



Ontario Energy
Association

A Blueprint for Energy Policy in Ontario

March 2011



The objective of Ontario energy policy must be to promote and support the development of an energy system that is secure, reliable and sustainable. Ontario energy policy must be fact-based, cost-effective and transparent.



Table of Contents

1	Introduction and Summary of Recommendations	4
2	Objective	10
3	Issues and Recommendations	14
	A Fact-Based, Cost-Effective and Transparent Energy Policy	16
	B Long-Term Goals for a Positive Investment Climate	18
	C Streamlining Approvals and Building Social Acceptance	20
	D Roles and Responsibilities	22
4	Glossary and Notes	24



IMAGE — Kruger Energy Inc.

Introduction and Summary of Recommendations





Introduction

A Blueprint for Energy Policy is the Ontario Energy Association's (OEA) recommended energy policy for the 2011 provincial election.

The OEA has more than 150 corporate members representing the full diversity of the energy industry in Ontario – power producers, firms that transport, transmit and deliver natural gas and electricity, energy marketers and retailers, manufacturers, contractors, service providers, and energy consultants.

The electricity sector alone is a \$15 billion annual industry in Ontario.¹ The Ontario energy sector employs about 95,000 people in the province², 65,000 of those people directly.³ But energy policy is not just about jobs in our sector. It is about jobs all across the province and the value of reliable energy supply for every office, factory, home, school and hospital in Ontario. In a competitive global market, reliable and affordable energy is essential for attracting business and investment to our province.

SOUND ENERGY POLICY: THE ESSENTIALS

- Energy drives Ontario's economy. Government's role is to create a policy framework that supports a secure, reliable and sustainable energy system.
- Government must ensure that Ontario's energy policy is fact-based, cost-effective and transparent, and there should be awareness of the cost impacts of economic, environmental and social goals.
- Government must develop long-term plans and stick to the principles of those plans as much as possible to ensure the stability the energy sector needs for building and investing in Ontario.
- Government must streamline approvals processes and engage communities to increase acceptance of new energy projects.
- Government must provide clarity in the roles, responsibilities and accountabilities of the agencies working in the energy sector.

Energy drives the Ontario economy – from resource extraction and processing in northern Ontario, to manufacturing in southwestern Ontario, to power for lighting, cooling and computers in the financial, high technology and service industries of the Greater Toronto Area and the Golden Horseshoe, to farms and small businesses throughout the province.

Energy policy is also about ensuring that our environment can support our society, economy and way of life now and in the future. Ontario’s commitment to closing coal-fired electricity generation represents the most significant step by any North American jurisdiction to reducing **greenhouse gas (GHG)** emissions and addressing the long-term issue of climate change, and will make a significant contribution to air quality and the reduction of pollution.

The environmental imperative to reduce GHGs and be sustainable is increasingly important in energy policy. This imperative is evident in the current focus on **renewable energy, conservation** and efficiency, new technologies such as the **smart grid** and the electric vehicle, the commitment to nuclear power, and the renewed attention to **distributed generation**, combined heat and power, and **district energy**.

We offer the Blueprint as non-partisan advice to those seeking to form the next government of Ontario, and to help inform and frame the broader public debate about these important issues for Ontario’s energy future.

NOTE TO READER: Words that appear in **blue bold letters** hyperlink to this documents’ Glossary.

Summary of Recommendations

Fact-Based, Cost-Effective and Transparent Energy Policy

- 1** Government and industry have a shared responsibility to help educate consumers about energy costs, rising prices and how consumers can control costs, and should cooperate to ensure that consumers receive consistent information.
- 2** Government should review electricity pricing to make electricity costs more transparent to consumers and to align the role of price in signaling consumption and **conservation**.
- 3** Government should maintain support for cost-effective conservation, including building codes and standards.
- 4** Future energy programs should be cost-effective over the long term. In its long-term planning, government should be mindful of impacts on energy bills.

Long-Term Goals for a Positive Investment Climate

- 5** Government should set the long-term goals, benchmarks and priorities for energy policy and the energy sector and, once they have been set, keep to them as much as possible and not deviate from their underlying principles, so that the energy sector can invest with confidence that the chosen policy will be sustained and not abandoned or changed mid-course.
- 6** To better manage cost increases to ratepayers, and to allow investors to more accurately ascertain risks and rewards, government and its agencies must ensure that the regulatory environment allows energy companies to undertake energy projects with minimal delays.
- 7** Government must ensure that any national carbon reduction program addresses Ontario's interests, and does not harm the province's industrial competitiveness.

Streamlining Approvals and Building Social Acceptance

- 8 To prevent increased costs and delays in implementation, government must ensure that local authorities and processes cannot undermine provincial energy policies, plans and processes.
- 9 Government should, in consultation with the energy sector and stakeholders, continue with efforts to streamline approvals processes, ensure that approval processes are applied consistently and fairly, and build community acceptance for new energy projects.

Roles and Responsibilities

- 10 Given the changes in energy policy since their original mandates were established, the government must clarify the roles and responsibilities of the various agencies in the energy sector. Once these agencies have clarified mandates, government must monitor the continued appropriateness of those mandates.
- 11 Government must allow the **Ontario Energy Board** to operate as an independent regulator.
- 12 Government must ensure that all energy planning is closely integrated with provincial economic and development planning.

A large, stylized number '2' in a dark yellow color, positioned centrally on the page. The number is composed of a thick, rounded top curve and a straight vertical stem that ends in a horizontal base. The background is a lighter yellow color.

Objective



Objective

The objective of Ontario energy policy must be to promote and support the development of an energy system that is **secure, reliable** and **sustainable**. Ontario energy policy must be fact-based, cost-effective and **transparent**.

Energy is essential to our economic and social well-being. Per capita commercial energy consumption is an excellent indicator of the overall economic development of a country.⁴

Energy policy in Ontario should support the development of an energy system that promotes the quality of life for all Ontarians and supports our economic competitiveness.

That means creating and supporting an energy system that is secure – that guarantees an adequate supply of energy, now and for the future.

In addition to security, reliability is essential to an energy system in a modern, technologically advanced industrial society such as Ontario.

Reliable gas and electricity infrastructure requires maintaining and refurbishing existing systems, as well as investing in new infrastructure and new technologies.

Our energy system must also be sustainable. The World Commission on the Environment and Development (the Brundtland Commission) defined sustainable development as "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs."⁵

Sustainability is not only about the environment, but about ensuring that our communities are positioned to attract investment and be desirable places to live, work and raise families. Energy policy needs to take into account the long-term human resources and skills needs of our sector, and the need for innovation and technological change.

Like all government programs, energy policies and programs should be designed to achieve program objectives cost-effectively, and to cause the least possible disturbance to the normal operation of markets. In other words, Ontario energy policy and programs should be cost-effective over the long term.

Good policy is also **transparent**. Energy policies and their objectives should be easily understood and based on facts that are accessible to all. Information about policies should be readily available. Accountability for outcomes should be clear.⁶



Issues and Recommendations



Fact-Based, Cost-Effective and Transparent Energy Policy

- Government and industry have a shared responsibility to help educate consumers about energy costs, rising prices and how consumers can control costs, and should cooperate to ensure that consumers receive consistent information.
- Government should review electricity pricing to make electricity costs more transparent to consumers and to align the role of price in signaling consumption and conservation.
- Government should maintain support for cost-effective conservation, including building codes and standards.
- Future energy programs should be cost-effective over the long term. In its long-term planning, government should be mindful of impacts on energy bills.

INCREASE THE ROLES OF COMPETITIVE MARKETS AND PRICE SIGNALS

In the 2010 OEA member survey, 76 per cent of respondents indicated that we need to increase the role of competitive markets in Ontario's energy system. Asked to pick the top priority from among 12 issues for political parties to focus on, respondents selected "Increase the use of price signals and market approaches."

— "Assessing the Future Needs for Ontario's Energy Sector": Ontario Energy Association Membership Survey, Innovative Research Group, Inc., September 2010

As stated above, Ontario energy policy should be fact-based, cost-effective and **transparent**.

While natural gas prices continue to remain low and relatively stable, electricity bills, after several years of stability, increased by between 15 and 20 per cent in 2010. According to Ontario's Long-Term Energy Plan (LTEP), electricity prices for small businesses and families will rise by about 3.5 per cent annually over the next 20 years.⁷

A key electricity issue is the role of price in signaling consumption, conservation and investment. Targets for conservation in the LTEP are bold, but there is potential for confusion and conflicting messages with the introduction of the **Clean Energy Benefit** and the change in the **time-of-use (TOU)** pricing schedule. The OEA has long recommended that the government clarify and enhance the role of electricity prices in signaling conservation.

The OEA supports Ontario's move to close the coal plants, invest in **renewables**, refurbish the existing nuclear plants, build new nuclear plants at Darlington, and build new natural gas-fired generation. It is also vital that we invest to maintain and modernize our infrastructure to accommodate new sources of supply and new technologies. Government and the energy industry need to stress the importance of these investments and help consumers understand what they are getting for their higher rates.

Consumers are vocal about rising prices because of the impact on their budgets, and businesses are concerned about their impact on Ontario's industrial competitiveness.

In addition to concern about rising electricity prices, many consumers – including families, small businesses and industrial consumers – find electricity prices increasingly complex and difficult to understand, especially the **Global Adjustment**.

Consumers want to be able to manage their energy costs. Consumers have no control over the fixed-cost components of their bills, such as the **debt retirement (DRC)** and **regulatory charges**. Bills should be transparent and comprehensible to show consumers which aspects of their bills they can manage and which aspects they cannot.

COMPONENTS OF AN ELECTRICITY BILL

- Energy costs – which are about 49 per cent of the total of the average electricity bill; this is the only part affected by TOU rates.
- Delivery – the cost of operating the high-voltage lines and other infrastructure involved in carrying power from generating stations to local utilities, and the wires that deliver it to homes and workplaces. Together these account for about 29 per cent of total costs.
- Regulatory charges – mainly the cost of running the non-profit **Independent Electricity System Operator (IESO)**, which manages our system, dispatching electricity minute by minute as it is needed across the province. These charges are about five per cent of an average residential bill.
- Debt retirement charges – to pay down the stranded debt remaining when Ontario Hydro was dismantled in 1998. These account for about five per cent of total costs.
- Taxes – now about 13 per cent of total residential energy bills.

— Ontario Energy Board
<http://www.oeb.gov.on.ca/OEB/Consumers/Electricity/Your+Electricity+Bill>

NOTE: The Global Adjustment is reflected in the RPP price for customers who buy electricity from their LDC, and appears as a separate line item for all other customers outside the RPP, including customers who have signed electricity retail contracts.

Long-Term Goals for a Positive Investment Climate

- Government should set the long-term goals, benchmarks and priorities for energy policy and the energy sector and, once they have been set, keep to them as much as possible and not deviate from their underlying principles, so that the agencies and the energy sector can do their jobs.
- To better manage cost increases to ratepayers, and to allow investors to more accurately ascertain risks and rewards, government and its agencies must ensure that the regulatory environment allows energy companies to undertake energy projects with minimal delays.
- Government must ensure that any national carbon reduction program addresses Ontario's interests, and does not harm the province's industrial competitiveness.

SETTING AND MEETING THE GOALS

A survey of stakeholders and OEA members conducted in summer 2010 found that the primary concern is day-to-day government involvement in the operation of the energy system. Survey respondents believe that decisions are too often based on short-term politics rather than solid evidence, and that inconsistent policy and the use of ministerial directives are a major problem. The survey found strong agreement that the Ontario government should focus on setting long-term goals for the energy sector and leave the decisions on how to best meet these goals to the sector.

— *Innovative Research Group, Inc., September 2010*

The **LTEP** forecasts total public and private investment of \$87 billion over the life of the plan. This investment is essential to the long-term **security** and **reliability** of Ontario's electricity system.

The lead time needed for most energy projects is now five to seven years, and even longer for nuclear and transmission projects.

The OEA supports a diversified supply mix based on a balance among economic, environmental and system impacts, and on the characteristics and relative costs of the different technologies.

We support increased **renewable** generation capacity as part of the coal phase-out, as a means of meeting Ontario's **GHG** reduction targets, and as a way of ensuring that Ontario carves a competitive niche in the emerging green economy of the future. However, because many renewable sources of energy, such as wind and sun, are intermittent, conventional sources, such as nuclear and natural gas, must continue to provide the majority of our energy needs.

Nuclear power is the backbone of Ontario's baseload generation, and is a clean technology that will contribute to the government's efforts to reduce GHG and other emissions. The OEA supports keeping nuclear to produce approximately 50 per cent of energy, both through refurbishment of older generating units and procurement of new ones.

Any delay in planning approvals or processes ultimately adds to the cost of a project. Delay in natural gas investment could impact integration of renewables and the refurbishment timetable for the nuclear units. Delay on nuclear refurbishment or new build could affect the reliability of the system, raise costs, and impact the province's efforts to reduce GHG emissions. Delays on transmission and pipeline infrastruc-

ture could affect our ability to bring new capacity on line.

Electric and natural gas utilities are also key parts of Ontario's infrastructure, essential for integrating new capacity at the local level. With the **smart grid**, the role of the **LDCs** will become even more important. Transmitters, pipelines and energy distributors are all refurbishing infrastructure and investing to accommodate new sources of supply. It is essential that they continue to be able to attract the capital they need.

Energy developers and investors need to have confidence in the stability of the political and regulatory environment. The cancellation of the Western GTA gas plant is an example of the kind of decision-making that can deter potential investors.

As a signatory to the **Western Climate Initiative (WCI)**, Ontario is committed to launching a cap-and-trade program for large emitters of GHGs in January, 2012. In preparation for this program, the Ministry of the Environment has developed a comprehensive set of rules and regulations for the measurement and verification of GHG emissions.

We support the objective of environmental sustainability, but Ontario needs to be sure that it is not burdening Ontario firms relative to firms in other jurisdictions, and not placing Ontario at a competitive disadvantage.

Any **carbon pricing** regime will also have to be reconciled with the **Feed-in Tariff (FIT)**, one of the primary objectives of which is to reduce GHG emissions (along with supporting Ontario as a player in the green economy of the future). Some commentators have suggested that carbon pricing through a carbon tax is the best way to achieve both reduced GHG emissions and green economy innovation.⁸

Streamlining Approvals and Building Social Acceptance

- To prevent increased costs and delays in implementation, government must ensure that local authorities and processes cannot undermine provincial energy policies, plans and processes.
- Government should, in consultation with the energy sector and stakeholders, continue with efforts to streamline approvals processes, ensure that approval processes are applied consistently and fairly, and build community acceptance for new energy projects.

Most energy projects face numerous approvals at the municipal, provincial and sometimes federal level. Governments have made efforts to improve the approvals process, including the new Renewable Energy Approval (REA) process under the **Green Energy Act** and the Ministry of the Environment's Modernization of Approvals initiative. We support these efforts.

Another challenge is the apparent decline in social acceptance of energy projects of any kind. The province may not be able to pursue new sustainable energy systems if increasing opposition from vocal minorities makes energy infrastructure too difficult to build.

Cancellations, delays and longer timelines for energy infrastructure projects mean higher costs. Unless Ontario maintains and grows its energy infrastructure to keep pace with our needs, Ontarians will pay a price sooner or later, either in energy bills or living with an unreliable system.

Government and industry must jointly address this issue. Ontario needs to make the connection between future price increases and failure to address infrastructure needs sooner rather than later.

A better process also needs to be put in place to engage all stakeholders in our energy projects.

Roles and Responsibilities

- Given the changes in energy policy since the original mandates were established, the government must clarify the roles and responsibilities of the various agencies in the energy sector. Once mandates are clarified, government must monitor the continued appropriateness of those mandates.
- Government must allow the **Ontario Energy Board** to operate as an independent regulator.
- Government must ensure that all energy planning is closely integrated with provincial economic and development planning.

INTEGRATED PLANNING

A more integrated approach could help avoid delays in energy investment arising from regulatory inefficiencies and community opposition, and could contribute to a more positive investment and business climate.

A further issue is the roles and responsibilities of institutions involved in energy policy: the **Ministry of Energy**, the **Ontario Electricity Finance Corporation (OEFC)**, the **Ontario Energy Board (OEB)**, the **Ontario Power Authority (OPA)**, and the **Independent Electricity System Operator (IESO)**. In the OEA member survey, 85 per cent of respondents felt that the current structure with a number of agencies assigned to specific tasks either needs better implementation (46 per cent) or needs to be changed altogether (39 per cent).

The challenge is to eliminate overlap and bring clarity and transparency to the mandates of these agencies, and to the relationship between the agencies and the government. For example, in **conservation**, government could better achieve its goals if the roles and capabilities of the various players now involved in conservation were made clear; this would also help in ultimately assessing which approaches work best.

The mandates of the agencies require clarification because they were initially established in a much different context.

For example, the OPA was established to provide planning and procurement in the expectation that the market would eventually respond to that information and make investments without OPA procurement contracts. However, these functions are no longer transitional.

The OEB was given the mandate of keeping utilities out of “non-utility” services – such as generation, conservation technology, and district energy – so that these services could be provided in the competitive market place. However, the competitive market place has not emerged.

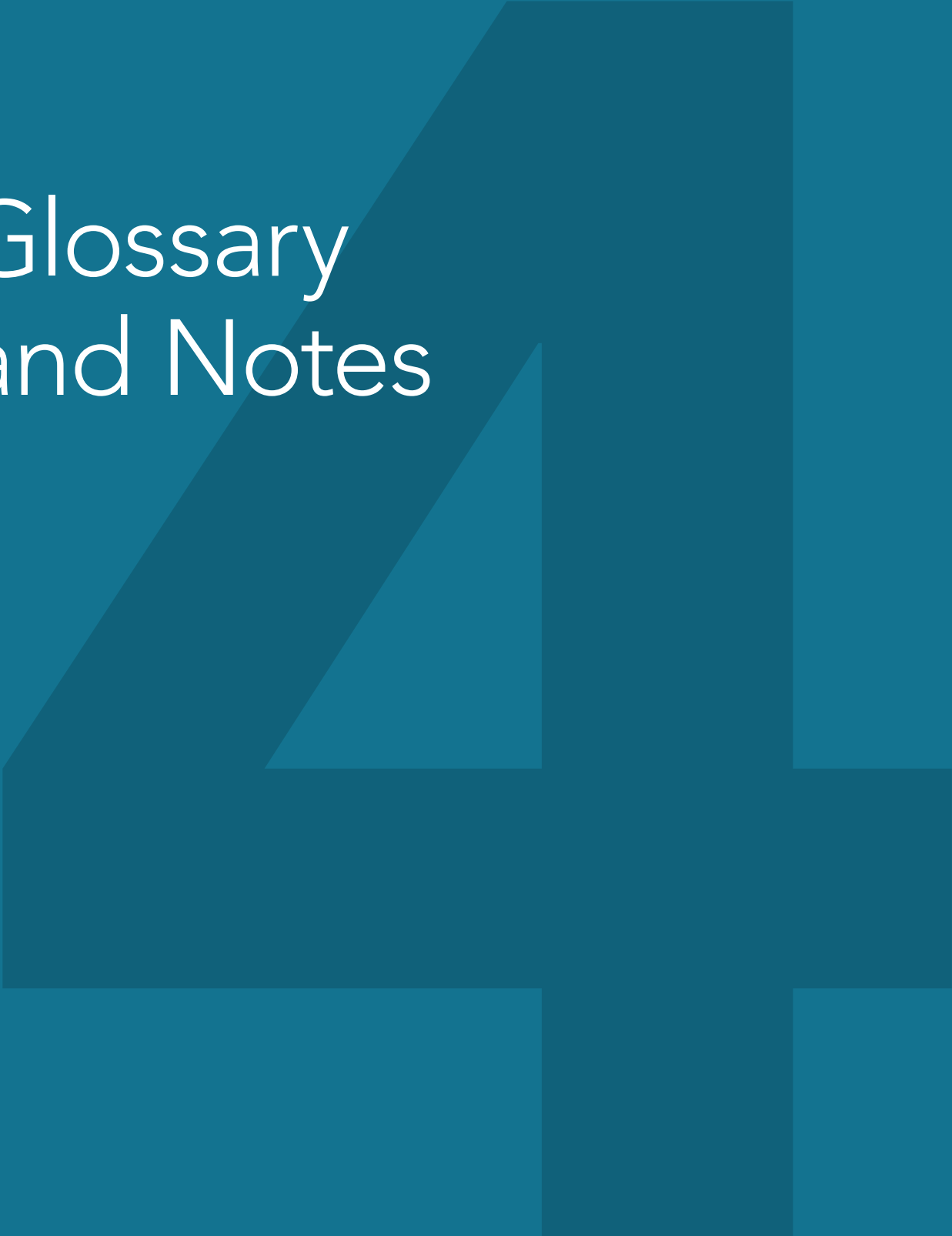
Similarly, the IESO was initially established to create price signals that would drive investment and consumption decisions. However, the price signals emerging from the wholesale market, while relevant for system operations, are now much less relevant for supply and consumption decisions.

Once these agencies have clarified mandates, government must monitor the continued appropriateness of those mandates.

In addition, the Green Energy Act has granted the Minister of Energy the ability to use the OEB as an instrument to collect new “green energy” taxes. This is an inappropriate use of the OEB’s powers and should be repealed. The OEB best serves the public interest as the independent regulator of the province’s electricity and natural gas sectors.

Finally, demand growth will be different across the province: some areas may anticipate increased demand, whereas others may have a decline. In this regard, it would be beneficial for energy system planning and broader regional, environmental and economic planning to be integrated as much as possible. A more integrated planning system would better meet the needs of communities, contribute to increased social acceptance of needed energy projects, and create a more positive investment climate.

The goal of the OEA in presenting this document is to provide a framework for developing, implementing, and measuring sound energy policy. Energy policy is a long-term endeavour that affects every aspect of Ontario’s economy and society. For this reason, it must be based on facts, it must be transparent and comprehensible to voters and consumers, and it must provide stability and predictability while being flexible enough to adapt as required to changing circumstances. We hope the Blueprint will be a catalyst for debate and a lens to clarify the issues involved.



Glossary and Notes



Glossary

Carbon Pricing

Intended to meet future greenhouse gas targets, carbon pricing is a way to place a dollar amount on carbon emissions through government subsidy programs, carbon-tax systems, and/or an emissions trading mechanism.

Clean Energy Benefit

A measure introduced in November 2010 by the Ontario government to provide a 10 per cent reduction on electricity bills to help consumers manage rising prices for the commodity over the next five years. The benefit took effect on January 1, 2011, and is set to expire on December 31, 2015.

Combined Heat and Power

Heat and electricity produced simultaneously from a single fuel such as natural gas. The heat that results from electricity generation is used to produce steam or hot water that can be used for industrial and commercial heating or cooling, for example in district energy systems.

Conservation

Any activity that reduces the amount of electricity used overall, or shifts the consumption of electricity from a higher system demand ("peak time") period to lower system demand ("off-peak") period.

Debt Retirement Charge (DRC)

An itemized charge on electricity bills based on metered usage levels to pay down the stranded debt remaining from the former Ontario Hydro. The DRC accounts for approximately five per cent of the total costs on an electricity bill.

Demand Management

Measures undertaken to control the level of energy usage at a given time, by increasing or decreasing consumption or shifting consumption to another time period.

Distributed Generation

Electricity produced by generating units that are situated near the location where it is used.

District Energy

Heating (including space heat and domestic hot water) and/or cooling that is provided centrally. District energy can include electricity provided through combined heat and power.

Feed-In Tariff (FIT)

A program legislated by the Ontario government for renewable energy generation that features standardized program rules, contracts, and prices. A feed-in-tariff program promotes the development of community-based and large commercial renewable energy projects.

Global Adjustment (GA)

The GA is that part of the electricity bill that covers the cost of regulated rates paid to Ontario Power Generation's nuclear and hydroelectric baseload generating stations; payments made to suppliers that have been awarded contracts through the OPA such as new gas-fired facilities, renewable facilities; and the cost of conservation programs.

All electricity consumers in Ontario pay the GA. For consumers who buy electricity from their Local Distribution Company (LDC) (utility), this amount is already included in the electricity Regulated Price Plan prices set by the OEB shown on the "Electricity" line of the bill. For consumers who have signed electricity retail contracts the GA appeared as an additional line item on the bill that was referred to as the Provincial Benefit. Starting in 2011, it will appear on the bill as the Global Adjustment.

Greenhouse Gases (GHG)

Gases that include carbon dioxide, methane, nitrous oxide, ozone and chloro-fluorocarbons that trap heat near the earth's surface, contributing to a "greenhouse" effect. These gases can result from natural processes such as ocean currents, cloud cover, volcanoes, and from human activities such as the burning of fossil fuels.

Green Energy Act

Legislation passed in 2009 that is intended to boost investment in renewable energy projects, increase conservation, and create green jobs and economic growth in Ontario.

Independent Electricity System Operator (IESO)

A non-profit, regulated corporation, established by the Electricity Act, that is responsible for operating the wholesale electricity market and ensuring reliable operation of the electricity system in Ontario.

Local Distribution Companies (LDCs)

Also known as local electricity utilities, LDCs take power from high-voltage transmission lines, “step-down” the electricity to a lower voltage (50 kV and under), and provide it to local customers.

Long-Term Energy Plan (LTEP)

A document released by the Ontario government in November 2010 to plan for energy investments essential to Ontario over 20 years. It projects a mix of clean power sources and the closure of the province’s remaining coal-fueled plants.

Ministry of Energy

The organization of the Ontario government responsible for energy policy. The Ministry of Energy works with partners inside and outside government to develop electricity generation, transmission and other energy-related facilities.

Ontario Electricity Finance Corporation (OEFC)

One of five entities established by the Electricity Act, 1998 as part of the restructuring of the former Ontario Hydro. Its responsibilities include, among other things, managing the debt of the former Ontario Hydro, providing financial assistance to the successor corporations of Ontario Hydro, and entering into financial and other agreements relating to the supply of electricity in Ontario.

Ontario Energy Board (OEB)

A quasi-judicial agency of the Ontario government, the OEB regulates the province’s electricity and natural gas sectors. The OEB reports to the Legislature through the Minister of Energy, but operates independently from the Ministry and all other government departments in the performance of its regulatory functions and responsibilities.

Ontario Power Authority (OPA)

The OPA was established by legislation in 2004 to plan and procure electricity supply from diverse resources and facilitate the measures needed to achieve conservation targets.

Regulated Price Plan (RPP)

Established by legislation, the RPP is a system in which most Ontario consumers pay tiered prices for electricity. These prices are reviewed every six months by the Ontario Energy Board.

Regulatory Charges

Regulated by the Ontario Energy Board, these charges are mainly for the cost of running the non-profit Independent Electricity System Operator (IESO), which manages Ontario’s electricity system, dispatching electricity minute by minute as it is needed across the province. These charges are approximately five per cent of an average residential bill and differ from month to month depending on adjusted usage levels after line loss adjustments have been made. (Line loss

is the loss of electricity that occurs, mainly due to natural causes, while it is transported from the generator to the customer.)

Reliability, Reliable

Reliability encompasses the concepts of adequacy and security. As defined by the North American Electric Reliability Council (NERC), adequacy is “the ability of the system to supply the aggregate electric power and energy requirements of the consumers at all times,” and security is “... the ability of the system to withstand sudden disturbances.” Adequacy implies that there are sufficient generation and transmission resources available to meet projected needs plus reserves for contingencies. Security implies that the system will remain intact even after outages or other equipment failures occur.

Renewable Energy, Renewables

Energy sources that are renewed by natural processes including wind, water, biomass, biogas, biofuel, solar energy, geothermal energy, and tidal forces.

Security, Secure

We use security to mean adequate reserve capacity. Security implies that the system will remain intact even after outages or other equipment failures occur.

Smart Grid

A smart grid delivers electricity from suppliers to consumers using digital technology with two-way communications to control appliances at consumers’ homes to save energy, reduce costs and increase reliability and transparency.

Sustainability, Sustainable

Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Time-of-Use (TOU) Prices

Electricity fee rates that vary throughout the day. Rates tend to be higher during peak demand periods (when electricity demands tend to be high) and lower during off-peak hours.

Transparency, Transparent

Transparency means that policies and their objectives should be easily understood, based on facts and information that are accessible to all, and have clear accountability for outcomes.

Western Climate Initiative (WCI)

The WCI is a collaboration of independent jurisdictions working together to identify, evaluate, and implement policies to tackle climate change at a regional level. This is a comprehensive effort to reduce greenhouse gas pollution, spur investment in clean-energy technologies that create green jobs and reduce dependence on imported oil.

Notes

- 1** Ontario's Long-Term Energy Plan, p. 51, Ministry of Energy, 2011.
- 2** Ibid.
- 3** "Invest in Ontario, Ministry of Economic Development and Trade, http://www.sse.gov.on.ca/medt/investinontario/en/Pages/oolf_303.aspx. See also Centre for Energy, <http://www.centreforenergy.com/FactsStats/MapsCanada/ON-EnergyMap.asp>.
- 4** The connection between commercial energy consumption and economic development and technological advancement has been established by much research and many researchers; see, for example, Human geography: landscapes of human activities, Jerome Donald Fellmann, Arthur Getis, Judith Getis, p. 342.
- 5** Report of the World Commission on Environment and Development: Our Common Future (the Brundtland Commission) 1987.
- 6** Literature Review: Transparency in Public Policy & Customer Service, <http://www.transparencyslcgov.com/LinkClick.aspx?fileticket=Nr4kdYBf3CU%3D&tabid=57&mid=379>.
- 7** "Electricity prices for small businesses and families will increase by about 3.5% annually over the next 20 years," "Ontario's Long-Term Energy Plan: Building Our Clean Energy Future," presentation by David Lindsay, Rick Jennings, and Su Lo, Ministry of Energy, November 23, 2010.
- 8** Today's Innovation, Tomorrow's Prosperity, Task Force on Competitiveness, Productivity and Economic Progress, Martin, Roger L., et al., The Institute for Competitiveness & Prosperity, November 2010, p. 46.



IMAGE — Hydro One Networks Inc.

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