Submission No 106

SUSTAINABILITY OF ENERGY SUPPLY AND RESOURCES IN NSW

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SUBMISSION to the Inquiry into sustainability of energy supply and resources in NSW

I commend the committee for looking into the energy supply and resources in NSW. It is imperative that you to move quickly to take up opportunities of renewable energy and not simply to create a discussion paper.

In regional areas of NSW, the impacts of drought, exacerbated by climate change, are obvious to all: destocked farms, bare paddocks, empty dams, dry wells, dying gardens, ever increasing water restrictions, the threat of hazardous bushfires and no water to fight them. To continue with 'business as usual' and not address issues that compound the severity of these conditions is reckless. Therefore, the move to renewables has to be supported with the transition from coal and CSG.

It is clear from the IPCC's 1.5-degree report that we all must work to prevent more greenhouse gases from entering the atmosphere and to remove some CO2 that is already present. Experts suggest that we have 10 or 12 years in which to make the transition before we reach the tipping point for catastrophic and unstoppable decline expected at 2 degrees. We must act decisively and quickly.

The capacity and economic opportunity.

I believe there is plenty of scope for the development of this industry in NSW.

An efficient cohesive energy and climate policy would give the private sector confidence and provide a pathway to clean energy future.

Around the world, the installation of solar PV is doubling every 2or 3 years. With every doubling, there is a price reduction of over 25%. Wind turbines, solar batteries and electric vehicles are showing similar trends. Therefore, with the ageing power plants in NSW, renewables compare very favourably with the cost of a new coal fired power station.

Solar and wind, therefore, are the most affordable and the best sites are in more remote locations. This point should give hope to many regional communities who would appreciate the stimulus of a wind or solar farm in their precinct.

Pumped hydro could act as a battery for wind and solar generation. According to Professor Andrew Baker, ANU, "Australia could transition to 100% renewable power within two decades". These facilities could supply the dispatchable power needed in the system. Engineers have identified thousands of suitable sites across the country.

The AEMO Integrated System Plan is whole of system road map for the efficient development of the National Electricity Market over the next 20 years. The implementation of this system would coordinate all of these technologies nationally.

The Status of and forecasts for energy and resource markets.

As the threats of worsening climate change becomes evident there are many signs that the economic outlook for coal and CSG is weakening:

- Our own Reserve Bank has stated that there will knock on effects on interest rates as climate change impacts us all.
- The Norwegian Sovereign Wealth Fund, the world's largest, has divested itself of coal assets,
- The $15b trade deal with the EU will be threatened if we fail to reach out pollution targets under the Paris Accord.
- Market forces.org details the campaigns against banks, super funds, insurance companies and the Tax department. Investors want two things. First, guarantees they are not funding the fossil fuel industry. Secondly, those companies are taking concrete steps to restructure their finances in the light of climate change risks.
- The Office of the Chief Economist has forecast a likely decline in three of our largest customers: Japan, Korea and China
- Our ageing power stations are coming to the end of their working life. This gives further impetus to a move away from the status quo.
- In recognition of the current situation, BHP has set a "long term goal is to achieve net zero emissions from our own operations."

Effects on Communities.

Environmentally, there are many reasons for transitioning from coal:

- Coal mining and burning in the Hunter are damaging people's health.
- It uses large volumes of water in the process, which could be directed to agriculture, especially valuable in times of drought.
- Coal mining on the Liverpool Plains destroys valuable fertile agricultural land.
- To develop CSG mining when the water of the GAB could be contaminated seems ludicrous in a time of drought, especially when it is the only source of water for some farmers.
- The burning of coal exports in overseas power stations creates three times NSW's annual emissions. Therefore, our coal does have a global impact.
- Doctors are warning that our health system is not prepared for the extreme heatwaves, which are already part of our weather patterns, and will particularly impact the very young and the elderly.

- Australia is particularly vulnerable to the effects of climate change. The more emissions we pump into the atmosphere, either directly or vicariously, the greater the impact we will suffer.

Opportunities to support economic development in rural and other communities likely to be affected by changing energy and resource markets, including the role of government policies.

Future Planning

The NSW government plan for the New England and North West NSW is a commitment to a 'healthy environment and pristine waterways' and 'attractive and thriving communities'. Keeping these aspirations in mind, and with particular reference to renewable energy, I feel following points should be considered to develop a broad and cohesive plan:

- Instill private sector confidence of a cohesive policy which mandates substantial targets of new renewable energy and storage infrastructure in NSW.
- Have AEMO plan the transition to a dependable integrated renewable energy system.
- Begin the transition to having all government operations powered by 100% clean energy within a decade: from schools and government buildings to new transport and infrastructure projects.
- Establish funds for regional communities to investigate and implement a variety of models for community energy, such as the current plans for a solar farm near Manilla. These funds should provide for diversification and direct involvement of community participation and leadership.
- Set and enforce standards for energy efficiency in new buildings, houses and rental properties.
- Establish a Manufacturing Energy Efficiency fund to support energy intensive businesses and agriculture to become more efficient. This would include training, advice and grant funding focusing on the transition from polluting gas and coal.
- Incentivise businesses to move to new sustainable technologies such as industrial heat pumps, electromagnetic heating and electric arc furnaces where possible.
- Conduct research on the industry and job opportunities of clean energy in NSW. This would include transition jobs as well as those in a decarbonized system.
- Enforce clean air standards to world best practice.
- Update pollution Licenses for power stations in line with the stricter standards.
- Have polluters pay for their air pollution by increasing license fees for harmful pollutants.
- Set targets for net-zero emissions by 2340 so that all government departments consider the impact of policies in reaching this goal.

- Provide for a just transition for coal industry workers. In Australia, we have seen that workers from the La Trobe Valley and Port Augusta needed assistance and training for re-employment. There are examples of how to do this successfully. One is the German Ruhr Valley experience, decided to manage the change over an eleven-year timeframe. They included all stakeholders in developing an orderly mechanism for transition. The resulting Coal Commission was an inclusive structure with workers, companies, experts and environmentalists designing a plan with funding and environmental protections. We have time to do the same.
- Afford the opportunity for all to benefit from the renewable developments with low cost loans provided to households who cannot afford it.
- Around half of us live in rental accommodation. Require landlords to offer energy efficient properties.
- Provide renters opportunities to connect to microgrids, solar gardens or community energy or similar alternatives.
- Research the opportunities for exporting power in the future.

The current weather conditions are a possible hint of the future. We can hope to avoid the worst-case scenario of societal collapse if we play our part. I believe that the cost of action on climate change will avoid the inordinate and disproportionate cost of inaction.