

Submission to the South Australian Government's

CLIMATE CHANGE STRATEGY FOR SOUTH AUSTRALIA

Prepared by

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Introduction

Repower Port Augusta welcomes the opportunity to make a submission to the South Australian Government's climate change strategy. In the lead up to making this submission we engaged our supporters asking them to make submissions and be involved in this process and 329 people added their name to the following submission. Before this consultation was announced we collected 1000 petition signatures locally calling on the State Government to make solar thermal in Port Augusta a priority following the first announcement of the power station closure earlier this year.

Repower Port Augusta has been active and advocating for renewable energy through the development of Concentrated Solar Thermal (CST) with storage in Port Augusta since 2012. The group has about 30 active local members and thousands of online supporters in Port Augusta and throughout the state. We meet once a month to discuss activities and to lobby for and promote the development of a CST plant in Port Augusta.

Major activities of our group and some of our achievements to date include:

- Community Vote conducted in July 2012 polling over 4000 community members on whether the community wanted solar thermal or gas to replace the power station. 97% voted solar and the vote was covered in media across the state;
- The Walk for Solar 2012 that saw a rally of hundreds in Port Augusta send off 100 people to walk from Port Augusta to Adelaide over two weeks, greeted by thousands in Adelaide calling for solar thermal in Port Augusta. The walk received national media coverage and was followed by a State Government Select Committee being established into solar thermal;

- Community awareness raising and CST displays at Community Markets, presentations to community groups and organising forums;
- Numerous local petitions signed by thousands of community members in support of solar thermal in Port Augusta;
- Meeting with numerous politicians including Minister Ian MacFarlane, Minister Tom Koutsantonis, Minister Ian Hunter, Rowan Ramsey MP, Mark Butler MP, Dan Van Holst Pellekaan MP and others for state and federal support for solar thermal and renewable energy policies such as the national Renewable Energy Target (RET).

The recent announcement by Alinta Energy to close the Port Augusta power stations and Leigh Creek coal mine with the loss of an estimated 430 jobs will have a major impact on our community, including members of our group. With the closure the need to move to create investment in solar thermal and other renewable energy in Port Augusta to create new local jobs has never been more relevant. While this would not replace all the existing jobs, the more investment and job creation that can take place in clean, renewable solar thermal with similar skill sets to the power station workers the better.

Repower Port Augusta would like to congratulate the SA Government on the work it has done in producing their new Climate Change Strategy documents and taking these to the community for consultation. The comprehensive and concise documents are well thought through, up to date and provide an informative base for community and industry consultation. Repower Port Augusta is glad to make this submission and use this opportunity to advocate for creating solar thermal with storage in Port Augusta to be a key part of the State Government's Climate Change strategy.

Climate Change

South Australia is seriously exposed to the dangerous impacts of global warming like more frequent and intense droughts, bushfires and extreme heat. It is clearer than ever that more action is needed and the State Government has a big role to play.

For South Australia, this global phenomenon will have a significant impact on our rural and outback communities as well as all the households and industries dependent on the River Murray for their water supplies.

The SA Government's Climate Change Strategy must take into account the likelihood and impact of these extreme events as part of its adaptation strategy.

The most fundamental concept in mitigating the effects of climate change is the need to transition away from burning fossil fuels, and electricity generation - from burning fossil fuels - is the single largest source of emissions, so it is purely logical to direct most effort in this direction. 75% of South Australia's carbon pollution came from energy in 2012/13.

Action on climate change must also include a plan to act on a transition plan for communities historically reliant on employment in polluting industries. Our community is currently feeling the impacts of unplanned closures.

For decades, huge commodity companies have sunk trillions of dollars into fossil fuel projects they expected to last for years. At the same time, the Australian Government has been forking out over \$11 billion in subsidies to the fossil fuel sector each year.

(The Australian Institute,, May 2015)

But while they've been busy spending, the world has been busy changing.

Internationally, both China and India are desperately trying to transition away from fossil fuel, especially coal, which will have a major impact on Australian terms of trade, local jobs and future prosperity. Australia needs to transition our economy from fossil fuel to safe and clean renewables for economic as well as climate change reasons.

Locally, rooftop solar systems and wind energy farms now account for nearly 40% of South Australia's energy needs. Local energy suppliers such as AGL and Alinta are already feeling the impact of this change to renewables and the effect this is having on their business model.

This change is happening and is not likely to slow down, placing more power in the hands of consumers as people put solar on the roof and battery storage is taken up and voters continue to support policies to encourage more renewable energy not less. South Australia is already an established leader in renewable energy and we can continue that with strong State Government policy.

The Australian Capital Territory government has called for expressions of interest to provide 50 MW of "Next Generation Solar with Storage" with the aim to reach the ACT Government's 100% Renewable Energy Target by 2025. Thirty submissions were received, including a number based on CST with molten salt storage. The ACT Government's reverse auction policy is one that could be used in South Australia to generate investment in solar thermal at Port Augusta.

A reverse auction for solar thermal could be used to benefit the State Government's Carbon Neutral Adelaide helping to replace the city's energy pollution with baseload

renewable energy. Designing policy to encourage renewable energy storage like solar thermal is a critical next step for the State Government's climate strategy as the state has already reached approximately 40% renewable energy. Solar thermal with storage has a greater current large scale storage capacity than battery storage making CST a critical part of South Australia's future renewable energy mix.

Tackling the intermittency issue of existing and new renewables needs to happen, or else there will be limitations to South Australia's renewable energy uptake, which in SA's case means retaining one or both of Torrens Island or Pelican Point indefinitely or worse - using Victorian brown coal generation.

Given South Australia's reliance on renewables for electricity grid generation, CST with storage would play a key role in addressing the intermittency problem associated with renewables thus making the existing infrastructure more efficient and effective.

The options are then Concentrating Solar Thermal with molten salt storage, solar PV with battery storage and wind energy with battery storage or a combination of these.

Concentrating Solar Thermal Plant in Port Augusta

Repower Port Augusta has been advocating for a CST plant in the Port Augusta region since 2012 when it was obvious that the coal fired power stations in Port Augusta (the Playford power station effectively mothballed in February 2012 and the Northern power station) would become unviable due to declining coal quality and quantity, the economic cost of maintaining production in aging facilities and declining demand for electricity.

The recent announcement by Alinta of the closure of the Leigh Creek coal mine by November 2015 and the Port Augusta power stations by March 2016 with the

associated loss of 430 jobs caught most observers by surprise, with no plan for a transition for the local economy. The leadership of the community and the Port Augusta council to reset a vision for Port Augusta as an arid smart city that can be a hub for renewable energy development is creating new opportunities with the Sundrop Farm solar powered greenhouse under construction and proposed solar PV and wind projects in the region alongside significant international investor interest in constructing solar thermal in Port Augusta.

Repower Port Augusta has recognised the need and opportunity to transition to renewables, specifically to CST in Port Augusta. The storage capability of CST adds a new capability for non-hydro renewables that did not exist in the SA/Australian energy network, with sufficiently proven technology (an important factor). The already high penetration of intermittent renewables in the SA part of the NEM grid made the “balancing power” and “despatch-ability” of power from a CST facility even more attractive. Those reasons were valid in early 2012 when our campaign started in earnest, and are still valid now.

The benefits of a CST - with molten salt storage - are;

- Provides dispatchable on-demand renewable power;
- Creates local jobs in construction and operation;
- Is a proven technology operating and under construction around the world;
- Creates manufacturing opportunities, highlighted by the establishment of Heliostat SA to manufacture mirrors for solar thermal plants from a transitioning car component factory in Adelaide;
- Is quicker to implement than other alternatives such as nuclear;

- Provides clean renewable energy with zero emissions;
- Can be scaled up and implemented in regional centres;
- Would place South Australia as a national leader in this technology.

The benefits of positioning the CST – with molten salt storage – in Port Augusta are;

- Proximity to existing power grid;
- Great solar resource;
- Provides local jobs that require similar skills to those exiting locally thus helping reduce the social costs involved with the recent Alinta closure announcement;
- Several international companies already involved with CST technology are already familiar with Port Augusta and have made preparatory plans for CST;
- Strong community support.

Solar thermal as a technology is coming down the cost curve and with the right policy support from the South Australian and Federal Government is a commercially viable proposal. Government policy that assists with a power purchase agreement like the ACT Government's policy, direct grants and concessional loans are all policy approaches in place in different forms in Australia and around the world that would facilitate solar thermal being built in Port Augusta.

Recommendations

Repower Port Augusta strongly advocate that renewable energy with storage – specifically CST with molten salt storage be incorporated into the South Australian Governments Climate Change Strategy as a way to mitigate greenhouse gas emissions and make full use of the existing renewable energy sources currently in South Australia.

We believe that Port Augusta is a logical choice for a CST –with storage - because of its 'fit' with the South Australia's existing infrastructure and natural and human resources.

We recommend that the Government:

1. Conducts a reverse auction to establish a power purchase agreement for solar thermal in Port Augusta that prioritises local job creation and local manufacturing;
2. Unlike the ACT auction, we recommend that this auction is not capped at a size to allow for greater economies of scale;
3. Encourage more than one plant to be built by conducting staged auctions to meet the state renewable energy target;
4. Sets a long term target of 100% renewable energy by 2030

We thank the State Government for the opportunity to input into its Climate Change Strategy and are more than happy to discuss anything raised in our submission further.