

## Call for projects

### Justification

Natural Resources Canada has recently launched the Dialogue with Canadian Electricity System Modellers which aims to structure and support a national electricity/energy systems modelling network that reflects the diverse needs of the country and can inform stakeholders on paths forward on electrification or other pressing energy-system inquiries. This network will focus on the electricity system, but in a way that recognizes this system's interactions with energy efficiency/use and other sources of energy, and it should inform federal and provincial policy makers on the transition to a [Clean Electric Future](#).

To prepare this effort, Natural Resources Canada requires a product that illustrates the depth and breadth of current relevant modelling capabilities of Canadian researchers and their value to stakeholders.

### Description of the call

In response to this request, we propose to prepare a report that builds on a diverse range of electrification-related modelling efforts purposely designed and conducted in order to illustrate and analyze various scenarios compatible with the orientations and objectives of the [Pan-Canadian Framework on Clean Growth and Climate Change](#). These scenarios can be at various geographical levels, from neighbourhoods, cities and provinces to the entirety of Canada, and target specific electricity-related sectors.

We therefore launch a call to the community at large —academics, consultants, etc.— for original electricity/energy modelling of various aspects of Canadian energy systems, including, but not limited to, electricity production, transmission and distribution, or its usage in any given sector, as the country embarks on a deep energy transition.

### Expected deliverables

The selected teams (up to 10) will be expected to produce, by December 1st, 2019 :

- a. A 15 to 30 pages report presenting an original electricity-related modelling efforts and results discussed and analyzed in light of the [Pan-Canadian Framework on Clean Growth and Climate Change](#);
- b. A future work section that presents how this work could be expanded, integrated and developed with the support of the larger Canadian Energy Modelling Community;
- c. All produced figures and data in a usable format for distribution and use in various products linked to this initiative;
- d. Participation, by one of the team leaders, to the National Forum to be held in December 2019.

## Energy Modelling Initiative – Bringing the Tools to Support Canada's Energy Transition

## Initiative de modélisation énergétique – Outiller le Canada pour réussir la transition

### Evaluation criteria

Submitted proposal will be evaluated on the following criteria:

1. Original electricity/energy modelling of various aspects of the Canadian energy systems, including, but not limited to:
  - a. electricity production, transmission, distribution and management;
  - b. electricity usage – current or potential – in any given sector (building, transportation, industry, etc.);
2. Relevance to the Pan-Canadian Framework and other federal initiatives (see below);
3. Originality of theme, approach and use of the modelling result for policy design;
4. Capacity to help demonstrate the depth and breadth of current relevant modelling capabilities of Canadian researchers to inform policy makers on a [Clean Electric Future](#);
5. Quality of the research team and its capacity to deliver on the project.

Although not mandatory, collaborations will be considered favorably.

### 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.

### Project selection

Because the projects will form the basis of a report demonstrating the depth and breadth of current relevant modelling capabilities of Canadian researchers to inform policy makers on a clean electric future, 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.

### Preparation of the projects

To facilitate the integration of the various projects into the final report, a template for the presentation of the projects will be prepared by the Initiative and will be available by July, in collaboration with the selected project teams.

The selected teams will be strongly encouraged to exchange with the Initiative during the preparation to ensure that the approach and product are most useful for the goal of demonstrating the importance of Canadian electricity modelling community.

### Funding support

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

A maximum of ten (10) teams will be selected.

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### Thematics

The thematics for the projects must relate to electricity production, transmission, distribution and management, or its usage, current or potential, in any given sector (building, transportation, industry, etc.). They can also be inspired by all and any of the following concepts:

The four pillars of the [Pan-Canadian Framework on Clean Growth and Climate Change](#):

1. Pricing of Carbon pollution;
2. Complementary measures to limit climate change;
3. Measures to help climate change adaptation and resiliency;
4. Measures to accelerate innovation, development of clean technology and job creation.

### [Federal Budget 2019](#)

1. Making Canada's homes and buildings more energy efficient;
2. Improving electricity affordability by increasing connectivity;
3. Investing in the future of transportation.

Additional considerations:

- a. Diversity of provincial economies;
- 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 strengthened as stipulated by the Paris Agreement.

Other determining factors in the elaboration of policies:

- a. economic, environmental and social impact and benefits
- b. how individual policies will be linked with carbon pricing
- c. on the necessity take into the impact of high emission sectors
- d. co-benefits, including health improvement due to pollution reduction
- e. benefits for ecosystems and biodiversity

### 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, written in 11-point font using single-line spacing)
- b. The CVs of the team members (maximum of 2 pages per CV)
- c. References (maximum 1 page / optional)

(A document template is available for download at <https://emi-ime.ca/call-for-projects>)

Proposal must be submitted in a **single PDF document** via email at [project@emi-ima.ca](mailto:project@emi-ima.ca)

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### Calendar

July 7 <sup>st</sup> , 2019	Proposal submission deadline
July 16, 2019	Project selection announcement
December 1 <sup>st</sup> , 2019	Final project report submission
December 2019	National Forum (date to be set) – mandatory attendance by one team member, cost borne by participant.

### Contact

Inquiries can be addressed to [info@emi-ime.ca](mailto:info@emi-ime.ca)