

## Appliances

Look for an energy use rating on all appliances and consider the up front cost along with the operation cost of the machine.

### Refrigerators

- Conventional refrigerator-freezers use more energy than all-fridges because they use a single compressor for both units
- Vestfrost (a Danish manufacturer) produces a refrigerator-freezer unit that consumes only 320 kWh/a. It uses HCFC-134A for coolant and the foam insulation is made with HCFC-123

### Dishwashers

- Most modern dishwashers use less water than hand washing dishes
- Miele (a German manufacturer) produces a dishwasher that uses only 4.7 gallons per wash compared to 13 gallons per hand wash and 8.7-12.5 gallons for conventional dishwashers. It only requires 640 kWh/a compared to 950 kWh/a for conventional machines, based on 34 washings per month. Furthermore, it will last 20 years instead of the conventional 5-7 years for North American models.

### Ranges

- Gas ranges use about the same amount of energy per year (1000 kWh/a) as electric ranges but are cheaper and cleaner
- Look for units containing a heat exchanger to warm incoming air with outgoing exhaust

### Water Heater

- According to Ontario Hydro, the average residential water heater uses 12,000 kWh/a, representing 1/4 of total house energy consumption

### Washing Machines

- Top load washing machines use twice the amount of water as front load washing machines
- In a year, the average top load machine uses 6900 gallons while front loaders use 2900 gallons
- Miele sells the most efficient front loader in Canada at 14 gallons for an eleven-pound load, using only 2500 gallons of water per year. It has a built in water heater and uses only 312 kWh/a compared to 1200 kWh/a for conventional models, run on a DC motor. The machine uses 5 rinses instead of the usual 1.5 and has a 1600 rpm spin cycle that removes 85% of water. This is twice as much as is removed by conventional machines, allowing clothes to dry faster.

### Clothes Dryers

- Typical dryers use 420-1128 kWh/a
- Inglis produces a natural gas dryer that contains a sensor to turn off the dryer once the clothes meet a certain dryness limit. A heat exchanger uses outgoing exhaust air to preheat incoming air to save energy.

*Note: Before sizing furnaces, wood stoves, boilers, etc. take all measures into account that can reduce the loading in the building.*