



Backgrounder for Minister of the Environment and Climate Change Site Visit

Fridge & Freezer Pickup in Ontario

Since 2006, ARCA Canada has provided appliance pickup and decommissioning services for the FRIDGE & FREEZER PICKUP program, an electricity conservation program funded by the IESO (formerly OPA). ARCA Canada has successfully decommissioned approximately 500,000 appliances (of which 85% are refrigerators and/or freezers with the IESO program) containing hazardous household waste. These appliances contain Chlorofluorocarbon (CFC), Hydrochlorofluorocarbon (HCFC) and/or Hydrofluorocarbon-based (HFC) refrigerants (R12, R22 and R134a), Polychlorinated biphenyl-based (PCB) capacitors, mercury-based switches, various metals and plastics. In addition to contributing to climate change, these environmental pollutants have been linked to cancers and other health problems.

Did You Know?

- CFCs and HCFCs are ozone-depleting substances that, when released to the environment, destroy the protective ozone layer above the earth.¹
- The degradation of the ozone layer leads to higher levels of ultraviolet radiation reaching Earth's surface. This in turn can reduce crop yields, diminish the productivity of the oceans, and possibly contribute to the decline of amphibious populations.²
- CFCs, HCFCs and HFCs are substances with a significant Global Warming Potential (GWP), meaning that their release contributes to global climate change.³
- If improperly disposed, used oil coolant from appliances can result in the release of dissolved ozone-depleting substances and groundwater contamination.³
- Many appliances contain mercury switches. When released into the environment, mercury bio-accumulates in the tissues of plants and animals and is a known neurotoxin.⁴
- Many old appliances are equipped with capacitors that contain Polychlorinated biphenyls (PCBs). PCBs are toxic substances with carcinogenic and non-cancerous effects on humans, including effects on the immune system, reproductive system, nervous system, and endocrine system.³

¹ "Material Safety Data Sheet - Dichlorodifluoromethane." SynQuest Laboratories Inc. N.p., 27 May 2015. Web. 29 July 2015. <<http://www.synquestlabs.com/msds/1100-6-02.pdf>>.

² Auby, Susan. "Environmental Indicators: Ozone Depletion." EPA. Environmental Protection Agency, 19 Aug. 2010. Web. 29 July 2015. <<http://www.epa.gov/ozone/science/indicat/>>.

³ "Safe Disposal of Refrigerated Household Appliances: Frequently Asked Questions (FAQ) | Ozone Layer Protection - Regulatory Programs | US EPA." EPA. Environmental Protection Agency, 19 Aug. 2010. Web. 29 July 2015. <<http://www.epa.gov/ozone/title6/608/disposal/household.html>>.

⁴ "Mercury - Human Health." EPA. Environmental Protection Agency, 29 Dec. 2014. Web. 29 July 2015. <<http://www.epa.gov/mercury/health.htm>>.

Why do we need responsible recycling?

Responsible disposal and recycling of refrigerant-containing appliances provides important reductions in both energy consumption and emissions of ozone-depleting substances and greenhouse gases. ARCA Canada's recycling limits the release of CFCs, PCBs, mercury and used oil into the environment while saving landfill space.

The ARCA Recycling Process



About ARCA Canada

ARCA Canada Inc. has in-depth experience and professional expertise in providing services to turnkey appliance recycling programs for utilities and other entities concerned with the disposal of appliances containing refrigerants in a manner that meets or exceeds existing provincial regulations and industry expectations. A pioneer in developing cutting-edge technologies, ARCA Canada strives to maximize materials recycling while protecting natural resources from the environmentally damaging substances found in old appliances. ARCA Canada prides itself on staying at the forefront of innovative, technological advances that have made the company a leader in the appliance recycling industry.

- At peak operations, ARCA Canada employs approximately 100+ green collar workers and processes 850 appliances a day at the Oakville facility.
- 95 percent of the materials recovered during the decommissioning process are recycled; the remainder is disposed of in accordance with provincial environmental regulations.

Join the thousands of Ontarians who are removing their old, energy-guzzling fridge or freezer

**SINCE 2006
MORE THAN
420,000
FRIGDES AND FREEZERS
HAVE BEEN
REMOVED!**



Adding up the +
+ SAVINGS



Lower electricity costs
\$125 SAVINGS/YEAR

We pick up for FREE
\$90 SAVINGS

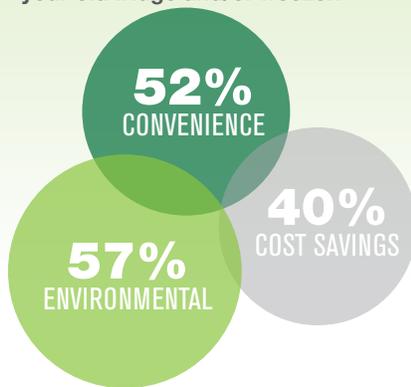
Municipal disposal fee avoided
\$30 SAVINGS

Disposing of potentially harmful pollutants in an environmentally responsible way
PRICELESS

But We're Not **DONE YET!**

WHY THEY DID IT

Most common reasons to remove your old fridge and/or freezer:



From the electricity we've saved...

WE COULD POWER
21,800 HOMES
FOR AN ENTIRE YEAR



DID YOU KNOW?

A typical fridge built in 1986 uses 1,500 kilowatt-hours (which could be costing up to \$160 per year to run), while a new ENERGY STAR[®] certified appliance uses approximately two-thirds less energy.

Buying a New Appliance?

Make sure your new appliance is:

- 1 The right size
- 2 The right model
- 3 Low EnerGuide rated
- 4 ENERGY STAR[®] certified



1. Step One: PARTICIPATION

To qualify, you must have a full-sized refrigerator or freezer that is:

- Fridges 15 YEARS of age or older
- Freezers 20 YEARS of age or older
- between 10-27 cubic feet
- in WORKING condition



PLUS, if you have at least one fridge or freezer collected, we'll also pick up your old qualifying **window air conditioners** and **dehumidifiers** at the same time.

3. Step Three: BALER TIME!

Next step – an industrial baler. It's used to crush refrigerators. One baler can crush as many as 8 refrigerators at a time. Once the fridges are crushed, all of the steel is recycled and reused to help build such things as bridges and roads.



2. Step Two: FRIDGE IS PICKED UP & RECYCLED



Technicians strip away any copper, plastic and aluminum

- Plastic can be recycled to make lots of things such as flower pots
- Copper can be recycled for copper wiring
- Car parts can be made from recycled aluminum

Refrigerators made before 1995 usually contain Freon

Freon is a chlorofluorocarbon (also known as CFC). It can destroy the ozone layer which protects us from the sun's harmful UV rays. That's why safe disposal of CFCs is so important.

Every fridge is drilled and tipped to drain the oil

After all the oil is safely removed, the fridge can be destroyed in an environmentally responsible way.

DID YOU KNOW?

Some chemicals used in fridges contain atmospheric pollutants and extra attention is given to ensure they are contained and destroyed.

IN THE END, **VERY LITTLE** GOES TO THE LANDFILL AND THAT'S PRETTY **AMAZING!**

But hurry – this program ends December 31, 2015.

For complete details or to book an appointment, visit saveonenergy.ca or call 1-877-797-9473 today.



Subject to additional terms and conditions found at saveonenergy.ca. Fridges must be 15 years of age or more and freezers must be 20 years of age or more, in working condition and between 10-27 cubic feet. Access conditions apply. Window air conditioners and dehumidifiers must be 10 years of age or more and in working condition. Funded by the Independent Electricity System Operator. SMOfficial Mark adopted and used by the Independent Electricity System Operator.