



# A Canadian Opportunity: Tackling climate change by switching to clean power

June 2016

With federal and provincial officials working hard to develop policy options, it was clear that a window had opened up to join, and hopefully influence, the national climate conversation.

---

## Arriving at A Canadian Opportunity

In March of 2016, Canada’s Premiers and Prime Minister launched an unprecedented initiative: they agreed to work together to reach a national climate plan for adoption by early 2017.

With federal and provincial officials working hard to develop policy options, it was clear that a window had opened up to join, and hopefully influence, the national climate conversation.

Clean Energy Canada believed that a set of policy recommendations backed by a coalition of stakeholders from various sectors would carry more weight than any contribution we could make on our own.

We convened a representative group of stakeholders and experts on the crucial issue of electrification to an in-person meeting in Ottawa in May. In advance of that meeting, Clean Energy Canada:

- performed a review of relevant literature on electrification
- interviewed virtually all participants to understand their perspective and test for areas of convergence,
- produced a discussion paper listing policy options for discussion, and
- worked with the SFU Centre for Dialogue to shape an effective agenda and facilitation for the roundtable.

The Minister of the Environment and Climate Change, Catherine McKenna, opened the roundtable. She stressed the power of coalitions of unusual suspects collaborating on policy solutions and emphasized the importance of electrification as a climate change solution.

The May roundtable was very successful: all participants expressed an interest in continuing to work on a package of policy recommendations for formal submission to the federal / provincial climate process. Clean Energy Canada staff worked with roundtable participants, often one-on-one, to produce a set of consensus policy recommendations.

The policy package has already been favourably received by officials involved in the development of the national climate plan—but we see it as just a first step. We will be working with the signatories to this document, as well as a wider group of stakeholders, over the weeks and months to come to advance the policy recommendations proposed here.

Our thanks to Shauna Sylvester, director of the SFU Centre for Dialogue, for her facilitation expertise, and to Sustainable Prosperity for hosting the event.

## Contents

|   |    |
|---|----|
| Signatories                             | 2  |
| Introduction                            | 4  |
| Supportive Policies for Electrification | 6  |
| Transportation                          | 8  |
| Buildings                               | 9  |
| Industrial Processes                    | 10 |
| Electricity Supply                      | 11 |

---

## Signatories



# Signatories



## Individual Signatories

**Chris Bataille**

IDDRI.org and Simon Fraser University

**Jose Etcheverry**

Sustainable Energy Initiative, York University

**David Runnalls**

Institute for the Environment, University of Ottawa

To tackle climate change, **we need clean** electricity to power far more of our daily activities than it does today.

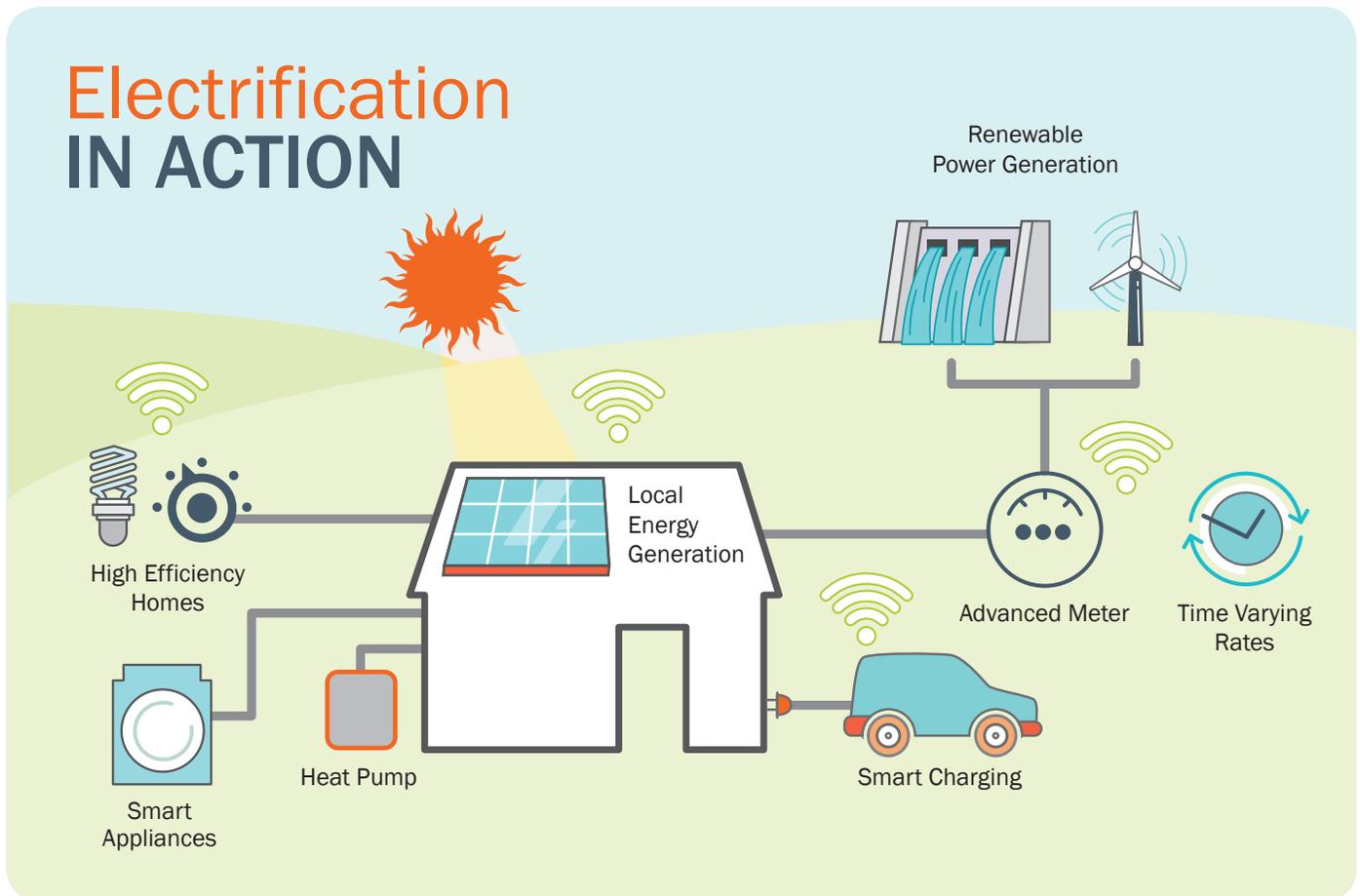
## Introduction

Expert assessments are clear: to tackle climate change, we need clean electricity to power far more of our daily activities than it does today—even factoring in a dramatic improvement in energy productivity.

Over time, we will need to shift from fuelling our personal vehicles with gasoline to driving electric cars. Electric pumps will draw heat from the air or the ground to keep our homes

warm in winter and cool in summer. Innovative industrial processes will produce the goods and materials we need using clean power rather than fossil fuels.

The growing interconnectivity of the internet with electricity generation and consumption will also make these power flows smarter.



Source: Adapted from the Acadia Centre's *EnergyVision* (2014)

## With the right policy signals as a foundation, our country can reap the benefits of a rapid shift to clean electricity as a source of energy across the economy.

---

This shift from fossil fuels to clean electricity is needed in Canada, but to an even larger extent around the world. While not a one-size-fits-all solution, electrification will be a big part of the international effort to live up to the climate commitments countries made at the UN climate talks in Paris<sup>1</sup>. As a result, the global market for clean electricity is growing quickly. So is demand for the technologies and services that underpin electric transportation, buildings, industrial processes and smart grids.

And that's excellent news for Canada: our country already has one of the cleanest electricity sectors in the world. Today, well over 60 per cent of our power comes from water, wind and sun—and that share of renewable electricity is poised to grow, thanks to government commitments to further decarbonize Canada's power supply. With ambitious and effective policies, Canada's headstart means our country is positioned to reach near-zero emission power well ahead of its peers.

In other words, clean electricity is a comparative advantage for Canada, one that positions us to lead in the global clean energy economy. With the right policy signals as a foundation, our country can reap the benefits of a rapid shift to clean electricity as a source of energy across the economy. We'll see those benefits in new jobs, innovation, business development and export opportunities, while reducing our carbon pollution.

This document frames some of the most important policy choices governments can make into a strategy to accelerate the shift to clean electricity as the energy source for Canada's economy. We recognise that this strategy must be about transforming transportation, buildings, and industrial processes as much as the electricity generation sector itself. We also describe overarching policies needed to support electrification as a foundation for a clean and innovative Canadian economy.

We hope the policy recommendations listed below are useful as you craft a pan-Canadian climate plan. We welcome any questions or comments you may have, and look forward to working with you in the weeks and months ahead.

### Original Signatories

**Merran Smith**, *Clean Energy Canada*

**Cara Clairman**, *Plug'n Drive*

**Louise Comeau**, *Conservation Council of New Brunswick*

**Ron Dizi**, *Advanced Energy Centre, MaRS*

**John Gorman**, *Canadian Solar Industries Association (CanSIA)*

**Chantal Guimond**, *Electric Mobility Canada*

**Chris Henderson**, *Lumos Energy, Principal Clean Energy Advisor to Canada's Indigenous Peoples*

**Robert Hornung**, *Canadian Wind Energy Association (CanWEA)*

**Jacob Irving**, *Canadian Hydropower Association*

**Paul Kariya**, *Clean Energy BC*

**Elisa Obermann**, *Marine Renewables Canada*

**The Pembina Institute**

**Félix-A. Boudreault**, *Principal, F&B Advisors*

**Dave Sawyer**, *EnviroEconomics*

**David Runnalls**, *Visiting Professor, Institute for the Environment, University of Ottawa*

---

<sup>1</sup> See IPCC, 2014: *Summary for Policymakers*. In: *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 20. [http://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc\\_wg3\\_ar5\\_summary-for-policymakers.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_summary-for-policymakers.pdf)

---

## Supportive Policies for Electrification

While the policies described in this section may not result directly in a switch from fossil fuels to clean power, they lay the groundwork for electrification.

That transition needs to accelerate rapidly to meet our 2030 climate goal—but it’s also a very long-term effort. Policies to support a durable, effective transition to electrification in Canada include:

**A price on carbon across Canada.** The price signal should apply in all jurisdictions in Canada, start as quickly as possible (where it doesn’t exist already), grow over time, and cover the vast majority of emissions.

**A national “roadmap” or action plan for electrification** in Canada. Electrification remains a relatively new policy area, and it faces some significant barriers. A roadmap for electrification would help fill information gaps that exist today, and lay out a national vision aligned with the pan-Canadian effort to tackle climate change and the Council of the Federation’s Canadian Energy Strategy.

A national action plan for electrification should also include:

- **A national goal of reaching a near-zero carbon electricity supply** by a given year, along with interim milestones. Canada’s electricity sector should demonstrate continuously decreasing GHG emissions while ensuring reliability and affordability in power supplies.
- In support of the national electricity sector goal, assessments of the **growth in clean power supply that will be required in various regions of Canada**, and plans to meet those needs.
- **Sector-by-sector electrification goals** and pathways for end use sectors (transportation, buildings, industry, etc.) for the short, medium, and long term.
- Assessments, including cost-benefit analysis, of the **grid modernization that will be needed** and plans to achieve those improvements, recognizing the advantage and economic value of the potential electricity storage capacity of hydro reservoirs as well as smaller-scale storage and distributed generation. Investments in “smart” grids and micro-grids will allow for more efficient use of electricity and greater integration of decentralized power while maintaining reliability, resilience—especially in the face of a changing climate— and affordability for consumers.
- Assessments of the **financing needs associated with electrification**, and recommendations of how best to meet those needs. For example, governments may wish to consider providing seed funding for revolving funds to mobilize private capital, possibly via green investment banks. In the building sector, Property Assessed Clean Energy (PACE) loans merit consideration.
- **Analysis of the scale of export opportunity involved**, which goes well beyond clean power itself to include electrification technologies and services, and recommendations of the policies and practices that will allow Canada to capitalize on those opportunities. (We called this E3P: the Electrons and Expertise Export Plan).
- Targeted approaches for **electrification in remote, rural and Indigenous communities**, which also represent prototype solutions for a world marketplace.
- Assessments of the **limits of electrification in the Canadian context**. For example, industrial operations in remote areas that lack electricity or other power infrastructure may need to rely on other solutions to reduce emissions. Similarly, some heavy industry applications or freight transportation may reduce emissions more effectively through other means.

In some cases, governments in Canada have **already adopted policies** similar to what we propose here, while others at the federal/provincial table have yet to do so.

- Assessments of the **skills training, certification and human resources needs** the transition to a more electrified economy will require, and recommendations to meet them.
- Recommendations for world-leading electrification policies in **government procurement, operations and standards**, and
- Plans to **better communicate lessons learned and success stories** across Canada.

Developing an action plan of this type would take time. It requires investment, analysis, and consultation—but we believe a well-researched action plan would provide the national vision and technical foundation we need for the transition to electrification across Canada.

While the full action plan is being crafted, we have identified policy choices that governments can seize today. In many cases, these opportunities—which are presented in the remainder of this document—build on government actions or global trends that are already well underway. Accelerating those trends and initiatives will help move Canada to a leadership position in the global clean energy transition.

### A note on existing policies and jurisdiction

In some cases, governments in Canada have already adopted policies similar to what we propose here, while others at the federal/provincial table have yet to do so. In those cases, the experience of the early adopters can offer valuable insight for the remaining jurisdictions as they design policies to meet or beat the leaders.

Further, some of our recommendations are explicitly aimed at either federal or provincial governments, while others do not specify the government actor involved. In those cases, adoption of the policy in question by any government would be good news—and its adoption by all relevant Canadian jurisdictions would be even better.

### An Essential Climate Solution

Below are three recent assessments of the importance of electrification in reducing Canada's greenhouse gas (GHG) emissions.

*From Technology and Policy Options for a Low-Emission Energy System in Canada: The Expert Panel on Energy Use and Climate Change (Council of Canadian Academies, 2015):*

“Low-emission electricity is the foundation for economy-wide emission reductions in transportation, buildings, and industry. While Canada already benefits from relatively low-emission power generation, remaining high-emission generation facilities will need to be replaced, and all provinces will need to expand low-emission electricity generation capacity to meet growing demand and enable further reductions.”

“Improved building design can reduce heating and cooling energy demand by 60 to 90% over conventional construction, and can facilitate a transition to low-emission electricity for space heating. Such buildings feature passive solar design; enhanced use of insulation; and air-, ground-, and water-source heat pumps.”

*From Pathways to Deep Decarbonization, Canada Report (Sustainable Development Solutions Network, Carbon Management Canada and IDDRI, 2015):*

“Fuel switching to decarbonized electricity is the single most significant pathway toward achieving deep emissions reduction globally. It allows demand sectors to reduce their end-use emissions by switching from refined petroleum products, natural gas and other fossil fuels to clean electricity. This abatement is only made possible through both decarbonization of existing electricity generation as well as a large expansion of new zero emissions electricity sources. This trend is already evident, with electricity production moving strongly towards decarbonization in the developed world, including in Canada.”

97% of all EVs sold in Canada last year were purchased in the three provinces that currently offer rebates.

In Canada, the “buildings, transport and electricity sectors almost completely decarbonize by 2050, accounting for less than a quarter of remaining emissions.” This scenario “envisions a large increase in electricity generation, with the share of electricity rising to almost half of total annual energy consumption by 2050...This translates into a more than doubling of electricity supply between now and 2050.”

*From Canada’s Challenge & Opportunity: Transformations for major reductions in GHG emissions (Project Summary, Trottier Energy Futures Project, 2016):*

“In the first 20 years of the simulations (2010 to 2030), the results from the scenario analysis point to a number of opportunities that, if acted upon now, will lead to significant progress toward meeting the GHG emission reduction goals.

- Reduction of dependence on fossil fuels for end uses, mostly by switching to greater use of electricity derived from low-carbon sources or biofuels. This includes, as examples, replacing combustion of fossil fuels for space heating, and hot water and steam production in the residential and commercial sectors, with electric boilers, electric baseboard heaters, electrically driven geothermal and air source heat pumps, and increased use of ambient solar heating. In the transportation sector, the dominant changes indicated by the modelling are toward the use of electric vehicles for passenger cars and light-duty commercial vehicles, the use of biofuels for heavy-duty transport, and selective electrification of rail transport. In the industrial and agricultural sectors, the dominant opportunities involve switching to increased use of electricity and biofuels.

- Reduction of dependence on fossil fuels for electricity production. As shown in the analysis, this is one of the most cost-effective options for quickly reducing combustion emissions.”

## Transportation

The electrification of personal transportation, via electric cars, is a significant opportunity we can start to realize today, as the technology is ready and increasingly attractive. Support for electrification in transit also offers a significant contribution to reducing greenhouse gas emissions. To increase the uptake of electric vehicles (EVs) in Canada, governments should:

**Invest in effective support for EV education** in their 2017 budgets. Polling shows that relatively few drivers know about the EVs available today, or about the benefits—economic and environmental—of driving them. In response, governments can support access to updated, abundant, unbiased and user-friendly EV information to potential drivers, and to calculators<sup>2</sup> or other tools that allow potential EV drivers to assess the costs/savings of EV ownership over time. Governments can also provide funding to support EV “test and trial” initiatives run by non-profit organizations, which would allow potential EV buyers to test drive a range of EV models and talk to current EV drivers about their experience driving, charging and maintaining EVs. Increasing the fraction of EVs in the growing number of car-sharing fleets, via support for pilot programs in interested municipalities, is another very effective way to introduce drivers to EVs.

**Provide incentives for the purchase of EVs.** There is strong evidence, both in Canada and in peer countries, that rebates to offset the higher upfront cost of EVs are an effective means of accelerating EV use. For example, 97 per cent of all EVs sold in Canada last year were purchased in the three provinces that currently offer rebates. All provinces should offer a rebate of at least \$3,000, and the federal government should match that level of incentive.

Other kinds of incentives can also be very effective in convincing drivers to purchase EVs. For example, guaranteed access to high-occupancy vehicle (HOV) lanes for EVs would be a very appealing benefit for some commuters. Regulators should also consider rate structures adapted to EVs that support low-cost charging and maximize GHG benefits. For example, Ontario plans to offer free overnight EV charging and transition to an enhanced time-of-day charging program to lower electricity bills for EV owners<sup>3</sup>.

## Over time, trilateral cooperation between Canada, the US, and Mexico could lead to North America being a leading player in the fast-growing global EV market.

---

### **Make strategic investments in charging infrastructure.**

Greater availability of workplace charging would help reduce “range anxiety” for EV drivers, so governments should offer incentives to workplaces that invest in EV chargers. Fast charging stations in public locations where they will be used—for example, at rest stops along national highways or near public / urban transit hubs—are also an important upfront investment that governments should support, often via public-private partnerships.

### **Support the growth of the EV supply chain in Canada through a dedicated advanced transportation innovation fund and a Canadian industrial strategy for electric vehicles.**

Federal and provincial investments have helped to build clusters of advanced transportation expertise in Canada, including electric battery and fuel cell technologies and advanced transportation software. A new national innovation network for advanced transportation technologies—an independent entity that brings together industry, government, and academic expertise—could build on that foundation and help position Canada as a leading global destination for advanced vehicles, including in public transit and other applications alongside personal vehicles. The federal government could support a fund of this kind in the 2017 budget.

A more in-depth understanding of the specific areas where the prospects for job growth are greatest would significantly enhance the ability of government, academia and the private sector to prepare to turn the inevitable changes into opportunities rather than threats. Federal and provincial governments together can support effective decision-making, planning and funding at a finer level of detail to ensure that Canada is prepared to not only protect, but to enhance its current presence in the auto sector, a critical part of the Canadian economy. This transportation-specific analysis could comprise one sector strategy within the overall electrification roadmap we recommended earlier in this document. Over time, trilateral cooperation between Canada, the US, and Mexico could lead to North America being a leading player in the fast-growing global EV market.

Where predictable demand for EVs has been demonstrated, **design effective and balanced regulations to require a certain percentage of car sales to be zero emission.** Regulations that mandate a growing percentage of vehicle sales to come from zero- or low-emission vehicles will help

get more electric vehicles into sales lots, and thus into consumers’ hands. Because EV uptake and incentives vary across Canada today, the design of provincial “Zero Emission Vehicle” (ZEV) policies should reflect that province’s specific situation. Any federal ZEV policy would need to consider how best to level the playing field between provinces.

## Buildings

Everywhere in the economy, electrification works best if it’s paired with increasing energy efficiency. Having efficiency and electrification go hand-in-hand is particularly important in the buildings sector, where efficiency opens the door to greater use of electric technologies: an electric heat pump may not be an effective choice to heat a very leaky home, but it could provide more than enough heat for a cutting-edge green building. In other words, it’s efficiency that makes it possible to displace fossil fuel combustion in buildings.

Of course, increasing energy efficiency has other important benefits. Those include reducing costs for homeowners, tenants, and building operators; reducing emissions where fossil fuels are used in buildings; and freeing up electricity for other economic uses in cases where buildings are already powered with clean electricity.

The policies below will help to reduce emissions and encourage electrification in the building sector. They also build on one another, becoming progressively more stringent and more mandatory over time.

### Existing Buildings

Governments **should require all large buildings (for example, buildings over 25,000 square feet) to report their energy use**, and the associated GHG emissions, annually using Natural Resources Canada’s ENERGY STAR Portfolio Manager. The information should be public and comparable.

As an immediate first step in advance of mandatory reporting, all public buildings—federal, provincial, municipal and broader public sector—should voluntarily report their energy performance to the database.

---

<sup>2</sup> See, for example, the U.S. Department of Energy’s calculator at <http://www.afdc.energy.gov/calc/>.

<sup>3</sup> See Measure 2.3 of Ontario’s Climate Change Action Plan at <https://www.ontario.ca/page/climate-change-action-plan#section-4>.

## Canada has significant expertise in resource extraction, and innovation related to electrification is already taking place in our resource sectors today.

---

Drawing on this data, governments should set minimum greenhouse gas and energy performance levels for existing large buildings, by building type. Because the electricity mix varies by province, the GHG performance standard would need different baselines in different provinces.

For an initial period of time, governments should offer targeted retrofit incentives and/or financing for buildings that do not meet the established performance target. Over time, governments should consider moving to regulations that require buildings in the lower tier of performance to meet minimum performance targets. In this scenario, governments would strengthen the performance level over time and communicate the next set of targets well in advance, in order to encourage early adoption and to facilitate efficient capital planning.

### Existing Homes

Require energy audits and labelling for homes at the time of sale and major renovations, so that home buyers (and in the case of renovations, homeowners) can easily understand the energy costs and potential for improvement associated with a given home purchase.

Support significant improvements in GHG and energy performance through incentives for retrofits. Drawing on the legacy of the EcoENERGY program, require an audit upfront, and provide incentives based on the level of improvement in a home's performance after the retrofits have occurred. Such incentives could be offered through tax credits calibrated to the performance improvement achieved; through loans; or through grants where appropriate. To remove barriers for homeowners, public or private "one-stop-shop" organizations could be established to offer technical expertise and facilitate access to financing. To ensure high-quality renovations, investments in training and certification of renovators will be necessary.

### New Buildings (Commercial and Residential)

Require nearly net-zero-ready energy standards via building codes across Canada in the near term. Building codes should also require "electrification readiness": for example, roughing in EV chargers in homes, condominiums, and commercial buildings; ensuring solar readiness; and supporting energy management systems and adaptive technologies like smart thermostats. This transformation of the industry will require investments in capacity building and training, which can be supported by incentive programs and the development and implementation of stretch codes.

## Industrial Processes

Even a very low-carbon future will still require cement, iron, steel, petrochemicals, and so on. Canada has significant expertise in resource extraction, and innovation related to electrification is already taking place in our resource sectors today: for example, the Canada Mining Innovation Council has developed roadmaps toward zero waste mining, one component of which is enhancing the deployability of electric mine haul trucks and other vehicles.

With the advent of greater data collection along with increased connectivity and automation, the electrification of industrial processes offers significant emission reduction potential. But the technological solutions are less advanced in most heavy industry applications than they are in the buildings or personal transportation sectors—a state of affairs that opens up opportunities for Canadian leadership.

Because commercial-scale technical solutions for electrification are still being developed for some applications, Canada's governments will need to consider earlier-stage research in the electrification of industrial processes alongside deployment policies and potential for export.

In the context of growing global demand for low- or zero-carbon industrial processes, and as part of the upcoming federal Innovation Agenda, the federal government should create a new research institution for zero-carbon industrial processes. A research institution of this type should bring together universities, federal and provincial players, industry, and federal science bodies like the National Research Council.

## Updated acts and regulations could allow for R&D support, pilot projects, innovation, growing clean power capacity, and new rate structures, while assuring affordability and economic competitiveness.

Governments in Canada should also **initiate trade promotion efforts** to attract businesses to Canada to take advantage of our clean electricity supply. Locating a manufacturing operation or a data centre in areas of Canada that generate clean electricity would allow businesses to reduce the lifecycle emissions (“embedded carbon”) associated with their products, which confers an important advantage in an increasingly carbon-conscious marketplace.

Over time and where appropriate, the federal government should also set **mandatory energy performance standards for heavy industry** at high enough levels that electrification needs to be considered, while **offering incentives** to support technology changeover and domestic innovation.

### Electricity Supply

Of course, electrification works best to reduce emissions when the electricity comes from zero-carbon sources. In assessments of pathways to deep emission reductions in Canada, fuel switching from fossil fuels to electricity produces significant growth in the electricity sector, particularly for hydro, wind, and solar power.

This means that governments in Canada need to plan for significant growth in the clean electricity sector as we reduce greenhouse gas emissions, even while maximizing energy conservation and energy efficiency.

The policy proposals below are intended to support more effective use of clean power resources in Canada, encourage the growth of clean electricity capacity, and remove barriers to electrification. They are also intended to help attain the longer-term national goal of reaching a near-zero carbon electricity supply that we recommend be included in an electrification action plan for Canada.

**The federal government should facilitate and enable opportunities for interprovincial and regional cooperation on electricity needs**, as well as increased exports, where such enhanced connections support the transportation of clean power to jurisdictions still reliant on fossil fuelled electricity, and where they enjoy broad regional support.

### Laying the Groundwork for Electrification

In some regions, the legislation governing energy boards and utility commissions can be perceived as presenting a structural barrier to electrification. Some utilities are mandated to choose “least cost” electricity generation, rather than “lowest emission,” “most resilient,” or “best life-cycle return.” Restrictive utility mandates can also make it difficult to invest now in new clean power to enable more electrification; to plan for increased demand as the transition to electrification takes hold; to conduct pilot programs; to support R&D efforts; to value energy efficiency and conservation; to invest in smart grid technology; and to change rate structures where necessary to support electrification activities.

Thus, in some regions, utility mandates may need to be updated for the 21st century, now that electrification and low-carbon electricity are important policy goals. Updated acts and regulations could allow for R&D support, pilot projects, innovation, growing clean power capacity, and new rate structures, while assuring affordability and economic competitiveness.

Similarly, as more and more renewable electricity generation comes online, Canada’s electricity transmission and distribution system operators will face new challenges. These operators have already worked hard to develop and implement solutions as, for example, coal-fired generation has come offline in Ontario. However, because of the constitutional division of powers and the current structure of Canada’s electricity grids, most system operators have worked on these challenges independently—with many organizations working on similar challenges at the same time. This leads to duplication of effort and a failure to consider the potential benefits of work in other jurisdictions or interjurisdictional cooperation.

## The federal government should also convene expert panels to recommend best practices for utility legislation and regulation in a low-carbon world.

---

Building on the Government of Canada's Budget 2016 investment in regional electricity cooperation, the **federal government should support a forum for transmission and distribution system operators to share best practices** for managing high penetrations of smart and variable generation and loads. The forum would allow system operators to share issues of common concern and support research and analysis on solutions.

The federal government should also **convene expert panels to recommend best practices** for utility legislation and regulation in a low-carbon world. Drawing on Canadian and international precedents, the panel would recommend elements of "model" legislative and regulatory approaches that jurisdictions could adopt where appropriate. As a next step, the federal government could make the adoption of some or all of the best practice recommendations a condition when considering funding energy-related infrastructure projects.

Building on existing measures and where appropriate, **provide enhanced federal support for the deployment of renewable technologies**. While renewable energy becomes increasingly cost-competitive all the time, federal support can speed its deployment, helping to achieve emission reductions in line with our 2030 climate target. The 2016 federal budget took the positive step of introducing accelerated depreciation measures for two additional electrification technologies, power storage and EV chargers. However, U.S. producers will continue to benefit from a renewed Investment Tax Credit and Production Tax Credit into the early 2020s, thus creating an uneven playing field for some Canadian developers. Any enhanced federal support could be designed to phase out on the same timeline as the U.S. credits—by which time a growing national price on carbon should help make clean power even more competitive against fossil options.

Build on existing electricity sector regulations by **adopting emission regulations on natural gas-fired electricity** that become progressively more stringent over time. The regulation should be structured in such a way that renewable energy investment is permitted as a compliance option. In addition, and where applicable, governments should assess the benefits and costs of **accelerating the timeline for the full phaseout of unabated coal power across Canada**.

