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The Honourable Tim Hodgson
Minister of Energy and Natural Resources

Natural Resources Canada

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RE: Powering Canada Strong: A National Strategy for an Electrified Canadian Economy

Building the Industrial Ecosystem to Deliver Canada's Electricity Future

Electro-Federation Canada's Implementation Priorities for *Powering Canada Strong*

Introduction

Electro-Federation Canada (EFC) welcomes the Government of Canada's *Powering Canada Strong: Canada's National Electricity Strategy* and its vision for a stronger, more competitive, and increasingly electrified Canadian economy.

EFC represents more than 230 member companies that manufacture, distribute, market, sell, and maintain the electrical and automation technologies that power Canada's homes, businesses, industries, and critical infrastructure. Collectively, our members contribute more than $15 billion annually to Canada's economy and support more than 109,000 Canadian jobs.

The National Electricity Strategy recognizes that expanding and modernizing Canada's electricity system will be essential to long-term economic growth, industrial competitiveness, energy security, affordability, and national resilience. EFC is encouraged by the Strategy's focus on expanding electricity infrastructure, accelerating electrification, strengthening domestic manufacturing, securing resilient supply chains, modernizing the grid, improving energy efficiency, and developing the skilled workforce needed to support Canada's electricity future.

These priorities closely align with EFC's recent policy work, including *Decarbonizing Canada via Electrification*, developed with the Pembina Institute, and *Building Canada's Future Electricity Grid: A Supply Chain & Policy Roadmap*, developed with Dunsky Energy +

Climate Advisors. Across both reports, one conclusion has remained consistent: the technologies needed to support Canada's electrification objectives already exist. The challenge is creating the policy, investment, manufacturing, workforce, regulatory, and supply chain conditions needed to deploy them at the pace and scale required.

As Carol McGlogan, President and CEO of Electro-Federation Canada, noted upon the release of the Strategy:

"The National Electricity Strategy is an important step toward building the infrastructure and industrial capacity needed to support Canada's electrified economy. Our industry will play a central role in delivering the technologies, equipment, and expertise required to expand grid capacity, strengthen supply chains, improve energy efficiency, and support long-term economic competitiveness."

EFC believes the National Electricity Strategy establishes the right direction.

The next step is ensuring Canada has the industrial ecosystem capable of delivering it.

Executive Summary

EFC's Priority Implementation Actions

To support successful implementation of the National Electricity Strategy, EFC encourages the Government of Canada to prioritize five actions:

1. Secure Critical Supply Chains for Electricity Infrastructure

Complete Canada's electricity supply chain assessment and establish an ongoing framework to monitor critical equipment, manufacturing capacity, lead times, and strategic manufacturing inputs—including grain-oriented electrical steel (GOES), copper, semiconductors, and other critical materials and components.

2. Strengthen Canada's Manufacturing Competitiveness

Expand the Clean Technology Manufacturing Investment Tax Credit to include strategic grid and electrification technologies, support manufacturing modernization and commercialization, and maintain integrated North American supply chains that enable Canadian manufacturers to compete globally.

3. Modernize Canada's Electricity System

Modernize regulatory frameworks and invest in smart-grid technologies, digital grid management systems, advanced distribution infrastructure, demand-side flexibility, and distributed energy resources. Digital technologies can significantly increase the capacity and performance of existing electricity infrastructure, improve reliability, and accelerate electrification while helping contain long-term system costs.

4. Support Electrification Through Integrated Planning

Advance building electrification, energy efficiency, workforce development, and long-term infrastructure planning that supports housing, industrial growth, AI and data-centre development, transportation electrification, and Canada's growing electricity demand.

5. Provide Long-Term Investment Certainty

Maintain stable policy, tax, regulatory, and trade frameworks that encourage private-sector investment in Canadian manufacturing, support coordinated electricity planning, streamline project approvals, and preserve predictable access to critical equipment, components, and advanced technologies.

Looking Forward

EFC welcomes the Government's commitment to undertake a comprehensive electricity component supply chain analysis and looks forward to supporting this work. As the national association representing Canada's electrical and automation industry, EFC and its members can provide market intelligence, identify emerging supply chain risks, validate priority technologies, and help develop practical implementation solutions.

Canada has a strategy to build its electricity system.

Implementation Priorities

Successful implementation of the National Electricity Strategy will depend on more than constructing new generation, transmission, and distribution infrastructure. It will also require manufacturers and distributors to have the investment certainty and incentive, skilled workforce, supply chains, regulatory environment, market access, and commercial conditions needed to supply the technologies that electrification requires.

Canada’s electricity strategy is therefore not only an energy strategy. Properly implemented, it can also serve as an industrial strategy that attracts investment, increases productivity, strengthens domestic manufacturing, creates skilled employment, and expands Canada’s capacity to compete in North American and global markets.

The following implementation priorities are offered to help translate the Strategy's vision into action.

Implementation Priority 1

Secure Canada's Critical Supply Chains for Electricity Infrastructure

EFC strongly supports the Government of Canada's commitment to develop a comprehensive understanding of Canada's electricity component supply chain and publish an analysis that industry can leverage. This is one of the most significant commitments in the National Electricity Strategy and provides an important foundation for strengthening Canada's electricity manufacturing ecosystem.

Building and modernizing Canada's electricity system depends on reliable access to a wide range of critical equipment and components, including transformers, switchgear, circuit breakers, conductors, protection equipment, automation technologies, digital controls, electrical steel, semiconductors, bushings, relays, copper, electronics, heat pumps, electric heating systems, and thousands of other specialized products and inputs.

Without secure and resilient supply chains, electricity infrastructure cannot be deployed at the pace and scale required to achieve Canada's economic, energy-security, housing, and electrification objectives.

EFC's *Building Canada's Future Electricity Grid* report found that the primary challenge facing Canada's electricity transition is not the availability of technology, but the ability to deploy available technologies at scale. Long lead times, equipment shortages, cost escalation, limited manufacturing capacity, and dependence on imported components have become significant barriers to grid expansion and modernization.

These pressures are already delaying infrastructure projects, increasing costs, affecting electricity affordability, and slowing the connection of new generation, housing, industrial facilities, AI and data-centre development and customer loads.

Canada's electrical manufacturing sector is deeply integrated into global and North American supply chains. Approximately 60 per cent of Canada's critical electrical equipment is imported, and approximately 70 per cent of those imports originate from the United States, China, and Mexico.

Canada has meaningful opportunities to expand domestic manufacturing in strategic areas. However, many critical products and inputs will continue to be sourced internationally through specialized supply chains. Implementation should also recognize the importance of securing reliable access to critical materials and manufacturing inputs required to produce electricity system equipment. These include grain-oriented electrical steel (GOES), copper, semiconductors, bushings, relays, electronics, electrical components, and other specialized

materials that are essential to manufacturing transformers, switchgear, conductors, motors, wire and cable and other strategic grid technologies. Strengthening access to these inputs by investing in domestic supply or diversified trusted supply chains will improve Canada's manufacturing competitiveness and enhance long-term electricity system resilience.

As implementation moves forward, industry encourages the Government to build on this commitment by:

- working collaboratively with manufacturers, distributors, and industry partners to identify critical supply chain bottlenecks and vulnerabilities, and to develop targeted supply chain initiatives that strengthen domestic capacity for priority grid equipment and building-electrification technologies
- developing long-term forecasts for electricity equipment demand;
- identifying strategic manufacturing opportunities and critical production gaps;
- assessing dependencies on specialized components and inputs;
- establishing an ongoing framework for monitoring manufacturing capacity, imports, lead times, and equipment availability; and
- using this analysis to guide electricity planning, infrastructure investment, industrial policy, and trade-diversification initiatives.

Supply chain resilience begins with understanding where risks exist and ensuring Canada has reliable access to the equipment, materials, and components needed to build its electricity system.

Implementation Priority 2

Expand Domestic Manufacturing Capacity for Strategic Grid and Electrification Technologies

Once critical supply chain risks are understood, Canada has an opportunity to translate that analysis into targeted industrial policy. By strengthening domestic manufacturing capacity in strategic grid and electrification technologies, Canada can accelerate deployment, attract private investment, improve supply chain resilience, and generate long-term economic and productivity benefits.

Recent experience with the United States Inflation Reduction Act demonstrates how stable, investment-driven industrial policy can attract significant electrical manufacturing investment. For Canada, this underscores the importance of remaining a competitive and reliable jurisdiction for investments in electrical equipment, grid technologies, building electrification, automation, and advanced manufacturing.

Canada should pursue three complementary objectives:

1. **Develop internationally competitive clusters** in areas where Canada has existing capabilities, established supply chains, security advantages, and a credible pathway to North American or global competitiveness.
2. **Maintain sufficient domestic capacity for critical technologies** that contribute significantly to supply chain risk, cost escalation, energy security, and system resilience.
3. **Preserve access to advanced global technologies and integrated North American supply chains**, particularly where the scale or specialization required cannot be supported solely through domestic production.

To support the Strategy's objective of expanding domestic manufacturing capacity, industry encourages the Government to build on this commitment by:

- expanding the Clean Technology Manufacturing Investment Tax Credit to include strategic grid and electrification technologies;
- considering an enhanced investment tax credit or incentive for projects that result in meaningful Canadian production and economic activity;
- supporting investments in retooling, automation, new production lines, testing infrastructure, certification capacity, and long-lead manufacturing equipment;
- providing strategic financing and incentives that enable manufacturers to establish, expand, or modernize Canadian operations;
- maintaining competitive corporate and investment tax conditions;
- improving access to testing, validation, and certification infrastructure to reduce time to market; and
- preserving comprehensive CUSMA market access and an open, predictable trading environment.

Canada's manufacturing competitiveness depends on integrated North American supply chains. Domestic manufacturing policy should therefore strengthen Canadian capacity without creating unnecessary barriers to the components, equipment, and advanced technologies that Canadian operations require.

Support Manufacturing Modernization and Scale-Up

Meeting future electricity demand will require Canadian manufacturers and distributors to invest in automation, productivity, commercialization, and digital capabilities.

These investments are necessary to compete with larger global manufacturers, address labour constraints, increase production, and ensure that public investments in electrification create domestic economic value.

Federal policy should support:

- capital investments in new or expanded Canadian manufacturing and assembly capacity, including adoption of advanced manufacturing technologies;
- automation and productivity improvements;
- commercialization and scale-up of Canadian products and solutions;
- expanded testing, validation, and certification infrastructure; and
- programs that help small and medium-sized manufacturers participate in emerging electricity supply chains.

Implementation Priority 3

Accelerate Grid Modernization and Regulatory Reform

EFC supports the Strategy's recognition that Canada's electricity system must become increasingly digital, connected, flexible, and intelligent.

Smart grids, advanced automation, distributed energy resources, energy storage, demand flexibility, digital substations, and modern protection and control technologies will all be essential to accommodating future demand while maintaining reliability and affordability. Together, these technologies optimize the use of existing electricity infrastructure, reduce overall system costs, improve asset utilization, and defer or avoid more expensive investments in new generation and network expansion.

Digitalization should be recognized as a strategic investment in grid capacity, not simply an information technology upgrade. Intelligent grid management systems, real-time network monitoring, automated fault detection and restoration, predictive asset management, and advanced software platforms enable utilities to optimize the use of existing infrastructure, improve reliability, and integrate distributed energy resources more efficiently. Because these technologies can often be deployed in months rather than the years required to build new infrastructure, they represent one of the fastest and most cost-effective tools available to increase grid capacity while helping contain costs for ratepayers.

However, current utility regulatory and rate-setting frameworks do not always support the deployment of advanced grid or demand-side solutions, even where those solutions may represent the most cost-effective approach.

Utilities and technology providers continue to identify barriers such as:

- unclear cost-recovery mechanisms for digital investments;
- A preference for traditional capital infrastructure over software, automation, or non-wires alternatives;

- limited valuation and compensation frameworks for distributed energy resources;
- inconsistent interoperability requirements;
- fragmented regulatory approaches; and
- limited opportunities to demonstrate and validate new technologies at scale.

Addressing these barriers will require coordinated action by federal, provincial, and territorial governments, regulators, utilities, standards organizations, and industry.

To accelerate implementation, industry encourages the Government to build on the Strategy by:

- supporting a national utility regulatory modernization initiative;
- encouraging regulatory frameworks that appropriately value distributed energy resources, demand flexibility, and non-wires alternatives;
- supporting a national digital grid initiative that accelerates utility adoption of advanced grid management systems, real-time monitoring, predictive maintenance, automation, and interoperable digital platforms to maximize the capacity and performance of existing electricity infrastructure;
- accelerating the development and adoption of harmonized codes, standards, interoperability requirements, and cybersecurity frameworks;
- reopening multi-year federal smart-grid demonstration and deployment programs;
- supporting targeted pilot projects that build Canadian operational experience;
- reducing barriers to commercial-scale deployment following successful demonstrations; and
- requiring consistent performance reporting and knowledge-sharing from publicly funded projects.

Modern regulatory frameworks are as important as modern infrastructure. Canada will not achieve the full value of smart-grid and demand-side technologies unless utilities and customers have clear pathways to deploy them.

Implementation Priority 4

Modernize Canada's Electricity Distribution System

EFC supports the National Electricity Strategy's recognition that achieving Canada's electrification objectives will require significant investment across generation, transmission, and distribution.

While much of the national discussion focuses on expanding electricity generation and transmission capacity, every new housing development, commercial building, industrial facility, AI data center, electric vehicle charger, heat pump, and distributed energy resource ultimately depends on a modern electricity distribution system capable of delivering reliable, affordable, and resilient electricity to customers.

Distribution systems are rapidly evolving from one-way delivery networks into intelligent, digital platforms that support two-way power flows, distributed energy resources, demand response, electric vehicle charging, battery storage, and advanced energy management systems. Modernizing these systems is essential to improving grid flexibility, optimizing existing infrastructure, and reducing the long-term cost of meeting Canada's growing electricity demand.

Investment in distribution modernization also creates demand for Canadian-manufactured electrical equipment and technologies, including transformers, switchgear, conductors, protection systems, advanced metering, sensors, automation equipment, communications systems, and digital grid technologies. As a result, investments in distribution infrastructure not only strengthen the electricity system—they also support Canadian manufacturing, skilled employment, and regional economic development.

As implementation moves forward, industry encourages the Government to build on this commitment by:

recognizing electricity distribution infrastructure as a strategic enabler of Canada's housing, electrification, industrial growth, and affordability objectives;

expanding eligibility for federal investment programs and tax incentives to include modern distribution technologies, including smart-grid equipment, advanced distribution management systems, protection and control technologies, communications infrastructure, advanced metering, and technologies that enable two-way power flows;

supporting investments that improve grid flexibility through demand response, distributed energy resources, battery energy storage, electric vehicle charging infrastructure, and intelligent building technologies;

encouraging coordinated planning between governments, utilities, manufacturers, distributors, and regulators to ensure distribution infrastructure keeps pace with projected demand growth; and

supporting the adoption of advanced planning tools, digital technologies, and interoperability standards that improve asset utilization, strengthen system resilience, and reduce long-term infrastructure costs.

Modern distribution systems are fundamental to realizing the full value of investments in generation, transmission, building electrification, and distributed energy resources. Strengthening Canada's distribution infrastructure will improve reliability, support economic

growth, enhance affordability, and create sustained demand for the technologies and equipment manufactured and supplied by Canada's electrical and automation industry.

Implementation Priority 5

Scale Building Electrification, Retrofits, and Demand-Side Solutions

The National Electricity Strategy appropriately recognizes that Canada cannot meet its objectives through new electricity supply alone.

Energy efficiency, building electrification, demand management, and intelligent controls can reduce peak demand, improve affordability, optimize existing infrastructure, and defer or avoid more expensive generation, transmission, and distribution investments.

Canada should increase the pace and depth of building retrofits and fuel switching. EFC's work with the Pembina Institute identified the need to significantly increase the annual retrofit rate across Canada's existing building stock.

Federal implementation should recognize that building electrification requires more than the installation of individual technologies. It requires integrated systems that include:

- heat pumps and electric heating systems;
- smart thermostats;
- connected controls;
- building energy-management systems;
- load-management technologies;
- electrical panels and distribution equipment;
- energy storage;
- electric vehicle charging; and
- demand-response capability.

Smart controls and energy-management platforms are becoming increasingly important not only in commercial and institutional buildings, but also in homes and multi-unit residential buildings.

Industry encourages the Government to build on the Strategy by:

- developing a comprehensive national market-development strategy for deep retrofits and building electrification;

- aligning model building and retrofit codes with long-term electrification and emissions-reduction objectives;
- increasing federal support for deep retrofits, building electrification, and enabling electrical infrastructure;
- designing incentives around whole-building outcomes rather than isolated equipment replacements;
- supporting technologies that provide the most appropriate solution based on climate, application, cost, grid conditions, and customer needs;
- recognizing both heat pumps and electric resistance heating as important technologies in appropriate applications;
- expanding demand-side programs to include intelligent building technologies and energy-management systems;
- using codes, standards, and performance requirements to accelerate market adoption; and
- coordinating retrofit, housing, electricity, and affordability policies.

Federal programs should avoid prescriptive approaches that unnecessarily favour one technology where multiple electric solutions may be appropriate. Policy should focus on performance, emissions reductions, affordability, and grid impacts.

Implementation Priority 6

Build the Workforce Required for Electrification and Advanced Manufacturing

The workforce challenge extends across the entire electricity and electrification value chain.

Public discussions often focus appropriately on skilled trades and installers. However, building electrification and grid expansion will also require workers in manufacturing, engineering, product development, quality assurance, testing, certification, technical sales, distribution, customer support, maintenance, and service.

Electrical manufacturers frequently require college- and polytechnic-level technical professionals who can contribute directly to product development, manufacturing operations, applications engineering, technical support, and commercialization.

Regional manufacturers also face challenges attracting and retaining specialized workers. In some areas, bilingual capacity can be a limiting factor for roles involving customer service, technical support, sales, and interprovincial or international markets.

Industry encourages the Government to:

- support applied, modular, and industry-designed training programs, including microcredentials, work-integrated learning, apprenticeships, and short technical pathways;
- elevate college-, polytechnic-, CEGEP-, and vocational-level careers as essential to electrification and advanced manufacturing;
- expand school-industry partnerships near manufacturing facilities and regional industrial clusters;
- provide regional attraction and retention tools, including internships, relocation assistance, mobility incentives, and practical language training;
- promote electrical, automation, building-electrification, and advanced-manufacturing careers to young people;
- align productivity and workforce policies by pairing automation incentives with targeted skills-development investments;
- recognize regional manufacturing communities as strategic economic assets; and
- improve immigration and foreign credential-recognition pathways for specialized technical and engineering talent.

Workforce policy should reflect the full value chain required to design, manufacture, distribute, install, operate, and maintain the technologies that make electrification possible.

Implementation Priority 7

Maintain Long-Term Policy and Investment Certainty

Canada's electricity manufacturing sector operates within highly integrated North American supply chains. Trade certainty and predictable market access are critical to attracting investment, supporting domestic manufacturing growth, reducing project costs, and ensuring the timely deployment of Canada's electricity infrastructure. Companies making decisions about new facilities, production lines, workforce development, and supply chain capacity require confidence that Canada’s policy and market environment will remain stable.

The National Electricity Strategy provides an important long-term vision. Maintaining clear, predictable, and coordinated policy signals will help translate that vision into private-sector investment.

To preserve and strengthen investment confidence, industry encourages the Government to:

- Advocate for policies that preserve efficient cross-border movement of electricity equipment, components, raw materials, and advanced technologies.

- maintain stable and predictable policy, tax, and regulatory frameworks;
- coordinate long-term electricity planning across jurisdictions;
- improve the transparency of future electricity infrastructure and equipment requirements;
- streamline approvals for nationally significant electricity infrastructure;
- support regional transmission and grid projects of national importance;
- establish predictable deployment incentives for priority grid, building, and demand-side technologies; and
- ensure that policies introduced by different departments reinforce rather than conflict with one another.

Stable, long-term policy remains one of the strongest investment signals government can provide.

Conclusion

Electro-Federation Canada believes *Powering Canada Strong* establishes a strong framework for Canada's electricity future.

The Strategy recognizes that expanding Canada's electricity system requires more than generation and transmission infrastructure. It also requires resilient supply chains, competitive domestic manufacturing, a skilled workforce, modern regulatory frameworks, energy-efficient and electrified buildings, advanced grid technologies, and access to integrated North American and global markets.

Canada has a strategy to build its electricity system.

The next step is ensuring Canada has the industrial ecosystem capable of delivering it.

EFC welcomes the Government's commitment to undertake a comprehensive electricity component supply chain analysis and looks forward to supporting this work. As the national association representing Canada's electrical and automation industry, EFC and its members can provide market intelligence, identify emerging supply chain risks, validate priority technologies, and help develop practical implementation solutions.

EFC appreciates the Government's recognition that secure supply chains, domestic manufacturing, workforce development, grid modernization, energy efficiency, and building electrification are fundamental to Canada's economic and energy future.

As implementation moves forward, EFC and its members look forward to working collaboratively with governments, utilities, Indigenous partners, manufacturers, distributors, regulators, standards organizations, and other industry stakeholders to translate the National Electricity Strategy into action.

Together, Canada can build not only the electricity infrastructure it needs, but also the resilient industrial ecosystem that will support economic growth, energy security, affordability, and competitiveness for decades to come.

Sincerely,

Cherith Sinasac
Director of Government Affairs
Electro Federation Canada
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