

Blanket Warmer Timer Toolkit

This toolkit will help you to work with people in your unit and with facilities, maintenance and operations (FMO) staff in your building to reduce the amount of electricity consumed by blanket warmers when they're not being used.

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.

Blanket warmers are an important piece of equipment in the clinical setting to promote patient comfort and security, but they're also energy hogs.

Often, blanket warmers are left on in departments that are not open 24/7. Over a year, one blanket warmer can use as much energy as a typical BC household uses in 4 months. After hours, the equipment is still warming blankets and using energy, even when no one is around to use them.

Timers are an effective, low cost solution to schedule when you want blanket warmers to run. By following the schedule you set, they automatically shut the equipment off when it's not in use and ensure that the equipment is turned back on when needed. They're also easy to install and their schedules can be reset as required.

Controlling blanket warmers with a timer when they're not being used will reduce energy consumption, improve environmental performance and lower electrical costs without compromising patient care.

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.

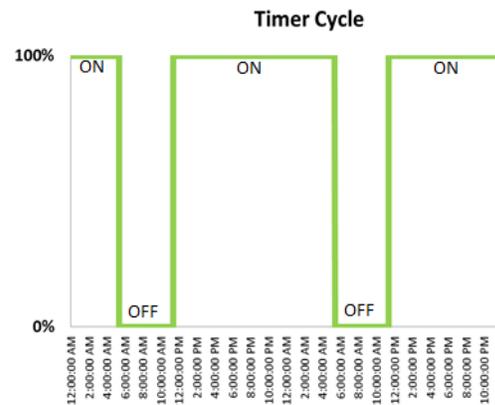


Timer Study Results

The *Energy and Environmental Sustainability (EES) Team* conducted a pilot project at Royal Columbian Hospital in New Westminster in early 2015. The aim of the study was to determine the feasibility of using a standard timer on a blanket warmer, and estimate potential annual savings in energy and cost.

The pilot project achieved a **24% reduction in energy use** by connecting a blanket warmer to a timer that cycled the unit off when not in use. In this study, the timer was turned off 5 hours per day. The annual energy savings achieved by the pilot was equivalent to the power used by an entire BC household over nearly 20 days.

While energy savings will vary by site and circumstance, this study's results suggest that installing timers on blanket warmers can significantly reduce energy and costs while maintaining current levels of patient care.



The table below highlights the energy savings achieved per unit in the pilot project and the simple payback (how long it takes to pay off the cost of purchasing the timer) of just over one year.

Existing Annual Energy Use	New Annual Energy Use	Annual Energy Savings	Annual Utility Cost Savings	Unit Cost	Installation Cost	Simple Pay Back
3270 kWh	2484 kWh	786 kWh	\$70	\$48	\$ 30	1.1 years

When to Install a Timer on a Blanket Warmer

Here are a couple of points that will help to determine if a blanket warmer in your area is a good candidate for a timer:

- o The blanket warmer is turned on continuously (all day and night), but the departments is closed overnight, or on the weekend, etc.
- o The time that the blanket warmer is not in use is the same day to day. For example, every morning the blanket warmer is not being used from 5pm to 8am.



Steps

Step 1 – Get your Manager / Supervisor Involved

Speak with your supervisors about running a blanket warmer initiative. Here are some key talking points to help you make the case:

- o 10 to 20% of LMHA’s consumption is due to electronic devices and equipment plugged into wall outlets.
- o A recent study shows that installing timers on blanket warmers can save almost 25% on the equipment’s energy consumption. These energy savings can pay for the cost of the timer and installation just over a year.
- o Timers are reliable and can be used without compromising patient care. They will turn blanket warmers back on according to a schedule that can be reset anytime.

Step 2 – Communication Strategy

Craft your communication strategy to address why putting the blanket warmer on a timer is important and how potential concerns will be addressed. We all work in different environments and you will know best what kind of communications strategy will fit your work area.

At the next staff meeting ask to speak about the initiative. Explain how it will work and what staff should do if they have an issue with the timer or if it needs to be adjusted. If your work area is shared by a variety of groups who meet separately, offer to speak at smaller team meetings.

Step 3 – Implementation

Now that you have spoken with your supervisor and staff, you will need to contact FMO staff to have your timer ordered and installed:

- o You must obtain permission from your manager before contacting your site’s FMO and before ordering a timer.
- o Before any timers are installed, please coordinate with your site’s FMO team to ensure that the timers are sized correctly.
- o The cost of the timers should be covered by your facility or department. Our pilot study showed that the payback period is just over one year (see page 2).

Plug Meters

Plug meters are devices that plug into the wall socket and measure how much electricity each piece of equipment uses.



Make sure to talk to staff in each area you are implementing timers to identify any additional barriers and benefits to behavior change. Provide special consideration to issues of safety for hospital staff, patients and visitors.

Step 4 – Assess

Make an inventory of the blanket warmers in your area to calculate the potential savings for the department. The “Equipment” Worksheet in the [Energy Savings Calculator](#) can help you calculate the energy and cost savings associated with installing timers on the blanket warmers.

Want more accuracy? Use a plug meter to measure your blanket warmer wattages. Use the ‘Energy Savings’ equation in the Additional Resources section for a more accurate estimate of savings potential.



The image shows a screenshot of a spreadsheet titled "Step 4: Calculate Your Savings". It contains a table with several columns: "Equipment", "Power", "Hours", "Energy", and "Cost". The table is filled with data, and there are some highlighted cells in yellow and blue. The spreadsheet is used for calculating energy and cost savings for blanket warmers.

Step 5 – 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: Smart Energy

- ✓ 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.
- ✓ 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.



Additional Resources

Energy savings formula

$$\text{Energy Savings} \left(\frac{kWh}{\text{year}} \right)$$

$$= \text{Blanket Warmer Wattage}(W) \times 0.001 \left(\frac{kW}{W} \right) \times \# \text{ of Hours Equipment can be Shut Off} \left(\frac{\text{hours}}{\text{day}} \right) \times 365 \left(\frac{\text{days}}{\text{year}} \right)$$

Cost savings formula

$$\text{Cost Savings} \left(\frac{\$}{\text{year}} \right) = \text{Energy Savings} \left(\frac{kWh}{\text{year}} \right) \times \text{Electricity Cost} \left(\frac{\$}{kWh} \right)$$

Contacts

For help using this toolkit or a plug meter, please contact the G+L Program Coordinator.

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

