



AUSTRALIA'S RENEWABLE ENERGY TARGET

The Australian Government has set a target for around 23 per cent of the country's electricity supply to be sourced from renewable energy by 2020.

This Renewable Energy Target (RET) is a legislated scheme designed to increase the market share of renewable energy generation technologies - like solar, wind and hydro-electric - by creating a market that provides financial incentives and encourages generation from renewable energy sources.

BACKGROUND

The RET has been operating in various forms since the Mandatory RET commenced in 2001, which had an aim to source 2 per cent of the country's energy from renewable sources. An expanded RET scheme began in January 2010 and was designed to ensure that at least 20 per cent of Australia's electricity comes from large-scale renewable energy sources by 2020.

Under the RET, liable entities must purchase a percentage of their electricity from renewable sources each year. Liable entities are large purchasers of electricity, such as energy retailers and large energy users.

In 2014 the Federal Government appointed an independent panel to consider the 2020 target. Due to a fall in electricity demand, the scheme's fixed targets were heading towards around 27 per cent of Australia's projected 2020 energy use, and an adjustment was necessary.

Following the review, new legislation passed in June 2015 that reduced the large-scale new renewable energy target from 41,000 gigawatt hours to 33,000 gigawatt hours. Given a fall in electricity demand, the reduced target in combination with small-scale renewable energy and legacy hydro generation, is expected to equate to 23 per cent of the country's electricity supply sourced from large-scale renewable energy by 2020.



How does the RET work?

The RET creates a floating-price market where certificates are currency.

When renewable sources generate electricity, they can create Renewable Energy Certificates (RECs); one certificate can be created for each megawatt-hour of power generated. Since January 2011 the RET has been split into two parts:

1. The **Large-scale Renewable Energy Target** that produces Large-scale Generation Certificates (LGCs).
2. The **Small-scale Renewable Energy Scheme** that produces Small-scale Technology Certificates (STCs).

The government requires liable entities to purchase a proportion of the electricity they sell (in the case of retailers) or consume (in the case of large users) from both schemes in the form of LGCs and STCs, which they then surrender to Government. Some trade-exposed energy-intensive industries are exempt, but the target is maintained by proportionally increasing the obligation on other electricity consumers.

LARGE-SCALE RENEWABLE ENERGY TARGET (LRET)

The LRET offers a financial incentive for the establishment and growth of large-scale renewable energy power stations - like wind and solar farms, or hydro-electric power stations. For older hydro-electric power stations built before the RET was conceived, the financial incentive only applies to generation above its historical average, which creates an incentive to boost production.

The revenue earned by the power station for the sale of LGCs is in addition to the market price it receives for the sale of electricity it generates and feeds into the grid.

The Australian Government mandates that power stations must generate electricity from approved sources such as solar, wind, ocean waves and the tide, geothermal-aquifers, wood waste, agricultural waste, bagasse (sugar cane waste), black liquor (a by-product of the paper-making process) or landfill gas.

SMALL-SCALE RENEWABLE ENERGY SCHEME (SRES)

The SRES rewards homes and businesses that install eligible small-scale power generators such as solar panels, and small-scale wind or hydro systems. Solar and highly efficient heat-pump water heaters are also rewarded as they offset conventional power use. SRES does this by legislating demand for Small-scale Technology Certificates (STCs).

Entities that have an obligation under the SRES, are legally obliged to purchase STCs and surrender them to the [Clean Energy Regulator](#) (CER) quarterly. The Small-Scale Technology Percentage sets the rate of liability, which is administered by the CER.

When a liable entity installs a compliant technology, the number of certificates awarded is based on the amount of electricity (in megawatt hours) the generator will produce over its 15 year lifetime or, from 2017, from the installation year until 2030 when the scheme is expected to end. This number may vary depending on factors such as geographic location, system type and the size or capacity of the system.

The CER adjusts retailers' SRES liability each year with the objective of achieving a fairly stable price of about \$40 per certificate.



What happens if the liability is not met?

Liabe entities will receive a shortfall charge if they surrender 90 per cent or less of their total LGCs for an assessment year. If more than 90 per cent are surrendered, the shortfall can be carried forward to the next assessment year.

Liabe entities that fail to surrender all their STCs for any quarter of an assessment year will receive a shortfall charge. All shortfall charges are paid through the CER.

Liabe entities can choose to pay a shortfall charge rather than surrender certificates. The charge is set at \$65 per certificate not surrendered. As it is not a tax-deductible expense, this means entities can purchase LGCs and STCs (which are tax-deductible) at a price of around \$93 and be no worse off than paying the shortfall charge.

While it is disappointing for the penalty shortfall to be triggered, it is a useful element of the RET. While the goal is to increase renewable energy in Australia, there is no sense that this goal is to be achieved at any cost.

The purpose of setting the liability on retailers, who operate in competitive markets, is to use the power of competition to minimise the cost of procuring the new renewables by encouraging supply, the price of which is limited by the grossed-up shortfall charge.

While the RET is a federal scheme, there are also a number of state-based renewable targets.

Queensland has a target to reach 50 per cent of the state's electricity supply sourced from renewable energy by 2030. South Australia, 50 per cent by 2025 and Victoria, 40 per cent by 2025. Since New South Wales and Tasmania have not implemented their own schemes, they fall back on the national target of 23 per cent by 2020, although New South Wales has committed to zero net carbon emissions by 2050.

In 2015, in Paris, Australia agreed to reduce greenhouse gas emissions by 26 to 28 per cent on 2005 levels by 2030, which equates to a cumulative reduction of around 990 million tonnes - this is called the 'Paris Agreement' and is applicable to all sectors of the economy, not just electricity usage. Both the federal RET scheme and the state-based targets will contribute to reaching the agreement's target.