Submission, Garnaut Report
ASFEE (www.asfee.org)
Report: "***From Crusty Coal To Clean Kilowatts: a Roadmap To Decarbonising The Australian Economy By 2020***"
available from
http://www.asfee.org/downloads/ASFEE-CrustyCoalToCleanKilowatts.pdf

Australian Society of Foreign Energy Executives (ASFEE)

Issues Paper 5 - Transport, planning and the built environment

Questions for Consideration
What are the key barriers to the adoption of cost-effective and low-emissions mode use in the passenger transport sector? How might these be addressed effectively and efficiently by government policy?
What policies would be suitable to address barriers to the uptake of more fuel efficient passenger vehicles?
How can land-use planning and the built environment be managed more effectively to lower reliance on high emission patterns of transport behaviour?

Transport is a huge contributor to Australia and the world's greenhouse gas emissions. Worse, Australia and the world have huge, private vehicle legacy infrastructures. So, how to make the best of a bad situation?

The near-term solution is electric cars. The electricity distribution infrastructure is already in place for recharging an expanding fleet of electric vehicles. But that begs the question: where will the clean electricity come from to recharge them?

The answer: solar, geothermal, wind and nuclear -- all generated from Australia's Outback and brought to the nation's eastern mainland cities via High Voltage, Direct Current (HVDC) power lines.

The entire plan is laid out in great detail in ASFEE's report: "From Crusty Coal to Clean Kilowatts: Decarbonising the Australian Economy by 2040." The report is at www.asfee.org and available in PDF. [http://www.asfee.org/downloads/ASFEE-CrustyCoalToCleanKilowatts.pdf]

Australia has a huge internal hinterland full of renewable energy. Thus, the smart thing to do is string HVDC power lines from Roxby Downs to Brisbane. This would 'close' the eastern electricity grid and allow electricity to flow more freely between states. The investment would be paid off through reduced deadweight losses caused by inter-state electricity "price separation."

Once in place, the power lines could be operated on a 'common carrier' basis, opened to all comers to carry generated electricity to downstream customers.

With such power lines in place, investments in huge Outback concentrating solar photovoltaic plants,

concentrating solar thermal plants and geothermal plants become less risky since a path to market for their energy is assured. With such a catalytic spur, large new solar-geothermal-wind energy-generation infrastructure would be built out between now and 2015 that *could* solve Australia's looming energy crisis as its aging coal-fired power capacity is retired.

If it doesn't, Australia can hold a national referendum in 2017 to determine whether 'closed cycle' nuclear power should be allowed, if strictly limited to, the geographic area around Roxby Downs, South Australia. All this is outlined in ASFEE's report.

Between renewables, nuclear power and huge power lines, Australia could rapidly convert her vehicle fleet to electric power as those vehicles start coming off the assembly lines in 2010 and rapidly expand their market share thereafter.

We encourage you to read and consider ASFEE's views not only on transport but on other elements of how Australia can decarbonise her economy by 2040.

The private vehicle is here to stay. That battle's been lost. The question is how to limit its future damage. Shifting its fuel to something produced domestically and free of greenhouse gases is the way to do it. Under ASFEE's proposals, petrol stations would become a thing of the past. The fuel pump would be a powerpoint.

Sincerely,
Jonathan Agee
Chairman, Australian Society of Foreign Energy Executives (ASFEE)

"ASFEE's Seven Tenets for a Smart Energy Future For Australia"

1. Impose a carbon tax or emission permit floor of A$40 per tonne on greenhouse gas emissions. This will embed climate change costs into transactions and change economic behavior. Experts concur prices around A$40 per tonne should help avoid the worst impacts of climate change. In addition, $40 is the price the Australian coal industry claims is needed to make "clean coal" viable. A $40 carbon tax, therefore, will level the playing field between uproven clean coal and proven renewables, allowing the process of carbon mitigation to get underway. Proceeds of the tax can be used to ease the retrenchment and dislocation pain suffered by sunset industries.

2. Institute 10-year transitory premium feed-in tariffs for renewable energy while reducing fossil fuel subsidies. During the transition period, falling fossil fuel subsidies can fund the renewable energy premiums -- creating a zero sum for the Treasury. After 10 years, Australia will have transitioned to a newer, more competitive, cheaper energy industry and a retrained workforce.

3. De-emphasise use of natural gas for base load power. Natural gas (and hydro)'s quick startup

times are an increasingly valuable attribute in a future energy system dominated by fluctuating renewable energy supply. Therefore, future natural gas capacity should be directed to meeting the demands of high-priced peaking power markets, not base load power. Doing so doubles global gains in reducing carbon emissions. That's because Australia reduces its own greenhouse gas emissions by shifting baseload power provision to low emission technologies, while other countries (that would have used coal) can buy marginally freed up Australian gas supplies. Doing this means that Australia will improve its trade balance with greater exports by concentrating on its comparative advantage. Everyone comes out ahead.

4. Progressively idle, but not dismantle, existing coal fired power plants. Idled coal-fired capacity can provide Australia a crucial emergency cushion of electricity-generating capacity against future demand surprises. As dirty, geriatric coal-fired plants reach their retirement dates, they can be mothballed but kept ready to meet excess demand.

5. Restrict new coal-fired power capacity to Victoria. The La Trobe Valley has large supplies of brown coal supplies unsellable on international markets. Carbon capture and storage technology should be tried there. If it proves safe and cost-effective, it can be rolled out elsewhere. If it proves a dead end, Australia will have developed ample supplies of renewables. This is not a technology issue because carbon capture and storage doesn't even exist yet. This is a prudent economic risk management issue.

6. **Upgrade Australia's electricity transmission infrastructure to provide a level playing field for new energy sources,** particularly those located in remote areas. Create common-carrier tariffs on new, high capacity direct current power lines to pay down the costs. Open access will increase competition, lower greenhouse emissions and lower consumer prices for electricity. Eliminating impediments to production are beneficial to any economy, since it allows the market to pick winners.

7. Allow nuclear power generation in Australia, PROVIDED:

a. It is approved by national referendum in 2017

b. The entire nuclear industry is restricted to the area around Roxby Downs, South Australia.

c. Uranium is mined, enriched, burned and buried within a small radius of Roxby Downs.

Restricting the entire nuclear industry to the environs of Roxby Downs results in a geographically "closed nuclear cycle' in a safe and isolated area. This will eliminate nuclear proliferation risks while generating cheap, clean power and provide major cities a safety buffer against nuclear accidents.

The Australian Society of Foreign Energy Executives represents foreign-born experts working in the Australian energy industry.