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Discussion Paper: Annual WEM Report to the Minister
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2010 Annual Wholesale Electricity Market Report to the Minister for Energy Discussion Paper

The Energy Supply Association of Australia (esaa) welcomes the opportunity to comment on the Economic Regulation Authority's (ERA) 2010 annual Wholesale Electricity Market (WEM) Report to the Minister for Energy on the effectiveness of the market in meeting the Wholesale Market Objectives.

esaa is the peak industry body for the stationary energy sector in Australia and represents the policy positions of the Chief Executives of over 40 electricity and downstream natural gas businesses, including many with commercial interests in Western Australia. These businesses own and operate some $120 billion in assets, employ over 52,000 people and contribute $16 billion dollars directly to the nation's Gross Domestic Product.

As the ERA's discussion paper notes, a number of energy reform processes and reviews are currently underway which affect the WEM, including the Strategic Energy Initiative, the sub-strands of the implementation of the Verve Energy Review and the Independent Market Operator review processes.

With the WEM still relatively young and new economic and policy challenges emerging, the Association supports these processes and the continued refinement of the market. esaa agrees with the ERA that these review processes will need to be appropriately managed by the relevant stakeholders and decision makers, continue to feature a high level of public consultation with industry, and be transparent. The Association supports the ERA's intention to monitor and independently report on the progress and outcomes of the various reviews currently underway. With concurrent multiple processes, overarching coherence and coordination will be important and in this regard, the Association anticipates that the Government's Strategic Energy Initiative will provide this high-level direction.

The Association notes the decision of the ERA to narrow the focus of this year's annual report to a select set of issues, and that a more fulsome review of the WEM is

due to be undertaken next year as part of the three yearly cycle of reviews set out in the legislation.

In the attached document we provide some comments. If any further information is required in regards to this submission or esaa's Western Australian Energy Market Study, please contact Kieran Donoghue, Policy Development Manager on 03 9670 0188 or kieran.donoghue@esaa.com.au.

Yours sincerely

Brad Page
Chief Executive Officer

Efficient Energy Market Principles

As was noted in the Authority's 2009 Wholesale Electricity Market (WEM) review, in November 2009 esaa released its Western Australia Energy Market Study. This study was undertaken through close consultation with its members and sought to identify the most effective pathway to achieving and maintaining an efficient Western Australian energy market over the longer term, including the WEM.

As part of this study, esaa developed the following principles to provide a framework for thinking about reforms that could best promote efficient outcomes in the state's energy market over the longer term:

1 A secure, reliable, competitive and cleaner energy supply is best achieved by balancing the roles of government, the private sector and markets.

2 Markets should be the primary mechanism for coordinating the production and consumption of energy services.

3 Markets work best when they are competitive: there should be no unnecessary barriers to entry or exit; prices and quantities traded should reflect prevailing supply and demand conditions; and market information should be transparent and accessible.

4 Where government intervenes or regulation is applied, it should: be targeted, proportionate, transparent and consistently applied across market segments; be independently applied, monitored and enforced and open to review; promote competition, innovation, efficiency and reliability; and be of net benefit.

5 Regulation of the monopoly parts of the system should facilitate competitive market outcomes, timely investment, innovation and reliable energy supply.

6 Where prices are administratively determined, they should ensure full recovery of efficient costs and promote innovation.

7 Where costs are administratively allocated, the 'causer pays' or 'beneficiary pays' principles should be applied as appropriate.

8 Where the market is not appropriately delivering the community's social objectives, the government should explicitly describe and directly fund separate measures.

The Association encourages the Authority to use high-level energy market principles, such as these, as a reference point in its WEM review and in its broader role of monitoring the multiple reform processes shaping the WEM currently and in the future.

The effectiveness of the WEM in meeting its objectives

The Authority is seeking comment on the effectiveness of the Wholesale Electricity Market (WEM) in meeting the Wholesale Market Objectives, which are:

- to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system;

- to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors;

- to avoid discrimination in that market against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions;

- to minimise the long-term cost of electricity supplied to customers from the South West interconnected system; and

- to encourage the taking of measures to manage the amount of electricity used and when it is used.

Promoting reliability

A reliable supply of electricity is essential for the Western Australian economy and way of life. The reliability of electricity supply in the WEM is dependent on the availability of resources and there being sufficient infrastructure to maintain the energy supply system given credible expectations of peaks in energy demand and to manage contingency situations in the event that key infrastructure assets are unavailable.

As the level of reliability in an energy supply system increases, the cost of energy will increase because investments are required to build and maintain backup infrastructure. The trade-off between the objectives of least cost and reliability is unavoidable and confronts all electricity supply systems.

What constitutes an appropriate balance between the reliability of supply and the cost of energy is a matter of judgment and preferences will differ across and within households, businesses and industrial loads. Given this diversity of preferences, it is not possible for governments to know what energy consumers are prepared to pay for reliability. Accordingly, the most effective way to discern consumers' willingness to pay for reliability is through energy market transactions.

By ensuring that price signals are transmitted through efficient and transparent prices and costs are allocated to those who benefit, consumers will receive appropriate signals to guide decisions on the trade-off between the reliability of energy supply and energy costs. To the extent that consumers value more reliability, they will be prepared to pay the higher prices that it entails. It is important therefore that policies,

regulatory frameworks and market settings do not try to shield consumers from the price implications of the cost of reliability.

One policy that currently does shield consumers in the South West Interconnected System (SWIS) from the underlying costs of delivering energy supply is that tariffs for supply to small use customers are regulated below cost. esaa strongly supports the Western Australian Government's recent process to increase such un-cost reflective retail tariffs and supports continuing this process until cost reflectivity is reached.

The decision of whether to expose consumers to the full costs of electricity supply will become increasingly relevant as electricity network investment increases. Adequate electricity networks are a key component of delivering reliability. Currently networks are undergoing a period of renewal to maintain reliability. This renewal involves both replacing aged assets and upgrading the network to meet the demand for a digital quality power supply and a 'smarter' network, as well as to meet rising peak demand.

This renewal requires significant capital investment, which naturally has cost and price implications. An indication of the magnitude of this investment can be seen from recent network regulatory determinations in the National Electricity Market (NEM) by the Australian Energy Regulator and arguably the imperative of network reliability is greater in the SWIS as it is an islanded network unlike the interconnected NEM. Price structures that pass through the costs of this network build will be important to encourage customers to make rational consumption decisions and may lead to lower long term costs for network augmentation.

In this regard, in addition to attaining a level of tariffs that is cost reflective on average, there is merit in the medium term in exploring introducing pricing structures for electricity and networks usage that more closely reflect the actual costs of electricity supply in real time, such as 'time-of-use', 'real time', and 'critical peak' pricing. This would improve the efficiency of the market as it would enable prices to reflect the prevailing demand and supply conditions in real time, giving signals to consumers to respond. This could have benefits including deferring investment in generation and networks and would require up-to-date metering equipment and IT/communications infrastructure to be installed.

While in the absence of full retail contestability, continued retail price regulation may be warranted for the SWIS, there is currently no formal tariff review process to ensure tariffs are set at efficient, cost-reflective levels. For price regulation to be effective and efficient, there should be a consistent, independent and predictable price setting methodology, administered by an appropriate independent body, that allows recovery of the efficient costs to supply energy and the cost of all legal requirements, including the cost of climate change policies. The Association would support an independent body, such as the Authority, being empowered to determine and set electricity tariffs through a formal, transparent and consultative process.

Promoting economic efficiency and avoiding discrimination

esaa is a fuel and technology neutral organisation. Accordingly, the Association supports both the WEM objective of avoiding discrimination against particular energy options and technologies, and its converse i.e. that particular energy options and technologies should not be favoured by market frameworks either.

An effective way to ensure a level playing field is to use open, competitive markets to coordinate trade and production of energy services and for prices and quantities traded to reflect prevailing supply and demand conditions – that is, the costs of production and the willingness to pay. However, the WEM features a number of rigidities and distortions that mean administratively determined prices are a feature of the market, including for balancing and ancillary services.

While there is a range of physical, economic and regulatory reasons for this, as set out in esaa's efficient energy market principles, where prices are determined administratively, the Association considers that they should ensure full recovery of efficient costs.[1] Further, where costs are administratively allocated, the 'causer pays' or 'beneficiary pays' principles should be applied as appropriate. If set and allocated in this way, administrative price setting can 'proxy' competitive market outcomes, at least to some degree, and avoid cross subsidies.

As noted in the ERA's discussion paper, a particular area of concern in the WEM is the treatment of intermittent generation, which currently is not exposed to the full costs it imposes on the system. The current market frameworks result in un-cost reflective balancing prices and an implicit cross subsidy towards wind from baseload plant that is forced to accommodate its spilling into the system. Similarly, the current method of reserve capacity accreditation may not reflect the contribution wind can make at times of peak demand, and hence may be providing a subsidy to wind from consumers. There is a tendency in debates over the role of wind in Australia's generation mix to overlook such issues with the justification that it is a low-carbon generation technology as compared to the fossil fuel-based generation that currently provides Western Australia's baseload power. However, if large-scale low carbon baseload generation becomes economically viable in the future, any preference towards intermittent wind in the market frameworks would act as a discrimination against these technologies.

Due to the national Large-scale Renewable Energy Target, and Western Australia's considerable wind resources, wind generation will likely become an increasing feature in the WEM's energy mix. Accordingly, the reform challenge will be to get the market frameworks right so that intermittent generators (and all generators more broadly) can integrate efficiently into the system – the physical network, the reliability framework, and the energy market – by facing their true costs and being rewarded for their true contributions. Going forward, the Association would encourage

[1] A prominent example of administratively determined prices is the MCAP, which is used to settle balancing. Currently Verve Energy is the sole provider of balancing as there are not competitive arrangements to allow Independent Power Producer participation. However, as set out in esaa's efficient energy market principles, the Association considers that markets work best when they are competitive. Accordingly, while noting that the ERA is not considering competitive balancing issues in this year's report, the Association notes that in addition to its concerns that prices paid to balance wind are currently not cost reflective, and hence result in an inherent cross subsidy, the Association also supports the introduction of competitive arrangements in balancing to allow IPP participation. This would remove an unnecessary barrier to market entry and encourage prices and quantities traded in balancing markets to reflect prevailing supply and demand conditions, and hence, be efficient.

consideration of additional measures that could be taken to integrate wind into the market, such as those identified in the discussion paper as being pursued in the NEM.

Networks

Electricity networks are a key component of reliability. Network planning, development and charging is an inherently difficult issue and a range of different models are used throughout Australia's jurisdictions. Options that could be explored in the SWIS to improve network planning include greater input by Western Power into the IMO's Statement of Opportunities and the possibility of more formal strategic network planning, particularly in areas where multiple connections are likely. There may also be opportunities for collaboration with the National Transmission Planner function of the Australian Energy Market Operator that could be explored.

Currently, in assessing connection applications, network access in the SWIS is provided on an 'unconstrained' basis – that is, a new generation connection should not compromise the reliability and security of the network or the ability of other (existing) generators to deliver their full certified capacity through the network.

It has been contended that the unconstrained access model adds unnecessary complexity to the planning process, is becoming difficult to resource and may result in economically inefficient over-investment in the network, particularly as an unconstrained network may not accurately represent the likely coincidence of output from connected generators at time of maximum demand, particularly for intermittent generation.

With the current unconstrained model becoming unwieldy to administer and difficult to resource, endeavouring to maintain an unconstrained network in the future will likely result in an inefficient use of capital. Moving to a constrained model could be more economically efficient and achieve cost savings for consumers.

However, a constrained network planning model also has challenges. As the experience in the NEM shows, where there is a non-firm access, constrained planning model in place, transmission policy is an inherently difficult issue. Reflecting this, a number of reviews into transmission policy have been undertaken over the NEM's 12 years. The Ministerial Council on Energy commissioned the Australian Energy Market Commission in April this year to undertake a broad ranging Transmission Frameworks Review, which is scheduled to continue until November 2011.

As the ERA discussion paper notes, moving the WEM to a constrained planning model is closely linked with the issue of shallow connection charges. The Association welcomes consideration of these issues, but notes that prior to any transition to a constrained access model in the WEM, a comprehensive policy review is needed to identify and address the issues that a constrained access model will entail. In this respect, the experience of the NEM could be instructive for the WEM, and would suggest consideration of issues in the WEM including:

- the planning method for determining the type, timing and location of network augmentation, particularly given the likelihood of a greater number of renewable generation projects seeking to connect in the future;

- the status of access property rights for incumbents that have paid deep connection charges in the past and how any such rights are affected by new entrants;

- arrangements for allocating or rationing transmission access at times of high demand for the system or low transfer capability, such as due to outages;

- the impact of congestion on the efficiency of dispatch and on competitive market participants, including their contractual arrangements; and

- locational signals for new investment in generation and load.

In addition, there are WEM specific issues to address, such as the interaction between a constrained network and the RCM. Addressing these issues prior to the transition will provide industry with clarity, promote investor confidence and help prevent legacy issues in the future.

Encouraging competition, facilitating new entry and minimising costs

A competitive energy supply promotes efficient investment in, and the efficient use of, energy resources and infrastructure. In the presence of policies, regulatory frameworks and market settings that complement competitive market arrangements, competition will deliver the most affordable energy price possible, while ensuring system reliability and security over the longer term.

The competitiveness of WEM energy supply is dependent on there being minimal barriers to entry in wholesale and retail energy markets and sufficient numbers of participants (or potential participants) to ensure prices remain at levels reflective of underlying costs. Where competition is constrained, energy supply will tend to be inadequate, delivered at higher prices and with lower levels of reliability and face greater risks of security.

esaa considers that a competitive energy supply is best achieved by balancing the roles of government, the private sector and markets. In general terms, the Association considers that, consistent with the prevailing philosophy of reform in Western Australia's energy sector over the last decade, the Government should continue to provide high-level strategic direction, such as through vehicles like the Strategic Energy Initiative, and facilitate market participants to coordinate the production and consumption of electricity, while continuing to disengage itself from the operation of the market.

Balancing reform against complexity

One possible overarching regulatory impediment to investment in the WEM is the complexity of the electricity market.

Some stakeholders have expressed concern that the complexity of the WEM – including the rules that govern the Reserve Capacity Mechanism, the net pool and associated mechanisms, as well as contractual arrangements between the state-owned corporations – could be a barrier to new entry. This barrier reflects both the cost of understanding and complying with the rules, as well as the risks businesses face if they enter the market without fully understanding their obligations and the potential penalties to which they may be subject.

A competitive electricity market is a relatively recent development in the SWIS and the design of the WEM was influenced by the characteristics of the Western Australian energy market and the legacy of the industry's structure prior to market start. However, as a relatively young market it is important to continue the process of market development.

As noted above, there are currently market reform processes in place. These processes have canvassed both refinements to the WEM and fundamental changes. The Association supports these processes but notes that it will be important to strike the right balance in the reform process between reviewing and progressing the market, addressing short-term immediate issues, providing longer term strategic direction to the market, and also providing a stable environment to encourage investment and confidence.

Setting a reform pathway that navigates through these competing objectives is naturally difficult to do, particularly with multiple bodies involved. The Association supports the ERA's intention to monitor and independently report on the progress and outcomes of the various reviews currently underway, and supports coordination and overarching coherence.

Reducing emissions

An overriding challenge for energy supply, both in Western Australia and the other states and territories, is uncertainty at the federal level, and internationally, over the form and timing of climate change policies. This presents difficulties for state government energy policies because the most efficient response to climate change, one which can deliver Australia's agreed commitments to emission reductions at least cost to the economy, must be determined nationally and apply across the economy. While esaa acknowledges the negative impact on energy security of delays in climate change policy, the Association cautions against a further proliferation in the patchwork of climate change policies. This is likely to lead to significant increases in the cost of energy and may compromise long-term efforts to successfully address climate change. Policies that purposefully seek to manipulate commercial incentives for investment in favour of or away from particular forms of energy or energy technologies will create the greatest difficulties

Feed-in tariffs

In regards to policies favouring particular technologies, esaa notes the Government's recent introduction of a residential net Feed-in Tariff (FiT) scheme for solar photovoltaic, wind and micro hydro technologies to commence. The Association made a submission to the Western Australian Sustainable Energy Development Office's stakeholder consultation paper.

As noted in that submission, esaa does not support the introduction of premium FiT arrangements for micro generation installations in Western Australia. Such arrangements are inconsistent with the efficiency objective of the WEM as they distort the electricity market, increase the system-wide costs of electricity supply, are a regressive cross subsidy and are unlikely to deliver electricity or emission abatement objectives at least cost. The aggregate level of generation that they deliver is not likely to provide material security or reliability benefits either. However, esaa recognises that political support for FiT measures exists, with most jurisdictions having announced some form of net or gross FiT arrangement. esaa strongly contends that, consistent with the Council of Australian Governments' National Principles for FiT schemes, if the Government is to offer premium assistance for a specific technology, the premium should be transitional and funded on-budget rather than through a mechanism that distorts electricity prices. On-budget funding is transparent, which allows policymakers and the community to identify the cost of the subsidy to inform policy evaluation.

While not supporting a premium FiT arrangement, esaa considers it is appropriate that small-scale embedded generators are appropriately compensated for any benefits they may provide. In this regard it should be possible to design an efficient FiT for Western Australia that reflects factors such as actual delivered energy, network impacts (including the deferral of network augmentation and any augmentation required to manage two-way energy flows), contribution to meeting peak demand and reduced transmission losses. However, esaa notes to date this has not been the approach adopted in most jurisdictions, where FiTs have been arbitrarily set based on multiples of the underlying residential supply tariff.