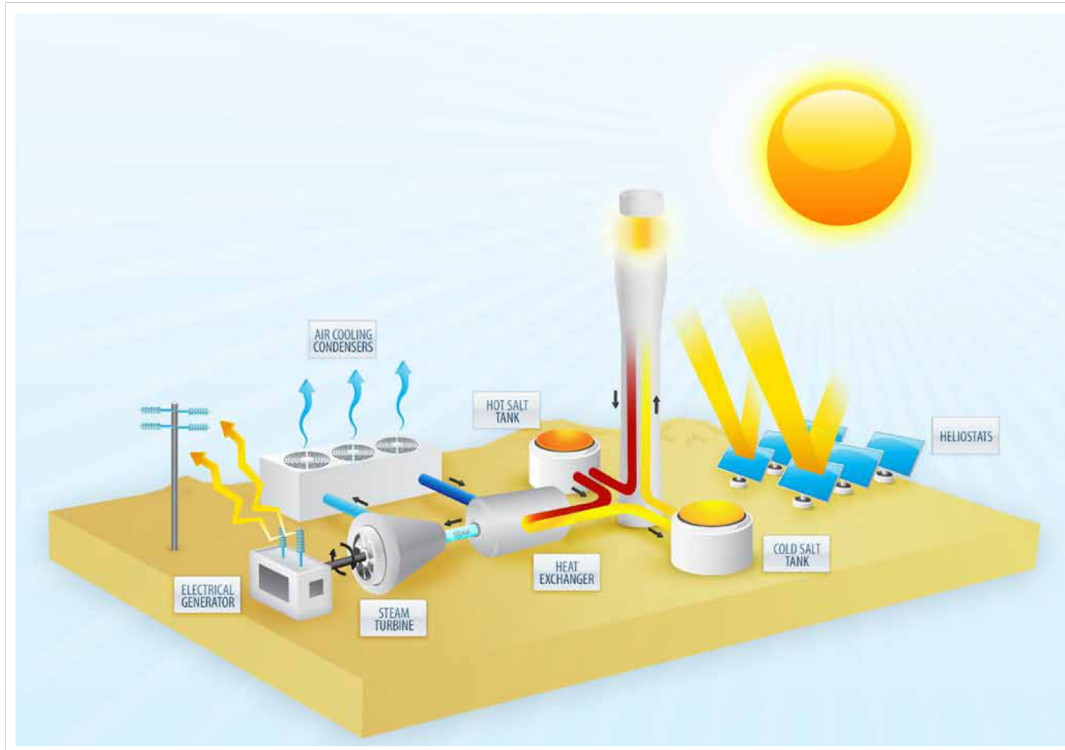


## **Repower Port Augusta Submission to the Senate Standing Committees on Economics review of the Australian Renewable Energy Agency (Repeal) Bill 2014.**

Over the last 3 years Repower Port Augusta has advocated for the replacement of the ageing Playford B (now mothballed) and Northern power stations on the edge of our city with a concentrated solar thermal with storage power station. This is an issue of critical importance to the creation of long-term jobs in our community, our community's health and doing our bit to act on climate change in a way that ensures coal communities like ours can transition to clean energy while retaining jobs and reducing carbon emissions. The Australian Renewable Energy Agency (ARENA) is a critical institution to making a transition to solar thermal in Port Augusta possible.

Concentrated solar thermal towers with storage is a game-changing renewable energy technology due to its ability to store and dispatch heat energy to provide on-demand baseload renewable energy, even when the sun goes down. Solar thermal towers operate by concentrating the sun's rays to the top of a tower with a field of heliostats (mirrors). This heat then heats up a storage solution such as molten salt which is then stored and dispatched to boil water, spin a turbine and create electricity. This process is demonstrated in the diagram below. The technology works in a similar way to a traditional coal-fired power station except it replaces the traditional coal heat source with the sun. This similarity makes the skills used to operate a coal-fired power station easily transferable to the skills used in a solar thermal plant. This transferability of skills from coal to solar would be of huge benefit to the Port Augusta community, allowing jobs to be transferred from the ageing coal station with a projected life of 2027, into a new solar thermal power station. Creating this transition pathway is a responsibility of the Government and ARENA is a critical agency for achieving it.



Solar thermal towers are the least mature type of concentrated solar power technologies and are expected to have the greatest potential to decrease in cost as the technology matures with increased deployment. Concentrated solar thermal towers currently operate or are under construction in countries like the United States of America, Chile, Spain and South Africa.

Despite Australia's world-leading solar resource, we are yet to realise the potential benefits that solar thermal can play in our energy market due to a lack of investment in the technology by the Federal Government. Ongoing policy uncertainty has further contributed to Australia's failure to realise the opportunity provided by the technology. ARENA has been playing a role in bringing this technology to Australia with the targeted funding of studies and demonstration projects. Abolishing ARENA or any cuts to its funding will severely hamper the introduction of this technology to Australia.

ARENA plays a critical role in reducing the cost of new renewable energy technologies so that they can be commercialised. The current capital cost of concentrated solar thermal with storage power stations makes this role critical to solar thermal being taken up in Australia. Already we have seen ARENA play a role in supporting Vast Solar's Jemalong Solar Thermal Station in

Forbes, NSW, which is demonstrating an Australian-made solar thermal technology which has the potential to lead to significant cost reductions in the technology<sup>1</sup>. The company, however, is being forced to question whether they can continue to develop this technology in Australia as key funding agencies like ARENA face repeal, as indicated by their CEO Andrew Want in an interview with RenewEconomy: “Our main challenge is now, ‘how do we stay in Australia?’”<sup>2</sup>. As well as supporting Vast Solar’s project, ARENA has also played a significant role in funding feasibility studies currently being undertaken for solar thermal projects across Australia. These projects include Alinta Energy’s current feasibility study into a 50MW solar thermal tower with 15 hours’ storage in Port Augusta, South Australia,<sup>3</sup> and Abengoa’s feasibility study for a 20MW solar thermal tower with storage in Perenjori Western Australia<sup>4</sup>.

The funding of Alinta Energy’s feasibility study by ARENA, and Alinta’s decision to focus solely on a stand-alone power station with storage, was a significant win for the community organising that has occurred over the last three years to see solar thermal become a reality, and was met with high praise in the Port Augusta community<sup>5</sup>. This, however, is only a first step, and the Federal Government’s plan to cut ARENA makes it incredibly unlikely that a solar thermal plant would be built in Port Augusta in the near future. In announcing their decision to focus solely on solar thermal with storage in their feasibility study Alinta Energy indicated the cost challenges of the project and the current investment environment, stating that:

There are real and significant challenges to developing and constructing solar thermal technology, including capital costs that are currently prohibitive...However, Alinta Energy is committed to completing the solar thermal full feasibility study with the due diligence it warrants. This will provide a comprehensive information-base for potential investment partners to consider should *the cost of technology or regulatory environment change* (emphasis added)<sup>6</sup>

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<sup>1</sup> <https://arena.govspace.gov.au/project/vast-solar-6mw-concentrating-solar-thermal-pilot-project/>

<sup>2</sup> <http://reneweconomy.com.au/2014/australian-solar-storage-technology-may-beat-wind-on-costs-85615>

<sup>3</sup> <http://alintaenergy.com.au/about-us/power-generation/port-augusta-solar-thermal>

<sup>4</sup> <https://arena.govspace.gov.au/project/feasibility-study-for-perenjori-20mw-dispatchable-solar-tower-project/>

<sup>5</sup>

<http://www.transcontinental.com.au/story/2394495/repower-port-augusta-elated-by-solar-thermal-announcement/>

<sup>6</sup> <http://alintaenergy.com.au/about-us/news/solar-thermal-generation-milestone>

The repeal of ARENA, a policy the Federal Government committed to before the election, severely hampers the investment environment needed in Australia for solar thermal, as indicated by Alinta's statement, by removing an institution, the role of which is to provide badly-needed capital investment into newer renewable energy technologies. This leaves countries such as the United States of America, Chile, Spain and South Africa, who are already investing in solar thermal, to reap the benefits of this technology while Australia is left behind. The signal that repealing ARENA alongside with attempts to repeal the Clean Energy Finance Corporation and the review of the Renewable Energy Target, sends about the Federal Government's lack of support for renewable energy. This uncertain environment is causing international solar thermal industry leaders like SolarReserve to abandon investing in Australia's retail energy market<sup>7</sup>. This is preventing the development of a new job-creating industry in Australia and threatens the opportunity for solar thermal to be built in Port Augusta as well as other places around the nation.

In closing, the repeal of ARENA is a broken promise and prevents regional communities like Port Augusta from accessing new job opportunities in renewable energy. The Port Augusta community has dealt with the health impacts of living beside two highly polluting coal stations that have led to a lung cancer rate double the state average. This long-term cost upon the community's health has not been factored in to the cost of coal. As the Port Augusta community has provided South Australians with electricity for decades it is our view that the Federal Government needs to play a role in supporting a transition plan to renewable energy for the Port Augusta community and other similar communities across the nation. The Port Augusta community deserves not to be left behind as these stations close, and the Federal Government should be investing in a new future for the community. It is critical that the senate saves ARENA, and Repower Port Augusta urges the senate to consider how more investment in renewable energy could be made, not less. Repower Port Augusta would welcome the opportunity to discuss our submission further with the committee.

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<sup>7</sup> <http://www.abc.net.au/news/2014-07-07/renewable-energy-investment-killed-by-government-policy/5575262>

Daniel Spencer, on behalf of the Repower Port Augusta Alliance