Energy White Paper 2014 –
Issues Paper submission template

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Confidentiality

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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:
No comment

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:
TIME-OF-USE TARIFFS **While tariff reform is welcomed by Master Electricians Australia (MEA) as a strategy to reduce peak demand, we believe that time-of-use based tariffs offer little promise of achieving this end. In practice, time-of-use based tariffs tend to provide an excessive peak period with virtually no discount on the shoulder. With limited opportunity for the average household to actually take advantage of lower prices, consumers end up paying more and those who do save money are those who already use power at odd times of day, such as shift workers.** **Controlled load off-peak tariffs on the other hand can provide genuine cost savings but are underutilised due to a number of issues such as the current requirement to hard wire appliances and the absence of back- up for the one odd day per year when power may be needed at the wrong time. These weaknesses could be overcome through smarter technology, such as the installation of a**

"booster switch" which could allow the consumer to manually boost their supply under times of extreme need (and still under the discretion of the supplier) and the possible application of the tariffs to socket outlets. There is very clear potential for controlled load off-peak tariffs to be utilised beyond their current application, should the government eventually remove the requirement for off-peak appliances to be hard-wired into a home's electrics. Such tariffs are well placed to be used in a variety of settings throughout a household and could include dishwashers, second televisions, free standing lights, outdoor pool lighting, power for tools and other portable appliances.

SMART METERS

While smart meters have the potential to provide savings for consumers, MEA would be opposed to a mandatory broad scale roll out of advanced metering infrastructure. Consumers who are in the position to alter their electricity usage patterns could certainly benefit, however, many consumers do not have this luxury. In fact, mandatory smart meters would likely have a detrimental impact on many households, particularly families with young children and the elderly. To these more vulnerable consumers who have no choice but to use electricity during peak times, smart meters and time-of-use tariffs will more than likely lead to higher energy bills. We do acknowledge that smart meters can be beneficial to some households and should be made available to those consumers who make the decision to change to advanced metering. For these consumers, smart meters will provide incentive to change their energy usage behaviour and reduce their electricity bills. However, it is the more vulnerable members of society that will lose out with a mandatory smart meter roll-out.

If these new generation meters are to have the desired effect of minimising greenhouse gas emissions and reducing consumer power bills, the responsibility must lie with retailers to install new meters as required by their customers. It is not the government's place to make this decision on behalf of each consumer, particularly when each household's living situation, energy usage and capacity for change can vary so significantly. Smart metering should be a choice, not a mandatory imposition.

We would also urge government to perform a cost/ benefit analysis regarding tariff and metering reform and in doing so consider alternative metering solutions apart from smart meters. Second generation electronic interval meters are one example of the options available. Nonetheless, whichever option is adopted it must be at the consumer's discretion to make the change.

The Victorian smart meter disaster demonstrates the need for more extensive community consultation and education about a smart meter system. If the public are fully informed about advanced metering they may be more willing to make the choice and embrace the new technology, fully aware of the costs and benefits of the change. If smart metering is to become a reality for Australian households, we strongly urge government to allow for comprehensive customer consultation prior to implementation.

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:

No comment

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:

No comment

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:

SKILLS SHORTAGES

According to a report released by DEEWR, Australian Jobs 2013, Electrician continues to be listed in the top five occupations expected to provide the largest number of new jobs over the next five years across Australia, with 23,800 new jobs projected to be created.

The E-Oz Enviroscan 2013 forecasts the increasing demand for electrotechnology skills, confirming the potential for a looming undersupply. EE-Oz reports that, according to census data, between 2006 and 2011 the national workforce grew by approximately 8%, while the electrotechnology workforce grew at an average of 19.47%. Figures for electricians are particularly striking with a 23% increase in demand between 2006 and 2011. So, in a period in which the workforce grew by 8%, employment of electricians grew at almost three times that rate.

These figures are evidence of the skills shortages in the electrotechnology industry. While industry's support for the continued inclusion of theses occupations on the Department of Immigration's Skilled Occupations List goes some way towards addressing these shortages, industry must play an active role in filling the gaps in supply and demand.

APPRENTICESHIPS

Apprentice commencements in the electrotechnology industry have stagnated for the past six years. The steadily dropping completion and attrition rates for apprentices are another concern for industry. The most recent figures indicate the completion rate for electrotechnology apprentices was below 55% with attrition rates averaging 45%. These figures are particularly problematic given the growing demand for these skills within the economy.

MEA considers that it is time for the Federal Government to re-assess the apprenticeship system with alternative strategies to be considered to boost apprentice numbers and retention in order to address skills shortages. Greater flexibility and innovation is needed to ensure quality outcomes for apprentices, the employers who indenture them and the broader energy sector. Specific issues to be addressed are discussed below.

- **Apprentice Remuneration Decision**

The recent substantial increase to apprentice wages that followed the Fair Work Commission's Apprentice Wage Decision is having the effect of deterring many MEA members from employing new apprentices, particularly employers running small businesses. With the current downturn in construction activity, this wage increase could not have come at a worse time. The eventual consequence being that while the demand for electricians remains strong the capacity for industry to match this demand with qualified electricians will be low. We urge Government to work with industry and develop strategies to minimise the impact of these wage increases.

- **Competency Based Progression**

The national training qualifications are based on competency standards. Unfortunately in too many jurisdictions across Australia, there remain impediments to effective implementation of competency based apprentice progression. Greater emphasis in relation to competency progression would encourage more apprentices into the electrotechnology industry. It would also enable employers to charge apprentices out at a higher rate if they were able to progress as they became competent. This would have flow on benefits to the business, the electrical industry and also the broader economy by helping to overcome skills gaps in the electrotechnology sector.

MEA would urge the Federal Government to consider how best to further promote competency based, as opposed to time based, apprentice progression as a priority.

- **Foundation Skills**

With MEA's experience working with both employers and apprentices through our ApprenticeConnect program, it is evident that many of those who embark on an electrical apprenticeship do so unaware of the challenging nature of the trade. MEA's soon to be introduced Foundation Skills Program is an example of the kind of support that industry groups can provide to address this issue. The Foundation Skills Program is designed to arm prospective apprentices with the knowledge and skills to ensure they are fully prepared to take on an electrical apprenticeship. The Program commences 48 weeks before the

start of an apprenticeship and involves work experience as well as a placement program with an employer. Many school leavers embark on an electrical apprenticeship underestimating the level of knowledge and skills required which is a significant contributor to the low completion and attrition rates. Programs that focus on developing these foundation skills will put apprentices in a much better position to successfully complete their electrical apprenticeship.

- **Apprentice Mentoring**

Targeted one-on-one support from industry experts, as offered through MEA's ApprenticeConnect, is another proven means to achieve a successful completion outcome for an apprentice. MEA's ApprenticeConnect retention statistics when compared to the industry average speak for themselves. Apprenticeships that are serviced by ApprenticeConnect boast an 82% contract of training retention rate within the program. This is well above the current industry standard of 45%.
It is important that targeted initiatives such as ApprenticeConnect are endorsed and supported by government. Industry groups are ideally placed to develop and manage these programs with the unique requirements of employers and apprentices from their industry in mind.

LONG-TERM TRAINING AND SKILLS DEVELOPMENT NEEDS

- **Energy efficiency**

Despite the new Federal Government's repeal of the carbon tax, escalating electricity prices remain a reality for the Australian public.

This creates a strong incentive for consumers to actively consider their energy consumption decisions and look for more energy efficient alternatives. Renewable energy options are likely to continue to be in high demand from large businesses to individual householders. This demand can already be seen with the growing popularity of solar photovoltaic (PV) panels and solar hot water systems. This creates a corresponding demand for electrotechnology workers with the necessary skills in energy efficiency. It is imperative that tradespeople begin to undertake the necessary training now in order to provide these specialised services for the public over the long-term.

- **Energy auditing training**

Energy auditing is a further skills development need that will be essential for the energy sector now and in the years to come. However, if an energy audit is to effect meaningful change, it is essential that the auditor providing the advice has the requisite knowledge and qualifications to make the assessment.

Recognising the growing demand for energy efficiency expertise, industry developed a nationally accredited qualification to support the skills needed to be a competent energy auditor - the Certificate IV in Energy Efficiency and Assessment. Master Electricians Australia has now trained a large number of electricians in the new qualification - UEE43111 Certificate IV in Energy Efficiency and Assessment. The Certificate IV stands out from other energy auditing qualifications requiring a current electrical licence as pre-requisite. This ensures that only technicians with a high level of skill and experience will receive the qualification, resulting in more comprehensive and effective energy audits for consumers.
This qualification should be entrenched as the minimum level any person completing an electrical energy audit should complete.

Unfortunately, the failed 2009 Climate Smart Program did some damage to the reputation of the energy auditing industry by endorsing underqualified and inexperienced energy auditors to perform energy assessments in Australian homes. A government endorsed energy auditing qualification would restore consumer confidence in the energy auditing industry and would be welcomed by Master Electricians Australia.

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:

DEMAND SIDE PARTICIPATION MEASURES

A proven and effective means to enhance the current suite of energy efficiency measures to provide greater energy efficiency and improve energy productivity is education. If householders and business owners understand the impact that their energy usage is having on the environment and their power bills they are much more likely to make the necessary changes. This can be achieved through an in-home energy audit performed by a qualified energy auditor.

A qualified energy auditor is in the ideal position to educate consumers on the changes they can make to improve their energy efficiency (further discussion on the industry developed Certificate IV in Energy Efficiency and Assessment qualification is at point 5 under the heading of Energy Auditing Training). An energy auditor can identify realistic and affordable changes that can save households and businesses thousands of dollars in electricity bills and dramatically reduce greenhouse gas emissions. MEA has many examples where an average residence reduced their energy consumption by over 65%, saving approximately $1,500 on their annual energy bill.

It is in the best interests of consumers, government and the industry for there to be a continued and strong focus on energy auditing performed by accredited technicians as a strategy for achieving energy efficiency and reducing carbon emissions.

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:

NETWORK TARIFF STRUCTURES AND SOLAR PV

In reviewing existing network tariff structures, MEA recommends that greater consideration be given to tariff structures that would accommodate battery storage systems for grid-connected solar power.

As solar power subsidies are progressively discontinued, there is now an opportunity to invest more resources into ways to make solar technology more attractive to consumers. One of the main objections to the broad-scale uptake of renewable energy technologies such as solar PV is the issue of intermittency, i.e. solar technologies only produce power when the sun is shining. A solution to this problem could lie in the use of energy storage systems or "battery banks" for solar PV systems. These battery banks would allow excess solar power to be collected in batteries for later use as required. However, currently the cost of storage technology can be prohibitively high making it quite unattractive for those who have the option to simply buy relatively cheap electricity from the grid. If more resources can be directed to refining this storage technology in order to make it more affordable, there is a likely to be a stronger uptake of solar power as an energy alternative.

A tariff structure that would reward users of battery banks for solar PV may act as the added incentive needed for consumers to embrace solar power options. This targeted tariff structure could be similar to a maximum demand tariff, providing genuine savings to those utilising solar PV and in turn reducing the peak demand pressure on the grid. However, in encouraging the use of solar technology, it is important to remember the lessons learned from the Government's solar incentive scheme. The scheme, which has now been phased out, provided a generous multiplier mechanism for consumers who installed polar PV systems in their homes. While achieving the objective of increasing the uptake of solar PV technology, the excessive rebate resulted in higher electricity bills for consumers not in the financial position to install solar PV systems. Those utilising the technology already enjoyed lower bills simply by virtue of being able to access solar power. We would urge government to consider the alternative strategies available that would encourage the uptake of solar PV technology to ensure the costs of grid backed-up distributed energy systems are equitably distributed.

BARRIERS TO THE INCREASED UPTAKE OF ELECTRIC VEHICLES

The primary barriers to the increased uptake of electric vehicles are the high upfront cost to purchase these vehicles and the significant expense involved with the inevitable replacement of a battery. While the long term savings of an electric car may be substantial, the initial outlay is cost prohibitive for many consumers when compared to the price they would pay for a petrol vehicle. A similar problem exists for solar power technology, where recouping the cost of installation is likely to take several years which many consumers find difficult to justify. The current availability of electric vehicle charging stations

would also be a concern for the public.

In order to overcome these barriers, MEA recommends that a study be undertaken to investigate the new infra-structure that would be required to support the electric vehicle energy demand. Making the results of the study readily available to consumers could boost public confidence in the effectiveness and the long-term cost savings of an electric car. Such a study could also include a cost/benefit analysis of introducing tax incentives and rebates for drivers who purchase electric vehicles.

General Comments

Any further comments?