

Ontario Backgrounder

What are the Unintended Consequences of the Ontario Government's Electricity Conservation Election Promise?

The Issue

- The Ontario government promised to reduce electricity bills in the recent election campaign by “moving conservation programs to the tax base”.¹
- Electricity Conservation and Demand Management (CDM) programs, currently paid for by electricity ratepayers, lower bills by reducing the need to purchase more expensive generation resources, such as power plants, fuel, and transmission.
- Shifting efficiency funding from electricity rates to government budgets could result in arbitrary political decisions that artificially restrict efficiency efforts, resulting in a more expensive electricity system, higher bills, and fewer jobs.

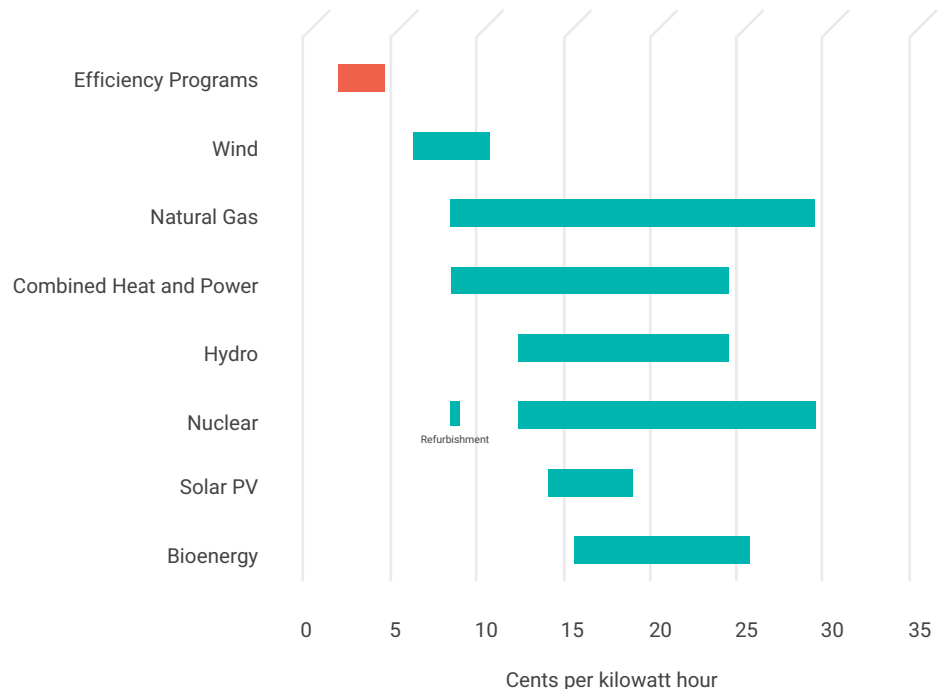
The Role of Energy Efficiency in Ontario's Electricity System

Electricity ratepayer funds are currently spent on energy efficiency programs to avoid higher costs. In 2016, it only cost 2.2 cents for Ontario's conservation programs to save a kilowatt-hour (kWh). As the figure below shows, generating a kWh, instead of saving it, costs much more. For instance, new natural gas generation costs range from 8-24 cents/kWh, nuclear refurbishments are quoted at 8 cents/kWh, and a recent renewable procurement provided an average price of 8.6 cents/kWh for wind energy.

BOTTOM LINE: ENERGY EFFICIENCY ACTS AS A “RESOURCE” FOR THE ELECTRICITY SYSTEM ALONGSIDE ENERGY GENERATION OPTIONS.

Cost of Reducing Energy Demand vs. Generating Energy

Sources: Environmental Commissioner of Ontario 2018 Conservation Report, p. 138, IESO 2016 Large Renewable Procurement & Molina 2014.



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How are energy efficiency budgets and targets determined?

The targets and budgets in the current 2015-2020 Conservation Framework are informed by an efficiency potential study, which estimates the energy savings that are cost-effective and achievable.² This efficiency potential informs the operations of Ontario's Independent Electricity System Operator (IESO) and the Ministry of Energy's Long-Term Energy Plan. In addition, programs must pass a cost-effectiveness test to ensure benefits outweigh costs.³ All energy savings are then verified and evaluated to prove that programs are making a difference.⁴

BOTTOM LINE: CONSERVATION PROGRAMS FACE A SERIES OF RIGOROUS TESTS TO ENSURE EFFICIENCY IS LESS EXPENSIVE THAN GENERATION OPTIONS.

Is energy efficiency needed to lower electricity system costs in the future?

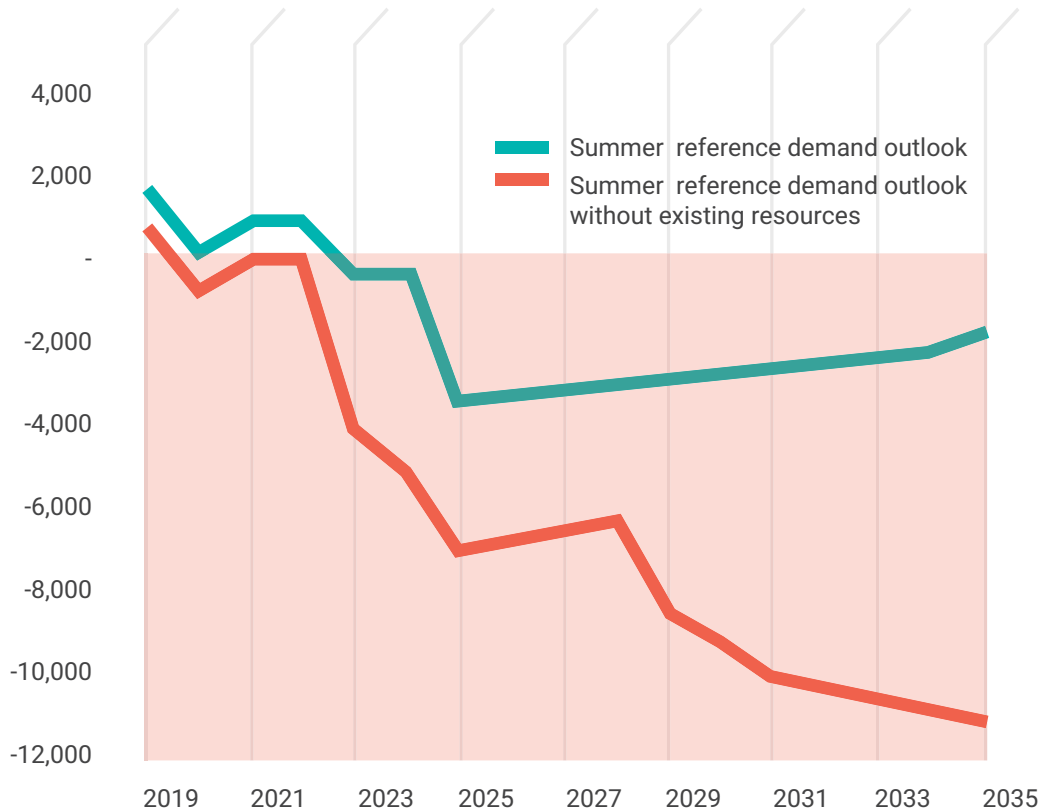
Yes. Ontario's Independent Electricity System Operator (IESO) is projecting shortfalls in capacity occurring as early as 2023, as nuclear plants retire and are refurbished. The shortfall will be 1,400 MW in 2023, 3,700 MW in 2025, and even higher if existing generation contracts are not renewed.

It will be important to not disrupt conservation programs, as new program plans are projected to reduce capacity needs by 1,000 MW in 2025.⁵ To manage the shortfall more conservation and demand management programs could be needed.

BOTTOM LINE: CONSERVATION SPENDING COULD PROVIDE THE MOST COST-EFFECTIVE SOLUTION TO AVOID A LOOMING ELECTRICITY CAPACITY SHORTFALL.

Ontario's Electricity Capacity Shortfall

IESO, 2018 Technical Planning Conference, September 13.



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What about the Made In Ontario Environment Plan?

Choosing generation options over conservation will also create more pollution. In Ontario, GHG-emitting natural gas generation is typically used to respond to system peaks. An increase in natural gas generation would work against Ontario's recent Environment Plan, which rests on the maintenance of a low-carbon electricity system.

BOTTOM LINE: RESTRICTING CONSERVATION BUDGETS COULD INCREASE POLLUTION IN THE ELECTRICITY SECTOR.

What are the unintended consequences of the government's "tax base" election promise?

The government's election promise appears to be based on an unfortunate perception – that conservation and demand management is a government program rather than an important electricity system resource. Conservation programs meet the same system needs as the power plants that are paid for by electricity ratepayers, thus they should be funded in the same way.

Ratepayer funding lets conservation programs compete alongside generation options to provide the lowest-cost and highest-value electricity services.

If conservation programs are "tax based" the program budget could become politically determined and subject to cutbacks in the face of government budgetary pressures. Placing conservation programs

within the volatile annual budget cycle will also make it difficult for electricity system planners to rely on energy savings in their projections and operations, tipping the balance in favour of more expensive generation choices paid for by electricity ratepayers.

While in opposition, the Progressive Conservatives criticized previous governments for making political decisions that prioritized higher-cost energy resources over less expensive ones. If the "tax base" promise leads to an arbitrary restriction of conservation budgets, the government will be doing what it previously opposed.

BOTTOM LINE: "TAX BASING" ENERGY EFFICIENCY COULD PRIORITIZE HIGHER-COST ELECTRICITY GENERATION SOURCES INSTEAD OF LOWER-COST CONSERVATION AND DEMAND MANAGEMENT.

Did the government promise to reduce energy efficiency budgets?

No. The promise to "tax base" conservation said nothing about budget cutbacks. A total of \$2.2 billion is budgeted to be spent for conservation and demand management under the 2015-2020 Framework. The PC platform budgeted \$433 million per year to pay for its promise. If programs are "tax based" we should be asking what criteria are used to determine appropriate conservation budgets.

BOTTOM LINE: THE ONTARIO GOVERNMENT DID NOT PROMISE TO REDUCE ENERGY EFFICIENCY SPENDING.

What other benefits can energy efficiency provide?

Energy efficiency creates jobs. Macroeconomic modeling showed that 14,000 new annual jobs would be created, on average, between now and 2030 if Ontario were to invest in electricity energy efficiency on par with leading North American jurisdictions.⁶

Energy efficiency provides long-term cost savings to the electricity system, and immediate benefits to those who participate in programs. Energy saving programs can reduce bills for consumers with lower incomes and/or higher energy bills. Efficiency programs can also increase business competitiveness, and thus help maintain jobs and economic activity within the province. Businesses that improve energy efficiency report numerous co-benefits as modernized operations increase employee satisfaction⁷, improve worker safety⁸, and reduce equipment downtime.⁹

Considering all the benefits of strategically managing energy demand is particularly relevant to Ontario's electricity system. Ontario experiences peaks at certain times of the year and in high-growth locations. New efficiency strategies can target energy reductions in specific localities and at particular times, to avoid the need to build new generation, transmission and distribution infrastructure.

BOTTOM LINE: ENERGY EFFICIENCY IMMEDIATELY CUTS BILLS, CREATES NEW JOBS, KEEPS BUSINESSES IN ONTARIO, AND PROVIDES SOLUTIONS TO ONTARIO'S ELECTRICITY CHALLENGES.

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What should the Ontario government do?

- The Ontario government should recognize efficiency as a low-cost energy resource that must be integrated within electricity system planning. The appropriate budgets and targets should be determined by an independent, evidence-based process, seeking to reduce costs and increase value for all Ontarians over the long-term.
- Any policy using government funds to subsidize electricity rates should not discriminate against energy efficiency, or artificially restrict cost-effective energy efficiency investments.
- The full benefits of energy efficiency should be considered. This includes the role of energy efficiency in reducing more expensive generation and transmission costs, avoiding a looming capacity shortfall, creating and maintaining jobs throughout the province, and reducing bills for those most in need.

References

- 1 [For the People, A Plan for Ontario.](#)
- 2 [Achievable Potential Study: Short Term Analysis. Report submitted to the IESO by Nextant \(2016\).](#)
- 3 IESO. [Conservation and Demand Management Energy Efficiency Cost-Effectiveness Guide.](#)
- 4 IESO. [Evaluation, Measurement and Verification](#)
- 5 IESO. [2018 Technical Planning Conference, September 13.](#)
- 6 [Calculations from The Economic Impact of Improved Energy Efficiency in Canada, Dunsky Energy Consulting, April 2018](#)
- 7 RMI. [Want Engaged Employees? & Calling all CEOs: Why Energy Efficiency Matters.](#)
- 8 [Lighting the Workplace: A Perspective for Safety and Productivity?](#)
- 9 [Why Energy Efficiency? Productivity.](#)

About Efficiency Canada

Efficiency Canada is the national voice for an energy efficient economy. Housed at Carleton University, as part of the Sustainable Energy Research Centre, Efficiency Canada advocates to make our country a global leader in energy efficiency. We convene people from across Canada's economy to work together to advance policies required to take full advantage of energy efficiency. And we undertake and communicate solid research to build a more productive economy, sustainable environment, and better life for Canadians.

For further information contact:

Brendan Haley, PhD
Policy Director
brendan.haley@efficiencycanada.org

