

# POWER TO EXCEL

BUILDING A POLICY LINCHPIN  
FOR THE FUTURE OF  
CANADA'S ENERGY SYSTEM



DR. ROGER GIBBINS

# PREFACE

In the spirit of Canada's 150th anniversary, *Power to Excel* reflects the conviction that an extraordinary future is within our reach *if we harness our energy potential today*. With the world in the midst of an historic shift to a lower-carbon economy, it is an opportune time to reflect on Canada's energy system – where are we now, where do we want to be a generation from now, and how do we get there from here? *What does the future hold as we embark on the transition to a lower-carbon economy and way of life?*

A great deal of work by provincial and territorial governments, think tanks, industry associations, NGOs and the academic community has gone into designing a policy framework for Canada's energy future. However, if we are to build on this foundation, much more remains to be done. We lack sufficient policy integration across federal, provincial/territorial, municipal and Indigenous governments. We need an inspirational story about our energy past for our future, one that will engage domestic and international audiences. It is perhaps of the utmost significance that the Government of Canada's position on the energy landscape has yet to be well articulated. Although the government is extensively engaged in energy policy on many fronts, the overall architecture of this engagement remains unclear.

*Power to Excel* presents the case for a more expansive and explicit federal policy position regarding the energy landscape. It argues that the Government of Canada has an essential role to play in framing Canada's energy future and in linking energy policy to the broader values and aspirations of Canadians. In short, the argument is that the federal government should provide the linchpin in an increasingly complex policy environment.

Canada's energy future will be constrained, though not determined, by external factors largely beyond our control. The policy choices facing the government are shaped by international agreements, including those on climate change; by provincial and territorial energy policies and, for that matter, those of non-Canadian governments; and by truly transformative technological change. Nevertheless, to a meaningful degree Canada's energy future — the timely transition to a lower-carbon economy — is ours to create. We have the opportunity to bend the trajectories of change in our favour through the policy choices we make today.

It is time, then, to write the next chapter in our energy story by harnessing the power of the energy system in our pursuit of excellence across the economy and society. *Power to Excel* is a modest step in that direction.

Opinions expressed in this publication are solely those of the author and do not indicate support from Natural Resources Canada.

# SETTING THE STAGE

*“Ready access to reliable, affordable and socially licensed, environmentally responsible forms of energy is not only vital for the country’s economic competitiveness and environmental well-being, it is vital to people’s everyday lives.” - NRCan, 2014:3*

Energy lies at the very core of Canadian lives. It moves the national economy, supporting seemingly unrelated activities from on-line banking and malls to manufacturing and international trade.<sup>1</sup> Beyond its contribution to employment, trade and tax revenues, the energy system touches our lives in a multitude of ways: it heats and cools our homes and industries, allows mobility, charges our tablets and smart phones, and impacts the natural and built environments. Furthermore, Canadians will soon connect with the energy system not only as consumers but also as producers through solar, geothermal and wind technologies.

“The energy sector has been a primary driver of Canada’s economy for many decades. In addition to meeting our energy needs, the development of our energy resources attracts investment, generates significant economic growth, and improves the quality of life for people and communities across the country.”  
- CES, July 2015

In 2015, the energy sector directly and indirectly generated 10.8% of the Canadian GDP and employed directly or indirectly 905,398 persons (5.0% of total employment) including approximately 16,200 Aboriginal people living off-reserve. The sector accounted for \$102 billion in exports (21% of Canadian domestic merchandise exports), represents \$208 billion of foreign direct investment, and, on average between 2010 and 2014, generated \$22.2 billion in corporate income tax, indirect taxes, royalties and land sales.  
- NRCan *Energy Fact Book, 2016-2017*

In a June 2015 Ipsos Reid survey of 3,000 national respondents, 53% agreed with the statement “the natural resource industry provides good quality jobs for Canadians across the country.”  
- NRCan, June 2015

It is not surprising, therefore, that Canadians care deeply about energy policies that connect so directly to our personal lives and to the quality of life in our local and regional communities. Canada’s vast geography and dependency on international trade, as well as its unique position as a major consumer and exporter of energy, ensure that the energy system plays a central role when we think about our continental and global positioning and about our future. For many Canadians, energy is *the* lens through which they view the future.

---

<sup>1</sup> The International Energy Agency (IEA) concludes that “Canada remains one of the most energy-intensive countries among IEA members. This is largely because of its energy reserves, its energy-intensive extraction and processing for exports, its high standard of living, but also its large geography requiring transport and in-land shipping and the climatic conditions, which demand more energy for heating.” (2016:10-11).

However, the Canadian energy system is far from immutable. National and global energy dynamics change, often rapidly and dramatically. Historically, we were able to rely almost exclusively on the U.S.) as the sole customer for the bulk of our energy exports. Although at present the U.S. still absorbs 97% of Canadian crude oil exports and 100% of natural gas exports (NRCan *Energy Fact Book 2015-2016*), American import demand has softened as domestic production increases, driven largely by the development of unconventional resources such as tight oil and shale gas. Growth in energy demand has shifted to emerging economies, and in these circumstances, Canadian firms are obliged to seek new markets for their energy products.

Within this context, many energy policy experts have called for a comprehensive long-term energy strategy to frame the transition to a lower-carbon, globally competitive economy and, not incidentally, to support the Government's environmental objectives. Over the past two decades, a good deal of work was done by academics, think tanks, NGOs and industry associations<sup>2</sup> on the potential design of such a strategy, but this extensive body of work found limited traction with Canadian governments.

In October 2009, the leaders of 11 Canadian think tanks gathered in Winnipeg to discuss a potential Canadian energy strategy. In a document that could easily have been written in 2017, the **Winnipeg Consensus** called for a national dialogue to “explore ways to overcome policy fragmentation and pursue opportunities that are emerging at the intersection of clean technology, infrastructure, climate change and investment in a green economy.” The Consensus rippled through energy policy discussions over the next eight years.

Recently, however, governments have been more receptive to the call for a pan-Canadian energy strategy. In 2011, federal, provincial and territorial energy ministers endorsed a **Collaborative Approach to Energy** at the Energy and Mines Ministers' Conference (EMMC) in Kananaskis, Alberta. While not a formal strategy, the approach outlined a common vision, shared principles and a multi-year work plan with clear deliverables. Regulatory reform was stressed as a federal priority with collaborative work to be undertaken by federal, provincial and territorial governments.

Although public visibility was limited, governments worked this file through the Council of the Federation and the EMMC.<sup>3</sup> In July 2015, the Council of the Federation released the Canadian Energy Strategy (CES). It articulated key areas where provinces and territories can collaborate, but did not address federal energy policy except by calling for boundaries on any such policy. Then in late 2015, Prime Minister Justin Trudeau's mandate letter to the new Minister of Natural Resources, the Honourable Jim Carr, instructed the Minister to work with

---

<sup>2</sup> The list includes but is by no means restricted to APEC, the Canada West Foundation, the Canadian Chamber of Commerce, the Canadian Council of Chief Executives, the CD Howe Institute, the Conference Board, the Ecofiscal Commission, the Energy Policy Institute of Canada (EPIC), the ISSP, the Network for Sustainable Prosperity, the Pembina Institute, the Public Policy Forum, QUEST and Smart Prosperity.

<sup>3</sup> Earlier federal initiatives included the National Energy Program (1980–1985), the Energy Options Advisory Committee (1987–1988), and targeted consultations (2005–2006) on an Energy Policy Framework.

provincial and territorial governments to develop a long-term energy strategy. In March 2016, the First Ministers, through the **Vancouver Declaration**, directed their energy ministers to work together on specific areas under the CES. The ministers reported on shared progress in late 2016 and urged the federal government to participate with respect to energy efficiency, electricity and renewables, energy markets and trade, technology and innovation, and international energy. On December 9, 2016, the governments of Canada and all provinces except Manitoba and Saskatchewan adopted the **Pan-Canadian Framework on Clean Growth and Climate Change**.

During this time, growing international concern about climate change, commitments to a new relationship with Indigenous peoples, increased urbanization, an unstable international environment and a relentlessly competitive global economy began to reshape the energy policy space.

---

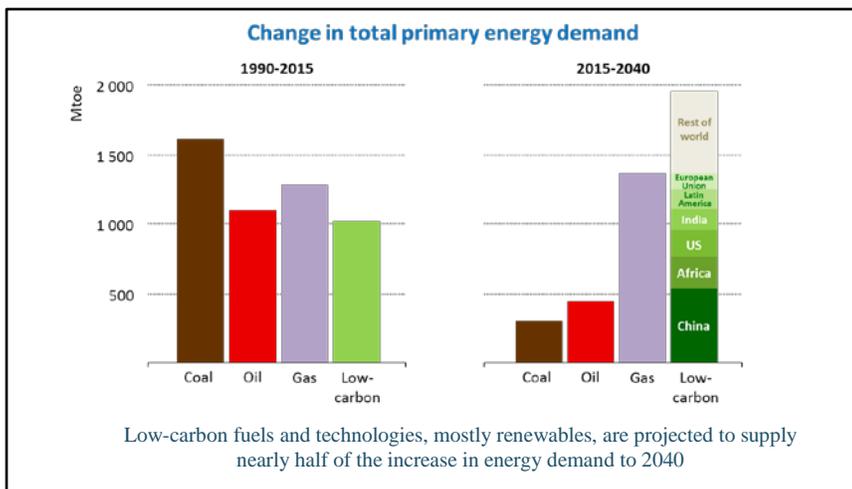
## GLOBAL ENERGY TRENDS

Energy systems around the world are in a state of dynamic flux, with even more dramatic change on the horizon. As a consequence, predictions for domestic and international supply and demand vary greatly. For example, oil price forecasts in recent years, admittedly the most volatile of energy forecasts, have ranged from *peak oil* with limited supply and high prices to *trough oil*, with supply gluts and low prices. The factors shaping global supply and demand, including technological change, shifting social values, new international policy paradigms, demographic transformations and the unfortunate potential for conflict, make our crystal ball cloudy, if not completely opaque.

Fortunately, we are on firmer ground in identifying *trajectories of change*, predicting where energy systems are trending rather than specific end points or timelines. As Minister Carr stated in the House of Commons (2016), Canadians “. . . know our world must phase-out its reliance on the fossil fuels of the past and embrace the renewable energy of tomorrow. While that transition may be long, the trajectory is clear.”

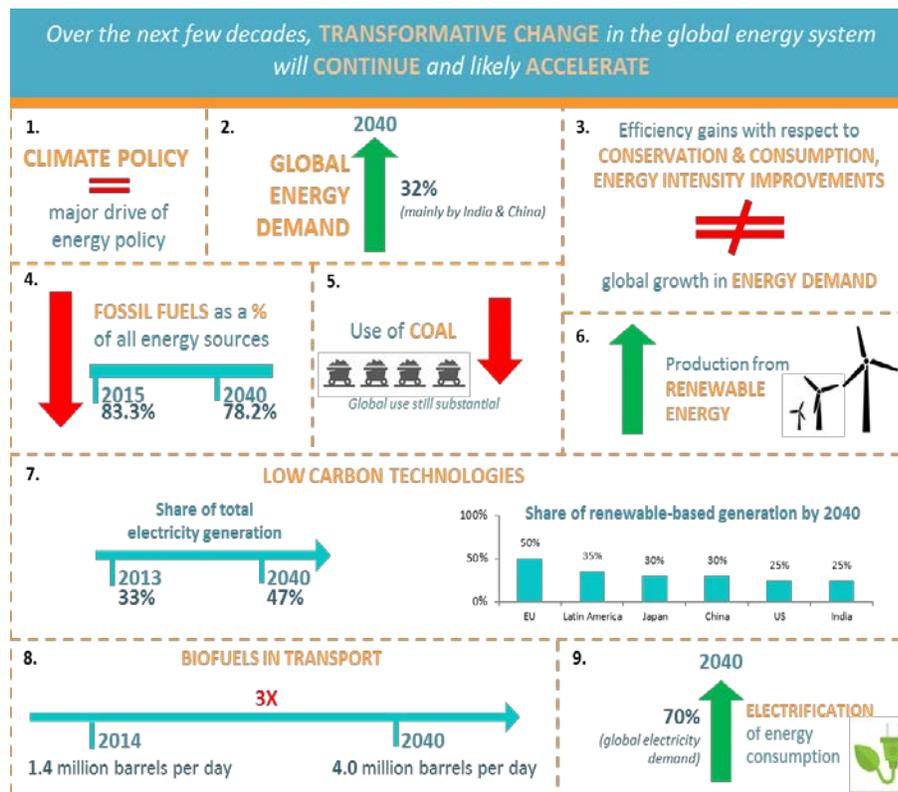
Crafting Canadian energy policy is unavoidably situated in a global context of unprecedented change, and here there are three particular trajectories to watch:

- First, world **energy demand is increasing**. Emerging economies are key contributors to this increase, reflecting faster rates of growth in economic activity, population and urbanization. The growing importance of China and India to global energy markets cannot be overestimated.



- Second, the world is **beginning the transition to a lower-carbon economy**. While fossil fuels will likely remain the dominant source of global energy for several decades, leading economies are making major investments to diversify energy sources and position themselves as low-carbon technology leaders. The 2016 International Energy Agency's (IEA) *World Energy Outlook*, the world's foremost authority on energy issues, predicts that low-carbon fuels and technologies, mostly renewables along with natural gas, will meet 80% of the growth in energy demand to 2040. The share of oil and (especially) coal, the largest fuels in today's global energy mix, is anticipated to shrink.
- Third, while concerns about **energy security** have not evaporated, they are being redefined by the energy transitions taking place. Deployment of renewables and enhanced energy efficiency play an important role in moderating oil and gas imports, providing an extra tool to mitigate traditional energy security concerns. On the other hand, the increased role of electricity in all economies and the rising share of variable renewables (wind and solar) in power generation put electricity security in the spotlight.

## Trajectories of Change



The above graphic shows that

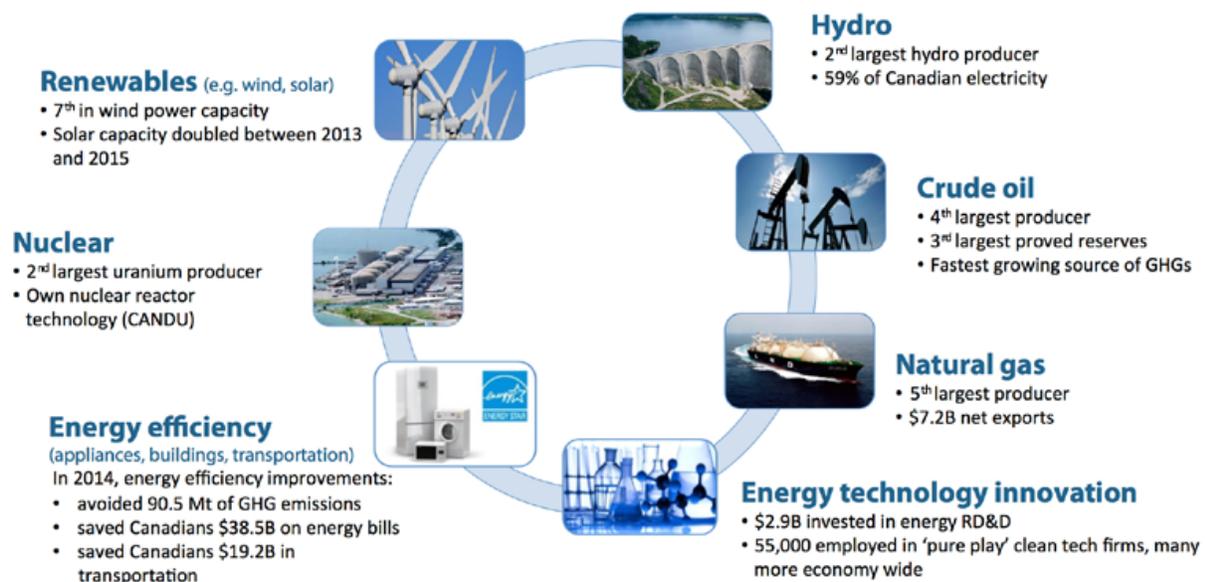
1. Climate policy will be the major driver of energy policy as efforts to decarbonize the global energy system expand.
2. At the same time, global energy demand will continue to grow. The IEA's *2015 World Energy Outlook* predicts that demand will grow by 32% by 2040 (mainly in India and China). It also predicts that demand growth for natural gas (mainly in China and the Middle East) will outpace other fossil fuels. The IEA forecasts that world oil production will grow by 12% by 2040.
3. Although there will be efficiency gains with respect to conservation and consumption, energy intensity improvements will not offset growth in global energy demand (NRCan, 2015).
4. Fossil fuels will continue to play a major role for decades to come. The USEIA (2016) predicts that fossil fuels' share of global energy supply will only decrease from 83.3% in 2015 to 78.2% by 2040.
5. The use of coal for power generation will decline, although it will still be substantial in many parts of the world. The IEA notes (2014:9) that, "Growth in coal-fired generation since 2010 has been greater than that of all non-fossil sources combined, continuing a 20-year trend . . ."
6. Production from many forms of renewable energy will increase, driving in turn "a reconceptualization of energy systems – moving toward diffuse, distributed and network-based generation sources" (IEA, 2016).
7. The share of low-carbon technologies in total electricity generation will increase from 33% in 2013 to 47% by 2040.
8. The IEA projects that the demand for biofuels in transport will triple between 2014 and 2040, from 1.4 million barrels per day in 2014 to 4.0 million barrels per day by 2040.
9. The electrification of energy consumption will continue to increase, perhaps at an exponential rate. The IEA refers to electrification as "a driving force across the global energy system" and predicts that global energy demand will increase by more than 70% between 2013 and 2040.

We have, then, a fairly good idea of where the global energy system is heading, even if the speed of transformation is uncertain. (We can, for example, confidently predict the greater electrification of the automobile fleet without knowing whether the proportion of electrical vehicles in 2040 will be 10%, 25% or 50%.) Most global forecasts suggest that given the embedded nature of the energy status quo, including commitments to existing energy infrastructures, significant transitioning of the global energy mix away from fossil fuels will occur gradually. Others are more optimistic about the faster development of renewable energy, particularly as it relates to electricity generation. *Canada 2030*, for example, predicts (2016) that “a new electricity-based industrial ecosystem could emerge at a much faster rate than expected, significantly disrupting fossil fuel markets.”

## Transformative change in the Canadian energy system

The Canadian energy system will be shaped by many of the trajectories of global change; we can expect little else given Canada’s open economy. We are price-takers, not makers, across most commodities in continental and international energy markets, and many of the major drivers of innovation are outside the country. The future of solar power will be determined more in China and the United States than in Canada, as will the future of wind power be determined more in Europe. In the transition that lies ahead, it is unclear whether we’re facing relatively smooth, linear change or more disruptive, abrupt change in the shift from fossil fuels. Will technological developments chip away at the edges of the existing energy system or lead to its fundamental and rapid transformation?

While Canada is home to just under 0.5% of the world’s population, we have 10% of the world’s crude oil reserves (97% of which is in the oil sands), 2% of recoverable shale oil reserves, 1% of proved conventional natural gas reserves, 8% of recoverable shale and tight gas reserves, and 1% of coal reserves. Canada generates 10% of the world’s hydroelectricity and 3% of the world’s total electricity (NRCan *Energy Fact Book 2016-17*) and is currently the world’s second-largest producer of uranium, supplying 16% of global demand.



At the same time, our rich endowment of natural and human resources allows us to “punch above our weight.” Good fortune means that we have more control than most countries, so that to a significant degree we can be masters of our own fate through energy policies that build on our strengths and buffer our weaknesses. Thus, the transition to a lower-carbon economy need not be driven by passive acceptance of technological change or new market conditions; we have the capacity to shape our future through the policy choices we make. In this sense, some trends are more predictable than others because they reflect policy choices. A greater reliance on public transit, for example, is not simply a prediction; it is also a choice, as was going off coal-generated electrical power.

“...Let us leverage the fossil fuel resources we have today to deliver clean energy solutions for tomorrow...”

-Minister Carr, House of Commons

What, then, lies ahead for the Canadian energy system with respect to challenges and opportunities in a world of dynamic change? The following seem likely:

1. Efforts to decarbonize the global energy system, with an emphasis on reducing the climate footprint of energy production, transmission, transportation and consumption, will continue to shape Canadian policy.
2. Cultural and generational change will give added weight to environmental values in energy policy debates.
3. Carbon pricing in one form or another will mean that externalities are more fully incorporated into the consumer cost of fossil fuels.
4. The contribution of renewables to Canada’s energy mix will steadily and perhaps even dramatically increase.
5. Regulatory processes will be modernized to strengthen environmental protection and expand public participation.
6. Urbanization will continue, prompting the greater utilization of public transit.
7. Continental and global frames for energy policy will be increasingly important.
8. Indigenous communities will become more engaged in the design and implementation of energy policy.
9. Energy production will become more regionally dispersed as new forms of renewable power generation come into play, and thus the *national* character of energy policies will be more evident.
10. Although global demand for oil and natural gas will increase, Canadians will face more competitive international markets and weaker American markets.

Taken together, these changes border on revolutionary. Fortunately, we have the opportunity to direct the trajectories of change through the policy choices we make today. This opportunity, however, means little if it is not harnessed to a policy destination, to a vision of our energy future.

---

## CRAFTING AN ENERGY VISION

If it is difficult to contemplate Canada's future without bringing the energy system into play, this suggests the need for an *energy vision* through which Canadians and their governments can integrate a complex policy file. At a time when contentious policy trees often obscure the policy forest, a pan-Canadian energy vision could provide a common platform for federal, provincial and territorial governments. It could also provide a framework for engaging Indigenous communities and municipal governments, a vehicle for public education, and a means to link long-term energy policy to the broader goals of governments. And, it could provide a platform for constructive dialogue with Canadians and the international community.

To these ends, the vision should be aspirational, focusing on opportunities to be seized rather than problems to be solved. It could provide the contextual backdrop against which specific projects and policy options could be placed, allowing the energy system to be discussed as a vital national asset rather than as a collection of policy headaches. Without such a vision, energy initiatives by the government could be lost in the general policy churn or be viewed narrowly as relating to employment or research support rather than as part of a more comprehensive response to energy challenges and opportunities.

An energy vision is particularly important for the Government of Canada as it provides a framework for the transition to a lower-carbon, globally competitive economy. Given that approximately 80% of our GHG emissions come from the production and consumption of energy, this overarching policy goal is unavoidably all about energy: how we produce, transport and consume it. An energy vision is therefore an essential complement to Canadian climate policy.

At first blush, it is daunting to contemplate an energy vision spanning often pronounced differences in circumstances across provinces and territories and across Indigenous and local communities. It is therefore of some comfort to note that such differences pale beside the differences in *national* circumstances that confront global climate policy, where progress is nonetheless being made. It should also be stressed that what the CES refers to as “the diverse pan-Canadian energy landscape” is a strength rather than a weakness to be overcome, fostering as it does diversification, resiliency and healthy competition. How, then, might an energy vision be crafted that would resonate with communities across the country?

## Foundational Values

Visions with the power to shape public policy are grounded in values rather than facts. They are more than a passive reflection of reality for they bring values and aspirations to the policy table. Therefore, a discussion about Canada's energy future is quite appropriately a normative discussion about where we *should* be going.

Not surprisingly, Canadians often hold discrepant values when it comes to the urgency of environmental protection, nuclear power, pipelines, the oil sands, tankers, the location of wind and solar farms, and public subsidies for the production and/or consumption of all forms of energy. Nonetheless, we can identify a core set of values around which a vision for Canada's energy future can be constructed. These include:

- a strong commitment to environmental protection, including a determination to meet international commitments;
- a conviction that environmental protection and economic growth are compatible;
- respect for the constitutional division of powers, combined with the recognition that all governments — federal, provincial/territorial, municipal and Indigenous — have a role to play in shaping Canada's long-term energy future;
- acceptance of significant differences in energy circumstances across and within provincial, territorial, Indigenous and local communities;
- acknowledgement that while innovation should be driven primarily by the private sector, support for innovations that serve the national interest cannot be left to the private sector alone;
- the importance of energy security, although there is some evidence that concerns in this respect are fading in the face of commodity gluts and more diverse energy sources coming on-stream; and,
- recognition that a successful transition to a decarbonized energy system will depend in large part on co-lateral prosperity and human capital within the resource sector.

Values, of course, are seldom universal in the face of divergent regional and ideological perspectives. Quite understandably, Canadians living on Vancouver Island might see the energy world differently than do the residents of Fort McMurray, Alberta, or Mississauga, Ontario. Nor are salient values neatly aligned with one another; considered in isolation, they might take policy makers in very different directions. And, Canadians will differ with respect to the priority they attach to specific values. Nevertheless, the values identified above are part of the feedstock from which we can fashion an overarching policy framework. They enjoy broad although not unanimous public support, and do not imply encroachment by the Government of Canada onto the constitutional turf of provincial and territorial governments, or onto the rights and values of Indigenous communities.

## A PAN-CANADIAN ENERGY VISION

This is not our first rodeo in attempting to forge a pan-Canadian energy vision. In 2011, the EMMC's energy vision was that "Canada is a recognized global leader in secure and sustainable energy supply, use, and innovation." The 2015 CES vision is that "Canada is a global leader in providing a secure, sustainable and reliable supply of energy that is delivered with a high standard of environmental and social responsibility, consistent with efforts to reduce greenhouse gas emissions and contributes to continued economic growth and prosperity for all Canadians." Individual provincial governments have also been active in crafting energy visions. For example, the Ontario government released *Conservation First: A Renewed Vision for Energy Conservation in Ontario* in the late spring of 2016. This electric power framework is built around the core principle of demand reduction through energy conservation and increased efficiency; the goal is to create a culture of conservation and to invest, where it is cost-effective to do so, in conservation first before new generation capacity. However, *none of these visions brings the federal government fully into play.*

A comprehensive energy vision would start with the Government of Canada, which provides the unavoidable policy linchpin in a complex energy world. It would build upon the existing framework for all federal policy: market orientation, respect for the jurisdictional authority and role of the provinces, and, where necessary, targeted intervention in the market to achieve specific policy objectives through regulation and other means.

A pan-Canadian vision would provide the aspirational foundation upon which detailed policy could be built. As such, it would reach well beyond any individual fuel or energy source, span production and consumption, and be robust enough to accommodate volatile energy circumstances from booms to busts. Ultimately, it would reach beyond the Government of Canada, weaving together the interests and aspirations of provincial/territorial, Indigenous and local communities while reflecting the desire Canadians have for a secure, reliable, affordable, sustainable and cost-efficient energy system. This vision would not provide answers to myriad specific policy challenges but could provide a principled template against which the national energy system's performance could be assessed.

A pan-Canadian energy vision must begin with the recognition that Canadians have embarked upon the transition to a lower-carbon, globally competitive economy and that our policies with respect to energy and climate are complementary.

### **More specifically, an energy vision for Canada could assert that in a generation:**

1. Canada is a global leader in sustainable development and use of the full range of energy assets;
2. Canadians have demonstrated our resiliency by growing our economy while reducing greenhouse gas emissions below international targets;

3. Canada's clean energy technology industries are innovative and globally competitive;
4. Indigenous communities are full co-development partners in the energy sector and in the resource sector more broadly defined;
5. The resource sector continues to provide jobs, prosperity, and opportunity in a world that increasingly values sustainable practices and low carbon processes;
6. Canada is an active participant in the global energy system as a supplier of commodities, services, expertise and clean technologies.
7. Canada encourages a business environment that fosters investments in clean technology, where public investment spurs the private sector and the Government acts as an innovation accelerator.
8. Public confidence in the regulatory system has been restored, and our regulatory model is the international standard.
9. Canada's urban environments are recognized internationally for their quality of life and energy efficiency.

If this is where we want to be by 2040, if not sooner, we need a road map that will take us there. Ultimately, this road map will be an integrated set of federal, provincial/territorial, Indigenous and municipal policies. The first step, however, is to map out energy policy space for the Government of Canada.

---

## ENERGY POLICY SPACE FOR THE GOVERNMENT OF CANADA

The energy policy space is crowded and will become even more so as municipal and Indigenous governments jockey with national governments and international organizations for voice and influence. At issue is how the Government of Canada can find space and a constructive role within this complex arena.

### International Policy Space

The energy policy space is increasingly bound by international agreements on climate policy, all of which touch to some degree on energy production and consumption. At times, although not consistently, these agreements come with domestic targets. Canada is an active player within this international policy space and, at least until recently, has been particularly influential in the North American space through bilateral and trilateral agreements with Mexico and/or the United States. As the IEA concludes (2016:12), “. . . the strong market integration with the United States and Mexico within NAFTA plays an important role for energy policy.”

More generally, the Government of Canada provides the linchpin between domestic realities and an embryonic international policy framework. Although the 2015 CES calls for “the more formalized participation of provinces and territories in international discussions and negotiations” and although provincial governments have forged innovative climate partnerships with American states, the primary international player going forward will be the federal government, particularly given that Canada’s brand is so closely tied to energy. International engagement will in turn animate domestic policy discussions and will likely underscore the Government’s leadership role within those discussions.

International policy engagement demonstrates the need for a Canadian energy story that can be easily conveyed to international audiences. A binder of 13 provincial and territorial energy policies along with dozens of municipal and Indigenous policies may reflect the Canadian reality but it is not a reality that can be communicated to international audiences wanting to know where *Canada* stands on the energy landscape. We need an energy story that is more than a listing of its component parts.

## Intergovernmental Policy Space

The provincial and territorial governments moved towards greater intergovernmental collaboration through the 2015 CES and its ten areas of policy focus (see Annex A), many of which touch on federal priorities and responsibilities. For example, enhanced energy information, research acceleration, human resource development, regulatory approval, and transmission/transportation systems all invite federal participation, and for that matter are policy areas where success will be contingent on federal engagement.

The provincial/territorial agenda was reflected in the 2016 *Vancouver Declaration on Clean Growth and Climate Change*, which recognized that “provinces and territories have been early leaders in the fight against climate change and have taken proactive steps, such as adopting carbon pricing mechanisms, placing caps on emissions, involvement in international partnerships with other states and regions, closing coal plants, carbon capture and storage projects, renewable energy production (including hydroelectric developments) and targets, and investments in energy efficiency.” The *Declaration* brought a positive tone to intergovernmental discussions about Canadian energy strategy, and the need now is to “advance a collaborative, F/P/T approach that enables the transition to a lower-carbon energy future.”

There is, then, no shortage of opportunities for policy engagement with provincial and territorial governments. Indeed, there are many parts of the energy policy file where intergovernmental cooperation has immediate appeal: funding green infrastructure, developing clean energy technologies, energy efficiency and conservation, and improved consultative mechanisms with Indigenous communities all come to mind. The innovation file, where the Government of Canada has greater capacity and financial resources to bring to the table, is a particularly happy space for F/P/T collaboration.

The intergovernmental aspects of policy development are not sidebars in the creation of a long-term energy policy for the Government of Canada. In fact, the intergovernmental arena may expand significantly with the inclusion of Indigenous communities. Given the government's commitment to fully engage Indigenous peoples in discussions of Canada's future and to do so on a nation-to-nation basis, given that many energy assets are found within the traditional territory of Indigenous communities or need to be transported across that territory, and given that many communities have an economic stake in energy development and that many remote communities are heavily dependent on outdated, carbon-intensive energy systems, it is imperative that a long-term energy policy embrace Indigenous interests and perspectives, although determining how this will best be done is very much a work in progress.

In any event, even an expanded intergovernmental policy agenda will not fully encompass the policy objectives and responsibilities of the federal government. It is therefore important to map out what the government could do on its own to advance a long-term energy vision without throwing sand into the intergovernmental gears. At the same time, it must be recognized that constitutional and practical realities preclude any stand-alone strategy. The federal government cannot *own* a comprehensive Canadian energy strategy; the provincial and territorial governments are too constitutionally empowered and too important practically to be overlooked. Moreover, a stand-alone federal policy co-existing with the 2015 CES would be a recipe for confusion. The challenge is to find a strategic language that acknowledges both the autonomy and co-dependence of the federal and provincial governments, and for that matter, municipal and Indigenous governments.

## Ongoing Federal Policy Engagement

It is not surprising that provincial and territorial governments took the lead with respect to the development of a long-term energy strategy. However, the constitutional responsibilities of the Government of Canada, including but by no means limited to national regulatory responsibilities, international and interprovincial trade, environmental protection, transportation and ports, and relations with Indigenous communities also touch directly on the energy needs and aspirations of Canadians. Moreover, energy policy is inextricably tied to government goals with respect to climate change, building a new relationship with Indigenous peoples, fostering technological innovation and thus global competitiveness, ensuring sustainable economic growth, and asserting international leadership in the transition to a climate-resilient, clean-growth economy. These federal goals all interface with the energy system as it is and as it might become. In this sense, energy policy is the linchpin for the federal policy agenda.

In Paris on November 30, 2015, the leaders of 20 countries, including Canada, launched Mission Innovation with the commitment to double their investments in clean energy research over the next five years. The participating governments also agreed to encourage private sector investment in early-stage clean energy innovation companies and to increase domestic and international collaboration.

**The Government of Canada starts with a seemingly full slate when it comes to energy policy. For example:**

1. initiatives that align with the government's climate change and clean growth targets, including initiatives on energy efficiency, electricity infrastructure, and renewable technologies;
2. restoring public confidence in the regulatory process by reviewing the *National Energy Board Act*, the *Canadian Environmental Assessment Act*, the *Fisheries Act* and the *Navigation Protection Act*;
3. building a national dialogue with Indigenous peoples on participation in resource development, energy safety and security;
4. fulfilling the commitment to green infrastructure spending;
5. examining ways to increase the role of provincial/territorial governments in international energy diplomacy;
6. leveraging Canada's strength in scientific research by increasing spending on energy innovation, and delivering on its commitments under Mission Innovation;
7. continuing to demonstrate how energy action can drive progress on climate change goals through the implementation of our Intended Nationally Determined Contribution;
8. encouraging greater energy efficiency through home energy refit programs and net-zero, energy self-sufficiency changes to the national building code;
9. forming global energy partnerships, either bilaterally or multilaterally, that advance the Canadian energy brand and access to markets; and
10. strengthening the safety and security of Canada's energy transportation and transmission infrastructure, including pipelines and the electricity grid.

In summary, the Government of Canada already has a large number of policy irons in the energy fire, and it will be challenging just to maintain momentum across this broad policy front. It will also be challenging to coordinate the energy policy file with other federal files and priorities including climate policy, building a relationship with Indigenous communities, economic innovation and international competitiveness. Occupying the government's existing policy space will be a resource-consumptive and complex undertaking. Nevertheless, an even more sweeping policy front may emerge as the government consults with Canadians.

# LOOKING AHEAD

If we look back on our energy system from the vantage point of Canada's 150th anniversary, there is no question that we built well. When we flip the many switches in our lives, the lights come on, the phone is charged and the car starts.

However, this success carries with it the risk of complacency, the comfortable assumption that we can continue to play the cards we were dealt in the past. Yet success tomorrow in a rapidly changing global environment is anything but assured. If we are to ride the crest of the global transition to a lower-carbon economy, if we are to avoid being outflanked by our competitors and left in their innovative wake, then we will need a game plan for success. If we drift into the future, we will not like what we find.

There is nothing inevitable about where we will be a generation from now; our energy future is a matter of choice, not prediction. The challenge we face, therefore, is to sketch in an overarching policy destination and then build the policy rails to take us there. The issue is not that the government is currently disengaged from energy policy, for even the most cursory inventory of policies and programs reveals a vast range of federal engagement. Rather, the issue is the lack of a wrap-around policy framework to frame conversations with Canadians and their governments and with the international community. The commitment to transition to a lower-carbon economy is an essential, even bold start, but it is only a start.

If the need for a Canadian energy policy is accepted as a way to harness our energy capacity in the pursuit of excellence across the economy, then the heavy lifting can begin. Here the *Generation Energy* project launched in April by Natural Resources Canada will generate the essential insights and data.

It is time, therefore, to write the next chapter in our energy story. The concluding chapter — the timely transition to a lower-carbon economy — has already been drafted, and now we need to figure out how to get there, how to build a federal policy linchpin for a comprehensive Canadian approach to energy in the 21st century.

## **ANNEX A:**

# Areas of Policy Focus Within the 2015 Canadian Energy Strategy

### **SUSTAINABILITY**

- promote energy efficiency and conservation
- transition to a lower-carbon economy
- enhance energy information and awareness

### **TECHNOLOGY AND INNOVATION**

- accelerate the development and deployment of energy research and technologies that advance more efficient production, transmission and use of clean and conventional energy sources
- develop and implement strategies to meet energy sector human resource needs now and well into the 21st century
- facilitate the development of renewable, green and/or cleaner energy sources to meet future demand and contribute to environmental goals and priorities

### **DELIVERING ENERGY TO PEOPLE**

- develop and enhance a modern, reliable, environmentally safe and efficient series of transmission and transportation networks for domestic and export/import sources of energy
- improve the timeliness and certainty of regulatory approval decision-making processes while maintaining rigorous protection of the environment and public interest
- promote market diversification
- pursue formalized participation of provinces and territories in international discussions and negotiations

## ANNEX B

### Questions for Canadians

Consultations with Canadians about our energy future will address a number of difficult questions. In general, the *Energy Generation* dialogue will ask:

1. *What does Canada's energy future look like in the long run?*
2. *What generation goals should we strive to achieve, and what values should guide us?*
3. *What are the pathways and guideposts along the way?*

In working through these big questions, Canadians may also encounter more specific questions that will need to be addressed in building a linchpin for Canadian energy policy.

#### **Should the Government create an *explicit* Canadian energy strategy or should the strategy be *implicit*?**

Rather than advancing an *explicit* long-term energy strategy, the Government could leave it to Canadians and other governments to infer long-term policy direction from an accumulating set of specific policy decisions, connecting the dots as best they can with respect to decisions on climate policy, tanker traffic, coastal protection, pipeline applications, LNG terminals, and investments in sustainable technologies. Specific decisions would become proxies for more general policy. This approach would facilitate informal consultations with municipal governments without offending the provincial governments within which municipalities are embedded. Given the growing role of municipalities in energy policy — public transit, energy efficiency, building codes and urban design — municipal engagement is as important as it is difficult to formally structure.

However, if the government is to have an effective means of talking to Canadians and the international community about Canada's place in the energy world, *if it is to tell the Canadian energy story*, it may need an explicit policy flagship. Without this, every decision within the energy file will be seen as a window on the government's more general strategic thinking. Every decision, no matter how local its effects, could become a hill to die on, a potentially defining moment for Canada's energy future.

#### **Should the government set national targets for our energy mix, analogous to those set by Canadian climate policy or should the primary determination of the future energy mix be left to markets and private investment decisions?**

The government could set national energy targets and associated milestones to mobilize Canadians around a pan-Canadian energy vision. For example, targets could be established for energy efficiency or for the share of Canada's future energy mix to be

derived from renewable sources. Should the government use incentives and prohibitions to shape components of the energy system or should the future energy mix be shaped by markets and private sector investment decisions?

### **What pace of change should be pursued as we transition the Canadian energy system?**

By itself, the commitment to transition to a lower-carbon economy does not imply a specific timeline. We could be slow and deliberate, being careful to calibrate policy change with other government priorities, or we could act with a greater sense of urgency.

### **Should the government strengthen the generation and distribution of empirical information relating to the Canadian energy system?**

A more data-driven approach to energy policy would need to consider whether the current energy information ecosystem is sufficient. Countries such as the United States have established energy information organizations to meet this need (i.e. US Energy Information Administration). A publicly accessible “Energy Outlook” report could serve as a vehicle for communicating progress in achieving targets while covering associated energy indicators and trends.

### **Should the Government of Canada lead the intergovernmental deliberations that will inevitably surround energy policy or should provincial and territorial governments take the lead?**

Here the question is not whether the Government of Canada should be involved, but to what extent it should lead. The government could adopt the CES as its long-term energy strategy, and work with its provincial and territorial partners to expand the coverage of the CES to include federal responsibilities and aspirations. In effect, the government could build a federal onramp to the CES. The risk is that the CES may not be malleable enough to accommodate the full range of federal interests and policy priorities.

A Nanos Research national survey released on December 14, 2014, found that 78% of respondents believed that the federal government should lead a conversation on Canada’s energy future and the environment, compared to 13% who believed the provinces should lead the conversation.

## **How can Indigenous people best be incorporated into the design and implementation of Canadian energy policy?**

A long-term energy policy must address the interests of Indigenous communities across the country. The question is how best to institutionally embed these interests and perspectives.

## **Should Canadian energy policy be aligned with the policy frameworks of our major trading partners or should Canada stake out an international leadership position even at the risk of being offside with our partners?**

The global energy environment is uncertain at best, and even the continental environment is unsettled. To what extent then, can and should Canada chart its own energy path?

## **How should federal policy, including financial incentives, be used to accelerate technological innovation in the energy sector?**

Although the bulk of funding for energy research and development will continue to come from the private sector, public sector financing will also have an important role to play. The question is whether funding should be specifically targeted: should the government pick potential winners and losers?

## ANNEX C: References

- Anderson, Bruce and David Colette (2016). “Pipeline Politics in 2016,” Abacus Data, May 24.
- Angus Reid Institute (2016). “Rocky Mountain Rumble: Alberta, B.C. residents at odds over TransMountain Pipeline.” June 16.
- Canada 2030 (2016). Canada in a Changing Global Energy Landscape, discussion draft March 3.
- Carr, the Honourable Jim (2016). Address by the Honourable Jim Carr, Minister of Natural Resources, on Bill C-15. House of Commons, May 5.
- Christensen, Naomi and Trevor McLeod (2016). Power Up: The hydro option. Calgary: Canada West Foundation, June 27.
- Council of the Federation (2015). Canadian Energy Strategy.
- EnviroNics Research Group (2007). “Canadians’ Attitudes Towards Natural Resource Issues — 2007.” June.
- International Energy Agency (2014). Energy Technology Perspectives 2014: Harnessing Electricity’s Potential. Paris.
- International Energy Agency (2015). World Energy Outlook, 2015. Paris.
- International Energy Agency (2016). Energy Policies of IEA Countries: Canada. Paris.
- McLeod, Trevor and Shafak Sajid (2016). Look Out: Toward a climate strategy that reduces global emissions. Calgary: Canada West Foundation, May 26.
- Natural Resources Canada (2014). Energy Technology Innovation in Canada: The Role of Government and Policy Options Available. June 16.
- Natural Resources Canada (2015). Energy Fact Book 2015-2016.
- Natural Resources Canada (2015). Energy Issues 2013-2015, June.
- Natural Resources Canada (2016). “Major global trends impacting the energy sector.” Internal report
- Ontario Ministry of Energy (2016). Conservation First: A Renewed Vision for Energy Conservation in Ontario.
- Policy Horizons (2016), Canada in a Changing Global Energy Landscape.
- Preparing for the Future: A Scan of Global Trends (2016). Draft, November 20.
- Saunders, Doug (2016). “Is Canada ready for a world awash in \$0 oil?” The Globe and Mail, June 4: F7.
- US Energy Information Agency (2016). International Energy Outlook, 2016.

## THE AUTHOR

**ROGER GIBBINS** was born and raised in Prince George, B.C. He received his Honours B.A. in political science from UBC and his Ph.D. in political science from Stanford University. From 1973 to 2002, Roger was a member of the Department of Political Science at the University of Calgary, spending nine years as department head, and from 1998 to 2012 was President and CEO of the Canada West Foundation, a non-partisan public policy organization based in Calgary. Awards include induction into the Royal Society of Canada and the Alberta Order of Excellence, being elected president of the Canadian Political Science Association (2000), and honorary doctorates from the University of Calgary and the University of Northern British Columbia. Roger now resides in Calgary and Vancouver.