



**CHAMBER OF COMMERCE AND INDUSTRY
QUEENSLAND SUBMISSION**

*Inquiry into modernising Australia's Electricity
Grid*
**Standing Committee on the Environment and Energy
House of Representatives**

CHAMBER OF COMMERCE AND INDUSTRY QUEENSLAND

28 April 2017

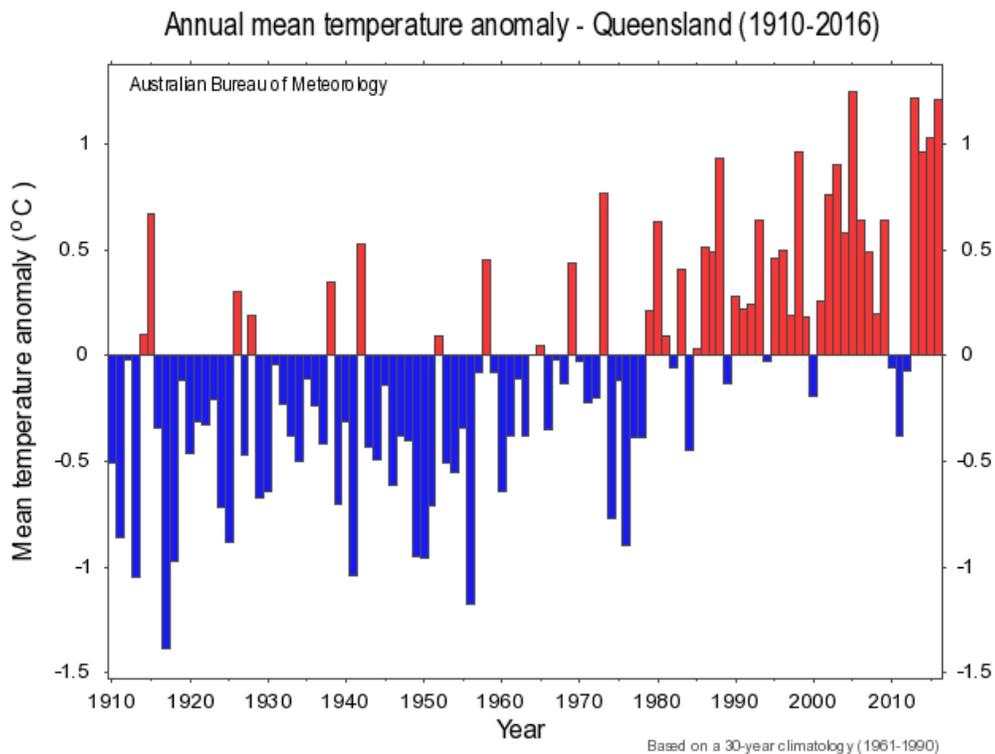
0.0 Overview

The Chamber of Commerce and Industry Queensland (CCIQ) makes this submission in response to the Standing Committee on the Environment and Energy Discussion paper relating to modernizing Australia’s electricity grid. The intent of this submission is to highlight the issues facing Queensland businesses under the current electricity grid and recommends ways to modernise the grid for the benefit of Queensland businesses within the terms of reference of the inquiry.

1.0 Security, Reliability, Sustainability and Affordability

1.1 Queensland Weather

Queensland is increasingly experiencing ‘extreme’ weather events due to rising temperatures. Since 1950, the increase of greenhouse gases had a significant effect on warming. In the past 5 years, temperatures have consistently been almost 1 degree Celsius above the mean temperature, as set by the Australian Bureau of Meteorology.



With increasing temperatures comes increased energy demand which is already compounded by a growing population. Increased air-conditioner use increase peak energy demand. The possibility of line outages and blackouts also increases. If the average temperature increases by 2 °C, peak demand has been shown to increase by 4% in Brisbane.

Queensland is also exposed to severe weather events in the form of cyclones and droughts. In the past decade, Queensland alone has experienced four category 4 to 5 cyclones, devastating industry and disrupting electricity supply for up to weeks at a time.

1.2 Interdependencies and Importance

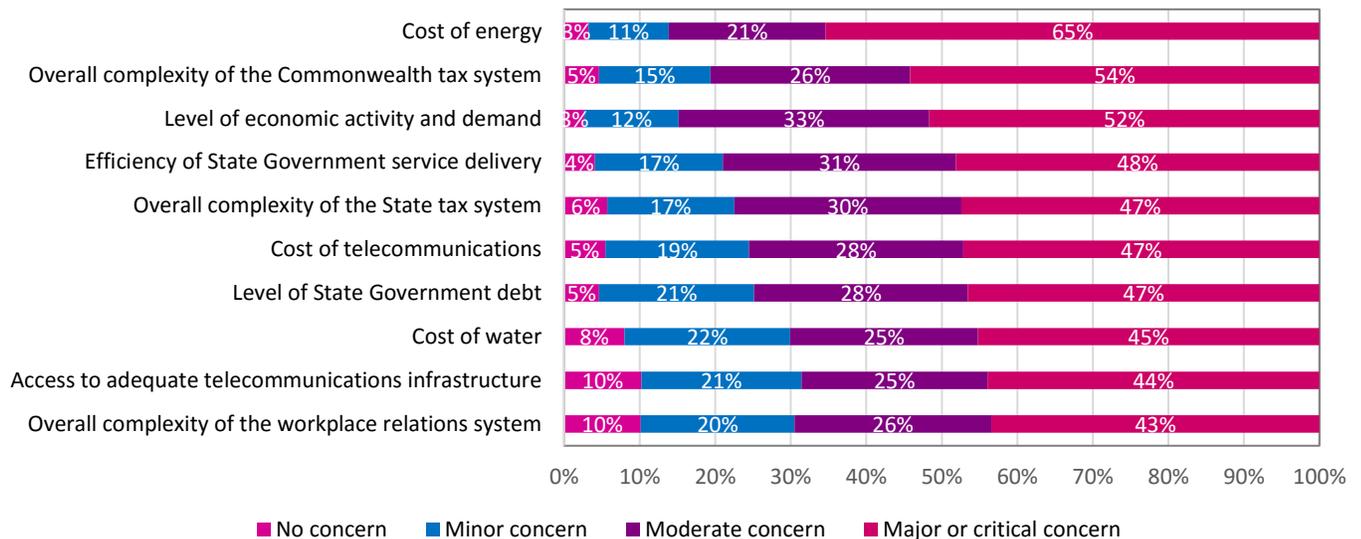
The objectives of the electricity market are intrinsically related. Increasing network sustainability as the grid is modernised would in turn increase security of the network, boosting reliability. However, the introduction of green energy to the system will require a significant investment in new generators and technology as more non-synchronous energy is included on the grid. A solution may be to introduce solar battery farms, which provide a backup and are an important step towards making solar and wind energy behave more like baseload generators.

Keeping in mind Queensland’s unique weather and the impact climate change is having on the system, investment in infrastructure and disaster planning will increase the security, reliability and sustainability of Australia’s electricity grid.

However, improvements and modernising of the grid comes at a cost. As is often the case, such costs will be passed on to the consumer.

CCIQ recently polled our members concerning what issues were impacting business. An overwhelming 65% indicated that rising energy prices were a major concern.

Top 10 Business Issues



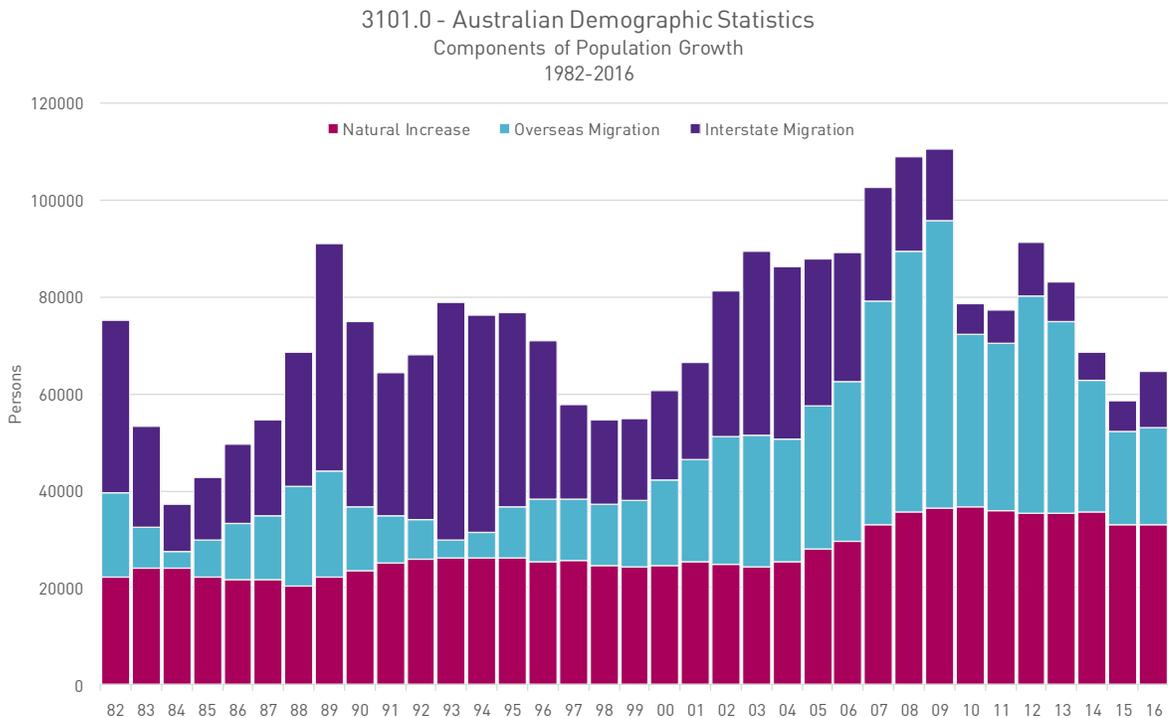
Per member feedback, CCIQ recommends affordability be given priority when reviewing the modernisation of Australia’s electrical grid. Improvements must be made to ensure the future of energy, however, due to the increasing costs of electricity prices Queensland small businesses cannot and should not be left holding the bill.

An example of how modernisation has driven up costs is the introduction of photovoltaics (PV) to the network. PV is green energy and a step towards modernising the grid and lowering emissions, however the introduction of PV technologies to the grid compromised reliability and sustainability. Due to the Solar Bonus Scheme (SBS) introduced by the Queensland Government in 2008, the introduction of PV has driven electricity prices up by approximately 9 per cent.

CCIQ supported the recommendations made by the Queensland Productivity Commission (QPC) in their draft report on electricity pricing in Queensland for the Queensland Government to consider the merits of an earlier end to the SBS than the planned 2028 closure. CCIQ believes the Queensland Government should commit to removing the burden of costs associated with the SBS to relieve pressure from small business consumers subsidising excessive feed-in-tariff rates.

At a minimum the grid must be able to meet demand. Currently with the closure of the Hazelwood Power station in Victoria supply has been restricted. Modernisation of the grid must have a system and regulator in place overseeing transitional arrangements in the medium term.

In the long term, Queensland is expected to have a population of 6 million by 2026. This means there will need to be on average an extra 40,000 new dwellings built annually. Modernisation of the grid must consider infrastructure to increase security of the network.



Source: ABS, 2017

The Australian Energy Regulator (AER) and Australian Energy Market Operator (AEMO) must work together to implement a standard of reliability. Increased reliability will ensure security across the grid. Currently the AEMO has a Reliability Standard Implementation Guidelines (RSIG). CCIQ supports the implementation of the guidelines however calls for a more proactive stance when it comes to security and reliability in the process of modernising the grid.

2.0 Technology, economy, community and regulatory

2.1 Costs

In Queensland alone, half a billion dollars is spent subsidising the cost of supply to regional areas in Queensland. CCIQ support the Consumer Service Obligation (CSO) however the cost to tax payers is unsustainable.

In 2010 the 'gold plating' of networks and transmissions was approved, costing \$45 billion. This debt will take 40 years to repay, however demand has been decreasing as more homeowners move off the grid, ironically due to increasing prices, in part due to the investment in infrastructure.

Network prices have risen substantially, due to the Australian Energy Market Commission (AEMC) and Council of Australian Governments (COAG) failure to rein in the Australian Competition Tribunal. This has now prompted the Federal Government to begin an Australian Consumer and Competition Commission (ACCC) review into the electricity retail industry. Networks are also entitled to earn a perpetual rate of return on sunk costs, even when those costs have been fully recovered and notwithstanding that capacity utilisation has fallen.

This multi-billion-dollar industry rakes in huge profits for its private and government owned corporations while Queensland and Australian taxpayers foot the bill to use, repair and build. Any modernisation plan must be with the aim to reduce costs of supply and operational costs.

As more Queenslanders leave the grid due to personal energy options, predominantly PV, for those that remain dependent on the grid prices will continue to rise, as the decreasing number of consumers are obliged to bear the fixed cost of maintaining the grid. CCIQ urges the Federal Governments to explore initiatives to turn grid leavers into grid contributors and use personal systems to add excess energy into the market.

2.2 New Energy Technology

As previously stated the biggest issue facing modernisation is transitioning to non-synchronous energy while the framework for the National Energy Market (NEM) relies upon continuous energy supply, currently supplied by base load generators powered by coal, gas and hydro.

Currently supply and demand are narrowing as the security of the network is further compromised by the reduction of thermal generators on the market. Queensland has invested in modernising the grid by approving Solar and Battery projects in the far north.

By pairing technologies together, PV energy will behave much like current old technologies, which require 50 hertz of inertia. It should be noted batteries will only provide several hours of back up, technology must be able to hold several days of reserve energy to be able to ensure grid security.

To modernise the grid, CCIQ recommends investment in smaller localised PV and wind farms in regional areas. The construction of these smaller projects will stimulate local economies and create jobs in regional Queensland while also lessening the burden on the grid, adding to security and in the long term reducing costs to consumers. Ultimately, the Federal Government must have short, medium and long term price alleviation in mind when modernising Australia's electricity grid.

3.0 International

Australia's electricity grid is unique. The National Electricity Market is the largest interconnected power system in the world. At the time, it was ground breaking. But now it is just another piece of the ailing system. Globally, many nations are tackling modernisation of their grids. As with countries of relative economic health, most are transitioning in one form or another from primarily high emission generators to low emissions and renewable energies. This shift has predominantly been actioned by energy targets and international conventions and not technology developments.

The implication and ratification of the Paris Agreement has signalled a global change and cultural shift from fossil fuel energy to renewable 'green' energy.

The Global top 10 most efficient electrical power infrastructures have one thing in common, they have taken advantage of the natural resources and environment. Iceland is a great example of using natural geo-thermal energy to produce energy with less than 4% loss of energy during transmission.

While there is a global trend to move towards more clean energy practices, this should not come at a cost to the small business consumer. Ultimately, for Queensland small and medium enterprises to remain competitive, governments should ensure ongoing downward pressure on electricity prices while also introducing new green technologies.

4.0 Summary

CCIQ welcomes the Federal Government's interest in modernising the electricity grid in view of the four underlying principles of the NEM. CCIQ acknowledges investment in infrastructure will increase costs in the short term however Queensland small businesses need relief from escalating prices before they should be saddled with more price hikes. The number one priority for Queensland small businesses is affordability supported by the sustainability, security and reliability of a modernised grid.