

04 May 2012

Mr Eamonn Corrigan  
Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235



Project Reference Code – EPR0022

Dear Mr Corrigan,

Energex acknowledges and welcomes the work embodied in the Australian Energy Market Commission's Directions Paper *Power of Choice – giving consumers options in the way they use electricity*.

Energex has over many years demonstrated its commitment to DSP and the value that it can bring. This includes our current target of 144 MW of peak demand reduction in the period 2010-15. Despite this, the requirement for new supply side infrastructure capacity to meet peak demand remains significant while the outlook for total grid supplied energy is moderating. Left unchecked this scenario will result in a decline in asset utilisation and increased pressure on prices.

As the AEMC now enters the final stages of its *Power of Choice* review and develops specific recommendations to increase the uptake of efficient DSP, Energex encourages the Commission to ensure that there is appropriate and considered balance in any changes in obligations for market participants. It is agreed that market and regulatory arrangements should not act as a barrier to the potential development of an active DSP market, however, the approach should be symmetric so as not to create obligations or add unnecessary costs on participants.

Please find attached Energex's response to the specific questions raised in the Directions Paper. Should you have any further questions in relation to this matter, please contact Bevan Kirk, Corporate Analysis Manager on (07) 3664 4092.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Kevin Kehl', written in a cursive style.

Kevin Kehl  
Executive General Manager Strategy and Regulation

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**Submission Paper**

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

**AEMC Directions Paper**

**May 2012**

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# 1 Introduction

Energex welcomes the opportunity provided by the Australian Energy Market Commission (AEMC) to submit comments on the Directions Paper *Power of Choice – giving consumers options in the way they use electricity*.

Energex agrees with the Commission's view that market and regulatory arrangements should support the uptake of efficient Demand Side Participation (DSP) to enable the least cost combination of supply and demand side solutions to evolve to meet customer and market participant requirements.

Energex also agrees with the four thematic areas identified in the Directions Paper that highlight the key issues limiting the adoption of efficient DSP in the market.

Energex's submission has been structured around these four themes and addresses those questions in the Directions Paper where we believe a distribution business is best placed to comment. A summary of the key issues and principles supported by Energex are presented in the next section followed by commentary on the questions raised in the Directions Paper on pricing, customer participation, network incentives and supply chain co-ordination.

## 1.1 Key Points

- Energex believes that efficient market outcomes are characterised by the appropriate allocation and utilisation of capital and operating resources. One of the fundamental determinants for efficient resource allocation and utilisation is the extent to which the cost of supply is explicitly signalled to customers such that they are encouraged to make efficient consumption decisions.
- Capital efficiency primarily relates to the efficient use of supply chain resources. As outlined by the AEMC, there are significant benefits to be gained in the NEM through improved capital efficiency associated with DSP.
- Energex notes that efforts that target reductions in total energy consumed (kWh), i.e. energy efficiency, address operational efficiency objectives but do not necessarily have a positive impact on capital efficiency outcomes, and in some cases they actually reduce capital efficiency. Yet energy efficiency projects are more readily adopted and understood in the market. Energex considers that this reflects the fact that there is an active and competitive market for energy (kWh) that customers and market players alike all understand. By contrast, there is no explicit and active market for capacity or demand (kW / kV.A) which is the critical element underlying the potential for improved capital efficiency in the market.

- Energex therefore supports the broad Directions outlined by the AEMC and in particular that tariff structures are a critical component in enabling customers and market players to appropriately value their consumption decisions. 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.
- The current pattern of electricity usage is therefore, at least in part, a reflection of historical pricing structures and technology solutions. As outlined in the AEMC Directions Paper, many of the current pricing structures in the NEM do not provide appropriate time based signals to consumers regarding their electricity consumption decisions. Energex believes that the successful and widespread adoption of DSP relies on exposing more customers to time sensitive pricing structures.
- There are a variety of methods available to improve price signals to better reflect the cost of supply at different times of the day, including, time of use, critical peak pricing, and discounted flat rate tariffs and/or rebates for loads capable of being directly controlled. However, non price based methods such as broadcast announcements, when used sparingly and with sufficient notice to alert consumers to emerging conditions in the electricity supply chain, can also be effective in changing consumer behaviour.
- Market benefits associated with improved capacity signalling in the market are likely to be maximised where the response is simple, cost effective and automated. Energex believes that this will improve the overall coordination of customer response and result in a greater level of reliable DSP.
- Energex recognises that the technology and system infrastructure required to achieve a significant increase in the degree of DSP in the market has a significant upfront investment cost that results in long term benefits from lower investment in new supply chain assets. It is imperative therefore that wherever possible, market and regulatory arrangements should promote a market driven solution and timeframe rather than imposing particular technology solutions and/or timelines.
- Energex believes that at the present time, no other market participants have the same motives as distribution businesses to pursue peak demand DSP solutions in the supply chain. For this reason, it is important that the regulatory framework encourages DNSPs to develop and implement efficient peak demand DSP and to engage directly with consumers.
- 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 legacy



direct load control capability. Greater certainty around the value of DSP in the market and the ability for DNSPs to access value from across the value chain will also assist in the successful expansion of DSP in the larger commercial and industrial sector.

- Appliance and building standards need to be recognised as critical elements in the long term strategy to facilitate efficient DSP in the market. Energex considers that the development and inclusion in MEPS of the AS 4755 suite of Australian Standards regarding demand response enabling devices is a valuable step in the right direction.
- To the extent that demand response capability becomes a standard feature of major household and commercial appliances and machinery, market forces will drive commercial behaviour to utilise this capability and create a value proposition for consumers and reduce the marginal cost of pursuing DSP as an alternative to traditional supply side solutions.

## 2 Role of Pricing

The most significant long run benefit to be gained from DSP is the deferral of new or upgraded supply side infrastructure. A significant determinant of the nature and timing of new supply side infrastructure is system capacity, i.e. the ability to meet peak customer demand at any point in time. Energex firmly supports the need for pricing structures that deliver a clear message to customers concerning the impact of their consumption pattern on supply side capacity requirements. To the extent that this contributes to better utilisation of supply side infrastructure, customers will benefit from a reduced long run electricity price path.

### 2.1 Network pricing and incentives

#### Questions

5. Should network charges vary by time of use?
6. Should NSPs charge on a volume or capacity basis?
7. What changes are needed to market conditions to facilitate more cost-reflective network pricing?

- Energex's network tariffs are established in accordance with Chapter 6 of the NER and the following pricing principles: cost-reflectivity, efficient use of the network, free from cross subsidy, equity, price stability and simplicity.
- Energex's current network tariffs are cost reflective but it is recognised that there are opportunities to improve cost reflectivity. Subject to metering constraints

and the Energex pricing principles, the strategy is to facilitate a move to time of use for small customers in the near term. Energex believes that additional benefit (efficient consumption decisions and peak demand reductions) would be gained via the introduction of a capacity tariff. The costs and benefits of any such tariffs would need to be considered before implementation.

- Implementing more cost reflective tariffs requires:
  - appropriate metering
  - regulatory processes that support the introduction and approval of innovative tariff structures
  - the engagement of consumers
  - retailer and DNSP coordination
  - appropriate mechanisms outside the electricity pricing framework to deal with customers who are particularly disadvantaged as a result of these changes.

## 2.2 Retail pricing and incentives

### Questions

8. Do retailers have the right incentives to pass through appropriate wholesale costs and network charges to consumers?
9. Do retailers have an incentive to minimise the costs of their customers' consumption?

- Energex is of the view that, to the extent that network prices are efficient, retailers will be incentivised to reflect these pricing signals in their retail tariff offering.

## 2.3 Cost-reflective tariffs

### Questions

10. Would a tariff with a fixed, variable and network LRMC element as described in section 5.8 closely reflect the costs of supplying electricity?
11. What are the restrictions on retailers offering such a tariff?

- In line with Energex's pricing principles, there is a need to consider the trade-off between greater cost-reflectivity and increased complexity and cost.

- As stated above, Energex's strategy is to move from flat rate to time of use volume based pricing and ultimately capacity based network pricing. Assuming that this was reflected in the retail tariff, Energex considers that this would be generally consistent with the structure outlined in section 5.8 of the Directions Paper.
- However, Energex considers that attempting to address locational issues through tariffs would be too complex and that separate schemes such as network support agreements would be a more efficient approach than locational pricing.
- Designing and managing location specific prices as a means to signal emerging supply side constraints would require prices to change over time as local load conditions changed, initially increasing as growth reduced the amount of spare network capacity and then falling once a network upgrade had occurred. This approach is likely to be administratively burdensome and confusing for customers and therefore contrary to the pricing principles of price stability and simplicity.

## 2.4 Potential for price signals to promote DSP

### Question

**12. Can efficient levels of DSP be achieved without cost-reflective prices? What considerations are needed to achieve this?**

- In the absence of improved cost reflectivity in tariff structures that specifically provide a price signal to consumers to alter their behaviour during peak times or to encourage the adoption of emerging demand response products, alternative methods of encouraging customer uptake would be required, e.g. rebates or side payments. Where rebates or incentives cannot be incorporated into the standard billing process, however, these options are unlikely to be as efficient or effective. However, they do provide a transitional opportunity while the supporting conditions required for long term use of DSP as a business as usual feature of the electricity market evolve.

## 2.5 Market conditions required for DSP

### Questions

**13. What other market conditions need to change to enable cost-reflective prices? Will the benefits from improving the cost reflectivity of price signals outweigh the costs of the actions to improve them?**



**14. Are changes to the current regulatory arrangements required to provide stronger incentives on NSPs and/or retailers to align price with cost?**

- Energex does not believe that any changes are required to regulatory arrangements to incentivise networks to align price with cost. In line with the NER and Energex's pricing principles, network tariffs are already cost reflective. Furthermore, Energex's strategy is to improve cost-reflectivity further through the introduction of time of use and ultimately capacity based tariffs. This recognises that it will take time to roll out suitable metering technology and gain government and community acceptance for these changes.
- Energex supports and currently operates two controlled load tariffs specifically for the purpose of shaping the system peak load profile. Energex does not perceive any market or regulatory constraints to the introduction of new or alternative demand management tariffs.
- The cost of changing tariff structures can be significant for networks and the costs and benefits of any new tariff would need to be considered prior to implementation. The extent of these benefits and whether or not they outweigh the costs of implementation will be dependent on a number of factors, including
  - the degree to which customers change their behaviour in response to more cost-reflective tariffs
  - the amount and cost of new supply side infrastructure that would need to be built in the absence of more cost-reflective tariffs
  - the way in which more cost-reflective tariffs are introduced, for example, the cost-benefit profile will be different for a mandatory changeover for all small customers versus voluntary uptake where the timing of the transition is managed through the relative incentive being provided to the customer to voluntary switch to a more cost-reflective tariff.

### **3 Consumer Participation**

Energex agrees with the AEMC that pricing is a necessary but not sufficient condition to drive increased uptake of efficient DSP in the market. Presently customers have limited understanding of the concept of peak demand capacity and how the timing of their consumption decisions affect future infrastructure requirements. Information and education is therefore likely to be a crucial element if DSP is to become a more prominent element in the electricity market.

### 3.1 Access to energy consumption – load profile data

#### Questions

1. What should be the arrangements for consumers (or third parties acting on their behalf) to access their energy data?
2. Do you consider that there could be a role for an information service provider in the market as a mechanism to provide consumption data to consumers?
3. Should amendments be made to the current NER clause 7.7 (a) to facilitate consumer access to consumption information? If so, how?

- In principle, Energex considers that a customer's ability to assess the potential value of DSP options would be enhanced through a better understanding of their consumption patterns. To the extent that there is a cost associated with the provision of this information, other than standard billing data, this should be provided on a fee for service basis.
- Providing customers with detailed load profile information will require the installation of metering technology with the capability to record interval data. In the absence of widespread deployment of interval meters, the publication of typical load profiles for different customer types, could go some way toward helping customers better understand the potential value of DSP options.
- An information hub that customers can access via web portals, their retailer or a third party has merit, however, the data management costs need to be considered. Energex believes this would only be viable where remotely read interval meters have been installed.
- Energex does not support a role for a market information service provider in the short term as there are not likely to be sufficient benefits to justify the administrative cost associated with the position.

### 3.2 Cost of consumption decisions and engagement with consumers

#### Question

4. What information provisions could be put in place to improve awareness of the costs of consumption and the use of particular appliances/equipment, so that the benefits of taking up different DSP options can be realised?
42. Should network businesses play a greater role in informing consumers about the potential benefits from DSP and various DSP products? If so, how should they do so?

- Customers could potentially obtain information on the costs of their consumption in a variety of ways, for example
  - through access to metered data
  - via in home displays that provide estimates of real-time consumption and cost information to customers without any specific metering requirements
  - through standard or typical consumption information as provided by energy retailers, network businesses or other third parties
  - through software tools such as a ready reckoner, similar to those used in the banking and insurance industry, that would enable customers to estimate their load profile based upon information about their housing characteristics, e.g. construction, size and occupancy, and what appliances they own and when they are being used.
- Energex is undertaking to educate customers about the costs of peak demand and linking this to appropriate tariffs and energy efficiency benefits through a web portal jointly developed with Ergon Energy. Energex also actively engages with other parties who have direct contact with consumers, e.g. electrical contractors and appliance retailers.
- Over the long term as pricing structures evolve toward demand or capacity based charges, Energex believes it is important to integrate demand response capabilities into MEPS and energy rating labels for appliances. This will assist customers to evaluate both the performance of the appliance from both a capacity and energy efficiency perspective.

### 3.3 Supporting efficient investment decisions in DSP

#### Questions

**15. Are there any practical additional mechanisms that could help alleviate the barriers to consumer investing in DSP technology?**

**16. What should be the role of intermediaries such as ESCOs in addressing the barriers to efficient consumer investment and what factors could be impeding the development of these parties?**

- While a clear well established market exists to promote energy efficiency, no such capacity market or signal exists to incentivise customers to adopt DSP options that target peak demand reduction. In order to deliver improved capital efficiency in the supply chain, it is necessary to have both the incentives and the mechanisms to achieve the targeted results.

- Consumer investment in DSP technology is likely to be maximised where there is clear value to investment in such emergent products. Further incentive to invest in DSP technology is provided when this technology is simple, easy to use and automated. This level of commoditisation requires the technology reaching a critical mass. This would be assisted by standards that would provide for economies of scale and a competitive technology market. Energex considers that the development of the AS 4755 suite of Australian Standards regarding demand response enabling devices is a valuable step in the right direction
- Energex believes that these outcomes will support the development of a competitive market in the provision of DSP services that can provide value to customers and multiple parties in the supply chain.

### 3.4 Commercial driven investment metering and other DSP technology

#### Questions

**17. What amendments to the metering arrangements in the NEM are required to facilitate commercial investment in metering technology which supports time sensitive tariffs?**

**18. Are the current arrangements sufficient to facilitate a consumer's decision to install their own meter as a revenue meter? If not, what changes to the current arrangements are required?**

**19. Are any amendments to the arrangements required to encourage either the network businesses or retailers to invest in metering capability in order to support DSP options?**

- Distribution businesses are currently investing in electronic metering on a commercial basis. Meters that are capable of supporting time sensitive and capacity based tariffs are or soon will be the standard for new and replacement installations, for customers connecting micro-generation to the grid, and for customers who elect to move onto a time of use tariff.
- Energex is also cognisant that any changes to market arrangements that result from the National Smart Metering Program may influence the business case for commercial deployments of smart metering technology.
- It is important to note, however, that interval metering is a tool that facilitates price based DSP options and one source of consumption information that can be provided to customers. There are a variety of ways to deliver DSP and consumption information that do not require interval metering at every premise. These include direct load control combined with simple tariffs, such as tariff 33 and tariff 31 in Queensland, or other incentives/rebates similar to the process



currently being adopted by Energex and Ergon Energy for residential air-conditioning.

- Energex considers that the current market arrangement already accommodate customers who wish to upgrade to more advanced metering infrastructure, for example, a customer could request a type 4 metering installation under current market and regulatory arrangements. The primary impediment to this is the cost and the lack of tariffs and DSP product offers to create a demand for the technology. It is possible that new arrangements may be introduced as part of the National Smart Metering Program which could result in lower costs for consumers wishing to upgrade to a more advanced metering technology.
- Care need to be taken in considering changes to meter ownership arrangements to ensure that operational efficiencies in maintenance and meter reading are not compromised.

### 3.5 Optimising the value of technology and systems capability

#### **Question**

**20. Are there aspects to the arrangements regarding the integration of DSP technologies into energy networks that requires further consideration under this review?**

- Managing network security and reliability is a key requirement for integrating DSP options that are not distributor led. Technical requirements, frameworks of general principles and processes for reducing and reinstating load need to be established, particularly for load aggregators who potentially could have access to and control over sizeable loads in particular geographic areas.
- Examples of items that could be included in the operating protocols for all parties include:
  - Ramp on rates
  - Ramp off rates
  - Firmness and diversity factors
  - Randomisation
  - Frequency rates for provision of services
  - Availability
  - Planned outages
- In emergency situations as well as for safety and network security purposes, distributors' operations should take precedence over the activities of other participants. Obligations must be legally enforceable on all participants.

- In addition to appropriate metering, an active market for DSP is likely to require the greater use of distributed intelligence in the distribution network. This will enable distribution businesses to manage the changing demands being placed on the network such as frequent changes in the direction of power flow and voltage fluctuation that may result from a high penetration of intermittent distributed generation. Smart networks are therefore required to deal with the needs of a 21<sup>st</sup> century electricity market. Regulatory frameworks therefore need to consider the potential long run benefits of smart network investment proposals which incur significant upfront costs.

### 3.6 DNSP Incentives schemes for DG

#### Question

**47. What incentives should be provided to DNSPs to ensure that they support DG projects? Is there merit in the proposal for DG proponents to pay DNSPs a fee-for-service to connect a DG installation? If so, how should this proposal be applied?**

- Distribution networks were not designed to cater for the connection of significant quantities of micro-distributed generation. It is important to recognise that connecting distributed generation to distribution networks may impose additional costs for network upgrades and in the case of residential solar pv, provides little or no reduction in peak demand on low voltage distribution assets and results in lower overall utilisation of those assets.
- If distributed generation is the most prudent and efficient solution to address a network performance issue (e.g. deferral of augmentation), then it may be contracted under a network support agreement, similar to other technologies.
- Distributed generation connection applications also require the dedication of internal resources which must be prioritised. It is essential that the costs associated with any services provided to distributed generation proponents are appropriately funded. A fee for service approach regulated as an Alternative Control Service has merit.

### 3.7 Metering and settlement arrangements for DG

#### Questions

**48. What are the appropriate metering and settlement arrangements to facilitate the ability of consumers and DG projects to sell their demand response to any party?**

**49. Are amendments to the current market arrangements required to facilitate DSP contracts which enable the DSP provider to sell its services to any party? If so, what amendments are appropriate?**

- Energex considers that the AEMC should consider carefully the additional metering and administrative costs associated with enabling the sale of DSP services to any party (portability). DSP proponents would need to be exposed to the cost of providing portability to ensure that they can assess the relative cost and benefits.
- Energex believes that in many cases the same outcome can be achieved with an on-market parent meter and off-market child meter to facilitate off market contractual payments for DSP.

### 3.8 Maximising the export value of DG to address peak demand

#### Question

**50. Should there be supplementary provisions to the arrangements governing feed in tariff payments to encourage such consumers who have micro generation units to maximise their export at times that enable deferment of network augmentation? If so, what are possible options to achieve this?**

- The rate and rules surrounding feed-in tariffs are currently determined differently in each jurisdiction. Energex supports a harmonised national approach to feed-in tariff arrangements that takes into consideration the explicit benefits and costs of distributed generation in the market.
- Energex consider that it is appropriate that, in the same way that time sensitive pricing is considered important to promote efficient consumption decisions, feed-in tariffs should also be time sensitive to reflect the true value of the production from micro-distributed generation sources at different times of the day.
- Significant network upgrades to distribution network infrastructure, in particular transformers and protections systems in the low voltage network, would be required to support large volumes of energy export from distributed generation facilities. These costs need to be taken into consideration when assessing the value of increased export from distributed generation. Furthermore, DNSPs would require certainty of funding for any upgrades to network infrastructure to facilitate this.
- Micro-generation such as solar PV is inherently intermittent and thus not of sufficient firmness for many network needs. Other technologies such as storage have to be considered in conjunction with this, and it should be acknowledged that this is still immature technology.

### 3.9 Energy efficiency policies and measures that impact on, or integrate with, the NEM

#### Questions

**51. What do you consider is the role for regulatory energy efficiency policies and measures in the context of facilitating uptake of cost effective DSP in the electricity market?**

**52. In your view, do consumers consider energy efficiency measures separately to DSP, or do they consider all actions as part of managing consumption and hence controlling electricity costs?**

**53. What are the elements for a best practice model or approach for energy efficiency policy to facilitate efficient investment in, and use of, DSP in the electricity market?**

- Consumers naturally associate lower electricity usage, i.e. energy efficiency, with lower electricity bills and from an environmental perspective there is a feel good factor that they are reducing their personal carbon footprint. There is, however, a genuine risk that the promotion of energy efficiency without appropriate information and incentives around peak demand management will result in less efficient overall network usage with little or no reduction in peak demand. This means that more supply infrastructure needs to be built and then recovered over fewer units of electricity sold. This means that the unit cost of electricity will rise, partially eroding the energy efficiency benefits to consumers.
- Energex therefore considers that there is clear value to be gained by aligning peak demand management policies with energy efficiency policies to assist in educating consumers to achieve peak demand reductions and increasing overall uptake of DSP solutions.
- The Queensland Energy Management Plan provides a good example of ways to bring these issues together.

## 4 Network

Network businesses can benefit from the use of DSP to improve the utilisation of existing network assets and minimise network investment and prices in the medium to longer term. NSPs can also use DSP as a tool to assist with network management to mitigate reliability and power quality risks. In the present environment, few market participants have the incentive to address peak demand issues through DSP options. The commercial incentives for other market players are mixed and would not necessarily target demand reduction at times required by network businesses. While there is scope within current market arrangements for network businesses to undertake DSP, there are opportunities to improve these



arrangements to provide network businesses with a greater level of certainty and confidence to expand their development and implementation of DSP alternatives.

## **4.1 Profit incentives on network businesses**

### **Questions**

**36. Do you consider that the current regulatory arrangements could prevent network businesses from pursuing efficient DSP projects which could contribute to achieving a more economically efficient demand/supply balance in the electricity market?**

**37. What options for reforming the current regulatory arrangements should be explored under the next stage of the review?**

**38. Do the current arrangements need to clarify distribution network businesses' involvement in distributed generation and if so, how?**

- Energex supports the ENA policy position that in the absence of a competitive DSP market there would be value in the establishment of a genuine demand management incentive scheme that recognises and reward the initiating party for the broader market benefits of a network initiated DSP option.
- To provide certainty the scheme could include a defined method or deemed value for the benefits of DSP activities (see comments in Section 5.3).

## **4.2 Research into estimating potential demand reduction of non-contracted DSP**

### **Questions**

**39. How should network businesses estimate the potential demand impacts associated with DSP? Should there be consistency in approach across the business and should arrangements provide guidance on how to do such estimation?**

**40. What should be the framework for recognising the impacts of DSP in the forecasting methodologies used during the regulatory revenue determination process?**

- For the 2010-15 regulatory period, Energex successfully presented a business case to the AER for funding of 144 MW of targeted and broad based demand management initiatives. This capacity was removed from the peak demand forecast with an associated reduction in Energex's traditional network capital expenditure forecasts.
- However there are no guidelines or frameworks for estimating, valuing and verifying DSP, particularly uncontracted DSP, from a regulatory perspective that

provides DNSPs with certainty that the AER would evaluate similar DSP funding proposals consistently. There would be value therefore in establishing a sanctioned whole of supply chain benefits calculation that could be applied consistently by all parties when seeking to implement DSP options.

- At present there is insufficient real information on which to determine robust estimates of actual demand reduction potential from uncontracted DSP. Statistical methods can be applied to trial data to estimate possible reductions, however, there is a risk of underinvestment in network infrastructure if these estimates are too optimistic.
- Energex argues that networks should not be required to alter demand forecasts and network planning for uncontracted DSP until a robust understanding of the potential reduction is achieved. Critical in this regard is access to information the DSP options that customers, retailers and other third parties are implementing. Even once the degree of certainty around potential demand reduction has improved, Energex would suggest that adjustments to demand forecasts and network planning should initially be done on relatively conservative estimates to ensure that network security and reliability are not compromised.

### 4.3 Exemption from service standard incentive schemes

#### Question

**41. Is it appropriate for network businesses to be exempt from the service standard incentive scheme during the initial development phase of DSP projects? What factors need to be taken into consideration in designing such an exemption?**

- Energex supports the argument that DSP options, at least initially, are a riskier alternative for meeting service obligations than traditional supply side solutions. This risk differential cannot be captured through the current framework for determining regulated revenue for network businesses. Any schemes which aim to increase network initiated DSP must recognise and seek to mitigate the risk profile of these options to the service standards of network businesses.

## 5 Supply Chain Coordination

Divergent commercial interests and transaction costs make achieving coordinated outcomes across the supply chain problematic. Improved clarity in market arrangements around the respective roles and responsibilities of various parties, customer engagement, and shared views on the value and means of operationalising DSP for multiple parties are key to overcoming impediments to coordinated outcomes.

## 5.1 Distribution of DSP impacts across the supply chain

### Question

**21. Can you provide a practical example of a DSP option which could deliver a net benefit to the market and also to the various parts of a supply chain. What are the reasons for such opportunities not being captured today?**

- Energex believes that there are DSP options that would provide benefits to all participants across the supply chain but these are not realised due to a lack of coordinated effort by these parties to promote uptake. Lack of coordination creates some duplication which lessens the efficiency of DSP delivery.
- An example of this is the energy efficient pool pump rewards program offered by Energex. This program motivates customers to replace fixed speed pool pumps with energy efficiency pumps saving them consumption costs and resulting in peak demand reductions for the network (which has flow on benefits to peak generation and transmission infrastructure costs). Retailers currently offer suites of energy efficient products and Energex believes there are opportunities to leverage synergies where DSP options provide both energy efficiency consumption savings and peak demand reductions with customers enjoying greater choice in tools to reduce their energy costs.
- The reasons for these benefits not being captured include quantification difficulties and diverse business environments and drivers. Acknowledging common principles would help to address some of these issues and assist in recognising efficiency benefits.

## 5.2 Co-ordination across the supply chain

### Questions

**22. How do the current market arrangements promote co-ordination across the supply chain to promote efficient DSP? What potential improvements should be considered?**

**23. Do you consider that there is inconsistency between how the wholesale and market sectors value DSP impacts? If so, is this a material problem to be addressed?**

**25. Would fully cost-reflective price signals enable the supply chain to act in a co-ordinated manner towards efficient DSP opportunities or would additional amendments be needed?**

**26. Would applying a network tariff scheme, similar to Orion's approach, be effective in the NEM?**

**30. If the required co-ordination across the supply chain cannot be achieved, should a market participant be assigned with the responsibility to procure DSP**

**options? If so, what issues need to be considered in the design of such an approach?**

- Energex considers that it is the diverse commercial interests of market participants and not the market arrangements per se, that result in limited coordination on DSP options across the supply chain. There is a lack of a clear understanding between market participants of the relative value of alternative DSP options to other players and the necessary conditions that need to be in place in order for those parties to realise the value.
- The market needs to support the provision of DSP services by networks retailers and third parties who may offer services to multiple parties. While coordination is difficult, examples do exist where mutual opportunity has led to the establishment of contractual arrangements to provide DSP benefits to more than one party. However, given the divergence in interests, it is likely to be preferable for all parties to retain the ability to act in their own right rather than rely on the initiatives of a third party. For this reason, together with the additional bureaucracy and cost, Energex does not support a single actor model.
- Furthermore, while a highly competitive retail market may incentivise all retailers to manage peak demand in response to appropriate market signals, Energex suggests that this cannot be relied upon at the present time due to the presence of large gentailers in the market that periodically may lead to retail behaviour that is inconsistent with that of non-vertically integrated retailers.
- As stated in 2.2 above, Energex considers that efficient network prices will drive consistent retail pricing. Energex understands that the approach adopted by Orion Energy in New Zealand relies on setting network prices on a retailer's aggregate load rather than customer tariff classes. For this to be applied in the NEM, changes to chapter 6 of the NER would be required.

### **5.3 Value of DSP benefits to the market**

**Question**

**28. What should be the approach to quantify the value of DSP options?**

**29. Should standardised, common methods to forecast the impacts of DSP be developed? Is there a need for common approaches between network and operational planning?**

- Energex supports a standardised approach to DSP valuation in line with that proposed by the Energy Networks Association (ENA) whereby the valuation of DSP should include benefits across the entire value chain (generation,



transmission and distribution) and to specifically take account of benefits that accrue in future regulatory periods.

- The approach to quantify the value of DSP should also be consistent with network planning principles and take account of factors such as diversity, risk, and the time value of money.
- This approach should be endorsed for use by all NSP in the regulatory building blocks and for assessment of alternatives under the RIT.

## 5.4 The role of aggregators in wholesale markets

### Question

**33. What issues should be considered regarding the role of aggregators in the NEM? Should there be a new category of market participant for aggregators?**

- Energex supports the development of a competitive DSP market in which aggregators would be likely to play a material role.
- To the extent that aggregators have direct control over loads connected to the electricity network, and as discussed in section 3.5, arrangements and principle frameworks will need to be established that govern how load is removed and reinstated by aggregators at any point in time so as to ensure that the electricity supply and operation of the market is not compromised.