



20 October 2015

Water & Climate Change Branch
Department of Environment, Water & Natural Resources
GPO Box 1047
Adelaide, South Australia, 5001

Via e-mail: DEWNRClimateChange@sa.gov.au

To whom is concerned

Re: South Australia's Climate Change Strategy

The South Australian Chamber of Mines and Energy (SACOME) is pleased to have this opportunity to make a submission to the Department of Environment, Water and Natural Resources (DEWNR) on *South Australia's Climate Change Strategy and the Low Carbon Investment Plan* (the Strategy).

SACOME is the peak industry association for all companies with business interests in the resources industry in South Australia, including those with business, vocational or professional interests in minerals exploration, mining and processing, oil & gas exploration, extraction and procession, power generation, transmission and distribution, logistics, transport, and infrastructure, and those with clients in these sectors. SACOME represents over 270 organisations, comprising of over 70 industry members and numerous service providers.

The focus of SACOME's submission is on the Low Carbon Investment Plan for South Australia and the Reduce consultation paper.

South Australia has great potential to deliver a highly integrated mix of electricity generation options which will be integral towards securing the states and Australia's electricity supply, reducing the carbon dioxide profile of the national electricity network, and contributing to national greenhouse gas emissions reduction targets. As the peak body representing the upstream energy sector in South Australia, SACOME is keen to ensure the regulatory environment is conducive to enabling the full endowment of the state's energy options, and not arbitrarily precluding particular energy sources or technologies.

Power generation sources

It is undoubtedly impressive that over the past decade South Australia has significantly increased its potential for electricity production from renewable sources (from 1 per cent to 39 per cent), with a capacity to produce 1473 MW of electricity derived from wind turbines, and 565 MW of electricity from solar PV. For the purpose of the draft Low Carbon Investment Plan, electricity generation source data is broken down in the Strategy to show sources from brown coal, gas, wind and solar within South Australia during March and July. However, SACOME is concerned over the failure of the Strategy to include comment or data of imported electricity from Victoria, which can often reach approximately 2000GWh in peak demand times.

During summer the low overall demand profile of South Australia and the extended periods of extreme heat combine to cause the "peaky" demand characteristics that is a feature of States electricity system, and where the contribution of wind to peak electricity demand is below 10 per cent.¹

¹ Australian Energy Market Operator, 2015, 'South Australian Electricity Report', p. 33.

Clean Energy Targets

Low carbon strategy

The Chamber suggests the development of a Strategy that supports carbon emission reductions and low carbon investment as opposed to promoting electricity production from renewables. It is important that analysis is undertaken on current resources to see how they can be used in a more efficient and cleaner manner. The people who are employed in the non-renewables sector and support this industry must also be taken into consideration; the recent slump in the resources industry has already seen numerous individuals out of jobs, so it is important for the employment industry and South Australia's unemployment rate to be taken into consideration prior to any radical overhauls.

SACOME is a keen advocator for all low carbon technologies as per the recommendations in the Intergovernmental Panel on Climate Change (IPCC) 5th synthesis report to attain a 2 degree target:

*“In the majority of low-concentration stabilization scenarios (about 450 to about 500 ppm CO₂-eq, at least about as likely as not to limit warming to 2°C above pre-industrial levels), the share of low-carbon electricity supply (**comprising renewable energy (RE), nuclear and carbon dioxide capture and storage (CCS) including bioenergy with carbon dioxide capture and storage (BECCS)**) increases from the current share of approximately 30% to more than 80% by 2050”³*

It is recommended that a long term low carbon or Clean Energy Target is implemented in South Australia, which gives the state the opportunity to source electricity from other clean energy sources, not just wind and solar as renewables – this is advised given we will be in a situation where we are relying more emissions intensive sourced electricity from interstate due to changing supply circumstances.

Other sources

In the medium to long term natural gas is a relative low emissions energy source that can provide a viable offset for coal produced electricity in an emissions constrained market. Experiences from the United States showed that a transition from coal to gas has resulted in significant reductions in emissions since 2010⁴. Gas also provides a viable intermediate load source to balance the variability of wind and other renewables, as is the case in South Australia presently.

A long term Low Carbon Energy Target would open the door for South Australia to source electricity from hydroelectric plants and from nuclear. SACOME suggests that DEWNR gives due consideration to the findings from the Nuclear Fuel Cycle Royal Commission, as nuclear is a low carbon energy source. As such, we would be able to set and reach a target of up to 90 per cent of all electricity coming from clean energy sources by 2050.

Mining industry involvement

If DEWNR takes on board the Chamber's suggestion for a Clean Energy Target in South Australia, we would encourage engagement with the resources industry – some of the biggest users of electricity in the state – to help structure such a policy. It is important that such a policy does not financially encumber resources companies. Strategies and policies must be inclusive, not punitive, and must not financially punish organisations over emissions but rather include them in the development of strategies to assist in emissions reductions.

³ Intergovernmental Panel on Climate Change, 2014, 'Climate Change 2014 Synthesis Report: Summary for Policymakers', p. 28.

⁴ United States Environmental Protection Agency, 2015, 'Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2013'.

SACOME member companies have policies in place to actively reduce their emissions intensities across their operations. These include investment in cleaner technologies in processing, optimising operations to minimise fuel use, advocate for market based approaches to emissions reductions and develop cleaner fuel sources such as gas and uranium for local and global markets. For example, the abolishment of the three mines policy (uranium) has allowed the expansion South Australian uranium mines to occur that mitigate approximately 30 million tonnes per annum of CO₂ that would have otherwise been used in coal fired generation.

Opportunities exist for the mining sector to be a significant participator in reaching a Low Carbon Energy Target. SACOME encourages the development of a mutually exclusive relationship between the renewables industry and the mining industry, whereby the rare earths that are sourced in South Australia are used in the manufacture of renewable technologies such as wind turbines or solar panels.

Collaborating with the mining industry to research and implement low carbon methods of production along with assessing where the supply of materials and minerals are available to support a low carbon economy will yield outcomes than implementing behavioural controls through punitive measures.

Flexibility

It is important that the Strategy is flexible with national policy, and must compliment and deliver on strategic, comprehensive climate change policy where all options are considered. South Australia must develop a vision for a transitioned energy sector based on lower carbon technologies without compromising on energy security and reliability. The Strategy should also document the framework to work with Commonwealth, State and Territory governments through the COAG Energy Council and the Standing Council on Energy and Resource to deliver the necessary energy market reforms to deliver a transitioned economy.

Technology neutral

The strategy should continue to cultivate government and industry partnerships in the development of new technologies and necessary infrastructure, which will deliver technologies for energy efficiency improvement, emissions reduction and electricity system management (smart technologies, intermittent generation, embedded generation, two-way flow of electricity, electric vehicles). This is the position of the International Panel on Climate Change as outlined in their 5th Synthesis report for policymakers to achieve a 2-degree target globally.

Economic modelling

It is vital that proper economic modelling is undertaken to ensure that proposed targets are viable. DEWNR cannot set arbitrary targets within the Strategy and not provide an analysis of the full implications of the policy. It is important to ensure there is a comprehensive understanding of how such policy will impact on the entire electricity system and market. DEWNR must talk to relevant government departments, electricity utilities, grid operators and market operators to include them in the development of the final Strategy. It is important that these targets are general but also look at emissions intensity rather than electricity produced, as the ultimate goal in the Strategy is to reduce emissions and carbon pollution rather than promote a specific technology or sub-set through a generation target.

The State Government's strategic plan under strategy 66 outlines this specific target of 0.5 tonnes of CO₂/MWh by 2020⁵. In forming the Climate Change Strategy an emissions intensity target should be the main focus. In contrast to an electricity generation target that can

⁵ Government of South Australia, 2014, *South Australia's Strategic Plan: Target 66, Emissions Intensity*, from <saplan.org.au/targets/66-emissions-intensity>

discriminate one technology over another that runs contrary to the IPCCs “all of the above” approach to decarbonising the electricity sector.

Carbon Offsets

Under the *Native Vegetation Act 1991* (SA) and as a part of the program for environment protection and rehabilitation (PEPR) requirements under the *Mining Act 1971*, mining companies are required to provide a Significant Environmental Benefit (SEB) for lands that are disturbed due to the mining operations. SEB policy is administered by the Department of Environment, Water and Natural Resources in conjunction with the Native Vegetation Council. There is an opportunity to utilise SEB credits, enabled by the *Native Vegetation Act 1991* (SA) in collaboration with mining companies to deliver carbon offset projects with native vegetation.

Should you require clarification on any of the matters addressed in this submission, please feel free to contact me on (08) 8202 9999 or via e-mail at nlong@sacome.org.au.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Nigel Long', written over a light grey rectangular background.

Dr. Nigel Long
Director, Policy & Community