

**Submission to the  
Parliamentary Inquiry into  
solar thermal power generation  
at Port Augusta**

Submission from  
Doctors for the Environment Australia Inc.  
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The following are members of our Scientific Committee and support the work of  
Doctors for the Environment Australia

Prof. Stephen Boyden AM; Prof. Peter Doherty AC; Prof. Bob Douglas AO; Prof. Michael Kidd AM;  
Prof. David de Kretser AC; Prof. Stephen Leeder AO; Prof. Ian Lowe AO; Prof. Robyn McDermott;  
Prof. Tony McMichael AO; Prof. Peter Newman; Prof. Emeritus Sir Gustav Nossal AC; Prof. Hugh Possingham;  
Prof. Lawrie Powell AC; Prof. Fiona Stanley AC; Dr Rosemary Stanton OAM; Dr Norman Swan;  
Professor David Yencken AO

## **Doctors for the Environment Australia recommends CST for Port Augusta on health and economic grounds; a sustainable future for South Australia.**

Doctors for the Environment Australia is an independent, self-funded, non-government organisation of medical doctors in all Australian States and Territories. Our members work across all specialties in community, hospital and private practices. We work to address the diseases – local, national and global – caused by damage to our natural environment. In effect we are a public health voice in the sphere of environmental health which embraces such issues as asbestos, lead poisoning and environmental pollution and the health impacts of greenhouse emissions.

In our submission we will address mainly term of reference (e), the important health aspects of the proposal and the economic savings from this renewable form of energy; we will also touch on all the other terms of reference because none can be considered without reference to all.

### **Health and Port Augusta (TOR e)**

Port Augusta has experienced pollution from its power stations for many years.

Doctors for the Environment Australia accessed over a decade's air pollution data recorded by Alinta and the EPA and concluded on the basis of review by its experts that there were more occasions of excess emissions than acceptable by national standards.

During this decade the community of Port Augusta has expressed concern over pollution and a high incidence of cardio-respiratory diseases. Indeed there is a higher than expected incidence of lung cancer and childhood respiratory illness. The papers documenting this are at [http://dea.org.au/news/article/illness\\_and\\_pollution\\_at\\_port\\_augusta\\_dea\\_speaks\\_at\\_the\\_parliament\\_of\\_south](http://dea.org.au/news/article/illness_and_pollution_at_port_augusta_dea_speaks_at_the_parliament_of_south)

Previously the SA government had advised that smoking is mainly responsible for the increased incidence of lung cancer. However, while smoking has certainly been one cause for the increased incidence of lung cancer, the impact of carcinogenic pollutants from the coal-fired power stations cannot be excluded as an additional contributing factor.

DEA's findings were presented to a community meeting in Port Augusta in November 2011 and since then we have worked to present this issue to our parliamentary representatives, the SA parliament, and the community. The issue has become national with involvement and support

of groups representing community, environmental, business and Union interests.

Our medical position has been endorsed by several peak health organisations in South Australia: the Australian Medical Association, the Royal Australian College of General Practitioners, the Australasian Faculty of Public Health Medicine, and further endorsement is expected from the Royal Australasian College of Physicians. (Appended)

As medical research addresses such issues, it has become apparent that Port Augusta is not unusual in suffering illness from pollution due to coal-fired power stations and from coal dust due to the transport and mining of coal. These problems have been identified in a landmark study from the USA <http://www.psr.org/resources/coals-assault-on-human-health.html> and in a review of coal mining and combustion which covers several continents [http://coalhealthstudy.files.wordpress.com/2009/09/douglasdale\\_v42.pdf](http://coalhealthstudy.files.wordpress.com/2009/09/douglasdale_v42.pdf). The situation in Australia has been reviewed by DEA and published in the Medical Journal of Australia <https://www.mja.com.au/journal/2011/195/6/mining-and-burning-coal-effects-health-and-environment>.

Over the years Port Augusta has suffered the injustices so common in coal mining regions many of which have been well documented for the Hunter valley <http://www.sciencedirect.com/science/article/pii/S1353829209001105>. Port Augusta suffered in the cause of providing energy for the State because there was no alternative energy source. However, today there are alternatives.

### **The Medical Solution for Port Augusta**

It is our duty as doctors to recommend and work for a Port Augusta free from pollution due to handling and burning coal, activities which cause a range of cardio-respiratory disease and reduce life span [http://dea.org.au/images/general/Briefing\\_paper\\_on\\_coal\\_2011.pdf](http://dea.org.au/images/general/Briefing_paper_on_coal_2011.pdf).

On health grounds we urgently recommend a rapid transit to renewable energy sources. We reject gas-fired power, for gas retains some of the cardio-respiratory impacts of coal, has other health impacts and retains few jobs [http://dea.org.au/images/general/Gas\\_and\\_Health\\_Report\\_01-2012.pdf](http://dea.org.au/images/general/Gas_and_Health_Report_01-2012.pdf). In terms of healthy mainstream technology (*d*) those immediately available are wind and solar energy.

## **DEA supports solar thermal with storage for Port Augusta**

This solution has additional health and community advantages beyond simply the replacement of coal-fired power generation.

### **1) Solar thermal is not expensive compared to fossil fuels - TOR b and d**

The **cost** of solar thermal is not expensive when compared to full-cost-accounting for fossil fuels. It is frequently stated that coal is the cheapest energy so conveniently maintaining the status quo, but this is only true because estimated costs ignore the externalities of burning coal. These external costs are human ill-health and environmental costs. In a study from Harvard University on the full cost to the community of mining and burning coal in the USA, it was found that these externalities would approximately double the cost of electricity.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1749-6632.2010.05890.x/full>

In Australia we also subsidise electricity in this way at the cost of communal ill-health and the need to provide additional health services.

Let us be clear about cost of solar thermal power, the CSIRO has expectations that solar thermal costs will compete with coal as early as 2016. <http://reneweconomy.com.au/2012/csiro-to-lead-push-to-bring-cost-of-csp-to-10ckwh-83741> If we factor in the health and environmental externalities from burning coal (or other fossil fuels), costs which are deflected onto other budgets and the community, then solar thermal is near-competitive now. Furthermore it will provide a fixed cost for power over coming decades in comparison to likely rising costs of gas, highly relevant to the containment of future household costs. These points are relevant to TOR (b).

DEA has no expertise in the engineering or developmental aspects of solar thermal technology, however we recognise that Spain has at least 11 solar thermal plants in operation and has demonstrated their success.

### **2) Solar thermal provides sustainable healthy employment - TOR (c)**

Solar thermal technology would provide the local community with truly sustainable maintenance **jobs**. It is recognised that stable sustainable employment is an important factor in the health of individuals and communities. It is also vital in the stability of regional communities; such as Port Augusta, where other employment opportunities are scarce. In addition, the manufacturing of this plant does not require highly capital-intensive facilities and much of the manufactured components are bulky and not ideal for shipping. Therefore, there is the opportunity for manufacturing in the country of installation, ie South Australia. Let us make Port Augusta a technological hub for solar thermal.

We also make the point that when new technologies are developed, there is an accumulation of technical expertise in relation to the project. Such expertise will be important to Port Augusta for it will attract supplementary technological enterprises. Again we say that such aims should be a part of this government's program.

### **3) Solar thermal offers future economic competitiveness**

Having established the desirability of introducing this technology to Port Augusta as soon as possible, the claim may well be made that it cannot be afforded in a stagnant state economy with budget constraints. Rather the question instead should be whether we can afford not to have it. It is clear that the world is now facing **two serious issues**: accelerating global environmental change which will require increasing budgets for restitution, and redistribution of income from developed to developing countries. This is the long predicted contraction and convergence phenomenon now brought about by free global markets and the financial irresponsibility of global banks. Growth will need to be selective for budgets will continue to be tight. Successful countries will need to have the most efficient and clean energy sources to remain competitive – a very strong argument for solar thermal power generation at Port Augusta.

So: we believe that the needs of Port Augusta should be seen in the context of South Australia's need to bake a different development cake. The present cake with more of the same developmental ingredients is bound to sink. To survive in this changing world SA needs to gain an advantage by converting to renewable energies, efficient transport, resilient agriculture and technological innovation based on its good university resources. Solar thermal in Port Augusta is an economic ingredient that will make the new cake rise.

It is valid to make the point that doctors who take the time to analyse the concerning data on climate change recognise that more and more national income will be spent on restitution, as indeed Queensland and New York State have recently found. The medical advances for our patients over the past few decades have been incredible and heart warming. We see future advances in health severely constrained by progressively contracting budgets. We need leadership from our elected representatives, a recognition that the future for this fragile State of South Australia will not be built on current models where the usual budgetary restraint action is to cut sustainability, for example the Murray Darling Basin funding, while retaining outmoded growth policies. We need recognition that rapidly advancing global environmental change, with all its constricting economic implications, is dictating that business as usual is no longer an option.

## **The cost of solar thermal (*TOR a*)**

In the light of the above points we maintain under TOR (*a*) that the full cost of solar thermal will be no greater than other alternatives when full-cost-accounting is used. In our view this alone would attract innovative sources of funding rather than risky long-term term bank investment.

The cost of one solar thermal installation of 110MW is \$340m with additional costs and financing arrangements as detailed by BZE. This initial outlay would allow the additional financing to be obtained at market rates.

We support the establishment of one installation immediately. This is the foot in the door approach to capture the initiative and encourage the financing of others.

## **Conclusion**

We hope the Committee will strongly support the project on grounds of health, full accounting economics, sustainable employment, regional development and the future of this state. It is an opportunity for support from all political parties with the unity we all yearn for when our future is discussed.

21/12/12

## Appendix



**AUSTRALIAN MEDICAL ASSOCIATION  
(SOUTH AUSTRALIA) INC.**

ABN 91 028 693 268

25 September 2012

Dr Ingo Weber  
Chair  
Doctors for the Environment Australia (SA Committee)  
69 Payneham Road  
COLLEGE PARK SA 5069  
[ingo\\_69@hotmail.com](mailto:ingo_69@hotmail.com)

Dear Dr Weber

I write in response to your letter of 9 August 2012.

The AMA(SA) supports the medical profession's involvement in addressing the health issues arising from environmental change and taking the necessary action to prevent climate effects that lead to social, health and population degradation.

The work being undertaken by the Doctors for the Environment Australia is commendable and the AMA(SA) supports your endeavors in this area.

The AMA expressed concern in relation to climate change and its likely effect on the world's health status in our policy statement of 2004. This was further revised in 2008. The AMA position statement states: 'human health is ultimately dependent on the health of the planet and its ecosystem. The AMA believes the measures which mitigate climate change will also benefit public health'.

The work of the Doctors for the Environment Australia and in particular, its efforts in relation to raising government's awareness of the risks of coal and gas, is to be commended.

The AMA(SA) supports the activities of the Doctors for the Environment Australia. Yours

Sincerely

A handwritten signature in black ink, appearing to read 'Joe Hooper'.

**Joe Hooper**  
LLB(Hons), BSc(Nursing), Dip Applied Science  
Chief Executive Officer

cc: Professor Michael Kidd

enc: AMA Position Statement 'Climate Change and Human Health'

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The Royal Australian  
College of General  
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Healthy Profession.  
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8<sup>th</sup> October 2012

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Dear Dr Weber,

Thank you for your letter dated 9<sup>th</sup> August 2012 requesting RACGP support for the replacement of brown coal fired power stations in Port August with renewable energy technology.

The Royal Australian College of General Practitioners (RACGP) mission is to improve the health and wellbeing of all people in Australia by supporting GPs, and in November 2011 the RACGP Council endorsed the Australian Climate Commissions joint statement by Australian Health Bodies, Health Professionals and Research Scientists on climate change.

The SA&NT Faculty Board recently reviewed the 'health costs of coal and gas in South Australia' briefing paper and present this letter to you in support of renewable energy initiatives that benefit the health of the community.

We recognise the broader benefits to human health from reduced emissions.

Thank you for including the RACGP SA&NT Faculty as an advocate for the attached DEA proposal. We welcome any progress reports in the coming months.

Please do not hesitate to contact me via email [nigel.stocks@adelaide.edu.au](mailto:nigel.stocks@adelaide.edu.au) if you wish to discuss further.

Yours sincerely,

Prof. Nigel Stocks  
RACGP Chair Council and  
SA&NT Faculty



Dr Ingo Weber  
Chair  
DEA (South Australia Committee)  
5 Fitzgerald Road  
Pasadena SA 5042.

October 14, 2011

Dear Dr Weber

Thank you for providing a copy of the Doctors for the Environment Australia (DEA) briefing and options paper proposing the replacement of the Playford Power Station in regional South Australia with renewable energy technology.

The Australasian Faculty of Public Health Medicine (AFPHM) is a Faculty of the Royal Australasian College of Physicians. As specialists in public health medicine, who aim to reduce the risks of disease, disability and death in both individuals and population groups, we strongly support renewable energy initiatives on public health grounds. We recognise that there is overwhelming scientific evidence of significant risk to individual and public health resulting from the impact of climate change, and that an immediate priority is to reduce greenhouse gas concentrations.

The terms of reference of the South Australian Regional Committee of the AFPHM are to engage in advocacy in areas relevant to Public Health Medicine of regional interest and to support the AFPHM Council's activities in advocacy on national issues.

The DEA proposal will, in our opinion, contribute towards the reduction of greenhouse gas concentrations and have immediate and longer term beneficial effects on human health, particularly in the vicinity of the power station. The SA AFPHM Committee members support to the DEA proposal to replace the Playford Power Station with renewable energy technology. Please keep us informed of progress with this issue, and whether we are able to provide further assistance.

Yours sincerely

Dr Wendy Scheil.

Chair, on behalf of the South Australian Regional Committee, AFPHM