



LEADING THE CHARGE:

Submission for
Ontario's 2017
Long-Term Energy Plan



ontario
chamber of
commerce

ABOUT THE ONTARIO CHAMBER OF COMMERCE

For more than a century, the Ontario Chamber of Commerce (OCC) has been the independent, non-partisan voice of Ontario business. Our mission is to support economic growth in Ontario by defending business priorities at Queen's Park on behalf of our network's diverse 60,000 members.

From innovative SMEs to established multi-national corporations and industry associations, the OCC is committed to working with our members to improve business competitiveness across all sectors. We represent local chambers of commerce and boards of trade in over 135 communities across Ontario, steering public policy conversations provincially and within local communities. Through our focused programs and services, we enable companies to grow at home and in export markets.

The OCC provides exclusive support, networking opportunities, and access to innovative insight and analysis for our members. Through our export programs, we have approved over 1,300 applications, and companies have reported results of over \$250 million in export sales.



The OCC is Ontario's business advocate.

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LETTER FROM THE PRESIDENT & CEO OF THE ONTARIO CHAMBER OF COMMERCE

Energy is top of mind for all Ontarians, as the province's future economic prosperity is intrinsically tied to the reliability and cost effectiveness of our energy supply. Both commercial and residential ratepayers in Ontario are feeling the pressure from high energy prices, with the business community citing rising input costs caused by climbing electricity rates as one of the most common and acute concerns affecting their competitiveness.

Ontario currently finds itself at a crossroads and the 2017 Long-Term Energy Plan (LTEP) must therefore be a pivotal planning document that represents the future energy needs of the province. The status quo is no longer an option, and together we must decide what we can do to make energy rates more competitive across the province of Ontario.

The goal of this submission is to inject research and principle into the discourse on Ontario's energy future. It will primarily focus on the electricity sector, but also incorporate discussion about the fuels sector and its continued role in Ontario's energy future. We ask that the Ministry of Energy consider the following recommendations when preparing the LTEP as, if guided by the principles of affordability, transparency and flexibility, the plan could improve our competitive climate and ensure the future prosperity of Ontario.

A handwritten signature in black ink, reading 'Allan O'Dette'.

Allan O'Dette
President and CEO
Ontario Chamber of Commerce

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GLOSSARY

Supply Mix

The variety of energy sources within a geographic region that makes up the “energy mix”. This could include fossil fuels (oil, natural gas and coal), nuclear energy, waste and many types of renewable energy (biomass, wind, geothermal, water and solar). In Ontario we have a diverse supply mix, a major strength of our energy sector.

Baseload

Baseload power sources are plants that generate dependable power to consistently meet demand. They are the foundation of a sound electrical system, ie. a nuclear generating station.

Peaking Energy

Peak demand, peak load or on-peak are terms used management when describing a period in which electrical power is expected to be provided for a sustained period at a significantly higher than average supply level. Peak demand fluctuations may occur on daily, monthly, seasonal and yearly cycles.

Industrial Conservation Initiative (ICI)

A government program that allows a company with a monthly peak demand greater than 1 megawatt (Mw) of electricity to enroll in the program and possibly reduce its electricity bill by one third.

Capacity Market

In a capacity market, the system requires X amount of peaking energy. An auction is set and all types of energy producers would bid to meet the demand at the lowest cost to consumers.

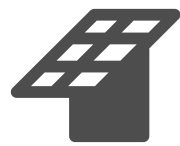
The basic idea is that power producers receive compensation for capacity (or the power that they will provide sometime in the future). The goal of a capacity market is to create long-term price signals for all energy resources. A capacity market is run so that is there is an auction every year that has a delivery date 3 years away.

Consider that demand for the province for one month could be 4 GW. All resources and producers (from wind turbines to natural gas) will bid at varying prices. The **clearing price** will be the option that allows the system to still produce enough electricity and function. In capacity markets, lower cost resources can have the effect of suppressing prices for all of the resources since they ensure that demand can be met at a lower cost.

Capacity markets are important, because they direct and encourage investments in different kinds of assets (clean energy, fossil fuels, or demand side responses like efficiency).



Ontario had no smog days in 2016 (as a result of coal phase-out) resulting in **savings of an estimated \$4.4 billion in health and environmental costs**⁵



Renewable energy now comprises 40 percent of Ontario's installed capacity and generates approximately **1/3 of electricity in the province**⁶



Over 6 GW of installed coal forced capacity was shut down and replaced with more than **14 GW of renewable natural gas and demand response resources**⁷

8%
additional
savings

A rebate for ratepayers in an amount equal to HST (**8 percent saving**) **directly on consumers' electricity bills**⁸

20%
additional
savings

Eligible rural consumers will receive approximately **20 percent of additional savings** (\$4 a month)⁹

ACKNOWLEDGING SUCCESS

The Ontario Chamber of Commerce (OCC) acknowledges the leadership of the Ontario government for becoming the first jurisdiction in North America to eliminate coal-fired electricity production. The decision to phase out coal-fired electricity production reflects Ontario's environmental leadership and has directly led to a significant reduction in greenhouse gas (GHG) emissions: a decrease of approximately 92 percent from 2005 to 2011.¹ With nearly two-thirds of this reduction in carbon dioxide emissions attributed directly to the electricity sector's phase-out of coal, Ontario has positioned itself well for the move towards a low-carbon economy.²

We are greatly encouraged by the government's commitment to expand the Industrial Conservation Initiative (ICI) so that a company with a monthly peak demand greater than one megawatt (Mw) of electricity will now be eligible to enroll in the program. Lowering the threshold for participation in the ICI will ensure that approximately 1,000 more companies are eligible to achieve cost savings of up to 34 percent, depending on their ability to reduce peak electricity consumption.³

The OCC is also encouraged by the recent response by the Ministry of Energy in repealing several green energy contracts, saving Ontarians an additional \$3.8 billion.⁴ This demonstrated demand response planning is a positive sign for the responsiveness of the 2017 LTEP.

MAJOR NORTH AMERICAN CITIES

Average Prices for Large Power Customers¹
(in ¢ Kwh)²



1 For a monthly consumption of 3,060,000 Kwh and a power demand of 5,000 Kw; rates in effect April 1, 2016
2 in Canadian currency

CONTEXT

Between 2006 and 2015, the total cost of the electricity service in the province grew by 32 percent.¹⁰ Since 2004, electricity prices have increased dramatically by 383 percent, from a flat rate of 4.7 cents a kilowatt hour (Kwh) to 18 cents a Kwh at peak times.¹¹ The Ontario Chamber Network and its members have consistently reported that the price of electricity is undermining business' capacity to grow, hire new workers, and ultimately remain competitive.¹²

Presently, Ontario's advertised electricity rate (the price before rebate and incentive programs are factored in) is one of the highest in North America. According to a recent Hydro Quebec study of electricity rates in 22 jurisdictions across North America, electricity rates in Ontario were in the top 10 for all categories assessed.¹³

While the Ontario government is to be commended for some of the results it has achieved on the energy file (such as being a world leader in renewable energy resources) the status quo is presently unsustainable for ratepayers. Recent comments from the Premier and government acknowledge that energy concerns are being heard and that they are seeking opportunities to take meaningful action. As such further action is required and the OCC has identified the following elements as key concerns regarding the energy sector in Ontario. While some of these elements have directly contributed to raising costs, others reflect grassroots concerns heard from our membership base.

Oversupply of power

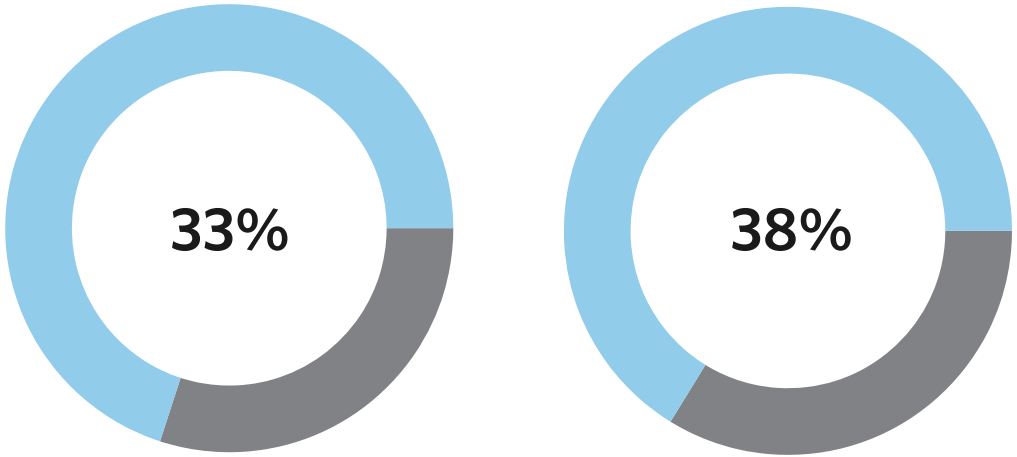
The gap between power supply and demand has led to excess and costly electricity capacity. Between 2003 and 2014, energy demand across the province dropped by eight percent while capacity increased by 14 percent.¹⁴ The inability of long-term supply contracts to respond to market fluctuations, coupled with lower demand, has contributed to the export of excess supply below market price. The oversupply, which must be recovered through price increases to ratepayers, has contributed to increased costs and reduced affordability.

Procurement of renewable energy without undertaking the appropriate cost-benefit analysis

Ontario's conversion to a diverse energy supply mix, rich in renewable resources and free of coal-fired generation, is a truly laudable accomplishment. However, the procurement of some of this renewable energy capacity came at costs above market rates, under long and unfavourable contract terms.

For example, the addition of renewable energy resources under the Feed-in Tariff (FIT) program has contributed to overall systems costs by guaranteeing long-term and above-market payouts to generators. Under FIT contracts, ratepayers will have to pay generators between \$150 million and \$225 million per year to not generate electricity, driving up the global adjustment.¹⁵ The global adjustment, which accounts for the differences between the market price and the rights paid to regulated and contracted generators, means that ratepayers are ultimately forced to recover unnecessarily spent money as a result of these contracts.

Escalating costs crowd out small business investment opportunities



Percentage of small businesses who believe increasing energy prices cause delays to or cancellations of investments

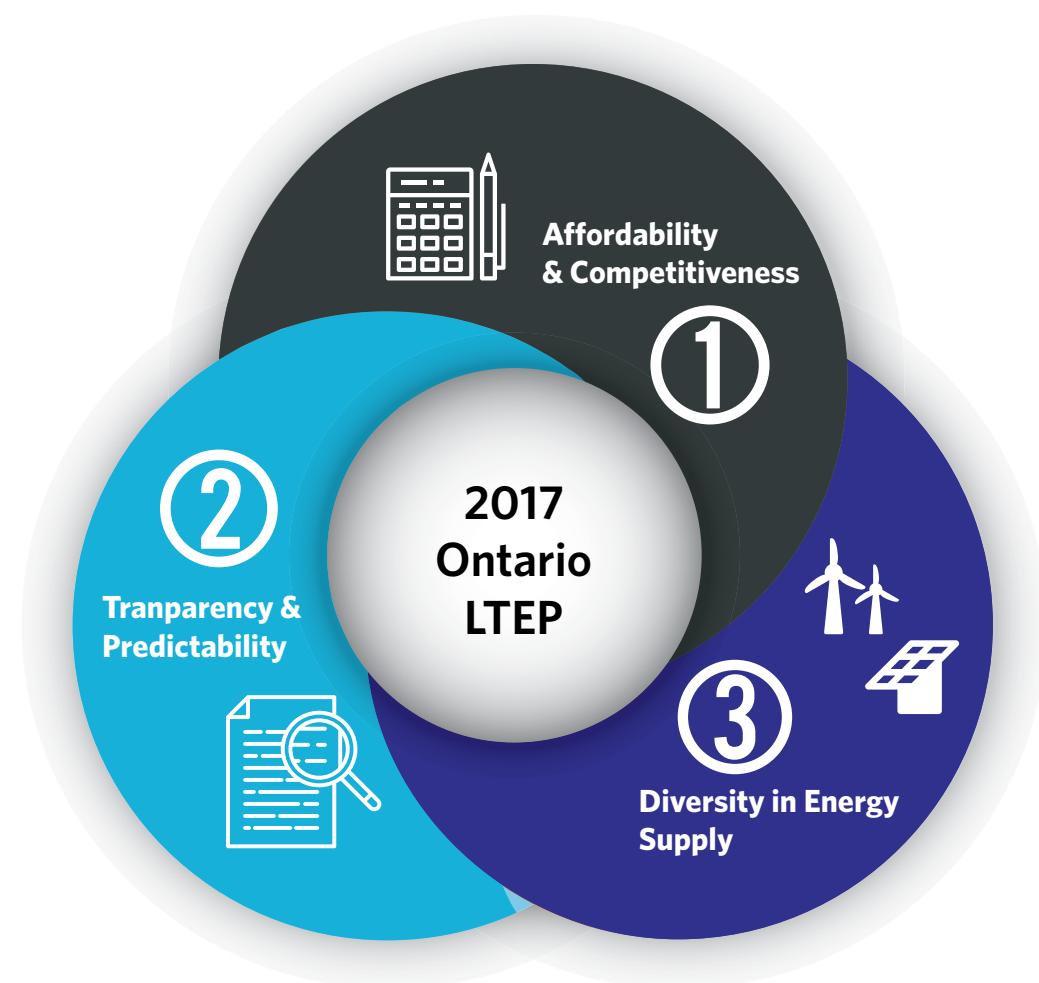
Percentage of small businesses who believe increasing energy prices cause delays to or cancellations of investments

Failure to fully implement and capitalize on smart meter data through time of use pricing

While Ontario’s investment in smart grid technology has been world-leading, it has also come at a cost. As of 2013, the government had invested over \$2 billion in this technology and to date, the possible benefits remain unrealized.¹⁶ The OCC still believes that the disclosure of smart meter data can be an important policy lever. However, as demonstrated by the Environmental Commissioner of Ontario’s 2015-16 Energy Conservation Progress Report (which found “a 0.7 per cent reduction in peak demand among residential customers attributed to time-of-use pricing over a four-year period”), the potential of this investment is not being realized. The province had initially predicted that the reduction in demand would be six times greater than present rates.¹⁷

Escalating costs crowd out small business investment opportunities

A recent OCC survey found that 33 percent of small businesses in the province believe that increasing energy prices will have a large impact on their organization, causing them to delay or cancel investment. The same survey also found that 38 percent of small businesses feel that electricity prices are having the greatest impact on their ability to remain competitive.¹⁸



A PRINCIPLED APPROACH TO THE 2017 LTEP

The government has stated that the 2017 LTEP will balance the principles of affordability, reliability, clean energy and community and indigenous engagement, with conservation and demand management within Ontario's power grid.¹⁹ The OCC respects these principles, and hopes to work collaboratively with government to address the needs of the business community in future energy planning.

A principled and pragmatic approach can insure that energy planning in Ontario reflects the needs of all Ontarians and promotes a competitive business climate. The OCC believes that the principles of affordability, transparency and flexibility should be foundational to provincial energy planning, and the balancing act between these principles will promote economic prosperity and business competitiveness while strengthening ratepayer confidence.

OCC Key Principles

1. Affordability and Competitiveness: The Road to Economic Prosperity

Reducing electricity costs for industry and small business is a top priority. The principles of affordability and competitiveness ensure that cost-savings can be realized either directly (through financial incentives or rebates), or indirectly (by lowering system-wide costs). Competitive energy prices are needed to take full advantage of new and existing economic development opportunities. With critical decisions on the horizon about climate change and further electrification of the province, it is imperative that government takes action to mitigate the impact of cost drivers in the electricity section.

2. Transparency and Predictability: Assuring Ratepayer Confidence

Transparency and predictability ensure that customers understand the cost drivers associated with their energy bill and the rationale for government decisions such as conservation initiatives or green energy procurement. These principles also encourage government to be open and transparent with the reasoning behind these decisions. Transparency also ensures that ratepayers are informed about the various government initiatives available to them and how to take advantage of these programs, such as the Industrial Conservation Initiative.

3. Flexibility and Leveraging Innovation: Maintaining Diversity in Energy Supply

Long-term planning requires assumptions about future demand, supply and resource costs. Flexibility ensures that Ontario has the ability to respond to changing market conditions, allowing the province to balance electricity demand and supply. Energy procurement must be informed by principled, expert evidence that focuses on establishing a diverse supply mix to meet the needs of every Ontarian.

Guided by these principles, the OCC makes the following recommendations for the 2017 LTEP.

The shift to renewable energy is commendable. However, in order for Ontario business to remain competitive, future energy procurement must place a greater emphasis on affordability



1. Ensure competitive and affordable rates while maintaining a reliable, modern and efficient supply mix of energy

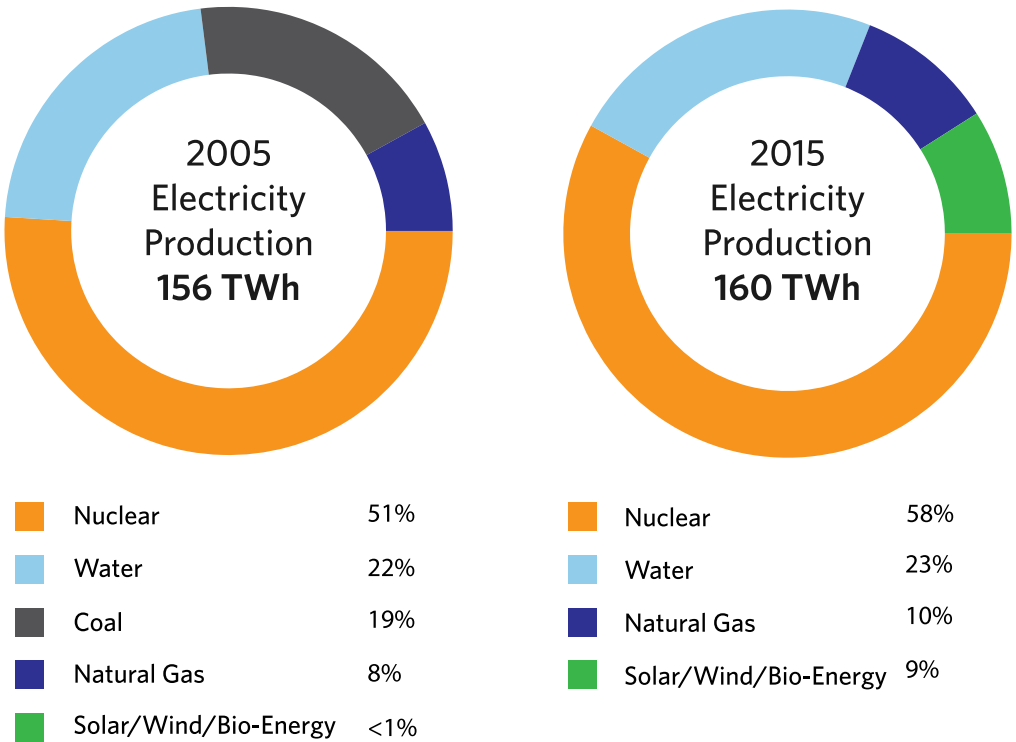
Ontario has made considerable strides over the past decade to establish a diverse and clean energy supply mix. The OCC acknowledges that the spillover benefits of clean energy production extend beyond the energy sector and have led to increased savings in health care, supported the growth of new industries and job creation and have positively impacted the environment. While this investment is commendable, the shift to renewable energy and investment in new energy infrastructure has negatively impacted ratepayer energy bills. In order for Ontario business to remain competitive, future energy procurement must place a greater emphasis on affordability.

1.1 Move away from a central procurement model to a more competitive capacity market

Ontario's electricity market has relied on heavily financing electric generation and directives from the Ministry, rather than market-oriented solutions. Instead of this approach, the OCC recommends a capacity market system in which an auction style market solution is used to ensure that the availability of electricity generation increases in correlation with demand. The success of a capacity market is dependent on the capacity auction process, the competitive procurement mechanism whereby resources (such as generation facilities, imported resources, electricity storage and demand-side resources) are compensated for capacity that they provide at some point in the future. As detailed in a previous OCC report, *Empowering Ontario*, the Province should implement a capacity market-style auction, similar to those successfully operating in New York and New Jersey.

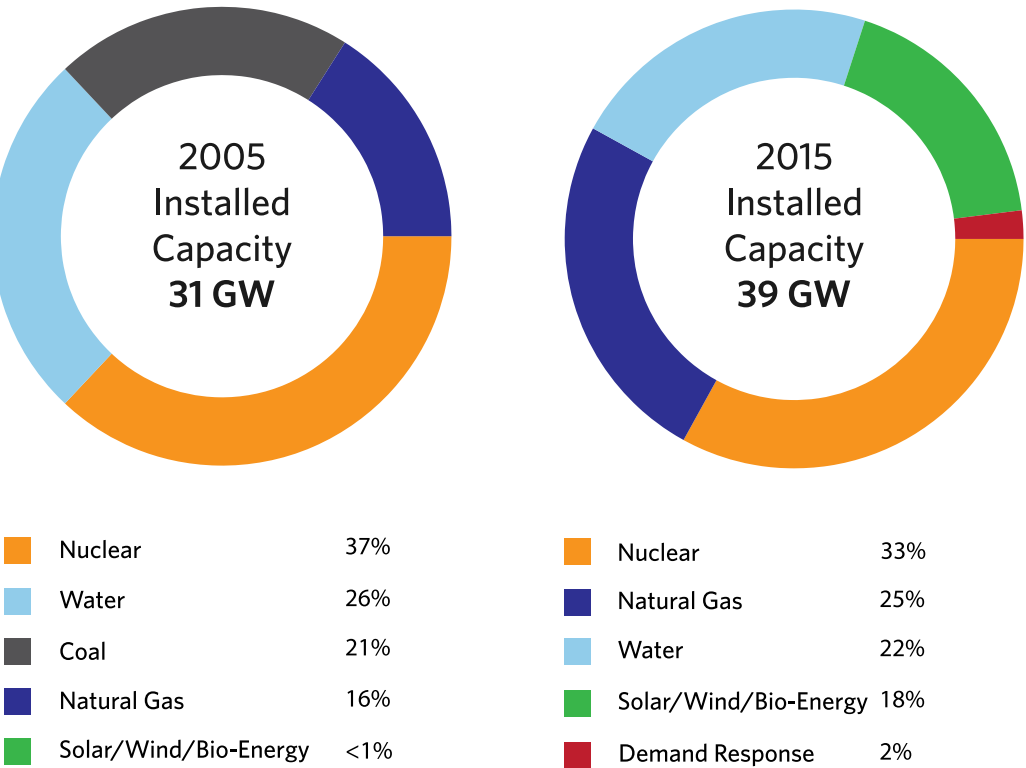
The implementation of a capacity market has the potential to create significant cost savings for Ontario's electricity system by procuring supply on a shorter term and more cost-efficient basis. However, since cost is the defining criterion for selecting resources, this may mean that other sources of clean generation will be deemed uncompetitive. Therefore, in order to address this concern, the market system could be oriented around both cost and renewable criteria. Ultimately, Ontario must strive to balance objectives regarding climate change, renewable resources and maintaining a diverse supply mix without forfeiting the competitiveness and transparency of the capacity market system.

Electricity Production in 2005 and 2015



Source: IESO OPO

Ontario Installed Supply Mix in 2005 and 2015



Source: IESO OPO

1.2 Procurement of energy resources should be forward looking, technology-agnostic and place an emphasis on affordability

Government is both a shareholder and a decision-maker in the electricity sector. As a result of this contradictory role, decision-making has been historically shaped by efforts that do not balance political objectives and cost-effectiveness. In 2015, the Auditor General reported that a great deal of time, effort and money was spent by the Ontario Power Authority (OPA) between 2004 and 2015 on the development of expert energy technical plans which were never implemented.

Ministerial directives and an “every pot approach” (which has targeted generation production by resource and not cost) have in the past pigeon-holed decision makers, and not appropriately respected the principles of affordability and competitiveness. The 2017 LTEP should not approach energy procurement in silos, targeting particular resources but instead embrace a principled procurement approach, one which is forward looking, technology-agnostic and places an emphasis on affordability.

1.3 Electricity planning must explicitly recognize the uncertainties of demand futures and address supply needs through cost-effective procurement

Ontario’s energy supply is in a strong position thanks to three factors: existing resources, committed resources and directed resources.²⁰ If all existing contracts were to continue to operate after expiry, and planned refurbishments went through as committed, Ontario would have installed capacity of nearly 43 gigawatts (GW) by 2035. This supply capacity would be sufficient to meet a flat demand outlook, with enough flexibility to address lower growth in demand. However, in higher electrification scenarios presented by the IESO in their Ontario Planning Outlook indicate that energy demand could be approximately 20 to 40 percent higher than today and would exceed the contribution that any single resource option could provide on its own.

While demand for electricity is expected to remain flat in the immediate term, there is uncertainty about the extent of electrification that may occur within the province up to 2035 with demand projections ranging up to 197 terawatt hours (Twh) in 2035.²¹ In higher demand outlooks, additional resources (conservation, generation and transmission) would be required to meet the increase in demand and to keep emissions targets within the expectations of the Climate Change Action Plan (CCAP). The IESO estimates that this could increase the annual cost of electricity service by approximately \$4 billion to \$10 billion by 2035.²²

Electrification projections, such as those presented in the higher demand outlooks, could therefore have dangerous implications for the economy and negatively impact business competitiveness. This type of electrification would require investment in new energy infrastructure. Nuclear power, which generates zero greenhouse gas emissions and plays a key role in making Ontario one of the lowest GHG emitting electricity jurisdictions in the world, should continue to be explored as cost-effective energy option.

The 2017 LTEP must establish a formal pathway to meeting this uncertain demand future and focus on cost effective resources for supply and demand.

Increase Transparency & predictability of electricity pricing



**Transparency of the Cap and Trade
Programme is fundamental to
achieving the government's emission
reduction objectives**

2. Increase the transparency and predictability of electricity pricing

Transparency and predictability in the pricing and delivery of electricity are key values of the Ontario business community and align with the current mandate of the Government of Ontario. As energy infrastructure is often capital-intensive and requires long lead times for development, it is critical that these principles be reflected in the LTEP 2017 so as to ensure ratepayer confidence.

2.1 Energy planning must be comprehensive and integrate Climate Change Action Plan goals

The 2017 LTEP must be a complete energy plan and not simply an electricity plan. It is necessary that it include:

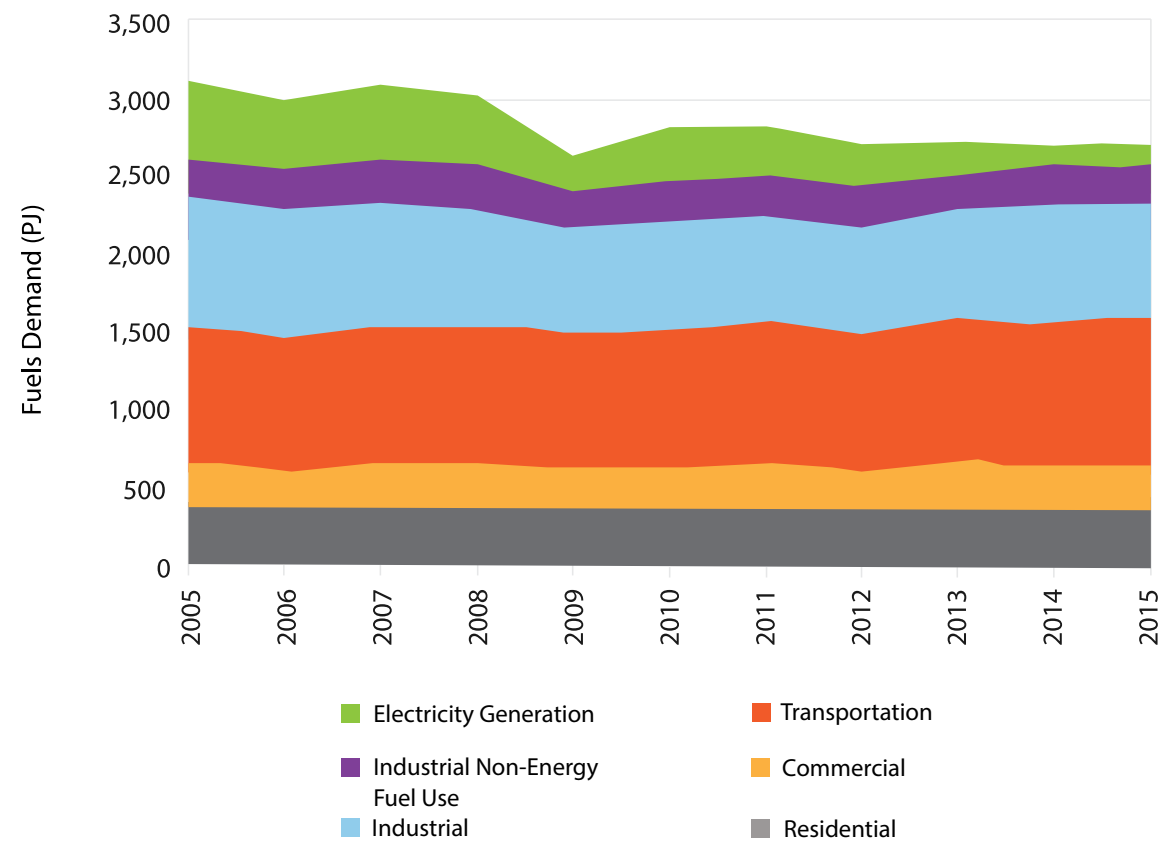
- ✓ A comprehensive assessment of the province's base supply energy needs;
- ✓ Expected base case demand needs, as well as full alignment with and integration of objectives and directives outlined in the CCAP; and
- ✓ Clarification as to how energy, climate change and conservation policy will be aligned now and through the expiry of current contracts.

2.2 Costs incurred as a result of the Climate Change Action Plan must be adequately represented on natural gas bills in order to ensure that business can effectively manage input costs

Cap and trade related costs should be a separate line item on natural gas bills in order to provide greater transparency and a visible price signal to customers.

The entire premise of a cap and trade program is to place a price on carbon in order to motivate consumers to take action and change behavior. To not provide this price to consumers could make it more difficult to achieve GHG emissions reductions, and would likely result in increased costs for businesses as the price of carbon increases over time. OCC members believe that transparency of the cap and trade program is an essential component of driving changes in consumer behaviour, which is fundamental to achieving the government's emissions reduction objectives.

Total Ontario Fuels Energy Demand



Source: CanESS, 2016

3. Leverage expiring contracts and utilize flexibility to provide Ontario with the means to pursue cost effective measures in the future

Ontario's transition to a low carbon economy will have significant implications for its fuels sector, but also create new opportunities. If approached strategically, Ontario has the flexibility to take advantage of options as they arise.

3.1 Encourage non-traditional energy sources such as renewable natural gas and compressed natural gas to reduce costs and balance environmental objectives

In 2015, natural gas generation accounted for approximately ten percent of Ontario electricity production and 25 percent of the province's installed electricity generating capacity. Natural gas assets enabled the transition off coal-fired generation and provided a source of on-demand power to backstop wind and solar resources. As a flexible and responsive resource, natural gas adaptability will be instrumental as the province moves to implement its climate change agenda.

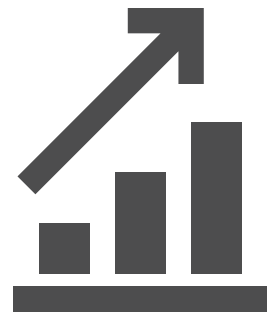
The use of natural gas as a, low-cost and low carbon emitting fuel source can aid in offsetting the high costs associated with building expensive electric transmission and generation capacity, as would be required under certain demand scenarios.²³ Ontario's fuel system is well positioned to meet the changing demand and supply characteristics for fuels given the diversity and robustness within the supply chain that exists today.²⁴ Since renewable natural gas and compressed natural gas provide a low cost opportunity for combined heat and power, we believe that the 2017 LTEP should consider the role of these resources reducing costs and balancing environmental objectives.

3.2 Continue to pursue and maintain a balanced supply mix, while seeking to invest in transformation and cost-saving technologies such as energy storage

Emphasising flexibility and maintaining a diverse supply mix is an effective way to provide a reliable and efficient energy system. By choosing complementary generating resources to adequately meet baseload and peaking demand capacity, Ontario can achieve a balanced supply mix.

In order to achieve this balanced supply mix, new technologies such as energy storage will be complementary to peaking resources such as wind and solar while supporting the baseload operation of nuclear power. In particular, investing in nuclear refurbishment projects such as Darlington and the life extension project at Kincardine, in order to support affordable and reliable baseload energy will provide a welcome boost to Ontario's economy and increase the reliability of our energy system. Additionally, solutions focused on electrical storage can help Ontario to address peaking periods and reduce the amount of money lost through exporting electricity at a loss.

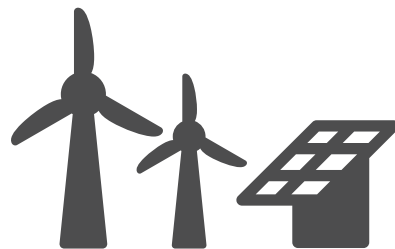
Given that the private sector is well positioned to be responsive and innovative in the energy sector, government should seek to further facilitate and leverage this expertise.



Affordability and Competitiveness



Transparency & Predictability



Maintaining Diversity in Energy Supply

CONCLUSION

Ultimately, we believe that the 2017 Long-Term Energy Plan should be rooted in alleviating the challenges of today to support an affordable, transparent and flexible system for tomorrow.

As we have outlined above, the OCC believes that the following principles must be adequately reflected in the LTEP:

1. Affordability and Competitiveness: The Road to Economic Prosperity

Affordability is of paramount importance to Ontarians. Energy policy has considerable downstream effects on the province's economy. As such, decisions must encourage investment, job creation and economic growth across the province. The most desirable options will lead to an overall decrease in rates and mitigate cross-subsidization between rate classes. The road to economic prosperity in Ontario requires a competitive business community, which in turn relies on affordable, reliable energy.

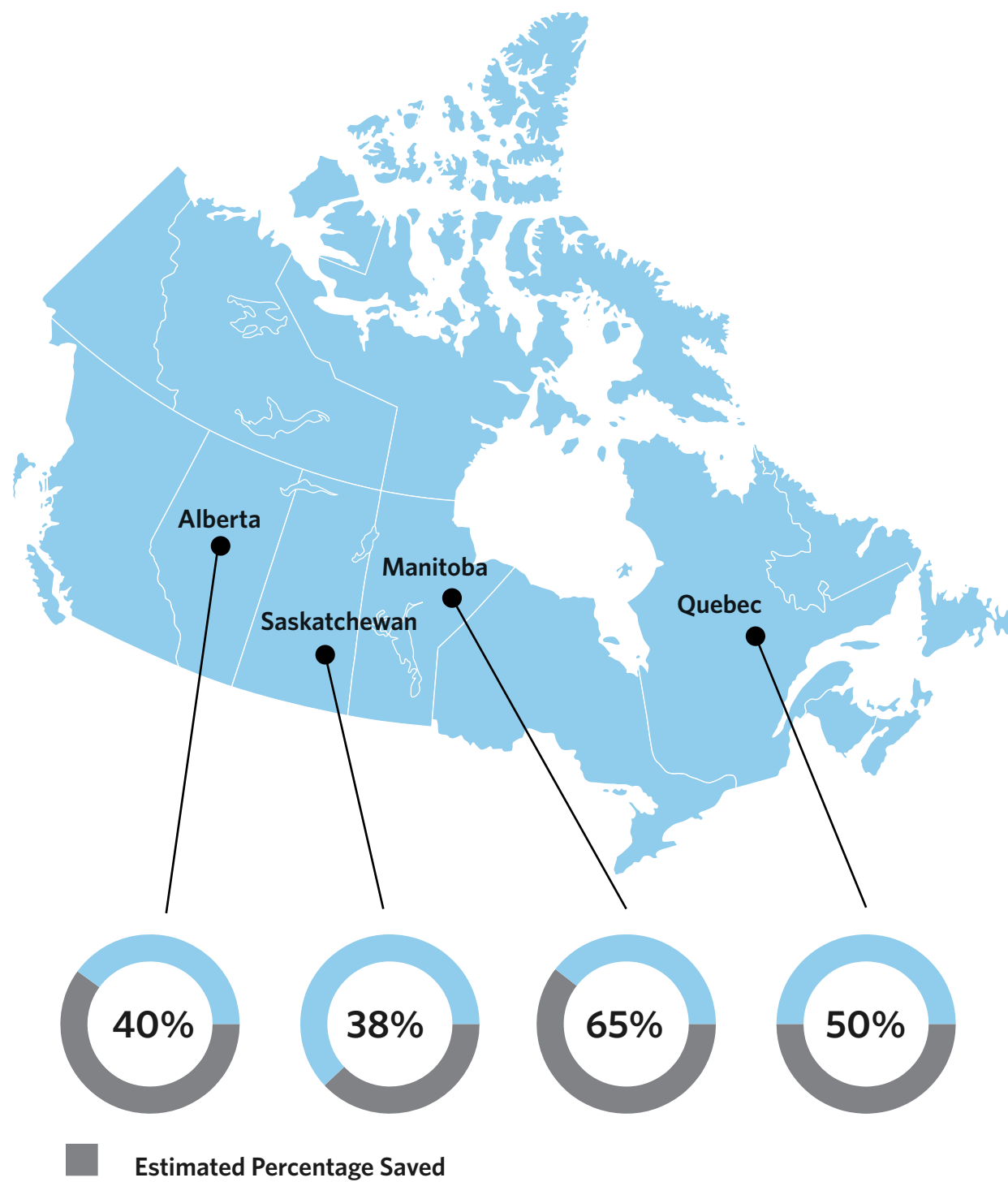
2. Transparency and Predictability: Assuring Ratepayer Confidence

The move toward increased transparency aligns with the current mandate of the Government of Ontario, and can help strengthen ratepayer confidence in the system design. Despite the government's best efforts, consumers are still confused as to why their electricity bills are so high and why particular decisions are being made.

3. Flexibility and Leveraging Innovation: Maintaining Diversity in Energy Supply

Ontario must balance electricity demand with supply by ensuring that the system has enough flexibility to respond to changing market conditions. Our strength in the energy sector stems from our diverse supply mix. By ensuring this type of flexibility continues, the Province can meet the ever-evolving needs of the energy sector.

An appropriate and thoughtful balancing of these principles will promote economic prosperity, business competitiveness and strengthen ratepayer confidence. The recommendations included in this submission, if implemented, will contribute to a more stable and sustainable electricity system that supports the businesses who work every day to employ our people and grow prosperity. We look forward to working with government to implement energy solutions that support Ontario's economy.



Businesses considering relocating outside of Ontario

To help government understand the electricity pricing issue, a southern Ontario business, which operates 13 manufacturing plants across the province, undertook a detailed analysis of the cost of the electricity needed for their operation.

Of the 124.8 million Kwh they will consume in 2016, and given an average rate increase of 2.4 C per Kwh, this firm's total electricity bill is expected to increase by 18 percent (including \$1.1 million saved from participation in the ICI).

Based on this cost, the firm projected the cost savings that they would enjoy if they were operating in four other provinces. These cost savings are demonstrated by the infographic on page 25.

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