

Fridge + Freezer Consolidation Toolkit

This toolkit will help you to save energy in your unit by reducing the number of unused and underused refrigerators and freezers.

Background Information

The Lower Mainland Health Authorities use approximately 290,000,000 kWh of electricity annually. This is enough electricity to power about **26,364 homes for a year**. While BC currently benefits from clean hydro power to meet electricity needs, demand is expected to outstrip our current capacity by 40% in the next two decades. How can BC close this gap? Significant energy savings can be achieved by being smart with how we use energy.

The power used by refrigerators and freezers, which are on 7 days a week, 24hrs a day, can add up to a significant portion of the energy usage of your unit and tonnes of greenhouse gas emission over the lifetime of the appliance.

See the [Additional Resources](#) section for more information on calculating how much energy different refrigerators in your unit may be using.

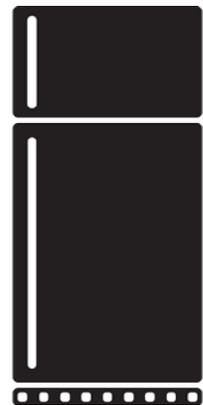
Steps

Step 1 – Get your Manager/Supervisor Involved

Speak with your supervisors about running a fridge and freezer consolidation campaign. Get them on board first.

The Big Picture

This toolkit is part of a broader initiative to reduce the Lower Mainland Health Authorities' energy use, and to foster a workplace culture where everyone works together to help reduce the energy demand of electronic equipment.



Step 2 – Assess your Work Area and Equipment

Assess how many fridges and freezers there are in your unit – how many are in use and how many could be disposed of or unplugged. Work with staff in each area where there is a fridge or a freezer to determine whether it is needed, taking into consideration the level of visitor and patient use, as well as use by hospital staff. If there is more than one fridge and freezer in an area, discuss with staff whether it is possible to remove the extra fridge and/or freezer by cleaning it out, consolidating the contents or introducing new methods of organization.

Use this online calculator to calculate the energy and cost savings associated with the initiative: <http://www.energystar.gov/index.cfm?fuseaction=refrig.calculator>

Step 3 – Recycle (or Unplug) Fridges & Freezers

Work to have all under-used fridges recycled. Check with your facilities management to see if they have a procedure for recycling fridges and freezers. Check with your local utility company and municipality for fridge recycling programs.

For fridges that are under-used but are still required, place a sticker on the fridge to remind staff to unplug the fridge when not in use. Install a power bar in an easy to access location to make it easy for staff to reach the outlet.

Step 4 – Send an Email

Either you or your manager can send out an email asking people to clean out and consolidate their fridges and freezers and unplug the fridge and freezer when they are not in use. Use the data you collected in your assessment to report on much energy could be saved and remind people that everyone is responsible for electricity use in the workplace. See the [Additional Resources](#) section for a sample email template.

Step 5 – Communicate the Plan & Build Your Team

At the next staff meeting, raise the issue of energy reduction and make sure staff members are aware of this toolkit. Encourage everyone to take a look in fridge and work with others in their unit to organize for periodic consolidation and cleaning. Make sure to find someone in each unit willing to be responsible for making sure this happens on a regular basis.

Keep in mind that fridges and freezers might be a sensitive issue for some people and it might take time to convince them to change the way they use fridges and freezers in their area.

Step 6 - Evaluation

When the initial fridge and freezer consolidation is complete, count the number of appliances you were able to recycle or unplug and send your findings to the Green + Leaders Program Coordinator.



Step 7 – Share your Success

Sharing your success with other Green + Leaders can be motivating and can help support others as they try new tactics and approaches. We also love telling success stories on the [GreenCare Community](#) site, so share your story with us.

Fast Facts: Energy + Fridges

Health Authority

- ✓ Energy conservation can enhance human health by reducing GHG emissions, improving outdoor air quality and decreasing acid rain.
- ✓ Over 97% of our reported greenhouse gas (GHG) emissions come from health care buildings within the LMHOs, making health care one of the most energy intensive sectors.
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- ✓ Our target is aligned with the Provincial mandate of reducing the public sector's carbon footprint 33% by 2020.
- ✓ While the LMHOs' overall energy consumption has increased since 2007 – due to facility expansions and increased health care services – our energy conservation measures have resulted in a **decrease in energy intensity** (*i.e.* amount of energy used per square foot):
-9.3% Fraser Health, -0.7% PHC, -2.5% PHSA and -10.2% VCH.

Fridge Energy Use

- An average refrigerator, left on 24 hours a day will use over 500 kWh of energy in a year – or roughly 4.5% of an entire household's annual consumption.
- Fridges are recyclable but carry a cooling agent that needs to be drained by a trained technician at a licensed facility. Visit <http://www.rcbc.bc.ca/> for more information on where to recycle your underused fridge.
- Every time you open a refrigerator, up to 30% of the cold air can escape.
- Set refrigerators' internal temperature to 2°C and 3°C to save energy, usually the mid-level setting on the temperature control in most refrigerators. Keeping fridge temperatures 5°C colder than the recommended levels can increase energy use by as much as 25%.
- Door seals as they can deteriorate over time and a fridge that does not seal properly can waste a lot of energy. To check the seal, place a piece of paper between the door and the refrigerator as you close it. The seal is damaged if the paper moves freely in the door.



Additional Resources

Testing Seals and Temperature Settings

After recycling all extra fridges, work with maintenance staff to set up a regular maintenance schedule of all remaining fridges. Fridge maintenance checklists can include checking door seals, dusting back or bottom coils and regular defrosting activities.

Refrigerator Savings Calculator

According to the [BC Sustainable Energy Association](#) an older model fridge and freezer can consume 1,000 kWh of electricity a year and 800 kg of CO₂ annually. Use the Energy Star Refrigerator Savings Calculator to calculate how much it costs to operate different fridge models in your unit.

Calculator: <http://www.energystar.gov/index.cfm?fuseaction=refrig.calculator>

Sample Email Template

Subject: Is your fridge and freezer eating energy?

The Lower Mainland Health Authorities use approximately 290,000,000 kWh of electricity per year. This pumps 232,000 tonnes of CO₂ into the atmosphere annually. Together we can work to reduce this demand by simply unplugging and disposing of un-sued and under-used fridges and freezers in our unit.

So, let's work together in saving energy and take a look and see what we can do to better organize our fridges and freezers and consolidate the contents with these simple steps:

- o Do your part and clean out any unused items you may have left behind.
- o Work with others in your unit to consolidate what is left and come up with a good system of organization that works for all of you.
- o Find someone in your unit willing to monitor the fridge/freezer on a regular basis.
- o If you find that you no longer require a fridge or freezer in your unit, alert [insert name and contact info] to coordinate for the removal and recycling of the appliance.

Contacts

For help using this toolkit, please contact the Green + Leaders Program Coordinator.

Visit <https://bcgreencare.ca/framework/energy-conservation> for more information on GreenCare's energy-related initiatives.

