



11 November 2014

John Ryan  
Energy White Paper Taskforce  
Department of Industry  
CANBERRA ACT 260

Submitted by email: [EWP@industry.gov.au](mailto:EWP@industry.gov.au)

Dear Mr Ryan

### **Energy Green Paper**

Origin Energy Limited (Origin) welcomes the opportunity to contribute to the Commonwealth Government's Energy White Paper (EWP) consultation process. Conceptually, the EWP has the potential to make a significant contribution to the efficient development of Australia's energy markets. For a variety of reasons, however, the effectiveness of previous iterations of the EWP has been limited. It is therefore important that this White Paper is clear in what it intends to achieve. One of the underlying challenges is the varied nature of the energy policy and regulatory framework, and that the Commonwealth is only likely to have partial responsibility for the delivery of any comprehensive policy package. Notwithstanding this, Origin considers this EWP process can facilitate the delivery of tangible outcomes by:

- Identifying policy objectives that will allow for robust and resilient energy markets;
- Specifying the actions (and associated timeframes) needed to ensure the meeting of these objectives - even where these are not the direct responsibility of the Commonwealth; and
- Facilitating a discussion on current and potential future challenges facing energy markets and possible policy approaches for dealing with these.

The Green Paper covers many of the pertinent issues that warrant consideration when looking at the long term strategic direction of energy markets. There are however some significant omissions. In particular there is limited commentary on a long term emissions reduction strategy. Given the interdependencies between climate and energy policy, the White Paper should have a meaningful discussion on this issue. Additionally, the current and potential future challenges facing the electricity market are deserving of a more in-depth discussion. Our views on these and other issues in the Green Paper are set out in the attached submission and summarised below.

- **Attracting energy resources investment**  
Origin supports the Government's one stop shop initiative and the progress made towards reducing duplication of the administration of the Environmental Protection and Biodiversity (EPBC) Act. The Commonwealth should also help ensure that there is a general acceptance and understanding of the reforms by the broader community.  
Where jurisdictions continue to impede project development, the Commonwealth should consider the introduction of an incentive framework to encourage greater cooperation.
- **Electricity prices**  
The deficiencies in the current approach to network tariff setting will need to be addressed so as to eliminate current cross subsidies and ensure equitable pricing outcomes for all consumers.  
In finalising its rule change regarding network pricing, the Australian Energy Market Commission (AEMC) should ensure network tariffs reflect customers' ability to understand and respond to complexity; and that tariffs move towards cost reflectivity immediately.

The Australian Energy Regulator (AER) should also be charged with the design of a consistent set of guidelines to apply to small customer tariff structures across the electricity market.

The prohibitive cost of site specific metering exit fees could dampen enthusiasm for smart meter uptake if these are not allocated in a more efficient manner. In the absence of the appropriate metering technology, network companies should be encouraged to progressively increase the fixed cost portion of network charges to more accurately reflect the cost of peak utilisation. Provisions would need to be made for any vulnerable customers impacted adversely.

The Commonwealth should play a key role in facilitating customer education around the need for, and benefits of, tariff reform, as well as the development of a national approach to customer hardship.

#### **Gas supply and market operation**

In light of increasing demand, the immediate challenge facing the east coast gas market is the removal of impediments to supply.

With added scrutiny on gas markets it is important that policy setting remains sound. Origin welcomes the Commonwealth's continued resistance to distortionary policies such as domestic gas reservations.

There have been a number of industry led initiatives aimed at improving gas market efficiency which have facilitated an increase in transparency and market effectiveness. These include the short term trading markets and Wallumbilla supply hub. Origin continues to support an incremental approach to gas market reform.

#### **Electricity market sustainability**

The National Electricity Market (NEM) is undergoing a significant period of transformation with an unprecedented decline in demand and ongoing oversupply. There are indications of the existence of barriers to exit which need to be addressed to restore equilibrium. Uncertainty around the future of the renewable energy target (RET) has added to the paralysis around exit decisions, and Origin urges a speedy resolution to this.

There is an outstanding question around the resilience of the NEM in the long term in the face of the increasing entry of zero short run marginal cost renewable energy, which is likely to depress wholesale prices. To enable the optimal plant mix the market design will need to ensure the viability of all generators.

#### **Long term emissions reduction policy**

There is an inextricable link between carbon abatement initiatives and the efficient functioning of energy markets. For this reason, commentary on a long term approach to emissions reductions should be contemplated as part of the White Paper process. A weakness of the current policy framework is the misalignment between energy and carbon policy, the White Paper should look to avoid a similar pitfall.

Early consideration of Australia's post 2020 emissions reduction commitment will help guide decisions around potential policy solutions. Given that approximately 40 percent of the entire generation fleet in the NEM will be more than 40 years old in 2030, clarity around potential carbon abatement commitments is crucial in guiding decisions regarding asset replacement.

If you wish to discuss any issues pertaining to this submission please do not hesitate to contact me on (02) 8345 5250 or Steve Reid on (02) 9503 5111.

Yours Sincerely,



**Tim O'Grady**  
General Manager Public Policy & Government Engagement

## **1. Attracting energy resources investment**

The Green Paper rightly identifies that Australia must address those issues that detract from its attractiveness as an investment destination. In seeking to achieve this goal, the importance of reducing duplication and streamlining the major projects approvals process has consistently been identified as a priority. It is crucial that the assessment and approvals framework is sound, and that it results in the safe and responsible development of resources projects at least cost. Where the cost of navigating the approvals and assessment process is greater than what is required to meet this objective, it will deter investment and lead to a lowering of economic benefits overall.

Origin supports the Government's one stop shop initiative and the progress made towards reducing duplication under the administration of the Environmental Protection and Biodiversity Act (EPBC Act). Whilst we are encouraged by most states now signing bilateral agreements with the Commonwealth, the lack of bipartisan support for the reforms has the potential to delay final implementation. Origin recommends that as part of the one stop shop initiative, the Commonwealth should ensure that there is a general acceptance and understanding of the reforms by the broader community. In particular it is important to demonstrate that while the purpose is to improve approval timeframes by adopting a more simplified process, this will not result in a reduced level of environmental protection compared to the status quo. For example, under the plan to devolve administration of certain aspects of the EPBC Act to the States, the Federal Environment Minister will still have the right to veto decisions, ensuring that there are checks and balances.

Many resources projects are subject to state based regulations and approval processes. However, similar to the adoption of reforms such as privatisation and deregulation, some jurisdictions have lagged behind in implementing a regulatory framework that is conducive to project development. This will need to change if the Commonwealth is to meet its objective of making Australia an attractive investment destination. Perhaps a similar incentives-based approach to that of the recently introduced Asset Recycling Initiative could be used to induce these states to implement the reforms needed to foster development.

The importance of an equitable and efficient taxation regime is an often overlooked facet of what is needed for a sound investment framework. For example it is crucial that there is immediate deductibility of exploration costs to take into account the highly prospective and risky nature of such activities. To ensure that Australia is able to attract the requisite capital investment, the approach to taxation including royalties should be no more onerous than that of other countries engaged in resources development.

## **2. Electricity prices**

It has been well documented that retail electricity prices have increased significantly over the past few years primarily due to higher network charges. Origin supports initiatives aimed at ensuring that consumers pay no more than is necessary for reliable energy supply. Whilst there has been good progress in improving the efficiency of network regulation, there are still some important issues that need to be resolved, including the deficiencies in the current approach to tariff setting. In addition to this, improvements to the hardship and concessions framework are required so that consumers most in need of assistance are able to receive it. As an industry we must also ensure that reliability standards are aligned with market expectations and that we continue to progress key microeconomic reforms such as privatisation and deregulation.

### *2.1 Reform of network tariff structures*

Current tariff structures are primarily based on the volume of energy consumed as opposed to the time at which usage occurs. This approach does not allow for accurate cost recovery given that

network expenditure is largely driven by augmentations to meet peak demand. In recent times, the rapid uptake of solar PV has made the distortionary impacts of the current pricing regime even more pronounced. By virtue of using less energy from the grid, PV owners pay reduced network charges. This lower consumption, however, does not have a commensurate reduction on the costs associated with satisfying demand at peak times. The end result is that non-PV owners pay disproportionately higher network charges to account for the shortfall, resulting in what is now commonly referred to as the 'death spiral'. This is where increasing network costs borne by non-PV customers drives even further PV uptake, pushing network prices higher still for remaining customers. Addressing these cross-subsidies is crucial in ensuring equitable pricing outcomes for all customers. For networks too, the current path is unsustainable and requires a move to cost reflective tariffs that will enable pricing to be based on a customer's contribution to peak network capacity.

Though there is broad agreement amongst industry participants and policy makers regarding the need for tariff reform, there are a number of obstacles that are yet to be overcome. The White Paper could be a useful tool in providing greater clarity around these, which would assist in ensuring the smooth and timely transition to more efficient tariffs. In particular the White Paper could as best as practicable outline the sequencing of what additional work that needs to be done and the identification of the most appropriate body/organisation to undertake such work.

Specifically Origin considers that the below issues will need to be resolved:

#### *2.1.1 Design of cost reflective tariffs*

The Australian Energy Market Commission (AEMC) is currently in the process of implementing a rule that sets out a new pricing objective for distribution network service providers (DNSPs). This will require network tariffs to be based on the long run marginal cost of providing network services. Though the incoming arrangements are an important step in ensuring the development of tariffs which more accurately reflect the true costs of network utilisation, it is important to stress that this is only the beginning of the reform process. The new arrangements are broad in nature and will provide network businesses with a great deal of latitude in determining their specific tariff structures increasing the likelihood of variances across distribution businesses. Retailers, however, require certainty and consistency around tariff setting practices so as to invest in systems and operational procedures that allow for the development of retail tariff structures that appropriately incorporate DNSP pricing. This will ensure greater continuity and consistency in retail product offerings and facilitate better customer awareness and understanding. Given this, it is our view that a crucial next step in the reform process is the development of a consistent set of guidelines to apply to small customer network tariff structures across the NEM. The Australian Energy Regulator is perhaps best placed to undertake this work.

#### *2.1.2 Metering technology*

Ultimately, access to the appropriate metering technology is crucial for effective tariff reform. Smart meters provide more precise data on usage, facilitating both the design of cost reflective tariffs, and a customer response to changes in the price of energy across different time periods. Increasing smart meter penetration, however, is not without its challenges, as demonstrated by the complexities of the roll out in Victoria. Origin supports a competitive roll out of smart meters but notes that there are some obstacles to this. For enabling technologies to receive widespread acceptance, customers must have an understanding of their benefits. This would allow for voluntary take up of these devices, circumventing the need to mandate uptake which is likely to result in confusion and resentment on the part of energy consumers. Customer education is therefore crucial in this regard.

Another issue is the prohibitive cost of site specific exit fees (for the transitioning from old accumulation meters to smart meters). Ausgrid in its recent Revenue Determination to the AER

stipulated an exit fee of \$195 to cover the stranded cost of an old meter. This cost is not inconsequential (and should be noted does not include the cost of the new meter). Such a fee if applied on a site specific basis will most likely dampen enthusiasm to transition to new metering technology. Origin therefore suggests that a reasonable compromise is to apportion exit fees across the customer base of each distribution business. Such a move is justified on the basis that the positive externalities of greater smart meter uptake will result in net benefits for the market overall.

It will likely take some time before there is sufficient penetration of enabling metering technologies across all jurisdictions, to support the development of more sophisticated tariff structures. Nevertheless, the distortionary outcomes due to the current approach to tariff setting need to be addressed expeditiously so as to mitigate the impact on consumers, and to allow for more efficient network utilisation. To this end, Origin's view is that where advanced metering technology is unavailable, network businesses can still make significant progress in reforming tariffs, e.g. shifting revenue collection from variable to fixed charges and from inclining block tariffs (that discourage network utilisation) to declining block tariffs. Such a move would need to be supplemented by appropriate concessions framework to assist vulnerable customers who may be made worse off by an increase in the fixed charge.

### *2.1.3 Customer education and understanding*

Customer education is crucial for successful tariff reform. Customers must first have an understanding of the rationale for tariff reform and the role of advanced metering in enabling them to have better control of how they use energy. The approach to tariff setting too needs to be as clear and uncomplicated as possible, which will allow energy consumers to relate their usage decisions to particular tariff structures and make an informed decision on how best to respond to the price signals. This will require network businesses to take into account more than just the efficiency properties of their network tariffs. There is little benefit in sending consumers efficient price signals if they then cannot relate their usage decisions to the price structures and respond accordingly. A key consideration therefore is that the types and range of network tariff structures adopted should reflect consumers' understanding and acceptance of complexity so that consumers can participate effectively in the market.

How customers are transitioned from their existing tariffs to more sophisticated tariffs not only has implications for customers but also for the electricity system. Approaches that rely on customers voluntarily adopting tariffs may have limited effectiveness on changing overall consumption patterns if only those customers who benefit from the tariff design adopt it. On the other hand, approaches that mandate the adoption of certain tariffs may lead to bill shocks and customer resistance— especially if customers are not fully educated on the tariff's operation.

Given the importance of the reform process, both industry and governments have a role to play in customer education. Given the commonality of this issue across jurisdictions there is perhaps some scope for a coordinated approach

### *2.2 Hardship*

The cost of electricity can prove challenging for some households. Identifying and providing assistance to customers that are least able to afford it is a shared responsibility between industry and Government. For our part, Origin continues to improve our approach to assisting customers in need through our Vulnerable Customer Strategy and Power On hardship programme.

In terms of the role for Government, Origin supports a cohesive approach to hardship through the development of a national concessions framework. Currently each jurisdiction has a different approach to hardship, and in some cases the assistance provided is not always targeted to those customers that most need it. The establishment of a national framework would allow for a more

consistent and transparent approach to customer assistance, and an investigation of a number of important issues, including:

- The optimal structure of rebates. The appropriateness of various design options could be examined such as the flat rebate used in Queensland and the percentage based approach in Victoria.
- Whether Governments and retailers can better utilise Centrelink information and data bases. Centrelink holds all relevant data on health and pensioner card holders as well as income information related to a household. Access to more specific data from Centrelink would enable concession schemes to be better targeted, and for the more efficient processing of applications.
- How best to increase community awareness of electricity rebate schemes and assistances measures. The Government could take a greater role in developing communication material and making these more accessible to financial counsellors and relevant consumer groups.

### *2.3 Reliability standards*

The role of network costs in the recent retail electricity price increases has also placed renewed focus on reliability standards and whether they are set at appropriate levels. The AEMC has now concluded its work on developing a framework that would allow for consistency in how reliability standards are expressed across jurisdictions. State Governments should be encouraged to look at this work with the aim of speedy implementation.

Ultimately, reliability standards must strike an appropriate balance in minimising network spend whilst maintaining adequate supply in line with community expectations. There are a number of options for improving the effectiveness of reliability standards, these include:

- Deriving standards on an economic basis whereby the costs to consumers of a supply interruption are weighed against the cost of the required network augmentation. This is likely to result in a greater level of efficiency compared to deterministic standards used in some States, that requires a set level of redundancy independent of a cost benefit analysis; and
- Considering customers' views on their desired level of reliability when setting the standard by incorporating the value of customer reliability (VCR). Though given the complexities in arriving at an accurate VCR, some judgment should be exercised.

### *2.4 Microeconomic reforms - privatisation*

The privatisation of those areas of the energy sector that remain under government ownership is another key reform that is necessary in order to fully maximise market efficiency. Privatisation allows for a number of benefits including that it:

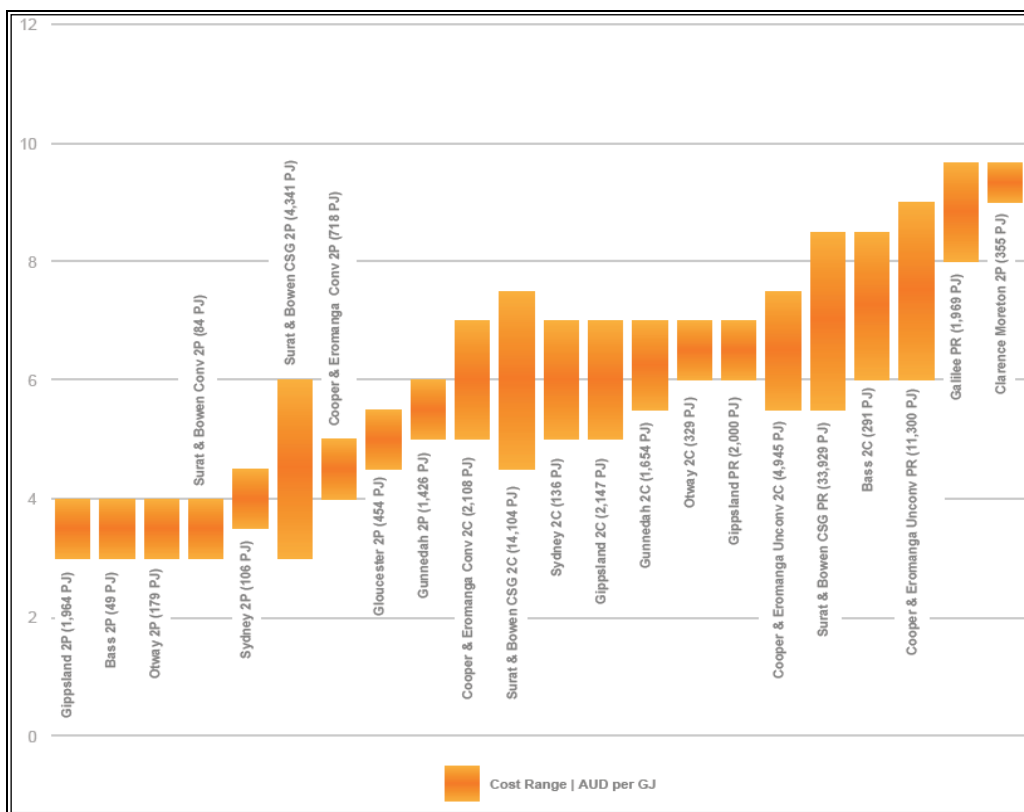
- Facilitates increased competition as all market players are exposed to competitive tension, which fosters innovation and productive efficiency with consequently better outcomes for consumers;
- Helps in safeguarding reliability by allowing the required supply options to enter the market in response to price signals as opposed to being subjected to exogenous variables such as electoral cycles and budgetary constraints which come into play when investment is dependent on governments; and
- Frees up the Government to allocate funding to other areas of the economy.

Origin welcomes the introduction of the Government's Asset Recycling Initiative, and it is our expectation that it will provide an additional incentive for jurisdictions to progress to privatisation of energy assets that remain in government hands.

### 3. Gas supply and market operation

The east coast gas market is undergoing a transitional period with an expected tripling of demand by 2017. Significantly, the impending commencement of LNG exports will for the first time establish a link with international gas markets. In addition to this, the cost of gas production has steadily increased as conventional reserves dwindle and more complex and costly unconventional resources are brought to market (as exhibited in figure 1 below). All this has put upward pressure on wholesale gas prices and has led to an increased level of scrutiny on the operations of the east coast gas market.

Figure 1: Ex-field cost of gas reserves and resources at June 2013 (\$/GJ)



Source: Core Energy 2013, *Gas, Power and LNG Outlook to 2033*

It is important to point out that any increases in wholesale gas prices will not have a proportionate increase on the retail price of gas given that wholesale costs only constitute between 10 percent and 30% of the overall residential retail bill depending on state and consumption.

#### 3.1 Sustaining national gas supply

Origin welcomes the Green Paper’s observation that the gas market is not fundamentally broken and that the key focus should be on ensuring sustained gas supply. Encouraging supply through the removal of obstacles to further resource development is essential for effective market operations. Continued streamlining of the projects approval process is crucial in this regard. Notwithstanding any divergence in views on the state of the gas market, there is universal agreement that there are sufficient gas resources to meet the needs of the domestic market, and for exports. There must be a concerted effort to ensure that these resources are brought to market in a timely manner.

There is also a role for greater coordination amongst all levels of government to facilitate the timely approval of priority gas projects. Origin welcomes the decision by the Northern Territory (NT) Government to assign major project status to the Northern Territory-Eastern Australia gas pipeline, and a signing of a memorandum of understanding by the NSW and NT governments to help facilitate development of the project. The proposed pipeline has the potential to materially increase east coast gas supply.

To ensure the identification of gas projects that demonstrate a genuine case for priority treatment, industry should be involved in discussions from the outset.

### *3.2 Market transparency*

The increased level of scrutiny has brought a number of the market's current design elements under the spotlight. The gas market is largely underpinned by long term bilateral contracts that have provided the revenue certainty needed to undertake large scale, highly capital intensive activities such as gas exploration and production. Long term contracting is an innate feature of the market which has facilitated resource development and the delivery of gas.

In recent years, the industry has been working with governments and regulators to improve opportunities for price discovery. The commencement of the Short Term Trading Market in Sydney, Adelaide and Brisbane, the Wallumbilla gas supply hub and capacity listing/trading services by AEMO and the APA Group are all evidence of industry-led initiatives in this area. In addition, work is underway to further develop the gas supply hub concept through a potential extension to a Moomba location and other physical and financial products. Given that industry has demonstrated its willingness to be proactive on this front, Origin considers that any further developments to improve price transparency should continue to be industry-led to ensure it is appropriate for the needs of market participants.

The Green Paper suggests the increased publication of information through the Bureau of Resources and Energy Economics and the work being undertaken by AEMO to enhance the National Gas Market Bulletin Board (NGMBB) and improve information in its annual Gas Statement of Opportunities. Origin welcomes each of these initiatives. Origin and other industry participants are already actively engaged in AEMO's NGMBB redevelopment project and we continue to look forward to engaging as necessary on the other bodies of work.

We note also the suggestion in the Green Paper for an ACCC Price Inquiry into the east coast market, or a Productivity Commission review to examine competition levels. Origin notes, however, that the Productivity Commission is already currently undertaking a research project examining barriers to more efficient gas markets. It is expected to release a research paper in March 2015. Origin suggests that the Productivity Commission be allowed to complete its current work before there is contemplation of any further reviews.

### *3.3 Improving gas market functionality*

Origin is of the view that where there is a need for further market reform this should be done on an incremental basis, with industry playing a leading role. Notwithstanding this, the Commonwealth has an important role in facilitating the development of a longer-term gas market strategy and agenda to promote and enhance market efficiency. It should also be based on the principle that any reform proposal should undergo a robust cost-benefit analysis prior to further development and implementation. Important to this will be a sound gas market reform governance framework. Origin supports the COAG Energy Council updating and progressing the implementation of the Gas Market Development Plan agreed reforms, in consultation with industry.



### *3.4 Responsible development of CSG*

Origin notes the proposal in the Green Paper for the Government to prepare a strategy to support the responsible development of the CSG industry and other unconventional gas resources. We agree that this should be undertaken in consultation with state and territory governments, but also that it is imperative for industry to be included in this process.

## **4. Electricity market sustainability**

The NEM is undergoing a distinct period of transformation with an unprecedented reduction in demand and an ongoing oversupply of generation. The Australian Energy Market Operator (AEMO) recently noted that there may be up to 8,950 MW of surplus generation capacity in the market<sup>1</sup>. A number of factors have contributed to this including the aforementioned decline in demand as well as the increasing entry of subsidized renewable energy. The current situation presents a number of challenges for the market the magnitude of which have the potential to increase if there is not timely resolution. Origin notes that there was not an in-depth discussion of these issues in the Green Paper and we would urge the Commonwealth to have a greater focus on this in the White Paper, particularly in the context of the following.

### *4.1 Barriers to exit*

In a well functioning market, oversupply coupled with depressed prices should provide a signal for the least profitable participants to exit, allowing for a rebalancing of supply and demand and a return to equilibrium. Though there has been some evidence of this, for the most part there has not been much in the way of permanent exit in the NEM with generators opting instead to mothball plant. This is an interim measure as opposed to a long term solution with generators reserving the right to re-enter the market. All this points to the existence of barriers to permanent exit, most likely due to a number of factors including high remediation costs (e.g. land rehabilitation) which can run into hundreds of millions of dollar for some generators. Additionally, there is a clear first mover disadvantage whereby the first plant to permanently exit will invariably improve market conditions for remaining generators. This results in a stalemate with a general reluctance for any generator to exit first.

The above issues are exacerbated by ongoing policy uncertainty, particularly in relation to the future of the RET, and climate change policy more broadly. The lack of clarity around the RET undermines prudent decision making and has added to the paralysis around exit decisions. On one hand a continuation of the scheme in its current form will add to the excess of generation prolonging depressed market conditions, whereas the prospects of a realignment of the target is likely to mitigate these impacts. The former scenario is likely to prompt exit whilst the latter would lead to greater optimism about the viability of the market. It should be noted, however, that even if the RET is reduced there will still be a need for orderly exit.

In terms of a policy response to address the above, Origin recommends that there is:

- A realignment of the RET to a true 20 percent to take into account the reduction in electricity consumption. Increasing supply in the face of falling demand is counterintuitive and will only result in further market destabilisation. Realignment will lessen the impacts of the oversupply, and assist in restoring some semblance of policy certainty which will facilitate generators' ability to make a more informed decision around permanent exit. Origin welcomes the Government's recognition of these issues and urges a speedy resolution to the current impasse through a bipartisan agreement.

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<sup>1</sup> AEMO 2014: Electricity Statement of Opportunities, Executive Summary pg 1

- Consideration of the provision of incentives for plant closure, e.g. to assist in meeting the costs of remediation. Contemplation of such measures could be justified if it becomes clear that the normal forces of supply and demand are not sufficient to restore equilibrium.

#### 4.2 Market resilience

The NEM has an exemplary record in delivering the investment needed to ensure reliable energy supply for consumers. However, as highlighted above, changing market dynamics have started to undermine efficiency. This could have long term implications for reliability and security, and market resilience overall. We raise these issues not to be alarmist, but rather that the White Paper facilitates a discussion on the state of the market so as to ensure its continued success over time.

Paradoxically, if market oversupply continues unabated it could result in reliability concerns in the medium to longer term. Weak cash flows due to depressed wholesale market conditions could prompt some owners of generation to minimise capital expenditure including through the curtailment or postponement of critical maintenance. This is likely to result in more sporadic supply interruptions and increased volatility.

It should also be noted that a realignment of the RET alone is not sufficient to address the concerns around excess capacity, particularly if the current market conditions are also symptomatic of a deeper structural adjustment. For example if demand growth does not return to historic norms, then the need for orderly generation exit becomes even more crucial. The increasing entry of distributed generation such as rooftop Solar PV will also be a key factor, as greater penetration will reduce the demand for energy from the centralised system. The important issue here is to ensure that there are efficient drivers for further PV uptake. This will include the unwinding of subsidies particularly as solar moves down the cost curve, and the expeditious introduction of cost reflective tariffs to ensure that PV owners pay appropriate network charges. The aim should be to guarantee the optimal uptake of solar PV which requires considerations that go beyond the greenhouse abatement benefits of the technology.

There is also an outstanding question as to how the current market settings would accommodate the ever increasing entry of commercial scale zero emissions renewable generation, both from an economic and physical stand point. Most renewables whilst costing more than conventional energy on a long run basis (taking into account variable and fixed costs) have zero short run marginal cost (i.e. there are no fuel costs). The increasing entry of these technologies under the NEM's current energy only design would result in lower wholesale electricity spot prices which could ultimately undermine the ability of all generators (even renewables if they are not provided subsidies) to recover their long run costs. Without an understanding of how the market works, this could be viewed by some as being a desirable outcome. However there are number of factors that must be taken into consideration:

- Lower wholesale prices will not automatically translate to reduced retail electricity prices, particularly where renewables continue to be subsidised as is currently the case under the RET.
- From a system security and reliability perspective, the current suite of renewable generation cannot operate without support from thermal generation. Therefore even if increasing penetration of renewable energy is the desired outcome, this must be supplemented by thermal plant that play a crucial role in maintaining system stability. The intermittent nature of wind and solar also means that thermal generators are an important source of supply when these technologies are not generating.
- Having the appropriate mix of plant is crucial for continued market resilience. The market design must ensure that there are adequate incentives to enable the commercial viability of all generation needed for this optimal plant mix. There is an open question as to whether a

traditional energy only market design will allow for this to occur given that as the volume of renewable energy increases there is likely to be further suppression of wholesale prices. This should not be seen as endorsement of alternative market structures such as capacity markets, but rather as us highlighting the need for policy makers to be cognizant of these issues when contemplating policy settings. A move to a capacity market would be the most significant change in the NEM's history, and it should be noted that these markets are not a panacea as they too are subject to challenges.

Though there are some distinct differences, the current turmoil in some European markets serves as a cautionary tale for Australia. In markets such as Germany, aggressive carbon abatement policies combined with falling demand have contributed to oversupply with destabilising market impacts. Australia must look to avoid similar outcomes domestically.

## **5. Long term emissions reduction policy**

There is an inextricable link between carbon abatement initiatives and the efficient functioning of energy markets. However despite this, there has been a general lack of alignment between energy and carbon policy. The impact of the RET on market oversupply, and the cross-subsidies due to inefficient tariff structures and the rapid uptake of subsidised Solar PV, are indicative of this misalignment. Going forward, energy and emissions reductions policies can no longer be contemplated in isolation, and any strategic policy framework for energy markets must take into consideration the likely shape and direction of Australia's long term approach to emissions reduction. This will allow for a more cohesive approach to policy setting and provide greater certainty to market participants, which is crucial to guide investment decisions. Whilst Origin welcomes the Government's Direct Action Policy we note that it is not intended to be a long term policy solution. Funding for the policy has only been allocated for the next 4 years, and there is a distinct focus on achieving the 2020 target only. Origin therefore recommends that there is a more in-depth discussion of Australia's long term emissions reduction strategy in the White Paper. Such a discussion could canvass the topics discussed below.

### *5.1 Post 2020 commitment*

Australia currently has bipartisan commitment to reduce greenhouse gas emissions by 5% on 2000 levels by 2020. Increasingly, however, the focus of the international community has started to shift to abatement objectives beyond 2020. The next United Nations Framework Convention on Climate Change (UNFCCC) meeting is scheduled for December 2015. It is widely anticipated that the key focus at the conference will be to broker an agreement on a post 2020 emissions reduction policy framework, including specific commitment from member countries. The intent of the UN process is that nations put forward targets by early 2015 to increase the chances of reaching an agreement by the end of that year. Already the European Union (EU) has announced a provisional 2030 target of a 40% reduction on 1990 levels, with the United States declaring a 2030 target for the power sector of a 30% reduction on 2005 levels. All this points to a possible expectation from the international community that Australia too, will pledge a post 2020 emissions reduction target. It is our understanding that the Foreign Minister has announced that a review will occur in 2015 to inform this target.

Such economically significant long term targets will require bipartisan support to be effective, as well as buy in from various sectors of the economy, and the broader community. Origin suggests that decisions around target setting could be guided by the following:

- The preliminary 2030 targets announced by the US and Europe would generally continue their current emissions intensity reduction trajectory. It is reasonable to assume that Australia will also be expected to continue to reduce emissions intensity over time.

- Australia's response should be in line with global action. Australia's fellow G20 counterparts present a good sample with which to compare our performance as they represent 85% of global GDP and 76% of global carbon emissions.
- Any targets should not disadvantage Australia's industries relative to our trading partners as this would undermine economic growth and move carbon intensive activity to less efficient countries increasing global carbon emissions.
- When contemplating targets, consideration must be given to the impact on the energy sector with the objective to ensure that there is the appropriate mix of generation technologies, with adequate commercial drivers in place to maintain the viability of the market.
- A traditional measure such as carbon emissions per capita is not the only means of testing carbon efficiency. Emissions per unit of GDP is perhaps more appropriate to the extent that it takes into consideration the link between carbon emissions and economic activity. Moving the focus in target setting away from absolute emissions to emissions intensity per GDP and reductions on business as usual trajectories may facilitate agreement on equitable burden sharing that does not disadvantage developing countries such as China, or wealthy countries with relatively high growth such as Australia.

## 5.2 Long term policy solutions

Origin considers that the White Paper should also facilitate a discussion on possible long term emissions reduction policy options. Early discussions on this issue is important as ultimately whichever policies are implemented, acceptance and understanding from the general public and industry will be critical to success.

Certainty around future policies is also crucial in guiding investment decisions. Origin's analysis shows that more than 40 percent of the entire generation fleet in the NEM will be more than 40 years old in 2030. This translates to approximately 74 percent of the current stock of coal fired generators or around 20,000 MW of capacity. Prudent decisions around asset replacement cannot be made without clarity around carbon abatement targets and what specific policy instruments are to be adopted.

To guide any decision making around long term policy setting, Origin suggests that the Government instruct an appropriate body such as the Productivity Commission to undertake a review of the cost of abatement of various options. This would help to ensure that Australia is able to meet any targets on a least cost basis.

There is a broad spectrum of policy options that could be adopted. However careful consideration must be given to ensure compatibility with energy market settings and that there is integration with energy policy more generally. We discuss some of these options below.

*Emissions trading:* The previous attempt at carbon pricing was perhaps too ambitious for its time. As a starting point any revisiting of carbon pricing should explore if there are simpler scheme designs which could then be expanded over time once community acceptance of the policy is established. International developments could play a major role in whether Australia returns to some form of carbon pricing. This could be driven by a holistic international agreement or more likely by the actions of key nations such as the US, China and the EU. All three have trading schemes at some level of development - the EU has the longest running scheme and the broadest in coverage; the US has a major scheme in place in California; and China is trialing a number of schemes with speculation that it may move to some form of national scheme in the next few years. Origin notes that the Climate Change Authority will now conduct a review of emissions trading

schemes in other countries with a draft report due in June 2015. The results of this study should further assist in informing debate on this issue.

*Direct closure of coal fired generators:* One of the policy challenges facing the Government and the electricity industry is the current excess of generation capacity in the market. This has made climate change policies such as the RET and the carbon pricing mechanism less effective than they would otherwise be, as such policies were largely predicated on the assumption that electricity demand would continue to grow. One of the most obvious large-scale emission abatement opportunities would be the retirement of highly emissions intensive brown coal fired electricity generators. Besides the obvious emissions reduction, such a measure would have additional benefits such as making the forced investment in new capacity under the RET a more viable option. More generally, it would create more room for investment in renewable energy over the longer-term. The sticking point for such a policy has been how any closure would be funded.

*Emissions Performance Standard:* The introduction of emissions standards would help to crystallize investment decisions in the electricity market, in that it would rule out the building of generators above a particular emissions intensity. If a coal closure policy was to be pursued it would make sense to reinforce this with emissions standard on new generation.