

*Esperance Power Station Pty Ltd*



Esperance  
Gas Distribution Company

# **ENERGY EFFICIENCY INFORMATION**

## **Esperance Residential Gas Customers**

**C9906c41 Rev 2**

# Energy Efficiency Information

<b>Contents</b>	<b>Page No</b>
1. Introduction	3
2. Cooking	4
3. Natural Gas Barbeques	5
4. Gas Fireplaces	6
5. Gas Heating	7
6. Patio Heaters	9
7. Pool and Spas	10
8. Water Heating	12
9. Windows	14
10. Energy Savings with natural gas	15
11. Home Energy Efficiency Audit	17

## **1. INTRODUCTION**

Esperance Gas Distribution Company Pty Ltd (EGDC) values its relationship with its customers and recognises that information on energy efficiency may assist our customers in reducing their gas bills for their homes and offices.

Everyone has a role to play in reducing greenhouse gas emissions that contribute to climate change. Choosing an energy efficient gas appliance is one way to do this while saving money

The energy efficiency document is available only to EGDC gas customers in Esperance and is freely available by contacting us directly by phone (08 9072 1422) or mail (PO Box 2392, Esperance WA 6450), or on our web site ([www.esperance-energy.com.au](http://www.esperance-energy.com.au)).

## 2. COOKING

Natural gas is the number one choice for chefs and it's no wonder! It's instant on, instant off, and distributes heat evenly.

### Energy Conservation Tips



- Don't preheat your gas oven if you don't have to. If you're baking breads and cakes, pre-heating your oven may be necessary. For most foods, like casseroles and broiled items, pre-heating isn't necessary.
- Don't open the oven door while food is cooking. You can lose up to 50 degrees in temperature and waste energy.
- Cover pots when cooking.
- Cook by time-and-temperature guides.
- Cook several meals at the same time.
- Use pots and pans that fit the burners. Pans that fit a burner absorb more of the energy, reducing the amount of heat lost.
- Keep oven and burners clean. A clean oven uses energy more efficiently.
- Never use the gas range for room heating! It's not designed for this purpose and can create a hazardous situation.

### Appliance Selection Tips

- Gas burners are often preferred by people who enjoy cooking because gas offers a greater level of cooking control.
- When choosing a new cooking appliance be sure to consider: size and location, efficiency, lifestyle needs and value.

### 3. Natural Gas Barbecues

Natural gas barbecues or grills make outdoor cooking easy and affordable. They're always ready, and you'll never run out of fuel. These environmentally friendly alternatives to charcoal grills reduce emissions and allow you to extend your living area.

#### Energy Conservation Tips



- To seal in juices and reduce cooking times, choose foods with comparable cooking times and operate your grill with the lid closed as much as possible.
- Cook a variety of dishes at one time or grill more than one meal for tasty entrees later in the week.
- Defrost frozen food prior to grilling.

#### Appliance Selection Tips

- A natural gas grill can be permanently installed in your yard, or portable models are available with a quick-disconnect.
- When you use a natural gas grill constructed of stainless steel, you have a unit that will prove long lasting, and provides a true commercial-quality kitchen appearance. Other grill exteriors are made of enamelled steel and aluminum. Look for heavier, thicker grades for the longest life.
- Top-rated burners, cooking grids and grates are made of stainless or enamelled stainless steel, cast or brass.

## 4. Gas Fireplaces

For a warm and cozy atmosphere, consider installing a natural gas fireplace insert, which can also provide a heating source for a room.

### Energy Conservation Tips



- Highly efficient natural gas fireplace inserts can heat up to 93 square metres (1,000 square feet) of living space.
- Install glass doors in front of your fireplace to help keep warm air in the house. Natural gas fireplace inserts not only help keep your house clean, but create less pollution than wood-burning fires.
- Add an elegant cast-iron fireback to your fireplace to promote heat transfer into the room.
- Use your energy wisely. Don't run your natural gas fireplace when you're not in the room to enjoy it.

### Selecting Energy-Efficient Appliances

- Fireplace inserts can be installed in almost any existing masonry fireplace and are available in a variety of styles and designs to match your home's decor.

## 5. Gas Heating

Heating is the number one energy expense for most customers. In fact, heating can account for more than half of your total gas bill. Switching to a natural gas furnace or upgrading to a more energy-efficient model can help save you money.

### Energy Conservation Tips



- Save up to 30% on heating costs by lowering your furnace thermostat by 3 to 5 degrees (health permitting).
- Install a programmable thermostat to help automatically regulate your home's temperature for comfort control and energy savings.
- Save up to 25% of your heating costs by installing or upgrading insulation in your attic and walls.
- Keep your heating system tuned-up to operate at maximum efficiency.
- Caulk and weather-strip drafty windows and doors and save up to 5% on heating costs.
- Clean or replace your furnace filters according to manufacturer recommendations and save up to 2% on your heating costs.
- For safety and efficiency, keep all heating vents and furnace registers free of dirt, lint and obstructions.
- Have your air ducts tested for leaks. Ducts should be repaired with mastic-type sealant not duct tape. You could save up to 20% of your heating costs.
- Open your drapes and shades during the day, allowing the sun to warm your house. Close them at night to limit the amount of heat that escapes.

### Programmable Thermostats

- Programmable thermostats save on heating costs by automatically turning thermostats down or off when you want and back on again when you need heat.
- Programmable thermostats are available in do-it-yourself or professional installation models (including units with several settings to turn heat down at night and during work

- or school hours when the house is empty) and units that handle both heating and air conditioning for year-round savings.
- Thermostats should never be turned up high to heat a home in a hurry. The heater will stay on longer and waste energy. And the room will not heat up any faster.
  - Before buying a thermostat, consider the following:
    - Is the thermostat compatible with the electrical wiring found in your current unit?
    - Are you able to install it yourself, or should you hire an electrician or a heating / air conditioning (HVAC) contractor?
    - Are the programming instructions easy to understand?
  - The best thermostat for you depends on your life style and comfort level.

### **Appliance Selection Tips**

Switching to a natural gas furnace or upgrading to a more energy-efficient model can help save you money.

- When buying a new gas furnace, choose an energy-efficient model. Look for a unit with a higher Annual Fuel Utilization Efficiency (AFUE) or a Energy Star Rating label (refer <http://www.energyrating.gov.au/star.html> )
- Did you know that by replacing a central forced air-furnace that is 15+ years old with a new energy-efficient model, you could save up to 20% on heating costs?
- When choosing a furnace, be sure to take into consideration the size, location, construction and insulation of your home. A system that is too large wastes fuel and money because it keeps cycling on and off. Ask a qualified gas heating contractor to estimate the heat loss of your home and recommend an appropriate size for your new furnace.
- Energy Star Rating labels can help you choose a cost-cutting furnace.

## **6. Patio Heaters**

### **Energy Conservation and Selection Tips**

- Natural gas patio heaters utilize radiant heat, warming objects, instead of the air surrounding them. When shopping for a heater, be aware of the size of the area to be heated.
- The efficiency of patio heaters is affected by the wind; it's best to install them in a sheltered area, providing specified minimum clearances for combustibles.
- Permanently mounted, directional gas patio heaters can be installed in eaves, along walls, or on specially designed posts and are less affected by air movement, adding to their efficiency.

## 7. Pools & Spas

Natural gas pool and spa heaters use less energy and heat water faster than electric heaters. You can help save on energy costs by following a few simple steps.

### Energy Conservation Tips



- Lower the pool or spa heater's temperature setting. Install a time clock to pre-set and minimize heating hours.
- Keep your spa or pool covered when not in use. Well-fitted pool and spa covers help prevent heat loss for energy savings of up to 50%. Besides helping to minimize nighttime heat loss, pool covers also help prevent chemical loss and water evaporation.
- Consider purchasing a solar pool cover. It uses the sun to heat the water's surface.

Reduce pool filtering and automatic pool sweep time to a minimum, and schedule it for "off-peak" hours (before noon and after 6:00 p.m.). Check with your pool service technician to determine the minimum number of hours required.

- To help maintain pool heating efficiency, follow a regular program of preventive maintenance, including an annual inspection and deliming of the heat exchanger.
- Check the accuracy of your spa's thermostat. An inaccurate thermostat can cost you hundreds of dollars each year.
- Heat your spa only when you plan to use it, allowing time for warm-up.

### Pool Filtering

- Pools need to be filtered. How long you should filter your pool depends on:
  - The pool size.
  - The filtering equipment.
  - How much you use the pool.
  - Different environmental factors (such as how much sunlight hits the pool).
- Keep in mind that the more you use your pool, the more filtering it will need.
- If you have pool service, before cutting back on pool filtering check with your service technician to determine the minimum number of filtering hours required.

## **Pool Covers**

- You can save up to 50% on pool heating costs by using a pool cover. Besides helping to minimize night time heat loss, pool covers also help prevent chemical loss and water evaporation.
- There are two types of pool covers:
  - Thermal/opaque covers help prevent heat and water loss. If left on during the day, they also transmit some heat to the pool.
  - Solar covers help transmit heat to your pool from sunlight. They also help prevent heat and water loss.
- When shopping for a pool cover, be sure to check the durability, warranty, insulation value and safety features, as well as the price. If you have small children, be sure to choose a cover that will prevent them from being trapped underneath it.

## **Pool Heaters and Timers**

- Pool heaters expand pool usage by extending swimming hours in the day and swimming months in the year. Energy-efficient natural gas pool heaters use less energy than electric heaters and cost less to operate. They also have automatic ignitions, eliminating the need for a constant-burning pilot light.
- A filter time clock is an easy way to manage pool filtering. Check your clock's instruction manual for directions on setting the operation times. Remember to reset the time clock after power outages and for the fall and spring time change.

## **Appliance Selection Tips**

- When its time to replace your old pool motor and pump assembly, consider a new energy-efficient model to help save on pool filtering costs.
- Consider purchasing a cover for your spa or pool. Covers are worthwhile investments that help reduce operating costs. Solar covers will help reduce overnight heat loss and reduce pool heater usage.

## 8. Water Heating

Next to heating and cooling, water heating is typically the largest energy user in the home.

### Energy Conservation Tips



- Setting your water heater thermostat at or slightly below the manufacturer's recommendation may prevent scalding and help lower your energy costs.
- If you have a gas water heater, turn it to the "Pilot" setting when you go on vacation. If you have an electric water heater, shut it off at the circuit breaker.
- Insulate exterior, uncovered hot water pipes.
- Showers can account for over 50% of your hot water usage. Take shorter, cooler showers rather than baths. Baths can use up to 2 ½ times as much hot water as a five-minute shower.
- Install low-flow, water-saving showerheads to cut water use and save up to 10% on water heating costs.
- Save up to 10% of hot water costs by washing full laundry loads in cold water.
- Wash full loads in the dishwasher.
- Fix leaky faucets. One drop of hot water per second can waste 500 gallons per year.

### Types of Water Heaters

- Storage Water Heaters - These are the most common type of water heater used in WA. Ranging in size from 20 to 80 gallons, storage water heaters work by heating up water in an insulated tank and storing it for use.
- Tankless Water Heaters - They are also called "demand" water heaters. Tankless water heaters do not contain a storage tank. A burner heats water only when there is a demand for hot water.
- Solar Water Heaters - These use energy from the sun to heat water.

## Selecting Energy-Efficient Appliances

- When buying a new water heater, choose a Energy Star Rating Label gas model.
- The energy efficiency of a storage water heater is indicated by its "Energy Factor" (EF). The higher the EF, the more efficient the water heater. For example, a .62 EF 40 gallon model can save up to 10% on water heating costs.
- Don't buy a water heater bigger than you need. Before you shop, estimate your household's peak hour demand and look for a water heater with the capacity to meet that demand.
- Check the Energy Star Rating Label to help choose an energy thrifty water heater.
- Always consult a contractor when considering a tankless water heater installation.



## 9. Windows

Your decisions regarding the type of windows to install will have a significant impact on your home's overall energy use.

For possible available rebates, check with your local electric utility provider.

### Energy Conservation Tips



- High efficiency windows (double pane, Low-E) can save up to 17% on cooling costs and 2% on heating costs compared to standard single pane windows.

### Appliance Selection Tips

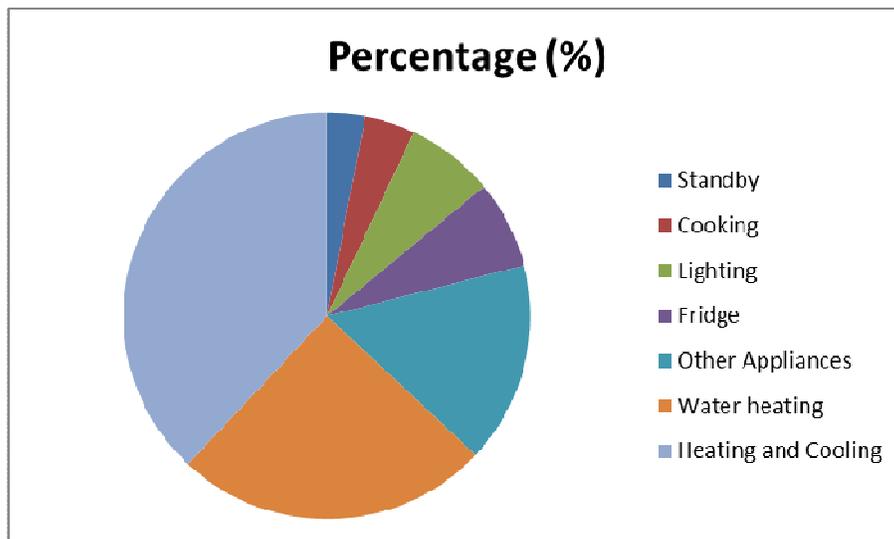
- Look for windows with these energy saving features: double panes; low-e coatings; low conductivity gas-fill between panes; and wood, vinyl or fiberglass frames.
- Consider Energy Star Rating Label qualified windows. \* They will help keep your home cooler in the summer and warmer in the winter, reduce drafts and outside noise, and reduce ultra-violet sunlight. And they can help you save up to 15% on your cooling costs.
- Look for the Energy Star Label as your guide to window energy performance. A window's ability to insulate is given by its U-value, and the lower the U-value, the more efficient the window.
- Select windows with low air leakage ratings—between 0.01 and 0.06 cfm/ft.
- Choose windows with larger, unbroken glazing surfaces.
- Choose windows with good warranties against loss of the air seal.
- To ensure that your new windows perform as well as they should, hire a skilled contractor to install them.

## 10. Energy Savings with Natural Gas

Natural gas homes are among the most energy efficient, which can mean savings for customers and the environment.

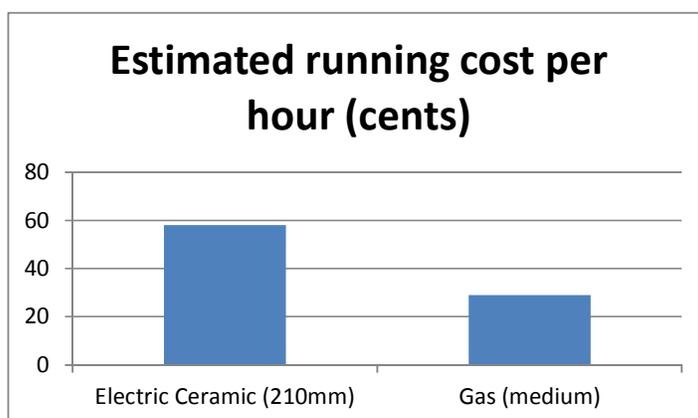
### Typical Energy Use in Households

For the typical Australian home, the majority of energy use comes from heating water, cooling and heating your home, and cooking. Using Natural Gas can make a big difference to your energy bills and the environment.

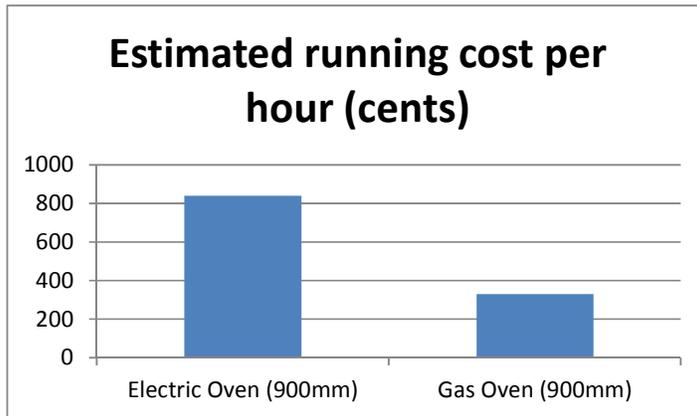


### Estimated running cost compared with electricity appliances

#### a) Cooktops - Electric versus Gas



## b) Ovens - Electric versus Gas



### Estimated running costs compared with LPG appliances

Appliance Type	Typical max energy consumption (MJ/hr)	Natural Gas (cents)*	LPG (cents)*
Oven	13	25	44
	10	19	34
Grill	10	19	34
Burner	10	19	34

\* Note:

1. Typical running cost per hour when on maximum.
2. Based on natural gas price of 7.01c/kwh and an LPG price of \$67 per cylinder (45kg).  
To convert MJ to kwh (1 kwh = 1unit) divide by 3.6.

## **11. Home Energy Efficiency Audit**

### **11.1 Through EGDC**

If desired, a home energy efficiency audit can be arranged by our trained assessor. We may engage an agent or subcontractor to perform the Home Energy Efficiency consultation services. There will be a fee for this service.

Following this assessment of your home, we will provide you with a personalised report.

It will outline practical solutions that could help you reduce your energy consumption, save money and increase the comfort and value of your home.

Key areas of your home energy check up:

- The building itself.
- Your household appliances.
- Your home heating, cooling and hot water.

Please call the Esperance Gas Distribution Company (EGDC) office on 9072 1422 or fax 9071 1433. Alternatively by mail to postal address: PO Box 2392 Esperance WA 6450.

### **11.2 Through Environment House**

Environment House (EH) provide audits to low income households and WA community organisations and have been associated with the Hardship Efficiency Program through WA Council of Social Services (WACOSS).

They can provide energy audits for your house/unit, offices or community housing to achieve effective reductions to your utility bills.

EH can be contacted by:

Phone: (08) 9271 4488 or 6363 5447

Email: [info@envirohouse.org.au](mailto:info@envirohouse.org.au)

Web: [www.envirohouse.org.au](http://www.envirohouse.org.au)