



Natural Resources
Canada

Ressources naturelles
Canada

Mission Innovation – International Collaboration Grant Opportunity

Jason Gadoury – Senior Director, Policy and Planning Division, Office of Energy Research and Development

OERD Smart Grid Symposium - April 10, 2024

Canada

Context – MI Green-Powered Future Mission (GPFM)



Mission Goal: *Demonstrate that by 2030, power systems in different geographies and climates are able to effectively integrate up to 100% VRE in their generation mix while maintaining a cost-efficient, secure and resilient system.*

Mission Participation: Italy, UK, and China co-lead the Mission. 12 other MI member governments (including Canada), 11 private sector participants, and 3 international organizations (IEA, IRENA, and World Bank) participate.

- The GPFM is one of MI’s seven “Missions” – public-private innovation alliances working towards ambitious and inspirational innovation goals for 2030.
- The GPFM’s [Action Plan 2022-24](#) proposes two “Flagship Projects”, major collaborative initiatives aligned with Mission goals.
 - This includes “**5 Demos in 5 Continents**” – calling on GPFM members (including Canada) to launch national pilot projects across 5 continents to demonstrate highly flexible systems capable of managing high penetrations of VRE, share knowledge, and strengthen collaboration on power systems transformation.
- Projects supported through the Energy Innovation Program’s Smart Grid Demonstration Call are expected to be **highly aligned with GPFM’s goals** through the 5 demos in 5 continents project.



MI GPFM – International Collaboration Grant

*For one project successful in the Smart Grid Demonstration Call – NRCan is offering an **International Collaboration Grant** to support that project's international engagement with the Mission Innovation GPFM Community, as Canada's contribution to the 5 demos in 5 continents project.*

- The selected project would receive additional grant funding (up to \$150,000) to support efforts to:
 - Share knowledge, expertise, and experience, including through light annual reporting to the GPFM (via NRCan)
 - Build strengthened connections with international partners through MI, including through participation at GPFM technical workshops and other events.
 - Demonstrate Canadian leadership internationally in power systems transformation, including through participation at key annual moments for MI GPFM (e.g., Ministerial-level, international events).



Objectives and Criteria

In addition to meeting all requirements to be funded through the Energy Innovation Program's Smart Grid Demonstration Call, interested projects applying for the International Collaboration Grant will be asked to demonstrate plans and priorities to support:

Alignment with GPFM Innovation Priorities

E.g. Project alignment across GPFM focus areas, including affordable and reliable VRE, system flexibility and market design, and data and digitalization for system integration.



International Collaboration

E.g. Project's existing and planned international connections/visibility, priority international partners for engagement.



Knowledge Sharing & Reporting

E.g. Plans for knowledge dissemination from the project, with a particular focus on international knowledge sharing.



Why Apply?

International Profile

- International exposure and publicity through the MI Global Community, including:
- Showcasing your project in GPFM publications and reports, MI and NRCan's websites and on MI social media.
- Participation in high-level events, including MI Ministerial events, and other international climate and energy conferences

MI GPFM Network

- Opportunities for networking and collaboration with projects globally – tapping into expertise from GPFM member governments across the world.
- Access to technical working groups and seminars to share progress, learn from other projects, and explore future collaboration.

Funding Support

- Dedicated grant funding from NRCan to support your projects' international engagement through MI – in addition to project funding received via the Smart Grid Demonstration Call.



Global Recognition for Canadian Excellence

Saint John Energy

- Winner of the **2021 International Smart Grid Action Network (ISGAN) Award of Excellence** for Smart Energy Project.
- This project brought forward significant advancements in artificial intelligence, machine learning, and IoT technologies to the local distribution grid, to reduce peak demands on the grid, lower purchased power costs, and reduce emissions.

London Hydro

- Honorable mention of **2020 ISGAN Award of Excellence** in “Digitalization Enabling Customer Empowerment” for the *Digitizing the Customer Experience with Real-Time Control* project.
- London Hydro was the first Local Distribution Company (LDC) to implement a customer engagement program that combined quick ramping demand response events and behind-the-meter energy management tools to help customers understand energy impacts in real time.



A Message from the MI GPFM Director



 MI GREEN POWERED
FUTURE
MISSION

Natural Resources Canada
Smart Grid Symposium

10 April 2024

Luciano Martini
Mission Director



Natural Resources
Canada

Ressources naturelles
Canada

Canada

Timeline and Eligibility

Smart Grid Demonstration Call	MI International Collaboration Grant	Dates
Deadline for Full Project Proposal (FPP) Submissions	Advertisement of MI opportunity to projects invited to FPP stage of Smart Grid Demo call	May 3, 2024
Project Selection (Technical Review Committee)		Spring/Summer 2024
Due Diligence/ Notification	Launch of MI Grant Applicants Guide, deadline for grant application, and evaluation	Fall/Winter 2024/2025
Signing of Funding Agreements	Grant Awarded to Successful Project	Winter 2024/2025

How to Apply

- Projects notified of success following the conclusion of the Smart Grid Demonstration Call FPP stage will receive a full Applicants' Guide for the MI GPFM International Collaboration Grant, with additional details on competition criteria and application process.
 - Only projects successfully funded via the Smart Grid Demonstration Call will be eligible for the MI GPFM International Collaboration Grant.**



ISGAN in a Nutshell

Created under the auspices of:



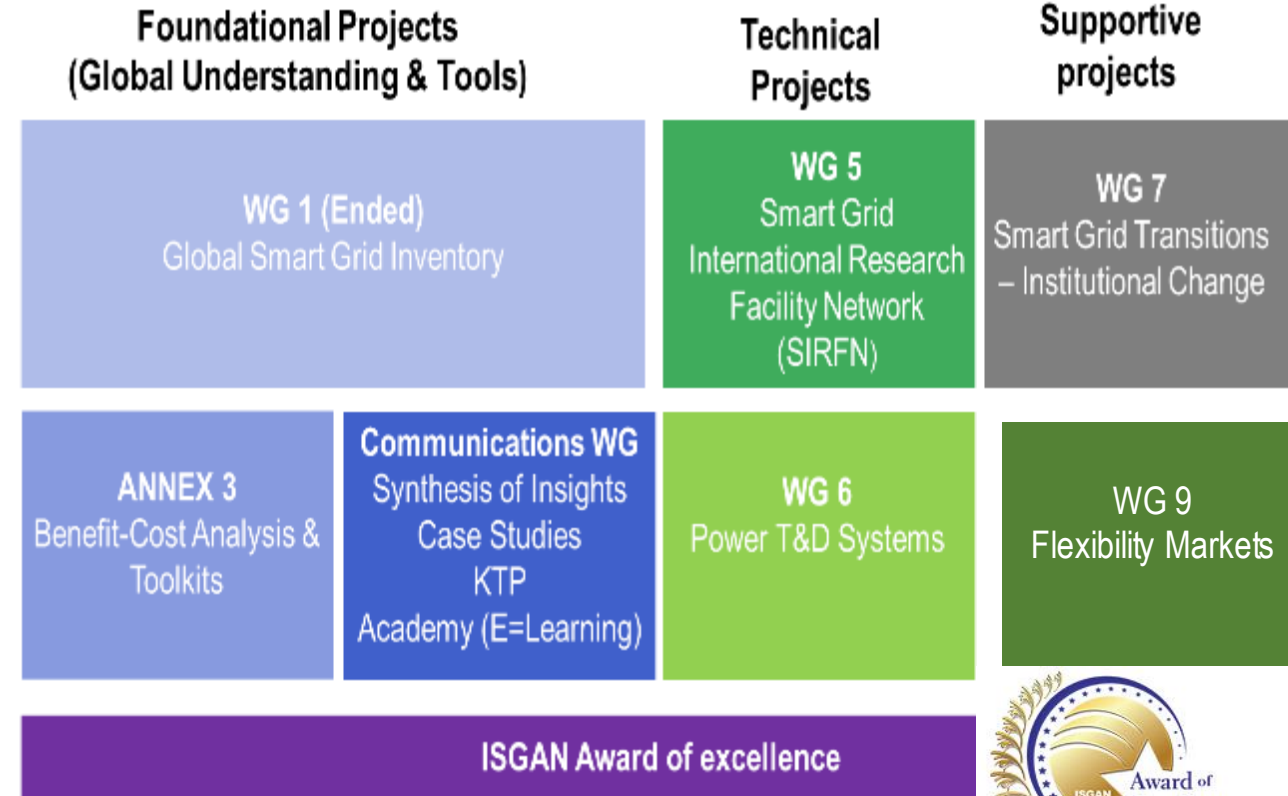
the Implementing
Agreement for a
Co-operative
Programme on Smart
Grids



an initiative of the
Clean Energy
Ministerial (CEM)

*Strategic platform to support high-level
government knowledge transfer and action for the
accelerated development and deployment of
smarter, cleaner electricity grids around the world*

*International Smart Grid Action Network is
the only global government-to-
government forum on smart grids.*



Globally Recognized Canadian Projects

- 2019 – 5th ISGAN Award focusing on *Excellence in Smart Grids for Local Integrated Energy Systems*
Honorable Mention:
 1. *Solar Energy Management Systems Smart Grid Pilot, Oshawa Power Utilities*
 2. *City of Summerside MyPowernet, City of Summerside*
- 2020 – 6th ISGAN Award focusing on *Digitalization Enabling Consumer Empowerment*
Honorable Mention:
Digitizing The Customer Experience with Real Time Control, London Hydro
- 2021 – 7th ISGAN Award focusing on *Future Proofing the Grid Operations via Advanced Digitalization and IoT*
Winner:
Smart Energy Project, Saint John Energy
- 2022 – 8th ISGAN Awards focusing on *EV Integration in Smart Grids*
Honorable Mention:
Peak Drive, Peak Power
- 2023 – 9th ISGAN Award focusing on *Excellence in Artificial Intelligence for Smart Grids*
No Canadian entry





10th ISGAN Award of Excellence

Flexibility for Grid Resilience

- **Open call** for Industry, Research Institutions, and Academia
- Recognition at the CEM15|MI-9 Annual Ministerial Meeting, 31 Sept. – 3 Oct., Foz do Iguacu Brazil.

Open Call Applications

- 05 February – 26 April 2024 @24:00 UTC

Topics

- Enhancements in Grid Infrastructure & Technology
- Consumer Involvement and Distributed Energy Integration

Information/Application Package

<https://www.iea-iscgan.org/awards/awards2024>



Canada

© His Majesty the King in Right of Canada, as represented by the Minister of Natural Resources, 2024



Natural Resources
Canada

Ressources naturelles
Canada

Canada