



Energy White Paper 2014 – Issues Paper submission template

Details of person making the submission

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Confidentiality

<input type="checkbox"/>	Submissions may be published on the Department of Industry website. If you do not wish to have your submission made public, please tick the box.
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Issues for comment are listed against each of the Chapter Headings. In making your submission, you are welcome to make comment against some or all of issues in the fields provided. A field for general comments is provided at the end of the template.

1. The Security of Energy Supplies

The Government seeks comment on:

- ways community expectations can be better understood and reflected in reliability standards;
- the value of developing fuel reserves to meet Australia's international oil security obligations, and augment domestic security;
- ways to increase new gas sources to meet demand and measures to enhance transparency in market conditions; and
- issues relating to the regulation of energy infrastructure.

Please provide any comments on The Security of Energy Supplies below:

1) Australia's energy security can be assured by developing our extensive free and infinite renewable energy and low emission resources to reduce dependence on coal, gas and imported oil. Expansion of fossil fuel combustion contributes to the global risks of rapidly increasing desertification, ocean ecosystems and fisheries collapse, coastal communities exposure and extreme weather events (cyclone ,bush fires, floods). There is no such thing as sustainable expansion of coal, gas and fossil fuels. Ignoring the well-documented and irrefutable evidence of the effects of mining and combustion of fossil fuels on Australia is of increasing concern. Australia's fair contribution to the global effort would be to reduce emissions by 15% to 25% below 2000 levels by 2020 and by 80% below 2000 levels by 2050. To achieve this, Australia needs to be a leader in emissions reduction technology and systems and build on our proven capacity to meet these emissions reduction targets.

2) Transformation to a low emissions energy economy should be driven by electrification of transport, industry and domestic supply. An efficient, interconnected, nationally-managed grid with distributed generation and managed consumption would provide the reliable energy supply for water, transport, industry, human and animal survival in a hotter and drier Australia. Our dependence on oil and gas resources must be reduced through careful integration of these limited resources into an energy transformation policy and design of a national electricity grid.

3) Regulation must be driven by the national and community interest, with major infrastructure commitments impartially and transparently evaluated for cost, sustainability and future emissions to avoid short-term opportunism resulting in political expediency, market inefficiencies, rising emissions and stranded assets.

2. Regulatory Reform and Role of Government

The Government seeks comment on:

- priority issues, barriers or gaps within the COAG energy market reform agenda;
- possible approaches and impacts of review of tariff structures including fixed network costs, further time-of-use based electricity tariffs and the use of smart meters;
- possible measures to promote greater price transparency in gas markets; and
- areas where further privatisation of government-owned assets would contribute to more effective regulatory frameworks and better outcomes for consumers.

Please provide any comments on Regulatory Reform and Role of Government below:

The Sustainable Engineering Society (SENG) generally supports COAG's reform agenda "Power of Choice" report, in particular:

1) Empowering consumers in demand-side participation with more flexible cost reflective (time of use) charging and customer control, in addition to traditional tariff option. To avoid grid failures and unnecessary expense, systems and products to enable demand management must be rolled out to consumers and networks to undertake demand management projects as an alternative to network capacity development.

2) Extending the range of people that distributed generators can sell their energy to and expand the ARENA regional energy commitments to either bring consumers onto the grid or support stand-alone renewables to offset the high costs of diesel generation.

3) Investigating whether electricity network service providers should be allowed to own distributed generation assets to provide network support and reduce the need for network augmentation.

4) An efficient pricing model which will allow Australians to take advantage of the electricity infrastructure we have and eliminate future inefficient capital expenditure would price grid supplied electricity via:

-- A fixed annual capacity charge, where the capacity is chosen by the consumer; and

-- A time of use consumption charge per unit of energy.

A demand charge caters for range of emerging distributed energy technologies and provides cost efficient electricity supply and delivery options and makes best use of existing infrastructure to defer unwarranted expenditure. Time of use charging will target daily peaks and demand charging will target the annual peaks.

5) SENG supports continuation of the Government's \$500 million for 1 million solar roof and \$50 million solar towns and solar schools projects. Heat pump installations (hot water and air conditioners) can be matched to solar PV to offset peak demand in the system. The industry and technology are mature and regulated and can readily ramp up to meet demand.

6) The Department of Industry must provide clear concise evidence-based reports into solar PV, wind power, grid stability, high efficiency appliances and systems, heat pumps, insulation etc to inform market decisions and consumer choices. For example, the Australian Photovoltaic Institute points out that solar PV is bringing a clear benefit to the network, particularly in offsetting the impact of air-conditioning. Well-documented forecasts show solar and wind entail less overall cost than new coal and gas.

7) The Department of Industry must revisit retrofit home insulation, double glazing etc. to bring the readily available benefits to households and small business on scale, safely and efficiently.

8) Substantial emissions reduction and cost savings in refrigeration and air conditioning can be achieved by new regulations under the existing arrangements (Montreal Protocol). High warming potential refrigerant gases can be phased out over two years. Funding for retrofit and conversions to hydrocarbon (low emission, locally produced) refrigerants can virtually eliminate high cost imported potent greenhouse gases

1) The renewable energy sector has been handicapped by reversals and changes in policy, uncertainty for investors and politicization. The Climate Change Authority (CCA) recommends emissions reductions of 15- 25% by 2020 and 35-40% by 2030. This would achieve a significant portion of Australia's "Fair share" of global emissions reduction and carbon budgets as noted in issue 1 point 1 above. CCA cost modeling show this can be achieved at moderate cost to consumers. Commitment to the measures outlined by the CCA in February 2014 would trigger the investment and roll out of wind, solar and other renewables on wide scale, and make a significant contribution to national greenhouse gas emissions reduction and international contributions.

2) Renewable energy has a higher installation cost than coal or gas and very low operational cost (free fuel forever). In the absence of a carbon price, renewable energy will take perhaps a decade longer to become the lowest power cost. We cannot wait and must trigger the investment now. Consumers are becoming aware of why these changes are necessary to avoid dangerous climate change and adaptation costs far beyond our capacity and capability.

3) The Standing Council on Energy and Resources must pursue price reform agenda to ensure reforms are in national and consumer interests and open the way for major utilities investment by superannuation funds and others.

4) Infrastructure Australia should be strengthened and additional criteria on- climate adaptation and greenhouse gas emissions reduction applied to assessment of all projects. A binding agreement of COAG to abide by Infrastructure Australia outcomes will help ensure the national long term interest and investment is upheld at all levels of Government.

3. Growth and Investment

The Government seeks comment on:

- commercial or market initiatives that could enhance growth and investment in the energy and resources sectors;
- areas where approvals processes could be further streamlined while maintaining proper environmental and social safeguards;
- further ways that regulatory burdens could be reduced while maintaining appropriate levels of disclosure and transparency in energy markets; and
- the impacts of variable land access policy and ways the community could be better informed and engaged on development in the energy sector.

Please provide any comments on Growth and Investment below:

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4. Trade and International Relations

The Government seeks comment on:

- how to grow the export of value-added energy products and services;
- ways to remove unnecessary barriers to continued foreign investment in Australia's energy sector;
- ways to strengthen support for access to export markets; and
- ways to support business to maximise export opportunities for Australia's energy commodities, products, technologies and services, including the value of Australia's participation in the variety of international forums.

Please provide any comments on Trade and International Relations below:

1) The technology and expertise in development and management of a distributed electricity network, with large and small low emission technologies for major industrial and populations centres to regional and remote communities and energy efficiency developments would provide high value services and equipment exports for decades. With its technical capability, project expertise and respected business practices Australia would be able to attract global investment support to deliver emissions reduction and adaptation projects. Australia could be at the forefront of these systems and technologies that will be required in almost every developing and some developed countries especially in SE Asia. To do this requires leadership to transition our own economy to low emissions and move beyond dependence on fossil fuels, especially for export.

2) Australia must have a legitimate viable emissions reduction plan that can achieve the levels required for our share of abatement to limit global warming to 2°C (issue 1, point1). This includes adherence to a carbon budget for national and global emissions.

3) Any reduction or stalling of the RET would immediately signal we are not serious about our international commitments as it would be lower than similar commitments by many other developed countries.

5. Workforce Productivity

The Government seeks comment on:

- the nature of any current skills shortages being experienced and how these could be addressed by and with industry;
- the capacity of industry and education sector-led programs to meet long-term training and skills development needs of the energy and resources sectors; and
- specific long-term training and skills development needs for alternative transport fuel, renewable energy, energy management and other clean energy industries.

Please provide any comments on Workforce Productivity below:

The decline of engineering employment in mining, construction and manufacturing presents an opportunity for re training and skilling for grid development, low emissions and renewable energy systems, retrofit and efficiency. The low emissions industries are not sufficiently developed to support this restructure, and the traditional fossil fuel industries are opposed. The RET, CEFC and ARENA are vital drivers but not sufficient to drive the productivity change required. Consequently, Government policy and funding would be required for training, combined with legislation supporting the emerging industries and services. A training and re-skilling levy could fund this, based on emissions intensive industries, which have the most to gain from a re-skilled workforce as they restructure their business.

6. Driving Energy Productivity

The Government seeks comment on:

- the current suite of energy efficiency measures, ways these could be enhanced to provide greater energy efficiency or possible new measures that would enhance energy productivity;
- the use of demand-side participation measures to encourage energy productivity and reduce peak energy use; and
- measures to increase energy use efficiency in the transport sector.

Please provide any comments on Driving Energy Productivity below:

- 1) The highly successful Energy Efficiency Opportunities program has been axed by the Government with no clear replacement or plan to drive efficiency in emissions intensive industries. The EEO Act 2006 established the framework for mandatory energy efficiency assessments and reporting by 300 large emitters, which account for 56% of Australia's total energy use. As at 30 June 2011, EEO participants reported that they had identified opportunities that could result in annual energy savings of 164.2 PJ. Of these, 88.8 PJ were adopted. The adopted savings were reported to have an annual net financial benefit of \$808 million. The majority of energy efficiency opportunities adopted by corporations had payback periods of two years or less. The EEO Program demonstrates that energy efficiency is a highly cost-effective means of reducing emissions, with participants average abatement cost near negative \$100 per tonne of CO₂-e. This means for each tonne of carbon abated, a net cost saving of just under \$100 is achieved. Government should reverse its decision to cease the EEO Program, so that major efficiency programs are continued and new projects will have obligations to participate and report emissions.
- 2) We have referred to demand side management in response to issue 2.
- 3) Rail freight is 2 to 3 times more efficient than road trucks and is the only long term viable and affordable solution to containerised and bulk long haul. States are responsible for rail and roads; however, the Commonwealth can ensure proper investment allocation by eliminating market distortions and subsidies (such as fuel excise relief for "on road" trucking, a "free" taxpayer-funded road network and lack of investment returns in rail infrastructure compared to toll roads). The Commonwealth has to initiate and assist to fund interstate rail, with the inland East coast freight route and maintaining and upgrading passenger rail urgent priorities. Management of systems via Austrack must be strengthened so that a clear investment program is established. Corridors for future rail, especially the East coast very fast train, must be set and land acquisition established, particularly at the entries to cities. These long-term plans must continue in a collaborative state and Commonwealth program otherwise the costs of access will continue to be prohibitive. As noted in issue 3 item 4, all projects must be reviewed by a strengthened Infrastructure Australia to promote the national interest.

7. Alternative and Emerging Energy Sources and Technology

The Government seeks comment on:

- ways to encourage a lower emissions energy supply that avoids market distortion or causes increased energy prices;
- the need to review existing network tariff structures in the face of rapidly growing deployment of grid-backed-up distributed energy systems, to ensure proper distribution of costs;
- additional cost-effective means, beyond current mandatory targets and grants, to encourage further development of renewable and other alternative energy sources and their effective integration within the wider energy market;
- how the uptake of high efficiency low emissions intensity electricity generation can be progressed;
- any barriers to increased uptake of LPG in private and commercial vehicles and CNG and LNG in the heavy vehicle fleet; and
- any barriers to the increased uptake of electric vehicles and advanced biofuels.

Please provide any comments on Alternative and Emerging Energy Sources and Technology below:

- 1) To encourage lower emissions and avoid markets distortions, the Government could remove the diesel fuel rebate concession for mining and heavy road transport and redirect approx. \$12 billion (over the forward estimates time frame) to stimulate investment in low emission technologies and energy transformation as noted above.**
- 2) The mining and processing of "Rare Earths" metals required for manufacture and recycling of batteries in Australia needs to be investigated and support for technology, research and investment facilitated.**
- 3) The Government should support assembly of full battery electric vehicles with maximum local content in Australia. Support for import and local manufacture of components and materials to fit to vehicles here (as in the Blade electric vehicle applied to light commercials and industrial forklifts etc.) This would include import, GST and FBT taxes and duty relief and tax concessions for investors.**
- 4) Conduct genuine enquiry into the vehicle Australian Design Rules so that lightweight and special electric vehicles can be road-registered and operate safely. This could be supported by investment of State and Local Governments in road infrastructure and urban speeds to facilitate safe local operation for passenger and delivery vehicles between transport nodes.**

General Comments

Any further comments?

- 1) The energy sector, in particular electricity generation and distribution, presents a huge opportunity to support businesses and community, drive new industries and services, and greatly reduce emissions. Ongoing reforms are needed to address grid demand management, dispersed generation, market distortions and infrastructure construction to ensure low emissions energy is available at least cost.**
- 2) Transformation to a low emission electricity economy can deliver substantial benefits to the community and business, particularly to regional areas that are likely to require more energy to remain viable and productive in the face of climate change. Freight and public transport reliability and efficiency can be improved by electrification to reduce dependence on imported petrol and diesel.**
- 3) The technology for power grid management, distributed generation and construction will require new and retrained skills from technicians and field work to high level systems and project management. These skills will be highly valued and rejuvenate our TAFE and university technical education and provide exportable services, knowledge and equipment to position Australia as a leader in a low carbon global economy.**

