

Engagement on Canada's 2030 Emission Reduction Plan

Submission by Moltex Energy, ARC Clean Energy Canada and NB Power

Q1. What opportunities do you think the Government of Canada should pursue to reduce emissions by 40-45% below 2005 levels by 2030 and position Canada to achieve net-zero emissions by 2050, including in any or all of the following economic sectors? Please elaborate on your answers where appropriate, including any specific insights on policy opportunities or initiatives.

- **Buildings**
- **Electricity**
- **Heavy industry, including oil and gas**
- **Transportation**
- **Agriculture and waste**
- **Nature-based climate solutions**
- **Economy-wide (e.g., carbon pricing, climate-risk disclosure, sustainable finance, etc.)**
- **Other, please specify**

The Government of Canada should pursue investment in clean energy technologies that will support several of the above-mentioned economic sectors.

In particular, investment in advanced Small Modular Reactors (SMRs) will position Canada to achieve net-zero emissions by 2050, supporting reductions in the following economic sectors:

- **Electricity** – Nuclear is already a strong contributor to Canada's non-emitting electricity supply. In New Brunswick, when the Point Lepreau Nuclear Generating Station is operating at full capacity, it avoids approximately 4.2 million tons of CO₂ every year. Investment in SMRs presents the opportunity to replace electricity generation methods that currently produce higher emissions, while keeping up with the rising demand in electricity due to the electrification of other sectors. In addition, carbon-free electricity generated by SMRs can be used in other processes, such as carbon capture and desalination, and can support small grids in remote areas.
- **Heavy industry** – SMRs can provide non-emitting high-temperature heat and power to support the decarbonization of heavy industry. They would be particularly advantageous in reducing the emissions associated with oil and gas extraction and refining, and steel manufacturing.
- **Transportation** – SMRs can provide carbon-free electricity and process heat to support the production of other important clean energy sources, such as hydrogen and ammonia for use in transportation and industry. They can also provide reliable, non-emitting electricity to support the increasing electrification of the transportation industry.
- **Bitcoin mining** – SMRs can provide non-emitting electricity to support this growing sector which has very large energy demands.

Q2. What do you see as the barriers or challenges to reducing emissions in these sectors? Do you have suggestions on how to overcome these barriers?

The barriers to reducing emissions in the sectors outlined above are as follows:

- Nuclear energy, as a non-emitting energy source, is not consistently defined by the Government of Canada as clean/green energy and is therefore ineligible for certain program funding and government subsidies.
- There is a lack of understanding of how nuclear energy can support renewable energy sources. For example, SMRs can enable broader deployment of intermittent renewables such as wind and solar by following grid load requirements, thus ensuring electricity is delivered reliably.
- There is a lack of understanding of how nuclear energy can support other economic sectors; its benefits are not limited to the electricity sector. For example, SMRs can provide non-emitting heat and power to oil sands facilities and heavy industry plants to reduce carbon emissions in these sectors.
- There lacks a pan-Canadian approach to emissions reductions. Provinces are implementing individual plans and not collaborating in all areas.

To overcome these barriers, the Government of Canada can develop and implement an inclusive, innovative, and science-based pan-Canadian plan to emissions reductions. This would require collaboration within the Government of Canada and across provinces.

The plan would include corporate/government incentives and penalties related to carbon emissions (for example, carbon tax). Incentives would be inclusive of all non-emitting energy sources, such as nuclear energy.

The plan would also include investment in innovative solutions that may require more upfront capital, but offer significant long-term emissions reductions, such as SMRs.

Q3. What broader economic, technological, or social challenges and opportunities do you foresee resulting from efforts to reduce emissions in these sectors? For example, opportunities associated with economic diversification across sectors. Do you have suggestions on how to address these challenges and opportunities?

There is a need for a pan-Canadian plan and climate action campaign focused on the environmental and economic benefits of new and innovative technologies.

This plan needs to connect all clean energy technologies, including nuclear, renewables, and hydrogen. If Canada is to significantly reduce carbon emissions by 2030 and achieve net-zero emissions by 2050, it needs an approach that considers all potential solutions and unlocks their benefits.

For example, investment in innovative nuclear technologies like advanced SMRs can create jobs and economic growth as part of the “just transition.” It can also expand Canada’s leadership in research and innovation, and ultimately strengthen the Canadian supply chain.

In New Brunswick, which is scheduled to have a first SMR unit operational before the end of the decade, the development and construction of two SMRs over the 2020-2035 time period is projected to create (both direct and indirect):

- Approximately 730 jobs per year;
- \$1B in GDP; and
- \$120M provincial government revenue.

Q4. Looking beyond 2030, what enabling measures, strategies or technological pathways do you think the Government of Canada should put in place now to ensure that Canada is on track to net-zero emissions by 2050?

To achieve net-zero emissions by 2050, Canada should build upon the measures listed in the previous responses. The pan-Canadian plan and climate action campaign should continue to support, promote and invest in new and innovative technologies, including SMRs, to ensure their benefits are maximized across economic sectors.

Q5. What broader economic, technological, or social issues to you foresee as a result of the transition to a net-zero economy in Canada? Do you have suggestions on how to address these issues?

Canada should address economic, technological, and social issues as a result of the transition to a net-zero economy in the same ways outlined in Q3.

There is a need for an inclusive, innovative, and science-based pan-Canadian plan to emissions reductions that will unlock social and economic benefits for the country.

Q6. How would you like to be engaged on Canada's climate plans moving forward? How often should this engagement occur, and what method or format would be preferable?

We appreciate the opportunity to provide input into the decisions that affect Canada's clean energy future.

The establishment of a well-organized, centralized, consultative organization, similar to the role the Nuclear Waste Management Organization plays in Canada's waste management strategy, would enable effective decision-making on Canada's net-zero emissions strategy.