

**Submission
No 115**

SUSTAINABILITY OF ENERGY SUPPLY AND RESOURCES IN NSW

Organisation: City of Sydney

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Ms Dora Oravec
Committee Manager
Parliament of New South Wales
Legislative Committee on Environment and Planning
By e-mail: environmentplanning@parliament.nsw.gov.au

Dear Ms Oravec,

Sustainability of Energy Supply and Resources in NSW

The City of Sydney congratulates the NSW Legislative Assembly Committee on Environment and Planning for this timely inquiry into the sustainability of energy supply and resources in NSW and welcomes this opportunity to make a submission.

The City of Sydney has a target for net zero emissions across its local government area by 2050 which is in line with the NSW Government's own target for net zero emissions across the state by 2050.

The City also has a target for 50 per cent of all electricity used in the local government area to come from renewable sources. In order to meet our own targets, the City will be purchasing 100 per cent renewable energy for its operations in early 2020. The City's investment is aiming to support community based projects in regional areas.

In June 2019, we declared a climate emergencyⁱ which was passed unanimously. We joined a growing movement of more than 987 jurisdictions in 18 countries and more than 45 jurisdictionsⁱⁱ in Australia (representing roughly 5 million people) to have done so. These declarations are based on the economic cost of inaction and the increasing number of extreme heat days and weather related events including droughts and bushfires which are adversely impacting our communities.

Under the Paris Agreement, countries including Australia have committed to keeping global average warming to below 2-degrees which requires net zero emissions by 2050. Already 1-degree of warming has occurred and it will take a concerted effort by all nations and all levels of government to curb pollution and meet this commitment.

There are clear opportunities for the New South Wales and Australian Governments to show leadership and support communities in the inevitable transition to a clean economy. Fossil fuel industries have made significant contributions to current levels of prosperity, however communities will be adversely impacted by the transition to clean energy if not adequately planned for.

Of paramount importance, the NSW Government needs to work with the Australian Government to establish a Just Transition Authority, with enough funding to ensure that Australians employed in the fossil fuel industries have viable and appropriate opportunities for alternate employment.

The City makes the following recommendations to the Inquiry's terms of reference.

1. The capacity and economic opportunities of renewable energy.

- Renewable energy targets are a demonstrated way to provide clear investment signals. New South Wales is the only east coast state without a renewable energy target – instead it supports the Australian target. However on 4 September 2019 the Clean Energy Regulatorⁱⁱⁱ confirmed that the Australian target has already been met. The New South Wales Government now needs to develop new market signals to ensure that renewable energy investment continues in the state.
- New solar and wind projects are the least cost form of new energy generation. However new projects are being limited by constraints in the electricity transmission network. New transmission infrastructure is urgently required to connect renewable energy zones across the state, unlock investment, improve reliability, and reduce costs to consumers.
- The City acknowledges work to date by the NSW Government to support renewable energy including the Sydney Metro power purchase agreement; Government Resource Efficiency Policy obligations; renewable energy guides and resource maps; the Pumped Hydro Roadmap and NSW Transmission Infrastructure Strategy; the GreenPower scheme; and the forthcoming Empowering Homes Program. However, more needs to be done to accelerate and support communities in the transition to renewable energy.

Recommendations

- The New South Wales Government adopt a renewable energy target of **at least** 50 per cent by 2030 - or enact a similar clear market signal for investment - that will contribute toward its target for net zero emissions.
- The New South Wales and Australian Government underwrite investment to fast track new transmission infrastructure to renewable energy zones as outlined in the Step Change scenario developed by the Australian Energy Market Operator Integrated System Plan^{iv} and the NSW Transmission Infrastructure Strategy^v.

2. Emerging trends in energy supply and exports, including investment and other financial arrangements.

- Australia has one of the highest levels of uptake in household solar PV and the capacity of new solar and wind farms for domestic energy supply continues to increase^{vi} despite a decade or more of energy and emissions policy uncertainty.
- Thermal coal and gas plant are aging and increasingly unreliable, especially during peak summer events. A strategic approach is needed to ensure efficient investment in new generation and network infrastructure, to increase reliability, and ensure lower prices for energy users.
- Thorough assessment by AGL^{vii} shows that replacing the Liddell Power Station using reliable renewable energy, storage and gas technology will last for 15-30 years at a significantly lower cost than continuing to use coal (\$83/MWh compared with \$106/MWh).
- A major export opportunity for New South Wales is the potential to generate and export hydrogen^{viii} made from water using renewable energy to emerging market opportunities in China, Japan, Korea, India and other countries.
- Whilst addressing the important issue of sustainable energy supply and resources, this Inquiry should also consider the important role of energy efficiency for cost effective ways to reduce the need for new supply, improve reliability and bring down energy costs to consumers.

Recommendations

- Quantify the economic and social benefits of transitioning to a clean economy and develop a diversification plan so that New South Wales can continue to prosper. It is in the best interests of NSW communities to be ready for this transition and strengthen economic competitiveness while reducing climate change impacts.
- Develop policy recommendations that take advantage of the abundant renewable energy resources in the state and the innovation and skills of businesses and individuals.
- Support the National Hydrogen Strategy^{ix} to decarbonise domestic gas and create a low carbon export opportunity for Australia.
- Support local governments to implement policies and programs to improve energy efficiency and increase uptake of renewable energy as demonstrated by the Better Buildings Partnership^x and CitySwitch Green Office^{xi} for example.
- Support changes to energy rules - for example the Demand Response Mechanism^{xii} - to incentivise energy efficiency, demand management and trading of “negawatts” in addition to supply side mechanisms.

3. The status of and forecasts for energy and resource markets.

- Coal mining and electricity generation continues to make a significant contribution to the prosperity of New South Wales. However, global financial market signals are trending toward cleaner investments and the liability of climate risk is increasing.
- Reliable sources such as the International Energy Agency^{xiii} and Office of Chief Economist^{xiv} predict a decline in coal as a share of total world energy.
- Multiple market and insurance signals indicate that investments in Australian coal and other emissions intensive areas are increasingly at risk. Suggested reading:
 - Australian Prudential Regulation Authority^{xv}
 - ASIC^{xvi}
 - Reserve Bank of Australia^{xvii}
 - Independent Planning Commission^{xviii}
 - Gloucester Resources Limited v Minister for Planning^{xix}
 - BHP^{xx}
 - Rio Tinto^{xxi}
 - Commbank^{xxii}
 - Insurance Business Australia^{xxiii}
 - Suncorp^{xxiv}
 - QBE^{xxv}

Recommendations

- Ensure government policies and support takes into account global trends in commodity supply and demand in accordance with Australia’s and key export partner countries commitments under the Paris Agreement, the increasing risk associated with coal investments, and the emerging opportunities in clean energy technology and exports.
- Develop a plan for the NSW Government to diversify revenue streams as royalties from coal mining diminish over time.

4. Effects on regional communities, water security, the environment and public health.

- Air quality affects the health of workers and residents in and adjacent to coal mining communities due to dust from mining operations, overburden and coal stockpiles.
- There are also significant waste streams and water issues from coal mining and coal utilisation in power stations including overburden from open cut mines, washery rejects, waste water from mines, general waste (e.g. oil, used tyres), coal ash, waste water from ash handling and cooling systems, and fine particulate matter emitted during combustion.
- Longwall coal mining within the Sydney Water catchment is a particular concern for water security and catchment health. It is understood this is the only place in the world where coal mining is allowed within a city's water catchment.
- Coal ash is a significant contaminated waste issue for New South Wales. A report by Hyder for the City of Sydney in 2012 estimated that Bayswater and Liddell power stations produce 73 to 127 kg of coal ash waste per megawatt hour of electricity generated. A person living in NSW is likely to produce as much coal ash waste from the electricity they consume as the amount of solid waste they generate over a year.

Recommendations

- Implement consistent air quality monitoring in all coal mining communities and adjacent areas with effective mitigation measures where there are human health exceedances in particulates, sulphur dioxide and other air borne pollutants per thresholds proposed to the National Air Quality Measure - Ambient Air Quality^{xxvi}.
- Ensure sufficient guarantees are in place for coal mining operations to sufficiently rehabilitate mines once production ceases to prevent illegal phoenix activity, artificial 'downgrade' operations, or other mechanisms that avoid obligations which may lead to future costs borne by NSW tax payers in rehabilitation.
- Implement a ban for new or expanded coal mining operations within the Sydney Water catchment area.
- See recommendation to reuse coal ash in the following section.

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

- A transition is clearly underway with aging thermal generation assets, increasing uptake of household and commercial solar energy, and multiple new large-scale renewable energy and storage projects at various stages of development.
- Communities in fossil fuel mining and energy production have made a remarkable contribution to the prosperity of Australia and must be engaged and supported through a planned diversification of local economies.

Recommendations

- The New South Wales government needs to work with the Australian Government to establish a Just Transition Authority, with enough funding to ensure that Australians employed in fossil fuel industries have viable and appropriate opportunities for alternate employment - these communities will be adversely impacted by the transition if not adequately planned for.
- The Hunter Renewal Roadmap^{xxvii} identifies that there is majority support for a justly planned transition and diversification of communities that will be affected.

- Underwrite or otherwise support investment into new transmission and pumped storage projects in affected areas in accordance with the NSW Pumped Hydro Roadmap and NSW Transmission Infrastructure Strategy.
- Quantify the economic development and jobs opportunities during the construction and operation of clean energy generation, storage and transmission. This should support the case for government underwriting of new infrastructure investment where demonstrated to result in net benefit.
- Commit a significant part of the \$2b received in the recent sale of Snowy Hydro to the Federal Government to support a just transition to affected communities.

6. Any other related matters.

- In Australia there are now more than 45 jurisdictions which have declared a climate emergency, including the government of the Australian Capital Territory and many local governments in New South Wales. This reflects a high level of concern by those communities and a lack of confidence that the New South Wales and Australian Governments are doing enough to ensure a smooth transition.
- The NSW Government needs to identify sustainable revenue streams, levies, or other opportunities such as taxes on exports to fund just transitions for affected communities - acknowledging that the global transition to clean and lower cost energy supply and demand is inevitable and the NSW Government has a target for net zero emissions.
- Energy efficiency should remain a key priority with ongoing support for successful schemes such as the NSW Energy Savings Scheme and NABERS Energy.
- The NSW Government needs to proactively contribute to a redesigned national energy market through the Energy Security Board Post 2025 Market Design^{xxviii} to ensure that energy markets support modern technologies and systems including clean energy, storage, demand management and new ways for trading.

Should you wish to speak with a Council officer about this submission, please contact Chris Derksema, Sustainability Director by telephone on [REDACTED] or by email at [REDACTED].

Yours sincerely

[REDACTED]

Kim Woodbury
A/Chief Executive Officer

Sources

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