

## 1. Background: Building Ontario’s Smart Grid Industry

Electricity grids around the world are being modernized to meet the demands of the 21<sup>st</sup> century and satisfy the current and emerging needs of consumers. By incorporating advanced information and communication technologies into their systems, electricity utilities are seeking to increase their systems performance and efficiency. Companies are currently developing technologies to help meet consumer needs and to enable the transition toward the development of “smart grids”. This transition toward smart grids presents not only a significant opportunity to advance our electricity grid, but also an opportunity to further electricity conservation and economic growth.

Ontario is a world-leading jurisdiction in enabling energy conservation capacity. Sector stakeholders like the Independent Electricity System Operator and Ontario electricity utilities such as Local Distribution Companies (LDCs) have aggressively pursued strategies to help consumers use energy more efficiently. The bedrock of these strategies is new information and control technologies, such as home energy management systems. Today, the new innovations in electricity system flexibility and visibility that characterize the smart grid are growing the breadth of conservation opportunities available to the Province. From real-time distribution line monitoring to smart meter developments to advanced data analytics, these types of technologies allow for an increased role for conservation in meeting Ontario’s electricity system demand. By committing to smart grid development, Ontario is ensuring it continues to build a cleaner, more reliable electricity system.

Ontario has taken an early lead in smart grid development through its comprehensive smart metering infrastructure initiative and strong legislative framework. In May 2009, the *Green Energy and Green Economy Act, 2009* (GEA) came into force, defining “smart grid” as “the advanced information exchange systems and equipment that when utilized together improve the flexibility, security, reliability, efficiency and safety of the integrated power system and distribution systems.” The objectives for Ontario’s smart grid described in the GEGEA support the following focus areas:

GEA Smart Grid Objective	Focus Area
i) "expanding opportunities to provide demand response, price information and load control to electricity customers;"	Customer Control
ii) "enabling the increased use of renewable energy sources and technology, including generation facilities connected to the distribution system;"	Power System Flexibility
iii) "accommodating the use of emerging, innovative and energy-saving technologies and system control applications;"	Adaptive Infrastructure

The GEGEA is complemented by the Minister’s Directive to the Ontario Energy Board dated November 23, 2010 that outlines a set of objectives to guide LDCs and regulated entities in establishing smart grid plans, and investments. The Directive can be viewed [here](#). The objectives have been incorporated into the Board’s Renewed Regulatory Framework for Energy (RRFE).

In 2014, the Ministry of Energy commissioned Navigant Consulting Inc. to undertake the Smart Grid Assessment and Road map Report, which can be found [here](#). The Report identifies specific smart grid functionalities that, if investment continues through 2035, hold clear value for Ontario – an estimated \$6.3B Net Present Value by 2045. For the purposes of this round of funding, these functionalities have been acknowledged in the Eligible Projects section (5.1) as a means to guide investment.

These smart grid policy initiatives work in concert with other Provincial commitments that have created the conditions for Ontario to become a global centre of excellence for the smart grid:

- smart meter infrastructure,
- time of use electricity pricing,
- conservation programs,
- Green Button program,
- large-scale integration of distributed renewable energy resources,
- electricity storage through targeted procurements,
- encouragement of electric vehicles, and
- reduction of diesel use in remote First Nation communities through projects such as renewable energy microgrids.

By leveraging Ontario's historic strengths in the high-tech and electricity sectors, the Province can become a global leader in the development of smart grid products, services, and solutions. To seize this unprecedented economic development opportunity, the government is committed to supporting the growth of a robust smart grid industry.

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## 2. Fund Overview

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The Smart Grid Fund (SGF) will help accelerate the growth of Ontario's smart grid industry through targeted financial support for projects that advance the development of the smart grid in Ontario and provide economic development opportunities, including the creation of new jobs. The SGF complements Ontario's proactive smart grid policy and supports existing government priorities.

The SGF is a **discretionary, non-entitlement program** administered by the Ministry of Energy. Funding will be awarded on a competitive basis. Funding will be in the form of a conditional grant (transfer payment agreement). There is no assurance of funding for any application. The SGF has a limited funding allocation, and in some instances applications that meet all program criteria and objectives may not be approved for funding as there may be other projects which more effectively meet the SGF criteria and objectives. Ontario has the sole right to approve funding, and all decisions are final.

The SGF currently has a technologically and geographically diverse portfolio of projects and will consider opportunities to maintain this diversity in the selection of projects.

### 2.1 Smart Grid Fund Objectives

The objectives of the SGF are to build the smart grid industry in Ontario by:

1. Developing and advancing the smart grid in Ontario in the near term [within the next five years] by advancing one or more of the smart grid objectives in the focus areas of consumer control, power system flexibility and adaptive infrastructure;
2. Creating economic development opportunities, including jobs, for Ontario; and
3. Reducing risk and uncertainty of electricity sector investments by enabling utilities and other electricity industry stakeholders to develop, test, and evaluate smart grid technologies and business models.

### 2.2 Expected Outcomes of the Smart Grid Fund

The Smart Grid Fund will help to:

- Identify potential solutions to the development and deployment of smart grid technologies in Ontario;
- Accelerate the commercialization of Smart Grid technologies and build market competitiveness;
- Build the capacity of organizations developing and implementing innovative smart grid products, technologies, and/or services in Ontario;
- Establish Ontario as a leader and an attractive jurisdiction in which to develop and manufacture services and/or products related to smart grid;
- Assist electricity consumers and market stakeholders in meeting conservation goals and objectives; and
- Support LDCs in integrating smart grid technologies into their distribution grid system in alignment with their strategic business priorities and in response to customer demand.

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## 3. Eligible Organizations

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The SGF will accept applications from organizations that are:

- established in Ontario; or
- can demonstrate that they will be establishing in Ontario as related to their project.

Where a group of organizations is applying, a lead applicant is required that meets the above criteria. Further, the majority of the collaborators should meet the above criteria as well.

Applications will be accepted from applicants of the following organization types:

- Business organizations such as technology developers/manufacturers, software providers, communications and information services providers;
- Ontario electricity utilities;
- Universities and colleges;

- Regional or municipal government agencies; and
- Non-governmental organizations.

Ontario government agencies are not eligible to apply.

Multiple applications by the same applicant are allowed but each application must be for distinctly different projects.

### 3.1 Applicant

The applicant is meant to act in the lead role in relation to the project as well as to be the organization in contact with the Smart Grid Fund in the following ways:

- Execution of the Agreement with the Ministry
- Main formal communications contact for the signed Agreement and project reporting;
- Submission of reports, receipt of disbursements and hosting/organizing site visits;
- Project management – responsible for management of the project including financing the project, leading the work of the project; and
- Primary contact for the project with all collaborators for the project.

### 3.2 Collaborators

All applicants to the SGF are encouraged to collaborate with other organizations. Collaboration with other organizations should provide mutual benefits such as leveraging complementary skill sets, knowledge sharing and greater economic development opportunities.

Collaborators of the project are distinct from suppliers to the project in that the former are offering a contribution to the project. This contribution could come in different forms, however some examples include:

- Specific sum of funds paid toward the project;
- Time contributed to the project;
- Flat discount on services provided; or
- Providing equipment at cost.

In contrast to a collaborator, a supplier is a provider of services or equipment that does so through a traditional procurement process or agreement with the applicant for full compensation.

Accompanying the Smart Grid Fund application, letters from collaborating organizations, electricity utilities, other funders and/or organizations providing support will be required and must demonstrate satisfactory proof of this support. All letters must define the role of the collaborating organization in, and their contribution to, the proposed project. Further, it should confirm the ability and intent of the collaborator to begin work on the project no later than July 1, 2016. Should your application be successful, the Ministry will require copies of legal documents between the applicant and all collaborating organizations (e.g., partnership agreements, contracts, etc.) as a condition of funding that must be met in order to receive the advance of funds following Agreement execution.

### 3.3 Ontario Electricity Utilities

As electricity utilities are important to the success of Smart Grid Fund projects, all projects must have an electricity utility as either the applicant or a collaborator. Electricity utilities are also unique project participants as they are regulated entities that are limited by license conditions as to what activities they can undertake, and require approval from the Ontario Energy Board (OEB) for any spending they seek to recover through ratepayers.

The OEB's RRFE process has included the development of Smart Grid guidance, which was revealed in the [OEB's Supplemental Report on Smart Grid](#) (released February 13<sup>th</sup> 2013). This guidance makes clear that utilities are expected to demonstrate a proactive approach to the investigation of the benefits of Smart Grid technologies. To quote from the Report:

**“Regulated entities must demonstrate in their investment plans that they have investigated opportunities for operational efficiencies and improved asset management, enabled by more and better data provided by smart grid technology.”**

The RRFE's smart grid guidance is reflective of the same GEGEA policy framework as that which influenced the development of the Smart Grid Fund. In short, the Smart Grid Fund and the OEB's approach to Smart Grid regulation share the same objectives. While cost recovery for utilities is not guaranteed prior to OEB regulatory review, the similarities in objectives and evaluation criteria are known and recognized by OEB staff. When requested, SGF will provide electricity utilities with project assessment documentation as supporting evidence when submitting rate applications. Ministry and OEB staff are available to consult with electricity utilities as applicants or collaborators should there be any questions.

Successful applicants must also be aware that the Ministry will not finalize a transfer payment agreement without first receiving evidence to the Ministry's satisfaction of a firm confirmation of the electricity utility's full commitment to the project. Where the applicant is not an electricity utility, it is the responsibility of the applicant to ensure it is proactive in reaching out and meeting regularly with electricity utility collaborators beginning with the application process and throughout the Agreement development and project implementation phases. The Ministry recommends beginning this process as early as possible.

#### 4. Project Funding Structure

<b>Project Timeframe</b>	Maximum of 2 years. Projects are expected to start no later than July 1, 2016. Note: Eligible costs incurred are eligible for reimbursement under the SGF funding agreement until March 31, 2018.
<b>Maximum SGF Project Contribution</b>	\$ 2 million per project.
<b>Contribution as % of Eligible Cost</b>	SGF will fund up to 50% of eligible project costs. Projects seeking less than 50% are preferred.
<b>Stacking Rule</b>	Funding from other Federal and Ontario (municipal / provincial) government programs for the same project is permissible up to a threshold of 75% of total eligible costs. Note: For additional information - there are other funding programs that support smart grid type projects. One such program is Sustainable Development Technology Canada (SDTC). Their Clean Tech funding window is open until Oct 14, 2015.

#### 5. Project Eligibility

The SGF is seeking to support projects that meet the definition of smart grid (see Section 1) are eligible as per the criteria outlined in Section 5.1 below and advance the Smart Grid objectives as outlined in Appendix A.

##### 5.1 Eligible Projects

Examples of technology focus areas that SGF has approved for funding include:

- Energy storage projects that involve the integration of information, control, automation, and communication with the grid for new and emerging applications;
- Projects of various technologies that demonstrate a clear potential to advance conservation at the residential, commercial, industrial or electric utility levels;
- Microgrid integration and management technologies;
- Projects that focus on innovative grid applications such as smart charging and communication infrastructure to support and manage plug-in electric vehicles (EVs);
- Cyber-security projects that demonstrate the protection of equipment, electricity utility systems and private information from malicious cyber infiltration;
- Regional projects demonstrating LDCs contributing to and benefitting from solutions in cooperation with other LDCs;
- Information and communications systems for enhanced grid operations and visibility as well as data analytics;
- Distributed generation integration; and
- Advanced and innovative distribution automation including monitoring, communication, automation, and control technologies.

Examples of technology areas that have been identified as beneficial to Ontario in the Smart Grid Assessment and Roadmap that are of particular interest for this round of funding include (see page 33):

- Self-healing grids;
- Enhanced Fault prevention;

- Automated voltage control;
- Dynamic capacity rating;
- Microgrids – including those in a remote context;
- Distributed energy resources monitoring and control; and
- Advanced Metering Infrastructure (AMI)

## 5.2 Ineligible Projects

The following types, or components, of projects are not eligible for funding under SGF:

- Projects solely focused on the development of Distributed Energy Resources (DER) and failing to incorporate advanced communication technology, including, but not limited to:
  - Distributed generation or energy production for electrical purposes, including generation projects which would qualify under the Ontario's Feed-in Tariff Program;
  - Co-generation or Combined Heat and Power technologies;
  - Fuel cells;
  - Microturbines;
  - Combustion turbines;
  - Reciprocating engines;
  - Stirling engines; and
  - Hybrid systems involving the technologies listed above
- Projects solely focused on behind-the-meter conservation and demand management technologies that are not integrated with utility systems through intelligent communications infrastructure;
- Pure academic research;
- Early stage research. The SGF is focused on promising products or services that are in the later stages of commercialization or deployment potential in Ontario;
- Replacement technology;
  - Technology that does not enhance service potential, or improve functionality.
- Restructuring, mergers and acquisitions;
- Marketing or sales activities including market research;
- Consumer subsidies;
- Consulting projects;
- Retail operations;
- Education or outreach;
- Standard technologies or technologies without intelligent grid applications that do not involve information, automation, control, communication and integration with the grid.

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## 6. Costs and Payment of Funds

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The Ministry will only fund eligible costs incurred as a result of the project, that are therefore both necessary and relate directly to project outcomes. Recipients must provide independently verifiable documentation as to the cash value of their internal costs. Internal recipient costs must be:

- Essential to the Project as determined by the Ministry in its sole discretion;
- Eligible as per the lists below in section 6.1;
- Thoroughly documented. In the case of internal labour, time spent by each employee must be documented as time spent specifically on the SGF project; and
- Pro-rated to reflect the actual cost to the project.

Costs will be verified by a 3<sup>rd</sup> party audit (paid for at applicant expense) at the end of the project. Applicant internal costs must have agreed upon documentation (acceptable to both the external auditor and the Ministry) to substantiate the value of the costs submitted.

**Total Project Cost:** All costs related to implementing the project. This includes costs by the applicant, contributions made by collaborators and ineligible costs associated with the project.

**Total Eligible Cost:** The portion of the Total Project Cost made up of costs to the project deemed to be eligible by the Ministry for purposes of the SGF. Contributions by collaborators (other than electric utilities see 6.3 below) that have not been paid for by the applicant are not considered eligible by the Ministry for purposes of the SGF and are therefore not part of the total eligible cost. For clarification, SGF will only disburse funds for eligible costs to applicants.

Funds are disbursed at milestone completion throughout the project in accordance with the payment schedule set out in the agreement. An advance of funds (of 20% of the Total Eligible Cost) is considered the first milestone and is paid after both the execution of the agreement and fulfillment of the conditions of funding listed in the agreement. At each milestone, in addition to any conditions of funding associated with the milestone, there are reporting requirements outlined in the agreement that must be provided to and approved by the Ministry prior to disbursement of funds.

Potential applicants should be aware that the Ministry does not reimburse HST and this will be confirmed during the project completion audit.

Note: Other funding programs may have different cost eligibility criteria. If your project is being considered by another program in addition to SGF, applicants are required to determine which costs they perceive are eligible under SGF and those that are eligible as per the other program on the budget template accompanying the application.

## 6.1 Eligible Costs

Eligible costs are one-time non-recurring costs associated with project start-up, development and implementation, including but not limited to:

- Construction/leasehold improvements of the applicant directly related to the project;
- Equipment and machinery purchase, installation and retrofitting costs, including delivery;
- Materials;
- Labour (one-time);
- Training;
- Direct external service provider costs;
- Project related administration; and
- Data collection and evaluation costs

To be considered eligible under the SGF costs must be directly attributable to, and necessary for, the implementation and completion of the approved project, and be neither wholly nor partially for another purpose. Equipment costs sourced from recipients must be at cost and if from collaborators must show a discount (e.g., a reduction in profit margin). Eligible costs are to specifically relate to information exchange and communications technology that provides intelligence/control/automation to the grid. Other technologies and infrastructure may be considered for SGF eligibility on a case-by-case basis, so long as they are integral to the successful demonstration of the information exchange and communication technologies.

### Electric Utility Project Costs Where the Utility is a Project Collaborator

For projects where the electricity utility is a project collaborator, eligible costs incurred by electricity utilities will be reimbursed up to 50% by the Smart Grid Fund. The utility will receive the SGF funds from the recipient as all project funds from SGF will go directly to the recipient. The balance of the eligible costs would be considered the utility's contribution towards the project. The intent through this process is for the recipient to be able to have full cost recovery for the utility's eligible costs (unless the recipient and utility make other arrangements as part of their sharing of costs). Note, the SGF does not pay for HST.

Electricity utilities are able to seek reimbursement for their portion of project costs through their regulated rate filings (see also section 3.3 Ontario Electricity Utilities). Only project costs incurred by electricity utilities will be treated this way. The SGF will only provide funds to the applicant for 50% of all other approved eligible costs.

Note: Project capital assets must remain in Ontario for the duration of the funding contract.

## 6.2 Ineligible Costs

The following are considered ineligible costs:

- Overhead – including: rent, office equipment, costs for general office operations, telecommunications, vehicles (costs associated with the purchase/lease or operation of vehicles) and off-site equipment;
- Ongoing costs of production or operations: labour, materials, and other costs of production of saleable items not related to the project;
  - Labour (ongoing/operational, including permanent staff salaries); and

- Routine hiring, relocation and training costs.
- General Working Capital requirements:
  - Capital requirements not directly attributable to the project including:
    - Debt service costs;
    - Federal or provincial income taxes; and
    - Surtaxes and special expenses.
  - Working capital costs for ongoing costs of the borrower's regular production or operations (e.g., materials).
- Recipient and collaborator costs are to reflect 'at cost' pricing, and not include profit;
- Purchase of land, buildings or the construction of a building;
- Costs associated with the preparation of the SGF application (successful or not), such as success fees or third party government relations consulting services;
- Transaction Costs:
  - Legal, audit, accounting, interest fees.
- Costs not incurred in Ontario, unless it can be demonstrated that resource is not readily available or cost-effective to acquire in Ontario;
- Costs incurred as part of academic and/or early stage research;
- Costs for project assets (including equipment and tooling) that will not be located at the project facility or a customer's facility located in Ontario;
- Costs incurred outside the timeframe of the project's contract;
- Costs of mergers, acquisitions, or restructuring;
- Facility improvement costs that do not enhance service potential of the direct project related assets, including, but not limited to system upgrades that, in the Ministry's opinion, exceed the scope of the project (including substantial, routine and non-project-specific upgrades), the costs of decorating and alterations that are cosmetic in nature, etc.;
- Remuneration to shareholders;
- Costs of sales, advertising, promotion, or marketing materials;
- Corporate relations and customer service;
- Costs related to product inventory management, wholesaling, distribution, and retailing;
- Costs to decommission the funded Project;
- Sales tax; and
- Leasing and financing costs.

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## 7. Application Process

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### How to Apply

The SGF has a three stage application process. The first stage of the process, the application stage, is the formal application submitted to the Ministry for consideration. The second stage is the initial evaluation by the SGF team to ensure the application is complete and that it meets all of the criteria of the program. The third stage includes the technical and financial due diligence evaluations for Applicants selected to move to the next phase of review.

### 7.1 The Application

Applications are available on the [Ministry of Energy website](#).

It is advised that applicants read through the guidelines, application and Q&As so that there is overall familiarity with the program structure and criteria prior to beginning work on the application. Ensure that your project is considered eligible under the guidelines.

It is also recommended that applicants (if the applicant is not an electricity utility) confirm the interest of an electricity utility prior to beginning work on the application as they are a critical part of the project for all demonstration projects.

Ministry of Energy staff are available to answer questions from applicants throughout the application intake timeframe, see section 9 for contact details.

### 7.2 First Evaluation

Applications will be reviewed for completeness and eligibility. If the Ministry determines that the proposed project is both complete and eligible, the application will be evaluated for meeting the objectives of the SGF.

In addition to the Application form, letters from project collaborators are to be provided.

Please note that any documents included with the application that were not specifically requested by the Ministry will NOT be reviewed.

Complete application submissions must be received by the Ministry no later than **9:00 am (EDT) Monday, November 30, 2015**. Submissions received past this deadline will not be reviewed.

The Ministry of Energy retains the right to conduct subsequent application intakes for the SGF. Information about future intakes to the SGF will be posted on the Ministry of Energy website. Applicants are encouraged to check the website for any additional information.

### 7.3 Technical and Financial Application Evaluations

Applications will be evaluated for their technical merit and ability to advance the smart grid in the near term, their ability to create economic development opportunities including jobs in Ontario, and their relevance to Ontario's policy goals and objectives. In addition, the applicant's organization(s) will be assessed for financial capacity to complete the project and managerial competency.

It is expected that applicants make themselves available at an agreed upon time for these evaluations. Applicants not available for these evaluations within a designated period of time may end up affecting the outcome of their application due to both the competitive nature and the timing of the review process.

Both technical and financial evaluations are given substantial weight in assessing the validity and value of the Applications. Having gone through one or both of these evaluations does not guarantee an offer of SGF funds.

### 7.4 Other Considerations

It is expected that applicants carefully consider their capacity to initiate and begin work on the project by July 1, 2016. For projects that are selected, the Letter of Offer will outline deadlines for completing the draft agreement and execution of the agreement that are required to be met, otherwise the offer of funding may expire. For this reason, it is imperative that the applicant maintain close contact with the project collaborators to ensure the collaborators are also available to begin work on the project by July 1, 2016.

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## 8. Letter of Offer and Grant Agreement

If funding for a proposal is approved, a letter of offer will be sent to the applicant. The letter of offer will provide information regarding: amount of funds offered by the Smart Grid Fund; the date the letter of offer must be signed back to the Ministry to proceed with an agreement; conditions that must be met prior to a signed agreement; the date that a complete full draft of the agreement is due; the date that an executed agreement is expected and when agreements between the applicant and the collaborators will be expected.

Following acceptance of the letter of offer, the successful applicant will enter into a transfer payment agreement with the Crown as represented by the Ministry of Energy.

The agreement will address terms and conditions for the disbursement of the grant that include, but are not limited, to:

- project description and timelines;
- project budget;
- project management;
- mode and schedule of payments;
- accountability framework;
- reporting requirements, and site visits by Ministry staff;
- corrective action; and
- insurance requirements.

Potential applicants should be aware that a transfer payment agreement is not a procurement, and is **not** a negotiation for services to be rendered to the Government of Ontario. Successful recipients will receive funding in line with the pre-established funding criteria and program design, which is modeled to comply with the Government's Transfer Payment Accountability Directive. The material terms of the transfer payment agreement are firm requirements that are standardized across government. **It is the responsibility of the applicant to be familiar with the SGF Program Guidelines at the time they accept the letter of offer.** Applicants should clarify any remaining questions or concerns regarding the agreement requirements with Ministry staff prior to responding to a letter of offer.



If the Ministry chooses to consider an applicant's submission for SGF funding and responds with a letter of offer, a precondition of any funding commitment on the part of the Ministry will be the execution by both the applicant and the Ministry of a Transfer Payment Agreement. The Ministry expressly disclaims any obligation to an applicant or the creation of a legal relationship prior to the execution of the Transfer Payment Agreement. The Ministry shall not be liable for any expenses incurred by the applicant, including the costs of any project, except as specified under the terms and conditions of such a fully executed Transfer Payment Agreement.

### **8.1 Corrective Action**

In the event of non-compliance with the obligations of the agreement or where a recipient has failed to meet its obligations under the program, the Province will take corrective action as needed to remedy the situation.

The details of the corrective action are set out in the agreement and will set out what shall constitute an event of non-compliance or default, the appropriate corrective action and opportunities for the recipient to remedy the default. Where the recipient fails to remedy the default within a specified time frame, the Province may initiate any one or more of the corrective actions set out in the agreement.

### **8.2 Notification - Access to Information and Commercially Sensitive Information**

As discussed in Section 8.3 below, the Ministry is an institution for the purposes of the *Freedom of Information and Protection of Privacy Act* (FIPPA) and as such must adhere to the Act as well as authoritative orders, decisions and policies of the Information and Privacy Commission (IPC). Please note that any final transfer payment agreements which form the subject matter of any access to information request may be disclosed in accordance with FIPPA or any order of the IPC or of a court of competent jurisdiction.

### **8.3 Confidentiality**

SGF applications will be subject to financial due diligence and technical assessments. This includes the use of third-party professionals bound by confidentiality obligations.

The Ministry of Energy is subject to FIPPA. FIPPA provides every person with a right of access to information in the custody or under the control of the Ministry, subject to a limited set of exemptions. Section 17 of the Act provides a limited exemption for third party information that reveals a trade secret or scientific, commercial, technical, financial or labour relations information supplied in confidence where disclosure of the information could reasonably be expected to result in certain harms. Any trade secret or any scientific, technical, commercial, financial or labour relations information submitted to the Ministry in confidence should be clearly marked. The Ministry will notify the applicant when access to a record that might contain information referred to in Section 17 has been requested so that the applicant may make representations to the Ministry concerning disclosure.

Projects, once selected are also subject to site inspections by Ministry representatives as well as their third party technical advisors, as required. Site inspections are intended to allow Ministry staff to better understand the project and its proposed product, to further stakeholder relationships with grant recipients, and to ensure due diligence. Site visits will occur only as required by the Ministry, and the Ministry will inform the recipient of any intent to perform a site inspection at least 7 days prior. Information obtained at site visits is also subject to FIPPA.

Potential Applicants should consider seeking external legal advice before submitting an application.

Please note that these guidelines are subject to change without notice.

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## **9. Contact**

Inquiries about the Smart Grid Fund should be directed to [sgf@ontario.ca](mailto:sgf@ontario.ca), or you can reach us by phone at:

Michelle Maxwell, Senior Project Analyst – Team Lead for the Smart Grid Fund, 416-212-2395

All communications between the applicant and the Government of Ontario in respect of the application shall be conducted solely with these designated officials of the Ministry of Energy.

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## **Appendix A: Smart Grid Objectives**

The proposed project must advance the smart grid in Ontario. Smart grid is defined as: “the advanced information exchange systems and equipment that when utilized together improve the flexibility, security, reliability, efficiency and safety of the integrated power system and distribution systems.”

Typically, this means that projects will incorporate advanced information technology and communications equipment/technologies and interact with existing grid infrastructure to achieve one or more of the objectives described below.

### **Customer Control Objectives**

For the purpose of providing the customer with increased information and tools to promote conservation of electricity, which will “expand opportunities to provide demand response, price information and load control to electricity customers”, in accordance with subsection 2(1.3)(b) of the *Electricity Act*, 1998 the following objectives apply:

- **Access:** Enable access to data by customer authorized parties who can provide customer value and enhance a customer’s ability to manage consumption and home energy systems.
- **Visibility:** Improve visibility of information, to and by customers, which can benefit the customer and the electricity system, such as electricity consumption, generation characteristics, and commodity price.
- **Control:** Enable consumers to better control their consumption of electricity in order to facilitate active, simple, and consumer-friendly participation in conservation and load management.
- **Participation in Renewable Generation:** Provide consumers with opportunities to provide services back to the electricity grid such as small-scale renewable generation and storage.
- **Customer Choice:** Enable improved channels through which customers can interact with electricity service providers, and enable more customer choice.
- **Education:** Actively educate consumers about opportunities for their involvement in generation and conservation associated with a smarter grid, and present customers with easily understood material that explains how to increase their participation in the smart grid and the benefits thereof.

### Power System Flexibility Objectives

For the purpose of “enabling the increased use of renewable energy sources and technology, including generation facilities connected to the distribution system,” in accordance with subsection 2(1.3)(a) of the *Electricity Act*, 1998 and recognizing the need for flexibility on the integrated power system, the following objectives apply:

- **Distributed Renewable Generation:** Enable a flexible distribution system infrastructure that promotes increased levels of distributed renewable generation.
- **Visibility:** Improve network visibility of grid conditions for grid operations where a demonstrated need exists or will exist, including the siting and operating of distributed renewable generation.
- **Control and Automation:** Enable improved control and automation on the electricity grid where needed to promote distributed renewable generation. To the extent practical, move toward distribution automation such as a self-healing and self-correcting grid infrastructure to automatically anticipate and respond to system disturbances for faster restoration.
- **Quality:** Maintain the quality of power delivered by the grid, and improve it wherever practical.

### Adaptive Infrastructure Objectives

For the purpose of “accommodating the use of emerging, innovative and energy-saving technologies and system control applications,” in accordance with subsection 2(1.3)(c) of the *Electricity Act*, 1998 the following objectives apply:

- **Flexibility:** Provide flexibility within smart grid implementation to support future innovative applications, such as electric vehicles and energy storage.
- **Forward Compatibility:** Protect against technology lock-in to minimize stranded assets and investments and incorporate principles of modularity, scalability and extensibility into smart grid planning.
- **Encourage Innovation:** Nest within smart grid infrastructure planning and development the ability to adapt to and actively encourage innovation in technologies, energy services and investment/business models.
- **Maintain Pulse on Innovation:** Encourage information sharing, relating to innovation and the smart grid, and ensure Ontario is aware of best practices and innovations in Canada and around the world.