



ENERGY RESOURCES

Energy resources: overview

Like every other community in New Zealand, Rotorua depends on access to energy to maintain its economic and social well-being. Energy is needed to heat houses, cook food, power cars, and keep factories and offices running.

It is only when access to energy sources is threatened that it is given much consideration. With predictions of oil shortages in the not too distant future, it is inevitable that consideration will have to be given to how energy needs will be met in the future. Rotorua has some advantages in this respect, given the existence of renewable geothermal resources.

The use of geothermal resources to create energy is an emerging issue for the district. We must manage our geothermal resources wisely and make the best possible use of them and other resources to ensure long term sustainability. The Energy Resources theme includes monitoring energy consumption in Rotorua.

How are we going?

The indicator for energy resources uses baseline information from 2001. This is the most reliable, current information available about the consumption of energy in the district, from which future monitoring will be measured.

What are we doing?


Environment Waikato has reviewed the geothermal section of the Waikato Regional Plan. Geothermal fields are categorised in terms of level of protection, including geothermal fields for development and exploration. In the future some geothermal fields in Rotorua may be used for the generation of electricity. Environment Bay of Plenty is undertaking a review of the Rotorua Geothermal Plan in 2008. More information about geothermal fields can be found in the Geothermal Resources section of this report.

Other alternative energy options are also being explored, such as biofuel, solar and waste-to-energy technologies. One example is the proposed harvesting of landfill gases to create energy. In capturing landfill gas for energy, there is a double benefit: energy and reduced greenhouse gas emissions. Similarly, there is double the benefit for waste to energy technologies waste becomes an energy resource rather than ending up at the landfill.

One of the easiest ways for businesses to save money and be more environmentally and financially sustainable is to identify ways to reduce energy consumption. The Bay of Plenty Sustainable Business Network facilitates programmes for businesses to be more sustainable and competitive.

Council is part of the Communities for Climate Protection Programme, which has five milestones, or steps towards fewer greenhouse gas emissions.

Energy resources indicator is:

Indicator	State
Energy consumption in the Rotorua district	



Energy resources: energy consumption in the Rotorua district



Indicator 11.1 GigaJoules per annum

BASELINE

Purpose of indicator

Monitoring energy consumption shows the demand on the different types of resources used to create energy. It can also be an indicator for greenhouse gas emissions, as use of different energy types creates waste gases.

Current information and trend

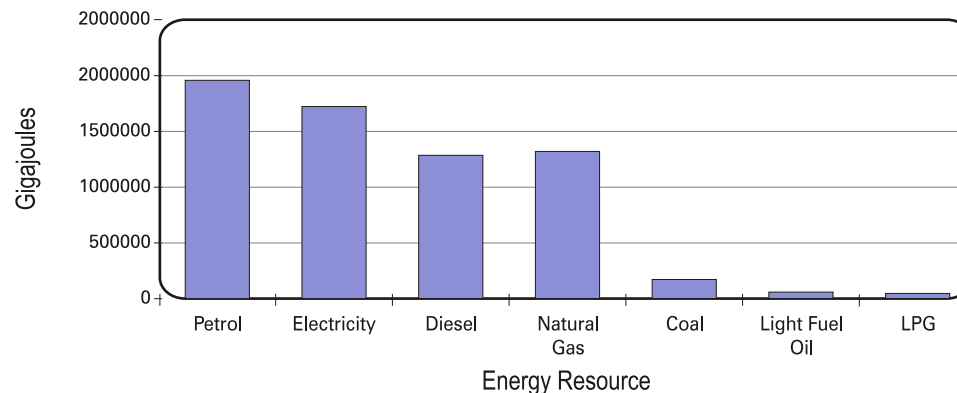
Energy resources were not considered in the 2002 State of Environment Report. The information available is the baseline from which we will monitor future changes and trends. Figure 11.1 shows that oil based energy resources (petrol, diesel and fuel oil) are the major sources of energy used in Rotorua. These fuels are mainly used for transport, which is the greatest energy consumer in Rotorua (Figure 11.2).



What the community said

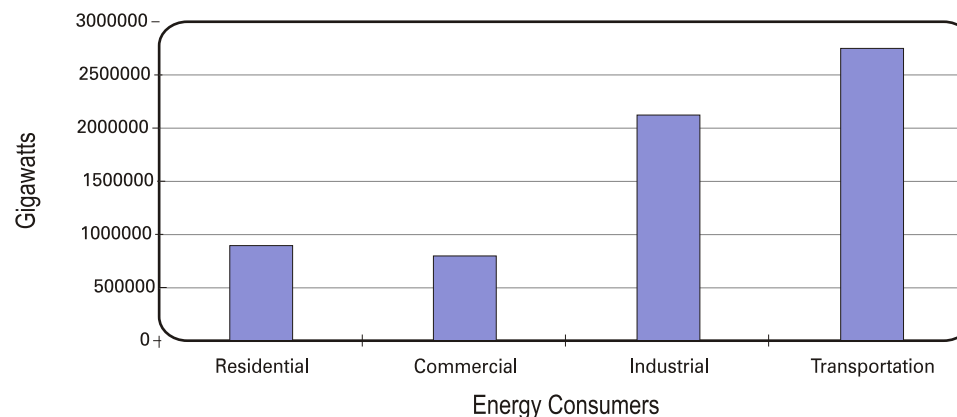
Almost half (46%) of the community thought the geothermal resource of Rotorua had been managed wisely in the past five years. A quarter stated the reason for this was reduced access/increased controls. A further 21% perceived the closing of some bores was wise management.

Figure 11.1 Energy consumption sources 2001



Source: Communities for Climate Protection, 2006

Figure 11.2 Energy consumption by sectors 2001



Source: Communities for Climate Protection 2006



ACTIONS YOU CAN TAKE



In 15 minutes

- ✓ Turn off lights and equipment when you are not in the room. If you like the company of the TV being on try using a small stereo instead.
- ✓ When burning fossil fuels for energy try to keep it as efficient as possible. If you are using gas for heating make sure there is adequate ventilation for safety but enough insulation for warmth.
- ✓ If you are in business, contact the Sustainable Business Network for information on greening your business.



In 1 hour plus

- ✓ Purchase energy efficient light bulbs, dishwashers, fridges, washing machines and other appliances for your home and workplace.
- ✓ Where possible ensure your home or office is well insulated and has thermal curtains and draught stoppers.
- ✓ Consider alternative energy types such as solar water heating and solar power. In some instances the payback period for the cost of the equipment is short and financial benefits can be more attractive in the long run.
- ✓ If you are using diesel or petrol for transport consider smaller engine-size vehicles or hybrid electric vehicles, and have your vehicles regularly serviced to ensure the engine is running efficiently and not costing you more money than it should.

WEBSITES FOR MORE INFORMATION AND IDEAS

Alternative energy types

Energy Efficiency and Conservation Authority
www.eeca.govt.nz

Greenpeace
www.yes2wind.co.nz

The Sustainable Business Network
www.sustainable.org.nz

