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Energy White Paper Taskforce
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Energy White Paper – Issues Paper

The Energy Supply Association of Australia (esaa) welcomes the opportunity to make a submission to the Department of Industry's Energy White Paper Issues Paper.

The esaa is the peak industry body for the stationary energy sector in Australia and represents the policy positions of the Chief Executives of 34 electricity and downstream natural gas businesses. These businesses own and operate some $120 billion in assets, employ more than 51,000 people and contribute $16.5 billion directly to the nation's Gross Domestic Product.

The esaa is strongly supportive of developing an integrated and coherent Australian Government position on energy policy. The Commonwealth Government has a key role to play in implementing policy settings that provide for the secure, reliable and least cost delivery of energy supply to Australian homes and businesses. Given the complex nature of downstream energy supply and changing market dynamics more broadly, there is a range of challenges that must be addressed to ensure these objectives are met over the long term. The Energy White Paper provides a timely opportunity to explore these challenges and develop a reform strategy that will deliver dynamic, competitive and consumer focused energy markets for the benefit of all Australian consumers.

The Association considers the most appropriate way to maximise economic growth while also delivering a sustainable energy supply system is through a framework that encourages efficient and competitive energy supply. At a high-level, this requires identifying and prioritising policy initiatives that: minimise regulatory burden; support competitive markets; and encourage market-based solutions for new investment. Coupled with robust concessions frameworks to provide targeted assistance to those most in need, such an approach will ensure consumers continue to benefit from efficiently priced and reliable energy supply over the long term.

Consistent with this, we have outlined below the key issues facing the electricity and natural gas sectors. More detailed comments can be found in Attachment 1. As the Association represents the stationary energy sector, we do not offer comments on policy issues specifically relating to liquid fuels.

Electricity

The electricity supply system in Australia is undergoing a period of transformation. Advances in technology are fundamentally changing the way electricity is made, moved and consumed. Consumers have also experienced sharp rises in electricity prices in recent years as the system keeps pace with strict reliability standards and a range of other cost pressures, including environmental policies.

Declining electricity demand coupled with the rapid uptake of solar PV has created new challenges for the traditional electricity supply model. Recent weather events in Victoria and South Australia indicate that peak demand has not been eroded in the same way as overall consumption. While the long-term impacts of these trends need to be better understood, the development of a more dynamic, flexible and consumer focused electricity supply system would ensure a more efficient and sustainable response to these challenges. Key to this approach is ensuring market and regulatory frameworks allow for allocation of costs to participants in line with the requirements they place on the system and allocation of revenues to participants in line with the benefits they provide to the system. To do otherwise is inequitable.

It is premature to draw conclusions regarding the effectiveness of the current market design, which has to a large extent been robust to a range of distorting policy interventions. Nevertheless, the price signals arising from the current market framework appear unlikely to drive an efficient transition in the near term. Significant financial and commercial barriers to exit for existing generation plant are likely a factor in this regard.

For the electricity generation sector, a key factor that must be considered is the impact of policy uncertainty, particularly as it relates to climate change policy and energy policy. Investment in generation capacity is not a pertinent issue at present given declining demand, but continued uncertainty over climate change policy could discourage investment in the future, or potentially exacerbate the current oversupply situation even further.

To partially address these challenges and avoid future unintentional negative outcomes on the structure and efficient operation of the wholesale electricity market, the government must carefully consider the rationale for encouraging additional supply of any type. A key focus for government should therefore be the provision of stable policy that continues to stimulate competition and encourages an efficient market-based approach to the effective deployment of new generation.

By contrast the network sector will continue to require capital investment to replace ageing infrastructure. Given that network regulation has been subject to thorough reviews and revision in recent years, a period of regulatory stability is required to allow those reforms to be implemented through the next round of revenue determinations.

With respect to the broader supply chain, completing the retail market deregulation process and encouraging the development of, and transition to, tariff structures that appropriately reflect the costs of the system is essential. This approach will allow consumers to flexibly adjust to cost-reflective price signals and ensure each pays

their fair share of system costs, the long-term benefits of which are improved system utilisation and least-cost electricity supply.

An additional factor that has the potential to deliver efficiency gains across the sector, while also indirectly improving energy security, is greater uptake of electric vehicles (EVs). Utilising spare network capacity at off-peak times (e.g. overnight) to charge EVs would be almost costless but would improve the efficiency and operation of the electricity network. In effect, with sensible incentives for users to charge at off-peak times, more than 500,000 EVs could be charged without requiring major new electricity infrastructure.

Natural gas

Australia is naturally endowed with significant reserves and resources and has historically benefited from the provision of secure, reliable and reasonably priced gas supply – relative to global standards – for some time. While gas is poised to continue playing an important role in the future of Australia's energy supply industry, the domestic market is in a state of transition. Production costs are rising, political uncertainty is hampering onshore gas development in a number of regions and new demand from the Liquefied Natural Gas (LNG) industry is challenging market dynamics. This has placed increased scrutiny on market operations and the current policy settings.

As discussed throughout this submission, there are relevant differences between the Western Australian and east coast gas markets which may warrant a different approach from governments. On the west coast, domestic gas users have supported a domestic reservation policy as an important policy lever in ensuring adequate domestic supplies.

On the east coast, the greater diversity of producers, gas sources and pipelines to transport the gas presents a different situation. Though it's currently unclear as to how the east coast domestic market will adjust to these new pressures, market intervention to force domestic outcomes is not the answer. Rather, it is important that efforts are focused on encouraging continued resource development and exploring ways to enhance competition and drive efficiency gains across the broader east coast gas market.

Despite the different stages of development, two priority areas of reform have relevance to both markets and their particular circumstances. These include:

- stimulating resource development to mitigate supply and cost pressures for consumers over the short and longer term; and

- improving market transparency and access to information across the supply chain, while also having regard for existing investment arrangements.

Identifying and exploring policy options to address these reform priorities will help mitigate any supply and cost pressures for consumers over the longer-term.

Any questions about our submission should be addressed to Shaun Cole, by email to shaun.cole@esaa.com.au or by telephone on (03) 9205 3106.

Yours sincerely

Kieran Donoghue
General Manager, Policy

Attachment 1

Security of Energy Supplies

Ways community expectations can be better understood and reflected in reliability standards

A number of states implement prescriptive planning standards that require businesses to maintain a level of redundancy to ensure that augmentations needed to maintain reliability are not deferred. These standards have imposed high costs on a number of networks.

A move toward a less prescriptive approach that focuses on customer outcomes and explicitly considers the trade-off between cost and reliability seems inherently sensible. The Australian Energy Market Commission (AEMC) has undertaken work to develop a framework that better reflects the value customers place on reliability. This includes separate frameworks for both transmission and distribution reliability.

The Association has a number of reservations over the AEMC's proposed approach for distribution reliability. In particular, that additional consultation by different bodies about the same reliability/cost trade-offs may not achieve a better outcome than integrated consultation in a regulatory determination process. This undermines the electricity distribution network's direct customer relationship at a time when policy makers argue there needs to be cultural change.

A superior approach is an incentive based national framework for reliability that is integrated with the revenue determination process administered by the Australian Energy Regulator (AER).

The value of developing fuel reserves to meet Australia's international oil security obligations, and augment domestic security

Given the high costs associated with investing in strategic reserves, it is important to consider opportunities to indirectly improve liquid fuel security through diversification of fuel usage, particularly in the transportation sector. Greater uptake of electric vehicles (EV) and natural gas vehicles (NGV) provides one such opportunity, the benefits of which would extend across multiple sectors

Liquid fuels have been used for the past century to power most cars and other transport vehicles. As a result, around 75 per cent of Australia's fuel usage is now attributable to the transportation sector. While the heavy reliance on liquid fuelled internal combustion engines is likely to continue in the short term, significant advances in technology have created a new generation of EVs and NGVs that have the potential to surpass traditional petrol and diesel engine vehicles on performance, safety, design and running costs.

From an energy security standpoint, a shift to vehicles fuelled by domestic fuel sources such as electricity or natural gas would reduce reliance on imported fuels. EVs in particular are not reliant on a specific source of primary energy, meaning any technology that can generate electricity can be used to power an EV. Further, it reduces the risks of price vulnerability due to oil supply constraints.

Encouraging continued exploration, particularly for unconventional resources, is also an important factor that should be considered. While much of the focus is currently on developing gas rich resources, continued exploration and development brings with it new opportunities for developing liquids production capacity domestically.

Ways to increase new gas sources to meet demand and measures to enhance transparency in market conditions

Delivering policy certainty and removing barriers to supply

The development of unconventional gas reserves and resources has been constrained on the east coast to date, principally as a result of political uncertainty and overly restrictive planning laws and regulatory frameworks. Such an environment has severe implications for the timeliness and diversity of supply, as it creates barriers and risks to investment at a time when continued resource development is essential. New South Wales is at the forefront of this issue and serves as an example of the problems that could emerge more broadly unless appropriate policy settings are in place for the exploration, production and supply of gas.

To ensure gas resource development is sufficient to support both domestic and export demand in the future, it is critical that government policies relating to the exploration and production of unconventional gas resources are carefully considered. In particular, government policies should give adequate consideration to the concerns of local communities, but also focus on relevant evidence based analysis and the key role natural gas plays in the Australian economy, both in terms of value creation and as an essential service.

Policy settings must also avoid duplicative and often inconsistent state and federal requirements. According to research conducted by the Australian Petroleum Production and Exploration Association, duplicative state and federal regulations may be holding back projects worth around $200 billion without any environmental benefit.[1] The Productivity Commission reiterated these concerns, highlighting the overlap and duplication of similar regulatory processes as "*one obvious source of unnecessary burden for proponents of major projects*".[2] Government initiatives to reduce green/red tape should therefore be supported, including the proposed one-stop-shop for environmental approvals.

Given a reliance on high-cost offshore gas resources and limited diversity of domestic supply, the management of retention leases is an issue that has particular relevance to Western Australia. The government previously outlined changes to the management of oil and gas retention leases with a view to delivering greater scrutiny of applications. These included:

- Verifying that companies seeking to retain a lease over oil or gas fields have a legitimate need to secure gas for long-lived production projects and are not simply seeking to obtain a competitive commercial advantage by their retention.

[1] The Australian Petroleum Production and Exploration Association, *Cutting green tape: streamlining major oil and gas project environmental approvals processes in Australia*, February 2013.
[2] The Productivity Commission, *Major Project Development Assessment Processes – Research Report*, November 2013.

- Should a field become commercial, requiring the company holding the retention lease to apply immediately to the Minister for a production licence to bring the field online. Alternatively, at the end of the retention lease period, the lease should be offered on a tender basis for a production licence.

Arguably the most essential component of the retention lease system, limited transparency with respect to the way in which commerciality is assessed has raised some concerns about the appropriateness of retention lease policy arrangements more broadly. In particular, that a potentially narrow assessment of commerciality and lack of third party participation and transparency in the assessment process could potentially subdue obligations on producers to bring commercially viable gas resources to production.

The former Commonwealth Government appeared to be cognisant of some of these issues, with the 2012 Energy White Paper outlining a number of key actions. These included updating the retention lease arrangements to: improve transparency; allow third party comment on the commerciality of developing particular fields; and specifically have greater regard to the potential for projects to supply the domestic gas market when considering granting a production licence.

Resource development is a high risk and capital intensive activity and there are multiple commercial considerations that govern the overall timing and scale of project development. As such, it is important to provide resource businesses with the scope to deliver efficient investment across their broader portfolio. But given the need to promote continued resource development, the Association is supportive of actions to provide greater clarity and transparency around the application of retention leases. This includes exploring whether there are other appropriate avenues to promote use-it-or-lose-it contestability such as auctioning, as foreshadowed by the government.

Enhancing transparency in market conditions

Information transparency and liquidity are key features of well-developed gas markets globally and it is important to investigate how these attributes can be enhanced across the domestic supply chain. With the east coast gas market in the midst of a transitional period (due to the anticipated tripling of demand), exploring how best to enhance transparency and encourage flexible access to supply is an appropriate area of focus in this regard.

A number of recent and ongoing government initiatives have been established with the aim of enhancing these market attributes, including: the Short Term Trading Markets; the Gas Bulletin Board; and the Gas Statement of Opportunities. The Wallumbilla supply hub is also an example of another key reform that has the potential to further enhance market development.

On this basis, an incremental approach to reform that has appropriate regard for existing contracts is likely to be the most appropriate response. Such an approach provides a better balance of risks/benefits relative to more heavy-handed reform and would likely be consistent with supporting industry-led initiatives such as the ‘trade facilitator’ model currently under development on the east coast.

The Association has provided more detailed commentary in relation to east coast gas market reform priorities and other related issues in its response to the Eastern Australian Domestic Gas Market Study. Addressing these issues will require a coordinated effort by governments and industry, but there is a clear role for the Commonwealth in engaging with stakeholders to develop and coordinate the most efficient path forward. The submission has been provided as an attachment to this paper.

Unlike the east coast, the existence of a range of wholesale gas market rigidities specific to Western Australia have constrained the development of a competitive and secure domestic gas market. Current characteristics of the Western Australian wholesale gas market include: limited diversity of supply; infrastructure capacity constraints; limited price transparency; and increasing energy costs.

Given these constraints, domestic gas users have concerns as to whether or not LNG producers would commit to providing domestic gas supply at volumes and prices more consistent with a well-functioning market in the absence of a gas reservation policy.

In recent years, a number of initiatives have been pursued to deliver a more competitive and efficient market. These include the development of a Western Australian based Gas Bulletin Board and GSOO, as well as investment in additional production and storage capacity.

Despite this progress the reform process remains largely incomplete, particularly with respect to the upstream gas market. The development of further competition in WA's wholesale gas market is still potentially inhibited by: authorisation for joint selling and marketing: management of retention leases; a lack of price transparency; and a lack of responsiveness and flexibility in gas transportation. Coupled with the risks associated with continued regulation of retail tariffs, further work is necessary to facilitate a competitive, secure and reliable gas market.

Issues relating to the regulation of energy infrastructure

Recent concern over the increase in costs of providing network services has prompted a wave of government processes examining the regulatory framework. If these review processes are not carefully managed and coordinated, the original intent of the national framework to facilitate efficient investment may be lost. To this end, a key focus for government is to ensure recent regulatory reforms are properly implemented and their outcomes understood before further network regulatory reviews are contemplated.

The adoption of smart grid technology to improve network utilisation and improve productivity of electricity supply will require further investment. State governments have an important role to play in enabling the deployment of advanced metering infrastructure to the extent it is inhibited in some regions, while also assisting industry with communicating benefits to consumers.

An additional consideration in this space is the role of government in the energy sector. Establishing the right regulatory framework is one thing, but businesses must be able to make efficient investment decisions within that framework. Where

governments assume multiple roles, including that of asset owner, competing interests can arise and potentially impede such outcomes. Over the long term, consumers will be best served if governments consolidate their roles and focus efforts on: joint oversight of NEM-wide electricity sector developments with other governments via the Standing Council on Energy and Resources; and addressing jurisdictional specific issues through direct policy instruments.

Please see 'Regulatory Reform and Role of Government' section for more detailed discussion relating to privatisation of energy assets.

Regulatory Reform and Role of Government

Priority issues, barriers or gaps within the COAG energy market reform agenda

The COAG reform agenda is based on four key areas. These are strengthening regulation, empowering consumers, enhancing competition and innovation and ensuring balanced network investment. In pursuing reform in these areas, it is important there is a focus on delivering a dynamic energy market that recognises the emerging ability for even small consumers to play an active role. Encouraging the development of, and transition to, tariff structures that appropriately reflect the cost of utilising the system is a critical element in this regard.

At its December meeting, the Standing Council on Energy and Resources (SCER) considered key factors impacting the electricity market, especially with respect to declining demand. The impact of market developments on network tariffs was a key focus, with Ministers "agreeing to consider how best to mitigate these impacts at the first SCER meeting in 2014".

While the December meeting outcomes were somewhat obscure, they suggest SCER is aware of the importance of ensuring the regulatory framework promotes the development of tariffs that appropriately reflect the underlying cost drivers. They have already initiated a rule change request on distribution pricing, although its narrow focus on determining network tariffs via a long run marginal cost means it is unlikely to resolve the issue.

A more strategic approach that empowers consumers and ensures equitable and efficient allocation of costs representative of the whole supply chain is needed to deliver equitable outcomes between customers with different consumption profiles, as discussed in further detail below.

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

In developing a long-term electricity tariff strategy to address this issue, there are two factors that must be considered, namely: the structure of the tariff; and how it should be implemented.

To address the underlying inequity and allow for more efficient use of the electricity supply system, a new tariff structure that reflects the true cost drivers of the system is

required. This implies accounting not only for how much energy is consumed from the grid but also the time and rate at which it is consumed, consistent with the make-up of network costs.

There is a range of tariff structures that can potentially achieve the desired outcome and the esaa recently commissioned analysis by Deloitte to investigate their pros and cons. The report is attached. Preliminary findings suggest a capacity based tariff has some advantages over other tariff types. But the industry needs to be allowed to develop tariffs appropriate to the characteristics of different parts of the system and should not be constrained through overly prescriptive regulation This may include interim models depending on the capability of the metering stock and customers' willingness to adapt to new tariff structures. In this regard, governments have a valuable role to play as a trusted source of information and guidance to customers.

In the interest of providing a gradual transition to more flexible pricing arrangements, the Association has developed a range of guiding principles. These principles include provision for the implementation of advanced metering infrastructure.

Principle 1: All customers should be moved onto cost reflective tariffs as soon as possible.

- *Trigger 1: Any customer requiring a meter replacement or being connected for the first time should have a meter capable of delivering cost reflective tariffs installed.*

- *Trigger 2: All customers in a part of the distribution network approaching a constraint should be moved onto an advanced meter.*

- *Trigger 3: Customers who are likely to be causing the largest distortions should have an advanced meter installed.*

- *Trigger 4: A customer voluntarily requests a tariff that requires a new meter.*

Principle 2: Customers who are imposing the largest distortion should not be able to choose to remain on existing tariffs.

Principle 3: Tariff changes are to be revenue neutral

Principle 4: Disadvantaged customers should receive direct assistance from government, rather than be offered special tariffs.

For the above principles to be implemented successfully, government and industry will need to work together to educate consumers on the need for change and what the changes mean for them. It must be noted that while time-of-use tariffs are a step in the right direction, they are not necessarily fully cost-reflective and may only be an interim solution. Tariffs based on capacity rather than consumption are likely to be more efficient solutions over the long term. Ultimately the approach may differ in different parts of the country depending on variations in climate, availability of alternative energy sources such as reticulated gas and so on. Governments have a key role to play in allowing industry to deliver the most efficient long-term solution.

Advanced metering is a critical element of the reform agenda. In conjunction with market deregulation and more cost-reflective and flexible tariff structures, advanced metering will enable consumers to realise the full benefits of broader and more diverse product offerings tailored to their particular needs. Wide-spread uptake of advanced metering will also play an important role in driving efficient outcomes across the entire supply chain where electricity tariffs better reflect the costs of energy supply.

Despite the noted advantages, it must be acknowledged that more advanced metering infrastructure and flexible tariffs can also lead to bill increases in some situations (e.g. if demand is not moved out of peak pricing periods). It is therefore important consumers are educated on how best to reap the benefits of such technologies. Further, improvements to concessions frameworks at a state level will ensure those vulnerable customers who may not be able to adjust receive assistance.

Possible measures to promote greater price transparency in gas markets

Please see commentary provided under the ‘ways to increase new gas sources to meet demand and measures to enhance transparency in market conditions’ section.

Areas where further privatisation of government-owned assets would contribute to better outcomes for consumers

Government involvement in the electricity sector beyond that of policy maker and regulator can create a conflicting set of interests, the outworking of which may be inefficient policy decisions and diminished stakeholder returns.

Currently various state governments play multiple roles in the electricity sector, including policy, price regulation, asset ownership and consumer protections. This inevitably brings tensions that do not appear to have been well-balanced over recent years, with network businesses in particular being subject to abrupt changes in rates of investment in Queensland.

Over the long term, consumers will be best served if governments consolidate their roles and focus efforts on: joint oversight of NEM-wide electricity sector developments with other governments via the Standing Council on Energy and Resources; and addressing jurisdictional specific issues through direct policy instruments.

In the short-term, the principal benefits will be to improve a government’s fiscal position, enabling more funding for key infrastructure of the type less suited to private sector financing (state schools, hospitals, etc.). From the perspective of consumers, there will likely be little obvious change as most state-owned energy businesses have been structured to operate commercially and either compete against privately owned businesses (generation, retail) or are regulated by the same regulator (networks). Consequently, the overarching governance will act to protect consumers from adverse outcomes.

But equally, the reforms to date mean that immediate benefits in the form of significantly lower prices for example, are not likely. Public messaging on the benefits

of privatisation should reflect this as previous overselling of the benefits of privatisation per se (as opposed to the broader reform program) has likely contributed to the current public antipathy.

There is currently a fiscal disincentive to privatise based on the competitive neutrality framework which requires that state-owned businesses make tax equivalent payments to the state treasury. On privatisation, this income stream diverts to the Commonwealth in the form of actual corporate income tax payments. We encourage state and Commonwealth governments to work together to remove this disincentive.

Growth and Investment

Commercial or market initiatives that could enhance growth and investment in the energy and resources sectors

Future levels of growth and investment in the energy sector will be largely contingent on the outlook for domestic electricity and natural gas demand, as well as international demand for LNG. Domestic growth is expected to be low in both cases, with LNG exports driving the natural gas sector.

Despite expected low demand at a domestic level, an important consideration here is how to encourage efficient levels of growth and investment in the energy sector. For the electricity sector, this will require stable government policy, particularly with respect to climate change policy and transparent price signals. Encouraging the development of, and transition to, tariff structures that appropriately reflect the cost of supplying electricity is a key priority in this regard, as is completing the market deregulation process (i.e. retail price deregulation).

Domestic gas demand growth will be significantly overshadowed by LNG exports. Efficient growth and investment for domestic supply will require continued exploration, particularly for unconventional gas reserves, as well as efforts to drive competition and transparency across the supply chain. Such measures will be vital in seeking to moderate any price and availability pressures in the future.

Areas where approvals processes could be further streamlined while maintaining proper environmental and social safeguards

There are greater opportunities to rationalise approvals for energy infrastructure projects in some jurisdictions than others.

Victorian arrangements for development approval have been raised in the past as being divergent from other states in the areas of: approvals for wind farm developments; timeframes taken for connection agreements; and acquiring approvals for vegetation management and cultural heritage.

Major development approvals processes are generally considered to be effective but could be improved by providing greater coordination of secondary approvals and statutory timeframes for decisions.

A lack of alignment between approvals processes and the commercial realities faced by many energy sector developments has also been raised in the past. Greater

flexibility in site layout and design without the need for amendments to development approvals or works permits may assist.

With respect to the resources sector, policy settings must also avoid duplicative and often inconsistent state and federal requirements. According to research conducted by the Australian Petroleum Production and Exploration Association, duplicative state and federal regulations may be holding back projects worth around $200 billion without any environmental benefit.[3] The Productivity Commission reiterated these concerns, highlighting the overlap and duplication of similar regulatory processes as "*one obvious source of unnecessary burden for proponents of major projects*".[4] Government initiatives to reduce green/red tape should therefore be supported, including the proposed one-stop-shop for environmental approvals.

The impacts of variable land access policy and ways the community could be better informed and engaged on development in the energy sector

While the esaa strongly supports policies that encourage best practice community engagement, arbitrary and non-evidence based approaches to land access and planning policy more broadly should be avoided across all technology and energy resource types. Interventions of this nature often give rise to unintended and negative consequences. These include delayed and inefficient investment, an outcome of which may be higher energy costs for consumers over the long term. Two recent examples where such an approach has been taken include wind farm planning laws in Victoria and unconventional gas exploration/production restrictions on the east coast.

Aside from a lack of evidence-based rationale for introducing the policy initially, the arbitrary imposition of wind farm planning restrictions in Victoria has led to a perverse situation for some projects that are not able to develop on the basis of the most efficient and advanced technology. The new planning policy in Victoria was implemented with no transitional arrangements and extremely limited capacity for existing projects to be modified so that even relatively minor technology adjustments may not be pursued.

As discussed earlier with respect to the importance of encouraging new gas resources, the development of unconventional gas reserves and resources has been constrained on the east coast to date, principally as a result of political uncertainty and overly restrictive planning laws and regulatory frameworks. New South Wales is at the forefront of this issue and serves as an example of the problems that could emerge across the broader east coast market unless appropriate policy settings are in place for the exploration, production and supply of gas.

To avoid such outcomes in the future and ensure energy and resource development is sufficient to support domestic and export requirements, it is critical that government land access and planning policies are carefully considered. In particular, government policies should give adequate consideration to the concerns of local communities, but

[3] The Australian Petroleum Production and Exploration Association, *Cutting green tape: streamlining major oil and gas project environmental approvals processes in Australia*, February 2013.
[4] The Productivity Commission, *Major Project Development Assessment Processes – Research Report*, November 2013.

also focus on the key role of energy in the Australian economy, both in terms of value creation and as an essential service.

There are also opportunities for rationalisation of unconventional resource development policy across the states. This could be guided by the multiple land use framework and harmonised framework for coal seam gas (CSG) developed by SCER.

Trade and International Relations

Australia's long term prosperity will be largely contingent on our ability to adapt to changing international dynamics and build upon our strengths. Internationally, energy demand continues to grow, particularly from non-OECD countries. To successfully capture the growing demand for energy and energy services, ongoing innovation and collaboration between Australian industry and other countries will be required.

The Australian energy industry has a broad range of skills and expertise that can be utilised. A key role for government will be to continue to promote Australian businesses and work with the energy sector to ensure that opportunities for technology exchange and export are realised. Continued support for research, development and demonstration (RD&D) processes will be a useful step in this regard.

Driving Energy Productivity

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 esaa supports greater efficiency and productivity across the Australia economy. This includes the use of the energy itself. Energy efficiency is not an end in itself, but is worthwhile when the costs to achieve lower energy use are lower than the costs to produce and transport the energy saved.

In general, the users of energy should be best-placed to make that trade-off. There may be some barriers to their doing so, for example:

- static, inefficient and non-cost-reflective consumer pricing;
- information asymmetries in consumer education;
- capital constraints faced by financially vulnerable consumers;
- split incentives (landlord/tenant to install energy efficient products); and
- bounded rationality (limited understanding/interest dictating product purchase).

Cost-reflective pricing is the only price-based barrier to energy efficiency. With this in mind, it makes little sense to try to address the remaining barriers to energy efficiency through white certificate schemes.

Any demand management and energy efficiency strategy should be based on enabling the industry to move towards offering more cost-reflective tariffs that will incentivise cost-effective demand response and ensure consumers have access to appropriate tools to manage their consumption effectively.

Encouraging the development of, and transition to, more cost-reflective tariff structures and enabling improvements in metering services is necessary to achieve this. Both government and industry have a key role to play in facilitating this transition and communicating benefits to consumers more broadly.

The use of demand-side participation measures to encourage energy productivity and reduce peak energy use

Empowering customers by providing them with more timely and meaningful information about their consumption allows for more efficient use of energy. Further, as discussed earlier, advanced metering and more flexible tariff structures can also deliver cost savings to consumers. These savings are achieved through more efficient network investment and the development of more innovative pricing offers that suit different patterns of consumption.

In considering additional demand-side measures, the government should avoid implementing policies that may have unintended consequences. In this regard, the Association does not support implementing the AEMC's proposed demand response mechanism (DRM).

During the design process the costs and benefits of the DRM have come into greater relief. It appears likely the DRM will distort underlying market signals and impede efficient decision making, with costs that outweigh the benefits. This combined with a lack of policy rationale for the mechanism, raises serious concerns about proceeding with its development.

Measures to increase energy use efficiency in the transport sector

Electric vehicles have the potential to deliver broad strategic and economic benefits beyond their direct impact on consumers. There are three main strategic benefits of electric vehicles: environmental, increased energy security and grid stability.

Environment

One of the fundamental differences between EVs and conventional cars is that electric cars enable consumers to eliminate greenhouse gas emissions from their vehicle use. This will vary depending on whether life-cycle emissions are assessed or just the emissions associated with refuelling the vehicle.

The Victorian Government's electric vehicle trial found that over the lifetime of a vehicle, EVs recharged using renewable electricity produce less greenhouse gas emissions than internal combustion engines (ICEs) after just three years. When fuel combustion alone is considered, even when the electricity used to charge EVs comes from a CO_2-emitting source, such as a coal or gas-fired powered plant, the net CO_2 production from an electric car can be lower than from a comparable combustion vehicle.

EVs also release almost no air pollutants at the place where they are operated. This removes key air pollutants from cities, improving air quality. EVs also create less noise than an internal combustion engine vehicle, whether it is idling or in motion.

Utilisation of the grid

One of the key drivers for recent electricity price rises has been the cost of re-investment in electricity networks and transmission systems. This multi-billion dollar infrastructure is built to manage large but short run spikes in energy demand. It is mostly underutilised, particularly at night, when the majority of transport vehicles are garaged. Utilising this spare overnight capacity is almost costless but would improve the efficiency and operation of the electricity network. In effect, with sensible incentives for users to charge at off-peak times, more than 500,000 EVs could be charged without requiring major new electricity infrastructure.

Future generations of EVs may be capable of storing and releasing energy back into the grid at high times of demand. While this may be a future use of EVs, it is not possible with the existing range of EVs likely to be in the market until the end of the decade. It should be seen as a potential long-term benefit.

Greater take-up of natural-gas powered vehicles (NGVs) could similarly improve gas network utilisation.

Energy security

Oil is a finite and depleting resource. Oil prices have tracked in excess of $100 a barrel since 2011. New extraction technologies will continue to extend the proven reserves of oil-based fuels, although this is likely to be at higher cost. By contrast, electric vehicles are not reliant on a specific source of energy. Any technology that can generate electricity can be used to power an EV. This means EVs have the ability to be fuelled by fully renewable energy sources.

The value of Australia's imports of crude oil, automotive and diesel fuel totalled more than $32 billion in 2011–12, even though Australia is one of the biggest exporters of energy in the world. A shift to vehicles fuelled by domestic fuel sources such as electricity or natural gas would reduce this reliance on imported fuels and the risks of price vulnerability due to oil supply constraints.

Alternative and Emerging Energy Sources and Technology

Ways to encourage a lower emissions energy supply that avoids market distortion or causes increased energy prices

As noted in the Issues Paper, policy that encourages low-emissions energy supply in a manner that does not lead to increased price pressures, risks surety of supply or reduces investment certainty for long-return investments is a difficult proposition. This is particularly so given the current state of oversupply in the NEM wholesale electricity market, key drivers for which include: declining electricity demand; and increased renewable plant underwritten by the Renewable Energy Target (RET).

Crucially, there are also doubts as to whether older plant will exit the market in a timely manner in order to rebalance supply and demand.

To partially address these challenges and avoid future unintentional negative outcomes on the structure and efficient operation of the wholesale electricity market, the government must carefully consider the rationale for encouraging additional supply of any type. In this regard, a key focus for government should be the provision of stable policy that continues to stimulate competition and encourages an efficient market-based approach to the effective deployment of new generation

Consistent with this approach, the esaa considers government initiatives may be best directed at supporting the process of RD&D in the energy industry where there are positive benefits that cannot otherwise be captured by those developing the technology. Demonstration projects in particular, face a funding challenge. The private sector needs to fund projects that will generate a return and can be unwilling to provide finance until results are proven.

Targeting funding in this manner would effectively be fuel and technology neutral and enable the market to make future investment decisions as required. In this respect the apparent erosion of funding for the Australian Renewable Energy Agency (ARENA) is concerning. This is of course provided that ARENA's programs seek to address demonstrated market failures and avoid introducing market distortions through funding for deployment.

Where additional policy measures are to be considered, it is critical the underlying rationale is explored in consultation with industry stakeholders. This should include a robust assessment of overall costs and benefits prior to potential implementation.

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

The rapid uptake of rooftop solar photovoltaic (PV) panels and high penetration of energy intense domestic appliances – especially air-conditioners – has reinforced the need for more efficient and equitable tariff structures. Under the current flat rates offered, consumers do not face cost-reflective prices, and this leads to unfair cross-subsidies.

Over time this may lead to inefficient system utilisation and also require an increasing proportion of consumers – particularly low income households – to pay more than their fair share of network costs.

To address the underlying inequity and allow for more efficient use of the electricity network, it is important to encourage the development of, and transition to, tariff structures that appropriately reflect the cost of supplying electricity (i.e. tariffs that account not only for how much energy is consumed from the grid, but also the time and rate at which it is consumed).

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

Consistent with views articulated above in relation to encouraging supply, the esaa is strongly supportive of a market-based approach to investment in new generation capacity. To ensure this trend continues, it is important to avoid introducing any market distortions through 'picking winners'. New technologies should therefore have to compete on their own merits.

How the uptake of high efficiency low emissions intensity electricity generation can be progressed

Commonwealth and state governments have an important role to play in delivering sound policies that continue to stimulate market competition and ensure the most cost effective deployment of new generation. Where efficient price signals are in place, private investment will continue to deliver adequate generation capacity and reliable electricity supply for all consumers.

Ongoing low wholesale prices are not sufficient to underpin significant new capacity of high efficiency low emissions intensity electricity generation. Conversely, the costs of permanent exit may inhibit withdrawal of higher emission plant, which would rebalance prices towards a level more conducive to investment. What, if any role, governments may play is an issue for careful consideration.

These price levels, especially once the carbon price is removed, will also make it more difficult to attract the required investment to meet the RET as it stands. Consideration must be given in the upcoming review to reshaping the target so it better aligns with the long-term objectives of the RET and the current supply/demand balance

The government's proposed Emissions Reduction Fund is unlikely, based on current indications of its design parameters, to affect this situation. This is not inherently a fault with the fund, merely a reflection that it cannot be all things to all parties.

An additional factor that must also be considered is the impact of policy uncertainty, particularly as it relates to climate change policy and energy policy. Continued uncertainty over climate change policy has discouraged investment in the energy sector.

Any barriers to increased uptake of LPG in private and commercial vehicles and CNG and LNG in the heavy vehicle fleet

At present, the Issues Paper refers only to heavy fleet use of LNG and CNG and private vehicle and commercial fleet use of LPG. The esaa considers this to be too limited; heavy, commercial and even passenger fleets have the potential to transition to LNG and CNG. Even if heavy fleet appears to most promising application of vehicle LNG/CNG, there is no reason to rule out its use in other vehicle types.

The Association has identified several barriers to the uptake of CNG and LNG as a vehicle fuel, including:

- The high purchase price of vehicles, relative to diesel and other petrol vehicles, is a major barrier which, when coupled with generally poor resale value, makes NGVs relatively less attractive to consumers. This is exacerbated by the limited

options for natural gas engines available in the Australian market. Support for transitioning to gas-fuelled vehicles has been limited to LPG.

- A reliable network of re-fuelling infrastructure is an important factor needed to facilitate NGV uptake. Australia has experienced a decline in refuelling infrastructure over the last 15 years. Fuelling stations are largely being situated in strategic locations for commercial users, rather than dispersed across metropolitan areas to promote uptake in small consumer markets. In line with the availability of refuelling infrastructure, Australian NGV uptake has flattened in the last decade.

- The lack of clear policy direction from governments at all levels has not allowed for a stable, long-term response from the industry and has provided no certainty to investors.

A full review of barriers and perverse incentives across the supply chain to the uptake of alternative fuels is needed. This includes incentives provided for vehicles (rebates and emissions standards); fuels (excises and credits); supporting infrastructure and user charges (registration, weight-based taxes).

The Federal Government should also consider fuel security when developing policies impacting the transport sector. This is important given that there is an increasing reliance on imported oil; diesel imports have increased in volume by almost 800% over the past 10 years.

The cross-sectional nature of industries impacted by alternative transport fuels means that there are strong reasons for the Government to establish an Alternative Fuels Taskforce, having regard to work completed previously through the Strategic Framework for Alternative Transport Fuels.

Any barriers to the increased uptake of electric vehicles and advanced biofuels

While electric vehicles have the ability to exploit some clear design and performance advantages, some barriers remain when compared to conventional vehicles. These include purchase price premiums over conventional cars, concerns over the driving range of vehicles, the availability of charging (refuelling) infrastructure and uncertain resale values.

The esaa's recent 'Sparking an electric vehicle debate in Australia' report identified a range of policy enablers that have been successful in stimulating demand for EVs in a number of international markets:

- Purchase price subsidies for consumers, as was applied for diesel technology when it was a developing industry

- 'Feebates' which involve increasing the purchase price of conventional fuels, such as petrol excise tax increases

- Luxury Car Tax (LCT) applies to Australian vehicles priced above $59,133, or $75,375 for fuel efficient vehicles (fuel consumption of seven litres or less per 100 kilometres). As such, this tax is unlikely to apply to small EVs whose

recommended retail prices fall below this threshold. However, the LCT applies to a premium EV. Accordingly, exempting EVs from LCT could potentially improve the rate of adoption of EVs in Australia.

- In addition to the LCT, imported vehicles are subject to a 5 per cent customs duty, levied against the Australian Customs' valuation of the vehicle. Removing or lowering this duty for EVs could take some pressure off the purchase price and stimulate uptake.

- Granting on-road privileges to EV users such as transit lane access for EVs, or designated EV parking spaces in metropolitan areas.

As has been seen in the market for solar PV, the wrong combination of policies can result in unforeseen consequences and uneconomic outcomes. Careful consideration is required to determine which, if any, policy enablers are appropriate in the Australian context.

Attached to this submission is the esaa's 'Sparking an EV Debate in Australia' report.