

I respectfully provide my submission to the Joint Standing Committee on Trade and Investment Growth Inquiry into Australia's transition to a green energy superpower.

While my submission refers to the Queensland Government's proposed Supergrid project, this project is the most significant and costly transformation in energy supply ever proposed in Australia and will have an enormous impact on the National Electricity Market and as such deserves serious Commonwealth Government scrutiny.

The Joint Standing Committee on Trade and Investment Growth shall inquire into how trade and investment can support Australia's transition to a green energy superpower. In conducting its inquiry, the Committee shall have particular regard to:

- where trade and investment activities are already having a positive impact;

Where other states have privatised State-owned generators and distribution networks, Queensland has retained public ownership of baseload electricity generation and distribution through Government owned Corporations. The results speak for themselves, despite being the largest State in terms of area in the National Electricity Market with associated transmission and distribution costs, Queensland has some of the cheapest and most reliable electricity in the NEM.

Investment in solar and wind power projects is privatisation by stealth. There are currently two State owned Utilities generating coal fired power in Queensland. Decommissioning the five power stations in these two Government Owned Corporations ahead of their designed closure date is not only a large waste of public funds, this action also takes control of critical infrastructure out of government hands. The vast majority of the 25 Gigawatts of renewable electricity generation in the proposed Queensland Government Supergrid will be privately owned.

The proposed Queensland Supergrid will not be capable of storing sufficient energy to supply Queensland for more than a few hours and will rely heavily on fossil fuel fired power from New South Wales via the Queensland-New South Wales Interconnector or open cycle gas turbines in Queensland to provide power when renewables are not available. Open cycle gas turbines are the least efficient of all heat engines for converting thermal energy into electricity and the gas for these turbines will have to be bought at market rate which is currently at a record high. The alternative to buying gas at market rate is for the Queensland Government to authorise the development of a new gas field to supply the Queensland Supergrid gas fired peaking plant.

Were State-owned coal fired power stations to close early, the Queensland Government proposes to on-sell any coal still under contract. The proposed Supergrid will result in a reduction but not an elimination of CO₂ emissions from Queensland electricity generation, while fossil fuel extraction in Queensland will stay at its current level or increase, i.e., net global CO₂ emissions from Queensland fossil fuel extraction will remain unchanged.

- emerging and possible future trends;

There are currently 55 nuclear power reactors under construction worldwide, mostly in Asia with 300 more proposed. (1. World Nuclear Association)

“Nuclear power plants produce no greenhouse gas emissions during operation, and over the course of its life-cycle, nuclear produces about the same amount of carbon dioxide-equivalent emissions per unit of electricity as wind, and one-third of the emissions per unit of electricity when compared with solar.” (2. World Nuclear Association)

Modern nuclear power stations cost approximately US\$5 Million per MWe (Megawatt electric), so a fifteen to twenty year rolling construction program to replace Queensland's existing State-owned coal fired power stations with nuclear would cost half as much as the A\$62 billion Queensland Supergrid and provide fifty years of reliable baseload power generation with a lower carbon footprint than renewables.

Nuclear power stations train and employ mechanical, electrical, and chemical engineers, industrial chemists, environmental scientists, operators, and skilled tradespeople adding value to the local community beyond cheap clean electricity.

- the role of key commonwealth agencies including Austrade, in identifying new trade and inward investment opportunities, and assisting Australian companies to access these opportunities, including through whole of government coordination of investment;

The Australian Nuclear Science and Technology Organisation is the commonwealth agency best suited to advise the Australian Government on nuclear energy.

- areas of growth, and how can these be accelerated and/or assisted, including through the use of Commonwealth Special Investment Vehicles; and how Australia can capitalise on existing and future trade agreements and economic frameworks with countries or regions around the world.

If the time has come for Australia to seek a serious reduction in Carbon dioxide emissions from energy production, then it is time for the Commonwealth Government to have an educated and rational examination of all possible low carbon emission energy sources, including whole of life carbon emissions and disposal costs.

References:

1. <https://world-nuclear.org/information-library/current-and-future-generation/plans-for-new-reactors-worldwide.aspx>
2. <https://world-nuclear.org/nuclear-essentials/how-can-nuclear-combat-climate-change.aspx>