



ENGINEERS
AUSTRALIA

Energy Security Taskforce Secretariat

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Via email: energysecuritytaskforce@stategrowth.tas.gov.au

9 September 2016

To whom it may concern,

RE: Consultation paper August 2016

Thank you for the opportunity to make a submission in response to the Energy Security Taskforce's consultation paper of August 2016.

About Engineers Australia

The Institution of Engineers Australia (Engineers Australia) is the peak body of the engineering profession. We are a member-based professional association with over 100,000 individual members. Established in 1919, Engineers Australia is a not-for-profit organisation, constituted by Royal Charter to advance the science and practice of engineering for the benefit of the community.

You can read more about Engineers Australia, our policy positions and associated resources at newsroom.engineersaustralia.org.au.

Energy policy overview

Energy policy should be comprehensive and cover all sources of energy use in Australia. Too often, discussion of energy consumption focuses on electricity use to the exclusion of other sectors, including transport fuels.

The 2015 United Nations Climate Change Conference in Paris (Paris COP21) reaffirmed the objective to restrict global warming to less than 2 degrees above the pre-industrial global average temperature. Future Australian energy policy will be constrained by the Paris COP21 agreement through Australia's commitment to an emission target of 26 to 28 per cent reductions on 2005 levels by 2030, which is just around the corner.

This target will be exceedingly difficult to achieve unless all aspects of energy use play their parts. If Australia is to meet this target, and remain globally competitive, it will need to transition to a new energy paradigm. Australian engineers will be crucial to the shift because they have the essential skills to prosper in a future economy with reduced emissions.

Engineers Australia's *State of the Engineering Profession* report (http://www.engineersaustralia.org.au/sites/default/files/uploaded/the_state_of_the_engineering_profession_engineers_australia_2016.pdf) provides further detail on the factors that Engineers Australia believes all Governments should tackle as a priority: energy productivity and efficiency, transport energy, and electricity generation.

Response to Taskforce consultation paper

Overall, the consultation paper indicates that the work of the Tasmanian Energy Security Taskforce (Taskforce) could be improved if a more systematic approach to energy security is taken. In particular, a weakness in the process is the ring-fencing of certain energy inputs like liquid fuels, and leaving out vital factors such as energy efficiency measures to reduce demand. Further detail specific to various sections is provided below.

Energy security

The Taskforce needs to define what energy security means to Tasmania. At the moment, it becomes a popular topic only when there is a crisis, as recently seen with the interconnector failure. A wider definition and setting for energy security as a 'complete' objective would give better structure to the other elements of the Taskforce's work.

In its Energy Security for Australia Report, Engineers Australia has urged governments, policy makers and energy consumers to rethink the way we view and discuss Australia's energy security and to consider medium and long term timeframes in their strategies.

The report states that Australia needs a much broader definition for energy security than that which is currently adopted. It also makes a series of recommendations aimed at implementing a comprehensive approach to energy security policy. This report can be found at https://www.engineersaustralia.org.au/.../engineers_australia_energy_security_for_australia_policy_dec_14.pdf.

By focusing on stationary generation, the Taskforce ignores the effect that changing demand could have in the transport sector in the medium term with electric cars and more generation and storage options. It should furthermore be acknowledged that the immediate action plan for the recent interconnector failure was to rely on diesel fuel. Similarly, there has been recent public comment in the media regarding the security of Tasmania's gas supply because of the future of the Tamar Valley Power Station, and the consequence of that to other gas consumers.

The exclusion of energy efficiency is disappointing because it reflects that the Government is not appropriately identifying the link between demand and security—let alone the role efficiency can play in reducing emissions. Sound energy efficiency (better buildings, materials and networks, etc) will make Tasmania more resilient and less affected by insecurity in energy supply.

Finally, energy security is not just a question of pricing versus reliability. By framing it as such in the consultation paper, there is a risk that the public will simply demand low cost energy at highest reliability when a more nuanced leadership is required.

Water and climate change

Climate change is a core factor in energy security planning, and although Tasmania faces particular challenges because it is a relatively small island state, climate change is an all-encompassing global phenomenon.

Especially in Tasmania, energy and water security are intertwined and the separation of the two issues in the consultation paper indicates that there may be a disconnect at a policy level. The paper notes that there was a record dry spring in 2015, but climate change means that perhaps it is instead the start of a new trend. Taking a broader approach to energy security will link water, energy and climate change and enable development of a more coherent energy security framework.

The NEM, gas and renewable energy

Building redundancy into the system with a second interconnector is an easy and relatively quick way to improve energy security. However, building redundancy is an expensive option and a better approach is to build diversity and resilience to mitigate risk.

Renewable energy is central to building diversity, and it is a constantly evolving factor. This means that the Tasmanian government's energy security strategy, and the critical place of renewables in it, will need to be adaptable to change and not focus just on the technology and economics that are seen today.

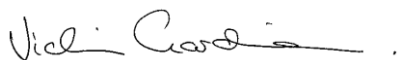
The consultation paper seeks comments on economic opportunities and risks associated with a second Bass Strait interconnector. The greatest risk would be delaying the creation of a diverse energy future, and losing the potential for new industry investment associated with a broadening of the energy generation, storage and efficiency options.

The gas market is an important consideration for potential energy diversification. The merits of using gas need to be assessed in the context of security, vulnerability and risk mitigation strategies, and in comparison with other energy generation options. As in other states, exploiting potential gas reserves in Tasmania may provide opportunities for regional employment and go some way towards lowering carbon emissions.

As much of Tasmania's broader economic reputation is based on a clean and green environment, the value options of other renewable energy technologies should not be discounted. Already a large percentage of Tasmania's energy comes from wind technologies. Integrating all technologies that are available as part of a diverse Tasmanian energy supply, should be considered. There are opportunities for the incorporation of new technologies, such as wave and geothermal, into the future. In some cases, it may be necessary to assist the commercialisation of new zero or low emission technologies to overcome barriers experienced by first movers and the costs of moving from prototypes to commercial models. All such assistance should be temporary, fully transparent to the community and governed by sunset arrangements.

Thank you for your consideration of this submission. A hard copy of this submission, and the referenced reports, will be forwarded to you via post. To discuss the issues raised in this paper further, please contact me on 03 6218 1901 or tasmania@engineersaustralia.org.au.

Yours sincerely,



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