

7 February 2014

Energy White Paper Taskforce  
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## Energy White Paper – Issues Paper

AEMO is the independent operator and developer of physical energy markets in Eastern and Southern Australia. Focussed on the long-term interests of Australian energy consumers in relation to markets that underpin affordable, safe and reliable energy supplies, AEMO's operational roles include the following:

- Managing the operation and security of the interconnected eastern and southern Australian power system, and the Victorian gas transmission system.
- Operation of the National Electricity Market (NEM) across six states and territories, and operation of the wholesale gas markets across four Australian states.
- Planner and Transmission Service Provider for the Victorian transmission system.
- Provision of a range of national planning services through publication of the following key documents for use by investors, regulators and policy-makers:
  - National Energy Forecast Report, containing energy and maximum demand forecasts for the next 20 years.
  - National Transmission Network Development Plan, setting out potential future development paths for the electricity transmission system under various economic scenarios for 20 years.
  - Gas and Electricity Statements of Opportunity, setting out the forecast balance between supply and demand over the next 10 years.

Consistent with these functions, AEMO has a keen interest in a number of the matters raised in the Energy White Paper Issues Paper, and welcomes the commitment to ongoing reform and intention to build on past work, including the energy market reforms endorsed by the Council of Australian Governments (COAG).

## An open market based approach

Australia's energy markets have operated in an open and competitive manner for over a decade and have demonstrated their ability to respond to changing customer demands. AEMO welcomes the approach of the Issues Paper in continuing support to market solutions and market openness. We also support continuing the reforms agreed by CoAG and pursuing the reform program already underway by the SCER. The continued evolution of the energy markets should meet Australia's energy needs in the most efficient manner.

## **The electricity and gas markets face different issues**

Australia's electricity and gas markets face have different, almost polar characteristics in relation to their evolution, regulatory arrangements and the areas in which they would benefit from a considered policy response from Government.

The energy sold through the NEM rose steadily for the first ten years it operated, but has declined since 2009-10. This decline has occurred despite Australia's economy continuing to grow. Not only has current consumption fallen, the forecast is for much lower growth over the rest of the decade and experience to date would suggest even that may be optimistic. This change has been driven by a number of factors and has had a profound impact on the outlook for the industry. Despite the low or negative growth in energy sales, retail prices have risen significantly. While prices in the wholesale market have been suppressed, network charges and the cost of a range of schemes have driven these retail price rises.

The National Electricity Market (NEM) is a mature, highly transparent domestic market arrangement that is regulated on a uniform cross-jurisdictional basis – it needs to adapt continually to a broad range of ongoing external developments particularly in the areas of technological change and government policy on areas such as climate change. That process of adaptation occasionally requires leadership from governments to ensure that policy frameworks, standards, and objectives keep pace with the changing market context. However, in many cases adaptation can be managed at the Rules level by energy market institutions.

On the other hand, Eastern states gas markets are facing major growth and change. The volume of gas being produced in eastern and southern Australia will grow sharply over the next few years and our previously isolated domestic markets will be connected to International markets as exports become the prevalent use. Existing gas markets are limited and disconnected with most trade based on bilateral contracting, with little transparency or price discovery. With the emerging international linkages and rate of change expected in the market, there would appear to be a need further developments in domestic gas markets to facilitate greater liquidity, responsiveness and efficiency domestically.

The remainder of this submission discusses areas the White Paper could consider from a policy perspective in the electricity and gas market contexts.

## **Electricity Regulatory reforms**

The reform process to date has successfully transitioned the wholesale generation and retail sectors into a competitive environment to drive efficiencies through those parts of the value chain. However, monopoly transmission and distribution network sectors continue to operate as regulated businesses. The largest driver of retail price rises over recent years has been network charges. While the changes to the arrangements that have been put in place, some as a result of the CoAG decisions, have provided improvements to the regulatory regime, a number of emerging factors are conspiring to make continuing reform in this area more pressing. Among those factors is the changing role of networks in the energy supply chain, the expectations for reliability associated with networks, and the way in which networks are regulated.

Current regulatory processes focus on the provision of assets. As electricity prices increase and new technology options become available however, the service that consumers receive from networks can be substituted by other means. An example of this is the increasing installation of solar rooftop photovoltaic systems as an alternative to power being delivered

through the network. As the regulatory process is arguably required to provide monopoly businesses with incentives that simulate competitive pressures, and consumers increasingly able to exercise choice, there is a growing imperative for regulatory processes to move away from asset based regulation to a more service and incentive based regulation.

The matter of reliability standards is specifically raised in the Issues Paper. In the near future, a significant step forward would be to plan infrastructure on the basis of the economic value consumers place on different levels of supply (their Value of Customer Reliability or VCR), instead of using arbitrary reliability standards based on the redundancy of the infrastructure itself. The approaches used across the NEM are currently varied, with redundancy-based planning, probabilistic planning and a combination of both used in different NEM jurisdictions. This results in confusion, inefficiency, and an awkward regulatory process. AEMO is of the view that consistent NEM-wide adoption of probabilistic planning principles is the most efficient approach for the near future. AEMO's current VCR program, which was requested by SCER, will support such an approach.

In the long-term though, potentially the most efficient approach will be for consumers to be empowered to choose their own reliability standard through the terms and pricing of their supply agreement. Technology is available to support such an outcome through the control of domestic appliances and industrial processes, but policy and regulatory processes need further work to make provision for such outcomes to emerge through market mechanisms. Policy vehicles such as the Energy White Paper could consider the merits of such an approach and the implementation timeline. If policy and regulatory processes do not keep pace, they risk becoming the barrier to moving towards a more efficient two-sided market characterised by informed choice on both the supply and demand sides.

### **Efficient electricity network tariffs**

As noted in the Issues Paper<sup>1</sup>, network tariffs that are predominantly consumption-based, no longer reflect the value consumers receive from networks, nor the costs they impose on a shared grid. AEMO agrees that consumers are currently exposed to inefficient price signals through electricity network pricing processes, leading to inefficient investment decisions by consumers. This is evident for example, where embedded generation can avoid most consumption-based network costs while still relying on the network for back-up supply. As technology options continue to develop, there is potential for consumers to become more empowered to interact with the price signals they see, increasing the need for those price signals to be efficient.

Continuation of current network pricing mechanisms is allowing the issue to compound, with consumer expectations becoming entrenched and increasing the potential for dissatisfaction when the issue is ultimately addressed. Again, the White Paper presents an opportunity for governments to put in place a clear policy context for the setting of regulated network prices by, for example, putting in place an efficient NEM-wide network pricing methodology. Such an arrangement would need to bridge the existing gap between uniform NEM-wide market arrangements, and the less developed regulatory arrangements by pricing networks on the basis of the service actually provided, remembering that increasingly empowered consumers will be seeking to meet their energy needs at the lowest cost to them.

Consistent with the initiatives noted in the Issues Paper of reducing the regulatory burden on businesses, and greater price transparency, there would appear to be little merit in

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<sup>1</sup> Page 36 of the issues paper.

continuing to have network pricing methodologies vary between monopoly network businesses – in preference, serious consideration should be given to moving to a consistent NEM-wide methodology that is efficient and transparent to all parties.

### **Electricity retail market reforms**

Ongoing reform of the electricity retail market so that policy and regulatory frameworks keep pace with the increasing ability of consumers to participate in energy markets is central to considering a range of matters raised in the Issues Paper, including reliability standards, demand side participation and to some extent, renewable generation.

In the short term, there is a need to complete the current reform initiatives to roll out smart meters and to facilitate the deployment of time-of-use tariff structures. However, smart meters are an enabler rather than an efficiency gain in their own right, and it is only after consumption patterns are changed that gains can be realised. As there are efficiency gains to be achieved in the areas of both energy usage and network usage, there is an imperative for policy and regulatory frameworks to be developed to facilitate the realisation of these gains. There is an opportunity through the White Paper process to ensure that policy objectives and frameworks are in place, and that regulatory institutions are sufficiently empowered to develop the detailed rules and incentives that are necessary for these gains to be delivered.

In the longer term as discussed above, there is potential for the interaction of consumers with the market to further develop, through the use of enablers other than smart meters. If consumers are able to interact with the market through actively modifying their consumption patterns in response to price signals or through agreeing to have elements of their consumption controlled on terms specified in their chosen supply contract, then they could be empowered to agree to a reliability / price relationship of their choosing. Such developments, if permitted to develop, could unlock efficiencies across the supply chain including in relation to efficient fuel choices, and local generation options. The potential for gains applies not only to times of normal operation but also through the allocation of scarce resources in times of shortage. The white paper presents opportunities for governments to prepare a policy position in relation to such possibilities, taking into account different consumer sectors and the need for protection of small customers.

### **Short Term Gas Market Reforms**

AEMO welcomes the commitment to pursue a policy of market openness. There is a need to ensure liquid and effective markets develop to support efficient asset utilisation and resource allocation. The commitments to further reform, as outlined in the Issues Paper reinforce the importance of current policy initiatives being undertaken by AEMO at the request of SCER to develop the Gas Supply Hub (GSH) at Wallumbilla, and to develop pipeline capacity trading mechanisms.

Of particular relevance to the White Paper however, is that progress with these current initiatives heralds the need for further policy reforms to support the take-up of trading at the GSH and the move towards greater gas market liquidity.

The GSH is a voluntary gas trading exchange centred at a major point of transit connecting Queensland, the LNG export trains, and the southern states gas markets. As such, it is effectively located further upstream than the existing demand hub market models (the

Victorian Declared Wholesale Gas Market (DWGM) and the Adelaide, Brisbane and Sydney hubs in the STTM). It, therefore, has the potential to increase overall participation in gas markets and transparency in gas prices by attracting large users, including those involved in the LNG export markets. This should provide clear commodity pricing signals and, potentially, a forward price curve that will assist in valuing development of gas supply projects. Implementation of the GSH is on track and due to commence operation in March 2014.

Once established, there is potential for the GSH to be further enhanced through the development of additional services that better facilitate trading across the hub, and through expanding the hub to incorporate new trading locations with natural liquidity, such as Moomba.

### **Gas Market Information and Price Transparency**

The AEMC, Victorian Gas Taskforce and Australian Government/BREE reviews conducted in 2013 all concluded that the east coast gas market would benefit from greater transparency in pricing and market conditions. However, all reviews fell short of making recommendations to address this issue.

The Energy White Paper, and the Australian Government's development of an East Coast Gas Strategy to 2020, presents an opportunity to build on the information and data collected through the 2013 reviews. The White Paper could establish a clear policy framework that allows for minimum information disclosure requirements to be defined and justified within a consultative process. Timelines for implementation could also be established which ensures the policy objectives are delivered within a reasonable timeframe.

### **Longer Term Gas Market Reforms**

AEMO considers that while there is some scope for improving the individual efficiency of the existing gas demand hub markets, the better approach is to take a step back and to consider the way forward more holistically.

The existing Declared Wholesale Gas Market (DWGM) in Victoria, and Short Term Trading Markets (STTM) in NSW, South Australia and Queensland, provide an important balancing service to support retail competition and, in Victoria, for scheduling of multiple competing gas supplies to meet within-day supply and demand variations. Nevertheless, these markets were each designed to meet the specific pre-existing requirements and market conditions and policy and market objectives. There are significant differences in the design of their respective pricing mechanisms<sup>2</sup> that make it difficult to derive clear commodity or capacity price signals, compare hub prices on a consistent basis, or to develop derivatives markets.

While it would be possible to pursue individual solutions to issues that have been identified, AEMO cautions that there may be no "quick fixes" to some of these issues, and no guarantee that such "fixes" would achieve the best possible outcome for a more flexible and informed national gas market.

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<sup>2</sup> For example the DWGM and STTM differ in relation to, ex-ante pricing vs ex-post pricing, different scheduling periods, trading periods, ancillary payments, uplift payment, Market Operator Service payments.

Therefore, AEMO considers that there could be value in commissioning an independent, “big picture”, strategic and holistic review of the east coast gas market. Both the AEMC Gas Market Scoping Study and the Victorian Gas Market Taskforce reports have separately recommended a review of this nature, building on the work already undertaken in developing those two reports and the Department of Industry and BREE Eastern Australian Gas Market Study. Such a review should include an assessment of the respective roles (both now and into the future) of the existing facilitated markets, including the gas supply hub model being implemented at Wallumbilla, the DWGM in Victoria and the STTM. The review should consider the future role of each of the facilitated markets to ensure they remain appropriate to meet the significantly changing requirements of the future east coast gas market.

The review would need to extend beyond the scope of the facilitated markets operating under the NGR, considering how to better facilitate new gas supplies and provide access to capacity to support competition. It is important that it is well scoped, with clear objectives and well defined principles for a successful national gas market. It is also important that the review results in a clear policy direction and mandate for implementation of its recommendations.

## **Conclusion**

The energy industry is currently going through a range of changes, some of which are driven by policy initiatives, some by technology developments, and some by commercial developments such as the export of LNG. In this context, there is an opportunity for government, through the White Paper process to put in place clear policy frameworks that minimise the risk of regulatory arrangements and market arrangements falling behind these rapid changes and resulting in inefficient outcomes.

If you wish to discuss this submission, please feel free to contact me on (08) 8201 7371. AEMO also holds considerable data on the gas and electricity markets it operates and a range of planning and forecasting information for eastern and southern Australia. AEMO would be happy to provide any of this data on request from the Taskforce.

Yours sincerely



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