

Conserving Electricity

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The logo for EPCOR, featuring the word "EPCOR" in a bold, sans-serif font with a stylized sun and water waves icon to the right of the letter "O".

EPCOR

About CO₂RE

Created by Edmontonians for Edmontonians...

Carbon Dioxide Reduction Edmonton (CO₂RE) is the City of Edmonton's community-based strategy to permanently reduce local greenhouse gas emissions.

The CO₂RE Strategy was developed by representatives from the residential, business, industrial, institutional sectors and not-for-profit organizations who worked with the City to develop a single, coordinated plan. The group, known as the CO₂RE Team, consulted extensively with many local groups and organizations to develop a consensus on the best approach and strategies. CO₂RE was launched to the public in 2004.

The CO₂RE mission is to work with Edmonton residents, businesses, institutions, non-profits, and industry to provide services, programs and initiatives to assist in reducing energy use, thereby reducing the levels of the GHG (greenhouse gas) emissions that are responsible for Climate Change.

The Original CO₂RE goals include:

- up to a 6% reduction in GHG emissions (from 1990 levels) by the year 2010 and
- a 20% reduction in GHG emissions (from 1990 levels) by the year 2020.

Current Status

Edmonton's GHG emissions increased from 13.9 million tonnes in 1990, to 18.2 million tonnes in 2008 (the most recent year of data), an increase of approximately 38%. Much of this increase is attributable to Edmonton's 24.3% population growth, as well as significant economic growth during this period.

On a per capita basis, GHG emissions appeared to have peaked in 2001 at 29 tonnes of CO₂ per person per year. Since then per capita emissions have continued to fall.

Become Involved

Do your part...

We can do many things to reduce our emissions – and that includes making our homes and lifestyles more energy efficient. The publications in this series are a first step, providing Edmonton with specific how-to guides on improving home energy efficiency, saving money and reducing GHG emissions.

For more ideas on how to become more energy efficient, log onto our website at **www.edmonton.ca/co2re**!

Free Membership

Why get a membership? Becoming a CO₂RE member is free and the more people who join us in taking action on climate change, the faster we will achieve our goals. CO₂RE is working with local companies to offer incentives on energy-efficient products and programs to further assist residents. You'll also receive a regular newsletter with new ideas and updates. Sign up today at **www.edmonton.ca/co2re**.

Organizations or individuals in the industrial, commercial, and institutional sectors can contact our commercial coordinator by calling 311.

Introduction

This booklet provides a range of how-to information and examples of the savings possible by reducing your electricity use. Most of the energy saving steps mentioned in this booklet are low-cost, but when combined, can result in annual savings of \$30 to \$120 a year. Still larger savings are possible when you buy new high-efficiency equipment or appliances.

There are many reasons to use electrical energy wisely. We pay for the usage on our utility bills and about 80% of Alberta's electricity is produced by burning coal, a major contributor of the greenhouse gases (GHG) responsible for global warming and climate change. Reducing your electricity use helps reduce the amount of GHG being released into the atmosphere.

The simple steps to savings outlined in this booklet include:

- No-cost changes in the way you use & maintain appliances,
- Modifications to reduce electricity usage, and
- Upgrading electrical equipment & appliances.

Electricity Usage

The average Edmonton household uses 7,800-kilowatt hours of electricity a year. Figure 1 shows an average breakdown of electric energy use in the home.

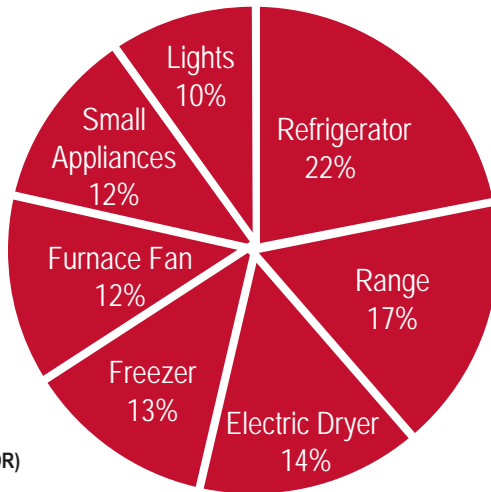


Figure 1
(Usage figures courtesy of EPCOR)

How You Pay for Electricity

The basic unit of electric consumption is the kilowatt hour (kWh). A kilowatt-hour is the amount of energy consumed by a load of one kilowatt (which equals 1,000 watts) operating for one hour.

For example, a 100-watt light bulb takes 10 hours to consume 1,000-watt hours or 1 kWh of electric energy ($100 \times 10 = 1,000$).

Edmonton residential customers, pay an average of 8.6 cents per kWh for electricity, including all delivery fees and GST. For the average single-family home the actual cost for electricity used (on average 7,800 kWh) is about \$670 a year. Monthly fixed charges and other fees add approximately another \$200 a year to your total electricity bill.

Reducing your electricity usage also has an environmental benefit in reducing the GHG emissions responsible for climate change. One kilowatt hour of electricity produced with coal-fired electrical generation produces the equivalent of 0.985 kilograms of carbon dioxide (CO₂), a major greenhouse gas.

A family using 7,800 Kilowatt hours of electricity yearly is responsible for the production of about 7,683 kilograms or 7.5 tonnes of GHG yearly.

No-Cost Changes

Maintain and Use Appliances Wisely – Basic maintenance to ensure appliances are working as efficiently as possible is an excellent way to cut electric costs. Using your appliances wisely simply means developing good energy conservation usage habits.

Fridges & Freezers

- Vacuum the coils at the back or bottom of your fridge regularly. Dust interferes with cooling efficiency.
- Refrigerator motors and compressors generate heat, so allow enough space for continuous airflow around your refrigerator. If the heat can't escape, the refrigerator's cooling system will work harder and use more electricity.
- Keep air circulating inside the fridge – e.g. don't overload it or line the shelves with foil.
- Make sure that the rubber gasket sealing the door is clean and in good condition. Close the door on a piece of thin paper. If you can pull the paper out with little resistance, cold air is escaping and the door needs adjustment or a new gasket is needed.
- Defrost the refrigerator or freezer when ice build-up reaches 6 mm (¼ inch) by removing the food and thawing the ice build-up.
- Keep your refrigerator's temperature between 1.7°C and 3.3°C (35° and 38°F). The freezer compartment should be kept at -18°C (0°F) for maximum efficiency and food safety.
- Place the fridge away from direct sunlight or other heat sources, e.g. the kitchen range, heat ducts, etc.
- Cool hot foods to room temperature and seal before putting into the fridge. You'll

use less energy and reduce condensation. Cold water can help cool food quickly.

- Frozen foods can be defrosted in the refrigerator; the cool air from the thawing packages will help maintain coolness.

Stoves & Ovens

- Regularly clean the drip pans under the stove elements. Lining drip pans with foil interferes with heat circulation and can damage the elements.
- When cooking with gas, make sure that the flame heats only the bottom of the pot. It's dangerous for the flame to reach the side of the pot and it's a waste of energy.
- Match your pot to the size of the cooking element. The base of the pot should just cover an electric cooking ring. If the pot is too large for the element, more energy will be required to heat the pot. If the pot is too small, energy is wasted.
- Avoid long preheating of the oven. It will heat to 180°C (350°F) in about 10 minutes. Preheating is needed for some baked goods but is not necessary for most roasts and casseroles.
- You can turn off the stovetop heat two or three minutes before the end of the proper cooking time. The element will stay hot, food will continue to cook — and you'll save money!
- Make sure that the oven door seal is tight. If not, adjust the door or replace the seal.
- Make sure pots have lids that fit tightly and whenever possible keep lids on when cooking. The lid traps heat in the pots and lets you lower the temperature of the cooking element. You'll use up to 20% less energy and your food will cook more quickly.

Clothes Washers

- Clean the agitator and the filters of both water hose inlets on the back of your clothes washer.
- Clothes rinsed in cold water come out just as clean as those rinsed in warm water. Washing with warm water and rinsing with cold will use 50% less energy than a hot wash and warm rinse. Washing and rinsing with cold will use 90% less energy than a hot wash, and you can purchase specially formulated laundry detergents to ensure that your clothes are just as clean.
- Clothes washers are most energy efficient when they're fully loaded.
- Most washers have water-level selectors so if you have to wash a smaller load, choose the right water level for the size of the load.

Clothes Dryers

- The most energy efficient way to dry your clothes is to hang them either inside or outside.

- Always vent your dryer directly to the outside of the house. Gas dryer units are required to vent directly outside by law.
- Don't overload your clothes dryer.
- Use the lowest setting that will not over dry your clothes.
- Use the dryer's cool down cycle, usually the permanent press setting, to save energy. No heat is supplied during the last few minutes as cooler air is blown through the clothes.
- Try to dry multiple loads of clothing in a row. The dryer stays warmer and saves you energy.
- Clean the dryer lint filter after each use and clean exhaust ducting and vent damper at least once a year. Use a toothbrush and detergent to remove buildup from fabric softeners and dryer sheets from the lint screen.
- Sort clothes to be dried by thickness. Dry the thin, quick-drying items in one load and thicker items, such as towels, in another.
- Once a year, disconnect and clean your dryers exterior exhaust system (the pipes) and outside shutter of any lint buildup or blockages to maintain good exhaust air flows.

Dishwashers

- Use the features on your dishwasher. The short cycle uses less hot water and the energy-saver switch, or the no-heat dry switch, reduces electrical use by turning off the heating element so that the dishes air dry.
- Dishwashers are most efficient washing full loads.

Electric Hot Water Tanks

- Most hot water tanks have factory temperature settings of 60°C (140°F) or higher, hot enough to cause scalding. You can lower the temperature setting for your hot water tank to 50°C (120°F), about as hot as your hand can tolerate, reducing energy usage by approximately 10 to 15%.
- Drain the sediment from the bottom of the tank once a year.

Get Mother Nature on Your Side – Make the most of your appliances and lighting:

- Place furniture to take advantage of natural light. Light coloured walls and ceilings increase lighting effectiveness.
- Help your air conditioner; in the summer close windows and curtains during the day and open them at night.
- Help your heating system; in the winter open your curtains and drapes in the day to allow sunshine to help heat your home and close them at night.

Use Small Appliances – toaster ovens, crockpots, and microwave ovens – all use less energy than your stove:

- It takes 18 times the electricity to bake a potato in a regular oven than in a microwave.
- A toaster oven is three times as efficient as your stove.

Avoid Phantom Power - phantom power or vampire power is electricity consumed by a device when it is turned off. For example, your television consumes electricity as it waits for you to press the “on” button on your remote.

- This wasted power is responsible for up to 10% of home electricity use. It can cost you over \$50 annually and more than half a tonne of CO₂ per year.
- Common power vampires are TV, DVD, Computer monitor, modem, speakers, printer, router, chargers for electronic devices like cell phones and any device that has a black box plug-in, is controlled with a remote or gives off heat when not in use.
- To stop this draw of phantom power plug your devices into a power bar and turn the bar off when not in use. You can now get specialty command bars that allow you to leave one or two items fully powered while it automatically powers down others when they are not in use.
- ENERGY STAR appliances have met available guidelines on phantom power draw and can be a means to reduce the power draw of appliances that would be impractical to turn off. Even with these appliances you will save more by unplugging them or turning off the power bar.

Modifications to Existing Appliances

Timers and controls are fairly inexpensive and help cut electricity use:

- Research shows your car’s block heater needs to be on for just three hours to ensure quick, reliable starts, even on Alberta’s coldest days. Leaving a block heater plugged in for an average of 14 hours per day (from arriving home to leaving in the morning) can cost more than \$22 a month. This number increases if you have an in-car warmer plugged into your block heater.
- You can use a timer or power-saver cord to regulate the times when your vehicle is plugged in.
- A programmable thermostat which turns your heating system down at night or when you are away from the home will save both fuel and the electricity that runs the furnace fan.
- An automatic timer on your waterbed heater can turn the thermostat down during the day. Keep the bed covered to retain heat.

Lighting

It is estimated that home lighting accounts for about 10% (780 kWh) of the total electrical usage for the average single-family home. Depending on home styles, usage habits and family size, lighting costs can be as much as 12 to 15%.

Controlling your use of lighting is one of the easiest ways to reduce energy costs and GHG emissions. There are a number of changes that you can implement to help reduce home lighting costs.

- One of the best energy-saving devices is the light switch. Get into the habit of turning off the lights when a room is not occupied.
- Lighting controls such as automatic timers, motion sensors and dimmer switches can all help reduce electricity usage.
- Lighting rooms by placing a lamp in the corner reflects more light off the walls and ceiling providing better illumination at lower wattages.
- Use task lighting, to focus light only where it is needed. A reading lamp placed by a chair lights only the book you are reading rather than the whole room.
- For closets or storage rooms, consider doorframe switches that turn lights on and off as doors are opened and closed.
- Three-way or dimmer switches allow you to use less light when you wish and higher light levels when you need them.

Compact Fluorescent Lighting

Compact fluorescent light bulbs (CFLs – Figure 2) are small, low-wattage fluorescent tubes bent into compact shapes that can be used almost anywhere that standard incandescent bulbs are used. Newer compact fluorescents are available in a variety of sizes and shapes, offer instant on (full lighting) and duplicate the warm quality of incandescent lighting.

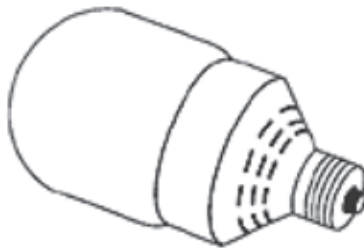


Figure 2

One-piece compact fluorescent light bulbs are sold as a complete bulb/ ballast unit. A compact fluorescent uses 75% less electricity on average than an incandescent bulb, provides the same amount of light and lasts up to 10 times as long (7 to 10 year life span based on 2,000 hours usage yearly).

In comparison, a standard incandescent light bulb lasts anywhere from 750 to 1,000 hours while 'long-life' bulbs only last about 2,500 hours.

To get the most out of the energy savings and long life potential of CFLs, it is best to use them in the light fixtures that you use the most and are on for at least 15 minutes at a time, like the kitchen, living room, family room, home office and reading lamps.

The table below shows a comparison of CFL bulb wattage that provides the same light (or slightly higher) light output as a regular incandescent bulb. To maintain current lighting levels, choose a compact fluorescent which has one quarter the wattage of the light bulb you are now using.

Compact Fluorescent	Incandescent
5 to 7 Watts	25 Watts
9 to 11 Watts	40 Watts
13 to 18 Watts	60 Watts
22 to 28 Watts	100 Watts

CFL Savings

Compact fluorescent bulbs initially cost more than incandescent bulbs, but they use less energy and last longer. As an example let's assume that there are 6 – 100-watt incandescent bulbs in the average home that could be replaced with 6 – 26-watt compact fluorescent bulbs. The following table shows the potential cost savings achievable assuming 10,000 hrs usage (5 years), for each CFL bulb compared to using 60 incandescent bulbs.

Light Source (6 x10,000 hrs of light)	Retail Cost	Energy Cost	GHG Emissions (kilograms)
100-watt Incandescent	\$30 (\$.50 x 60 bulbs)	\$514	5,910
26-watt CFL	\$30 (\$5.00 x 6 bulbs)	\$133	1,536
Cost Savings	\$0	\$381	4,374

If you change 6 incandescent bulbs to CFLs it would save you \$76 a year or about \$381 in total and reduce your share of greenhouse gas emissions by 874 kilograms a year, for a total of 4.3 tonnes over 5 years.

Using CFL bulbs offers additional environmental benefits. One CFL bulb can last as long as 10 years, eliminating the purchase of nine incandescent light bulbs (one per year) and the associated packaging and waste. This translates into less garbage in the landfill and additional secondary GHG emission reductions. You also won't have to change bulbs very often in those hard to reach fixtures.

Turn CFLs Off – A common myth is that it takes more electricity to turn on a compact fluorescent light than to leave the light on, or that switching CFL lights on and off will damage the ballast. Neither of these myths is true. While excessive switching may shorten the life of a fluorescent tube slightly, **the most energy efficient light is the one that is turned off!**

Lighting Controls

Timers – Can save energy and control your interior or exterior lighting, or even appliances, by turning them on and off at a pre-determined time. Most modern timers are digital, easy to operate, affordable and can be programmed with multiple settings for 24 hours a day, 7 days a week. Most timers are plug-in products, not requiring an electrician to install them.

Look for timer mechanisms that have a manual override function. Some digital timers do not operate CFL lamps efficiently; so please check with the vendor when buying timers for CFL products.

Motion Sensors

In residential applications, outdoor security or yard lights can account for a large portion of lighting energy costs, and are often left on when not needed. Motion sensors are a good choice for controlling outdoor security lighting. The motion sensor keeps the lights on as long as there is movement. After motion has stopped (lapse time is adjustable), the detector switches the lights off.

Interior motion sensors are also available including integrated wall switch units. These work well in various locations such as seldom used rooms, closets, storage rooms, seldom used bathrooms and garages. If you forget the light when you leave, it automatically shuts off.

Day Lighting

Studies have shown that increased day lighting in homes reduces energy costs and creates health benefits. The most common approach to date for providing natural light has been windows and skylights. If you are considering skylights choose units with the highest insulating value such as double or triple glazed units with Low-E coating and argon gas fill.

Solar light tubes can be used to bring daylight into areas of the home with no natural light. The basic components include a clear plastic dome that sits on the roof and lets in sunlight; a reflective tube that carries light into the interior; and a light diffuser, which looks like a ceiling light fixture and distributes light around the room. Light tubes are a good option to provide daylight in areas of the home, which currently require electrical lighting during the day.

Energy Efficient Appliances

If you are purchasing new appliances, buying the most energy efficient appliances is always the best choice.

When you shop, check the comparative efficiency of various models and brands. The best way is to check the “EnerGuide” label (Figure 3) and compare the kilowatt-hours that the appliance typically uses per month. If the EnerGuide label is not on display when you go to purchase new appliances, you can ask to see it. Every appliance and car comes with an EnerGuide label.

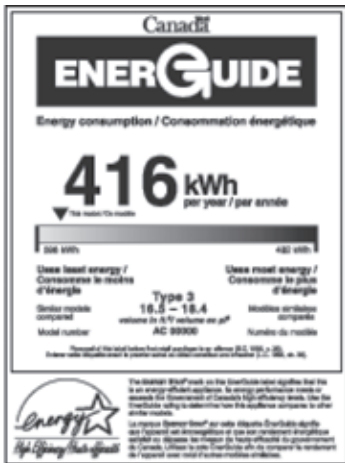


Figure 3

How to read the EnerGuide label

- The large number is an appliance's estimated annual energy consumption measured in kWh per year.
- The shaded bar scale displays the energy consumption range for appliance models of this type and size. The figure at the left end of the scale indicates the lowest energy-consumption rating; the figure on the right indicates the highest.
- An arrow just above the bar scale shows where the appliance ranks relative to similar models.
- The ENERGY STAR® symbol accompanies the EnerGuide label only on appliance models that achieve premium levels of energy efficiency, based on specific criteria endorsed by NRCan.

When shopping for new major appliances, remember that these items really have two price tags: the purchase price and the ongoing operating price. Although some energy-efficient appliances may cost a little more to buy, they'll save you money on your monthly utility bill.

Over the life of a good appliance, which should be 10 to 15 years, the operating cost savings will more than cover the higher initial purchase price. Remember to match the appliances to the size and needs of your family. Over-sized appliances waste your energy dollars.

Refrigerators

Refrigerators are one of the largest energy users in the home so it just makes good economic sense to purchase the most energy efficient model possible. Standard-size refrigerators must be at least 15% more efficient than the minimum federal energy performance standard in *Canada's Energy Efficiency Regulations* to qualify for the ENERGY STAR mark.

ENERGY STAR qualified refrigerators typically have a more energy-efficient compressor and better insulation than conventional models. They may also have an "Energy Saver" switch that allows consumers to adjust how much energy the refrigerator uses to keep food fresh.

If purchasing a freezer, an upright freezer costs more to operate than a chest-type due to cold air spilling out when the door is opened. Frost-free models have an automatic defrost cycle and cost more to run than manual defrost models.

The table below compares the operating costs of a new 2004 Energy Star rated refrigerator to a standard frost-free 1990 model refrigerator.

Refrigerators*	Energy Usage	Yearly Costs	GHG Emissions (kilograms)
1990 Model - 16 to 18 cu.ft.	1067 kWh	\$91	1050
2004 Energy Star - 16 to 18 cu.ft.	426 kWh	\$36	419
Yearly Savings	641 kWh	\$55	631

Assuming an average life expectancy of 15 years, purchasing an ENERGY STAR rated refrigerator would save you approximately \$825 and reduce your share of GHG emissions by 9,465 kilograms or 9.4 tonnes.

ENERGY STAR qualified compact refrigerators (7.75 cubic foot or less) must exceed the minimum standard in *Canada's Energy Efficiency Regulations* by at least 20%.

Clothes Washers

Standard-size clothes washers in 2004 must be at least 36% more efficient than the minimum federal energy performance standard in *Canada's Energy Efficiency Regulations* to qualify for the ENERGY STAR mark.

The two tables below compare the energy usage and saving potentials for a 1990 top-loading clothes washer and a 2004 Energy Star top-load and front-load units.

Clothes Washers* (top-loading models)	Energy Usage	Yearly Costs	GHG Emissions (kilograms)
1990 Model	1,218 kWh	\$104	1,199
2004 Energy Star Model	389 kWh	\$33	383
Yearly Savings	829 kWh	\$71	816

Assuming an average life expectancy of 10 years, purchasing an ENERGY STAR rated top-loading clothes washer would save you approximately \$710 and reduce your share of GHG emissions by 8,160 kilograms or 8.1 tonnes.

Clothes Washers* (front-loading models)	Energy Usage	Yearly Costs	GHG Emissions (kilograms)
1990 Model (top-loading)	1,218 kWh	\$104	1,199
2004 Energy Star (front-loading)	275 kWh	\$23	270
Additional Savings	943	\$81	929

Assuming an average life expectancy of 10 years, purchasing an ENERGY STAR rated front-loading clothes washer would save you approximately \$810 and reduce your share of GHG emissions by 9,290 kilograms or 9.2 tonnes.

ENERGY STAR qualified clothes washers must have advanced design features that deliver cleaning performance while using less energy and 30 to 50% less water. The washer extracts more water from clothes during the spin cycle. This reduces the drying

time, saves energy and wear and tear on your clothes. Front-loading models use considerably less hot water than top-loading types, saving you additional water and energy costs. Washing with cold water will result in even greater energy savings.

Dishwashers

ENERGY STAR dishwashers must exceed the minimum federal energy performance standard in *Canada's Energy Efficiency Regulations* by at least 25% to qualify. Additional features include “smart” sensors that adjust the wash cycle and the amount of water to match the load. Some offer an internal heater to boost the temperature of incoming water.

Dishwashers*	Energy Usage	Yearly Costs	GHG Emissions (kilograms)
1990 Models	1,026 kWh	\$88	1,010
2004 Energy Star Model	481 kWh	\$41	473
Yearly Savings	545 kWh	\$47	537

Assuming an average life expectancy of 10 years, purchasing an ENERGY STAR rated dishwasher would save you approximately \$470 and reduce your share of GHG emissions by 5,370 kilograms or 5.3 tonnes.

*Appliance energy usage figures derived from: *Energy Efficiency Trends in Canada (Natural Resources Canada) & EnerGuide Appliance Directory 2002 (Natural Resources Canada)*

Home Office Equipment

Most office equipment sold today has the ability to switch into “sleep” or low-power mode when it is not being used. To meet the criteria for ENERGY STAR, each product must automatically switch into a “sleep” or low-power mode before the maximum period of inactivity allowed. Turning off your home office equipment or home computers when not in use will result in greater savings.

LED Christmas Lights

New light emitting diodes (LED) Christmas lights are available that are very energy efficient, durable and never get hot. A 300 light string of LED lights only draws about 10.8 watts compared to a string of 300 standard mini-lights (4 watts each), which draws 1,200 watts. For 100 hours of usage the LED lights would cost you about \$0.09 (cents) while standard mini-lights would cost you \$10.28.

Purchasing a set of LED Christmas lights would save you \$10.19 and reduce your share of GHG emissions by 117 kilograms for every 100 hours of use.

As outlined in this booklet, reducing your electrical energy usage will both save you money and reduce your share of the greenhouse gas emissions responsible for climate change.

Additional Information Sources

Natural Resources Canada – Office of Energy Efficiency

www.oeenrncan.gc.ca – The Office of Energy Efficiency offers a wide range of free publications, programs and services to help Canadians save energy and reduce the greenhouse gas emissions that contribute to climate change.

Recommended Reading: *Keeping the Heat In* is a comprehensive source of energy efficiency how-to information for residents. This free publication is available from Natural Resources Canada. Call toll free at **1-800-635-7943** or download it from <http://publications.gc.ca/pub?id=259273&sl=0>.

Canada Mortgage and Housing Corp.

www.cmhc.ca – CMHC is a valuable resource for information. The CMHC Order Desk is a one-stop shop for all free and priced publications, fact sheets, reports, videos and other CMHC resources. You can order online, or through their call centre at **1-800-668-2642**.

EPCOR

www.epcor.ca – The website contains information on energy and water efficiency with calculators, tools and downloadable publications to assist you in reducing your energy and water consumption.

Tools include a **Home Energy Audit**, a do-it-yourself home audit with a library of resources; **EPCOR House**, an animated tour of a typical home with efficiency information; and calculators for most major appliances, plus a **simple electricity calculator** and **water audit tool**. Tools are located in the EPCOR-Customer Service drop down menus.

Environment Canada

www.ec.gc.ca – Environment Canada's website provides weather and environmental information to help connect Canadians, exchange information and share knowledge or environmental decision making.

Climate Change Central

www.climatechangecentral.com - Climate Change Central has information and resources to help Albertans save energy and reduce the greenhouse gas emissions that contribute to climate change.

The information contained in this publication is provided as a public service and represents current research results and information sources available to CO₂RE and has been externally reviewed. CO₂RE and the City of Edmonton however, assume no liability for any damage, injury or expense that may be incurred or suffered as the result of the use of this publication.

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We all contribute to the problem of Climate Change and each of us can contribute to the solutions. Become a CO₂RE Member.

Membership is free and you can sign up on the CO₂RE website at www.edmonton.ca/co2re.

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Carbon Dioxide Reduction Edmonton

Publications Currently Available

Attic Insulation	Heating Systems
Basement Insulation	Renewable Energy
Caulking and Weatherstripping	Ventilating Your Home
Condensation Concerns	Water Conservation
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General CO ₂ RE Brochure	Eco-Landscaping Brochure



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