

Call for projects

Context

Supported for a second year by Natural Resources Canada, the Energy Modelling Initiative (EMI) is aimed at defining and establishing an electricity/energy system modelling network that reflects the diverse needs of the country and can inform electricity stakeholders on paths forward on electrification or other pressing energy-system inquiries.

One of the conclusion that came from EMI's first year efforts is that although Canada can count on a rich and diverse energy modelling capacity, there is a need for a structure able to offer long-term support for specific energy models, to ensure a timely and relevant response to policy makers and, overall, to facilitate communications between Canadian energy modellers and governments, utilities and other stakeholders.

This conclusion was answered, following year-long consultation, with a [proposal for long-term Energy Modelling Centre](#), which would have at the core of its mission, activities that can be grouped in those three categories:

- Support evidence-based decision making, notably by implementing a selection process for applied models.
- Convene stakeholders, notably by regularly organizing regional and thematic workshop.
- Create a platform with a range of selected models and reference scenarios to coordinate and focus modelling collaborations towards effective solutions.

It is mainly to contribute to the latter that a new call for projects is launched for the second year of this initiative.

Description of the call

The main objective of this call for projects is to build on what was accomplished in the first year of EMI and further contribute to the establishment of a national modelling platform.

It is looking at identifying models that can not only provide better understanding of specific elements of energy systems, but that could also instill confidence by contributing to **increasing transparency of modelling exercises**, with a focus on decarbonization by electrification.

It is addressed to the community at large – academics, consultants, etc. – for modelling of various aspects of Canadian energy systems in relation with electrification efforts, ranging from electricity production to techno-economic and environmental analysis of the impacts of electrification.

Thematics

The thematics for the project must relate to the transformation of the electricity sector and its contribution to decarbonization of Canada's economy, either directly (electricity production, transmission, distribution and management), indirectly (electricity usage, current or potential, in any given sector), or from a systemic standpoint (e.g. techno-economic and environmental analysis of the impacts of electrification), at any given scale (national, provincial, territorial, regional or municipal).

Expected deliverables

The selected projects (up to 10) will be expected to produce, by **March 19, 2021**, a 20-30 page report containing:

- a. Electrification-related modelling results, discussed and analyzed to show how those can contribute to a decarbonization pathway, and in what that specific model is best adapted to that task.
- b. A description of the model used, particularly its accessibility and the data sources it uses, as well as the scenario development process and its various underlying hypothesis.
- c. A development roadmap section that presents envisioned work on how this model could be further developed or adapted to increase transparency and to benefit from being integrated in a national modelling platform.

Evaluation criteria

Submitted proposal will be evaluated on the following criteria:

1. Originality and quality of the modelling exercise, its objectives, its approach and usability for policy design in order to:
 - a. Clarify electrification and decarbonization pathways;
 - b. Deliver information regarding economic, environmental and/or social impact and benefits of these pathways;
 - c. Consider co-benefits, including health improvement due to pollution reduction or benefits for ecosystems and biodiversity.
2. Model's potential to increasing transparency of modelling exercises;
3. Quality of the research team;
4. Capacity to help demonstrate the depth and breadth of current relevant modelling capabilities of Canadian researchers.

Additional considerations:

- a. Diversity of scales: from local to national;
- b. Importance of collaborating between provinces;
- c. Importance of collaborating with First Nations regarding attenuation and adaptation;
- d. Recognition of the additional challenges for the North;
- e. Adoption of collaborative approaches based on science to help reaching Canada's targets that must be strengthen as stipulated by the Paris Agreement.

Eligibility requirements

Any Canadian, permanent resident or foreigner with valid work visa, working in Canada, in academia, as consultant, in non-profit or for-profit business is eligible to submit a proposal.

Although projects from governmental organizations are not eligible for funding, we encourage the submission of projects and reports in line with the call. All reports submitted will be diffused on par with those regarding funded projects.

Project selection

Because the projects will help form the basis for the modelling platform, the jury will select projects not only on their intrinsic value, but also to ensure a diversity of themes, approaches and proposers (from university, labs, consultant, etc.)

The Initiative also reserves the right to extend specific invitations for modelling projects beyond those submitted by the deadline to ensure this expected diversity of themes and approaches.

Funding support

Each selected team will be eligible to receive 15 000 \$ for the modelling and reporting efforts.

Ten (10) projects will be selected.

Proposal submission

The following information is required:

- a. A description of the project, its team and its relevance with respect to the evaluation criteria (maximum of 5 pages)
- b. The CVs of the team members (maximum of 2 pages per CV)
- c. References (maximum 1 page / optional)

A proposal template is provided as a separate document.

Proposal must be submitted, in French or in English, in a **single PDF document** via email at project@emi-ime.ca

Calendar

November 20, 2020	Proposal submission deadline
December 4, 2020	Project selection announcement
March 19, 2021	Final project report submission

Timeline

We, as EMI's team, are fully aware of the very tight timeline proposed in this program and the jury will take this timeline into consideration when evaluating of the projects. We recognize the pressure it puts on the participants and we would like to thank, in advance, all those who will contribute to this project.

Contact

Inquiries can be addressed to info@emi-ime.ca