Environmental Commissioner of Ontario

Commissaire à l'environnement de l'Ontario

Dianne Saxe, J.D., Ph.D. in Law
Commissioner

Dianne Saxe, J.D., Ph.D. en droit
Commissaire

Ontario's energy plan falls short

Plan doesn't provide the path from fossil fuels to low-carbon energy sources

TORONTO April 10, 2018 – The Ontario government's Long-Term Energy Plan ignores its own climate law, says Making Connections: Straight Talk about Electricity in Ontario, a new report from Dianne Saxe, Ontario's Environmental Commissioner. The climate law requires Ontarians to reduce greenhouse gas emissions from fossil fuels, such as gasoline, natural gas and oil by 2030, but the province isn't planning how to make that happen.

"The climate law means that Ontarians must be prepared to reduce emissions from fossil fuel use by 40 to 50 per cent in the next 13 years," said Saxe. "This means more conservation, and converting some fossil fuel uses – including some gas-fuelled cars and trucks, and some heating of our homes and businesses – to electricity instead." Ontario's electricity system produces very few emissions since coal-fired power plants were closed.

The 2017 Long-Term Energy Plan is produced by the Ministry of Energy to detail Ontario's energy needs for the future. It guides the government's energy investments to meet these needs. The current Long-Term Energy Plan however, predicts that demand for electricity will remain fairly stable, and doesn't recognize or plan for the low-carbon transition that is needed. In addition to switching from fossil fuels to electricity, the energy system as a whole must become more efficient, and Ontarians must do more to conserve.

Saxe acknowledged the government's role in cleaning up Ontario's electricity system and air by ending coal-fired power. By replacing coal with low-carbon electricity sources such as hydro, solar, wind and nuclear power, the system was 96 per cent emission-free in 2017. She noted that the cost to clean up the system led to higher electricity bills, but overall, it was worth it.

"Electricity was cheap, but it came at a very high cost to our environment and health," said Saxe. In 2005, the system not only strained to meet the peak demand, it was also a major cause of greenhouse gas emissions, air pollution and smog. "Those with asthma and other respiratory ailments struggled with bad air quality. There is no doubt that our electricity system was a major contributor to poor air quality and higher health costs."

Making Connections: Straight Talk on Electricity in Ontario can be downloaded at: eco.on.ca/reports/2018-making-connections

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Aussi disponible en français

The **Environmentai Commissioner of Ontario** is an independent officer of the Legislature who reports on government progress on environmental protection, climate change and energy conservation. The ECO is the province's environmental watchdog and guardian of Ontarians' environmental rights.

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Backgrounder –
Making Connections: Straight Talk about Electricity in Ontario

The Long-Term Energy Plan

The 2017 Long-Term Energy Plan is the government's roadmap for Ontario's energy sector. It outlines energy needs for the future, and how the government will invest to meet those needs. The 2017 plan is Ontario's 20-year energy plan. The plan assumes that demand for electricity will remain stable over the next 20 years. This assumption is inconsistent with the climate law.

Ontario's Electricity System

The electricity system meets about one-fifth of Ontario's energy needs. Almost all of the remaining 80 per cent is provided by fossil fuels. While fossil fuel energy in Ontario produces greenhouse gas emissions and air pollution, Ontario's electricity system was 96 per cent emission-free in 2017. Sources include nuclear power, hydro (water) power, wind, solar and natural gas-fired generation.

Most of the power needs formerly met by coal are now met through new renewable power generation and conservation. Nuclear refurbishments and new natural gas-fired plants have also increased system capacity and reliability.

Ontario has a surplus of electricity only at times when demand for electricity is low – mostly nights and weekend in the spring and fall. Conservation has reduced the amount of electricity Ontario uses. We sell surplus power at low rates to keep clean electricity from going to waste, and earn money for ratepayers. The surplus is expected to lessen in the next few years.

The system as a whole now costs about $21 billion each year, up from about $15 billion in 2005. The extra costs are mostly for added capacity to generate power, so the system is more reliable; it can handle high demand at peak periods on the hottest summer days. A clean, low-polluting system also benefits human health and lowers health care costs through improved air quality.

The Climate Mitigation and Low-carbon Economy Act

Ontario's climate law has put a cap on the amount of greenhouse gas emissions allowed in Ontario from burning fossil fuels each year. The cap will decline each year.

Emitters, including companies that sell fossil fuels to Ontarians, are required to buy allowances to cover their emissions. These companies will pass on costs of allowances to those who purchase fossil fuels for use. As allowances become increasingly scarce as the cap is reduced, these costs will increase.

For more information about Ontario's cap and trade system, see our Introduction to Cap and Trade in Ontario.

Ontario's Emissions

In 1990, Ontario industry was responsible for more than one third of our emissions, producing 67 of 181 megatonnes (Mt) of carbon pollution. Transportation produced 48 Mt, buildings produced 28 Mt, mainly from heating, and our electricity system produced 26 Mt.

Things have changed since then. In 2015, Ontario industry emitted 48 Mt, down 28 per cent. The electricity system reduced its contribution from 26 to 5 Mt*, a drop of 80 per cent, due mainly to the elimination of coal-fired power.

It's not all good news however. Transportation emissions increased over the same period from 41 to 55 Mt in 2015, an increase of 34 per cent. Freight traffic alone more than doubled its emissions. Emissions from buildings increased by 32 per cent as well, from 28 to 37 Mt.

For more information about Ontario's 2015 emissions, see The Climate Act: from Plan to Progress.

Our Future Energy System

While Ontario's electricity system is now low-carbon, our energy sector as whole is not. In 2016, Ontario emitted 126 Mt of carbon pollution from burning fossil fuels for energy, which is more than three-quarters of Ontario's total greenhouse gas emissions. The 2030 cap on emissions means that fossil fuel emissions will need to be cut almost in half in the next 13 years.

Ontarians need to look at where fossil fuel use has increased – in transportation and building heating – to find ways to reduce emissions. As Ontario's electricity system produces almost no emissions, conservation, and electrifying transportation and building heating could produce large reductions in greenhouse gas emissions, and more improvements to air quality.

Ontarians will be encouraged to conserve electricity, but we could need about a third more low carbon electricity to have enough to power much of our transportation and heating. The Long-Term Energy Plan needs to think through the potential for higher electricity demand, and what supply sources can meet that demand, to make sure Ontario stays within its emissions cap and meets its climate obligations.

*Note: Some slight differences in emissions data occur due to inconsistencies in data collection from different sources.

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Making Connections: Straight Talk about Electricity in Ontario
Table of Contents

Ontario's transition to a low-carbon electricity system

1. What's this report about?
2. How does Ontario make decisions about its sources of electricity?
3. How and why has Ontario's electricity demand changed?
4. Where does our electricity come from and how has the supply mix changed?

Impact on the electricity system

5. Has Ontario's electricity system become more reliable and able to meet peak demand?
6. How does Ontario deal with the variability of wind and solar electricity output
7. Why does Ontario export and curtail so much electricity?

Impact on electricity prices

8. How high are Ontario electricity prices?
9. What do higher electricity costs pay for?

Impact on the environment

10. What are the environmental impacts of Ontario's electricity sources?
11. How much have the coal phase-out, renewable electricity, and conservation reduced greenhouse gas emissions?
12. How much did the coal shutdown reduce pollution in Ontario?

Ontario's electricity future

13. What does the 2017 Long-Term Energy Plan propose for Ontario's electricity future?
14. What are the consequences of the Long-Term Energy Plan's commitment to nuclear power?
15. How much of Ontario's energy system must be electrified to meet Ontario's legal greenhouse gas limits?
16. How can Ontario make full use of clean off-peak electricity and prevent it from going to waste?
17. What impact will Ontario's electricity market redesign have on the cost and greenhouse gas emissions of our electricity system?
18. What impact will net metering have on the future of renewable electricity in Ontario?
19. What is the value of conservation?

REMARKS

Dianne Saxe, Environmental Commissioner of Ontario

2018 Energy Conservation Progress Report – *Making Connections: Straight Talk about Electricity in Ontario*

Legislative Media Studio, Queen's Park

10:00 a.m., Tuesday, April 10, 2018

Check Against Delivery

Low carbon electricity – the key to Ontario's future

Introduction

Bonjour à toutes et à tous.

This year, we are half way between two important dates for Ontario's energy supply: 2005 and 2030. In this, my third report to the Legislature on energy and conservation, I look at how Ontario's electricity system has changed since 2005, and where it needs to go by 2030.

There is a lot of public discussion, and public concern, about electricity in Ontario. I think it is important that Ontarians base that discussion on facts, and not on myths, rumours and part-truths.

I have therefore prepared independent, non-partisan answers to 19 key questions Ontarians ask about electricity, including how electricity affects the air we breathe and the climate we live in. These questions are the table of contents to my report.

Electricity system – 2005

One key lesson is that Ontario has a lot to be proud of.

In 2005, Ontario had an aging, highly polluting, highly indebted electricity system that strained to meet demand.

Nuclear plant shut-downs in the late 1990s had led to heavy dependence on coal-fired electricity. Though it looked cheap on our power bills, coal-fired electricity came at a high cost – to the environment, to the climate, and to human health.

As a result, a dirty layer of yellow smog often settled over Ontario cities, making the air unfit to breathe. Those were brutally hard days for the nearly one million Ontarians with asthma, including my late husband.

Fortunately, public health organizations spoke up, and helped Ontarians to understand the links between burning coal, breathing dirty air, and damage to public health. Based, in part, on their work, all three Ontario political parties pledged to shut down coal-fired electricity.

Today, we have with us some of those organizations. I want to acknowledge and thank:

- the Ontario Public Health Association, represented by Helen Doyle, Environmental Health Manager, York Region Public Health, and
- Toronto Public Health, represented by
    - Ronald Macfarlane, Manager, Healthy Public Policy and
    - Sarah Gingrich, Health Policy Specialist

Electricity system today

Today, Ontario's electricity system is more expensive, but it is also much cleaner, and more reliable.

In most years since we stopped burning coal, smog days have dropped to zero. The sky is blue, not yellow. Both air pollution and greenhouse gas pollution have dropped. In 2017, only 4% of Ontario's electricity came from burning fossil fuels, the lowest level in decades. 96% of Ontario's electricity was essentially emission free.

At the same time, our electrical system has regained its self-sufficiency and no longer faces brown-outs on hot summer days. Together, energy conservation and new renewables now meet almost as much of Ontario's electricity needs as coal-fired generation did in 2005.

Higher electricity rates

To make this transition, electricity rates had to go up, and they did.

Until the 2017 Fair Hydro Plan, typical Ontario electrical bills went up much faster than the rate of inflation from 2006 to 2016. Higher rates were only partly offset by a 13% drop in average household electricity consumption.

For small businesses or people on limited incomes, increases in the cost of any essential service can be challenging. Electricity price increases can be especially hard for those who live in the 16% of homes with electric heat. And many of these are older homes in rural or remote areas where the winter can be particularly harsh.

I recommend that the government should do more to help these people make their homes more efficient, to keep their bills down and their quality of life up.

I also think it's important for people to know *why* electricity rates have gone up. The main thing Ontarians are paying for is more and cleaner electricity generation, which we needed and will need for years to come.

There are also some charges on Ontario bills that could have been avoided.

For example, on an electricity bill of $100 per month, about three dollars would be used to pay for decades-old nuclear plant cost overruns.

Out of the same $100 monthly bill, a very small charge of only about 20 cents would pay for relocation of the two gas plants from Oakville and Mississauga.

But, contrary to popular belief, the sale of Hydro One has not added anything to power bills. And selling surplus power when we don't need it generated net revenue of about a quarter of a billion dollars in 2016, which Ontario's electricity consumers would otherwise have had to pay to have power available when we want it.

We know that more electricity rate increases are ahead. Nuclear costs will rise to refurbish the Bruce and Darlington reactors, and Ontarians will have to pay back the money borrowed to fund the Fair Hydro Plan, plus interest.

To keep rates and emissions to a minimum, Ontario needs to make full use of all the electricity we have, instead of curtailing, or turning off production of low-carbon electricity when demand is low.

We can do this by using flexibility tools, such as: storage, demand response, interties and prices, to better match supply and demand.

And Ontario should focus conservation on achieving more savings at times of high demand, when conservation produces the largest benefits.

Energy mix, transition needed

The really big challenge is not just about electricity, it is about the fossil fuels that Ontarians use.

Today, electricity is the cleanest of our major energy sources, but it is also the smallest, supplying less than 20% of Ontario's energy. Virtually all the rest – almost 80% of Ontario's energy – comes from fossil fuels, such as natural gas, gasoline and diesel.

The climate crisis, and Ontario's *Climate Change Mitigation and Low-carbon Economy Act,* limit the greenhouse gases and carbon pollution that Ontario can keep emitting from burning fossil fuels.

This means that Ontarians must get ready to dramatically reduce emissions from fossil fuel use. And that means converting much of the space heating and transportation that use fossil fuels today to conservation, renewables, public transit, active transportation and low-carbon electricity. In other words, more bikes and transit, but also more electric cars and trucks. In buildings, more insulation, better windows and smarter thermostats, but also more high efficiency heat pumps.

And that means Ontario will need more low carbon electricity, perhaps a third more in the next decade or so, before today's toddlers graduate from high school. Ontario should be planning and preparing for this, right now.

LTEP inadequate

Instead, the government is burying its head in the sand. Contrary to the clear requirements of Ontario's climate law, the government's entire 2017 Long-Term Energy Plan is based on the assumption that no such transformation will occur.

Instead, it is betting that it can keep electricity prices low by hoping that electricity demand stays flat, and taking no responsibility for the consequences.

Ontario's Long-Term Energy Plan should be required by law to be consistent with the *Climate Change Mitigation and Low-carbon Economy Act*.

Conclusion

In conclusion, Ontario can be proud of its cleaner, more reliable electricity system, and the resulting improvement in air quality and public health.

Since 2005, we have taken the first, indispensable steps in building a low-carbon economy: conservation and minimizing fossil fuel use in electricity generation.

Looking ahead, much more conservation and low-carbon electricity will be needed to displace fossil fuels as the climate crisis continues to worsen.

Good public policy should be based on facts.

Ontarians need independent, non-partisan answers to their key questions about electricity, including how electricity affects the air we breathe and the climate we live in. In today's report, I and my office do our best to answer them.

Thank you. Merci.