



# THE EFFICIENT ELECTRIFICATION TOOLKIT

Electrifying building heating by converting from fossil fuels such as natural gas, oil or propane to electricity is one of the largest opportunities for businesses and organizations across Ontario to reduce carbon emissions.

The **Efficient Electrification Toolkit** is a resource for anyone considering, planning or designing building electrification projects in Ontario. This toolkit can be used to support informed decision making about electrification based on your organization's goals and constraints. Using a five-step decision-making process, the toolkit includes technical tools, training and hands-on support to help building operators across Ontario address energy and/or GHG reduction objectives in an energy efficient and cost-effective manner.



## Technical planning tools

- Fuel-switching savings calculators
- RETScreen templates for commercial and institutional building archetypes
- Life-cycle cost assessment tools



## Training opportunities

- Net zero planning with RETScreen
- Financial analysis
- Electrifying HVAC with heat pumps



## Hands-on support

Need technical support for any of Efficient Electrification Toolkit components, or to develop your building electrification projects? Contact us at [trainingandsupport@ieso.ca](mailto:trainingandsupport@ieso.ca) for expert help!

## THE EFFICIENT ELECTRIFICATION DECISION PROCESS

# 1

### Establish Goals and Constraints

Understanding each building's constraints – such as a building's HVAC system configuration, electrical service capacity, and available space – and establishing intelligent, realistic objectives are key to project success.

# 2

### Reduce Heating Demand

Reducing the amount of energy needed to heat a building through envelope and mechanical upgrades improves energy performance and reduces the capital cost of new HVAC systems.

# 3

### Optimize the HVAC System

Reduce energy waste in building mechanical systems through temperature controls, zoning and heat recovery.

# 4

### Electrify Heating Systems

Use the life-cycle cost analysis section to compare the energy and emissions reductions and operating costs of electric heating systems over the lifecycle of systems under consideration.

# 5

### Balance Heating/Cooling Sources

Explore the cost and GHG emissions implications of different fuels, including hybrid and all-electric heating and cooling systems.

