



Energy White Paper 2014 – Issues Paper submission template

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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:

The community's expectations are that of reliability, supply, minimal if no interruptions to supply, as well as costs being reflected at a minimal level. The ASU notes history shows that when the assets were held in the public sector hands, and not corporatised entities, that the cost to the community was significantly less in supply (Dr. Phillip Toner, pp. 9-10, *Electricity Privatisation in Australia: A Briefing Note, 2012, University of Sydney*, <http://www.asu.asn.au/news/energy/121011-privatisation> [Accessed 6 Feb 2014]). We do however note that the community's expectations have developed substantially and the Government finds itself in a position of needing to utilise issues constrained with national contestability and competition. For that purpose the Australian Government, under successive political parties, has maintained a line of ensuring that competition is allowed to take place where the private sector seeks to compete against the public sector. Where assets have been publicly owned, costs to the community have been significantly lower than costs of privatised assets (Toner, 2012, pp. 9-22). Governments have used the corporatised model to leverage the debt of electricity enterprises, and provide loans or dividends to shareholders, being State Governments. Those shareholder dividends are substantial and around \$1 billion in the last financial year; solely for the State Government of New South Wales.

Highly efficient operation of State owned corporations has consistently provided significant returns to Government and should be seen as part of an ongoing position i.e., that there should be no interest in the Commonwealth to promote privatisation of the electricity industry or the assets as it only strips State Governments of long-term revenue streams that can be used to replace monies that may no longer be provided by the Federal Government. As mentioned, recent reforms in New South Wales of the electricity industry have enabled major State owned corporations to accrue and pay distributions to the state government of \$1.8 billion (\$1.4 billion in 2011-12), comprising:

\$572 million (\$573 million) in taxation
\$1,178 million (\$866 million) in dividends (Barry Underwood, p. 27, *Volume Four 2013 focusing on Electricity, 2013, Auditor-General's Report to Parliament*, [audit.nsw.gov.au](http://www.audit.nsw.gov.au), <http://www.audit.nsw.gov.au/Publications/Financial-Audit-Reports/2013-Reports/Volume-Four-2013/Volume-Four-2013-focusing-on-Electricity> [Accessed: 06 Feb 2014]).

Should we see privatisation of State owned assets take place we will see a reduction in community service standards, a reduction in employment, skills and training and a reduction in many service aspects to the community plus there will be an added cost to the community in terms of dramatic increases to the price of power as has happened in Victoria.

In contrast, the ASU notes that whilst substantial dividends could be returned to shareholders across the market, a similar amount returned to private sector shareholders is not available to public scrutiny. Privatised energy companies guard jealously their returns on assets (their ability to leverage debt nationally and internationally) and clearly there are excessive profits being made by the private sector in the electricity market. The ASU believes that the necessity is greater for substantial returns on the assets of the electricity industry to go to the public sector. In particular, we believe that distribution and transmission assets need to be returned to public sector hands, and in addition to that, there is a necessity for the development of Government-owned and not-for-profit electricity generators.

Whilst the ASU sees no difficulty with Government seeking to respond and return a profit on assets to

shareholders, \$1 billion does seem significantly higher than expected; however, this does mean that communities are reaping the benefit by way of; for example, stable electricity prices in distribution terms, and utilising funds to subsidise public services to the community such as hospitals, roads, schools etcetera. If a line was drawn that ruled out profit from the electricity sector, electricity prices would most assuredly come down; however, State Governments would lose substantial incomes they currently hold under the return of profits to shareholders in the corporatised model. The corporatised model is of course approved by the OECD and is seen as a mechanism for public sector enterprises to compete with private sector enterprises and to show openness and transparency. OECD guidelines also provide significant benefits to the regulatory framework and openness of assets.

It should also be noted that the current State owned corporations in New South Wales and Queensland and other states in Australia; also, have a significant responsibility to the community by creating employment opportunities and jobs. They have the social accountability of any Government. However, their social accountability is weathered by the fact that they are a corporatised entity. To this point, states that do not have State owned corporations, but have moved to privatisation, no longer have these issues of social responsibility such as a State Government would have, whether it is corporatised or whether it is simply a State Government Department.

Across OECD countries globally, the following significant problems have plagued governments of the day for the last 10-20 years of electricity competition:

1. Consumers – both large and small – strongly oppose restructuring.
2. Restructuring has not resulted in “real” or “true” competition.
3. Restructuring has brought higher electricity prices.
4. Technological innovation has not been realized.
5. High concentration of generation ownership, and joint ownership of generation and transmission, throughout the restructured world.
6. Single-price, bid-based auctions are easy to game and difficult to police.
7. It is very difficult to negotiate reasonable long-term contracts.
8. A disincentive to invest ... failure to build necessary infrastructure leads to concerns over reliability
9. Inadequate transparency and cooperation
10. Regulators have not protected consumers from the problems of restructuring.
11. Developing renewable energy resources requires a move away from liberalised markets (Hall, D., Prof. Thomas, S. and Corral, V., pp. 3-4, Global experience with electricity liberalisation, 2009, PSIRU, psiru.org, <http://www.psiru.org/sites/default/files/2009-12-E-Indon.doc> [Accessed: 06 Feb 2014]).

In Europe, Re-municipalisation of services is a new trend and essential undertaking of Government to successfully remedy the above issues on behalf of consumers (Hall, D., Re-municipalising municipal services in Europe, 2012, PSIRU, psiru.org, <http://www.psiru.org/sites/default/files/2012-11-Remun.docx> [Accessed: 06 Feb 2014]).

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:

Under this point the Government seeks comment on priority issues, barriers or gaps within the COAG Energy Market Reform Agenda. One issue that does need to be considered here from the ASU point of view, is that the electricity industry is strongest in the states where it has a large and most significant industrial landscape. This may be both manufacturing, retail, whatever business activity, but the larger the business activities, the greater the reliance on the electricity system, and therefore the largest investment (i.e. the most largest populist states have the largest amounts of business activity and the largest number of consumers, and therefore have a significant position on the electricity industry). The question here needs to be asked as to how much industry involvement could be provided to COAG based upon a percentage term of the role of each distributor in the equation (i.e. should COAG discussion timetable arrangements include not just a State Government position, but a position being put forward by distribution company X-Y and Z?) This also could be layered as there are different needs in different states for the role of COAG i.e. regulatory reforms based on COAG and energy supply may be specifically critical for metropolitan Sydney, western suburbs, Newcastle, Wollongong and the south-east part of Queensland, however these distribution requirements may be substantially different for the state of Tasmania, noting its different amounts of manufacturing and industry-based and also it's largely tourism population. Perhaps consideration could be given to weightings that may be about population density and industry requirements, and these could be looked at significant levels, A-B-C and D so to speak.

Possible approaches and impact of review of tariff structures including fixed network costs. As mentioned above, the issue of fixed network costs is one that is regulated by the AER. This is a significant part of the industry in its positioning and ensuring the distribution system operates effectively. It is noted that in other countries there have been substantial moves to reduce the number of tariff levels that are available to the community. In particular, this has occurred by way in New South Wales with the merger of the old County Council models into a series of five distribution companies now being brought down to three distribution companies where they still have many multiples of tariff levels that have an historical purpose. Tariff structure changes are a politically difficult issue as they have been established historically in specific areas and tariffs have been increased in percentage terms, not necessarily to the overall level. This has been significantly important in the lack of electricity charges increased and the lack of spend on the system in rural areas of New South Wales and Queensland prior to their corporatisation. The system's reliability factor was clearly at a low level prior to corporatisation and the system reliability factor was reflected in tariffs. We now see across the country, many hundreds, if not thousands of tariff levels which are a difficulty. We note also that in European countries that have a different geographical environment, they have moved to establish a much greater reduced number of tariffs and comparisons to the Scandinavian countries in tariff levels and also to U.S.A. may well be an issue. There is also the question of tariff levels perhaps being established separately for domestic consumers and maintaining regulatory prices for regulated tariffs for domestic consumers and remove the domestic consumers from the market as they serve no purpose and leave the market level to the game of those consuming significantly large amounts of electricity that might be more than the usual domestic household, perhaps any person paying less than \$2,000 as an electricity bill, should be removed from competition and returned solely to a regulated environment. This would clearly reduce the political level of positioning that is put by consumers as consumers could be regulated, with regulation prices kept low and provide only large consumers into the significant higher levels. This is reflected in the introduction of the National Electricity Market when it was undertaken by way of a series of tranches and that the remaining bottom tranche were the domestic consumers. Should we remove the domestic consumers tranche from the National Electricity Market, significant cost differences would well occur and there needs to be a clear examination of the role of the distribution companies and whether or not the churn taking place in electricity consumers in the retail side, is really worthwhile and has it actually provided a benefit to consumers? We believe it has not as if there are profits being made by the private sector in the retail market, which is really substantiated on how much you're buying electricity for and costs of transmission charges, perhaps the issue for competition for domestic consumers has been a failure and should be examined for removal.

In respect of the impact of structural review including network costs, time of use and electricity tariffs and smart metres, there are significant issues here to be asked in what really constitutes the specific needs of consumers. Some of the issues that do need to be considered is consumers of power to participate in electricity savings and be encouraged to run their electrical appliances without smart metres outside of peak times. An advertising campaign that would encourage the use of electricity appliances such as home swimming pool pumps, dishwashers, heat saving equipment and washing machines to be operated outside of the normal hours should encourage consumer actions to try to reduce electricity demand and supply. Of note here is Local Government's role in managing recycling products, of glass bottles, papers et cetera, where these items are recycled every week with no

commercial benefit being provided to the customers or the residents, however people do this to make a commitment to the environment and to reduce waste. A similar mechanism can be used here in respect of electricity prices (please see ASU Climate Change discussion paper references to this).

As part of reduction of costs to consumers, we should give consideration to the role that none of the market-based systems can play in the reduction of electricity consumers. We believe that there are significant opportunities here for customers to withstand or perhaps not see the introduction of market-based forces such as taxes on energy, but rather that we see consumers willingly making a commitment to using less electricity. Consumers have embraced this in many ways with the changes of electricity light bulbs, turning off their computers at the power point and many other green initiatives. There is not just one solution to reducing the price to consumers, there are many.

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:

“The electricity regulatory system exposes abuse of market power but also creates perverse incentives for private investors that undermines efficiency, reliability and equity.”(Toner, 2012, pp. 15-21)

Privatisation in Victoria:

The ASU refers to a recent paper published in April 2013 by David Richardson (p. 11, *Electricity and privatisation: What happened to those promises?*, TAI, tai.org.au, http://www.tai.org.au/system/files_force/TB%2022%20Electricity%20and%20privatisation.pdf [Accessed: 6 Feb 2014]) that found since Victoria privatised power in the 1990s, electricity prices have outpaced inflation, increasing by 170 per cent compared with an increase of 60 per cent in the consumer price index.

Consumers are worse off since Australian states decided to privatise their electricity assets with Mr Richardson warning that power sell-offs in NSW and Queensland were unlikely to ease cost-of-living pressures and might even slug consumers with higher bills and worse service.

An article by Shane Green, *The Age* on November 2013 also highlights the shocking truth regarding power price increases in Victoria (Shane Green, 2013, *The Age*, [online] 9 Nov, <http://www.theage.com.au/comment/the-shocking-truth-about-the-privatisation-of-power-20131108-2x76f.html> [Accessed: 6 Feb 2014]).

The ASU forcefully contends that privatisation is not an economic imperative for efficient and effective service provision. Public sector provision of electricity provides more direct accountability to the public and is not compromised by commercial secrecy and tactics to boost profits. Privatisation benefits no-one except the private companies.

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:

The energy sector and in particular the electricity industry is a Category 1 national security infrastructure and serious consideration needs to be given to the questions of offshore ownership. Companies that have strong links to their governments and/or are overseas Government owned companies. Already, much of the electricity is owned by Asian Government-owned companies:

Table 1.3 Generation ownership in the National Electricity Market, July 2011 (pp.30, State of the Energy Market 2011 Chapter 1, AER, aer.gov.au, <http://www.aer.gov.au/sites/default/files/Chapter%201%20National%20electricity%20market.pdf> [Accessed: 6 Feb 2014]);

Table 2.1 Electricity transmission networks, July 2011 (p. 49, State of the Energy Market 2011 Chapter 2, AER, aer.gov.au, http://www.aer.gov.au/sites/default/files/Chapter%202%20Electricity%20networks_0.pdf [Accessed: 6 Feb 2014]).

“Australian government electricity assets have proven quite attractive to both overseas governments and private investors. [Tables referenced above list the ownership of Australian generation, transmission and distribution assets within the national electricity market]. For example, offshore investors include the government of Singapore (through Temasek Holdings, the Singaporean sovereign wealth fund and Singapore Power, a publicly listed company but 100% owned by Temasek), China Light and Power, Spark Infrastructure (formerly known as Cheung Kong Infrastructure), French company GDF Suez, Tokyo Electric Power Company and China Huaneng Group. These foreign investors own a large number of assets across the Australian electricity supply chain. An important implication of foreign government ownership of these assets is that, in contrast to neoliberal advocates within the governments of Australia, overseas states obviously do not regard their ownership of Australian electricity assets as either excessively risky from a commercial point of view nor an impediment to competing against fully privately owned electricity entities. 5 There is also significant overseas private ownership of Australian electricity assets. Overseas ownership of these assets adds significantly to Australia's foreign debt, due to the repayment of interest and principal and the fact that the purchase of existing electricity assets is achieved primarily through debt rather than equity. The repatriation of interest, principal and profits also contributes to Australia's unsustainable current account deficit as there is no offsetting export income from electricity assets as both production and consumption of electricity occurs solely within Australia. Secondly, the economic benefit to Australia from the high level of foreign ownership of electricity assets is unclear. For example, the bulk of the investment would appear to be in existing assets and does not contribute to expanding new capacity. In addition, it is sometimes argued that overseas owners can transfer more efficient technologies and practices. This is an empirical question, though the evidence to date on productivity is unconvincing” (Toner, 2012, p. 17)

The regulation of energy infrastructure is largely controlled by the AER (AER). The AER determines, in particular, the prices that are set for recovery on assets of distribution networks and ensures a figure being set for the amount of dollars that can be charged for use of their distribution system from generator to retailer. These assets are largely still in public sector hands and should remain so and in particular, these are assets that could well be returned to State Governments in order to seek to reduce the costs to the consumer and have electricity savings made in the transmission systems reinvested in the assets rather than being passed on as profit to shareholder. There is no reason that these assets need to be privatised and there is no reason that these assets need to be held in a corporatised model

because the corporatised model is used for efficiency purposes and a return of profit to shareholders. It is better to ensure that an asset is held at arm's length and is therefore open to competition from other State owned corporations or the private sector. These are stand-alone assets of transmission systems and serious questions need to be asked about whether it is worthwhile maintaining assets now in private sector hands, or returning all transmission assets to the public sector.

With respect to distribution companies charges for recovery of monies on assets, to some degree State Governments are beneficiaries of efficiencies in the distribution industry. Once the AER figure determination has been reached should the actual distribution company be able to maintain and/or provide the service that it deemed it would, those excess monies may be returned to the shareholder of the business. I.e. if an energy distribution charge of $x + y$ is maintained by the distribution company (public or private) and in fact the charges are able to be kept at $x + y - 4\%$, a 4% profit, or a 4% savings is returned to Government for sustaining the assets. That raises a question about the actual value of AER determinations and whether or not there are better mechanisms that could stop such charges. We note here also that profits provided by the distribution sector, once privatised, are not returned to the State either by way of keeping electricity prices down, provision of water services, roads, schools, hospitals, or any other general public sector asset. Profits; instead, are returned to shareholders in other 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 Government seeks comment on the nature of current skills shortages being expressed and how these could be addressed within the industry. Current industry skills shortages have been around for some time. Government reforms of electricity sector in the 1990's saw Governments stop their large-scale skills apprenticeship training in the electricity industry and worldwide by way of privatisation and public sector reform. There was a significant reduction in electricity tradespersons being skilled and trained in the 1990's. This is now coming online and we are now seeing concerns on this in many levels as we have reduced the amount of trainees and apprentices in the electricity industry over that period of time and we are now faced with a convergence of retirement age and also the gap of the 1990's.

Please note the issue has been the subject of a United Nations International Labour Organisation report. Please see report by the United Nations: International Labour Office. 2010. A Skilled Workforce for Strong, Sustainable and Balanced Growth: A G20 Training Strategy. Geneva: ILO

The industry needs to be encouraged to provide access to skills and training and include more apprentices and up-skill existing staff. Unions have been strong arguers for this and in fact, industry is lagging behind in a number of areas. In particular, some parts of the industry have not grappled enough with their responsibilities and have not moved forward.

The capacity of industry and education sector-led programs to meet long-term training and skills development needs of the energy and resources sectors

The ASU has been a long term supporter of the necessity to develop skills and training in the industry. The ASU notes our role in the National Training Agenda and our role in dealing with E-Oz, the Electricity Industry Skills Council; which has been acknowledged in the Government's White Paper on page 29: "E-Oz Energy Skills Australia has committed to a review of the Energy Supply Industry and Gas Supply

Industry training system components. This review will ensure skills are available to meet the demand for labour in establishing, operating and maintaining gas-fired power generation systems.”

Specific long-term training and skills development needs for alternative transport fuel, renewable energy, energy management and other clean energy industries.

Making local government vehicles and plant more energy efficient:

Because local government industry represents the largest vehicle market in Australia, the ASU has found that the majority of local government fleets operate on hybrid engines, use renewable energies or switch to operate on lower emissions fuels like liquid petroleum gas or liquefied natural gas where refuelling will likely occur from street mains. Some local governments are already considering this measure.

It is important that analysis of energy efficiency and emissions intensity include the entirety of the life cycle of the vehicle or plant so that the energy used in manufacturing and disposing of the vehicle and the accompanying emissions are assessed, along with the fuel efficiency of the vehicle over its operational life.

It would be of no practical use for a fuel efficient vehicle to use half the amount of fuel, if twenty-five times as much energy is used producing the fuel efficient vehicle compared to its less operationally efficient peer.

The take up of alternative fuelled vehicles- in particular those powered by liquefied natural gas- will lead to new and changed employment opportunities within local governments.

These are significant areas and more definitively, needs to be done by government as new energy forms come into the market. It is; however, significant that we should try best to ensure we have a base trade position for these officers and persons to move from and build their skills. We should also look at taking current skilled workers in classifications that are moving out of Australia needs, such as fitters and turners, printers and machinists and others who have some qualifications, admittedly in a different skills area, but their aptitude to work as a tradesman is still there.

We should therefore look at locating tradespersons whose skills are no longer being used in this country as technology, export and trade has moved on, and we should assist these workers in being retrained to undertake tasks in the electricity industry. I point significantly to issues such as fitters and machinists that used to work in the printing industry and are no longer. A lot of that work done in Australia is now done overseas. Those workers are now excess and rather than see them work on lower level skills, we should offering an opportunity for tradespersons whose work is moved overseas to undertake an assessment process to look at what additional qualifications are required of them to be able to complete their studies. We also need to undertake this in a significant and new way of thought. We need to use more computer based systems, more distance learning opportunities and more opportunities to build skills for persons, not just in attending T.A.F.E., but during the regular T.A.F.E. or other RTOs during regular daylight hours, but we also need to find other ways to assist these people in distance learning and computers where they can do it on their own. In short, asking people in their 40s with a specific level of skills, to go back to the classroom for learning is just not appropriate. Other family needs are there, we need to condition and make our training more accessible to people to assist in their redevelopment. There have been some significant changes in a number of areas. There have been a significant number of small satellite employment programs that took over when the steel works in Newcastle and other locations closed that have seen people retrain and redevelop their skills and had them used in significantly different areas. This should be part of a project with specific, I note the specific reference that despite political differences or any considerations, a level of workplace participation and in particular, engagement with unions involved in the new trades areas is seen as important, i.e. it's not a case of engaging with all unions, but the unions that are working in the areas where those tradespersons as seen as moving onwards, i.e. if it's a case of training up a motor mechanic from a specific area of production into Local Government areas, it's the Local Government Unions you need to talk to, not the motor vehicle manufacturing unions if that makes sense.

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:

With respect to the impact of structural review including network costs, time of use and electricity tariffs and smart metres, there are significant issues here to be asked about what really constitutes the specific needs of consumers. Some of the issues that do need to be considered will mean inviting consumers of power to participate in electricity savings by encouraging the running of their electrical appliances outside of peak demand periods. An advertising campaign could encourage the operation of electricity appliances such as home swimming pool pumps, dishwashers, heat saving equipment and washing machines – outside of normal hours. Actions taken should encourage consumer to reduce electricity demand and supply. Of note is the role of Local Government to manage recycling products, of glass bottles, papers et cetera, where these items are recycled every week with no commercial benefit being provided to the customers or the residents, however people do this to make a commitment to the environment and to reduce waste. A similar mechanism can be used here in respect of electricity prices.

The ASU notes that there have been numerous of schemes available to support innovations that can address energy usage patterns. However, we also note that these appear to be ad hoc in their application and anecdotal evidence indicates they can be difficult to navigate. To address this, the ASU recommends that the Federal Government re-commit resources to a Department of Climate Change and/or establish an Energy Efficiency Innovations 'Clearing House'. The operational intent of the Clearing House would be to assist and advise proponents of innovations from local governments, businesses and individuals to access government assistance and support for their innovation to be considered and where appropriate actualised.

Recognising the importance of public recognition for innovation in challenging areas of public policy, the ASU observes the relevance of the establishment of a national program of 'Prime Minister's Awards'. We recommend the establishment of these awards across a range of categories, focussed on organisationally and individually developed and applied innovations.

Just as the ASU knows that quality public services can contribute significantly to efforts to address climate change, it knows that the actions we each take can make a difference, no matter how small they may seem at the time. This is the principle of thinking global and acting local.

The ASU notes that many households already undertake the types of actions outlined here and also that for low income households, some of these measures require government financial support to establish and implement through programs of education, because they will lead to lower ongoing costs:

Households can consider taking the following steps to reduce their energy usage:

- 1. Use off peak electricity by measures such as setting appliances to run overnight. This uses otherwise wasted power and is cheaper. Demand management meters and in some cases software will be required to take full advantage of this opportunity.**
- 2. Switch off or unplug appliances with inbuilt clocks or small lights**
- 3. Change light globes to the low energy incandescent bulbs**
- 4. Seal around doors and windows to ensure rooms remain at constant temperatures**
- 5. Hang clothes on a clothes line- don't use a hot air dryer unless absolutely necessary**
- 6. Switch lights off when rooms are empty (ASU. 2008. Quality public services - opportunities to address climate change in Australia. [report] asu.asn.au pp. 32-34).**

As part of reduction of costs to consumers, we should give consideration to the role that none of the market-based systems can play in the reduction of electricity consumers. We believe that there are significant opportunities here for customers to withstand or perhaps not see the introduction of market-based forces such as taxes on energy, but rather that we see consumers willingly making a commitment to using less electricity. Consumers have embraced this in many ways with the changes of electricity light bulbs, turning off their computers at the power point and many other green initiatives. There is not

just one solution to reducing the price to consumers, there are many.

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:

“For environmental technologies to penetrate and succeed in global markets, it is important that they succeed domestically. Thus, well-designed environmental policies that spur innovation, and government measures that contribute to creating and consolidating domestic markets for environmental technologies constitute a basis for success in global markets.” (OECD. 2008. ENVIRONMENTAL INNOVATION AND GLOBAL MARKETS. [report] France: OECD, p. 7)

Taking action on renewables is integral to addressing the energy market imperatives discussed in the issues paper. Renewables represent a remarkable opportunities to tackle the security of energy supplies; regulatory reform; growth and investment of energy markets; energy and resource trade; workforce productivity; and energy productivity. An unwavering and intelligent commitment that integrates industry policy on all the above; cannot be acknowledged if global market developments are not fully appreciated. Australia can take advantage; however, the role of government will determine the success of Australia’s emerging renewable industries.

“Several countries already source over 70% of their power generation from low-carbon sources. For these, investment has typically only occurred with substantial government intervention, even where markets have subsequently been liberalised” (UK Committee on Climate Change, 2009. Meeting Carbon Budgets –the need for a step change. Progress report to Parliament. P.136-137 <http://www.theccc.org.uk/reports/progress-reports>)

Firstly and in spite of proposing such a new market as an apparent remedy for security of energy supplies issues, nuclear power is not the answer for 2 significant reasons: (Thomas, Prof. S. 2010. THE FUTURE OF ENERGY: ARE COMPETITIVE MARKETS AND NUCLEAR POWER THE ANSWER?. [report] Greenwich: PSIRU, pp. 6-11)

1. The experience in the UK & more relevantly, in countries where nuclear power contributes most to supply (e.g. France, Slovakia and Switzerland) nuclear has not delivered on its promises of negligible cost. Operating costs have proven to be as expensive as double expected wholesale price. Reasons include the necessary responsibility of factoring in the cost of future decommissioning of the plant in a manageable way as well as ongoing environmental management of spent fuel, into year-on-year operating costs.

2. The cost per kilowatt hour (kWh) to the consumer has little margin for flexibility in pricing. Estimates as high as 70% of the cost of a kWh of nuclear electricity derived from the cost of initial construction (made-up predominantly of construction and borrowing costs). Construction cost has been difficult to manage accurately at the time of proposal, providing unreliable projections of future prices. Add to that the cost of spent fuel disposal and – like the future risk of decommissioning costs – cost far in the future is too much of an unknowable risk.

Secondly, the global failure of electricity markets to spur development in renewable markets has led government investment in meeting renewable energy targets. Germany has commenced a successful program of re-municipalisation and the results have meant secure sufficient capacity that protects against the effects of market instability and other high-cost maintenance issues of electricity assets (Hall, D., Thomas, S., Van Niekerk, S. and Nguyen, J. 2013. Renewable energy depends on the public not private sector. A briefing by PSIRU for the PSI delegation to the ADB Conference on renewables, June 2013. [report] Greenwich: PSIRU, pp.3-4).

And in the UK, economic downturn has meant necessary government intervention to resolve issues through new renewable markets: “The UK regulator, OFGEM stated: ‘The unprecedented combination of the global financial crisis, tough environmental targets, increasing gas import dependency and the closure of ageing power stations has combined to cast reasonable doubt over whether the current energy arrangements will deliver secure and sustainable energy supplies.’ And ‘There is an increasing consensus that leaving the present system of market arrangements and other incentives unchanged is not an option.’ The UK committee on climate change advised that: “we should not accept the significant risks and costs associated with the current market arrangements... changes to the current arrangements are both required and inevitable.” (Hall and Thomas et al., 2013, p. 4).

The Government of the State of California, United States of America, has a market based bidding system that uses fuel choice as a key indicator not just fuel price.

We must; also, consider reinvesting in small, regional and specific large-scale hydro that that can contribute and should be encouraged at all times. Renewable generation from waste sites, food processing and other by-products should be important contributors to the supply market.

Electricity smart-grids have in the past been seen as market contributors and should continue to be. Smart-grids and their ability to manage electricity fuel choice are important and should receive ongoing support. We encourage more work in the area. Smart-grids can be a critical part of cost and supply and reliability issues.

General Comments

Any further comments?