

**Submission to Senate Enquiry known as
Select Committee into the Resilience of Electricity Infrastructure in a Warming World**

Dear Senators,

The committee is charged

- to inquire into the role of storage technologies and localised, distributed generation to provide Australia's electricity networks with the resilience to withstand the increasing severity and frequency of extreme weather events driven by global warming;
- to recommend measures that should be taken by federal, state and local governments to hasten the rollout of such technologies; and
- to address any other relevant matters.

At all time the decisions taken by governments and private agencies in relation to these matters should and MUST be taken by

(a) relying upon the scientific evidence and

(b) not being swayed by existing commercial interests (whether private or governmental).

This means following the national and international lead of the collaborating scientists of the IPCC. These scientists are informed by continuing research, current observations, and constantly reviewed computer modelling. This data and the model work enables the climate, ocean acidification, and sea-level rise effects to be predicted. This research and model work allows multiple contributing factors, and changing energy sources, over many elapsing years to be forecast. This also means rejecting the deliberately distracting voices of the uninformed, un-professional, and profit-influenced who would either deny climate changes, deny global warming, and / or deny the human impact of burning VAST amounts of carbon-energy that has been sequestered in coal, oil, and gas for millions of years.

It is agreed that sure and reliable supply of energy, particularly electrical energy, is vital for the future stability of our nation and local communities. Having that energy derived NOT from fossil fuels is imperative for the survival of existing species upon this earth, which is our one and only accessible liveable planet, our only land masses and only oceans and fresh water bodies.

Given the proven existing acceleration of global warming, ocean acidity, and sea-level rise, it is imperative to act NOW to stop that acceleration, AND to stop the growth in carbon and other greenhouse-gas emissions, AND to actually reduce radically the amount of fossil fuel being used nationally and internationally, AND to reduce the amount of carbon in our atmosphere as a result of previous burning of fossil fuels.

The real responsible honest science must be heeded, and NOT the politics, vested interests, political donors, old-economics, or industry-captive pseudo-science spokesmen. Those old vested interests are the voices and demands that plunged the planet into this disastrous mess. The whole matter of adaptation to the climate change threat is amenable to rational and logical analysis. The deniers are NOT the modern prophets like Galileo Galilei in 1615. The deniers are like the Roman Inquisition who insist that leaving fossil fuels in the ground is contrary to the "Holy Scripture" of established industry, the power of oil and coal barons, the theories codified by backward looking "economists" who do not factor into their narrow equations the survival of the environment on which we (all species) rely for survival. The deniers do not know (or lie about) climate science. The deniers have not researched or heeded economic history. (The deniers do not even honour the truths of their claimed religions.)

Becoming powered by truly renewable or sustainable energy (and free of fossil fuels) is a new truth and offers the opportunity for a new vibrant economy. Denial of this truth, and failure to adapt, would impose a doom our children and their children to an appalling destroyed version of this planet. The consequences of failing to heed this truth would surely be disastrous failure of fresh water supplies and marine life, failure of cropping, wildfires, and forest collapses, rising sea-levels accelerating migrations of millions displace persons, collapse of social supports, total collapse of economies, bloody revolutions and uprisings. Mass thirst and hunger and homelessness would overthrow peaceful world orders, and multiply wars.

Therefore, I submit that

The first step is unequivocally to adopt AND to implement emission reduction targets that respond to the climate science, accepting and promoting among other nations a MAXIMUM OF 350-450ppm, seeking atmospheric carbon-reversal to achieve a maximum 1.5 degree Celcius global average temperature rise, and further measures as may be required to remove carbon from the atmosphere. It can be done. Other cities and nations have done it. Stop denying the truth and the possibilities.

The second stage is two-fold: to stop the old and start the new.

Stopping the old paradigm requires that we honestly reassess and stop the (subsidised) fossil-fuel industries. Any subsidies MUST be redirected to the sustainable energy industry: sustainable generation; sustainable delivery.

As a nation, we must stop trying to gag or starve the true science of Climate Council or CSIRO. We must commit to learning and applying the truth of science.

At every level, we must stop the denials aimed at making / saving money for small sectors of invested money.

This second stage will include structuring out of the old fossil-fuel industries:

- (a) to actively intervene to STOP the development of new coal mines altogether, and progressively (to a short timetable) move to stopping existing extraction of coal and oil in Australia,
- (b) to stop exploration for and extraction of fracked gas which devastates local land and water supplies as well as warming and destroying the atmosphere;
- (c) to educate citizens (and corporations) to lead the transition away from coal, oil, and gas for Australian households;

The parallel part of this second stage is to foster and make firm positive plans for renewable energy in partnership with private investment, but with a firm plan and supportive legislative framework.

(a) No more stupidity about the ugliness of wind and solar energy "farms". The comparison is with grossly polluting coal mining, with coal spoil heaps, poisoned rivers and toxic air. The comparison is with tar-pollution from oil and gas drilling, toxic exhausts, fractured water resources, land polluted beyond remedy.

(b) The new clean energy resources are characteristically suited to decentralised generation, reducing need for constant dependence on distribution networks.

(c) Distributed storage also enables great reliability and reduced dependence. It is economically sensible and also strategically stronger for national strength in time of natural or wartime crisis. Australia, with vast area, should foster community level, household level, factory level, local government level, regional level storage of energy that meets the specific needs and draws on specific localised opportunities for generation and storage. Beyond metal-based battery systems, for example, flexible and multi-purpose solar generation mixed with hydro-generation and storage.

(d) It is time to fully reward as well as recognise the true value of distributed energy and storage in the electricity supply chain, at every level.

(e) The true economics of investment in establishing energy sources or generation have changed radically. New coal and gas infrastructure is now considerably more expensive than investment in renewable energy and energy efficiency. We must stop robbing the population to pander to the profits of the old polluting and destructive industries.

As responsible citizens, we are undertaking to install both increased sustainable generation capacity and on-site energy storage, BECAUSE IT IS THE RIGHT THING TO DO for our family, community, and planet.

We call on our governments to make the same commitment to think and act locally so that our species can survive globally. Economically, it will also allow us and the nation to reap continuing benefits.

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The Senate Enquiry framework:

On 12 October 2016, the Senate agreed to the establishment of a new select committee, to be known as the Select Committee into the Resilience of Electricity Infrastructure in a Warming World.

The committee is to inquire into the role of storage technologies and localised, distributed generation to provide Australia's electricity networks with the resilience to withstand the increasing severity and frequency of extreme weather events driven by global warming; recommend measures that should be taken by federal, state and local governments to hasten the rollout of such technologies; and any other relevant matters.

The closing date for submissions is **27 January 2017**.

The committee is due to report to the Senate on or before **24 March 2017**.

Committee Secretary

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