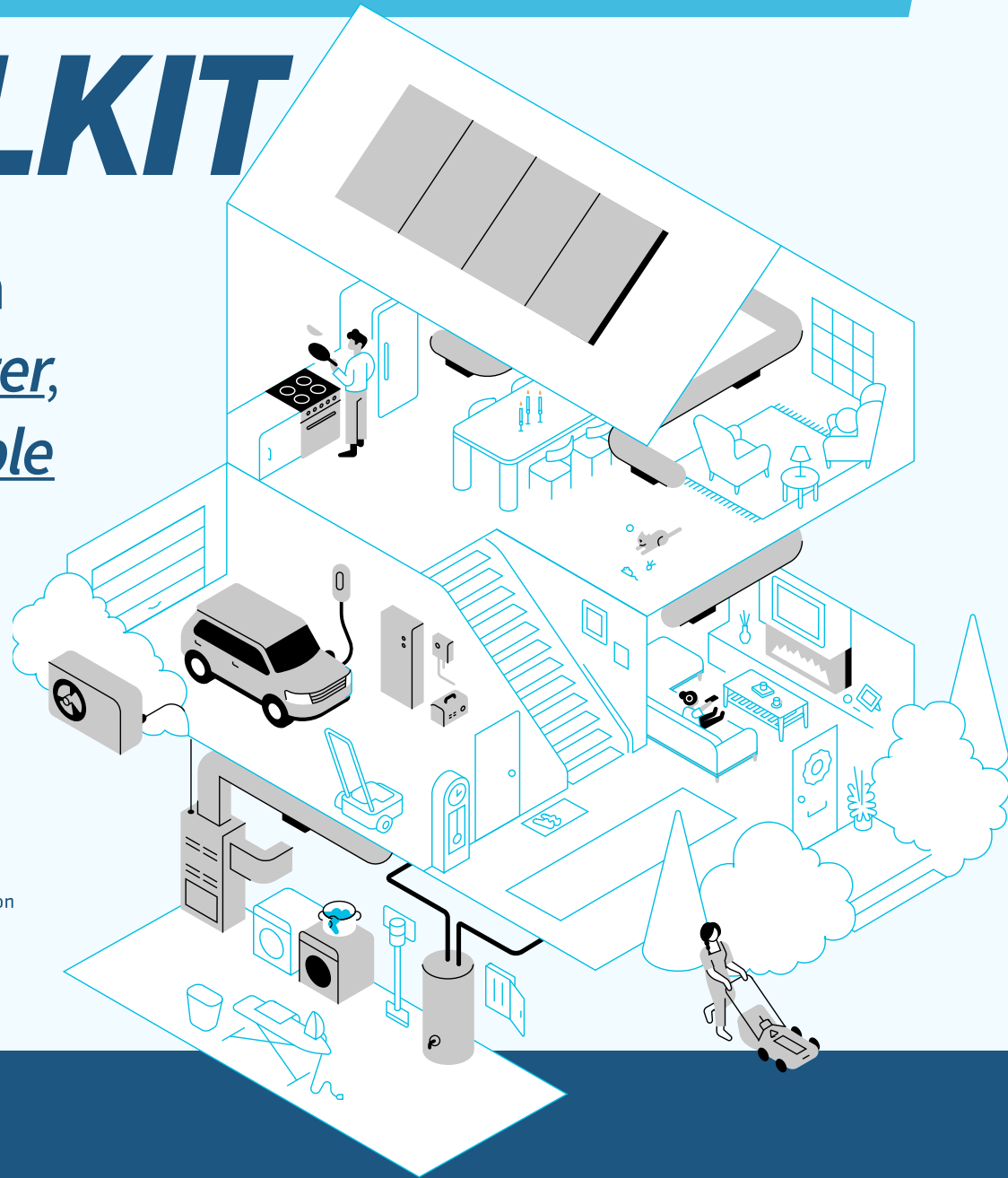


CANADA'S HOME ELECTRIFICATION TOOLKIT

Your guide to a
cleaner, smarter,
more affordable
home



APPENDICES

Appendices

Appendix 1: Equipment operating cost by province and territory (updated April 2025)

THE OPERATIONAL COSTS FOR ELECTRIFIED COMPARED TO NON-ELECTRIFIED EQUIPMENT BY PROVINCE

Equipment	AB	BC	MB	NB	NL	NT	NS	ON	PE	QC	SK	YT	CA
Space heating													
ASHP	>>	>	>>	<	<<	>	<	>	<	<	>>	<<	>
ccASHP	>>	=	>>	<	<<	>	<	>	<<	<<	>>	<<	>
Hybrid ASHP	>>	=	>	<	<<	<	<	>	<<	<<	>>	<<	>
GSHP	>	<	>	<<	<<	<	<<	<	<<	<<	>	<<	<
Air to water HP	>>	<	>>	<	<<	>	<	>	<<	<<	>>	<<	>
Portable ASHP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Water heater													
Electric tank	>>	>>	>>	>	=	>>	>	>>	>	>	>>	<	>>
Electric tankless	>>	>>	>>	>	=	>>	>>	>>	>	>	>>	<	>>
Heat pump water heater	>	<	>	<<	<<	<	<<	<	<<	<<	>	<<	<
Heat pump water heater (120 V)	>>	>	>>	<	<<	=	<	>	<	<	>>	<<	>
Solar water heater	>>	<	>	<	<<	<	<	=	<<	<<	>	<<	=
GSHP desuperheater	>	<	>	<<	<<	<	<<	<	<<	<<	>	<<	<
Cooking ranges													
electric coil range	>>	>	>>	<	<<	>	=	>	<	<	>>	<<	>
radiant range	>>	>	>>	<	<<	>	=	>	<	<	>>	<<	>
induction range	>>	=	>	<	<<	=	<	>	<	<<	>>	<<	>
portable induction cooker	>>	=	>	<	<<	=	<	>	<	<<	>>	<<	>
oven	>>	>	>>	<	<<	>	=	>	<	<	>>	<<	>
Dryers													
electric resistance	>>	>>	>>	>	=	>>	>	>>	>	>	>>	<	>>
condensing	>>	>>	>>	>	=	>>	>	>>	>	>	>>	<	>>
heat pump	>>	>	>>	>	<	>	>	>>	<	<	>>	<<	>>
120V	>>	>>	>>	>	=	>>	>	>>	>	>	>>	<	>>
combined washer and dryer	>>	>>	>>	>	=	>>	>	>>	>	>	>>	<	>>

APPENDICES

Equipment	AB	BC	MB	NB	NL	NT	NS	ON	PE	QC	SK	YT	CA
Fireplaces													
electric fireplace	>>	>	>>	=	<	>	=	>	<	<	>>	<<	>
water vapour electric fireplace	>>	>	>>	=	<	>	=	>	<	<	>>	<<	>
Barbeques													
electric	>>	>>	>>	>	>	>>	>>	>>	>	>	>>	<	>>
Other equipment													
electric pool heater	>>	>>	>>	>	<	>>	>	>>	>	>	>>	<	>>
heat pump pool heater	>	<	=	<<	<<	<<	<<	<	<<	<<	>	<<	<
Solar pool heater	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
EV chargers													
level 1	<<	<<	<<	<<	<<	<	<<	<<	<<	<<	<<	<<	<<
level 2	<<	<<	<<	<<	<<	<	<<	<<	<<	<<	<<	<<	<<
bidirectional	<<	<<	<<	<<	<<	<	<<	<<	<<	<<	<<	<<	<<

Notes:

- **NU** is not included because fuel prices are not available.
- **>>** the operating cost is two or more times the operating cost of comparable gas equipment.
- **>** the operating cost is more than 10% over that of comparable gas equipment but less than double the cost.
- **=** the operating cost is within 10% of the operating cost of comparable gas equipment.
- **<** the operating cost is less 90% of the operating cost of comparable gas equipment but less than half the cost.
- **<<** the operating cost is half or less of the operating cost of comparable gas equipment.
- **ND** insufficient data available.

Appendix 2: Equipment operational GHG emissions by province and territory

Even electrified equipment can still be responsible GHGs if the electricity that powers the equipment generates GHG emissions. How much GHGs are generated varies greatly by province and territory depending on how much generation comes from fossil fuel power plants.

Although operating electric equipment in some provinces and territories results in higher overall GHG emissions today, this will not be true for long. The federal government is working with the provinces and territories to move towards greater generation from renewable sources such as hydropower, wind, and solar.

THE EMISSIONS FOR ELECTRIFIED COMPARED TO NON-ELECTRIFIED EQUIPMENT BY PROVINCE AND TERRITORY

Equipment	AB	BC	MB	NB	NL	NT	NS	NU	ON	PE	QC	SK	YT	CA
Space heating														
ASHP	>	<<	<<	<	<<	<	>	>>	<<	<	<<	>>	<<	<<
ccASHP	=	<<	<<	<	<<	<	>	>>	<<	<	<<	>	<<	<<
Hybrid ASHP	=	<<	<<	<	<<	<<	>	>	<<	<	<<	>	<<	<<
GSHP	<	<<	<<	<<	<<	<<	<	=	<<	<<	<<	=	<<	<<
Air to water HP	=	<<	<<	<	<<	<<	>	>>	<<	<	<<	>	<<	<<
Portable ASHP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Water heater														
Electric tank	>>	<<	<<	>	<<	<	>>	>>	<<	>	<<	>>	<<	<
Electric tankless	>>	<<	<<	>	<<	<	>>	>>	<<	>	<<	>>	<<	<
Heat pump water heater	<	<<	<<	<<	<<	<<	<	=	<<	<<	<<	<	<<	<<
Heat pump water heater (120 V)	=	<<	<<	<	<<	<<	>	>	<<	<	<<	>	<<	<<
Solar water heater	<	<<	<<	<<	<<	<<	=	>	<<	<<	<<	=	<<	<<
GSHP desuperheater	<	<<	<<	<<	<<	<<	<	<	<<	<<	<<	<	<<	<<
Cooking ranges														
Electric coil range	>	<<	<<	<	<<	<<	>	>	<<	<	<<	>	<<	<<
Radiant range	>	<<	<<	<	<<	<<	>	>	<<	<	<<	>	<<	<<
Induction range	=	<<	<<	<	<<	<<	>	>	<<	<	<<	>	<<	<<
Portable induction cooker	=	<<	<<	<	<<	<<	>	>	<<	<	<<	>	<<	<<
Oven	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

APPENDICES

Equipment	AB	BC	MB	NB	NL	NT	NS	NU	ON	PE	QC	SK	YT	CA
Dryers														
Electric resistance	>>	<<	<<	>	<<	<	>>	>>	<<	>	<<	>>	<<	<
Condensing	>>	<<	<<	>	<<	<	>>	>>	<<	>	<<	>>	<<	<
Heat pump	>	<<	<<	=	<<	<	>>	>>	<<	=	<<	>>	<<	<<
120V	>>	<<	<<	>	<<	<	>>	>>	<<	>	<<	>>	<<	<
Combined washer and dryer	>>	<<	<<	>	<<	<	>>	>>	<<	>	<<	>>	<<	<
Fireplaces														
Electric fireplace	>	<<	<<	<	<<	<<	>	>>	<<	<	<<	>	<<	<<
Water vapour electric fireplace	>	<<	<<	<	<<	<<	>	>>	<<	<	<<	>	<<	<<
Barbeques														
Electric	>>	<<	<<	>	<<	<	>>	>>	<<	>	<<	>>	<<	<
Other equipment														
Electric pool heater	>>	<<	<<	>	<<	<	>>	>>	<<	>	<<	>>	<<	<<
Heat pump pool heater	<	<<	<<	<<	<<	<<	<	<	<<	<<	<<	<	<<	<<
Solar pool heater	<<	<<	<<	<<	<<	<<	<<	<<	<<	<<	<<	<<	<<	<<
EV chargers														
Level 1	<	<<	<<	<<	<<	<<	<	<	<<	<<	<<	<	<<	<<
Level 2	<	<<	<<	<<	<<	<<	<	<	<<	<<	<<	<	<<	<<
Bidirectional	<	<<	<<	<<	<<	<<	<	<	<<	<<	<<	<	<<	<<

Notes:

- >> the emissions are two or more times the emissions of comparable gas equipment.
- > the emissions are more than 10% over that of comparable gas equipment but less than double the emissions.
- = the emissions are within 10% of the emissions of comparable gas equipment.
- < the emissions are less 90% of the emissions of comparable gas equipment but less than half the emissions.
- << the emissions are half or less of the emissions of comparable gas equipment
- **ND** insufficient data available.

This section is part of the [Canada's Home Electrification Toolkit](#). The Toolkit provides clear, concise, and up-to-date information on space heating, cooking, fireplaces, home batteries and backup options, and other household equipment. It also includes tips for renters, strategies for avoiding potentially costly electrical panel upgrades, and case studies from satisfied homeowners.

ADDITIONAL SECTIONS ARE AVAILABLE FOR DOWNLOAD BELOW:

- [Space Heating](#)
- [Electric Thermal Storage](#)
- [Water Heaters](#)
- [Dryers](#)
- [Cooking](#)
- [Fireplaces](#)
- [Outdoor Equipment](#)
- [EV Chargers](#)
- [Home Batteries and Backup Generators](#)
- [Solar Power](#)
- [Avoiding an Electrical Panel Upgrade](#)
- [Electrification Incentives](#)
- [Energy Management Systems](#)
- [Options for Renters](#)
- [Amplifying the Impact Through Conversations](#)
- [Ways Community Groups Can Help](#)

Symbols and terms in this publication:

Upfront or operating cost (no incentives applied)

Symbol	Description
\$	Up to \$99
\$\$	\$100-\$999
\$\$\$	\$1,000-\$9,999
\$\$\$\$	\$10,000 and above

Implementation

Term	Description
Easy	Can be implemented by yourself if no electrical upgrade is required
Medium	Can be implemented by someone with DIY skills
Difficult	Generally requires a qualified electrician or other contractor

Emissions reduction potential (onsite emissions reductions using Canadian averages)

Term	Description
Low	1-9 kg CO2 per year
Medium	10-99 kg CO2 per year
High	100-999 kg CO2 per year
Very high	> 1,000 kg CO2 per year

When comparing electric to gas equipment on upfront costs, operating costs and emissions

Symbol	Description
=	Values differ by 10% or less
▽	Electric version is 10-50% lower
▼	Electric version is more than 50% lower
△	Electric version is 10-100% higher
▲	Electric version is more than 100% higher



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Version 1.2, released June 2025

Visit buildingdecarbonization.ca/canadas-home-electrification-toolkit for digital downloads, updates, and other information about home electrification.

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