

June 30, 2023

David Collie  
Panel Chair

Monica Gattinger  
Panel Member

Chief Emily Whetung  
Panel Member

Sent by e-mail to [energypanel@ontario.ca](mailto:energypanel@ontario.ca)

**RE: Electrification and Energy Transition Panel**

Dear Mr. Collie, Mrs. Gattinger and Chief Whetung,

Thank you for taking the time to consult Canadian Manufacturers & Exporters (CME) at our April 6, 2023 Ontario Energy Committee. I am writing to provide additional input to support your review and inform recommendations to the Government of Ontario.

Manufacturers are on the frontline of decarbonization. Industrial greenhouse gases emissions account for 25% of the provincial total, versus only 3% for the electricity sector. This highlights the central importance of affordable and reliable energy for industrial users. Without it, manufacturers will not be able to secure the investment needed to maintain and grow operations in Ontario. The consequence is a loss of prosperity and carbon leakage to jurisdictions with lower environmental standards, which can only lead to lower environmental outcomes.

We hope you consider and adopt the attached recommendations as you develop your final report. Should you wish to discuss any of them in details, please do not hesitate to contact me.

Sincerely,



Dennis A. Darby, P.Eng., ICD.D  
President and CEO

CC Doug Ford, Premier of Ontario  
Todd Smith, Minister of Energy  
Victor Fedeli, Minister of Economic Development, Job Creation and Trade  
Graydon Smith, Minister of Natural Resources and Forestry  
David Piccini, Minister of Environment, Conversation and Parks  
Prabmeet Sarkaria, President of the Treasury Board

**Canadian Manufacturers & Exporters Submission**  
**Ontario Electrification and Energy Transition Panel**

The manufacturing sector will need to make unprecedented investments in technologies to remain competitive while carbon pricing rises from \$50 per tonne to \$170 over the next decade. By CME's estimates, this escalation will have a cumulative cost for Canadian manufacturing ranging between \$65 billion and \$82 billion based on current levels of output and emissions.

At the same time, the signature of the *Inflation Reduction Act* by US President Biden in August 2022 introduced severe concerns with the continued competitiveness of Ontario's manufacturing sector as it seeks to transition to net zero emissions. Indeed, our closest trading partner committed significant resources to incentivize the low-carbon transition in absence of any carbon pricing. Other U.S. initiatives are expected to impact Ontario manufacturers, for example, the EPA's recent guidelines on emissions and the more stringent guidelines for the disclosure of supply chain emission profile for American listed companies.

In 2022, CME published a [Net Zero Industrial Strategy](#), calling on the federal and Ontario government to establish positive incentives to allow manufacturers in our jurisdiction to decarbonize while maintaining competitiveness. This document outlined several recommendations related to energy price, reliability and incentives needed to fund low-emission technology. Federal and provincial government have delivered some progress on recommendations through the 2023 Budget process. For example:

- Ontario introduced a technology-neutral 10% Ontario Manufacturing Investment Tax Credit which can be leveraged for critical machinery purchases and building retrofits;
- The Building Ontario Businesses Initiative (BOBi) will give preference to products made in Ontario through provincial procurement processes, allowing greater consideration for the value of products made with low-carbon energy through weighed criteria (versus focusing solely on product costs);
- IESO will soon administer the Clean Energy Credits, with proceeds to be paid into a Future Clean Electricity Fund to offset costs from construction of clean electricity projects.

All that said, much of the policy heavy lifting remains ahead. While the IESO forecasted in December that the net zero transition can be accomplished by doubling the size of electricity generation (at a cost of approximately \$400 billion), we believe those projections fall short of accurately forecasting the full scale of incremental demand to come from industry, transportation, comfort heat (homes, buildings, institutions, commercial) and electricity intensive activities like domestic green hydrogen production. We welcome your work to continue refining long-term planning assumptions and are providing the following to inform your recommendations.

## #1 – Ontario Needs a Subsidized Industrial Electricity Rate Competitive with Neighboring Jurisdictions

Most manufacturers are trade exposed, competing directly with other jurisdictions for investment and market share. Because electricity costs are an easily comparable data point in a north American complex, the rapid growth of Ontario rates (especially the Global Adjustment component) during the decade preceding the COVID-19 pandemic acted as an important disincentive for industrial expansion.

While this trend was halted following the implementation of the Comprehensive Electricity Plan, [Ontario's industrial electricity prices](#) remain higher than that in most other jurisdictions in Canada and the United States according to benchmarking conducted by the Association of Major Power Consumers of Ontario (AMPCO). Manufacturers have also seen the rise of Hourly Ontario Energy Price (HOEP) start to offset gains of the last few years. We expect the ambitious development of electricity generation required to meet net zero in the next few decades will push Global Adjustment charges upward again, hurting an already fragile competitive position.

We support Clean Energy Credits, but we expect proceeds from those sales will not be sufficient to mitigate the pressure resulting from a two- or three-fold increase in clean energy production in a 20-to-30-year period.

Therefore, Ontario should take proactive steps to implement a predictable manufacturing electricity rate to attract and retain investment to Ontario. This rate should be competitive with comparable rates offered by neighbouring provinces and US states (i.e., in the \$0.06 to \$0.10/KWh range) and provide a more diversified menu of options to promote economic development. This matters especially for businesses who don't currently qualify for the Industrial Conservation Initiative (ICI) or whose consumption profile does not match the very specific criteria for this program.

The following examples can be used as reference points.

### Quebec

In the Québec Economic Plan of March 2016, the provincial government announced the implementation of a program to stimulate capital investment by large industrial companies that are located in Québec and are billed at Rate L.

These companies can receive assistance in the form of reduced electricity costs, enabling them to recoup up to 50% of eligible project costs, i.e.:

- 40% of the eligible costs
- Up to 10% of the eligible costs incurred as part of efforts to reduce GHG emissions

This assistance corresponds to a maximum electricity bill reduction of 20% for a period not to exceed four years (or eight years for projects worth \$250 million or more).

## Michigan

In late 2021, the Michigan Public Service Commission (MPSC) approved [lower electricity rates](#) for its main utilities, providing industrial users with the explicit goal of attracting new manufacturing facilities.

This can result in rates in the range of 5 to 7 cents per kWh, or even lower for very large (50+ MW) facilities providing a long-term commitment to the state. Given the proximity of the State of Michigan and its central role for the automotive supply chain, these incentives cannot be ignored.

Ontario should work on creating its own rates for the purpose of attracting and retaining manufacturing investments in the province. The rate subsidy along with energy conservation measures will lead to economic growth and emission reductions as we capture greater share of global manufacturing output.

## #2 – Fully Use the Window of Opportunity Offered by the Clean Electricity Tax Credit

In August 2022, US Congress introduced a game changer with the *Inflation Reduction Act*. This legislation included significant financial incentives for electric vehicle supply chain, electrical grid development, Carbon Capture, Utilization and Storage (CCUS), hydrogen applications, among others, over a ten-year period.

As part of its response, the Canadian government introduced a 15% Clean Electricity Tax Credit in Budget 2023 for eligible for capital investment in non-emitting electricity generation systems, subject to labour requirements to be further defined. As this tax credit is scheduled to expire on December 31, 2034, Ontario should secure the greatest amount of supply possible to meet long-term reliability objectives within this timeframe.

This ten-year window introduces many practical challenges. Competition from the US will be fierce for needed investment, equipment, and labour considering the superior financial incentives available under the IRA. Ontario should seek to develop several assets in parallel, keeping a diversified approach and a relentless focus on cost mitigation.

While the federal government's investment tax credits for clean electricity, clean technology, clean hydrogen, and carbon capture, utilization, and storage (CCUS) will cushion capital costs of new resources, provincial and municipal support will be needed to accelerate planning, siting, and permitting of new long-duration storage, nuclear, and hydro facilities.

CME supports all initiatives streamlining IESO regulatory, approval and permitting processes, since it can take five to 10 years to site new clean generation and transmission infrastructure (greenfield or brownfield).

### #3 - Build New Assets with an Economic Development Lens

As Ontario initiates the most significant re-build of its electrical grid in recent history, it would be foolish to ignore the potential value for our manufacturing and constructions sectors.

Building on principles established under Ontario Building Ontario Businesses Initiative (BOBi), the province should leverage this opportunity to strengthen our local supply chains and re-shore key manufacturing capabilities.

For example:

- Leverage the local network of local supplier and intellectual property to build Small Modular Reactors, export them to the world and refurbish large nuclear assets.
- Pipes in solar panels should have a minimum local steel content, fueling demand for Ontario green steel and putting an end to purchases from high-emitting jurisdictions, as seen in many recent procurements of solar farms.
- Ensure existing Canadian manufacturing facilities of wind turbines are used to develop the untapped potential of offshore wind on the Great Lakes.

As part of this move to become more strategic in purchasing, IESO should involve power producers, utilities, original equipment manufacturers (OEMs) and technology developers earlier in the procurement process, ensuring that specifications are informed by local manufacturing capacity.

IESO and the Ministry of Energy should also collaborate with Supply Ontario to leverage local purchasing capacity on a larger scale, including coordinating with other provincial utilities and governments where possible to achieve greater economies of scale.

Building on experience in Quebec, tools such as “frame agreements” with mid to long-term timelines, can also help manage grid affordability and reliability while accelerating the buildout of energy infrastructure, and maximize economic benefit for local equipment suppliers.

Finally, the contribution of cogeneration and distributed energy resources on manufacturing sites should be fully accounted for and leveraged for long-term planning of the grid. By involving our sector in electricity planning and allowing more effective energy management ‘behind the meter’, Ontario can minimize the expense associated with large-scale energy builds, and the associated pressure on rates.

#### #4 – Reliability and Affordability Require a Diversified Approach Including a Role for Oil and Gas Assets

The decarbonization discussion tends to be dominated by electrification and unrealistic assumption of how much of our economy can depend on it. But the reality is that electrification is not practical for all sectors. Low- and zero- carbon gases like Renewable Natural Gas (RNG) and hydrogen will play a key role. Some natural gas use with carbon capture may also be needed in the long-term, although in smaller quantities, to ensure resiliency and dispatchability at the grid and individual firm level.

From a competitiveness perspective, there are also important advantages to retaining a role for natural gas. Estimates prepared by Enbridge as part of its Pathways to Decarbonization study showed that achieving net zero using diversified scenario can save Ontario \$181B by 2050 as well as be delivered with greater ease of implementation (i.e. building retrofits and heating equipment upgrades as 65% of Ontario buildings are already equipped with gas furnaces and boilers).

Decarbonization of Canada's transportation system will be challenging, and Ontario will be particularly challenged, but also has the benefit of scale and density of demand. All technologies have their place in getting to net-zero (e.g. battery EVs, hydrogen, natural gas, hybrid EVs, biofuels, sustainable aviation fuel, and efficient internal combustion engine vehicles). Liquid fuels with reductions in carbon intensity can provide near-term significant GHG emission reductions, leveraging existing infrastructure in a cost-efficient manner. All policy should be developed in a way that is flexible in approach and allows time for necessary new infrastructure to be developed. Reliable fuel, energy systems and infrastructure must be available in all regions ahead of any mandates which rely on electrification. The capabilities of the liquid fuels sector in terms of technology development, efficient management of large capital projects put them in an ideal position to positively contribute to the energy transition.

#### #5 – Establish More Positive Decarbonization Incentives

As discussed above, the US IRA changed the balance of competitive forces on a North American and global level. Canada, with its finite ability to directly support manufacturing industries must make strategic choice to maintain its competitive position.

The first, most time-sensitive policy that must be adopted relates to the use of carbon taxation proceeds. To fund technology improvements, lower emission and protect investment in hard to abate industries, a mechanism should be implemented at the earliest convenience to return proceeds from the Emission Performance Standards (EPS) to industry. Adopting a policy framework for the recycling of EPS proceeds is urgent considering the recent announcement of US investment incentives for its industry to transition and the looming start of EPS compliance reporting and payments in the second half of 2023.

Secondly, and building on comments members of the Panel made during our April 6 discussion, a well-designed Border Carbon Adjustment (BCA) may be needed to support the competitiveness of our manufacturing sector.

While CME supports the concept of a BCA, there remains deep concern about its potential unintended consequences. If poorly implemented, a BCA can increase costs and administrative complexity for domestic manufacturers and could negatively impact the future of the sector given the reality that Canada is a relatively small, trade-dependent economy with a limited ability to set global trade standards.

To be successful, a BCA would need to be simple to administer, WTO-compliant and fully aligned and harmonized with the United States and Canada's other key trading partners. It would also need to include mechanisms to provide export rebates and offsets to relieve competitive pressures on downstream industries. Like our recommendation for the EPS program, revenues would need to be fully recycled to fund carbon reduction investments.

This is not the type of task that can be accomplished in a policy vacuum.

We recommend that Ontario maintain extensive dialogue with the federal government and industry before making any final recommendation on the design or implementation of a BCA mechanism in the province.

#### #6 – Enable Carbon Capture and Storage at Utility Scale

After years of delay and CME advocacy that Ontario should enable CCUS in the province, movement is finally occurring. Bill 46 passed earlier this year removed legislative impediments. Furthermore, regulatory amendments have been proposed in April to enable special projects testing carbon capture and geological sequestration applications on private lands, with crown lands considered for addition in a subsequent phase, according to the [policy roadmap](#) published by the Ministry of Natural Resources and Forestry (MRNF).

This policy is a step in the right direction but will not allow Ontario to move fast enough to fully capture the opportunity afforded by CCUS technology. What is needed is a comprehensive framework covering both private and crown lands to allow the timely building of utility scale infrastructure for use by industrial customers to abate emissions.

This framework should be informed by the experience of other jurisdictions, especially Alberta and British Columbia, which have already adopted regulations qualifying investments in those provinces for the federal CCUS tax credit. Government vesting of saline aquifer pore space for the purpose of CO<sub>2</sub> storage will ensure the maximum benefit to Ontarians. A streamlined regulatory framework with stringent technical, financial and safety requirements for proponents of new CCS demonstrations, pilots or projects is also necessary. To promote a consistent approach and regulatory certainty going forward, pore space vesting by the Crown should occur **prior** to designating special projects.

CME urges the government of Ontario to develop and announce such a comprehensive framework at the earliest convenience.

## #7 – Promote Broad Adoption of Technology to Modernize Grid and Increase Energy Efficiency

In CME's recent Technology Adoption Survey, 45% of respondents stated their company currently use advanced technologies to reduce their energy consumption. At the same time, Ontario manufacturers also invest much less than our OECD partners in advanced manufacturing software and equipment.

To catch up on the adoption of industry 4.0 technologies, Ontario would be wise to invest in broad scale adoption of digital equipment and software applications at grid and industrial facility level. The following areas show great promise:

- **Transmission:** Increased grid stability, forecasting, security with advanced energy management systems, wide area monitoring systems, and market management systems, which be some estimates can help improve grid capacity by 25%.
- **Distribution:** Improved grid reliability and efficiency with distributed energy resource aware advanced distribution management solutions can reduce system interruption frequency and duration by up to 30%.
- **Asset management & analytics:** increased geospatial network accuracy, office to field mobility, and artificial intelligence/machine learning insights can provide up to 20% plan, design as-built time savings.

## #8 – Accelerate Hydrogen Hub Planning and Industry Consultations

In April 2022, Ontario launched its Low-Carbon Hydrogen Strategy. CME welcomed this initiative, as hydrogen is one of the most promising alternatives to fossil fuels in our sector, either through direct utilization in manufacturing processes or acting as an emission-free fuel for heavier vehicles which will be the most challenging to electrify.

However, one year in, manufacturers remain confused as to how they can leverage this strategy. Coupled with CCUS, hydrogen is likely to play a critical role in lower-carbon energy systems.

To date, the demonstration hubs announced have yet to connect with the broader manufacturing community, despite promising applications in a variety of subsectors. Ontario has not established college programs needed to train the next generation of hydrogen technicians. Further, there is no clear roadmap from key regulators like TSSA and Standards Council of Canada to establish the unified set of rules needed for safe, efficient operations and mobility of goods and workers in a north American marketplace.

To fulfill the intent of the Hydrogen Strategy, clear government leadership and increased engagement of the manufacturing sector, certification bodies and education institutions must take place. A more purposeful approach to involve manufacturers located in proximity to existing hydrogen assets should be pursued to continue building the capacity of our province to lead in this competitive area.

Finally, Ontario's ministry of Finance should consider targeted tax incentives to further incentivize industry investment and bridge the gap introduced by the *Inflation Reduction Act* in the US.



### #9 – Keep SMEs in Mind and Provide Added Support to Help them Transition

Because more than 90% of Ontario manufacturers have less than 500 employees, CME strongly believes an industrial SME transition strategy must be central to the efforts of industry and government. This will not only support SMEs directly, but also large domestic industrial companies that rely on them as supply chain partners.

While some SME manufacturers are independent, creating and selling their own consumer products, a sizable portion are tied into larger globally integrated supply chains, most notably in industries such as transportation equipment (vehicles, aerospace, transit, etc.), natural resources (forestry, oil and gas, mining, etc.), and food (agriculture, beverages, meat processing, etc.). As finished goods manufacturers commit to reducing their emissions, they will demand the same commitment from their suppliers, otherwise they will take their business elsewhere.

Yet, as is clear from past member surveys, Ontario SMEs are unprepared for this transition. To date, government support to help Canadian SMEs in their transition to net zero has primarily focused on retrofit programs (for things like LED lighting) and other energy efficiency improvements. This leaves a major gap in program support for SMEs, many of which are unaware of the transition getting underway and lack the financial resources and expertise to even get started.

CME is proposing to work directly with governments on the development and deployment of an Industrial SME Net Zero Transition Plan that would be a central pillar of its overall energy strategy. We believe this strategy should include the following elements and be rolled out sequentially over the next several years:

- Introduce a net zero educational awareness campaign.
- Support net zero operational assessments and the development of strategic business plans.
- Connect SMEs to existing government supports and provided targeted, low-amount and flexible funding to incentivize investment.
- Support the creation of a standardized SME net zero certification system to efficiently prove to larger customers, supply chain partners and governments that they have set and implemented rigorous net zero targets.

### #10 – Provide OEB Appropriate Tools to Act as Protector of Ratepayers

The IESO's mandate is to conduct planning, and the OEB's mandate is to protect the interests of ratepayers. There is currently a gap between the outcomes of the IESO's planning process and the OEB's mandate – the OEB has no role in assessing the prudence of expenditures on behalf of ratepayers during the planning process, and there are no apparent requirements on the planning process to minimize ratepayer costs.



As recommended by the [Green Ribbon Panel](#) reports (which represented a broad spectrum of business, labour and not-for-profit stakeholders), the government should consider mechanisms on how to address and bridge this gap. By introducing an accountability mechanism to mitigate cost risks during the planning stage, the government's effectiveness, transparency, and accountability objectives can be furthered.