15 September 2011

John Pierce
Chairman
Australian Energy Market Commission
(Via electronic lodgement)

Dear Mr Pierce

ENA response to AEMC Issues Paper, Power of Choice

The ENA welcomes the opportunity to provide the attached submission in response to the AEMC's Issues Paper, Power of Choice – giving consumers options in the way they use electricity.

While individual electricity network businesses have lodged submissions, the ENA has developed this industry wide submission to draw together the common high level themes across the network sector. Rather than respond to the specific questions in the Issues Paper, the ENA has limited its comments to:

- the assessment process,
- the objectives/ benefits of DSP in the NEM, including network initiated DSP and consumer choice,
- the efficient operation of price signals, including the tariff setting process,
- raising consumer awareness, and
- the principles that the ENA recommends the AEMC and governments adhere to when considering appropriate market and regulatory arrangements for DSP.

Should you wish to discuss the ENA's submission, please contact Tanya Barden, Director, Smart Networks Policy on 02 6272 1514 or via email to tbarden@ena.asn.au

Yours sincerely

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energy networks association

ENA submission

AEMC Review: Power of choice – giving consumers options in the way they use electricity

15 September 2011

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1. Summary

The ENA considers it essential that consumers are given the opportunity to receive information about the cost and impact of their energy consumption decisions, as well as energy management products and services to assist them in managing their energy use. Together these can provide consumers with the potential to make more informed consumption decisions that reflect the value they place on the use of electricity. These decisions may include changes in appliances or alterations in consumer behaviour, such as reducing energy consumption or shifting the timing of their electricity use, which can help to reduce peak demand, and hence reduce future network cost increases. There will however be those consumers that place a high value on continuing to consume high levels of electricity at peak times.

The emergence of smarter electricity measurement devices provides an opportunity for electricity prices to be restructured in a way that efficiently allocates scarce network resources at peak times, in the same way that other sectors charge higher prices in times of high demand (such as holiday travel, or evening movie sessions). Dynamic and cost reflective price structures can also play an important role in assisting consumers to manage their bills, for example, by removing inherent cross subsidies from low to high energy users and replacing them with price structures that better reflect the costs that users impose on the network.

The network sector is cognisant that any changes in product and service offerings (including tariff structures) could potentially have adverse impacts on some sectors of the community. The ENA supports the delivery of efficient outcomes that can provide an overall benefit, consistent with the National Electricity Objective (NEO). However, the ENA strongly recommends that governments ensure that there are adequate consumer protection mechanisms in place to safeguard disadvantaged or vulnerable consumers while supporting a system that enables economically efficient price signals.

New smart technologies, products and services offerings will also require changes in business models and processes, as well as the relationship and roles of existing market participants and third party service providers. Given the potential benefits of demand side participation (DSP) to several parties, it is important that there is flexibility in the market arrangements to allow multiple parties to be involved in the provision of DSP. Distributors are well placed to participate in demand management activities, so as to improve the efficiency of network operations and investments for the long term interests of end users. Indeed, many distributors have already implemented consumer-related trials and programs aimed at demand management. At the same time, distributors recognise the legitimate interests of other parties to offer DSP services to meet their commercial objectives.

The ENA is, however, conscious that increasing consumer choice does not necessarily equate to optimal consumer choice. It is therefore important to test the potential for multiple parties to work together to meet their objectives as well as deliver the best outcomes for consumers, while ensuring that the reliability and security of energy services is maintained. Balancing these different requirements will create increasing complexity in the energy market, and in the electricity networks that will be required to physically support the energy flows required.

These sorts of changes – in how electricity is priced and in the provision of information and other products and services to help consumers respond to the time-varying costs of electricity – will be potentially complex for consumers, compared to their relatively passive involvement in electricity consumption decisions to date. It is therefore vital that stakeholders seek to engage with consumers to bring them along on the transition the electricity industry is undergoing. The ENA therefore considers it essential that all stakeholders embark on an education campaign to help consumers understand the drivers and benefits of changes in product and service offerings, including tariff structures.

Given the relatively immature nature of many of the new smart technologies, and the market for related product and service offerings, the ENA considers that the supporting market and regulatory frameworks that enable consumer choice need to be flexible to adapt to a changing environment and to respond to

learnings from pilots and trials, including Smart Grid, Smart City. There is also benefit in allowing time and resources for additional trials to test the delivery of products and services through partnerships between distributors and other market participants or third parties in order to test the value proposition of various technologies and business models, and the impacts on consumer outcomes.

Finally, ENA recognises that there is a significant level of concern in the community about the material increases that have been experienced in electricity prices of the past few years, and that are likely to continue for at least some time. In this context it is important to note that much of the benefit of investing in DSP accrues over time, while at least some of the investments that enable DSP will add to costs in the near term. Consideration to the timing and magnitude of expenditures and the realisation of benefits is therefore an area that should be incorporated into any changes contemplated as a result of the AEMC's Review.

2. Introduction

The Energy Networks Association (ENA) welcomes the opportunity to respond to the AEMC's Issues Paper: *Power of choice – giving consumers options in the way they use electricity*.

The ENA is the peak industry association representing electricity and gas network businesses on a range of technical and economic, regulatory and policy matters.

While individual electricity network businesses have lodged submissions to the AEMC's Power of Choice review, the ENA has developed this industry wide submission to draw together the common high level themes across the network sector. Rather than respond to the specific questions in the Issues Paper, the ENA has limited its comments to

- the assessment process
- the objectives/ benefits of DSP in the NEM, including network initiated DSP and consumer choice
- the efficient operation of price signals, including the tariff setting process
- raising consumer awareness
- the principles that the ENA recommends the AEMC and governments adhere to when considering appropriate market and regulatory arrangements for DSP.

3. The assessment process–cost benefit analysis

The Issues Paper proposes an assessment process that includes an assessment of the costs and benefits of establishing the necessary market conditions (features that need to be present to enable all parties to make and implement informed decisions).

The ENA is concerned that this is a large and potentially unnecessary task for the AEMC to undertake, for example in relation to the deployment of technologies. For example, the Issues Paper states that a potential market condition is the deployment of meters that measure electricity consumption in half-hour time intervals. In the absence of a jurisdictional cost benefit analysis to inform a decision regarding a mandated smart metering roll-out, distribution businesses are assessing the business and regulatory case for deployment. This is a large and complex task, with results specific to individual businesses.

The ENA considers it is neither appropriate nor relevant for the AEMC to perform a cost benefit analysis in this instance, nor to draw conclusions based on a cost benefit analysis from another jurisdiction, as results will vary between businesses, and over time. In this instance, the AEMC's role should be limited to ensuring the appropriate market and regulatory rules are in place to support a smart meter deployment, where a sound business and regulatory case is made.

The same comments apply in relation to the assessment of other technology based market conditions (such as consumer information portals and appliances with control devices), which are more appropriately assessed as part of business and regulatory processes.

In addition, the ENA notes that Smart Grid, Smart City will provide information on the costs and benefits of various smart grid technologies, including those that enable new consumer services. Smart Grid, Smart City will also assess various business model options for the delivery of these services to determine which deliver the best outcomes for consumers, at the lowest cost. The ENA is concerned that the AEMC's efforts may duplicate the intended outcome of Smart Grid, Smart City, which is likely to deliver more reliable information, given it is based on a current deployment of technologies and services.

The ENA considers that the AEMC's role should be to ensure that there are no barriers to deployment of various technological DSP options, should market participants determine that there is a business and regulatory case for their pursuit.

4. Objectives/ benefits of DSP

Network businesses have an interest in DSP to reduce the network loading at peak times, thereby deferring the need for network augmentation and reducing network cost (and electricity bill) increases. Networks may also be interested in undertaking DSP for other network support reasons, such as to provide voltage control. In addition, distribution businesses are exploring the business and regulatory case for investing in smart grids, including the provision of information and devices that enable consumers to manage the financial and carbon impacts of their electricity consumption decisions.

The ENA acknowledges that DSP can also potentially provide benefits to multiple parties along the electricity supply chain in addition to consumers. Some of the other potential benefits or objectives of DSP to other parties include

- providing consumers with the ability to manage the financial impacts of their consumption decisions
- reducing electricity demand at peak times, thereby deferring the need for additional investment in generation and transmission (as well as distribution) infrastructure
- providing retailers with an alternative financial hedging instrument against high spot market prices
- providing the market operator with reserve capacity to manage security risks, or for ancillary services
- improving environmental outcomes, though it should be noted that this will not necessarily be the case in all situations
    - DSP could result in energy conservation, that is, a reduction in total energy consumption, thereby reducing carbon dioxide emissions.
    - DSP could result in a substitute of the consumer's own renewable power source (such as solar PV) in place of power sourced from the pool. This could lead to a reduction in carbon dioxide emissions.
    - If, however, DSP results in a shift of consumption from peak to off-peak periods, it could meet the first three objectives above, while delivering a perverse environmental outcome. This is because consumption would be shifted from periods supplied by a higher proportion of low carbon peaking plant (such as hydro or gas fired generation) into periods supplied by a higher proportion of carbon intensive base load coal fired generation. Over time the shift in the mix of generation to lower carbon technologies (for example through the MRET scheme) will reduce this perverse outcome.

Given the potential benefits of DSP to several parties, it is important that there is flexibility in the market arrangements to allow multiple parties to be involved in the provision of DSP. Distributors are well placed to participate in demand management activities, so as to improve the efficiency of network operations and investments for the long term interests of end users. Indeed, many distributors have already implemented consumer-related trials aimed at demand management. At the same time, distributors recognise the legitimate interests of other parties to offer DSP services to meet their commercial objectives. The ENA is, however, conscious that increasing consumer choice does not necessarily equate to optimal consumer choice. It is therefore important to test the potential for multiple parties to work together to meet their objectives as well as deliver the best outcomes for consumers and ensuring that the reliability and security of energy services is maintained. Balancing these different requirements will

create increasing complexity in the energy market and in the electricity networks that will be required to physically support the energy flows required.

The following sections contain a more detailed discussion of the network and consumer choice objectives of DSP.

Network initiated DSP

Electricity businesses around the world are facing a challenge — to supply increasing amounts of electricity while meeting community and government expectations for more reliable, environmentally sustainable and affordable energy supplies. The demand for increasing supplies of electricity is primarily driven by a growing population, combined with lifestyle choices to live in larger houses with fewer residents and an increasing number of appliances.

Generation and network assets are traditionally designed to meet peak demand requirements. In areas where peak demand is growing rapidly, and capacity is becoming constrained, there is a threat to the reliability and service levels set by governments and regulators, and expected by consumers, unless there is either a supply side response –by augmenting the network, or a demand side response – by reducing peak demand.

Informed decision making by consumers has the potential to reduce the amount of electricity consumed at peak times, thereby delaying or avoiding the need for expensive investments in network assets, which would only be needed for a few short periods each year. This can improve the cost-effectiveness of network operations and the affordability of electricity supplies, relative to the business as usual case where peak demand continues to grow unchecked, and relative to traditional (supply-side) network solutions.

In order to encourage DSP to the level where it can be considered as a truly effective alternative to network augmentation, distribution businesses need to be able to offer targeted energy management products direct to consumers in specific areas of the network where demand is at or near current capacity limits. Distribution businesses also need to have confidence that DSP will occur when needed, that is, DSP needs to be firm in its delivery. If, in the situation where DSP is being used as an alternative to a network augmentation, DSP does not take place to the level and at the time and place required by the distributor, there will be a risk of interruptions to power supplies and penalties to distributors for failing to meet reliability and service levels.

The distribution businesses' requirement for a firm, localised demand response is best met by arrangements that enable the distributor to directly turn off or cycle particular consumer appliances (such as pool pumps and air conditioners)[1], or limit the consumer's overall instantaneous end-use demand[2]. In either case this would only be undertaken in accordance with a pre-agreed arrangement with willing consumers, and in return for some form of compensation/ rebate. This type of arrangement is consistent with the hot water control schemes that have been in place in several jurisdictions for many years. Several distribution businesses have already commenced consumer-related direct load control trials, which are showing positive results in terms of consumers' willingness to engage in the program and the delivery of demand reduction.

Such arrangements could occur either directly between the distributor and the consumer; or via a partnership agreement between a distributor and retailer/ third party service provider. An example of this could be where the distributor asks retailers/ third party service providers to seek out interested and willing consumers to participate in the scheme, but the distributor performs the actual energy curtailment, as agreed by the consumer at times required to ensure network reliability is maintained.

1 Through direct load control contracts.
2 Through supply capacity control contracts.

Such arrangements would not preclude other parties from offering such products directly to consumers (for example appliance control through a retailer or 3rd party HAN, provided it complies with certain protocols to ensure network security and reliability are preserved). However, if the provision of these services was limited to only retailers or third parties, the necessary level of DSP may not occur in constrained areas to the extent required to defer augmentation.

Consumer choice

DSP can play an important role by providing consumers with the information and tools to alter their electricity consumption patterns so as to potentially minimise the impact of rising prices on their electricity bills. DSP can also provide consumers with some level of control over the carbon impacts of their energy consumption decisions.[3] In these instances, the DSP does not need to be firm or localised.

While DSP may help alleviate some of the increasing cost pressures, it is important to keep in mind that it will not necessarily offset rising electricity prices driven by a range of other factors. Network businesses will ensure that investment decisions are efficient, and to that extent, smarter technologies, including those that provide consumer choice, can help to reduce network cost increases relative to traditional network solutions. While these investments will not necessarily lead to an absolute reduction in network costs, and hence price levels, relative to where they are today, they can reduce costs from what they otherwise would have been, thereby providing net consumer benefits (and would only be undertaken if they met this condition.

There will continue to be other upward pressures on electricity prices. Some of these are network related, such as the need to replace ageing infrastructure, invest in new connections (for example, for new residential developments), and meet jurisdictional reliability and safety standards. Other non-network cost pressures may include government schemes to promote renewable energy, energy efficiency and a reduction in carbon emissions, and general economic conditions, which can impact on input costs such as fuel and wages.

There are many DSP options that can provide varying levels of price and consumption information and/ or control to consumers, either directly or through the services of another party. Traditional options include conventional control technologies (such as hot water load control) and the ability for consumers to replace appliances/ equipment with more efficient choices that reduce energy consumption. There is also the emergence of newer smart technology options (such as home area networks and internet portals), some of which are in their infancy in terms of development let alone deployment.

Some of these new DSP options utilise smart metering infrastructure (SMI - half hourly interval meter with two way communications), while others do not require SMI for demand management, but may rely on manually read interval meters for billing and settlements purposes. Demand management could also be undertaken with existing metering, for example by offering customers a network tariff rebate. It is necessary to understand which of these options delivers the outcomes consumers and others seek at the least cost and while maintaining network reliability and security.

Some DSP options require potentially significant investments by network businesses (in terms of deployment, as well as business models and processes), while the benefits are spread across the supply chain (generators, networks, retailers, 3rd party energy management service providers) as well as consumers. This split benefits/ split incentive problem means that there is therefore the need for a sound business and regulatory case to be made before investment is undertaken. Many network businesses are currently going through this assessment process and undertaking trials of technology and service delivery models. The Australian Government has recognised this through its Smart Grid, Smart City initiative, which

3 As indicated elsewhere in this submission, energy conservation and energy efficiency may reduce carbon emissions, however there may be a perverse carbon outcome from shifting load from low emissions intensive peak periods to high emissions intensive off-peak periods.

is intended to test the technologies and business models for smart grids and to identify whether regulatory or market barriers to investment exist.

The ENA considers that Smart Grid, Smart City and other trials underway will provide important insights into how consumers want to be engaged, the level of their response under different options, and hence the appropriate type of investments to undertake. It is important that the AEMC's Power of Choice review allows for flexible market and regulatory arrangements that enable the results from these trials to inform investment and engagement decisions. There is also benefit in allowing time and resources for additional trials to test the delivery of products and services through partnerships between distributors and other market participants or third parties in order to test the value proposition of various technologies and business models, and the impacts on consumer outcomes.

5. Efficient operation of price signals

The AEMC has highlighted the importance of providing consumers with price signals to reduce consumption when generation and network resources are constrained, as well as improve the overall economic efficiency of the electricity market.[4]

The ENA strongly supports cost reflective prices that incentivise consumers to make informed and efficient consumption decisions. In particular, the ENA considers it essential that network price structures reflect the cost drivers of network capacity, as this will allow consumers to receive a benefit from reducing their consumption at times when network capacity is constrained.

This type of pricing approach is akin to other sectors in which prices are used to allocate capacity during periods of high demand. For example, consumers generally pay more to attend an evening session at the theatre or movies compared to a matinee session; and generally pay more to travel at peak times, for example in school holidays.

There are a number of ways in which peak demand cost drivers can be reflected in network prices, for example through time varying charges such as time of use tariffs, critical peak pricing and peak time rebates, through to combination energy (kWh) and demand (KW or kVA) based prices.

Cost reflective and dynamic price structures can also play an important role in assisting consumers to manage their bills, for example, by providing an accurate signal as to the cost incurred by the electricity supply chain in meeting the consumer's need for electricity at different times. These signals will provide incentive for consumers to reduce their consumption at those times when doing so produces the most cost reduction for the electricity supply system. They will also assist in removing inherent cross subsidies between consumers with different electricity consumption profiles. For example, rather than charging a flat $X/ kWh regardless of when energy is consumed, prices can be designed so that consumers pay a higher rate ($Y/ kWh) in critical peak periods (for example, for the afternoon/ evening during the hottest 20 days in the year) and a lower rate ($Z/ kWh) for the rest of the year.

Some evidence has shown that, contrary to commonly held perceptions, such dynamic pricing structures may have the effect of reducing the bills of low-income consumers, even without them changing their energy consumption patterns.[5] Nonetheless, ENA considers it important that any changes in pricing structures should be accompanied by an assessment and commitment from governments to ensure consumer protections are adequate under a new pricing regime.

In its issues paper, the AEMC has questioned whether there are incentives for retailers to reflect efficient price signals in prices to consumers.

The ENA considers that it is uncertain whether retailers will pass network price signals through to the retail tariffs they offer consumers, given there is no requirement for them to do so. In the case of deregulated retail markets there *may* be competitive pressures for retailers to pass network price signals on; while in the case of regulated retail markets there is the potential for regulated retail prices to mask network price signals. The ENA notes that one jurisdiction with retail price regulation is taking steps to preclude this potential.[6]

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4 AEMC (2011) Issues Paper: Power of choice – giving consumers options in the way they use electricity, p. 27
5 Lisa Wood and Ahmad Faruqui, *Dynamic pricing and low income customers*, Public Utilities Fortnightly, November 2010
6 The Queensland Government has gone some way to addressing this issue through its intention to require that the notified prices that apply to small customers who have not taken up market offers be based on "a Network (N) + Retail (R) cost build-up approach ... for each retail tariff, where the retail cost component (R) is regulated and the network cost component (N) is passed through to customers" See Minister's Direction Notice, May 2011, available at http://www.qca.org.au/files/ER-MinEnergyWater-RevEPandTS-2011-MINDIRNOT-0511.PDF

De-regulation of retail prices may go some way to encouraging retailers to offer different price structure to consumers. However, ENA considers it is not possible to anticipate the degree to which cost-reflective price signals provided to retailers will be seen by consumers and therefore whether they will provide an incentive to reduce peak demand. This is one of the reasons that distributors require the flexibility to be able to offer demand management products directly to consumers to provide them with an incentive to alter their behaviour to minimise peak demand. The ENA considers that the issue of cost-reflective pricing is worth further consideration, including research into how such price signals are best delivered.

A related component of pricing reform is to align consumers' consumption decisions more closely with the financial impact of those decisions. To that extent, ENA considers it is worth considering the merits of reducing billing cycles, for example from quarterly to monthly periods.

6. Raising consumer awareness

Changes in how electricity is priced and in the provision of information and other products and services to help consumers respond to the time-varying costs of electricity will be potentially complex for consumers, compared to their relatively passive involvement in electricity consumption decisions to date. It is therefore vital that stakeholders seek to engage with consumers to bring them along on the transition the electricity industry is undergoing.

Regardless of whether DSP is aimed at deferring network augmentation or providing consumer choice (or in fact meeting other objectives) there is an important need to raise consumer awareness of the drivers for electricity price increases and the role consumers can play in order to reduce the impact of price increases on their bills and by doing so on the need for further price increases in the future.

As part of this process it will be important for all stakeholders to inform consumers about the benefits of new service offerings, such as new price structures and various energy management services, in particular load control and supply capacity control products, which may have negative connotations if not properly explained and understood. It is recognised that this process will take time and require a variety of different mechanisms to deliver, given that consumers vary greatly in their needs, interests and capacity to engage. Different consumer sectors and interests need to be recognised and adequately and appropriately addressed.

7. Principles for the development of market and regulatory arrangements for DSP

ENA, in consultation with its electricity network members, has developed and recommends the following high-level principles that we believe should be adhered to in the development of any altered market and regulatory arrangements that seek to enhance the participation of the demand-side in the NEM.

1. Recognise the role that distribution businesses can play in enhancing DSP

Distribution businesses can potentially play an important role in enhancing DSP in the NEM in ways that are consistent with the NEO. The ability of distribution businesses to play such a role is the result of the following facts and characteristics of the role they play in the market.

- Distribution businesses directly experience the impact of peak demand on the cost of supplying electricity to end-use consumers. They are also in a position to understand how much specific consumer sectors and end-uses contribute to peak demand on a system-wide basis, and thereby to provide a very good foundation for the identification and assessment of the technical potential of DSP actions.

- Distribution businesses have a direct and long-lived relationship with every end-use facility within their service territories, and therefore the end-use equipment characteristics and usage behaviour of the users of those facilities. The longevity of this relationship and the impact of end-use facilities and equipment on the cost structure of the distribution businesses also give them a longer horizon in considering the cost-effectiveness of demand-side actions than that held by other relevant stakeholders including retailers and, in most cases, end-use consumers themselves.

2. Recognise there are two levels of DSP activity that distribution businesses may engage in

a. Area-specific DSP (and other non-network options) undertaken to

   i. defer network augmentation projects required to meet growth in peak demand

   ii. reduce the risk of network outages resulting from a network constraint

   iii. provide other network support, such as through voltage regulation.

b. Broad-based DSP activities (i.e., activities in areas that are not facing an augmentation requirement) that seek to provide information and tools to help consumers exercise greater choice about their energy consumption (which might or might not result in permanent demand reductions).

3. Explicitly recognise the right and ability of distribution businesses to provide energy management services directly to consumers

This is important in the first instance because the multiple objectives that stakeholders have with regard to DSP (including reduction of peak demand and the consequent need for low duty-cycle infrastructure, moderation of wholesale price excursions, reducing costs to end-use consumers and the ability to provide consumers with more options for exercising choice and control over their use of electricity) will require contributions from multiple players and innovative products/services in order to be met.

It is also of significant importance in order for distribution businesses to be able to effect DSP-based deferrals of network augmentation projects. Distribution businesses cannot be required to rely on the retailers to enact area-specific DSP projects, as such engagements are very likely to be too small to warrant

the attention of a retailer that has consumers across potentially every distribution service area in the NEM. Requiring retailers to serve as the implementation agents of distributors' DSP activity would subject them to very high transaction costs, as they would potentially need to deal with the technical and commercial requirements of a number of small retail programs.

The flip side of the above (coupled with the fact the distributor will have a form of communication and control technology) is that the distributor could potentially serve as the agent for giving effect to the DSP potential of consumers for other market participants, particularly retailers.

Distribution businesses have access to the meter data relating to each end-use facility within its service territory and hence can provide access to and independent analysis of that information for consumers. The advantages of this are that the distribution business

- is likely to be perceived by consumers as having significant technical expertise with regard to electricity consumption information
- can provide a 'second opinion' independent from the retailer
- has an on-going interest in addressing peak demand
- is a party with fewer vested interests in the consumer's current level of electricity consumption being maintained or increased.

Distribution businesses can be a provider of information on a prescribed service basis which will ensure that a certain level of information is available to every consumer regarding his/her electricity consumption and ways to manage that consumption. Ensuring that relevant parties are not precluded from providing information and other services to consumers concerning the management of their electricity consumption is entirely consistent with the overall goal of increasing consumers' power of choice.

To give effect to the distributor consumer interaction, ENA considers that the NER needs to make explicit the ability of distribution businesses to provide metering information to consumers, through internet portals etc., without needing to first be requested to do so by the retailer.

Given concerns raised by some retailers, it is important to note that existing ring-fencing arrangements and competition legislation provide a safeguard to ensure that distribution businesses do not misuse their position as a monopoly provider of regulated services.

4. Support price structures that reflect network cost drivers and incentivise consumers to change behaviour

As discussed elsewhere in this submission, the ENA strongly supports cost reflective prices that incentivise consumers to make informed and efficient consumption decisions. In particular, the ENA considers it essential that network price structures reflect the cost drivers of network capacity, as this will allow consumers to receive a benefit from reducing their consumption at times when network capacity is constrained.

The ENA also considers it important that any changes in pricing structures should be accompanied by an assessment and commitment from governments to ensure consumer protections are adequate under a new pricing regime.

In its issues paper, the AEMC has questioned whether there are incentives for retailers to reflect efficient price signals in prices to consumers. The ENA considers that it is uncertain whether retailers will pass network price signals through to the retail tariffs they offer consumers, given there is no requirement for them to do so. The ENA considers it is therefore not possible to anticipate the degree to which cost-reflective price signals provided to retailers will be seen by consumers and therefore whether they will

provide an incentive to reduce peak demand. The ENA considers that the issue of cost-reflective pricing is worth further consideration, including research into how such price signals are best delivered.

A related component of pricing reform is to align consumers' consumption decisions more closely with the financial impact of those decisions. To that extent, ENA considers it is worth considering the merits of reducing billing cycles, for example from quarterly to monthly periods.

5. Recognise that market and regulatory frameworks that enable consumer choice need to be flexible to adapt to a changing environment and to respond to learnings from pilots and trials

Chapter 6 of the National Electricity Rules contains the following arrangements for assessing area-specific DSP

- the Demand Management Incentive Scheme (DMIS), which provide incentives to further improve on the consideration of non-network alternatives
- the Demand Management Incentive Allowance (DMIA), which assists distributors in building the required skills and capabilities
- changes that are being considered with respect to the Regulatory Investment Test – Distribution (RIT-D), which (if approved) will allow distribution businesses to incorporate upstream benefits in their consideration of non-network and network alternatives.

While these changes provide incentives to consider area-specific DSP as an alternative to network augmentation, it is important to note that most distribution businesses are still learning about DSP, particularly with respect to broad-based DSP activities.

Participation in broad-based DM activities will require additional expenditure and changes to business models that are outside the distribution businesses traditional role. Some DSP options require potentially significant investments by network businesses (in terms of deployment, as well as business models and processes), while the benefits are spread across the supply chain (generators, networks, retailers, 3rd party energy management service providers) as well as consumers.

This split benefits problem means that there is therefore the need for a sound business and regulatory case to be made before investment is undertaken.

In addition, given the relatively immature nature of many of the new smart technologies, and the market for related product and service offerings, the ENA considers that the supporting market and regulatory frameworks that enable consumer choice need to be flexible to adapt to a changing environment and to respond to learnings from pilots and trials, including Smart Grid, Smart City. There is also benefit in allowing time and resources for additional trials to test the delivery of products and services through partnerships between distributors and other market participants or third parties in order to test the value proposition of various technologies and business models, and the impacts on consumer outcomes.

In the absence of a mandated smart meter deployment by jurisdictional governments the ENA considers that there is a need to clarify the arrangements in the rules in relation to meter types so as to enable distribution businesses to undertake a smart meter deployment, if they determine appropriate, in accordance with their business and regulatory case.

Some ENA members have commented in their own submissions that there is room for additional improvements to further encourage distributors to engage in long term or broad-based DSP activities. The ENA is continuing to investigate this issue with its membership to arrive at an industry position.

6. Focus on incentivising desired behaviour rather than regulating outcomes

Distribution businesses should not be compelled to undertake DSP activities (beyond complying with existing requirements to identify and pursue the lowest cost means for meeting demand consistent with reliability standards). This is at least in part because different networks face different cost drivers, and therefore will have different levels of benefit that can be extracted from demand side actions in terms of network augmentation deferral, and therefore, corresponding differences in activity levels.

While the ENA has focussed its submission on DSP from network deferral and consumer choice perspectives, the ENA notes that there are a range of other benefits that DSP can provide, such as

- voltage control for distribution networks
- providing retailers with a financial hedging instrument against high spot market prices
- providing the market operator with reserve capacity to manage security risks, or for ancillary services
- reducing energy demand at peak times, thereby deferring the need for additional generation investment
- improved environmental outcomes, though it should be noted that this will not necessarily be the case in all situations.

Given the potential benefits of DSP to several parties, it is important that there is flexibility in the regulatory and market arrangements to allow for the provision of DSP by multiple parties. In each of these instances, DSP should be selected where it is an efficient option and where it is in accordance with the National Electricity Objective, rather than being pursued as an end in itself. It is inappropriate to set arbitrary targets for an overall level of DSP in the market, as this could result in DSP being undertaken in instances where the costs outweigh the benefits, thereby making consumers worse off.

The ENA argues that the appropriate measure of DSP is not the absolute level of DSP in the market, but rather whether the market and regulatory arrangements support various parties making a decision to participate in DSP where it is efficient to do so. The ENA notes that this has been recognised by the Ministerial Council on Energy, in its direction to the AEMC to, "consistent with the National Electricity Objective, investigate and identify the market and regulatory arrangements needed across the electricity supply chain to facilitate the efficient investment in, operation and use of DSP in the NEM."[7]

Clearly the focus of the NEO is on efficiency, price and reliability; therefore DSP options need to be carefully assessed against these objectives. If environmental objectives are sought to be achieved through DSP, then consideration needs to be given to the additional costs of facilitating emissions reductions, and the impact on prices and the reliability of energy supplies.

In any case, it is clear that policies implemented in different parts and at different levels of government can and have had impacts on the costs of providing the electricity required by Australia's businesses and households. There is a strong need for all policies that impact on the electricity sector to be assessed in a holistic fashion that identifies and takes account of their impacts on the costs of operating the sector as well as their specific objectives and thereby assists in achieving the best policy outcomes.

7 AEMC (2011), op. cit., p. i

7. Ensure DSP arrangements do not negatively impact on network reliability

The ENA disagrees with the AEMC's conclusion that cost-effective DSP (through more efficient network utilisation) "should result in lower costs to consumers for an equal level of reliability of supply". It is not necessarily the case that DSP will result in an equal level of reliability, and indeed there could be detrimental impacts on supply reliability if DSP is not managed properly. For example, if significant levels of consumption levels are reduced or brought back on line, this can cause disruptions to frequency and voltage levels, which could cause a power outage. Network businesses are in the process of developing Load Management and Network Security protocols to overcome such concerns. It is essential that all parties engaging in material levels of DSP that could affect network performance levels must be required to adhere to these protocols.

Network businesses are required to participate in a Service Target Performance Incentive Scheme (STPIS), which is designed to reward or penalise a network business for its network performance relative to a series of service targets. STPIS liability is therefore an important consideration in those situations in which the pursuit of DSP could potentially increase the potential for supply interruptions. Based on these concerns, some network businesses have in the past sought to reflect STPIS liability in contractual arrangements with DSP providers. However, DSP providers have often been unwilling to accept those risks, which has resulted in their DSP potential remaining untested and unused. The ENA considers that the AEMC could play a useful role in assisting in a re-examination of the community's expectations regarding and willingness to pay for specific levels of supply reliability and security, and the implications of those findings for the role of DSP in the NEM. More immediately, there would be merit in considering measures that provide additional flexibility (at least on a temporary basis) in the application of the STPIS in instances where reliability performance is negatively impacted by network DSP undertakings.

Also, in the instance where distributors are provided with financial support to test DSP options, invariably the DSP option, supplied by smaller niche companies, is riskier than the BAU solution which discourages DSP investment. There is an opportunity to moderate existing governing regulatory rules to facilitate the testing of these solutions until it can be fully proven if they can be utilised as viable options.

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