



Queensland Government Response

to the **Environment and Resources Committee's**

Report No.4 released in May 2011

Growing Queensland's Renewable Energy Electricity Sector

Queensland Government response to the Environment and Resources Committee's recommendations on growing Queensland's renewable energy electricity sector

ERC Recommendation 1:

That the Queensland Government should encourage the Federal Government, through the Ministerial Council on Energy, to finalise the form of its proposed carbon price mechanism as soon as possible.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 1 is supported.

On 10 July 2011, the Prime Minister announced details of its Clean Energy Plan, which includes comprehensive detail on the proposed Carbon Pricing Mechanism.

ERC Recommendation 2:

That the government should continue to pursue energy efficiency improvements and efforts to minimise energy wastage as a priority to achieve greenhouse gas abatement targets.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 2 is supported.

Under "Towards Q2: Tomorrow's Queensland" (Q2 program), there are five targets to deliver a fair, green, healthy, strong, and smart Queensland by 2020. Through this program, a target has already been established to reduce household carbon footprints from electricity, transport and waste by one third by 2020. The Queensland Government has invested significantly in energy efficiency programs to achieve these targets. These programs cover a wide range of sectors, including:

- Government buildings and equipment;
- Fleet car efficiency;
- School construction standards;
- Lighting retrofits in schools;
- Residential hot water, lighting and energy monitoring;
- Commercial buildings;
- Small to medium business efficiencies; and
- Street lighting.

A few example programs include:

- **ClimateSmart Home Service** - The ClimateSmart Home Service is the largest in-home carbon reduction program delivered in Australia. As part of the service a licensed electrician installs a wireless power monitor, provides up to five compact fluorescent light globes, installs a water efficient showerhead (non-regulated plumbing work), provides a standby power saving device and may make

efficiency adjustments to electric hot water system thermostats in addition to conducting a combined energy and water assessment of the premises and plan.

The original program was scheduled to finish in December 2010, with approximately 235,000 services completed. Given the proven success and continuing strong demand for the ClimateSmart Home Service it was extended for a further two years, starting January this year, bringing the total investment in the program to \$120 million. To the end of May 2011, more than 266,000 households have received the ClimateSmart Home Service, which includes installed energy saving devices and expert advice.

- **Climate Smart Business Services** - an initiative to assist Queensland's small to medium size enterprises reduce their greenhouse gas emissions and prepare for higher energy and other input costs following the transition to a low carbon economy.
- **Queensland Government Solar Hot Water Rebate** - assisting households become more energy efficient by providing financial support for the installation of solar and heat pump water heaters. Through the initiative, customers are expected to use around 80 per cent less electricity for water heating compared to traditional electric storage systems, as well as saving approximately two tonnes of greenhouse emissions per household.
- **Queensland Energy Management Plan** - will undertake partnerships with local governments to promote energy efficiency across their operations; and encourage energy efficiency in the tourism sector, social housing, and the commercial and residential rental market.
- **Queensland Water and Energy Sustainable Technology Network** – an information and networking forum which aims to increase the uptake and awareness of innovative sustainable technologies amongst Queensland businesses by connecting them with best practice solutions.
- **Energy Conservation and Demand Management Program** – is a \$44.7 million initiative in collaboration with Energex and Ergon under the ClimateQ strategy to deliver a range of initiatives to reduce peak energy usage and promote energy conservation through energy management solutions and rewards-based tariffs.
- **Clean Energy for Remote Communities** – is a collaboration with Ergon Energy under the ClimateQ strategy to provide free energy consultation, lighting and water efficiency upgrades, education programs and incentives to the remote communities of Thursday Island, Horn Island and the Northern Peninsula Area which rely almost solely on diesel fuel for electricity generation.

In addition, the Queensland Government is actively involved with the National Framework for Energy Efficiency (NLEE), which is the primary mechanism for developing and implementing co-ordinated national energy efficiency policies and programs through a collaborative approach between the Commonwealth, State and Territory Governments under the oversight of the Ministerial Council on Energy. The NLEE includes a range of measures addressing issues that prevent the market delivering the economic potential of energy efficiency across industrial, commercial and residential sectors.

By 2020 it is estimated that the NLEE measures will have a net economic benefit to Australia of \$2.6 billion and greenhouse gas savings of 15.7 million tonnes per year. In addition to the substantial economic, energy and emissions savings, some examples of the key public benefits achieved under the NLEE to date include:

- regulation of appliance and equipment energy efficiency standards, which mean that the worst performing appliances are no longer available for sale in Australia;
- a ban on the sale and importation of inefficient light bulbs in Australia from 2009 that has prevented 50 million inefficient bulbs entering the country over the last two years. This equates to lifetime savings of 3 million tonnes of greenhouse gas emissions and approximately \$400 million in operating cost savings;
- national skills and training programs for electricians, plumbers, refrigeration and air-conditioning professionals, facilities managers and engineers; and
- regulation to require energy retailers to provide benchmarking information on residential energy bills that will allow customers to compare their energy use to similar households in their area. Households that act on the information could save up to \$75 per year, delivering total national savings of approximately \$190 million cumulatively by 2020.

ERC Recommendation 3:

That the government should increase the prescribed percentage for the proportion of electricity to be sourced from gas-fired generation under the Queensland Gas Scheme to 20 per cent by 2020.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 3 is not supported at this time.

Currently, the Queensland Gas Scheme requires electricity retailers to source 15 per cent of their electricity from gas-fired generators from January 2010 onward.

The Queensland Government has previously announced that decisions on the future of the Queensland Gas Scheme will be made following the outcomes of the national carbon pricing agenda. As a result of the Prime Minister's announcement on 10 July 2011, this work will now commence.

ERC Recommendation 4:

That the government should set an aspirational target for Queensland of 20 per cent of the state's electricity needs to be generated from renewable energy sources by 2020, consistent with the Federal Government's national renewable energy target.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 4 is supported in principle.

As part of the two-year review of the Queensland Renewable Energy Plan (QREP) due for completion in late 2011, the Queensland Government will reassess goals and targets for renewable energy in Queensland.

The drivers for renewable energy in Queensland include reducing carbon emissions, improving energy security, providing regional development opportunities, diversifying our economy, and reducing the burden on the electricity network through distributed generation. The Queensland Government is seeking to support a robust renewable

energy industry to capitalise on Queensland's comparative and competitive advantages which will benefit the State in the long term.

Queensland has signed up to the national renewable energy target of 20 per cent of Australia's energy supply to come from renewable energy by 2020. However, setting an aspirational target for the Queensland's renewable energy generation to 2020 does not capture the broad scope of the objectives of the State's renewable energy strategy. Instead, through measures outlined in the QREP, Queensland is seeking to leverage 20 per cent of the investment under the Commonwealth Renewable Energy Target. This would mean more than \$3.5 billion of investment and supporting 3,500 jobs in the renewable energy sector, and directly relating to increased deployment of renewable energy technologies in Queensland.

ERC Recommendation 5:

As a further Queensland target, the Queensland Government should aim to replace diesel generators with renewable energy systems as the primary source of electricity in all the state's remote Indigenous communities by 2020.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 5 is supported in principle.

The intent of moving Indigenous remote communities to renewable energy systems as their primary source of electricity is supported by the Queensland Government.

There are 34 remote communities across Queensland that are not connected to the electricity network. These communities are serviced by Ergon Energy and mainly rely on diesel for electricity generation. There are many benefits in transitioning the State's 34 isolated communities from high carbon intensity diesel fuel to low emission alternatives.

However, there are significant technical issues which may prevent these communities from having renewable energy systems as their primary source of electricity by 2020. In particular, without technological improvements in storage, the intermittent nature of renewable energy sources would lead to a reduced security of supply. In addition, renewable technologies introduced into these communities need to be proven to be reliable given the remoteness, potential wet season isolation, and the difficulty in obtaining prompt servicing from qualified personnel in these isolated areas.

The Queensland Government strongly supports the implementation of energy efficiency and energy conservation programs for remote communities. These programs have a proven record of reducing electricity bills in remote indigenous communities by up to 30 per cent, and an investment return to the State through a reduced Community Service Obligation. Over the next two years Ergon Energy will be rolling out the "powersavvy" program in all the remote communities they service.

The Queensland Government also notes opportunities presented by Commonwealth Government's recently announced Remote Indigenous Energy Program. The program consists of \$40 million over four years to provide financial support for the installation of renewable energy generation systems like solar panels and wind turbines in around 50 remote indigenous communities.

ERC Recommendation 6:

That the government should consider options to mandate that GreenPower be used for recharging electric vehicles used on Queensland roads.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 6 is not supported at this time.

The Queensland Government supports voluntary uptake of GreenPower for recharging electric vehicles and will be investigating options for encouraging its use, but does not consider mandating GreenPower to be necessary at this time.

As part of the recently released Queensland Energy Management Plan, the Queensland Government is developing the Electric Vehicle Recharging Initiative to manage charging of electric vehicles on the Queensland network. This may include the development of strategies to encourage the use of GreenPower or specific electric vehicle tariffs.

The Queensland Government is actively supporting the uptake of fully electric vehicles in Queensland through programs such as *An Electric Vehicle Roadmap for Queensland* and the *Queensland Energy Management Plan*. Electric vehicles powered from the Queensland electricity grid produce fewer greenhouse emissions than conventional vehicles and when powered by GreenPower have the potential to eliminate their emissions entirely.

The Queensland Government is looking to maximise the number of consumers driving electric vehicles, and barriers to uptake of this emerging technology should be minimised. In the short term, the number of electric vehicles in Queensland will be limited, with owners expected to come from the same consumer demographic that already purchases GreenPower, or who generate their own renewable electricity from rooftop solar panels (i.e. higher income and education, with an interest in environmental issues).

If an electric vehicle owner was required to purchase GreenPower for vehicle charging but did not use it for the rest of their domestic electricity bill, isolating the electric vehicle component bill would be very difficult. Alternatively, an additional notional GreenPower charge could be imposed based on typical expected electricity use, but the high variability of driving patterns could make this inequitable for infrequent drivers.

ERC Recommendation 7:

That the government should review the existing net feed in tariff scheme for small scale solar photovoltaic installations to ensure the scheme provides appropriate outcomes for electricity consumers and promotes better, more efficient use of energy. This review should consider:

- the cost of the feed in tariff scheme to electricity consumers;
- whether the feed in tariff should be extended to other renewable energy technologies as well as solar photovoltaic systems larger than 10 KW;
- whether the tariffs should be reviewed and adjusted on an annual basis; and
- the specific tariff rates that should apply.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 7 is supported.

Queensland's Solar Bonus Scheme (the Scheme) has exceeded all expectations in delivering affordable solar energy and jobs for Queenslanders. By the end of May 2011, almost 88,000 Queensland households and small businesses had connected 188 megawatts of solar capacity to the Queensland grid. Given the rapid uptake of solar photovoltaic (PV) in Queensland, the ongoing performance of the Scheme continues to be closely monitored.

On 10 May 2011, the Minister for Energy and Water Utilities announced changes to ensure the Scheme remains cost-effective, sustainable and equitable in the long term. From 8 June 2011, the size of eligible individual solar PV systems was reduced to a maximum of 5 kilowatts capacity and limited to one system per premises. This change was introduced to curb the recent significant increase in applications for multiple large solar PV systems by investors seeking to make a profit from the Scheme at the expense of Queensland electricity consumers, which was inconsistent with the objectives of the Scheme.

To this end, in early May 2011, Government requested a further analysis of the Scheme's progress and achievement of policy objectives be undertaken for its further consideration by the end of 2011. This analysis will consider a broad range of issues, including the impact of the recent amendments to the Scheme that commenced on 8 June 2011, and the potential impact of the Commonwealth Government's policy settings, including the planned introduction of a carbon price.

ERC Recommendation 8:

That the government, through the Ministerial Council on Energy, should seek the establishment of a uniform, national feed in tariff regime for renewable energy generators.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 8 is supported in principle.

Queensland is supportive of discussions held at the national level regarding a national feed in tariff regime. The Queensland Government notes however, that feed in tariff arrangements for solar PV in some states have resulted in unsustainable levels of customer participation.

The Queensland Government will continue to participate in further cross-jurisdictional discussions on this issue as opportunities arise.

ERC Recommendation 9:

That the government should legislate to provide certainty to current and future participants of feed in tariff schemes and confirm that arrangements for existing scheme participants are grandfathered in the event of alterations to the scheme.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 9 is supported.

Queensland's Solar Bonus Scheme (the Scheme) is legislated to 2028 under the *Electricity Act 1994*. Any changes to the Scheme need to be reflected in legislation and will not affect existing Scheme participants.

On 10 May 2011, the Minister for Energy and Water Utilities announced changes to ensure the Scheme remains cost-effective, sustainable and equitable in the long term. From 8 June 2011 the size of eligible individual solar PV systems was reduced to 5 kilowatts capacity and limited to one system per premises. As previously noted, this change was introduced to curb the recent significant increase in applications for multiple large solar PV systems by investors seeking to make a profit from the Scheme at the expense of Queensland electricity consumers.

Legislation was introduced to Parliament in mid-June 2011 to give effect to the announced Scheme changes. As noted in the 10 May 2011 announcement, there will be no other changes to the Scheme, including the solar bonus rate of 44 cents per kilowatt hour, at this stage. The legislation will also provide for the Scheme's existing customers to continue under their current arrangements.

ERC Recommendation 10:

That the government should consider whether upfront subsidies or interest free loans may provide electricity customers with greater incentives to participate in the renewable energy market than the current feed in tariff.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 10 is supported.

The Queensland Government supports further investigation of upfront subsidies or interest free loans for electricity customers to incentivise the uptake of renewable energy in Queensland. It is noted that some electricity retailers are already offering interest-free loan schemes and other incentives for renewable energy options.

The Queensland Government has recently made changes to the Solar Bonus Scheme to limit the size of eligible individual solar PV systems to 5 kilowatt capacity and to just one system per premises. The Scheme will again be reviewed in late 2011.

In addition to the solar feed in tariff, the Queensland Government provides a rebate for eligible householders who replace an electric storage hot water system with a solar hot water system or heat pump.

As part of the Renewable Energy Industry Development Plan under the QREP, the Queensland Government is undertaking analysis of the costs and benefits of renewable energy incentives. This assessment involves comparing an extensive list of potential incentive options, including upfront subsidies, interest free loans and feed-in tariffs.

Critically, the assessment will take into account a range of policy considerations, such as how each incentive option addresses market failures and investment barriers, compatibility with Federal Government renewable energy initiatives, and any costs to Government and consumers.

ERC Recommendation 11:

That the government should examine the benefits and feasibility of allowing open tendering by renewable energy generators for long-term electricity supply contracts for government departments, buildings and other infrastructure.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 11 is supported.

The Queensland Government supports further investigation of the benefits and feasibility of electricity supply contracts with renewable energy generators for government operations. This is being investigated as part of the incentives analysis referred to in the response to recommendation 10.

The outcomes of Brisbane City Council's (BCC) tender process for a green power plant will be important part of this consideration. However it should be noted that this process was announced in December 2009 and as at 31 July 2011, BCC has not yet awarded a successful tender for a green energy power plant to supply BCC's electricity.

It should also be noted that any consideration to use long-term supply contracts as proposed, would first require a comprehensive procurement review and evaluation by the Queensland Government Chief Procurement Office in the Department of Public Works. Long-term supply contracts for services and utilities for government buildings are uncommon.

ERC Recommendation 12:

That the government should consider providing support for renters to purchase GreenPower by providing subsidies based on the Brisbane City Council EzyGreen scheme.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 12 is not supported.

The GreenPower program allows households and businesses to support renewable energy generation in Australia. It provides an easy and cost effective alternative to onsite installation of solar or other renewable energy. Most electricity retailers offer a range of GreenPower products of between 10 and 100 per cent renewable energy. GreenPower typically costs around five cents per kilowatt hour in addition to the relevant electricity tariff, although this rate varies between electricity retailers.

The EzyGreen scheme partnered with an electricity retailer to offer options of discounted electricity contracts with 10 per cent GreenPower included, or 20 per cent GreenPower at no extra cost when signing on to a three year contract. Similar offers are available in the competitive electricity market.

Competition in the electricity retail sector has resulted in some electricity retailers offering 10, 20 and 25 per cent GreenPower products for free or at rates below the regulated electricity tariff rate. As a result, the Queensland Government considers subsidisation unnecessary at this time. Further information on GreenPower products

offered by Queensland electricity retailers is available through the Price Comparator tool on the Queensland Competition Authority website.

ERC Recommendation 13:

That the government should consider a scheme to mandate the purchase of GreenPower by households to offset the electricity consumed by pool pumps and air conditioners.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 13 is not supported.

The Queensland Energy Management Plan (QEMP), released by the Queensland Government in May 2011, outlines a program of 28 initiatives that aim to slow the rapid growth in electricity use and peak demand. A key focus of the QEMP is to mitigate upward pressure on electricity prices. By 2020, successful implementation of the Plan would avoid 1000 megawatt of electricity load, saving more than \$3.5 billion in avoided network and generation costs.

One action under the QEMP is a change to the tariff schedule in the Queensland Government Gazette and the Electricity Industry Code, allowing pool pumps to be connected to controlled load Tariff 33 via a standard power point from 1 July 2011. Previously any appliance accessing Tariff 33 needed to be hardwired. A relaxation to the conditions for pool pumps was agreed after public consultation identified permanent connection as a significant barrier to using Tariff 33 for pool pumps, due to the ongoing cost of requiring an electrician to disconnect and reconnect pumps where maintenance was required. For an average sized pool electrical running costs on continuous supply Tariff 11 could be \$550 a year. Switching to Tariff 33 could save owners around \$220 per year.

The Queensland Government supports the voluntary uptake of GreenPower by households to offset the electricity consumed by pool pumps and air conditioners, and has recently made it easier for households to make significant savings on their electricity bills by relaxing the conditions for connecting pool pumps to the cheaper off peak Tariff 33. The Government would support consumers reinvesting these savings in GreenPower to match the appliance load, and in most cases this will be cheaper than powering their pool pump on the continuous supply Tariff 11.

GreenPower currently trades at an average of approximately five cents per kilowatt hour in addition to the relevant tariff (either controlled load or continuous supply).

Under the QEMP, the Queensland Government is also investigating options to increase load control on air conditioners, including reviewing tariffs for air conditioning and the use of demand response enabling devices. In addition, ENERGEX is currently undertaking trials of energy management devices on air conditioners, pool pumps and hot water systems in participating homes, enabling the appliances to be remotely cycled by ENERGEX for short periods of the few hours of peak demand. This is the largest trial of its kind in Australia.

ERC Recommendation 14:

That the government provides the Parliament with a statement of the objectives, outcomes and value for money achieved from its renewable energy projects and initiatives.

Minister responsible: Minister for Energy and Water Utilities

Recommendation 14 is supported.

The Queensland Government regularly reports on its renewable energy projects and initiatives. The Queensland Government undertakes regular reviews of its renewable energy programs to ensure they are meeting their objectives in the most cost-effective way. For example, the recent review of the Solar Bonus Scheme examined the uptake of the Scheme and recommended some changes to the eligibility criteria to ensure the Scheme is meeting its objectives. In addition, the current two-year review of the QREP will assess how the existing suite of renewable energy programs is contributing to the overall QREP objectives, and determine whether the goals remain appropriate.

Renewable energy project outcomes may be comprised of direct benefits that can be costed, such as avoided infrastructure expenditure; direct benefits that cannot be easily costed such as reduced carbon emissions; and indirect benefits such as jobs, regional development opportunities, and energy security outcomes. It is therefore difficult to evaluate the outcomes of renewable energy projects in the short term, as many have only recently been completed, and project learnings, electricity generation, jobs created, and other industry development outcomes may not be evident for a number of years.

However, the Queensland Government will evaluate project outcomes and value for money where appropriate in the longer term. These evaluations may be reported as appropriate in future QREP annual reports, or through other relevant reporting mechanisms.