vegetation due to land clearing and disturbance to wildlife during construction activities.	Modifications to the layout were made to avoid placing Project in and around sensitive wildlife habitat and features.
<b>Surface and Fish Habitat</b> Potential to impact to surface water quality and fish and fish habitat due to erosion of soil from the site.	Sediment and erosion control measures will be implemented prior to and maintained during construction
<b>Groundwater</b> Potential effect on local wells due to removal of water from excavations that may lower the local water table. Potential for spills of fuel and fluids from construction equipment to enter the water table.	Construction will not involve deep excavations; contractors will be required to handle and store hazardous materials in accordance with environmental regulations.
<b>Air Quality</b> Exhaust from construction equipment may temporarily impact local air quality. Dust is expected to occur during excavation, levelling, or piling of, soil and from traffic on Project access roads.	All equipment will meet the Ministry of the Environment emissions requirements. Idling of vehicles will be avoided. Equipment will be turned off when not in use. Water will be used in to keep dust down during construction. Disturbed soils will be re-vegetated as soon as possible.
<b>Noise</b> Noise from construction equipment and trucks hauling materials to site could become a nuisance to nearby residents.	Equipment and vehicles will be maintained in good working condition to limit engine noise. All construction and installation activities would take place in accordance with the City of Kingston's and Loyalist Township's noise by-laws.
<b>Public Health and Safety</b> There will be an increase in construction-related road traffic.	A Traffic Management Plan and an Emergency Response Plan will be developed in consultation with the City of Kingston and Loyalist Township and used by the Construction Contractor.



## DESIGN & OPERATIONS REPORT

Provides details about key facility structures, facility operations, and possible environmental effects from operating the solar facility and planned mitigation and monitoring measures. For examples;

<b>Potential Effects</b>	<b>Mitigation Measures</b>
<b>Air Quality</b> Exhaust from operations and maintenance vehicles may temporarily impact local air quality around Project.	Idling of maintenance vehicles will be avoided. All equipment will meet the Ministries of the Environment and Transportation emissions requirements.
<b>Surface and Groundwater</b> There is a potential for spills of fuel and fluids from operations equipment to impact surface water quality or enter the water table.  No groundwater is required for the cleaning of the panels during operations.	Accidental spills would be limited, of short duration and protocols to minimize effect would be provided in a Spill Response Plan.  No chemical cleaning would be used.
<b>Noise</b> Occasional noise from operations and maintenance equipment during maintenance visits to site could be a temporary nuisance to nearby residents.	Operations equipment and vehicles will be maintained in good working condition to limit engine noise. A noise barrier will be installed on the west and south sides of the transformer to meet performance meet provincial requirements.



## STORMWATER MANAGEMENT PLAN

<b>Purpose</b>	Developed for stormwater runoff control from the solar facility and substation property based on the Ministry of the Environment and Cataraqui Region Conservation Authority (CRCA) guidelines.
<b>Conclusions</b>	Plan identifies that stormwater runoff from the Project can be managed by the use of erosion and sediment controls and grass berms.  <i>Note: Subject to consultation with Regulatory authorities.</i>



## WATER ASSESSMENT & WATER BODIES REPORT

<b>Purpose</b>	<p>Summarizes the results of records review and site investigation to determine the presence and boundaries of water bodies within 120 metres of the Project study area.</p> <ul style="list-style-type: none"><li>• Records review completed in consultation with the Ministry of Natural Resources (MNR), Cataraqui Region Conservation Authority (CRCA), Fisheries and Oceans Canada (DFO) and Natural Resources Canada.</li><li>• Site investigations were completed in October 2011.</li></ul>
<b>Conclusions</b>	<p>The study concluded that protection such as silt fencing and control of site runoff will to protect watercourses.</p>





## NOISE STUDY REPORT

<b>Purpose</b>	Sound levels were modeled using an industry standard and Ministry of the Environment accepted noise modeling program.
<b>Findings</b>	<p>Predicted sound levels were determined to not exceed the Ministry of the Environment guideline limits at the points of reception (i.e., nearest residences and vacant lots).</p> <p>Noise from the operation of the solar facility will come from the inverter stations and the substation. Modern designs have significantly reduced the noise levels associated with the units.</p>
<b>Conclusions</b>	Sound levels will not increase due to sound from nearby solar projects.
<b>Mitigation Measures</b>	Construction noise will primarily come from mobile equipment. Work is expected only between the hours of 7:00 AM and 7:00 PM.

## DECOMMISSIONING PLAN REPORT

Provides a description of the activities that are to be completed when the facility ends operation and is decommissioned.

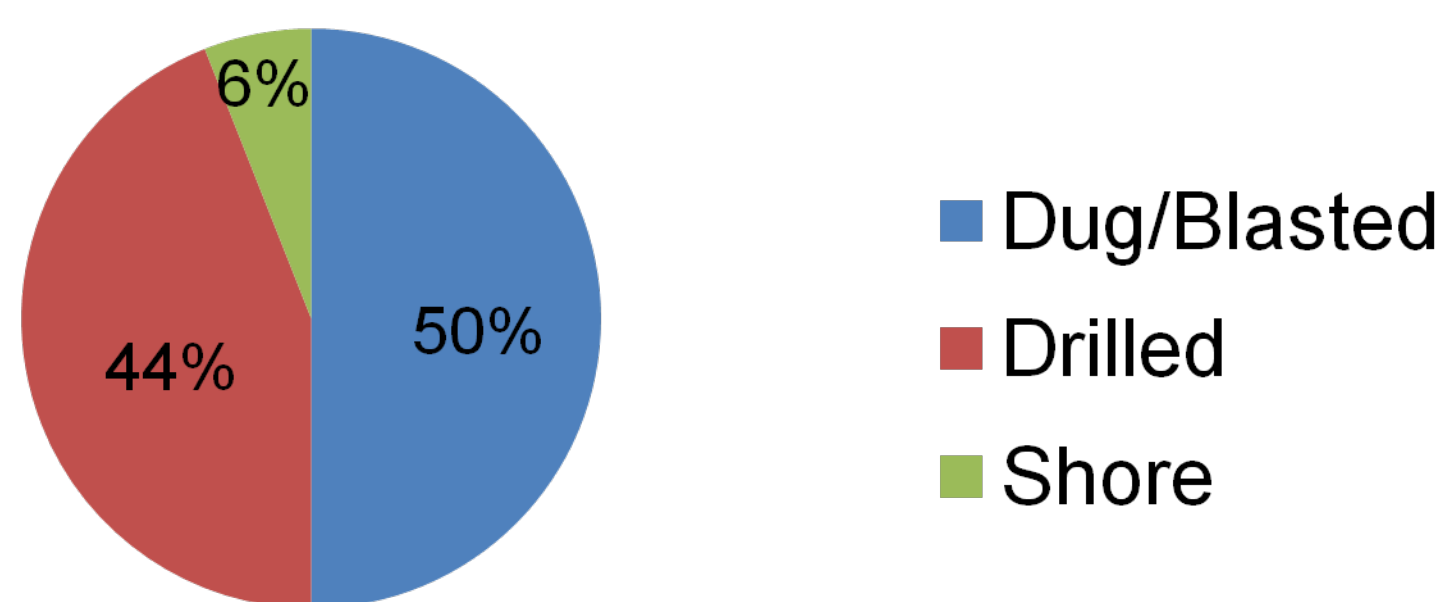
Potential Effects	Mitigation Measures
<b>Natural Environment</b> Disturbance to wildlife may occur during dismantling of the solar arrays, access roads, and electrical components due to increased human activity, traffic and noise and dust.	Decommissioning activities will be limited to the pre-assessed footprint area of the Project. No disturbance of habitat will be required.
<b>Surface and Fish Habitat</b> Potential to impact to surface water quality and fish and fish habitat due to erosion of soil from the site.	Sediment and erosion control measures will be implemented prior to decommissioning activities and maintained during the decommissioning phase to prevent entry of sediment into the water.
<b>Groundwater</b> Potential for spills of fuel and fluids from equipment to enter the water table.	Contractors on site will handle and store hazardous materials in accordance with regulation and the Spill Response Plan
<b>Air Quality</b> Exhaust from equipment may temporarily impact local air quality around the Project. Dust is expected to occur during excavation, levelling, or piling of, soil and from traffic on Project access roads.	All equipment will meet the MOE emissions requirements. Idling of vehicles will be avoided.
<b>Noise</b> Noise from equipment and trucks could become a nuisance to nearby residents.	Equipment will be maintained in good working condition. Construction will take place according to City and Township's by-laws.
<b>Public Health and Safety</b> There will be a temporary increase in road traffic during decommissioning activities.	A Traffic Management Plan and an Emergency Response Plan will be developed in consultation with the City of Kingston and Loyalist Township and used by the Contractor.



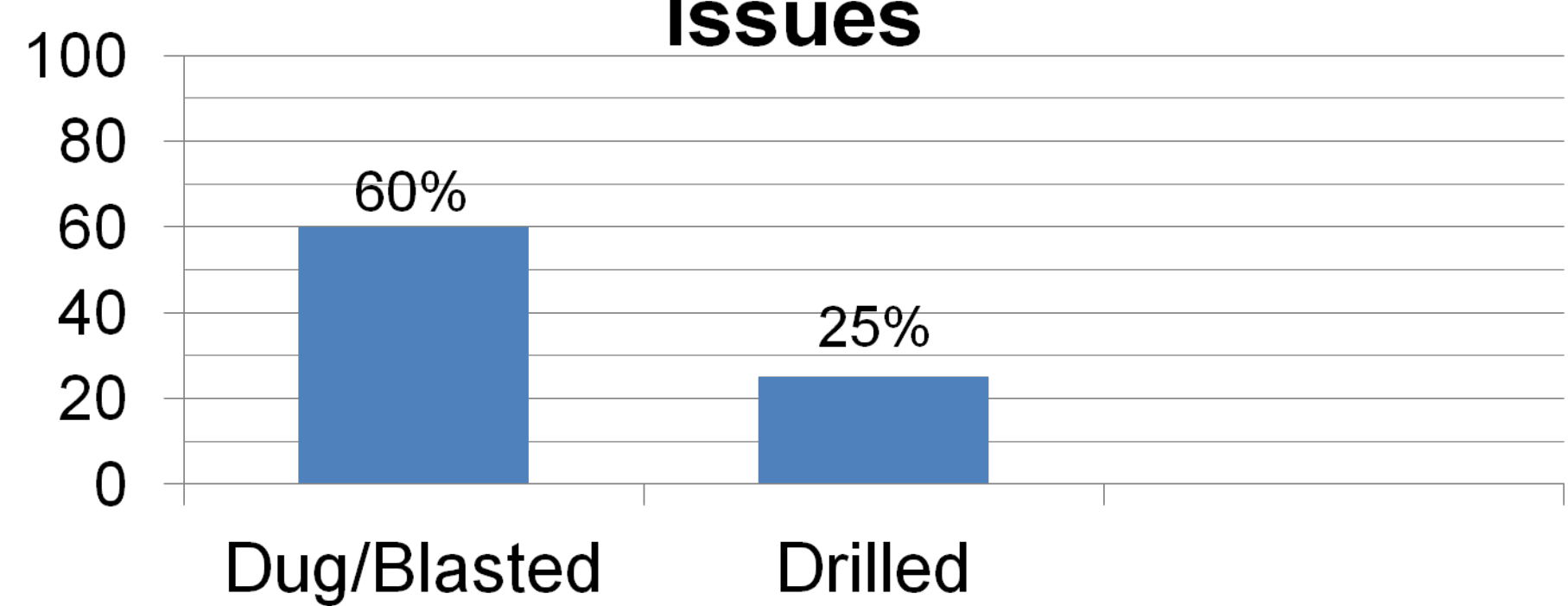
## WELL WATER SURVEY

<h3>Objectives</h3>	<ul style="list-style-type: none"> <li>Assess groundwater quality conditions prior to construction.</li> <li>Data used as input into Monitoring/Contingency Program</li> <li>Identify location of groundwater users.</li> </ul>
<h3>Methodology</h3>	<ul style="list-style-type: none"> <li>Program based on guidance from the Ministry of the Environment.</li> <li>Identified well users within 500 m of Project sites</li> <li>Sampled un-treated well water samples in June/July, 2012 from a sub-group of properties down flow of Project sites; water analyzed for bacteria, general chemistry and select metals.</li> <li>60 addressees approached, 32 water samples collected</li> <li>Collected information about well construction, location</li> </ul>
<h3>Survey Results</h3>	<ul style="list-style-type: none"> <li>120 properties within 500 m of solar infrastructure estimated to use groundwater as a potable water supply</li> <li>Of the 32 surveys, the following conditions were observed:</li> </ul>

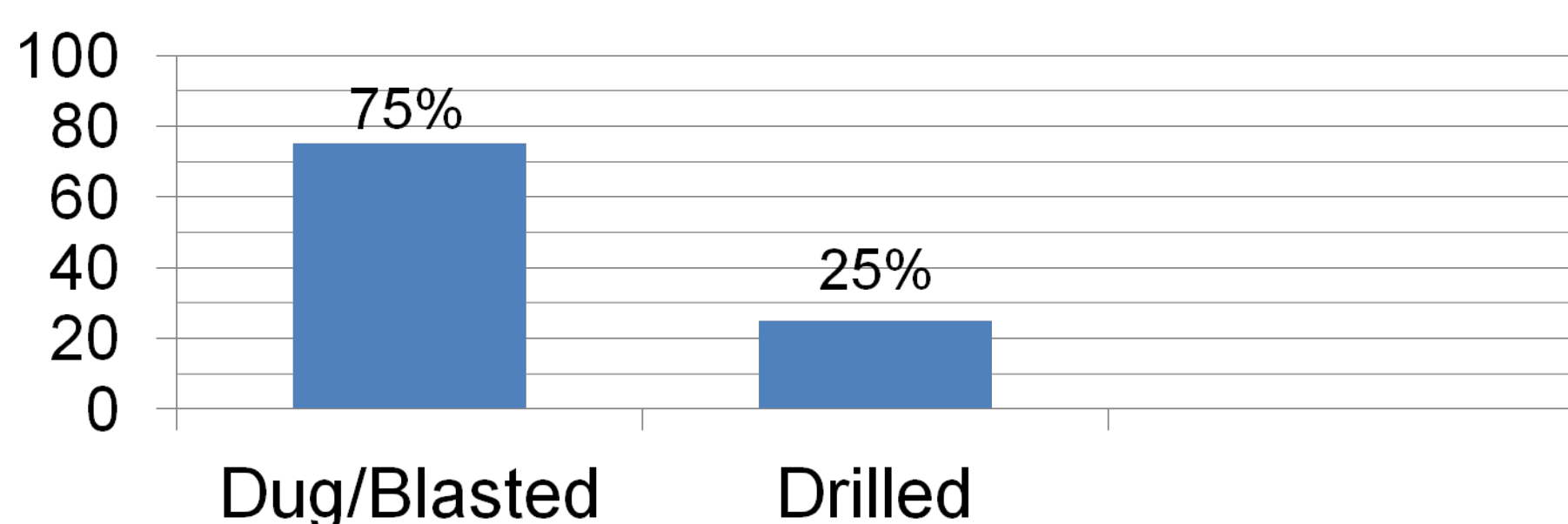
**Type of Well**



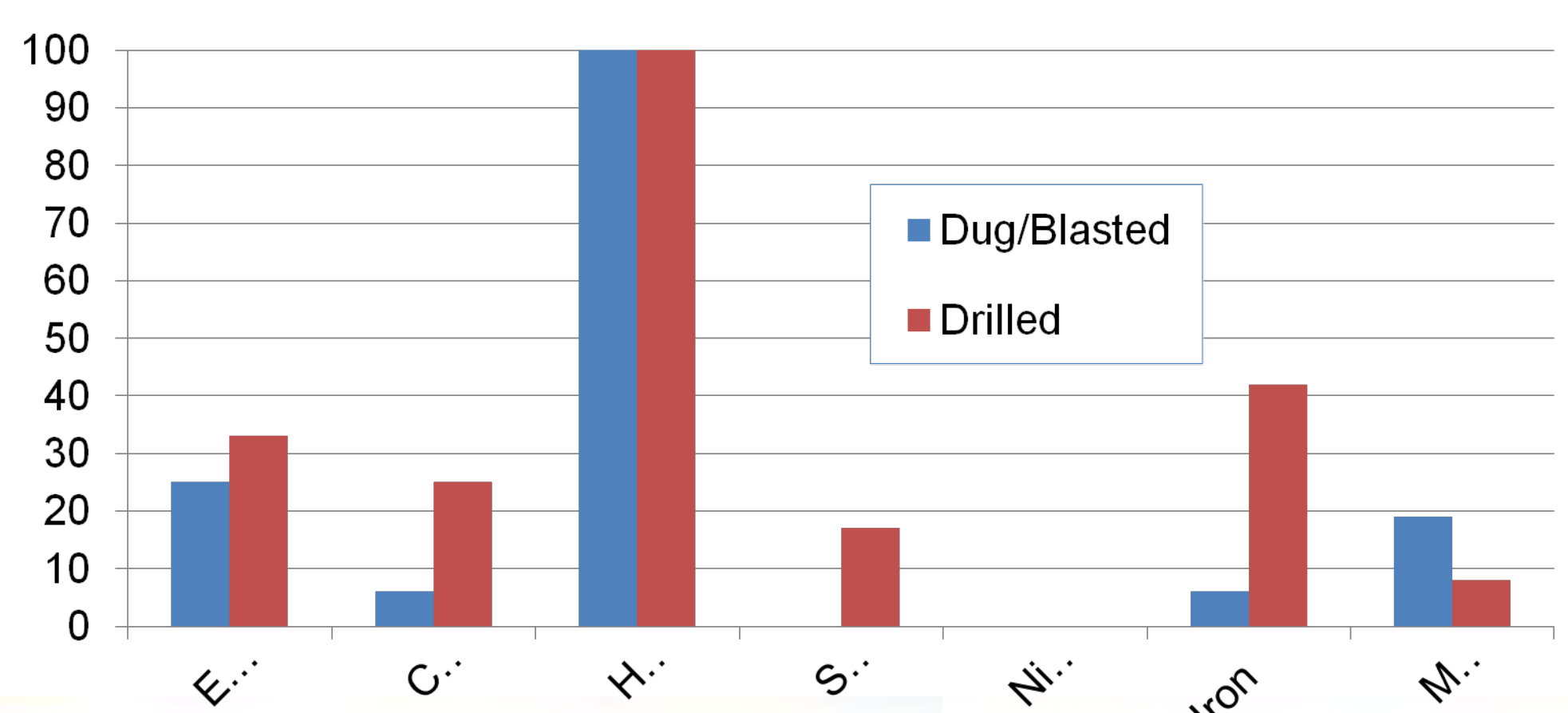
**% Reported Water Quantity Issues**



**% Reported Water Quality Issues**



**% of Wells with Water Quality Exceedances**





## ASSESSMENT OF POTENTIAL WATER QUALITY ISSUES

Assessed Issue	Comment/Mitigation/Expected Impacts
<b>CONSTRUCTION RELATED</b>	
Impacts from Accidental Fuel Spillage/Releases from Equipment	<ul style="list-style-type: none"> <li>No bulk fuels/chemicals will be stored on site</li> <li>No equipment refueling to occur within 100 m of wells</li> <li>Hazardous and Non-Hazardous Waste Management Plans will be implement to identify procedures for storage/handling/transportation of construction wastes</li> <li>Construction Emergency Response and Communication Plan will be implemented to ensure proper procedures are followed in the event of a spill/release</li> <li><b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Erosion and Sediment Issues	<ul style="list-style-type: none"> <li>Erosion and Sediment control program will be implemented</li> <li>No stockpiling of soils within 100 m of private wells</li> <li>Run-off will not be allowed to pond within 100 m of private wells.</li> <li>Water pumped from excavations will be filtered prior to discharge</li> <li><b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Fracturing of Bedrock During Foundation Construction	<ul style="list-style-type: none"> <li>Foundations will be installed in portion of bedrock (top 3 m) that is already heavily fractured, so no significant increase in groundwater infiltration is expected</li> <li>No blasting within 100 m of private wells</li> <li>Foundations installed in areas of overburden will be backfilled with compacted soil</li> <li>Cement used to secure solar panel supports will seal off fractures around foundations reducing risk of vertical groundwater movement along foundation support.</li> <li><b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Sewage Disposal	<ul style="list-style-type: none"> <li>Portable washrooms will be used during construction. Waste will be removed by a licensed waste hauler</li> <li><b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
<b>OPERATIONS RELATED</b>	
Impacts from Weed Control	<ul style="list-style-type: none"> <li>Chemical-based herbicides will not be used</li> <li><b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Spillage/Leakage of Chemicals/Fuels	<ul style="list-style-type: none"> <li>Bulk storage of fuels or chemicals will not occur on site</li> <li>Refueling activities of maintenance vehicle/equipment will be performed off-site</li> <li>Best Management Practices followed for storage of small quantities of chemicals and spills management program implemented</li> <li>Substation transformer will be installed in a concrete pit to provide secondary containment; transformer will be inspected monthly for leaks</li> <li><b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Erosion and Sedimentation Issues	<ul style="list-style-type: none"> <li>Stormwater Management Plan will be implemented for run-off control for the substation property and under solar panel areas. Drainage system will be maintained and monitoring on a regular basis.</li> <li>Mitigation measures such as the use of grassed filter strips will be used at down-slope ends of Project sites to improve run-off quality</li> <li><b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Sewage Management	<ul style="list-style-type: none"> <li>Washrooms and kitchen at operations building to discharge to a holding tank. Contents will be removed by a licensed waste hauler.</li> <li>Septic Tank will be equipment with a level monitoring system</li> <li><b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Cleaning of Solar Panels	<ul style="list-style-type: none"> <li>Cleaning will be occasional only, and will use potable water brought in from off-site. No chemicals will be used.</li> <li><b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>



## VISUAL IMPACT

- Existing vegetation in the Project area will provide visual buffering or filtering of extended views to the Project on interior lands.
- Where the solar panels are closer to the roads, mitigation of views may be provided by the installation of screening devices. The locations of screening devices will be determined during detail design with input from local community and respective agency.
- Prior to construction, Kingston Solar LP will determine an acceptable and practical visual screening, which includes vegetative fencing, berms, tree rows or similar.



INSTALLATION OF SOLAR PANELS



BERM CONSTRUCTION TO MITIGATE VIEW



## **WE WELCOME YOUR FEEDBACK**

Please share your thoughts with us by filling out a feedback form.

Please contact the following for more information:

**A. José De Armas**

Manager, Project  
Development

Samsung Renewable  
Energy Inc.

55 Standish Court, 9th Floor  
Mississauga, Ontario  
L5R 4B2

**Rob Young**

Associate Environmental  
Scientist

AMEC Environment &  
Infrastructure

160 Traders Blvd E, Suite 110  
Mississauga, Ontario  
L4Z 3K7

**E-mail:**

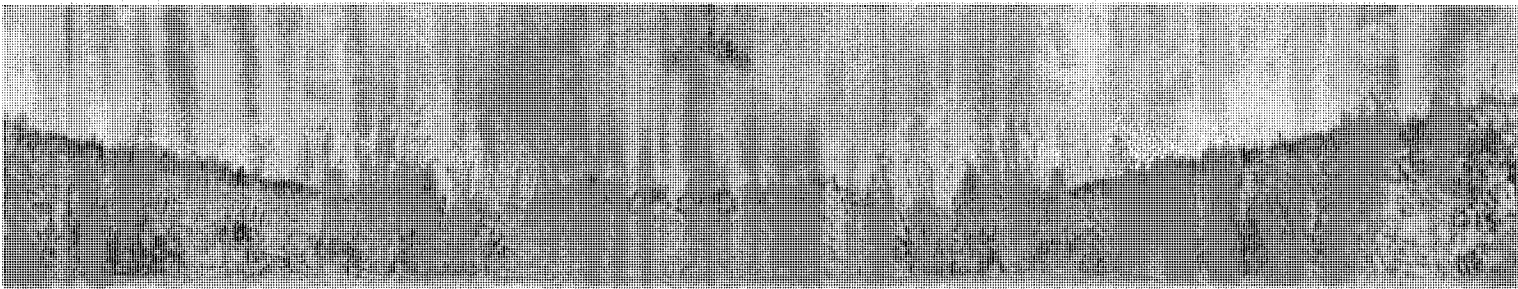
[solucekingston@samsungrenewableenergy.ca](mailto:solucekingston@samsungrenewableenergy.ca)

**Website:**

[www.samsungrenewableenergy.ca/kingston](http://www.samsungrenewableenergy.ca/kingston)







**FEEDBACK FORM**

**Sol-luce Kingston Solar PV Energy Project**

**Community Session – August 2012**

**1. How did you learn about the Sol-luce Kingston Solar PV Energy Project?**

- Newspaper Advertisement
- Word of Mouth
- Other (please specify) \_\_\_\_\_
- Delivered Letter
- Project Website

**2. Are you a resident or business in:**

- City of Kingston
- Loyalist Township
- Other (please specify) \_\_\_\_\_

**3. Which Open House did you attend?**

- Invista Centre, Kingston
- Odessa Fairgrounds, Loyalist Township

**4. Why did you decide to attend? (to learn more, with a group, etc.)**

*FINAL PUBLIC MTG. - having attended every public mtg, conveyed our concerns on many occasions & in every way possible - to Samsung and Municipal Gov't etc - wanted/needed to determine if ANY of our concerns had been addressed in final plan*

**5. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?**

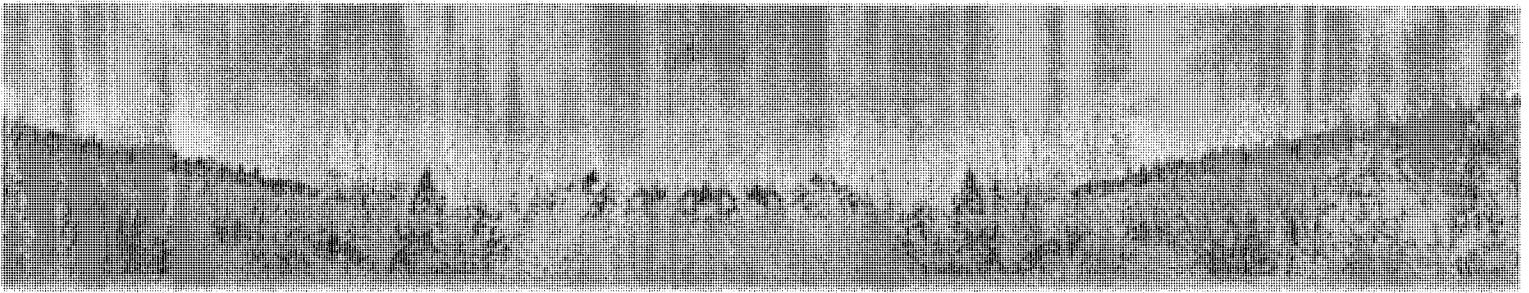
*Response from Samsung to City of Kingston's guidelines has demonstrated a complete FAIL on that part of Samsung - they have totally disregarded the Municipal Gov't's report & city citizens.*

**6. Do you have any local information that might be relevant to the proposed development?**

*We have provided detailed concerns - in writing on numerous occasions!*

**7. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?**

*Consult in an authentic reciprocal manner to integrate all of the city's recommendations, which are entirely reasonable*



**8. How would you like to receive future information about the proposed Project?**

- Open houses
- Direct Mail
- E-mail
- Other: \_\_\_\_\_
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**9. Did the Open House meet your information needs?**

- Yes
- No

**10. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

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**Optional Contact Information (please print clearly)**

<b>Name</b>	[REDACTED]
<b>Street Address</b>	[REDACTED]
<b>Town/City</b>	[REDACTED]
<b>Postal Code</b>	[REDACTED]
<b>E-mail</b>	[REDACTED]
<b>Phone</b>	[REDACTED]
<b>Organization (if applicable)</b>	[REDACTED]

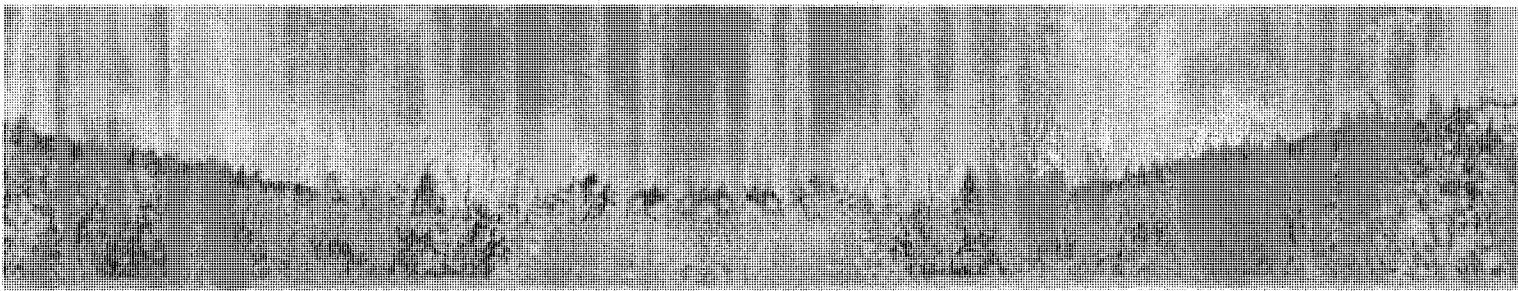
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**THANK YOU FOR YOUR FEEDBACK**

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**Sol-luce Kingston Solar PV Energy Project**  
 55 Standish Court, 9<sup>th</sup> Floor  
 Mississauga, ON L5R 4B2  
[solucekingston@samsungrenewableenergy.ca](mailto:solucekingston@samsungrenewableenergy.ca)  
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## FEEDBACK FORM

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Community Session – August 2012

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- Newspaper Advertisement       Word of Mouth       Other (please specify) \_\_\_\_\_  
 Delivered Letter       Project Website

**2. Are you a resident or business in:**

- City of Kingston       Loyalist Township       Other (please specify) \_\_\_\_\_

**3. Which Open House did you attend?**

- Invista Centre, Kingston       Odessa Fairgrounds, Loyalist Township

**4. Why did you decide to attend? (to learn more, with a group, etc.)**

TO SEE DETAILED PLANS FOR THE PROJECT SINCE THIS IS THE FINAL MEETING - THERE WERE NO SPECIFICS OFFERED MAKING IT IMPOSSIBLE TO BE SATISFIED

**5. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?**

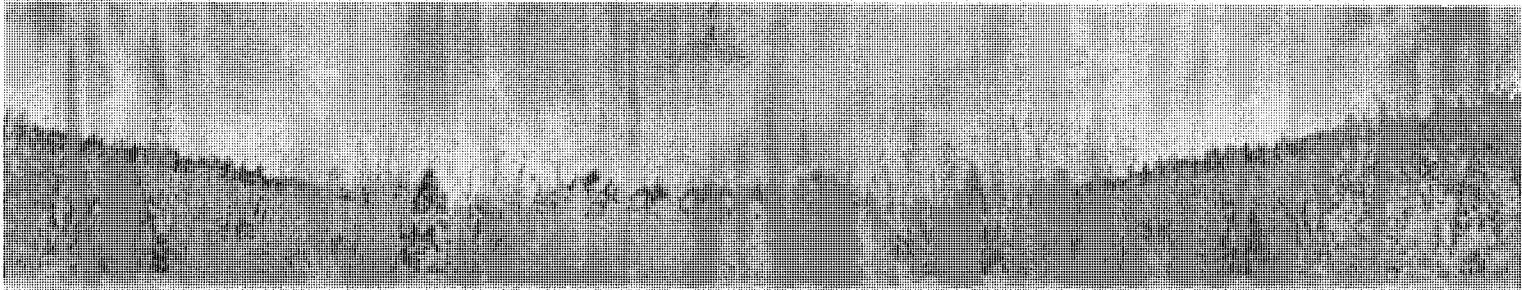
RESOLVE CITY REQUIRED SETBACKS SETBACKS FROM WATERCOURSES, WATER WELLS, TREES, RESIDENCES

**6. Do you have any local information that might be relevant to the proposed development?**

INFORMATION ON FLOOD STAGE WATERCOURSES ON PROJECT LANDS

**7. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?**

ROAD ACCESS ON ROCK ROAD ARE IN WRONG PLACES



**8. How would you like to receive future information about the proposed Project?**

- Open houses
- Direct Mail
- E-mail
- Other: \_\_\_\_\_
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**9. Did the Open House meet your information needs?**

Yes

No **ABSOLUTELY INADEQUATE!**

**10. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

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**Optional Contact Information (please print clearly)**

Name	[REDACTED]
Street Address	[REDACTED]
Town/City	[REDACTED]
Postal Code	[REDACTED]
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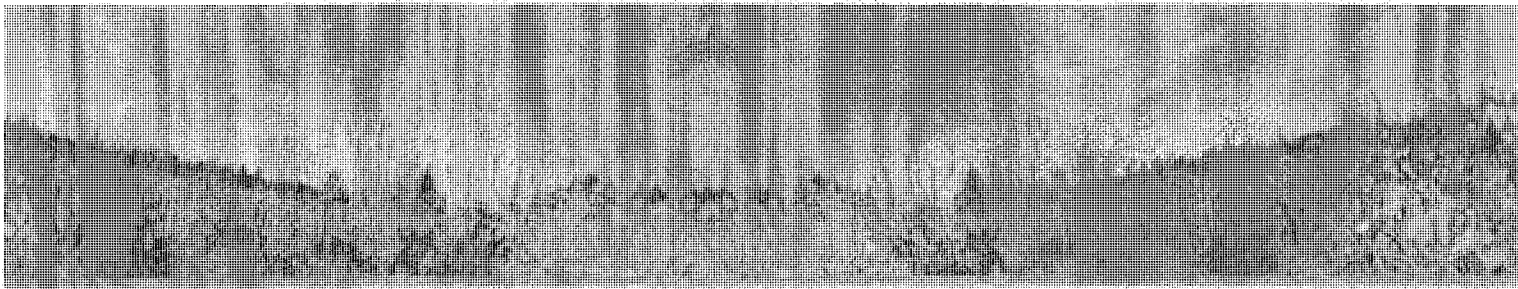
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**FEEDBACK FORM**

**Sol-luce Kingston Solar PV Energy Project**

**Community Session – August 2012**

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 Delivered Letter       Project Website

**2. Are you a resident or business in:**

- City of Kingston       Loyalist Township       Other (please specify) \_\_\_\_\_

**3. Which Open House did you attend?**

- Invista Centre, Kingston       Odessa Fairgrounds, Loyalist Township

**4. Why did you decide to attend? (to learn more, with a group, etc.)**

*To learn more*

**5. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?**

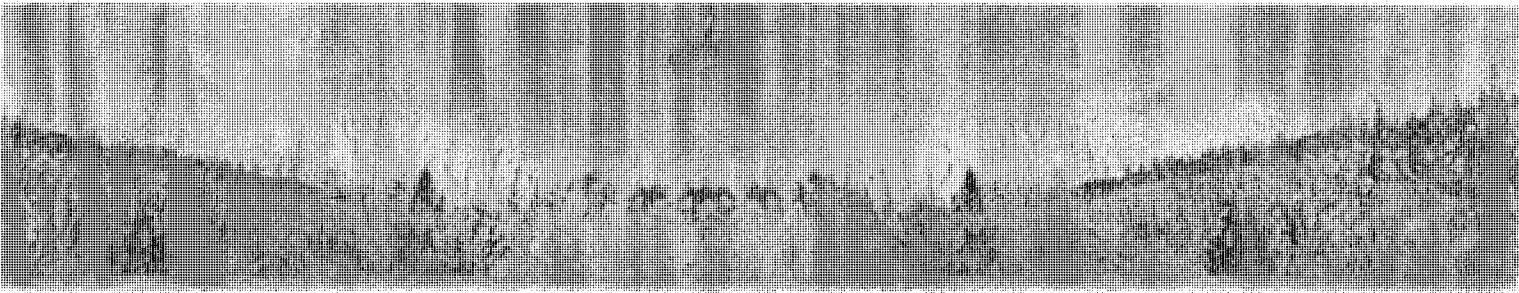
*Setbacks  
Berms  
Water Quality/Quantity*

**6. Do you have any local information that might be relevant to the proposed development?**

*OCA most recent review  
plus Schomberg - De Wolfe farm - land behind  
Swale on Red Rd.*

**7. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?**

*Vegetation / Landscape*



**8. How would you like to receive future information about the proposed Project?**

- Open houses  
 Direct Mail  
 E-mail  
 Other: \_\_\_\_\_
- Samsung Renewable Energy Website  
 News media  
 In-person discussions with Samsung representatives

**9. Did the Open House meet your information needs?**

Yes

No

**10. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

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**Optional Contact Information (please print clearly)**

<b>Name</b>	
<b>Street Address</b>	
<b>Town/City</b>	
<b>Postal Code</b>	
<b>E-mail</b>	
<b>Phone</b>	
<b>Organization (if applicable)</b>	

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FEEDBACK FORM

Sol-luce Kingston Solar PV Energy Project

Community Session – August 2012

1. How did you learn about the Sol-luce Kingston Solar PV Energy Project?

- Newspaper Advertisement       Word of Mouth       Other (please specify)  
 Delivered Letter       Project Website

2. Are you a resident or business in:

- City of Kingston       Loyalist Township       Other (please specify)

3. Which Open House did you attend?

- Invista Centre, Kingston       Odessa Fairgrounds, Loyalist Township

4. Why did you decide to attend? (to learn more, with a group, etc.)

To see the detailed results / evidence that all of my concerns have been addressed

5. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?

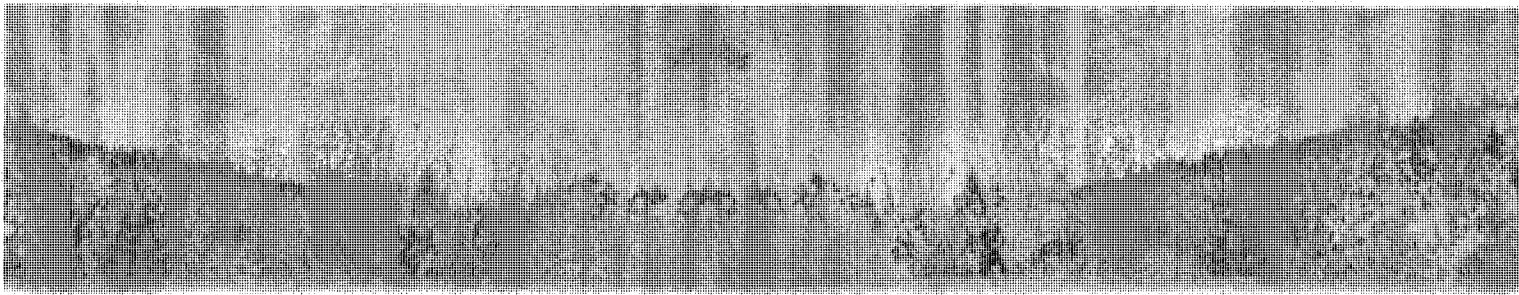
- Water Quantity      Water Quality      Water Travel
- Prime Agricultural - Farm land - Livestock
- Describe the guarantees in place to ensure residents are not ill-affected by the installation and decommissioning

6. Do you have any local information that might be relevant to the proposed development?

The local community consultation process was not legitimate - The process is a scam!

7. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?

Please do the homework the residents have asked for.



**8. How would you like to receive future information about the proposed Project?**

- Open houses
- Direct Mail
- E-mail
- Other: \_\_\_\_\_
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**9. Did the Open House meet your information needs?**

- Yes
- No *it was not meaningful*

**10. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

*The community has been disrespected*  
*The City of Kingston has been ignored.*  
*The Province of Ontario has been misled.*

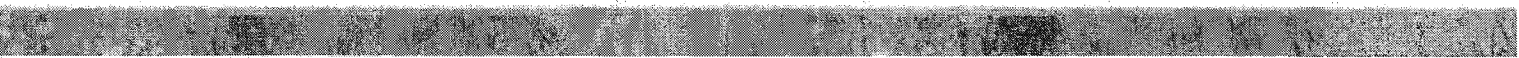
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Street Address	[REDACTED]
Town/City	[REDACTED]
Postal Code	[REDACTED]
E-mail	[REDACTED]
Phone	[REDACTED]
Organization (if applicable)	[REDACTED]

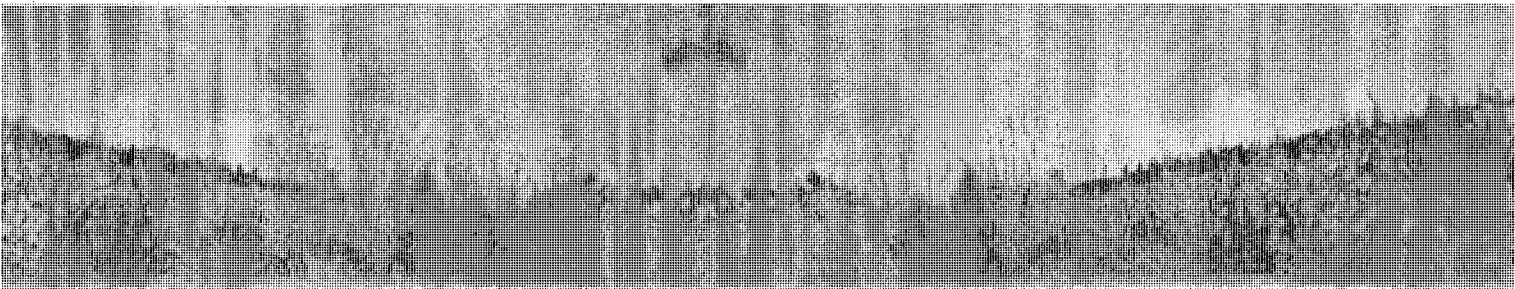
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**FEEDBACK FORM**

**Sol-luce Kingston Solar PV Energy Project**

**Community Session – August 2012**

**1. How did you learn about the Sol-luce Kingston Solar PV Energy Project?**

- Newspaper Advertisement  
 Delivered Letter

- Word of Mouth  
 Project Website

Other (please specify)

from a friend

**2. Are you a resident or business in:**

City of Kingston

Loyalist Township

Other (please specify) \_\_\_\_\_

**3. Which Open House did you attend?**

Invista Centre, Kingston

Odessa Fairgrounds, Loyalist Township

**4. Why did you decide to attend? (to learn more, with a group, etc.)**

To learn more about the project.

**5. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?**

None. Not really.

**6. Do you have any local information that might be relevant to the proposed development?**

No.

**7. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?**

I'm very impressed by the fact that numerous factors / concerns have been considered during the project. / solutions have been provided

**8. How would you like to receive future information about the proposed Project?**

- Open houses
- Direct Mail
- E-mail
- Other: \_\_\_\_\_
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**9. Did the Open House meet your information needs?**

- Yes
- No

**10. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

N/A

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**Optional Contact Information (please print clearly)**

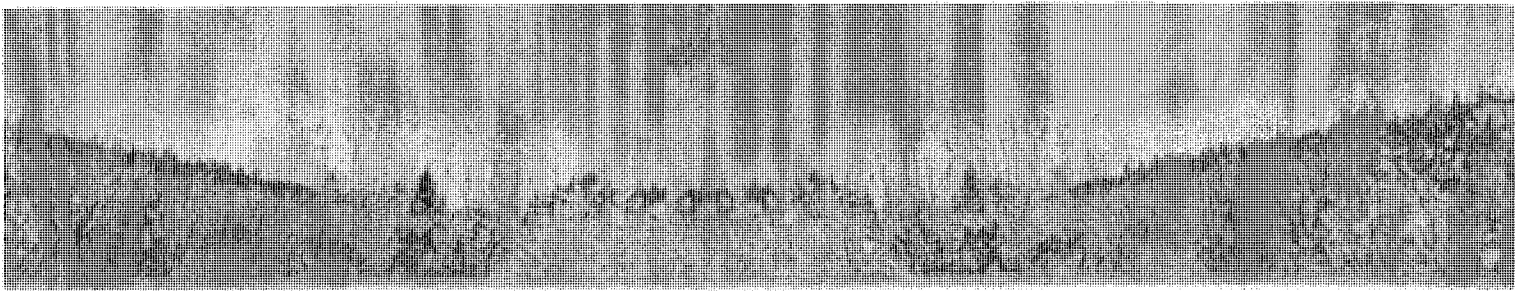
<b>Name</b>	[REDACTED]
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<b>Town/City</b>	[REDACTED]
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<b>Phone</b>	[REDACTED]
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**Community Session – August 2012**

**1. How did you learn about the Sol-luce Kingston Solar PV Energy Project?**

- Newspaper Advertisement
- Delivered Letter

- Word of Mouth
- Project Website

Other (please specify)

LANDOWNER

**2. Are you a resident or business in:**

City of Kingston

Loyalist Township

Other (please specify) \_\_\_\_\_

**3. Which Open House did you attend?**

Invista Centre, Kingston

Odessa Fairgrounds, Loyalist Township

**4. Why did you decide to attend? (to learn more, with a group, etc.)**

UPDATE  
FURTHER INFORMATION SHARING

**5. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?**

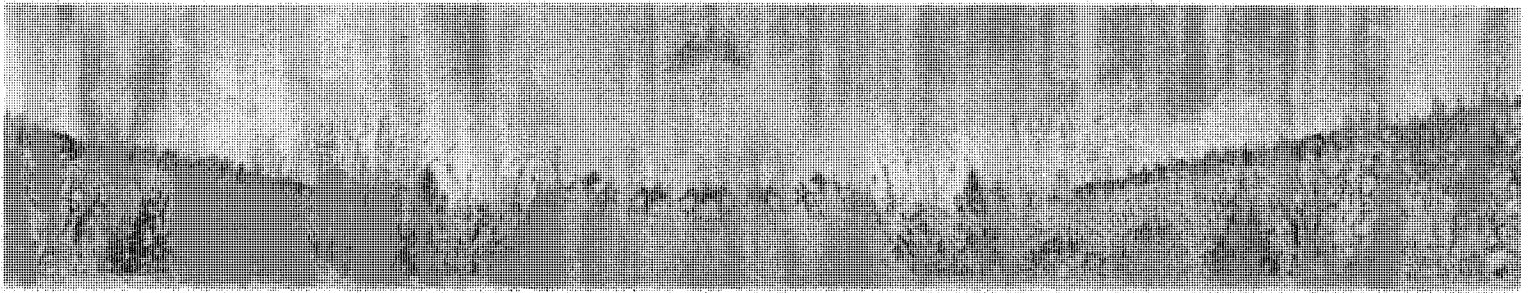
MORE FREQUENT UPDATES FOR  
THE LANDOWNERS

**6. Do you have any local information that might be relevant to the proposed development?**

ALREADY PASSED IT ON AT THIS MEETING

**7. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?**

NO



**8. How would you like to receive future information about the proposed Project?**

- Open houses
- Direct Mail
- E-mail
- Other: \_\_\_\_\_
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**9. Did the Open House meet your information needs?**

- Yes
- No

**10. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

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**Optional Contact Information (please print clearly)**

<b>Name</b>	
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<b>E-mail</b>	
<b>Phone</b>	
<b>Organization (if applicable)</b>	

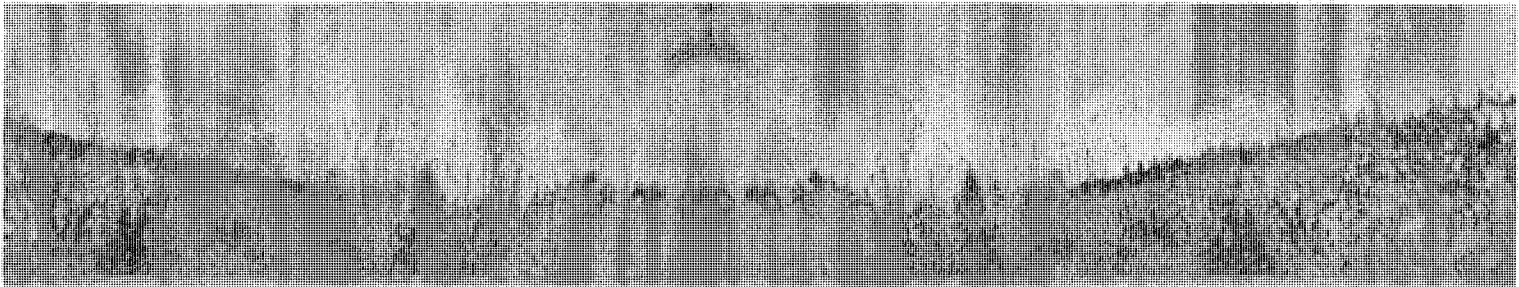
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**THANK YOU FOR YOUR FEEDBACK**

**Kingston Solar LP**  
**Sol-luce Kingston Solar PV Energy Project**  
 55 Standish Court, 9<sup>th</sup> Floor  
 Mississauga, ON L5R 4B2  
[solucekingston@samsungrenewableenergy.ca](mailto:solucekingston@samsungrenewableenergy.ca)  
[www.samsungrenewableenergy.ca/kingston](http://www.samsungrenewableenergy.ca/kingston)







**FEEDBACK FORM**

**Sol-luce Kingston Solar PV Energy Project**

**Community Session – August 2012**

1. How did you learn about the Sol-luce Kingston Solar PV Energy Project?

- Newspaper Advertisement
- Delivered Letter

- Word of Mouth
- Project Website

Other (please specify) \_\_\_\_\_

2. Are you a resident or business in:

City of Kingston

Loyalist Township

Other (please specify) \_\_\_\_\_

3. Which Open House did you attend?

Invista Centre, Kingston

Odessa Fairgrounds, Loyalist Township

4. Why did you decide to attend? (to learn more, with a group, etc.)

*to learn more*  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?

*the height of the beams in front of my house  
the height of the beams and location*  
\_\_\_\_\_  
\_\_\_\_\_

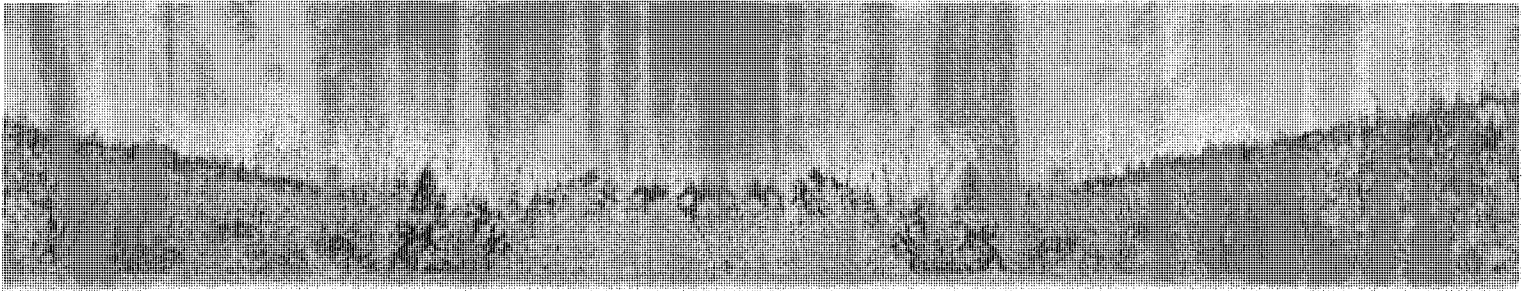
6. Do you have any local information that might be relevant to the proposed development?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





**8. How would you like to receive future information about the proposed Project?**

- Open houses
- Direct Mail
- E-mail
- Other: \_\_\_\_\_
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**9. Did the Open House meet your information needs?**

- Yes
- No

**10. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

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**Optional Contact Information (please print clearly)**

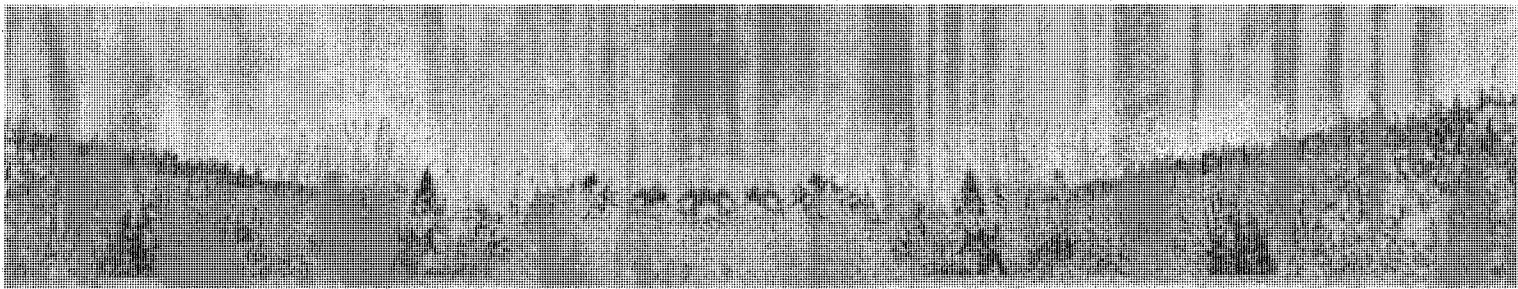
<b>Name</b>	[REDACTED]
<b>Street Address</b>	[REDACTED]
<b>Town/City</b>	[REDACTED]
<b>Postal Code</b>	[REDACTED]
<b>E-mail</b>	[REDACTED]
<b>Phone</b>	[REDACTED]
<b>Organization (if applicable)</b>	[REDACTED]

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## FEEDBACK FORM

### Sol-luce Kingston Solar PV Energy Project

#### Community Session – August 2012

**1. How did you learn about the Sol-luce Kingston Solar PV Energy Project?**

- Newspaper Advertisement       Word of Mouth       Other (please specify) \_\_\_\_\_  
 Delivered Letter       Project Website

**2. Are you a resident or business in:**

- City of Kingston       Loyalist Township       Other (please specify) \_\_\_\_\_

**3. Which Open House did you attend?**

- Invista Centre, Kingston       Odessa Fairgrounds, Loyalist Township

**4. Why did you decide to attend? (to learn more, with a group, etc.)**

When I saw advertisement in the newspaper, the name of SAHUNG was attracted me, because I'm Korean. I'm so proud of my country and this company, so it was interested me and I decide come in here.

**5. What issues would you most like to see addressed for this proposed Project? Do you have any specific concerns in regards to the Kingston Solar PV Energy Project?**

Environment issue is very curious. water, wood, etc.  
This project is very huge and I'd like to know how this company can control without bad effect by big construction and delete some wood forest, the lake.

**6. Do you have any local information that might be relevant to the proposed development?**

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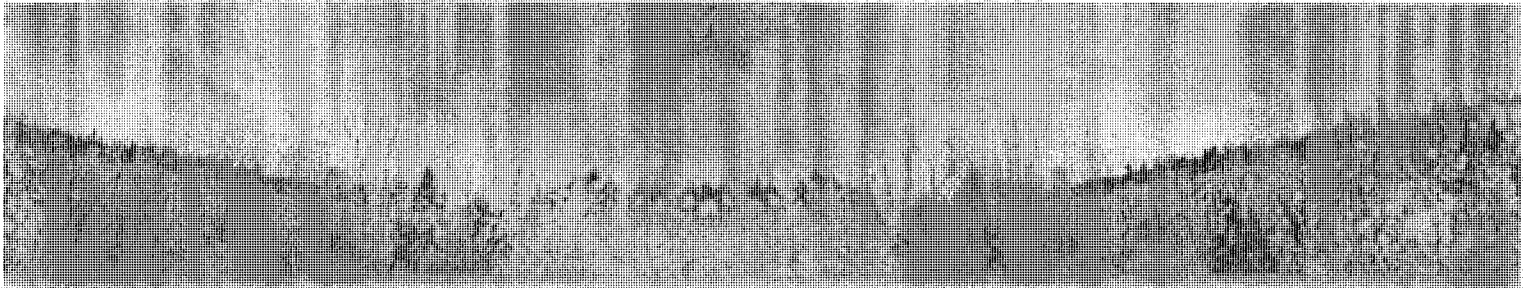
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**7. Do you have any comments, concerns or suggestions related to the design and operation of the proposed facility?**

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**8. How would you like to receive future information about the proposed Project?**

- Open houses
- Direct Mail
- E-mail
- Other: \_\_\_\_\_
- Samsung Renewable Energy Website
- News media
- In-person discussions with Samsung representatives

**9. Did the Open House meet your information needs?**

- Yes
- No

**10. Additional Questions/Comments (if you would like a reply make sure to leave your contact information):**

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**Optional Contact Information (please print clearly)**

<b>Name</b>	[REDACTED]
<b>Street Address</b>	[REDACTED]
<b>Town/City</b>	[REDACTED]
<b>Postal Code</b>	[REDACTED]
<b>E-mail</b>	[REDACTED]
<b>Phone</b>	[REDACTED]
<b>Organization (if applicable)</b>	[REDACTED]

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SOL-LUCE KINGSTON ENERGY PROJECT  
KINGSTON SOLAR LP

RESIDENTIAL WELL SAMPLING PROGRAM  
SUMMER - 2012

HANDOUTS







# WELL WATER SAMPLING PROGRAM

## Objectives

- Assess groundwater quality conditions prior to construction
- Data used as input into Monitoring/Contingency Program
- Identify location of groundwater users

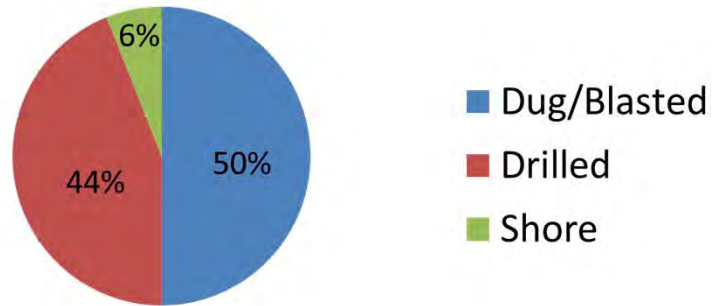
## Methodology

- Program based on guidance from the Ministry of the Environment
- Identified well users within 500 m of Project sites
- Sampled un-treated well water samples in June/July, 2012 from a sub-group of properties down flow of Project sites; water analyzed for bacteria, general chemistry and select metals
- 60 addressees approached, 32 water samples collected
- Collected information about well construction, location

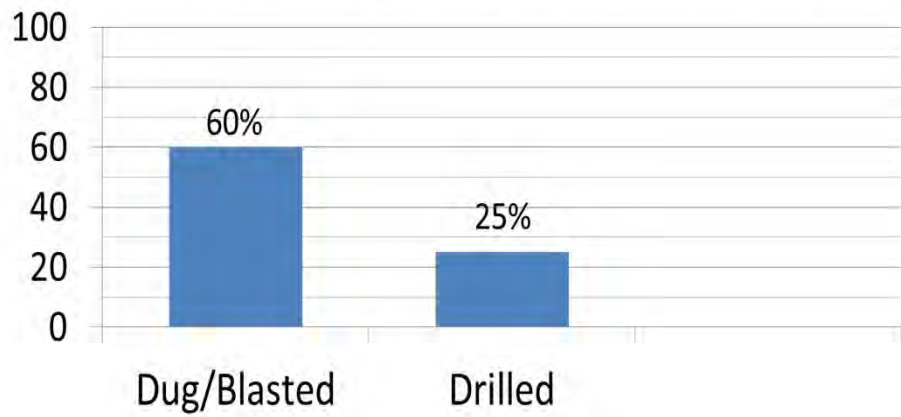
## Survey Results

- 120 properties within 500 m of solar infrastructure estimated to use groundwater as a potable water supply
- Of the 32 surveys , the following conditions were observed:

### Type of Well

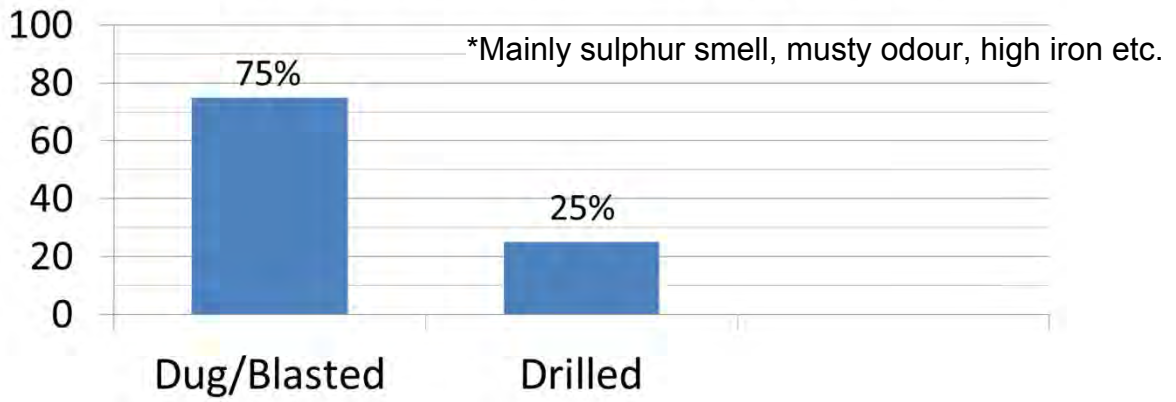


### % Reported Water Quantity Issues

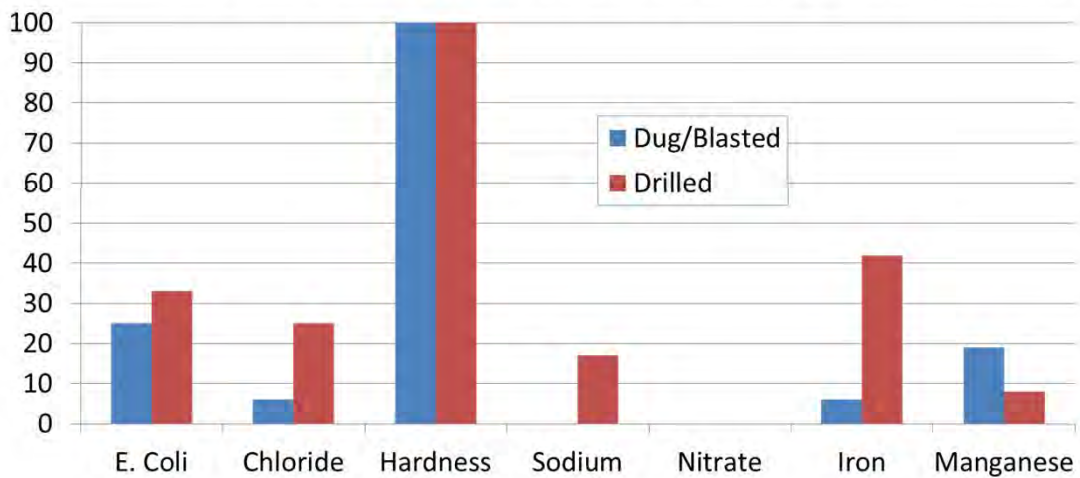




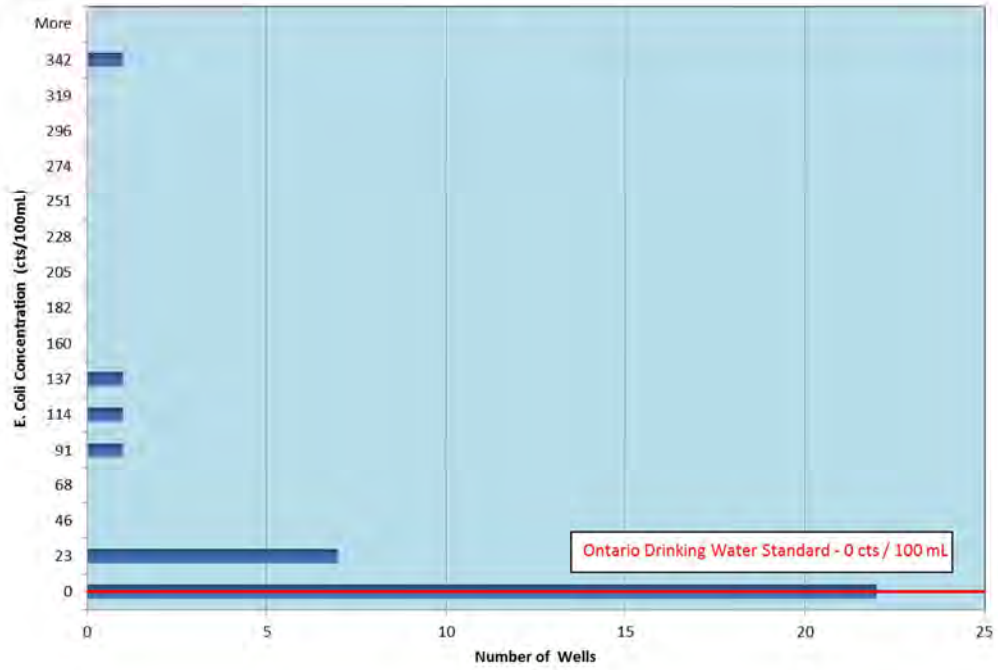
## % Reported Water Quality Issues



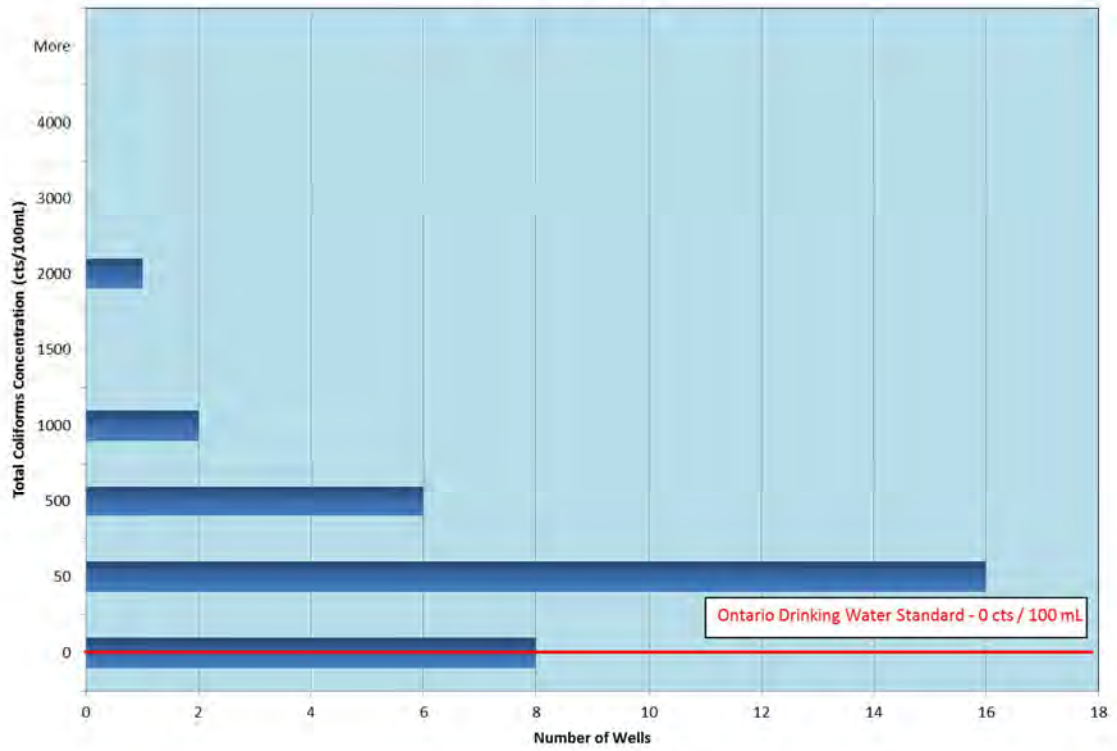
## % of Wells with Water Quality Exceedances



### E.Coli

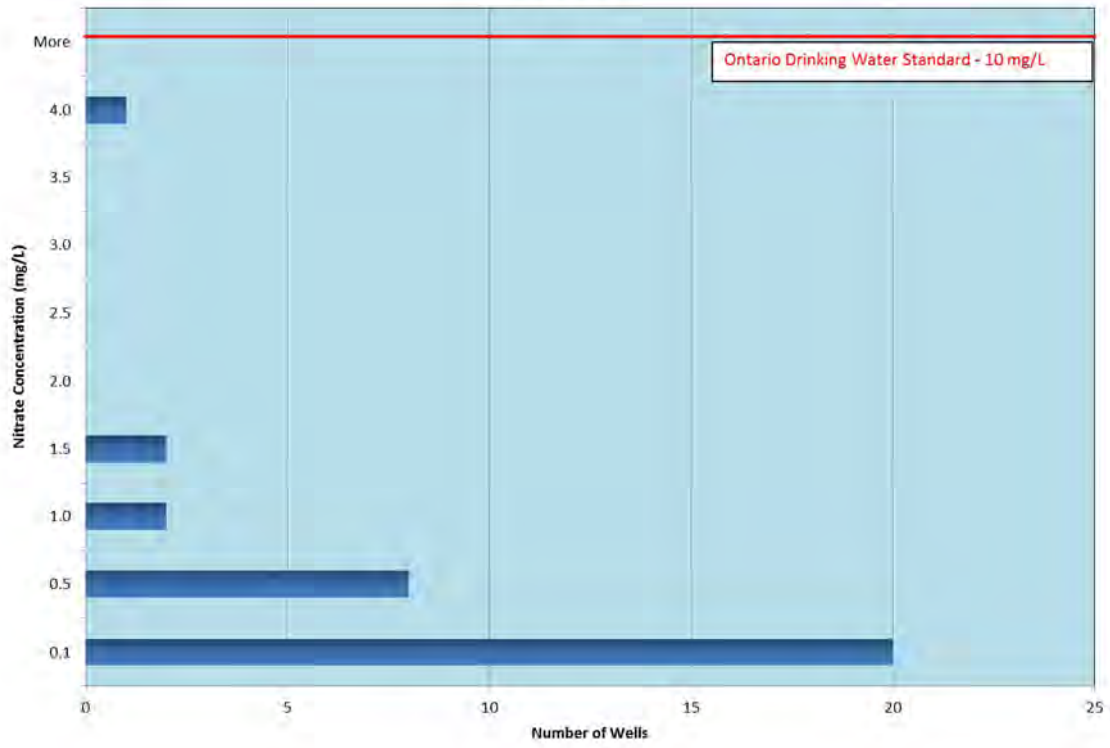


### Total Coliforms

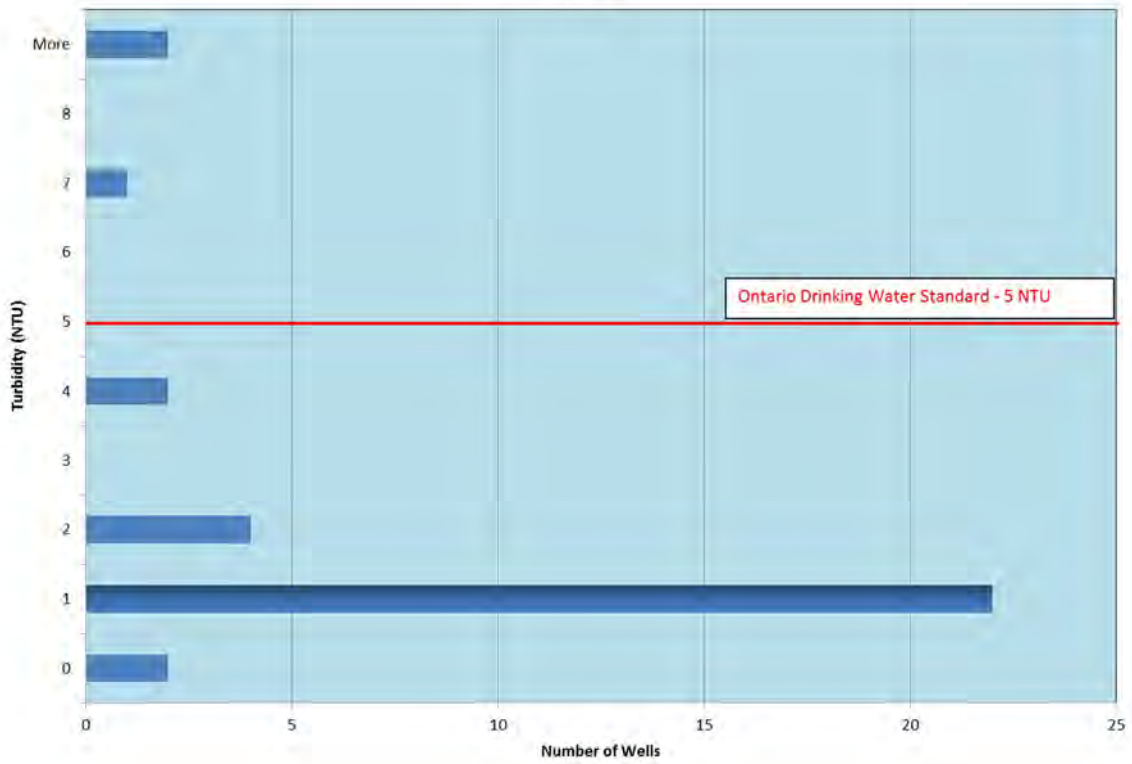




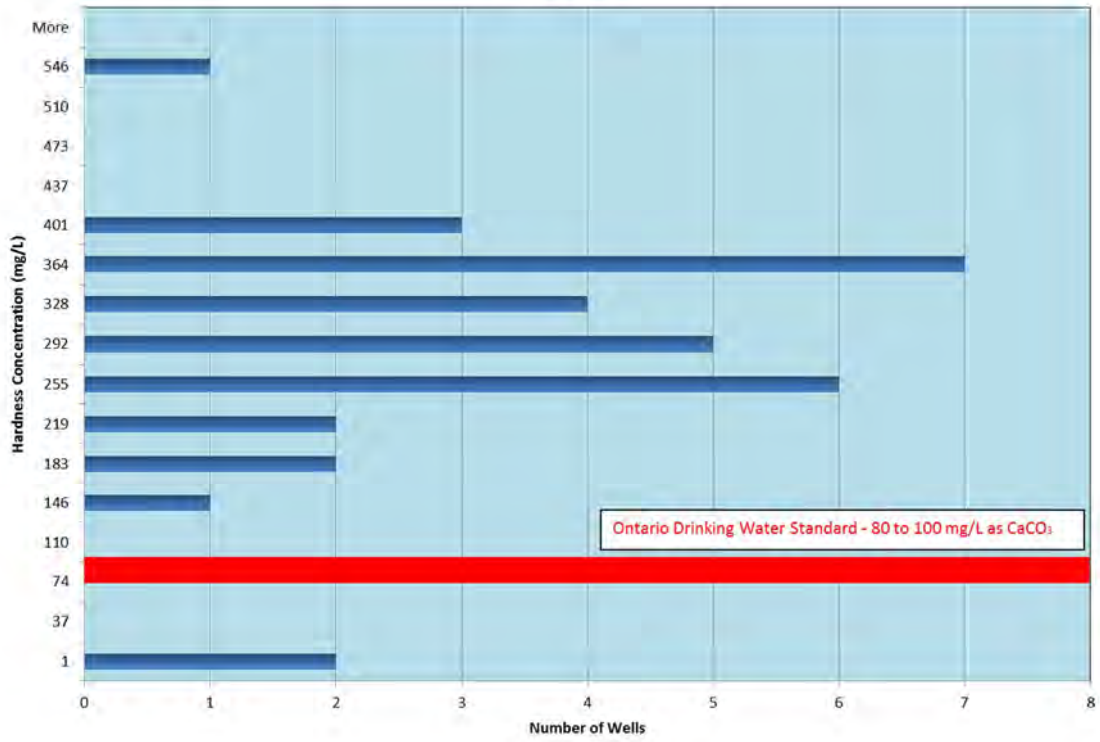
### Nitrates



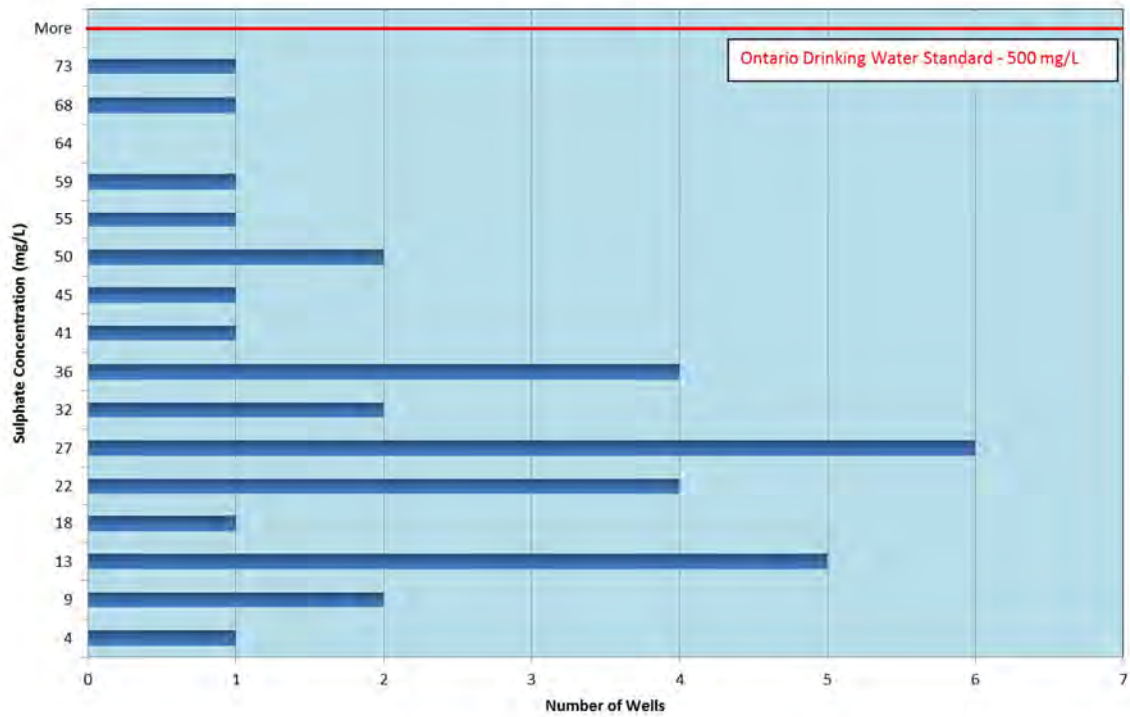
### Turbidity



### Hardness

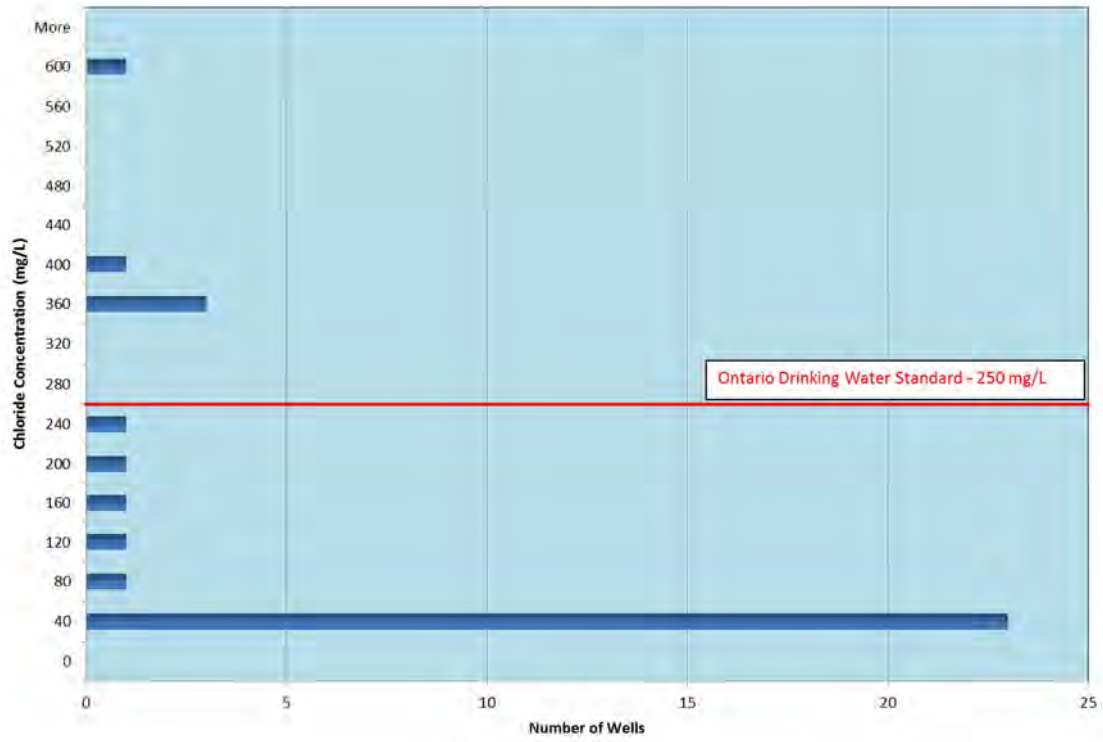


### Sulphate

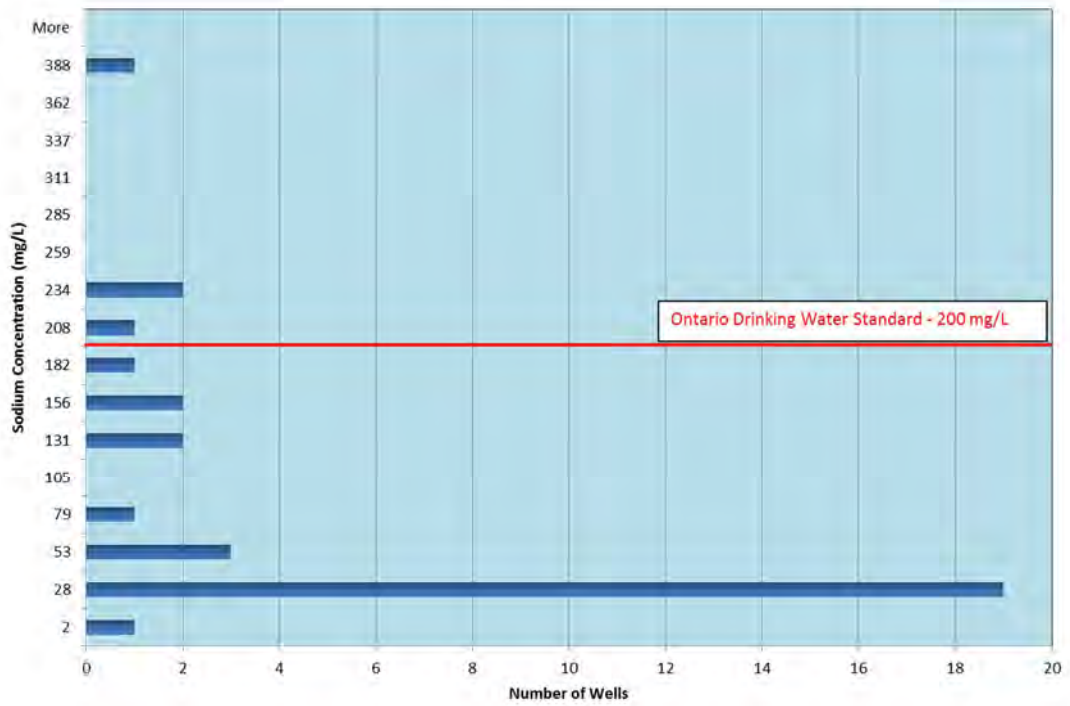




### Chloride



### Sodium



# ASSESSMENT OF POTENTIAL WATER QUALITY ISSUES & RECOMMENDED MITIGATION ACTIVITIES

Assessed Issue	Comment/Mitigation/Expected Impacts
<b>CONSTRUCTION RELATED</b>	
Impacts from Accidental Fuel Spillage/Releases from Equipment	<ul style="list-style-type: none"> <li>• No bulk fuels/chemicals will be stored on site</li> <li>• No equipment refueling to occur within 100 m of wells</li> <li>• Hazardous and Non-Hazardous Waste Management Plans will be implement to identify procedures for storage/handling/transportation of construction wastes</li> <li>• Construction Emergency Response and Communication Plan will be implemented to ensure proper procedures are followed in the event of a spill/release</li> <li>• <b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Erosion and Sediment Issues	<ul style="list-style-type: none"> <li>• Erosion and Sediment control program will be implemented</li> <li>• No stockpiling of soils within 100 m of private wells</li> <li>• Run-off will not be allowed to pond within 100 m of private wells.</li> <li>• Water pumped from excavations will be filtered prior to discharge</li> <li>• <b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Fracturing of Bedrock During Foundation Construction	<ul style="list-style-type: none"> <li>• Foundations will be installed in portion of bedrock (top 3 m) that is already heavily fractured, so no significant increase in groundwater infiltration is expected</li> <li>• No blasting within 100 m of private wells</li> <li>• Foundations installed in areas of overburden will be backfilled with compacted soil</li> <li>• Cement used to secure solar panel supports will seal off fractures around foundations reducing risk of vertical groundwater movement along foundation support.</li> <li>• <b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Sewage Disposal	<ul style="list-style-type: none"> <li>• Portable washrooms will be used during construction. Waste will be removed by a licensed waste hauler</li> <li>• <b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
<b>OPERATIONS RELATED</b>	
Impacts from Weed Control	<ul style="list-style-type: none"> <li>• Chemical-based herbicides will not be used</li> <li>• <b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Spillage/Leakage of Chemicals/Fuels	<ul style="list-style-type: none"> <li>• Bulk storage of fuels or chemicals will not occur on site</li> <li>• Refueling activities of maintenance vehicle/equipment will be performed off-site</li> <li>• Best Management Practices followed for storage of small quantities of chemicals and spills management program implemented</li> <li>• Substation transformer will be installed in a concrete pit to provide secondary containment; transformer will be inspected monthly for leaks</li> <li>• <b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Erosion and Sedimentation Issues	<ul style="list-style-type: none"> <li>• Stormwater Management Plan will be implemented for run-off control for the substation property and under solar panel areas. Drainage system will be maintained and monitoring on a regular basis.</li> <li>• Mitigation measures such as the use of grassed filter strips will be used at down-slope ends of Project sites to improve run-off quality</li> <li>• <b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Sewage Management	<ul style="list-style-type: none"> <li>• Washrooms and kitchen at operations building to discharge to a holding tank. Contents will be removed by a licensed waste hauler.</li> <li>• Septic Tank will be equipment with a level monitoring system</li> <li>• <b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>
Impacts from Cleaning of Solar Panels	<ul style="list-style-type: none"> <li>• Cleaning will be occasional only, and will use potable water brought in from off-site. No chemicals will be used.</li> <li>• <b>NO ADVERSE IMPACTS ANTICIPATED</b></li> </ul>