

Energy Saving Tips for Small Business Customers

Seattle City Light wishes to thank
Puget Sound Energy who helped us create
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Conservation Help Line
(206) 684-3800

www.seattle.gov/light/conserve



Small businesses primarily use energy for heating and cooling, lighting, office equipment, and any specialized machinery required for the business. Outlined below are five basic steps which small businesses can take to reduce energy consumption and lower energy bills. These steps are described in more detail on the following pages.

- 1 Track your energy costs.** Take time to review your energy usage and understand how your business consumes energy.
- 2 Pay attention to how you use energy.** You and your employees can do a lot to save money simply by turning things off when they are not in use.
- 3 Keep up on routine maintenance.** By maintaining and cleaning equipment, you can ensure the safe and efficient operation of your energy consuming systems and appliances.
- 4 Troubleshoot problem areas.** If you suspect equipment is malfunctioning, running too long, or not operating properly, get it fixed quickly.
- 5 Install more efficient equipment.** When it is time to purchase or replace equipment, invest in systems or appliances with high energy efficiency ratings. Investing in the most energy efficient equipment you can afford, typically pays for itself in a relatively short time frame. Call Seattle City Light's Conservation Help Line at **(206) 684-3800** for information on our \$mart Business rebate program for small businesses or visit Seattle City Light's website at www.seattle.gov/light/conserve.

1 Tracking Energy Costs

Keeping tabs on energy consumption is a necessary step in reducing the overall amount your business spends on energy. By filling in the tables on pages 2 and 3, you will be able to see whether your energy consumption is increasing or decreasing when comparing the current year versus prior years.

A variety of factors can have a significant impact how your business uses energy. When reviewing your energy use over time, consider whether any of the following may have influenced the way your business uses energy:

- ▶ changes in the weather (warmer or cooler than normal temperatures impact heating and cooling)
- ▶ changes in the hours your business operates (increasing your business hours typically adds to your use of heating, cooling and lighting, etc.)
- ▶ addition of new equipment (or significantly increasing the hours you use equipment)
- ▶ an increase of business space (square feet)
- ▶ addition of employees
- ▶ lack of maintenance of heating, cooling and lighting equipment
- ▶ malfunctioning controls, or inefficient operation of lighting and heating ventilation and air conditioning (HVAC) systems



Use this table to help track electricity consumption and the associated costs over time.

Larger businesses that use significant amounts of electricity may be charged for both the electricity used (billed in terms of kWh) and electric demand charges (billed as kW). Small businesses are typically charged only for electricity in kWh.

Electricity Consumption (kWh)

Electricity Costs

Demand (kW) (if applicable)

Demand Charges (if any)

	Prior Year	Current Year	% Change
January	kWh	kWh	%
February	kWh	kWh	%
March	kWh	kWh	%
April	kWh	kWh	%
May	kWh	kWh	%
June	kWh	kWh	%
July	kWh	kWh	%
August	kWh	kWh	%
September	kWh	kWh	%
October	kWh	kWh	%
November	kWh	kWh	%
December	kWh	kWh	%
Total:	kWh	kWh	%

Prior Year	Current Year
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$

	Prior Year	Current Year	% Change
January	kWh	kWh	%
February	kWh	kWh	%
March	kWh	kWh	%
April	kWh	kWh	%
May	kWh	kWh	%
June	kWh	kWh	%
July	kWh	kWh	%
August	kWh	kWh	%
September	kWh	kWh	%
October	kWh	kWh	%
November	kWh	kWh	%
December	kWh	kWh	%
Total:	kWh	kWh	%

Prior Year	Current Year
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
\$	\$
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2 Changing Energy Usage Behavior

Significant energy savings can be achieved by simply changing how you and your employees use energy. Some of the fastest and easiest ways to save money, typically cost little or nothing. If all of these simple suggestions are implemented, you could reduce your energy costs considerably.



- ▶ Turn off lights, computers, and other office equipment when they are not in use. Have a procedure to ensure these items are switched off overnight and on weekends. Consider installing reminder labels.
- ▶ Lower your heater thermostat to the lowest comfortable setting when your business is occupied. Set the temperature back further when the business is unoccupied.
- ▶ In warmer months, raise your air conditioner thermostat to the highest comfortable setting. There should be at least five degrees F between heating and cooling set points.
- ▶ Set back or turn off heating or air conditioning, a little while before the end of your operating hours. (Remember to maintain some heating in winter to prevent pipes from freezing.)
- ▶ Let the sunshine warm your office during colder months by opening drapes or blinds. Close them at night to retain heat.
- ▶ Remember to turn off outside safety and security lighting at the start of each day.
- ▶ Keep doors and windows closed to prevent heat loss during winter or loss of cool air in summer. However, you may wish to keep doors and windows open to provide ventilation, instead of using air conditioning in summer.

3 Routine Maintenance

Maintenance of energy-consuming equipment is critical to ensuring optimum energy efficiency. Many maintenance items do not require specialized training and can be done yourself. Here are some key items to incorporate into your business maintenance routine.

- ▶ Check to be sure all automatic controls are set and operating correctly.
- ▶ Clean all filters in your heating and cooling system monthly.
- ▶ Check and regularly clean filters if you use exhaust fans.
- ▶ Caulk or weatherstrip any drafty doors or windows.
- ▶ Remove unneeded light bulbs or use lower wattage bulbs.
- ▶ Replace incandescent light bulbs with screw-in energy efficient compact fluorescent bulbs as appropriate.
- ▶ Lower your water heater thermostat. Washington state law requires all new water heaters to be preset at 120 degrees F for safety.
- ▶ Adjust outdoor lighting timer controls to accommodate daylight savings time changes, or install photocells to adjust automatically to changes in the season.
- ▶ T-8 fluorescent tubes (1-inch diameter) last longer than the older T-12 lamps. You do not need to replace them as frequently as T-12's. When you do replace them, be sure to buy case lots from lighting supply companies to save money.
- ▶ Regularly clean and maintain food refrigeration equipment where applicable.



4 Troubleshooting Problem Areas

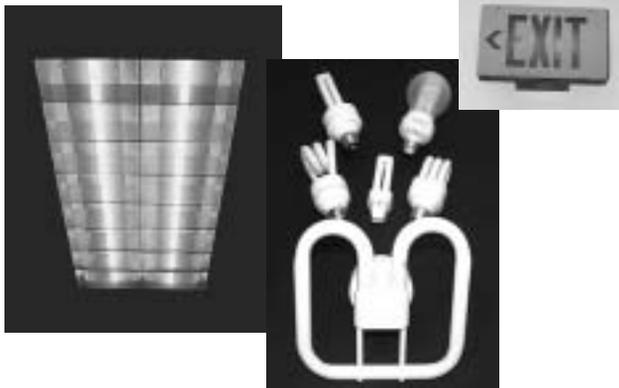
Here are some troubleshooting tips to help you deal with common situations that can cause high energy costs for many small businesses.

Symptoms or situation	What to do
<p>Your air conditioning or heating is running, but does not keep people comfortable.</p> <p>Your HVAC has had problems or breakdowns in the past.</p> <p>Areas within your business are too hot or too cold.</p>	<p>Contact an HVAC contractor for system maintenance.</p> <p>If you have a forced air system, inspect duct work for loose connections or hanging insulation. Repair any duct leaks, whether large or small, before you tackle other system performance issues (i.e. system balancing and control settings, etc.). Refasten any insulation to ducts.</p>
<p>Programmable thermostats or time clocks do not seem to be working properly.</p> <p>HVAC equipment or lighting cannot be turned off in recently vacated spaces.</p>	<p>Refer to the thermostat manual or contact an HVAC contractor to ensure proper operation of timers and thermostats.</p> <p>Contact your property manager or HVAC contractor to shut off equipment in vacated spaces.</p>
<p>Electricity or gas consumption increased after recent remodeling or electrical work at your facility or an adjacent one.</p>	<p>Unplug or turn off all electric equipment at your site and look to see if your electric meter still spins. If so, contact your property manager or adjacent businesses to resolve potential wiring problems.</p> <p>An electrician or contractor may be able to track down any item that may be connected to your electric or gas meter in error.</p>
<p>New equipment uses much more energy than was anticipated.</p> <p>You replaced or added any new heaters, copiers, ovens, freezers, coffee pots, vending machines, etc.</p>	<p>Sometimes new equipment is used for longer periods than old equipment or consumes more energy because of added features. Some “stand-by” and “preheat” modes can consume significant amounts of energy.</p> <p>Recognize that adding equipment, especially items with heaters, will consume more energy.</p> <p>Check for plug-in space heaters, or unneeded task lighting.</p> <p>To estimate consumption (kWh) of new electric equipment, multiply the wattage by the number of hours it is used.</p>
<p>Your energy costs changed when you moved to a new space.</p>	<p>Consider these factors that may have contributed to the increased energy consumption and energy cost:</p> <ul style="list-style-type: none"> • increased space to heat, cool, and light (square footage or higher ceilings) • lower insulation levels or greater exposure on an outside wall • increase in window area • increased lighting, especially incandescent and halogen lights • increased hours of operation • additional employees • different electric or natural gas rates at your former location

5 Install More Efficient Equipment

New equipment and appliances offer opportunities for improved energy efficiency. If there is an added cost for high efficiency equipment, be sure to factor in savings from lower energy operation costs over the life of the appliance. Here are some suggestions that provide a good return on your investment:

- ▶ Install automatic, programmable, set-back thermostats to control both heating and cooling. Most offer flexible options that enable you to change settings for different days of the week, weekends and holidays.
- ▶ Install occupancy sensors in hallways, bathrooms, meeting rooms, kitchens, storage rooms, and other areas where lights can be shut off for blocks of time.
- ▶ Install photocells in outdoor entry, and security lighting to automatically sense outdoor lighting levels which turn on and off automatically.
- ▶ Install light emitting diode (L.E.D.) exit signs in place of incandescent signs. L.E.D. signs last up to 15 times longer, and use much less energy.
- ▶ When changing interior lighting, use energy efficient fluorescent T-8 lamps with electronic ballasts.
- ▶ If you lease equipment, insist on energy efficient models to lower your operating costs.



Seattle City Light

Programs for Small Businesses:

Smart Business Program

Update your existing lighting with lighting rebates for your small business. Benefits include:

- ▶ Improved lighting quality
- ▶ Reduced energy and maintenance costs
- ▶ Increased productivity
- ▶ Safer work environment

To see if you can take advantage of our lighting rebates, call us at **(206) 684-3800** or visit www.seattle.gov/light/conserve for a FREE, no obligation lighting audit. We'll estimate your initial costs, rebate amounts and long-term savings.

LaundryWise

If you have coin-operated washing machines, we offer rebates when you replace them with energy efficient models. Call **(206) 684-3800** for more information or visit www.seattle.gov/light/conserve.

Toilet Rebates

If you have older inefficient toilets (pre-1993) in your 4+ unit apartment building, get a rebate for replacing them with new water-saving models. Call **(206) 684-SAVE (7283)** or visit www.savingwater.org.

Programs for Medium & Large Businesses:

We also offer a number of incentive programs for new and existing medium and large businesses. Call the Energy Smart Services Hotline at **(206) 684-3254** or visit www.EnergySmartServices.com