



Conservation
Council SA

GREEN OUR GRID

>> From carbon to renewables >>



Conservation Council SA's plan to transform energy in our state
A PROSPECTUS FOR OUR KEY CAMPAIGN SUPPORTERS

Introduction

The climate is changing; when will we?

If you are reading this booklet, it is probably because you know that climate change is already happening.

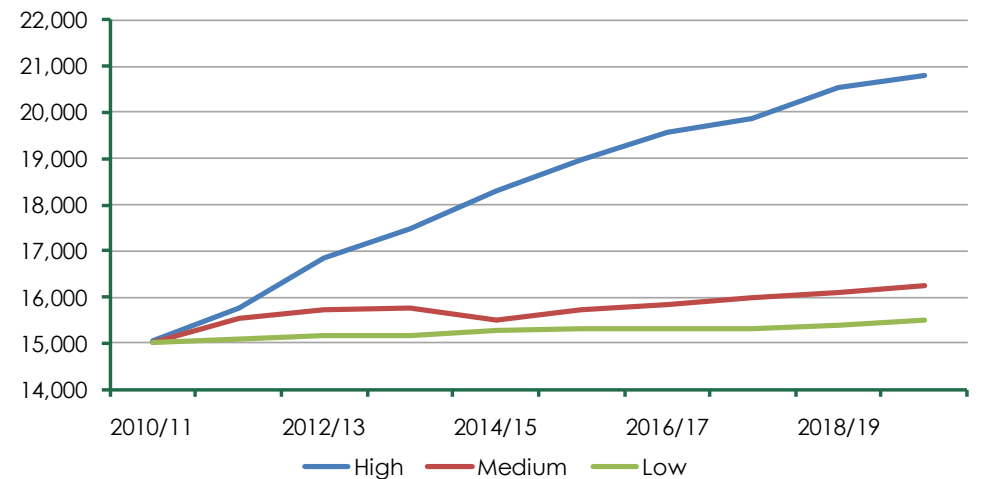
While there will always be sceptics, the vast majority of Australians accept the view of the scientific majority and are asking the next question: what can we do about it? How can we power our society in a way that doesn't overheat the planet and damage humans and the healthy ecosystems that sustain us all?

We know we don't want to go backwards. The industrial revolution changed the world in many beneficial ways, and no-one wants to turn the lights out. But we need a new kind of industrial revolution: as the saying goes, the Stone Age didn't end for lack of stones.

South Australia has a unique part to play. We have shown that we can be innovators; many times we have led our nation and other countries too. Our Premier Mike Rann has shown strong leadership on climate change in the past. But good leaders can't get complacent, the job never ends.

Premier Rann led the way with legislated targets to reduce South Australia's emissions – but set a 2050 delivery date! We know we have to act decisively now, not in nearly four decades time. This is especially critical given that our power needs are set to soar with current population growth targets and the mind-boggling energy demand of the proposed Olympic Dam mine expansion. This project alone will increase our state's current baseload energy demand by nearly 40%.

Projections for SA energy demand 2010/11 to 2019/20 (GWh)



Note: The high growth scenario is the only one that includes the Olympic Dam mine expansion.

Source: Australian Energy Market Operator (2010) South Australian Supply Demand Outlook.

Without interim targets to reduce emissions and increase renewable energy, our emissions will go up, not down, in coming years. We need these targets for 2020, and Conservation Council SA will be calling for them during the critical window this year when our legislated climate change targets are up for review.

But how about something even more tangible? How about a serious commitment to shut down the skeleton in South Australia's closet, the dirtiest power station in the whole country, and replace it with a revolutionary renewable energy power plant?

Sitting at the tip of the Spencer Gulf at Port Augusta is the Playford power station, built back in the Cold War era of 1963 to make use of the dirty, low-grade brown coal mined nearby. Today Playford is a dinosaur, emitting more greenhouse pollution per unit of energy than any other power station in Australia. Questions have also been asked about its role in Port Augusta's much higher than average lung cancer rates¹.

In this day and age, such dirty and dated technology has no rightful place in our energy mix. We can and must do better.

It's time to Green Our Grid

In some parts of the world, closing a coal power station might be a challenge. But South Australia is lucky, unusually blessed with a range of renewable energies, just waiting to be tapped. We have no need to hold onto the polluting power of the past.

Given that South Australia must significantly upgrade its electricity infrastructure, this is a perfect opportunity to green our grid and provide a low carbon advantage for our future state economy. We can provide enough renewable energy to replace the Playford power station and

¹ <http://www.adelaidenow.com.au/news/south-australia/port-augusta-is-sas-cancer-hotspot/story-e6frea83-1225846333836>

progressively phase out the use of the Northern coal fired power station next door.

To make these changes we will need real visionary thinking. We will need cooperation between all levels of government, as well as between political parties, business and the community.

We will need action within election cycles, not decades into the future, when most decision-makers won't be here to face the climate change legacy.

To get that kind of boldness from our state and federal governments, we will need a whole community behind us. We are asking you to join us and actively support visionary change for SA's energy supply.



The Playford Power Station at Port Augusta, built in 1963

Replacing Playford

In 2009 our state government set a target to achieve 33% of SA's energy production from renewable sources, up from the 20% it legislated in 2007.

While 33% sounds pretty good, it has been demonstrated by more than one report to government that 50% renewable energy is entirely achievable², and Conservation Council SA will call on the government to raise its target this year when our climate change act is reviewed.

Whether the target for renewable energy is increased or not, it will be impossible to achieve if the energy demand for major projects such as the Olympic Dam mine expansion is met from fossil fuels.

Therefore it is imperative that we begin the transition from fossil fuels to renewable energy **now**. What better way to begin than by completely replacing the dated and dirty Playford power station with a world-class renewable energy facility that won't damage anyone's health, won't overheat the planet, won't rely on resources that are running out and will be immune from carbon costs.

South Australia has taken the environmental lead in so many ways, and now is the right time to extinguish this historic legacy – the most polluting power station on the Australian grid.

That's why we are campaigning for the replacement of Playford power station with cleaner, greener alternatives. We want Playford out, renewables in.

² See <http://www.climatechange.sa.gov.au/uploads/Attachment%20A.pdf> and <http://www.climatechange.sa.gov.au/uploads/Attachment%20B.pdf>

This means switching OFF ...

- The most polluting power station in Australia
- The burning of dirty, dwindling, low-grade brown coal from Leigh Creek
- Emissions that are driving climate change globally and health problems locally
- A power source that will become increasingly unaffordable once Australia prices carbon
- Northern Power Station: we are also planning for the progressive phasing out of this second Port Augusta coal fired power station

And switching ON ...

- More clean renewable energy
- A better transmission grid that can link the new renewable energy sources to customers
- Health benefits for the Port Augusta region
- Hundreds of secure new green jobs
- The innovation advantage for South Australia

What can be achieved?

Ramping up our transition to renewable energy is no pipe dream. Large-scale renewable energy power stations that can store energy for near-continuous availability are being deployed around the world right now.

In 1990, 99% of Spain's energy production was from coal, oil, nuclear and hydro. By 2008 these inputs accounted for just 48% of its electricity. Spain has 37 solar thermal plants built or under construction, with a further 200 planned. The Castile and León region obtains 70% of its energy from renewable sources, while another four of Spain's 17 regions source over 54%.

The South African government has announced plans to build a 5 GW solar power plant with 1 GW being produced by 2012.

The United States has built the largest wind farms in the world with the Roscoe Wind Farm in Texas producing 781.5 MW.

The 1000 MW Blythe Solar Power Project in Riverside, California will provide enough electricity to power over 300,000 homes for a year and remove 2 million tonnes of CO₂ each year. During construction it will create over 1100 jobs with 220 permanent roles during the project's 30 year plant-life. Economic forecasts predict a further 7500 jobs will be created in related industries.

South Australia could lead Australia in taking the next step forward in using renewable energy technology, and reap the many rewards.

So what are some of our renewable energy options in South Australia?

Wind

South Australia is already a world leader in integrating wind electricity into our grid and maintaining reliable supply to customers. While we have achieved a great deal from virtually zero in ten years, we can achieve so much more by providing the right grid extensions and upgrades for wind energy to expand in the places most beneficial for energy production, environmental protection and communities.

Concentrated Solar Thermal (CST) with molten salt storage

This technology uses mirrors to convert sunlight to thermal energy to be used immediately or stored. CST is likely to be an ideal replacement for the Playford station, with many transferrable jobs for Port Augusta. It could work very well in combination with increased wind power.

Geothermal

Sometimes known as 'hot rocks', geothermal power takes advantage of the heat in hot granite within the earth's crust to heat water to steam, rather than burning fossil fuels. The north of our state has enormous geothermal potential and other areas may also provide opportunities.

Wave technology

Producing electricity from the motion of waves has good potential along much of the South Australian coastline.

Photovoltaic Solar Power (Solar PV)

This is a familiar sight on rooftops across our state, as South Australia has more solar panels than any other state. Solar PV is well suited to household and community scale projects in South Australia. We are fortunate to have very high solar radiation.

Campaign action: how will we do it?

One of our very first actions will be to commission a detailed feasibility study, looking at all the implications of closing the Playford power station, and the feasibility of also phasing out the Northern power station as renewables contribute more baseload energy. We believe that it will have a net positive effect, creating more new jobs, reducing SA's emissions, bringing our state all the benefits of being a world leader in large-scale renewable technology, and protecting our future economy from increasing carbon costs. But we want these assumptions to be independently verified, and the necessary information to develop an action plan.

With 40 years experience protecting South Australia's environment, we are well-placed to lead this campaign, but we cannot possibly do it alone. A large part of our work will be connecting up with other organisations and communities. The people of Port Augusta need to know that their region can still be rich in jobs and opportunities, without damaging their health. And all South Australians have a stake in how their energy is produced, and how we are planning to bring down our state's very high per capita greenhouse emissions.

We will take full advantage of all the new communication methods the internet is providing to reach new audiences and connect up the different players in this campaign. But we will not lose sight of the oldest communication method – face to face conversations.

With a strong coalition of like-minded individuals, communities and organisations, we will actively lobby both our state and federal governments, because we know they will need to support this proposal in order for it to happen.

As well as policy changes, we expect there will be a need for capital investment by governments, because the total green grid package we envisage will be cutting-edge, and in the short term innovation costs more than business-as-usual.

Fortunately there are many benefits to reap from innovation, and we think that with the evidence from our feasibility report and the momentum of a community demanding change, the case will be compelling.

Campaign initiatives

- A feasibility study into the replacement of Playford (and ultimately Northern) power station with renewables
- Building collaborative relationships with other organisations to spearhead a united approach to greening our grid
- Public talks in Adelaide and Port Augusta
- Lobbying state and federal governments
- A dedicated Green Our Grid campaign website
- Social media campaign to build a wide, active network of community support
- Petitioning our state leaders for change
- Online advertisements to promote the campaign
- Community mobilisation including a campaign volunteer force
- Surveys to gauge community attitudes to climate change and energy issues
- Contributing to the review of South Australia's climate change legislation, due in 2011

Donations we are seeking

Our goal is to raise \$75,000 for our campaign to replace Playford with clean renewable energy and Green Our Grid. We can win this one!

We need your support to make sure that South Australia has a clean, green healthy future.

Should you decide to get behind the campaign, the following table shows you the value of the gifts we need – but of course, anything you can give would be valued by all of us here at Conservation Council SA.

The value of gifts needed

Gift	Donors	Total	Recognition
\$20,000	1	\$20,000	Campaign Patron
\$10,000	2	\$20,000	Platinum Donor
\$5,000	3	\$15,000	Gold Donor
\$1,000	5	\$5,000	Silver Donor
Varied gifts to appeals	n/a	\$15,000	Campaign Supporter
Total we need to raise		\$75,000	

Unless otherwise requested by you, your gift will be publicly recognised by Conservation Council SA in the manner listed above.



Mirrors from a Concentrated Solar Thermal power plant. Source: langalex on Flickr.com

Summary

We hope you share our excitement about shutting down Australia's most polluting power station and leading the way with clean, baseload renewable energy at Port Augusta.

Beyond this work, we will be campaigning to secure better commitments from our state government in its climate change legislation, being reviewed this year. See box, right.

We will keep you updated on our climate campaign and hope you will support us in whatever way you can.

Thank you for taking the time to read this proposal and considering how you might be able to support the Green Our Grid campaign. All donations to Conservation Council SA are tax deductible.

We'll be in touch to discuss our campaign with you further. Until then, thank you so much for your support of our organisation and South Australia's environment.

Should you wish to learn more about any of our activities we invite you to contact Tim Kelly, Chief Executive or Julia Winefield, Campaign Coordinator on (08) 8223 5155. Alternatively, visit us on the web:

www.GreenOurGrid.org.au

www.conservation.sa.org.au

The **Green Our Grid** campaign is part of Conservation Council SA's wider climate change campaign. Key goals of our climate change campaign include:

- 2020 emission reduction targets of at least 40–50% on 1990 levels. Currently we have no post-Kyoto (ending 2012) target till 2050!
- Our renewable energy generation target increased from 33% to 50%.
- 100% GreenPower to cover Government electricity use commencing in 2015.
- A greater focus on GreenPower and creating the right market rules for it to reach its full potential.
- Significant infrastructure projects (such as the Olympic Dam mine expansion) to be constructed and operated with low-greenhouse approval conditions including a commitment to 100% GreenPower.

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