

Clean Energy Fact sheets

All about Energy Efficiency

Why we need clean energy

Australia's stationary energy sector, which includes electricity derived from coal-fired power, is responsible for around 50 percent of our greenhouse gas emissions. Australia's environmental, economic and energy security is at risk from climate change unless we can compete in a low carbon world. Any successful climate change solution must first target the energy sector specifically.

Energy Efficiency is one of the most cost-effective methods for reducing Australia's greenhouse gas emissions. Smart energy solutions, like insulation or solar water heating help to stimulate domestic manufacturing while saving money, energy and the environment.

Energy Efficiency – how it works

Energy efficiency can be implemented in a range of different ways that enable us to be smarter with the energy we use. It works by reducing our overall energy demand and can be as easy as replacing your light globes or installing insulation and solar water heating.

Greenhouse gas savings

The average household's energy use is responsible for over seven tonnes of greenhouse gas emissions. Improved energy efficiency can make a major contribution to reducing greenhouse gas emissions.

In Australia

Currently Australia has a range of national and state energy efficiency policies which involve many different initiatives from the provision of information to consumers, regulation of minimum standards, rebates and grants and the use of state based targets - each with their own rules.

Although there is currently no national energy efficiency target, a number of states are establishing their own energy efficiency schemes such as the Victorian Energy Efficiency Target (VEET), the NSW Energy Savings Scheme (ESS) and the South Australian Residential Energy Efficiency Scheme (REES) which provide incentives to adopt energy saving measures.

Insulation in buildings is a key component to improved energy efficiency. In residential buildings, insulation is a simple and cost effective way to save energy and reduce greenhouse gas emissions. Around 4.8 million or 60 percent of homes in Australia have insulation.



Lighting choices can also impact on efficiency, with fluorescent and compact fluorescent lights able to last up to 10 times longer than incandescent lighting. The Australian Bureau of Statistics found that in 2008, 58 per cent of dwellings used energy saving lights in at least one room, while 22 per cent had compact fluorescent lights in every room.

Potential

The International Energy Agency lists energy efficiency as one of the most vital strategies to reduce global carbon dioxide emissions in the energy sector, estimating that unexploited energy efficiency offers the single largest opportunity for emission reductions.

By using improved levels of insulation, proper shading and more efficient glazing Australian buildings could substantially reduce the amount of energy required by heating and cooling. According to the Insulation Council of Australia & New Zealand, retrofitting insulation into currently uninsulated Australian homes could save 2.4 million tonnes of greenhouse gas every year.

While almost 60 percent of Australian homes have insulation, in most cases the insulation is only in ceilings and/or roofs. Only around 30 per cent have wall insulation.

Insulation energy savings:

- Ceiling/roof – up to 45 percent
- Wall – up to 20 percent
- Floor – up to five percent.

Did you know? Globally, energy efficiency has the power to cut all greenhouse gas emissions by up to 80 percent to 2030.

Global View

International standards for energy efficiency, particularly in the US, are well ahead of those currently in Australia with California leading the way. Ontario, Canada has set the goal of reducing 75 percent (6,300 MW) of energy waste by 2025, the equivalent of six coal-fired power stations.

The European Commission has estimated the potential for cost effective savings across the European Union is in the order of 20 – 40 percent and accordingly set an energy efficiency target of 20 percent by 2020.

Current Issues

There are currently a raft of government policies in place or being developed to enhance energy efficiency in Australian homes and businesses. The National Strategy for Energy Efficiency aims to improve minimum standards for energy efficiency, accelerate the introduction of new technologies through regulatory incentives, and address identified barriers to improved energy efficiency.



While education and awareness will assist in increased demand for energy efficiency services, information programs alone are unlikely to be a major driver of improvement in existing homes. Regulation and incentive schemes to encourage energy saving techniques are a necessary path to wide-spread energy efficiency and greenhouse gas reductions.

About the Clean Energy Council

The Clean Energy Council is the peak industry body in Australia, creating a united strategy built on strong policy and direction in the clean energy sector.

We aim to find solutions that deliver abundant and affordable clean energy and efficiency solutions to Australia, as quickly as possible. For more information please visit www.cleanenergycouncil.org.au



