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positive energy

Dear Mr Corrigan

**Demand Side Participation (DSP) Review – Draft Report**

Energex Limited (Energex) is pleased to provide this submission to the Australian Energy Market Commission's (AEMC) Power of Choice Review – Draft Report.

For some time, Energex has been an advocate of efficient Demand Side Participation (DSP), successfully incorporating it into its Standard Control Services as part of its approach to operating an efficient network, improving asset utilisation and load factors, and providing better value to our customers.

Energex supports the intent of this review to implement market and regulatory arrangements that support the uptake of efficient DSP to enable the least cost combination of supply and demand side solutions to evolve to meet customer and market participant requirements.

However, Energex has concerns regarding a number of recommendations raised in the Draft Report which could have a significant cost impact on customers and impacts on supply chain interactions, and Distribution Network Service Providers ability to provide services at the most efficient price. Additionally, Energex notes that key sections of the Draft Report do not effectively delineate energy efficiency and peak demand management objectives.

Energex's response to the AEMC's recommendations is provided as an attachment to this letter. Should you have any enquiries please contact Mick Ryan on (07) 3664 4125 or Richard Schoenemann on (07) 3664 5710.

Yours sincerely

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**Submission Paper**

**AEMC DRAFT REPORT  
EPR 0022**

**Power of Choice – giving customers options in  
the way they use electricity**

**October 2012**

# Table of Contents

1	<i>Introduction</i>	3
1.1.	<i>Issues and Concerns</i>	4
1.1.1.	<i>Principles for metering contestability arrangements</i>	4
1.1.2.	<i>Proposed introduction of time varying tariffs for network only components</i>	5
1.1.3.	<i>Role of parties to engage with consumers</i>	6
1.2.	<i>System-wide compared to Localised Demand Side Participation</i>	6
1.3.	<i>Integrity and Reliability of Network</i>	7
1.4.	<i>Energex Demand Management Experience</i>	7
1.5.	<i>General Comments</i>	8
2	<i>Facilitating consumer access to electricity consumption information</i>	10
2.1.	<i>Timely and accessible energy and metering data to consumers</i>	10
2.2.	<i>Transfer of energy and metering data to authorised consumer agents</i>	11
2.3.	<i>Market information to develop DSP products and services</i>	11
3	<i>Engaging with consumers to provide DSP products and services</i>	12
3.1.	<i>Energy Services to residential and small business customers</i>	12
3.2.	<i>Role of retailers and distribution network businesses – engaging with consumers</i>	13
4	<i>Enabling technologies for DSP</i>	14
4.1	<i>Functional Specification of meters in the NER</i>	14
4.2.	<i>Metering infrastructure installation and arrangements to support commercial investment in metering</i>	15
5	<i>Demand side participation in wholesale electricity and ancillary services markets</i>	16
5.1.	<i>Demand response mechanism</i>	16
5.2.	<i>Demand forecasting</i>	17
5.3.	<i>Creating a new category of market participant</i>	17
6	<i>Efficient and flexible pricing options</i>	19
6.1.	<i>Education, impacts on vulnerable consumers and time varying tariffs</i>	19
6.2.	<i>Strengthening arrangements for network tariffs</i>	21
6.3.	<i>Addressing risks for retailers under cost reflective pricing</i>	21
7	<i>Distribution networks and distributed generation</i>	22
7.1.	<i>Potential return for network businesses implementing DSP projects</i>	22
7.2.	<i>Network tariff structure influencing incentive to do DSP</i>	22
7.3.	<i>Ability of DNSP to own and operate DG and feed in tariffs for DG</i>	23
	<i>Appendix A. Energex Demand Management Experience</i>	24

## 1 Introduction

Energex welcomes the opportunity provided by the Australian Energy Market Commission (AEMC) to respond to the Draft Report *Power of Choice – giving consumers options in the way they use electricity*.

Energex supports the intent of this review to implement market and regulatory arrangements that support the uptake of efficient Demand Side Participation (DSP). Efficient DSP enables the least cost combination of supply and demand side solutions to evolve to meet changing customer and market participant requirements.

However Energex does have concerns regarding a number of recommendations raised in the Draft Report which could have a significant cost impact on customers and impacts on supply chain interactions, and Distribution Network Service Providers (DNSP) ability to provide services at the most efficient price. In addition, Energex notes that key sections of the Draft Report do not effectively delineate energy efficiency and peak demand objectives.

The AEMC states the overall objective of the review is to ensure that the community's demand for energy services is met by the lowest cost combination of demand and supply side options and that the potential benefits of DSP are to reduce growth in peak demand, which may potentially enable more efficient utilisation of transmission and distribution networks including the deferral of the need for additional investment in networks.

Energex supports this objective and has been a leading proponent of Demand Management activities in Australia for decades. Energex currently has approximately 767,000 (59%) customers with a demand managed service, such as air conditioning, hot water and pool pump control. In the current regulatory period Energex is adding 144 MW of demand management capability across the Residential, Commercial and Industrial sectors. This is being achieved through the current standard control services expenditures approved by the AER as well as off-market contracts with demand aggregators. Current technology platforms are enabling Energex to achieve these outcomes. Energex will also be able to leverage the technology to manage electric vehicles. This demand management program is one of the largest programs of its type in our region.

Given that network costs are currently undergoing a high level of scrutiny, Energex believes the recommendations of this review need to support enablers of peak demand reduction for DNSPs rather than impose additional obligations or limitations. DNSPs need to improve load factors, asset utilisation, and the overall efficiency of the network to provide value to customers.

To facilitate more cost effective network services for customers, Energex considers that it is essential that changes from this review:

- Support appropriate customer response to price signals;
- Continue to support the provision of DSP services to customers by DNSPs; and

- Do not restrict or erode existing load control infrastructure through changes to metering arrangements.

It is in this context that Energex responds to this consultation. This submission responds to the specific issues and recommendations raised in the Draft Report which require further clarification and industry consultation to ensure the intent of the review is achieved and that value to end users is created from any changes to market rules.

Energex's submission has been structured around the key recommendations raised in the Draft Report which are likely to affect DNSPs. A summary of the key issues and concerns raised by Energex is presented in the next section, followed by commentary on the Draft Report recommendations on pricing, metering contestability, network incentives and supply chain co-ordination.

## **1.1. Issues and Concerns**

The Draft Report contains a number of recommendations which appear to enhance the market potential of certain industry sectors without clearly defining how additional market efficiencies and benefits will be realised by customers.

At the same time, proposed mechanisms appear to limit, rather than enhance, the ability of DNSPs to provide DSP to customers in a cost effective manner.

For some time Energex has successfully utilised demand management as part of its approach to operating an efficient network, improving asset utilisation and load factors, and providing better value to our customers.

Energex is concerned that these recommendations could act to create inefficiencies in the supply chain and ultimately work against the objectives of the review to provide net benefits to end users through lower cost delivery of energy. That is, the cost impost on DNSPs could be greater than the benefit derived by the other participants and ultimately passed on to customers.

Specifically, Energex has concerns regarding the following three key recommendations.

### **1.1.1. Principles for metering contestability arrangements**

The Draft Report and supplementary section recommend a move to a contestable roll-out of interval metering with remote communications.

Energex notes that there has been little consultation and supporting analysis through the DSP3 process to support this recommendation and demonstrate clearly how market benefits will be achieved and passed to customers.

While Energex acknowledges potential benefits of advanced metering, Energex believes further work and consultation is required to define the real benefits, costs and impacts of the proposed roll-out model before any rule changes are proposed. This analysis should include

a comparison of how the much the more detailed information equates to a lower price to customers.

The following issues need to be clearly addressed:

- Ownership, installation and maintenance model of the assets;
- Model for charging customers (e.g. third party cost recovery, moving to a new premises, etc);
- Guaranteed Service Levels;
- Protocols for load control events;
- Treatment of associated stranded infrastructure (meter, load control and IT systems);
- Responsibility for installation at difficult sites;
- Protocols for multiple parties providing services; and
- Model for how benefits are passed on to customers.

### **1.1.2. Proposed introduction of time varying tariffs for network only components**

The AEMC recommends a gradual transition to time varying network tariffs for customers. It is proposed that retailers will be free to decide how to include the network tariffs in their offers.

Energex supports this transition provided there are benefits and that these are appropriately realised and apportioned.

With regards to the proposed customer bands, Energex does not see clear value in creating the additional customer bands, given that the proposal allows retailers to price outside of these bands.

Energex is aware that the protection of vulnerable customers is essential. However, it questions the value of creating bands on this basis and notes the distinction between the implementation of efficient pricing mechanisms and social policy.

Data from trials undertaken globally (and supported by Energex trials) indicates that there is no correlation between usage and vulnerable customer classification. All customers at varying income levels are proportionally represented in all of the proposed bands. As such, tariff banding to protect a particular group may lead to less efficient outcomes compared to customer protections mechanisms implemented through social policy.

Energex notes the thresholds for the bands have not been defined and at a minimum any bands created should align to the National Energy Customer Framework (NECF) guidelines.

In addition to the above, DNSPs must maintain the flexibility to initiate the appropriate network tariff structures to achieve efficient network pricing. This may involve implementing tariffs other than time of use tariffs to achieve greater reductions in peak demand.

Tariff trials conducted in Queensland have confirmed the findings of international trials (e.g. Brattle Group report<sup>1</sup>) in that time of use pricing elicits a response from customers less than that achieved through dynamic peak or demand based pricing. Maximum responses are achieved when customers are provided the appropriate tariff signal with enabling “set and forget” technology (e.g. load control) as currently offered by Energex.

### **1.1.3. Role of parties to engage with consumers**

The Draft Report recommends clarifying the conditions when a DNSP can engage directly with customers to offer DSP network management services.

Energex notes that its primary objective for dealing directly with customers when offering certain DSP products is to deliver the lowest cost network solutions, primarily through peak demand reduction, thereby avoiding the cost of constructing additional network capacity beyond what is required for effective delivery of electricity. This is distinct from other market participants, whose motives and drivers may differ to those of a network business.

DNSPs have long-standing customer relationships, which are supported nationally by the NECF and the triangular relationship between customers, DNSPs and retailers. Energex relies on this relationship and its knowledge of customers to deliver network services at an optimal balance of reliability and cost. Any additional limitation on the conduct of Energex’s DSP activities is likely to be counter-productive and would likely deliver less efficient outcomes. Such measures have the potential to add more cost to customers in terms of additional DSP program costs.

## **1.2. System-wide compared to Localised Demand Side Participation**

The Draft Report makes a number of recommendations regarding the benefits of system-wide DSP and the benefits of system demand forecasting.

It is important to note that while appropriate DSP at a system level will improve the overall efficiency of the supply chain (e.g. by offering generation and retailer efficiencies), DNSPs largely invest in network to address localised demand requirements.

As such, while DNSPs support the potential benefit of the Australian Energy Market Operator’s (AEMO) proposed role in demand forecasting, the information provided will be of limited value in addressing forecast peaks on localised network elements. Likewise, a system-wide view of DSP opportunities is unlikely to directly correspond to an improvement in network efficiency. For example, a peak generation load curtailment opportunity in the CBD is of no value in addressing a peak demand constraint in an outer suburban residential feeder.

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<sup>1</sup> Dynamic Pricing – What we have learned (2011), Dynamic Pricing – Top Ten Myths (2011), Brattle – Pricing Experiments (2008)

It should be noted that Energex supports the continuation of broad-based demand management activities as part of its business as usual activities. These programs reduce the cost of providing demand management activities (due to momentum and economies of scale) and increase customer awareness of the implications of peak demand and in turn will ultimately improve utilisation of the network and network costs.

### **1.3. Integrity and Reliability of Network**

DNSPs are required to maintain the integrity and reliability of networks. As volumes and size of loads being managed by third parties increases over time, the ability of DNSPs to maintain network integrity and reliability at lowest cost diminishes. It is essential that rules and protocols be established to avoid future complications, in particular that DNSPs are involved in the decision process for bringing loads on and off to maintain network integrity and reliability.

Obligations for network security and Guaranteed Service Levels would need to be considered as part of any review if DNSPs are not involved in this process.

### **1.4. Energex Demand Management Experience**

Energex has a long and successful history of providing demand management services to our customer base as a means of improving asset utilisation and load factors to provide better value to our customers.

Energex currently manages approximately 550MW of peak load and 59%<sup>2</sup> of our customer base utilises a demand managed service in exchange for a direct benefit, which Energex shares with customers often in the form of a reduced load control tariff. There has been overwhelming support of the benefits that this provides in minimising capital expenditure and improving utilisation of network assets. Energex is able to provide this feature at a low marginal cost to customers through its Audio Frequency Load Control system and metering configurations.

In the current regulatory period, the AER has approved Energex's strategy to further extend its Demand Management capability with its Energy Conservation and Demand Management (EC&DM) Program. This approval was contingent on Energex clearly demonstrating how customers would benefit through lower network capital expenditure as a result of the program.

The program is targeting the delivery of 144MW of peak load reduction by 2015 and forms part of Energex's Business Plan to address growing community concerns about increasing electricity prices.

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<sup>2</sup> This number is down from 90% in 2006 when attenuation of the signals from the DNSP to the consumer began with the introduction of the change to more efficient hot water technology.



## 1.5. General Comments

In general Energex supports the enhancement of the demand side participation market, however this should not come at the expense of current services that have provided the largest volume of load management in Australia.

Energex would prefer to see extensions of the current arrangements to enable more of its connected customers to have access to this capability and to reduce the long term costs to customers. To reduce the overall cost to customers, Energex considers it essential to provide seamless access to demand management services requested and managed by third parties.

Energex agrees that tariff structures are a critical component in enabling customers and market players to appropriately value actions that change electricity consumption or demand behaviour, provided the signal is passed to customers. Energex also agrees that customers need to be better informed so as to enable them to determine if and how they can respond to these signals.

Energex believes that currently no other market participants have the same motives as DNSPs to drive peak demand DSP solutions in the supply chain. For this reason, there is value in ensuring that the regulatory framework enables DNSPs to pursue efficient peak demand DSP and to engage directly with customers.

While the efficient deployment of the various supporting conditions required for a substantial increase in DSP will take time, there are opportunities in the short-term, particularly where distribution businesses have a critical mass of direct load control capability. Greater certainty around the value of DSP in the market and the ability for DNSPs to access this from across the value chain, will also assist in the successful expansion of DSP in the larger commercial and industrial sector.

Demand management mechanisms can also be enhanced by:

- Building standards that have compulsory demand management or load control;
- Open standards (e.g. Open Automated Demand Response) for introduction of load control on all household appliances to integrate with future technologies such as Home Area Networks;
- Moving solar incentive programs to areas where solar producing hours align with customer load profiles (i.e. Commercial and Industrial);
- Modifying the Energy Efficiency component of building standards to reflect a component of peak demand for that building;
- Overcoming electrical wiring issues to facilitate off-peak tariffs;
- Ensuring retailer margins for peak and off peak components are cost reflective;
- Enhancing education of demand management options, both for customers and industry (e.g. appliance retailers, electricians); and
- Introducing demand management services on an opt-out, rather than opt-in basis.

A positive business case for a mass rollout of interval metering with communications for residential customers is yet to be established in Queensland. However, net benefits do exist for targeted deployments in areas with a high cost to serve.

To assist the development of a positive business case, options to reduce the overall costs need to include:

- Reassessing the performance indicators for these services which will reduce IT and communications costs;
- Ensuring that customer education and knowledge is actively supported and provided through multiple channels;
- Consideration, in any tariff reform undertaken, of alignment with the objectives of each party's core business (i.e. demand for DNSPs) ; and
- Improving building and appliance standards.

Energex notes that if the current recommendations were adopted as proposed, DNSPs' ability to deliver current demand management services would be diminished and customers would become further confused by additional complexities in the market.

Energex also maintains that as the services provided in the NEM become more fragmented, the optimal lowest cost outcome for the customer will not be achieved and that the DNSPs will be left managing the customers with inherently more costly services (e.g. new entrants would be more inclined to target lower cost to serve customers). This will in turn decrease synergies and increase overall costs to customers.

## 2 Facilitating consumer access to electricity consumption information

### 2.1. Timely and accessible energy and metering data to consumers

#### DRAFT RECOMMENDATIONS

We propose that changes are made to:

- Chapter 7.7 (a) of the NER to clarify the requirements on a retailer when consumers request access to their energy and metering data. This would include provisions relating to the format and structure of data to be provided; the timeframes for delivery; and fees that can be charged.
- Chapter 7 of the NER to require, at a minimum, a retailer to provide residential and small businesses consumers with information about their electricity consumption load profile. There may be a need to amend the NECF to ensure consistency of arrangements.

Energex supports the provision of timely and relevant information to customers, however believes the following key principles need to be adhered to with regards to the provision of energy and metering data:

- Whoever provides the service should make the information available to all parties in the value chain, while managing the confidentiality of information;
- The provision of energy and metering data to customers should not be restricted to retailers;
- Consideration needs to be given to the net benefits that would accrue to customers from information when setting the minimum requirements for customer groups (e.g. residential, small business and large business);
- Consideration should be given to determining how much data is useful for decision making as distinct from confusing; and
- Metering and energy data arrangements need to support demand and capacity tariffs in future.

## **2.2. Transfer of energy and metering data to authorised consumer agents**

### DRAFT RECOMMENDATIONS

- We propose that changes are made to Chapter 7.7 (a) of the NER to enable agents, acting on behalf of consumers, to access consumers' energy and metering data directly from a retailer. This would include requirements on a retailer to provide consumers' energy and metering data to an authorised consumer's agent (third party), following explicit informed consent.

Energex is not averse to the provision of customers' energy and metering data to an authorised agent, however appropriate safeguards must be in place to protect the privacy of customers and manage confidential information.

## **2.3. Market information to develop DSP products and services**

### DRAFT RECOMMENDATIONS

- We propose that changes are made to the NER to require AEMO to publish market information on representative consumer sector load profiles.

Energex notes that profiles provided at feeder level need to have switching information in order to serve any relevant purpose to the market.

Any decision to add to the complexity of published market information adds additional cost and as such should be supported by a detailed cost / benefit analysis which clearly results in net benefits to end users.

### **3 Engaging with consumers to provide DSP products and services**

#### **3.1. Energy Services to residential and small business customers**

##### **DRAFT RECOMMENDATIONS**

– We recommend that the NECF is clarified to make it clear what arrangements apply to third parties providing “DSP energy services”. This should involve establishing criteria either in the NECF or the AER guidelines on retail exemptions. The criteria could include the circumstances where accreditation (or exemptions) of parties is required and the relevant provisions of the NECF that would apply (i.e. marketing rules, and the relevant enforcement and monitoring provisions).

It is important to note that NECF has not yet been implemented in Queensland and when this occurs, an appropriate governance framework would be required to support the recommendation.

To protect network integrity under the proposed arrangements DNSPs would need to be made aware of the impact of what customers are signing up for (e.g. which loads are coming on/off).

As part of its Energy Conservation and Demand Management initiative, Energex currently undertakes various customer engagement and education activities to encourage participation. These activities include:

- Education campaigns online and on television;
- The provision of the [www.yourpowerqld.com](http://www.yourpowerqld.com) website to educate customers about peak demand;
- Localised community programs;
- Shared incentives for customers and community groups; and
- Upfront incentives and ongoing tariff reductions.

### 3.2. Role of retailers and distribution network businesses – engaging with consumers

#### DRAFT RECOMMENDATIONS

– We recommend that the NER and NECF are clarified to outline the conditions when a distribution network business can engage directly with consumers to offer DSP network management services. This may involve establishing appropriate guidelines/process for the AER to apply and outlining which elements of the NECF apply.

To enable efficient network outcomes for customers, Energex maintains load control with residential customers and conducts various residential demand programs to deliver network peak load reductions.

Energex currently manages approximately 550MW of peak load and 59% of our customer base utilises a demand managed service in exchange for a direct benefit which Energex shares with customers, often in the form of a reduced load control tariff.

Energex has serious concerns that additional conditions would impose limitations on its ability to deliver demand management activities which improve the efficiency of its network and provide value to customers.

Energex notes that any impediments to DNSPs providing DSP services would counteract the intent of the DSP3 review. Energex already has processes in place to ensure retailers are aware of customers who have demand management activities, such as controlled load, at their premises.

In addition, new rule changes currently proposed require DNSPs to have a demand management engagement strategy.

Further, it should be noted that load control infrastructure is attached to the premise, not the customer, and it would impose unnecessary and inefficient costs if DNSPs were obliged to re-sign customers every year. It would be more efficient to use a deeming process with the option for customers to choose to opt out of load control where they did not see the benefit.

## 4 Enabling technologies for DSP

### 4.1 Functional Specification of meters in the NER

#### DRAFT RECOMMENDATIONS

– We recommend that a new minimum functionality specification is included into the NER for all future new meters installed for residential and small businesses consumers. That specification should include, interval read capability and remote communications.

Energex notes the following areas of concern regarding the proposed minimum functional specification:

- Remote firmware upgrades are not required, hence there is a potential for meters to be installed which do not have the capability to adapt to different or changing tariff structures;
- Considerations about the treatment of existing load control infrastructure are not defined. Energex currently has extensive direct load control integrated through its metering infrastructure which provides the largest volume of load control in Australia. The report has not mentioned how this infrastructure will be maintained or what compensation mechanisms would be implemented to address the potential stranding of a significant asset which currently defers approximately \$2 billion worth of electricity infrastructure;
- The approach raised in the Draft Report does not appear to consider the comprehensive work undertaken by NSSC in the National Smart Meter Program and does not specify protocols and protections for load control for DNSPs.; and
- Requirements for interoperability of metering technology and the inclusion of common open standards and protocols need to be further defined.

## 4.2. Metering infrastructure installation and arrangements to support commercial investment in metering

### DRAFT RECOMMENDATIONS

We recommend that:

- the installation of meters consistent with the proposed minimum functionality specification to be required in certain situations (e.g. refurbishment, new connections, replacements).
- Such metering must also be installed on an accelerated basis for large residential and small business consumers whose annual consumption a defined threshold.
- Reforms to the current metering arrangements are necessary to promote investment in better metering technology and promote consumer choice. We put forward a model where metering services are open to competition and can be provided to residential and small business consumers by any approved metering service provider.
- If new arrangements are implemented, then we advise that governments should consider removing the possibility of a mandated roll-out of smart meters.

Energex believes that these recommendations require further clarification and consultation prior to any rule change request. In particular, the following points should be noted:

- Proposed model needs to clearly define the costs and benefits, including how customers will be better off as a result of the change to contestable metering with minimal functions and how the benefits will be realised by customers.
- Proposed model does not specify implications on loss of load control functionality with the move to contestability, what compensation mechanism will be afforded to DNSPs for the stranding of load control assets and the impact of additional peak load that could return.
- Proposed fixed 30% of the cost of replaced meter is not appropriate as it does not take into account systems costs, loss of economies of scale (e.g. meter reading routes, etc.) which will amount to additional costs to be borne by DNSPs and ultimately customers.
- The inclusion of a provision in the NER so that DNSPs can claim cost pass-through of any mandated roll out of smart metering.
- Unbundling metering charges will lead to additional confusion and costs as duplicated systems are required to undertake the same function.
- Load control and data are required elements for DNSPs to deliver their network services efficiently to customers.
- Further work is required to ensure consistent standards (meter quality, communications) and protocols are implemented across the industry.
- The AEMC should clearly define how it proposes to treat the issue of “cherry-picking” and who should bear the costs of the difficult sites and remediation.



## 5 Demand side participation in wholesale electricity and ancillary services markets

### 5.1. Demand response mechanism

#### DRAFT RECOMMENDATIONS

- We recommend a demand response mechanism that pays demand resources via the wholesale electricity market is introduced. Under this mechanism, consumers participating in the wholesale market can make the decision to continue consumption, or reduce their consumption by a certain amount for which they would be paid the prevailing spot price.

Energex acknowledges the potential benefits of this model. However, it notes that the operation of the wholesale market, which trades energy, does not necessarily directly correlate to drivers of network expenditure, which provides capacity to meet peak demand. The wholesale price cycle and network peak demand rarely coincide. For example, of Energex's last 26 peak event days only 15% of these have coincided with high pool prices.

Further clarity is required to define specifications and operating protocols, for elements such as embedded generation. In addition, to ensure network stability DNSPs require information regarding loads that come on or off.

This recommendation also has potential to affect the network pricing of large, individually calculated customers.

New participant rules to accommodate numerous new transactions and address how DSP will be enacted will need to be implemented. This will necessitate additional systems and processes which will in turn increase costs.

Hence, while Energex broadly supports the introduction of this mechanism, significant further work is required to define the costs and benefits of this mechanism and specify which parties will be bearing the costs and how net benefits will be passed to Customers.

If this recommendation is suggesting that a capacity market be introduced, the details of this market need to be sufficiently detailed before any costs are identified.

## 5.2. Demand forecasting

### DRAFT RECOMMENDATIONS

- We recommend that the NER is amended to clarify AEMO's role in developing both long and short term demand forecasts, including estimating DSP, for the purpose of providing accurate price signals to the market over various time frames including pre-dispatch.
- To achieve clarity in this regard, the existing rules associated with specific reporting obligations may need to be rationalised to remove any ambiguity regarding their information gathering powers

Energex understands the potential benefits for the wholesale market of this recommendation, however notes concerns regarding the Draft Report's suggestion that state-wide demand forecasts would lead to a reduction in DNSPs capital expenditure.

Accurate forecasting is a complex and essential part of electricity infrastructure planning and it is important to distinguish between system demand which drives generation assets and network element based demand which drives the specific need to build DNSP assets.

In Queensland, state-wide demand forecasting may not be representative due the differing loads across the state (e.g. in mining centres). As such it is unlikely to provide benefits to the AEMO process unless determined at a network element level detailed enough to include switching information.

## 5.3. Creating a new category of market participant

### DRAFT RECOMMENDATIONS

- We recommend creating a new category of market participant in the NER that will allow for the unbundling of all non-energy services from the sale and supply of electricity.

Energex notes that this recommendation has significant implications for the industry through increasing complexity by introducing control and measurement functionality for multiple parties.

Energex is not aware of any meters currently available in the residential market which would be capable of handling the proposed model of multiple communications for control and measurement.

Practically, the introduction of a new category of market participant will require extensive further definition of protocols and interactions as well as a clear definition of the framework for the new market participant.

Further work is required to clearly demonstrate the costs and benefits of this recommendation and how it is envisaged that these will flow to end Customers.

Some issues that need to be clarified are:

- Guaranteed Service Levels for the participant;
- who assumes responsibility for the customer if the market participant experiences financial difficulty (e.g. similar to “Retailer of Last Resort” provisions);
- what minimum accreditation requirements must be met; and
- what additional systems and rules are needed to accommodate the new arrangement need to be clearly defined.

With the introduction of multiple Financially Responsible Market Participants and new Meter Providers and Consumer Agents, significant process changes will be required to the CATS process and will require every Market Participant to develop and test against a new CATS framework. This will introduce significant additional system and process costs, potentially at a greater scale than the introduction of Full Retail Contestability.

## 6 Efficient and flexible pricing options

### 6.1. Education, impacts on vulnerable consumers and time varying tariffs

#### DRAFT RECOMMENDATIONS

- We recommend that governments and industry work together to educate consumers and provide them with the information they need to understand both the system wide benefits and potential individual gains from time varying tariffs.

- To manage the impacts on vulnerable consumers we recommend that:

- Arrangements are put in place for consumers, which may a limited capacity to respond, to remain on a retail tariff which has a flat network component, and would have the option to choose a time varying tariff.
- Government programs target advice and assistance to these consumers to help manage their consumption.
- Governments review their energy concession schemes so that they are appropriately targeted.

- The transition to better price signals in the NEM should be done in a gradual phased approach. We propose that this can be achieved through:

- Focusing only on introducing time varying prices for the network tariff component of consumer bills. Retailers would be free to decide how to include the relevant network tariff into their retail offers; and
- Segmenting residential and small business consumers into three different consumption bands and applying time varying network tariffs in different ways.

This would work as:

- For large consumers (band 1), the relevant network tariff component of the retail price must be time varying. This would require these consumers to have a meter that can be read on an interval basis.
- Medium to large consumers (band 2) with an interval meter would transition to a retail price which includes a time varying network tariff component. These consumers would have the option of a flat network tariff.
- Small to medium consumers (band 3) would remain on a flat network tariff. These consumers would have the option to select a retail offer which includes a time varying network tariff, if they so choose.

The AEMC recommends a gradual transition to time varying network tariffs for Customers. It is proposed that retailers will be free to decide how to include the network tariffs in their offers.

While time varying tariffs are broadly supported by Energex, there are some concerns over the extent to which the network price signal will be passed to customers under this model. It is inconsistent to recommend that retailers are free to decide on how to include the relevant network tariff in their offers if the purpose of the price signal is to inform customers of the cost of their investment and consumption decisions. If the network price signal is not passed to customers, the costs of this enabling infrastructure will be incurred, but the potential benefits will not be realised.

DNSPs must retain the flexibility to initiate the appropriate network tariff structures to achieve efficient network pricing. This may involve implementing tariffs other than time of use tariffs to achieve greater reductions in peak demand.

Tariff trials conducted in Queensland have confirmed the findings of other international trials (e.g. Brattle Group<sup>3</sup>) in that time of use pricing produces a smaller reduction in peak demand than dynamic peak or demand based pricing. Maximum responses are achieved when customers are provided the appropriate tariff signal with enabling “set and forget” technology (e.g. load control) as currently offered by Energex.

DNSPs can offer such tariffs with enabling infrastructure, and these tariffs produce demonstrable net benefits to Customers. DNSPs must be able to implement these tariffs so that the appropriate price signal is passed to Customers.

With regards to the proposed customer bands, Energex does not see clear value in creating the additional customer bands, given that:

- The proposal allows retailers to price outside of these bands;
- All bands will contain members at all income levels;
- All groups have demonstrated the capacity to respond to signals; and
- Retailers already have obligations and programs to manage vulnerable groups of customers.

It was noted at the AEMC Public Forum on 3 October 2012 that 80% of low income customers could miss out on benefits by not participating in dynamic tariffs.

Energex is aware that the protection of vulnerable customers is essential. However, it questions the value of creating bands on this basis and notes the distinction between the implementation of efficient pricing mechanisms and social policy. Data from trials undertaken globally (and supported by Energex trials) indicates that there is no correlation between usage and vulnerable customer classification. All customers at varying income levels are proportionally represented in all of the proposed bands. As such, tariff banding to protect a particular group will lead to less efficient outcomes compared to customer protection mechanisms implemented through social policy.

Energex notes the thresholds for the bands have not been defined and at a minimum any bands created should align to National Energy Customer Framework (NECF) guidelines.

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<sup>3</sup> Dynamic Pricing – What we have learned (2011), Dynamic Pricing – Top Ten Myths (2011), Brattle – Pricing Experiments (2008)

## 6.2. Strengthening arrangements for network tariffs

### DRAFT RECOMMENDATIONS

We recommend that:

- The distribution network pricing rules in the NER are amended so that distribution network businesses have sufficient guidance to set efficient and flexible network tariff structures that support DSP.
- A new provision is included in the rules which require distribution network businesses to consult with consumer groups and retailers on their proposed tariff structures each year.

Energex believes that DNSPs are best positioned to determine the most appropriate network tariff structures to drive efficient network investment.

Energex is generally supportive of stakeholder consultation regarding tariff structures provided it is in alignment to the processes and requirements already in place. Energex questions the practicality and value of additional consultation on the following basis:

- Regulatory obligations require Energex to have a customer engagement strategy; and
- Additional consultation in the tariff setting process would likely add extra lead time to an already tight timeframe.

## 6.3. Addressing risks for retailers under cost reflective pricing

### DRAFT RECOMMENDATIONS

- We recommend that once a residential and small business consumer has a meter with interval read capability, that consumer's consumption should be settled in the wholesale market using the interval data and not the net system load profile. This will be the case irrespective of whether the consumer has reverted to a flat retail tariff.

Energex suggests this recommendation should refer to meters with remote reading capability installed only (i.e. meters under the minimum specification). Energex currently has a large number of non-communication enabled interval meters, and requiring manual reading of these meters will be cost prohibitive. In addition, the potential costs and benefits of this proposal should be clearly identified and attributed to the appropriate industry participant.

## 7 Distribution networks and distributed generation

### 7.1. Potential return for network businesses implementing DSP projects

#### DRAFT RECOMMENDATIONS

- We recommend that the AER considers reforming the application of the current demand management and embedded generation connection incentive scheme to provide an appropriate return for DSP projects which deliver a net cost saving to consumers. We have put forward principles and two mechanisms for how this could be achieved.

Energex is supportive of mechanisms which allow the inclusion of demand management activities (including broad-based demand management activities) into business as usual processes for lowest cost delivery of DNSP Standard Control Services.

### 7.2. Network tariff structure influencing incentive to do DSP

#### DRAFT RECOMMENDATIONS

- We recommend a combination of two approaches to mitigate the problem of network profits being linked to actual volume. Firstly, the pricing principles in Chapter 6 of the NER need to be amended to provide greater guidance on how network businesses should set their tariffs to reflect their costs. Secondly, we recommend that the AER considers expanding the current application of the foregone revenue component of the demand management incentive scheme to cover DSP tariff based projects as well.

Energex understands this recommendation predominantly refers to implications under a price cap form of revenue regulation. However it is worth noting that any additional requirements placed on DNSPs in setting tariffs will incur additional compliance costs and should be supported by a cost / benefit analysis which clearly results in net benefits to Customers. Energex believes that DNSPs are best positioned to determine the most appropriate network tariff structures to drive efficient network investment.

In addition to the pricing principles established in Chapter 6 of the NER, Energex currently applies the following range of pricing objectives in formulating its tariffs:

- Free from cross subsidisation;
- Efficient use of the network;
- Equity;
- Price stability;
- Cost reflectivity; and
- Simplicity

## Market benefits, volatility and treatment of operating expenditure

### DRAFT RECOMMENDATIONS

- We recommend that the NER is clarified to enable the AER to consider potential non-network benefits when assessing the efficiency of network expenditure allowances.
- We recommend that the NER is amended to include the ability for distribution network businesses to have extra flexibility in their annual tariff setting process to reflect changing DSP costs.
- We propose that a new rule is introduced in the NER that provides distribution network businesses with more certainty on how DSP expenditure incurred in a regulatory period( but which is not included in the approved allowance) will be treated in future regulatory determinations.
- We propose that the NER is changed to permit the AER to grant temporary exemption from reliability service standards for specific DSP pilots/trials.

Energex supports the consideration of non-network benefits in the assessment of efficiency around network DSP expenditure and encourages the setting of guidelines or deemed values for the assessment of these benefits.

In addition, Energex is generally supportive of increased certainty regarding DSP expenditure.

Energex supports service standard reliability exemptions for DSP pilots and trials subject to understanding the conditions around these exemptions.

### 7.3. Ability of DNSP to own and operate DG and feed in tariffs for DG

#### DRAFT RECOMMENDATIONS

- We recommend that the AER should give consideration to the benefits of allowing distribution network businesses to own and operate DG assets when developing the national consistent ring fencing guidelines for these businesses
- We consider that SCER should, in developing a national approach to feed in tariffs, take into account the value of time varying feed in tariffs to encourage owners of DG to maximise the export of their energy during peak demand periods

Energex generally supports taking into account the value of time varying feed in tariffs to encourage owners of DG to maximise the export of their energy during peak demand periods, however requires more clarity on the proposed measures, before coming to a firm position.

Energex believes DNSPs should be allowed to own and operate demand aggregation capability as a means of improving their services to Customers and notes the current AER Ring-fencing consultation in this regard.



## Appendix A. Energex Demand Management Experience

Energex has a long and successful history of providing and delivery demand management services to our customer base as a means of improving asset utilisation and load factors to provide better value to our customers.

Load control has been a very effective form of Demand Management for Energex. Currently Energex manages approximately 550MW of peak load and 59% of our customer base utilises a demand managed service in exchange for a direct benefit which Energex shares with customers, often in the form of a reduced load control tariff.

Energex is able to provide this feature at a low marginal cost to customers through its Audio Frequency Load Control system and metering configurations.

In the current regulatory period, the AER has approved Energex's strategy to further extend its Demand Management capability with its Energy Conservation and Demand Management (EC&DM) Program.

This approval was contingent on Energex clearly demonstrating how customers would benefit through lower network capital expenditure as a result of the program.

The program is a standard control services element of the current AER determination, with funding to deliver 144MW of peak load reduction by 2015 and forms part of the Energex Business Plan to address growing community concerns about increasing electricity prices.

The Residential component of this program delivers over 40% of the broad based demand management benefits planned for the network and in doing so must provide the means for tens of thousands of customers a year to sign up for peak load reduction initiatives with their hot water, pool filtration and air conditioning appliances.

To date the program has enlisted 15,576 customers to successfully deliver some 26 MW <sup>4</sup>of peak load reduction. As the program has developed and improved, the costs to deliver these services have greatly reduced. The program aims to enlist an additional 87,000 customers in this determination period and is currently tracking above the target levels in meeting these goals.

The Commercial and Industrial program has delivered some 70 MW under management or contracted to date. This program includes power factor correction, load curtailment, generation, lighting replacement, thermal storage and new HVAC initiatives.

The benefits of these programs have been passed to customers through lower levels of capital expenditure.

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<sup>4</sup> For operational measurement purposes Energex uses MV.A in the tracking of its programs and assumes a unity Power Factor in calculations.

To achieve this outcome Energex has spent a considerable amount of time working with suppliers, appliance retailers, industry associations, standards bodies and service providers including electricians and plumbers.

It is through this work that Energex is able to meet the targets described above. It should be recognised that without the support and integration of the above bodies, the provision of these services would be at a much higher price.

Energex believes that Demand Management should be delivered at the lowest possible cost and always at a lower cost than the equivalent cost of network provision.

As enabling tariffs and standards develop and Energex progresses its strategy of working with the above bodies, the incremental costs of these programs will trend towards zero.

Energex has had considerable success with the development of the AS4755 "PeakSmart" ready air conditioning market and the introduction of variable speed pool pumps.

In developing its demand management services Energex has established the following key principles for a successful program:

- Engaged and knowledgeable customers - this education can be provided via advertising, schools, associations, and delivery partners such as electricians and appliance retailers.
- Correct incentives to entice customers, including upfront incentives backed by ongoing tariff support processes and supportive building and appliance standards.
- Engaged and supportive parties in the value chain.
- Simple set-and-forget service to a customer.

Energex has adopted these key principles in the development of its PeakSmart air conditioning program.

It is important to note that developments are well underway to allow Energex to expand its load control capability for air conditioning, with enabling tariffs and technologies in advanced development. More than 60% of the air conditioning market now produces AS4755 PeakSmart compliant models and over 250 PeakSmart devices are being connected per week, with this number expected to increase to over 600 units per week in summer months.