



Secretariat
Energy Security Taskforce
Department of State Growth

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[Climate Tasmania](#) is a group of experienced specialists who seek to provide timely, independent and authoritative advice to Tasmanian business, government and community leaders on climate change and appropriate policy responses.

Since climate change and scenario planning have both been prominently identified in the Consultation Paper as key focal areas in determining the state's pathway to energy security we wish to briefly submit to this consultation process.

What follows is our brief response to the paper's Question: 18: *"Are there other climate change related implications for energy security in Tasmania?"*

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Members of *Climate Tasmania* believe that the immediate issue of energy security must not be divorced from longer term climate change risk. Indeed, Tasmania's optimum responses on both levels are inherently complementary and should be pursued as such.

1. Capability of existing electricity infrastructure to provide security

Tasmania has a particular difficulty in providing electrical energy security. This stems from the fact that the state's power demand is dominated by a relatively large industrial load, whereby most of the state's power consumption (over 60 per cent) must be delivered around the clock, 365 days per year. For these reasons Tasmania has been wrestling with

the energy security problem for some forty years and during that time has invested heavily in that endeavour.

This inquiry is an immediate response to the energy crisis that struck Tasmania in the past year. Whilst it is appropriate for lessons to be learned from that experience, the set of circumstances that brought about the crisis was unique. It is highly unlikely to be repeated. One lesson that has almost certainly already been learned is that the existing Basslink, though it has been valuable in helping to drought proof the power supply system, is more vulnerable to breakdown than had been appreciated. That vulnerability is likely to be ever present and, in the medium term, it needs to be responded to by Hydro Tasmania adopting conservative dam storage strategies that match this belatedly recognized elevated risk.

Climate Tasmania recognizes the State Government's and Hydro Tasmania's legal responsibility to fulfil and guarantee its power supply agreements with Major Load customers and that confidence has been jolted. However, we believe the recent energy crisis does not warrant decision making whereby major infrastructure policies are urgently thrown up and implemented as a knee jerk response to the recent situation.

We recognize that the broad issue of energy security is very important for Tasmania but that this should be prudently addressed through longer-term scenario planning taking into account rapidly moving issues in relation to external climate change and fuel supply security issues over which the state has little control.

2. Vulnerability of hydro-electric power systems

The energy output of every hydro-electric power system throughout the world fluctuates according to local weather variability in any year. To that extent these systems all require a level of non-hydro back up (or a sizeable component of non-hydro generation capacity) in order to cope with periods of lower than average water inflows. In recent decades climate volatility has rendered many [hydro-electric dependent systems around the world less reliable than they were originally planned for](#).

Tasmania's system is typical in this respect. Nominal average energy yield of the Tasmanian system was [reduced by over ten percent of output in 2008](#) - accepting that the system was under delivering and that this situation is likely to become the new normal and perhaps even exacerbated over time (as advised by [Climate Futures for Tasmania forecast](#) on likely changes to river flows in the coming century).

3. Tasmania's energy security context

Climate Tasmania appreciates that this consultation paper, and the Task Force's role, has

been largely limited to standing energy considerations. However, we assert that it is administratively absurd to deal with electrical energy security in the absence of total energy security context.

- In terms of primary energy consumption, Tasmania uses [approximately equal amounts of electrical and transport energy](#).
- The state is mostly (*about 90%*) self sufficient in electrical energy.
- Meanwhile, it has zero (*0%*) self sufficiency in transport energy. Every last drop is imported.
- More saliently from the perspective of carbon pollution, the 90% of energy that is generated by the hydro-electric system is 100% renewable. By contrast, fossil fuels comprise 100% of the state's transport energy consumption.
- For these reasons, we submit that it is folly for the state to strategise over half of the state's energy consumption whilst turning a blind eye to the half, where we are arguably much more vulnerable and where climate policy is so obviously central.
- There are also sound economic reasons to bring transport fuels into policy reckoning. To date there has not been an occasion to be concerned about disruption of liquid fuel imports. Yet, serious liquid fuel supply disruption would bring the state economy to a standstill. One lesson that should be learned from the Basslink breakdown saga is for the state to be prepared for unpredicted circumstances.
- *Climate Tasmania* believes that all potential energy scenarios should be fed into a comprehensive matrix. However unlikely it may be that major industry may become uneconomic and close down, such an unfortunate scenario should be incorporated into energy scenario planning for the state because that event would alter the existing energy security situation more than any other single factor. That possible scenario would be critically relevant to prospects for both the mooted second Basslink and in relation to policies that would accelerate electrification of the state's public and private vehicular fleets.

4. Options to enhance energy security via the adoption of new energy infrastructure

Climate Tasmania is concerned that in the aftermath of the power crisis future policy discussion has been unfortunately sharply polarized in the media into a strident two-way debate: 1) A 'second Basslink' proposal versus 2) major investments in gas generation infrastructure.

From a climate perspective both of these mooted ventures are built around fossil fuel burning - in the one case coal, in the other gas.

We accept that in theory, the second Bass Strait interconnector can be envisaged (and

positioned) as a means to export renewable energy from Tasmania. However, in the absence of a robust energy state government policy regime that is purposefully designed to render Tasmania over 100 percent reliant in renewable energy generation, the mooted 2nd Basslink project should be regarded as a net carbon polluter.

5. A third model – better for climate and better for Tasmania’s economy?

Climate Tasmania is keen for the state government to seriously look beyond short termism and bite the bullet on energy security whilst simultaneously building on our renewable generation assets.

We propose the third strategic approach for five reasons:

1. Presently approximately 10 percent of Hydro Tasmania’s electricity generation is delivered by renewable other than hydro-electricity (solar and wind). Building up the level of non-hydro generation to 30 percent of average generation output would add enough resilience to the system to obviate any more security than is already provided by Basslink and the Tamar Valley combined cycle facility.
2. The mooted Basslink 2 and increased investment in gas generator projects are primarily being put forward as energy insurance strategies – that is, they would add energy security without necessarily adding to generation output. By contrast, a staged approach to building up non-hydro renewables would serve both needs simultaneously.
3. There is a clear climate and branding advantage in Tasmania pursuing a ‘clean green’ energy portfolio rather than one based on fossil fuels.
4. In the event that Tasmania can ever place itself as a major provider of export energy, this approach would need to be an essential first step.
5. We believe that it is only a matter of time before Australia falls in line with the global community and adopts climate policies that strongly favour renewable energy sales, based on attractive pricing and stronger targets. Tasmania stands to benefit from such policy changes.

In order to realize the business viability and economic benefit to Tasmania of this third approach, it would be necessary to juxtapose cost-benefit analyses across all possible policy options - recognizing that up to a billion dollars of investment attaches to the second Basslink venture, by way of example.

In so saying *Climate Tasmania* is aware that some decision making relating to the gas back-

up generator is unavoidable, owing to the looming 2017 date for contractual renewal in the gas sector. We submit that any such short term decision making pursuant to this should, as far as possible, not short circuit the state's ability to pursue a rational, holistic energy policy future.

Maximising efficient use of energy within Tasmania is central to this theme, and should be regarded as the [cheapest means to, in effect, provide energy to new users](#) without incurring a further increase in the level of imported energy.

6. Barriers to rational energy policy setting

Tasmanian energy policy is in a bind, and this has allowed other administrations (particularly the [ACT](#) and [South Australia](#)) to forge ahead and brand themselves as leading the nation in the renewable energy revolution.

Tasmania's main problem in pursuing rational, forward looking energy policy is that policy development is being hampered by regressive culture within our utilities and administration. Some of this deficiency may relate to dysfunctional corporate structures. In any event, *Climate Tasmania* proposes that at the government level a policy built on a foundation of enhanced renewable energy capacity should be enthusiastically taken up and driven via workable policy instruments that are already available.

ACT's recent and successful [Reverse Auction initiative](#) is an example that could be readily replicated here, given political will. In the absence of such innovation, Tasmania, for all of its purported 'clean green' branding, risks having its future energy outlook being stymied by an administrative model that blocks potential energy supply developments that are sitting in the wings – such as that at Granville Harbour.

In summary:

Climate Tasmania submits that Tasmania is naturally well placed to lead the nation in the area of sustainable energy generation, to the extent that the state could play a major role in assisting the nation to reduce overall carbon emissions. In recent times Tasmania has played a somewhat regressive role in this regard by pursuing energy policy directions that have increased our dependency on imported coal-fired electricity.

At this juncture in history, just as international efforts are putting in place agreements from the COP21 Paris agreement, state energy policy should complement, not contradict, national and state objectives to reduce carbon emissions.

Independent research on the long-term implications of the Paris Agreement for the

energy market strongly indicates two connected developments over coming decades – a large expansion in the deployment of renewable energy and a large contraction in use of fossil fuel resources. The drivers of this will be diplomatic and legal (from the point when the Agreement comes into force, which may be as soon as this year) and in a somewhat longer term the energy market itself, as demand switches from fossil fuels to renewables for both stationary energy and ground transport.

We submit that Tasmania has an important role to play in helping Australia deliver on its COP 21 commitments. The state has tremendous flexibility to provide security of energy supply whilst adding to economic advantage.

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