

Multi-Residential Buildings

How to save energy in a multi-residential building and improve your bottom line

Energy costs are a significant part of the operating costs in an apartment building. Your building consumes energy for indoor and outdoor lighting, ventilation, exhaust fans, elevators, heating and more. Paying attention to how your building uses energy can result in big cost savings.

Being Power Smart results in more efficient, comfortable and marketable buildings, as well as lower operating costs. And the savings go straight to your bottom line. You can decrease your electricity bills by taking simple Power Smart steps as part of your routine building maintenance program.

Ongoing Maintenance

To keep energy costs down, make sure all your energy-using equipment is well maintained. Dirty or out-of-balance equipment wastes energy. Download a Power Smart Building Maintenance Schedule (example to the right), and use it as part of your ongoing maintenance to maximize the savings on your energy bills.

Power Smart Building Maintenance Schedule

	As Required	Monthly	Per Season	Mid Season	Semi-Annually	Annually
<i>Use this checklist as part of your ongoing maintenance to maximize savings on your energy bills.</i>						
Lighting						
• Clean lenses and reflectors	•					
• Check photocells		•				
• Adjust timer clocks for daylight savings					•	
Ventilation Unit						
• Check filters for cleanliness		•				
• Check belt condition and tightness					•	
• Lubricate fan and motor bearings					•	
• Check and clean fan blades						•
• Clean heat exchange elements						•
Water heating						
• Check safety equipment					•	
• Drain, clean and refill tanks						•
Boiler						
• Check safety and operating controls		•	•			
• Check burner and combustion equipment			•			
• Inspect fireside of boiler, firebrick and pressure vessel			•			
• Perform combustion check and adjust burner				•		
• Test water treatment						•
Pumps						
• Inspect leaks from mechanical seals and packing		•				
• Lubricate pump and motor bearings			•	•		
• Visually check pump alignment and coupling			•	•		
Packaged and split heat pumps						
• Inspect filters, replace or wash if dirty		•				
• Inspect for refrigerant leaks			•			
• Lubricate evaporator and condenser fan and motor bearings			•		•	
• Check belts and sheaves					•	
• Check and clean drain and drain pans under cooling coil						•

Power Smart Tips

Here are just a few ideas to get you started saving energy:

Lighting

- Install energy-efficient lighting such as compact fluorescents and LED exit lamps in common areas. Compared with regular incandescent bulbs, these lights turn more energy into light, and less into heat—which is not only a waste, but puts more demand on your cooling system.

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They last so much longer that they can save significantly on labour for replacing bulbs.

- Use lighting controls such as automatic switches, photocells and timers to limit lighting to the times when it is needed. Remember that fire regulations require lighting in areas such as hallways and stairwells at all times.

Ventilation

- Adjust the ventilation air heating temperature where it enters common spaces to 21°C from November to March, and to 18°C the rest of the year.
- Keep all components, such as filters, heating and cooling coils, clean and well maintained to reduce the load on motors.

Parking Exhaust

- Use a carbon monoxide (CO) sensor to activate fans when the CO level in enclosed parking areas approaches the level set by the building code in your area.
- Use a timer to shut off ventilation fans when there is little or no activity in the parking area, for example from midnight to 5 am. Note: a timer is not required if CO sensors are used.

Water Heating

- Make sure that all tanks and hot water lines are properly insulated.
- Set the hot water temperature to the lowest level necessary for your building. In most buildings, 60°C meets the need. A setting of 55°C may be used for gas water heaters.

Contact Us

For more information, please contact your BC Hydro representative or call **604 453-6400** in the Lower Mainland, **1 866 453-6400** elsewhere.

- Use an aquastat to control circulating pumps and reduce pumping costs as well as piping heat loss.

Heating

- Set the room temperature in common areas to between 20°C and 21°C.
- Use a setback thermostat to reduce temperatures to between 15°C and 18°C during unoccupied hours.
- Set thermostat temperatures to between 5°C and 10°C in sprinkler rooms, which is within code requirements and high enough to prevent freezing, and 30°C in electrical switch rooms and elevator machine rooms to activate cooling fans.
- Install a controller on radiant loop circulation heating pumps to circulate water only when heat is required.

Cooling

- Set the air conditioning temperature to between 24°C and 26°C, with a setback to 30°C if possible during unoccupied periods.

Pools and Spas

- Use a polyethylene or foam cover on pools and spas when they are not in use to reduce heat loss and heating costs. For indoor pools and spas, using a cover also reduces ventilation costs resulting from evaporation.
- Set pool water temperature to 24°C to 28°C and spa water temperature to 36°C to 40°C.
- Install push button timers to operate sauna heaters for a pre-set time period.

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