

1. Every Joule Counts - Introduction

Every Joule Counts is the second volume of the ECO's 2016/2017 energy conservation progress report.

The first volume, *Every Drop Counts*, was released in spring 2017, and was a focused look at policy opportunities and barriers to reducing the energy and climate footprint of Ontario's municipal water and wastewater systems, the largest energy use for most municipalities.

This second volume is quite different, and presents a broad and primarily quantitative overview of the state of Ontario's energy sector, and the role and impact of energy conservation. It addresses the ECO's responsibility under section 58.1(2) of the *Environmental Bill of Rights, 1993* to report annually on the results of energy conservation initiatives and on progress achieved towards Ontario energy conservation targets. This report pulls together many different data sources to provide Ontario's only comprehensive public summary of energy conservation and efficiency.

The time frame covered by the report is by necessity a hybrid. Final numerical data on overall energy use and energy conservation results is generally presented as of year-end 2015 (exceptions where more recent data are available are noted in the text). This is due to the time lag in data collection and reporting, and (for conservation programs), to the need for evaluation prior to verifying final results. However, the report's description of policy developments, including policies that affect conservation program activity, is complete through the end of 2016.

1.1 Contents of the Report

- **Chapter 2, Ontario Energy Use in 2015**, presents a statistical look at trends in energy use in Ontario for all major sources of energy, and what impact energy conservation has had on our overall energy use. This chapter also looks at trends in energy prices, which affect energy consumption.
- **Chapter 3, Ontario Energy Policy in 2016**, is a fuel-by-fuel summary and timeline of the key laws, regulations, policies, and funding decisions made in 2016 that affect energy use and conservation in Ontario.
- **Chapter 4, Progress on Ontario Conservation Targets**, summarizes results achieved towards Ontario's energy conservation targets, such as the long-range electricity conservation target established in the Long-Term Energy Plan.
- **Chapter 5, Natural Gas Conservation Program Results**, assesses the 2015 results of conservation programs delivered by Ontario's gas distributors, Enbridge Gas Distribution and Union Gas, and funded by natural gas customers. Policy developments in 2016 that impact gas conservation programs are also discussed in more detail.
- **Chapter 6, Electricity Conservation Program Results**, assesses the 2015 results of conservation programs delivered by the Independent Electricity System Operator and Ontario's electric distributors, and funded by electricity ratepayers. As for natural gas, policy developments in 2016 that impact electricity conservation programs are also discussed in more detail.

1.2 Energy Conservation Program Results and the Greenhouse Gas Reduction Account

The energy savings for electricity and natural gas conservation programs presented in this report are based on program evaluations overseen by the Independent Electricity System Operator (for electricity) and the Ontario Energy Board (for natural gas). The ECO tracks the methodology and findings of these evaluations (and also participates as an observer on the OEB's Evaluation Advisory Committee for natural gas conservation results), and raises concerns with these evaluations where appropriate (for example, see section 6.3.3 of *Conservation: Let's Get Serious*, the ECO's 2015/2016 Annual Energy Conservation Progress Report).

In 2017, the ECO was granted access to confidential ministry information, as well as any evaluation of that information by Ministry of the Environment and Climate Change, to confirm that initiatives funded through the Greenhouse Gas Reduction Account (GGRA) are likely to reduce (or support the reduction of) greenhouse gases. See chapter 5 of the ECO's 2016 Greenhouse Gas Progress Report, *Facing Climate Change*, for details on the GGRA. Many GGRA-funded initiatives will address energy use, and there will likely be some overlap with existing energy conservation programs. In future reports, the ECO will address the question of how to determine the incremental impact of GGRA-funded initiatives relative to existing energy conservation programs and activities. This will be necessary to assess whether the GGRA spending is being used to reduce greenhouse gas emissions.