EASY$ TIP SHEETS

Energy Advice Saving Yukoners Money

Quick Links

Appliance Buying Tips

One of the easiest ways to select an energy efficient appliance is to check the label. ENERGY STAR® labeled appliances are the most energy efficient on the market and help you save money on your energy bill.

The winning team of ENERGY STAR® and EnerGuide

The international ENERGY STAR® symbol works together with another important energy efficiency initiative: Canada's EnerGuide Program. EnerGuide provides a basis for comparing the energy efficiency of the many different models of household appliances, or heating and cooling products sold in Canada. Before a major household appliance can carry an EnerGuide label, the appliance must be tested for its energy performance. These tests establish how much energy the appliance consumes under average conditions and whether it meets minimum energy-efficiency standards set out by the *Energy Efficiency Act*.

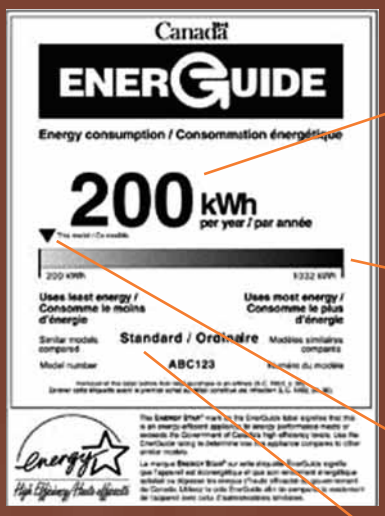
For some of these products, ENERGY STAR® goes one step further and identifies specific models that meet or exceed premium levels of energy efficiency, based on specific criteria endorsed by Natural Resources Canada.

Goal and Summary

By selecting energy efficient appliances, you will save money on energy costs throughout their operating life.

This Easy$ tip sheet explains ENERGY STAR® and the EnerGuide label and outlines the benefits of ENERGY STAR® labeled clothes washers, refrigerators and dishwashers.

Many manufacturers are adding the ENERGY STAR® mark to the EnerGuide label to identify their most efficient clothes washers, refrigerators, and dishwashers. While EnerGuide tells you how much energy the appliance uses, an ENERGY STAR® rating identifies the most energy efficient appliances.



How to read the EnerGuide label

Annual Energy Consumption
The large number is the appliance's estimated annual energy consumption, which is measured in kilowatt hours (kWh) per year. This label indicates that the appliance model [number ABC123] uses 200 kWh per year under typical home use conditions.

Bar
The shaded bar scale displays the energy consumption range for appliance models of similar 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.

Arrow
An arrow just above the bar scale shows where the appliance ranks relative to similar models.

Type
The type indicates the size range of appliances in the same category. When comparing appliances, it's important to compare models of the same type. That way, you're comparing "apples" to "apples". In this example a standard size range of appliance is indicated.

The benefits of buying ENERGY STAR® appliances

This section outlines the many benefits or reasons why ENERGY STAR® labeled appliances are the best choice for managing energy costs.

ENERGY STAR® labeled clothes washers

- Use 35–50% less water than standard models, saving 14,000 to 22,000 litres of water a year;
- Reduce overall energy use by up to 50% by having to heat less water;
- Have higher spin speeds, therefore less time and energy are needed to dry clothes;
- Have no agitator, therefore more space is available for clothes; and,
- Have sensors that prevent energy waste by matching the water needs to the size of each load.

Energy Factor

The overall efficiency of water heating appliances is indicated by their energy factor (EF). The EF is the portion of the energy going in to the water heater that gets turned into usable hot water under average conditions. It takes into account heat loss through the walls of the tank. The higher the energy factor, the more efficient the heater and the lower your operating costs. In most cases, the larger the storage tank, the lower the EF.

The most efficient electric storage water heaters have energy factors ranging from between 0.93 and 0.95 resulting in estimated annual energy use below 4,725 kWh/year (based on 242 litres of hot water used per day). Electric water heaters have improved so much over the years that there is currently little difference between the most efficient models and the minimum efficiency standard required by law in Canada.

ENERGY STAR® labeled refrigerators

- Use 50% less electricity than a standard 10 year old fridge;
- Are better insulated and have precise temperature settings and defrost mechanisms;
- Are quieter with more efficient compressors; and,
- Exceed minimum Government of Canada energy efficiency standards by at least 15%.

ENERGY STAR® labeled freezers

- Standard-size freezers exceed minimum Government of Canada energy efficiency standards by at least 10%; and
- Compact freezer models must exceed minimum Government of Canada energy efficiency standards by at least 20%.

ENERGY STAR® labeled dishwashers

- Are at least 41% more efficient than the minimum federal standard;
- Some have smart sensors to adjust the wash cycle to match the load and therefore use less hot water; and,
- Use a more effective washing action.

Other major appliances

Here are some buying tips and energy efficient features to look for when purchasing other major appliances.

Dryers

- Choose a full-size dryer that has a moisture sensor to prevent over-drying. This sensor will trigger an automatic shut-off when clothes are dry.
- Look for the saving energy, permanent-press or "cool down" cycle, which will shut off heat during the end of the cycle, saving energy.

Ranges

- Consider models with a self-cleaning oven, as they have more insulation, resulting in greater efficiency.
- Consider purchasing a convection oven. With heated air continuously circulated around food, the even heat distribution and temperatures mean faster cooking times, and lower energy use.
- If you are a cook who likes to peek in the oven, buy a model with a window. Opening the oven door during cooking causes a 20% loss of heat.

The total cost of an appliance

An appliance's life-cycle cost is the most realistic measure of its true cost because it takes into account the purchase price and the operating cost.

Two "price tags"

Although energy efficient appliances sometimes cost more initially, the energy savings on your electricity bill can often make up for the initial cost. One way to look at whether purchasing energy efficient appliances makes sense is to think of the appliance as having two price tags.

When both of these values are considered, an item that costs less to purchase may end up costing considerably more in the long term because of its high operating costs.

Price tag 1 = purchase price of the appliance.

Price tag 2 = operating cost of the appliance over its lifetime.

Calculate your total lifecycle costs.

Step 1

Cost of Energy x kWh (kilowatt hours) per year = Estimated annual energy cost

Note: The average cost of electricity in Yukon is approximately13¢ per kWh. You will find the estimated kWh consumption per year on the EnerGuide label.
Example: 0.13 x 200 kWh = $26.00 Estimated annual energy cost

Step 2

Purchase Price + (Average lifespan x Estimated annual energy cost) = Total lifecycle cost

Step 3

Total lifecycle cost ÷ Average lifespan = Average annual expense for appliance

Here are some interesting operating cost comparisons:

	Average kWh used each year (kWh)	Monthly kWh used each month (kWh)	Monthly cost at $.1301/kWh ($)
Refrigerator and freezer			
• Old refrigerator (10 cu ft) with manual defrost	479	40	$5.20
• ENERGY STAR® labeled manual defrost refrigerator (10 cu ft)	295	28	$3.64
• Old frost-free refrigerator-freezer (16–18 cu ft)	1044	87	$11.32
• ENERGY STAR® auto-defrost refrigerator-freezer (16-18 cu ft)	450	38	$4.94
• Old chest-type freezer manual defrost (12–15 cu ft)	658	55	$7.16
• ENERGY STAR® chest-type freezer (12–15 cu ft)	326	27	$3.51
• Old upright freezer manual defrost (12–15 cu ft)	992	83	$10.80
• ENERGY STAR® upright freezer manual defrost (12-15 cu ft)	524	44	$5.72
Cooking			
• Electric range: (usage varies widely)			
— manually cleaned oven	784	65	$8.46
— self-cleaning oven (1 cleaning/month)	754	63	$8.20
• Microwave oven (30 min/day at full power)	218	18	$2.34
• Electric frying pan (12 times per month)	140	12	$1.56
• Coffee maker (40 times/month)	117	10	$1.30
• Toaster oven (12hours/month)	250	21	$2.73
• Dishwasher (energy to heat water only)			
— using dry cycle (1 time/day)	270	22	$2.86
— without dry cycle (1 time/day)	120	10	$1.30
Laundry			
• Dryer (1 load/day)	910	76	$9.89
• Top-loading washer (33 loads/month, including electrically heated hot water)	881	73	$9.50
• Front-loading washer (33 loads/month, including electrically heated hot water)	264	22	$2.86
• Iron (2 hours per week)	104	9	$1.17

	Average kWh used each year (kWh)	Monthly kWh used each month (kWh)	Monthly cost at $.1301/kWh ($)
Lighting			
• Four 100-watt incandescent lamps, lit for 5 hours every day	730	61	$7.94
• Two 40-watt fluorescent lamps in a fixture, lit for 5 hours every day (provide light equal to four 100-watt incandescent lamps)	146	14.5	$1.89
• Two energy-efficient, 34-watt fluorescent lamps in a fixture, lit for 5 hours every day (provide light equal to two 40-watt fluorescent lamps or incandescent lamps totaling 400 watts)	124	10.3	$1.34
• Two 32-watt T8 fluorescent lamps in a fixture, with electronic ballast lit for 5 hours every day (provide light equal to two 40-watt fluorescent lamps or incandescent lamps totaling 400 watts)	116	9.7	$1.26
Entertainment			
• Colour TV, solid state (5 hours/day)	364	30	$3.90
• Stereo (3 hours/day)	109	9	$1.17
• Clock radio (3 hours/day)	4	0.3	$0.04
Computer			
• Computer & monitor (8 hours every weekday)	189	16	$2.08
• Laser printer standard (8 hours every weekday)	282	24	$3.12
Personal care and comfort			
• Waterbed (any size)	1,200	100	$13.01
• Portable space heater (1,000 watts)	600	50	$6.51
• Electric blanket (double size)	120	10	$1.30
Other			
• Furnace fan	1,200	100	$13.01
• Vacuum cleaner (4 times/month for 1 hour)	36	3	$0.39
• Electric lawn mower (4 to 5 times/month for 1 hour)	52	4	$0.52
• Car warmer (80 hours/year in 4 months of seasonal use)	72	18	$2.34
• Block heater (320 hours/year in 4 months of seasonal use)	96	24	$3.12
Electric water heating			
• Standard electric water heater (Energy Factor = 0.86):			
— for a household of 2	2,408	200	$26.02
— for a household of 4	4,816	400	$52.04
• Energy-efficient electric water heater (Energy Factor = 0.92):			
— for a household of 2	2,251	188	$24.46
— for a household of 4	4,502	375	$48.79

This Easy$ tip sheet is provided by the Energy Solutions Centre.

If you have additional questions or comments, please contact the Energy Solutions Centre by:

Phone: (867) 393-7063 or from the communities at 1-800-661-0408 ext. 7063

Mail: Box 2703 (EMR-206), Whitehorse, Yukon Y1A 2C6

Web: **www.esc.gov.yk.ca**

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