

Powering Queensland Plan

Transmission lines, rural Queensland

The Queensland Government is investing \$1.16 billion to ensure Queenslanders can continue to enjoy an affordable, secure and sustainable supply of electricity.

The plan addresses Queensland's current and future energy needs

Australia's energy markets are facing significant challenges relating to electricity and gas prices, system security, gas availability, and energy and climate policy.

These challenges are being driven by closure of ageing coal-fired generation and gas supply restrictions in southern states, a lack of investor confidence and an uncertain national policy.

These challenges are resulting in higher prices for households and businesses, and if left unaddressed may threaten energy security and Australia's ability to meet its emissions reduction targets.

The *Powering Queensland Plan* sets out the Government's strategy to guide the state through the short-term and long-term challenges occurring in the market. The plan aims to deliver stable energy prices, ensure long-term security of electricity supply, transition to a cleaner energy sector and create new investment and jobs.

ACTIONS

- ▶ Provide electricity price relief by investing \$770 million to cover the cost of the Solar Bonus Scheme
- ▶ Return Swanbank E gas-fired power station to service
- ▶ Direct Stanwell Corporation to undertake strategies to place downward pressure on wholesale prices
- ▶ Investigate the restructure of Government owned generators and the establishment of a 'CleanCo'
- ▶ Deliver a \$386 million Powering North Queensland Plan to strengthen and diversify the north's energy supply and create a North Queensland clean energy hub
- ▶ Confirm the Government's commitment to a 50 per cent renewable energy target by 2030
- ▶ Facilitate the next wave of up to 400 megawatts of diversified renewable energy, including 100 megawatts of energy storage through a reverse auction
- ▶ Improve large-scale renewable project facilitation, planning and network connections
- ▶ Establish the Queensland Energy Security Taskforce
- ▶ Implement the Queensland Gas Action Plan and release over 450 square kilometres of new gas tenure for supply to the Australian market
- ▶ Continue to advocate for stable, integrated national climate and energy policies





Our actions in more detail

Provide electricity price relief by investing \$770 million to cover the cost of the Solar Bonus Scheme

The Queensland Government is committed to stable electricity prices and due in part to the Government's efforts, average residential electricity bills have risen by just 1.2 per cent per annum over the last two years.

However, the Government understands that recent supply and demand shocks have led to unprecedented increases in wholesale energy prices in Queensland and across the National Electricity Market.

To ensure continued price stabilisation, the Government has:

- ▶ directed Energy Queensland to remove the cost of the Solar Bonus Scheme from electricity bills over the next three years
- ▶ reissued a new delegation to the Queensland Competition Authority to set 2017–18 prices in line with the reduced rates.

This action will limit the bill increase for a typical regional household customer in 2017–18 to around 3.3 per cent, and place downward pressure on prices in 2018–19 and 2019–20. The benefits will also flow to South East Queensland customers. As a result, the bill for a typical household will have increased by just over 1.9 per cent per annum over the last three years.

The cost of the Solar Bonus Scheme will be transferred to the Government at an estimated cost of \$770 million.

Return Swanbank E gas-fired power station to service

As a result of extreme heat wave events in Queensland and in southern states, there has been significant volatility and upward pressure on wholesale electricity prices across the National Electricity Market. Increasing generation supply will help minimise future volatility and reinforce the state's energy security over the coming summers.

To achieve this objective, the Queensland Government has directed Stanwell to return its 385 megawatt Swanbank E power station to service in late 2017 to support the market over the summer period.

The Queensland Government does not want to see a repeat of the events of last summer, including record wholesale prices and load shedding in southern states in February 2017 due to unprecedented demand on the electricity system – which put industrial customers and jobs at risk.

Wholesale costs make up a larger proportion of electricity bills for large customers – industrial users and manufacturing plant – meaning they are more exposed to the impacts of market volatility.

The Queensland Government understands an affordable and secure energy supply is essential for a strong economy, which is why we are acting to protect our industrial customers most affected by wholesale market volatility, as well as the jobs they provide.

By bringing Swanbank E back online for summer 2017-18, the Queensland Government aims to support more stable wholesale prices in Queensland, helping to ensure Queensland customers continue to have security of supply even when demand is at its highest, protecting jobs and our economy.



Koombuloomba Hydro

Direct Stanwell Corporation to undertake strategies to place downward pressure on wholesale prices

As a shareholder of electricity assets, we have the ability to take steps to counter some of the impacts being seen in the broader national electricity market that are resulting in higher wholesale prices and volatility during peak demand periods.

To complement the return of Swanbank E, the Queensland Government has directed Stanwell to alter its bidding strategies to help put as much downward pressure on wholesale electricity prices as possible.

This action is only possible because we have kept our electricity assets in public hands, enabling the Government to deliver better outcomes for Queensland electricity consumers.

Investigate the restructure of Government owned generators and the establishment of a 'CleanCo'

In parallel with implementing other strategies to reduce wholesale prices, the Government will investigate a restructure of Government owned generators to deliver improved market outcomes.

The Government will consider establishing a separate 'CleanCo' generator to operate Queensland's existing renewable and low-emissions energy generation assets and develop new renewable energy projects.

The investigation will provide recommendations to the Queensland Government in the first half of 2018.

Establishing a 'CleanCo' has the potential to deliver improved market outcomes

Deliver a \$386 million Powering North Queensland Plan to strengthen and diversify the north's energy supply and create a North Queensland clean energy hub

Under the *Powering North Queensland Plan*, the Queensland Government will:

- ▶ Commit \$150 million to develop strategic transmission infrastructure in North and North-West Queensland to support a clean energy hub, subject to a feasibility study. This will unlock around 2000 megawatts of renewable energy projects and support up to 4600 jobs.
- ▶ Provide a \$100 million equity injection into SunWater and reinvestment of dividends to deliver improvement works to ensure that the Burdekin Falls Dam continues to meet design standards. These works, which are estimated to support 250 jobs, will support the proposed hydro-electric power station.
- ▶ Invest a further \$100 million to help fund a 50 megawatt hydro-electric power station at the dam, subject to completion of a business case. The Burdekin Falls power project will create 200 jobs during construction and generate enough electricity to power 30000 homes.



Indicative transmission path in North Queensland

New transmission infrastructure in North Queensland could unlock around 2000 megawatts of new renewable projects and support up to 4600 jobs





Wind turbine in Atherton Tablelands

Confirm the Government's commitment to a 50 per cent renewable energy target by 2030

Based on the positive outcomes of the independent Expert Panel public inquiry, the Government reaffirms its commitment to a 50 per cent renewable energy target for Queensland by 2030.

Achieving a 50 per cent renewable energy target has the potential to deliver broad benefits to the economy, particularly in regional Queensland. The Expert Panel found that the target could drive \$6.7 billion of new investment, and deliver a net increase in employment of 6400–6700 full-time equivalent positions on average per year between 2020 and 2030.

Facilitate the next wave of up to 400 megawatts of diversified renewable energy, including 100 megawatts of energy storage through a reverse auction

In the period up to 2020, a significant opportunity exists for additional renewable energy projects to be developed in Queensland under the national large-scale renewable energy target.

In addition to creating an attractive environment for these projects, there is also a role for the Queensland Government in supporting a diverse mix of renewable technologies, some of which are not currently being deployed on a fully commercial basis. This diversity is important for maintaining system security and reliability.

The Government will undertake a reverse auction for up to 400 megawatts of renewable capacity, to commence in the second half of 2017, with priority given to projects that support local jobs and businesses.

Energy storage technology is expected to play an important role in the transition to higher levels of renewable energy.

As part of the 400 megawatt auction, and to support the accelerated deployment of this technology, the Government will undertake a specific process to secure up to 100 megawatts of energy storage prior to 2020.

Improve large-scale project facilitation, planning and network connections

Most renewable projects will need to connect to a transmission or distribution network. Under a 50 per cent renewable energy target, there will be an increasing workload for Queensland's network businesses to deliver network connection services.

The Queensland Government will work with Powerlink and Energy Queensland to ensure efficient and timely network connections.

Timely provision of information to project proponents and entities assessing project proposals will be critical to facilitating the rapid expansion of Queensland's renewable energy industry. To meet this need, the Queensland Government will establish a centralised web portal in the second half of 2017 to provide an integrated information service for renewable energy project proponents.

The Queensland Government will also work with stakeholders to develop best practice guidance material on project planning and development. This guidance material will help the renewable energy industry, local governments and landholders have a common understanding of best practice, and ensure that strategic land use considerations are factored into the planning process.

With almost 1200 megawatts of large-scale renewables committed since January 2016, the transition to a clean energy future is underway



Gatton Solar Research Facility (photo courtesy of The University of Queensland)

Establish the Queensland Energy Security Taskforce

System security has emerged as a critical issue across the National Electricity Market.

Queensland has a strong fleet of baseload generators, and is well placed to commence its transition to a 50 per cent renewable energy target, ongoing vigilance is needed. The Queensland Government will establish a Queensland Energy Security Taskforce to develop an energy security plan for the state.

The taskforce will be quickly mobilised, with its first priority to develop a Queensland summer preparedness plan for 2017–18 by September 2017. This plan will map out what needs to be done to ensure Queensland's system remains secure in the short term.

The taskforce will also develop a demand management and energy efficiency strategy to help Queenslanders manage their power bills and to better manage peak demand, improving the resilience of the grid.

The taskforce will provide advice on long-term market design for Queensland and the National Electricity Market, taking into account outcomes of the Finkel Review.

The taskforce will investigate:

- ▶ deployment of new hydro-electric and pumped storage generation capacity
- ▶ strategic transmission infrastructure in North and North-West Queensland to support a clean energy hub
- ▶ expanding interconnection between Queensland and other states.

The taskforce will be chaired by Mr Terry Effenev, former CEO of Energex and member of the Finkel Review panel. The Taskforce will also comprise Prof Suzanne Miller (Queensland's Chief Scientist), Prof Paul Simshauser (Director-General of the Department of Energy and Water Supply) and Mr Jim Murphy (Queensland's Under Treasurer).

Implement the Queensland Gas Action Plan and increase gas supply for the Australian market

Gas supply issues are having significant impact on industrial users and the electricity market. The lack of availability of gas nationally for generation is contributing to upward pressure on wholesale electricity prices.

The Queensland Gas Action Plan will deliver a range of initiatives to increase gas supply and reduce barriers to market.

In order to increase gas supply, in February 2017, the Government released a tender for gas development and production in the Surat Basin involving 58 square kilometres of land with an Australia-only sale condition on the gas produced.

The Government is looking at further and larger land releases in the Surat Basin with the same Australian market conditions, and will soon release another 395 square kilometres of land for gas development to supply the east coast Australian market. Releasing more land will drive employment and investment in regional Queensland and eventually add to the gas currently available for domestic use.

Continue to advocate for stable, integrated national climate and energy policies

The Queensland Government will also continue to advocate for stable and more integrated national climate and energy policies, to ensure the electricity sector can deliver a meaningful contribution to Australia's emission reduction commitments and to support new clean energy investment.

The Queensland Government will further consider its renewable energy policy in 2019, following the completion of the Finkel Review and the national review of climate change.



Queensland: a generation powerhouse

Swanbank E power station (photo courtesy of Stanwell Corporation)

Queensland has a secure and reliable electricity system, backed by the most efficient coal-fired generation fleet in the National Electricity Market. We also have the highest level of rooftop PV in the country, and our largescale renewable energy industry is experiencing unprecedented growth. We are an energy generation powerhouse that is well placed to transition to a low-carbon energy future.

QUEENSLAND'S ENERGY FLEET



8,200 megawatts
coal-fired generation



2,700 megawatts
gas-fired generation



1,706 megawatts
rooftop PV



700 megawatts
large-scale renewables



500 megawatts
pumped storage
hydro-electric

Our fleet of thermal generation will be important during the transition

In Queensland, thermal generation comprises around 80 per cent of the state's generation capacity. Importantly, this includes:

- ▶ the four youngest, most efficient coal-fired generators in the National Electricity Market
- ▶ significant tranches of flexible gas-fired generation, which enables the system to 'ramp up' quickly if required.

Undoubtedly, this plant will play an important role in maintaining system security and reliability under a higher penetration of renewable energy.

The Queensland Government made a careful decision when it retained its generation portfolio in public ownership.

Owning our generation portfolio will support our transition from thermal to renewable generation, allowing us to make power stations available to provide synchronous generation when it is needed.

* A further 800 megawatts of thermal generation capacity is operated in Queensland using liquid fuels, such as diesel and fuel oil



**Queensland
Government**

Queensland's renewable energy boom

The transition to a renewable energy future has already commenced

Since January 2016, Queensland has seen an unprecedented level of renewable energy investment activity, with 17 large-scale projects either commencing construction or finalising commercial arrangements.

When complete, these projects will deliver almost 1200 megawatts of clean power to the state, more than doubling Queensland's current renewable energy supply. This will provide the annual energy needs for some 520 000 houses.

Renewable energy projects committed or under construction



What will these projects bring to the Queensland economy?



\$2.2 billion
investment



2200
construction jobs



2.8 million
Tonnes of carbon dioxide
avoided each year