SP AusNet™
A member of Singapore Power Group

11 October 2012

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Dear John,

Draft Report: Demand Side Participation Review Stage 3

SP AusNet welcomes the opportunity to respond to the AEMC's draft report '*Power of choice – giving consumers options in the way they use electricity'.*

We agree that the use of demand side participation is a matter of customer choice. SP AusNet also supports the use of DSP solutions by network businesses where they represent the most economically efficient means to satisfy consumer energy needs, including meeting peak demand and ensuring the reliability and quality of supply. We therefore broadly support the direction being taken by the AEMC to enhance opportunities in both of these areas. We consider that the steps taken towards the introduction of flexible pricing in Victoria could be the first step in establishing market conditions which provide the correct incentives to enable the socially optimal uptake of DSP solutions.

SP AusNet's response focuses on areas of the AEMC's draft report which are particularly pertinent to networks. These areas are metering, flexible pricing, risk to network health, participation in DSP markets by Distribution Network Service Providers and the extra risk and time necessary to implement DSP solutions.

Our submission makes the following key points:

- SP AusNet supports increased consumer choice and removal of barriers to engagement and participation in the energy market, including through initiatives such as flexible pricing. Consumer education and protections will be essential to achieving this whilst avoiding any adverse impacts.

- Victoria is in a different position to other jurisdictions due to the AMI roll out and the forthcoming introduction of flexible pricing. In some cases, the AEMC's draft recommendations are less suited to Victoria than to other jurisdictions.

- Without appropriate incentives, the use of DSP will not be at efficient levels. The incentives for DNSPs to facilitate DSP need to be improved, including through changes in the NER (including the treatment of expenditure, DSP exemptions from the Service Target Performance Incentive Scheme and enhancing incentives for required innovation).

- SP AusNet supports AEMC's proposal to clarify ability of DNSPs to participate in the market for DSP solutions, including owning and operating distributed generation.

We look forward to continued participation in the review. Please contact Kelvin Gebert, Manager Regulatory Frameworks, ph. 03 9695 6603 for any inquiries regarding this submission.

Yours Sincerely,

Alistair Parker
Director, Regulation and Network Strategy

Attachment:

SP AusNet Submission on Draft Report: Review into Demand Side Participation Stage 3

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Submission to Draft Report: Review into Demand Side Participation Stage 3

Section 1 - Introduction and Overview

Introduction

SP AusNet supports DSP solutions where they represent the most economically efficient way to satisfy consumer energy needs, peak demand and reliability and quality of supply needs. However there are a number of barriers to a broader take-up of DSP solutions by network businesses, which this review is seeking to address.

DSP solutions can benefit both the consumer (through efficient costs) and network businesses (via the regulatory regime's financial incentives to outperform the capital expenditure provision). Our experience is that this is effective in identifying the optimal network solution, but that improvement of the incentives is necessary for riskier and more complex non-network solutions to be selected in preference.

Network assets must be built, maintained and operated in response to peak demand to ensure we deliver safe and reliable electricity supply to meet consumer expectations and a range of policy and regulatory requirements. Peak capacity is often only needed for short periods of time (hot summer days etc.) and demand management during these periods can potentially be a lower cost solution, albeit with a higher risk profile. In addition, embedded generation or demand side participation in the medium term may assist to partially defer augmentation of substation assets or lines.

SP AusNet considers demand management options through its planning processes, and has a number of initiatives in place to test the efficacy of demand management, alleviating localised and regional demand issues. These include;

- Establishing network support agreements with commercial and industrial consumers to assist with short duration peak management by either shifting loads or using existing embedded generation (the first agreement is expected to be signed within a month).
- Time shifting of water heating loads.
- The use of diesel fuelled generators to provide seasonal standby network support and planned outage mitigation.
- Long term embedded generation contracts. SP AusNet contracted embedded generation currently contributes approximately 100 megawatts of installed capacity which provides around 30 megawatts and 1.5% load during afternoon peak demand.
- A tariff based critical peak demand pricing mechanism introduced in 2011, which has resulted in an estimated peak summer demand saving of 76MVA per annum.

- Contracting medium scale natural gas fuelled generation to provide network support under contingency conditions.

- Trialling the use of battery units in residential properties to minimise peak demand.

SP AusNet sees a benefit in an improved framework that will facilitate further developing and expanding the scope of this program of initiatives, to encourage efficient DSP.

Overview

There are a number of areas associated with DSP that SP AusNet considers particularly important from a network's perspective. These include:

- Metering

- Flexible pricing

- Risk to network reliability

- Participation in DSP markets

- Extra risk/ time taken to implement DSP solutions

Victoria's AMI roll-out will have many benefits including enabling the introduction of flexible pricing and operational benefits for the networks. To realise the full benefits of the roll-out, DNSPs must continue to have access to real time network data and the full suite of services provided by all Victorian meters, even after the return to contestability of metering provision. These services include voltage alarms and the ability to monitor and reduce load at key times. This implies that any minimum functionality standard for Victoria should be set to match current AMI functionality.

The introduction of flexible pricing is fundamental to improving the efficiency of network investment. Charging consumers a cost-reflective tariff enables consumers to shift consumption behaviour in a way which would benefit society, reducing the leak of peak demand and hence deferring costly augmentation works.

The implementation of flexible pricing in Victoria will occur on an opt-in basis, with a cooling off period to allow any consumers who have switched to a flexible network tariff, but are unhappy with this, to switch back to a flat tariff free of charge. This approach will protect vulnerable consumers, but will need to be supplemented with effective consumer education to encourage uptake.

DSP activities can present reliability risks to both DNSPs and consumers. These risks are technical, financial and reputational. Voltage level issues, protective device operation problems and irreversible asset damage can all be caused by the activities of energy service providers. These could impact the reliability of supply for surrounding consumers. The DNSP would also be financially penalised for the reduced reliability through the AER's service standards. For this reason, DSP must integrate with network operational arrangements must guard such eventualities, and the arrangements provide for a reasonable sharing of risk such that third party service providers are held financially accountable for any asset damage, impact on the service standards and impact on other consumers that eventuate from their activities.

The various additional risks and time taken to implement DSP solutions can reduce the attractiveness of these solutions to networks. These are partly due to the infant nature of the DSP sector. To account for these, there is a need for greater incentives to be provided under the regulatory regime. SP AusNet agrees with the AEMC's recommendations that there should be:

- Reform of the demand management incentive scheme
- Provision of an earmarked innovation allowance
- Increased certainty on how DSP expenditure will be treated in future years
- Exemption from the Service Target Performance Incentive Scheme (STPIS) for DSP projects.

More detail on each of these points is provided within the submission.

The framework should clarify that DNSPs are able to own and operate distributed generation, as this may represent the most economically efficient, timely and secure means of providing network support, in lieu of more costly network augmentation options.

SP AusNet's submission addresses those questions (numbered for ease of reference) and recommendations (copied in text boxes) in the Draft Report where we are able to offer most valuable comment. The submission follows the Draft Report structure:

- Section 2 – Facilitating consumer access to electricity consumption information
- Section 3 – Engaging with consumers to provide DSP products and services
- Section 4 – Enabling technologies for DSP
- Section 5 – Demand side participation in wholesale electricity and ancillary services market
- Section 6 – Efficient and flexible pricing options
- Section 7 – Distribution networks and distributed generation

Section 2 – Facilitating consumer access to electricity consumption information

4. **Is AEMO the appropriate body to publish such information, or should each DNSP be required to publish such information particularly where data will be at the feeder level where accumulation meters are installed?**

SP AusNet agrees that AEMO would be an appropriate body to publish consumer segment load profiles.

Within two years there will no longer be accumulation meters installed in Victoria, and whilst consumers will have direct access to personal usage data, the need for aggregated information to be made available remains important to facilitate the targeting of DSP to get the best response.

Consumption data captured by smart meters could be aggregated to provide load profiles for each consumer segment. This would require each smart meter to be linked to a particular consumer segment, and interval data could then be automatically aggregated by AEMO to provide a load profile for each segment.

To facilitate the data collection process and for the aggregated data to be most useful, the segmentation of consumers should be agreed by, and standardised across different bodies (including retailers, DNSPs and AEMO).

Section 3 – Engaging with consumers to provide DSP products and services

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.

7. **Do you agree that existing rules and guidelines should be amended to clearly outline the circumstances when distribution businesses are able to directly contract with residential and small consumers to deliver DSP network management services/ programs?**

We agree with the AEMC that amendment of the Rules is necessary for this purpose.

The existing rules and guidelines do not adequately outline the circumstances in which DNSPs can engage with residential and small consumers to deliver DSP solutions. Given that residential consumers can account for a substantial proportion of peak demand, significant network benefits, including ensuring reliability and quality of supply during peak demand periods, can potentially be realised by DNSPs engaging with smaller consumers. It is therefore imperative that networks are not unduly constrained from actively participating in the DSP market if the long-term benefit to the community is to be maximised.

Section 4 – Enabling Technologies for DSP

The introduction of interval meters at the small consumer level will ultimately enable DNSPS and retailers to set efficient tariffs for their services. Interval metering will mean that for the first time ever retail pricing and network pricing can be de-coupled and thereby enable efficient retail pricing to be overlaid on the efficient network prices.

For networks, interval metering enables multi-rate time of use pricing that targets periods of a network's specific constraint. Interval meters will provide consumers with access to their time of use energy consumption information that will facilitate their response to time of use price signals. In turn, this form of pricing can also be flexible and responsive to the changes in behaviour that it brings about.

Additional benefits of interval metering include potential operational benefits accruing to networks. To realise these benefits, where metering is contestable DNSPs should have the ability to access the full range of meter based services and data provided by smart meters.

For some network outcomes the DNSP requirements can reasonably be supported by data sourced from, or sent by, the smart meter and infrastructure provider. These include:

- Load monitoring in support of network planning at different levels including at individual device levels e.g. distribution sub stations;
- Tariff design and reset to improve price signals to customers; and
- Load forecasting.

However for a number of other intelligent network outcomes the distributor will require continual near real-time access to the meter and its data. These include:

- Load monitoring during times of abnormal network configuration, outages, times of network stress etc. requires capability for metering data to be available on demand to support potential switching actions by control staff, and to provide ongoing information on the network's condition.
- The capability to check during outages whether the meters of customers at critical locations potentially impacted by the outage or by a restoration action have supply. This needs to be available on demand by control staff establishing restoration strategies and controlling emergency crews in the field.
- During load shedding scenarios when the ability to change meter settings immediately based on load changes may enable load reductions that avoid customers going off supply.
- Additional load shedding using in-home Demand Response Enabling Device (DRED) capabilities supported by the ZigBee interface of the smart meter will provide a fine level of granularity allowing DNSPs to curtail load both proactively and reactively based on real time feedback from the smart meters themselves supported by monitoring of their local conditions.

Another feature of smart meters is the capability to remotely energise and de-energise the connection point. Under all regulatory frameworks, including NECF, the responsibility for

energisation and de-energisation is assigned to the distributor. This has always been seen as a fundamental duty and obligation of the distributor, as ultimately this determines the load on the network. This is also reflected by industry and AEMO processes.

Remote switching via interval meters where they are not owned by the distributor has not yet been considered. Potentially the industry arrangements could provide for the distributor to operate via the third party asset, although liability issues may need to be considered. We suggest that, in finalising its recommendations for the approach to introducing smart meters, the AEMC consider the appropriate arrangements, and provisions in the regulatory instruments, for remote switching in these circumstances.

More broadly, where the meter has been provided by a third party, there may be conflicting requirements in terms of the functionality of the meter or the data captured although is Victoria any replacement meters will need to match the Victorian Minimum AMI Functionality Specification. However, mechanisms which ensure that the services from third party or retailer meters continue to support key network outcomes have not been debated. A hierarchy may be needed to resolve conflicts. If this is the case, SP AusNet's view is that then the safety and integrity of the network must be the highest priority, and maintaining key network based benefits a key community and government driver.

6. **What requirements should be in place for these third parties (DSP energy service providers)? For example, what should be the form of authorisations/ accreditations?**

As the DSP sector is relatively new and complex, a significant information asymmetry exists between third parties and consumers. This creates both a financial risk to consumers, and a reputational risk for the industry. Therefore the need for and level of consumer protection should be considered for the authorisation of participants.

The third party providers could potentially be operating at three levels and the regulatory arrangements will be different for each.

They could be:

i) Operating in the market and trading directly for blocks of DSP load over which they have control. At this level the third party provider would need to be recognised in the AEMO settlement system as a registered Participant. They would need to have the financial resources to support the commitment they were making to the market with respect to providing or removing a load block i.e. an equivalent to market prudentials. At this level these third party providers are similar to the concept of the Small Generation Aggregator for which the AEMC is currently considering Rules changes to establish.

ii) Offering load blocks to Participants off-market as a mechanism for these participants to meet their market and/or operational objectives.

iii) Offering information and advice to customers but with no actual operation role of control.

Third party providers operating at levels i) and ii) will require regulatory protections to reduce the risk of damage to the network (as outlined in the response to question 14d. below), including the requirement for the third party to assume financial liability for any

network damage or reliability reductions that occur as a result of their activities. Those operating at level iii) may require some regulation with respect to marketing and consumer protections etc. but obviously not with respect to physical actions. Whilst market prudentials would operate to ensure that third party providers at level i) achieve certainty of outcomes, those at level ii) may require regulation with respect to the degree of certainty they must specify in achieving the contracted outcomes.

It is possible that third party service provision may consider DNSP activities to limit their opportunities, or to be in competition. It is important that in opening up greater opportunities for market provision of DSP, that DNSPs are not constrained from being able to provide services to consumers at the lowest cost.

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.

7. **Should the minimum functionality specification for meters be limited to only those functions required to record interval consumption and have remote communication? Alternatively, should the minimum functionality include some, or all, of the additional functions specified in the SMI Minimum Functionality Specification?**

In Victoria, metering services will return to be contestable from 2013 unless the Victorian Rules derogation is extended. As detailed above it is SP AusNet's understanding that in Victoria any replacement of a network rolled out meter will be required to have the same functionality. However SP AusNet is concerned about the potential for lack of real time meter access via third party systems, which could impact on various smart meter based services.

The national arrangements should ensure that a third party replacing a meter in Victoria, or installing a meter for a new connection, is obliged to provide the same meter functionality and to provide access by authorised parties to the full range of data and services (including real time data on voltage and instantaneous load). This will ensure that pre-existing or planned use of this data and services and the resultant benefits can be maintained. Otherwise, once contestable metering returns, there may become gaps in network data and services (a 'swiss cheese' effect), which will erode the data and services value as there are significant network economies associated with this network data and services.

10. **What should the exit fee be when a consumer upgrades its meter from one provided by the local distribution business? Is the proposed fixed 30% of the cost of a replaced meter appropriate?**

The average remaining life of Victorian meters is very high relative to the national average due to the ongoing AMI roll-out. Once the roll-out is completed, the oldest meter on the Victoria network will have been installed in October 2009. Therefore, a fee significantly higher than 30% of the cost of a replaced meter should be charged to enable metering service providers (DNSPs) to recoup their costs.

SP AusNet agrees that a simple percentage of the replaced meter is an appropriate basis for setting an exit fee. However, as the remaining life of Victorian meters is relatively high,

SP AusNet considers that this percentage could be based on the years of life remaining. For example, an exit fee could be set at 80% of the cost of a replaced meter for a meter with 10 years of life remaining, and this could decrease each year – for example, 70% where 9 years of life remain, 60% for 8 years of remaining life and so on.

Section 5 – Demand side participation in wholesale electricity and ancillary services market

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.

SP AusNet supports demand side bidding in principle. DNSPs should be able to rely on the providers of such services for network support in peak loading periods, in addition to their own time of use pricing and other strategies. However our understanding is that experience in the wholesale market, with large loads, has not shown a material uptake.

We therefore consider that further work is required by an industry and consumer group to review the practicality and costs of the proposed mechanism at the current time, especially having regard to the introduction of flexible pricing in Victoria, and in the NEM subject to the recommendations of the AEMC being adopted more broadly.

Transitional arrangements will also need to be designed, and principles should be established to determine where the liability lies in the case where communication system outages may cause consumers to miss opportunities to bid into the market.

12. Participation in the wholesale market:

a. Do stakeholders agree that the proposed demand response mechanism is likely to result in efficient consumption decisions by end-users? If not, are there any changes you recommend to the mechanism to facilitate this?

For many consumers it is unlikely to be easy to determine efficient consumption decisions. We think there are questions around how to establish a consumption profile, particularly as the circumstances under which curtailment would occur (such as an extreme weather day) are not regular occurrences. Obtaining a 'true' profile to correspond to these conditions would also be problematic where the consumer's load profile is particularly lumpy, and does not follow a defined pattern.

In addition there are potentially significant transaction costs associated with this approach could lead to a relatively low rate of participation. The improvement in the efficiency of decisions made by these end users will be limited by the number who do participate.

There is also potential for multiple payments where a consumer bids demand resources into the wholesale market, and is also compensated for this demand reduction through an agreement with their retailer, network or distributor. These parties would not necessarily know about the agreements with other parties, and the consumer could end up being compensated multiple times for essentially providing the same service.

b. On balance, is a new sub-category of market generator required for consumers providing a demand that enables aggregation? What types of issues should be considered when developing the registration process?

SP AusNet agrees it would be appropriate to introduce a new sub-category of market generator for consumers offering demand management in a small quota (for example, 100kW minimum), as per the New York State Energy Research and Development Authority's (NYSERDA) mechanism in the USA

It will be necessary to assess whether a consumer genuinely has the ability to provide demand resources of a relatively significant level with a degree of certainty when allowing the market participant to register. In addition, checks should take place to establish the potential impact of the operation of this demand resource on the reliability and quality of supply for other nearby consumers connected to the same network circuit.

14. Incorporating demand response into central dispatch:

d. Should there be a trigger in the monitoring and reporting framework that requires consumers to provide greater detail regarding their demand resources to AEMO or affected DNSPs?

SP AusNet agrees that there should be a trigger requiring consumers to provide detail of their demand resources to the affected DNSPs. Relatively small loads (e.g. 100kW) can impact the quality and reliability of some distribution network circuits (e.g. Single Wire Earth Return (SWER) circuits or single phase rural circuits).

In addition, third party aggregators with control over blocks of load (comprising the demand resources of many consumers) have the potential to have a disproportionate impact on the operation of the distribution network, depending on the magnitude and location of these load blocks. Therefore it is important that any party controlling load blocks is responsible for the potential distribution network impacts of their load block switching actions.

A load block of controllable load switched off of (or onto) a distribution network could adversely impact the network if the step change is large, and/or if switched at an inappropriate time of day, and/or if switched when the network is vulnerable e.g. during extreme weather of during periods of non-normal operating configuration. Impacts could include voltage level issues, disruptions to protective device operation, or immediate or long term equipment damage.

Mechanisms will need to be developed to ensure that when such load block switching is contemplated potential network impacts are given full consideration. Industry participants have a level of agreement in principle that these type of mechanisms need to be in place, but specifics have not been developed. This is a complicated aspect of the developing market, particularly as the distribution network condition and potential impact could be quite dynamic. All service providers, whether participants or third party providers, would need to comply with protocols that may be established.

Further, a protocol is required regarding system and communication security to prevent accidental switching of a load block caused by unreliable controls or a security breach, which could also lead to these types of network impacts. Again, industry participants have agreed this in principle.

Load block switching actions which impact on network reliability could also have financial impacts on DNSPs, for example through the AER's service target performance incentive scheme. A regulatory framework is required that ensures that a distributor is not financially impacted by other's actions or inactions.

15. **How should AEMO's powers be expanded to improve demand forecasting? Should retailers and other market participants be obliged to provide information regarding DSP capabilities? Will non-obligatory requirements achieve the desired accuracy in reporting requirements?**

Obtaining an understanding of trends and projections in demand side participation would facilitate efficient network planning, and SP AusNet accordingly supports the AEMCs recommendation for AEMO to develop both long and short term demand forecasts inclusive of DSP. The DSP component should be separately identified and the process of its development described, and subject to stakeholder consultation to facilitate robust evolution of the method.

AEMO already develops a 'value of customer reliability' which is used for transmission and distribution network planning in Victoria. The method is conducted through customer survey and has developed over time. AEMO may be able to extend this technique to assess the propensity for demand side participation, as one method of assessment.

Development of forecasts based on trend and participant intentions is another technique to be used. Participants and intending participants should be required to communicate with AEMO on their demand side intentions, including likelihood. This could include the expectations of DNSPs arising from pricing strategies.

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.

15. **Do you agree that a new category of market participant should be established for the provision of non-energy services?**

SP AusNet agrees that a new category of market participant should be established for the purposes of provision of non-energy services. These services are inherently different from either the consumption or supply of energy, and registrations, requirements and obligations should reflect this.

16. **What types of issues should be considered when developing the registration process, such as eligibility, obligations and liabilities?**

As with energy service providers, non-energy service providers will also be dealing directly with consumers in an area with significant information asymmetry. Therefore there should be a rigorous registration process including full prudentials.

17. **What metering arrangements need to change to implement this mechanism?**

Wherever possible the objective should be for metering arrangements to be unchanged, or for this to be minimised. We are not yet clear on what will be required for the envisaged services. This will depend on further development of the scope for these services and their dependence on information provision through the meter.

Section 6 – Efficient and flexible pricing options

The Victorian Government has announced that flexible prices will be implemented in a phased approach in Victoria. From 1 July 2013 consumers will be able to opt in to a flexible network tariff. A 'cooling-off' period until December 2015 allows consumers who have selected a flexible network tariff to revert to a flat tariff free of charge.

In the longer term the uptake of DSP may lead to an increasing number of consumers both extracting energy from, and inputting energy into the network. Network tariffs currently only apply to consumers extracting energy from the network. Under the current Rules, a reduction in the number of consumers extracting energy from the network would lead to higher tariffs charged to the remaining consumer base. Consumers using the network to export surplus generation would not be subject to network tariffs. Under these circumstances changes to the NER may be required to allow networks to recoup their costs by charging consumers on a user pays basis.

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.

Consumer education is essential to realising the benefits of time varying tariffs. Information should be provided to enable consumers to see the benefits of time varying tariffs at both an industry-wide, and individual level.

Access to individual metering information in a format that is clear and easy to understand will be key to achieving this. In Victoria, this is currently provided by certain DNSP and retailer web portals and in-home displays on smart meters also enable consumers to access real time energy consumption data.

The Victorian Government's roll out of flexible pricing allows consumers a trial period during which, if they opt into a flexible pricing tariff, they will be able to switch back to their original tariff free of charge. This reduces the risks associated with 'learning by doing'.

To manage the impacts on vulnerable consumers we recommend that:
- Arrangements are put in place for consumers, who may have 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 Victorian approach for introducing flexible pricing (outlined above) will mitigate the impact of flexible pricing on vulnerable consumers, as consumers will not be obliged to be subject to a flexible tariff if they do not wish to be.

While SP AusNet acknowledges the concerns around protecting vulnerable consumers from the impact of flexible tariffs, if tariffs are well-designed the adverse impact on vulnerable consumers can be minimal. Vulnerable consumers tend to have a relatively flat load profile, and therefore a more granular tariff structure which imposes a high peak

and/or shoulder charge for a relatively small amount of time throughout the year can potentially lead to vulnerable consumer's benefiting from its imposition.

This is demonstrated in research quoted in the Brattle Group's report 'Managing the Costs and Benefits of Dynamic Pricing:

> *'There is evidence that more than three-quarters of low income consumers are overpaying under flat rates and if allowance is made for their likely response to dynamic pricing rates, one would expect more than 80-90% of low income consumers to benefit from such rates'.*

SP AusNet considers that education, in the form of advice and assistance, can particularly benefit vulnerable consumers, particularly those who are less likely to respond.

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.

21. We seek stakeholder comments on appropriate pricing principles for distribution businesses and the appropriate time period for stakeholder consultation on distribution network pricing proposals.

SP AusNet does not believe that the pricing rules need to be amended to encourage efficient and flexible network tariff structures. Our experience is that network businesses have the incentive to structure tariffs that optimise network utilisation, and smart metering makes this much more practical. This is demonstrated by SP AusNet's time of use tariffs (listed above) being approved by the AER (although they have been subject to Victorian Government moratorium).

SP AusNet agrees that consultation with consumer groups and retailers will enhance the tariff setting process. However, the timing of any consultation should not be during the annual tariff setting process. There is limited time available to DNSPs during the annual price setting process and the tariff rebalancing constraints restrict how much can be done at these times for any consultation process to be effective or of any real value. There is also the risk of unrealistic expectations as to what can be achieved through annual tariff review, which may leave all parties dissatisfied with the process.

The appropriate time for consultation is during the Distribution Price Reviews that are conducted every five years. It is during these reviews that DNSPs establish the general direction of tariff policy and at this point the consultation process can be much more effective and given a more holistic consideration to the views of all parties. Consumer groups, retailers and individual consumers have all been involved in the consultation process at this time.

Section 7 – Distribution networks and distributed generation

SP AusNet assesses demand management options as part of its planning process. However, such options are more risky, and take more time to develop and implement, compared with more traditional augmentation projects. This is due to the nature of DSP solutions being smaller localised support options which tend to be less firm with no back up, as well as the infancy nature of the DSP sector. Over time, learning economies will be realised through experience and innovation, reducing costs.

Capital expenditure solutions to network augmentation are part of the routine operations of SP AusNet. These are internal projects, and hence the scope, timings and delivery are within the control of the business. In addition, the resulting asset will be available to SP AusNet with a high level of reliability. The success of a distributed generation solution, where a 3rd party provider connects into the network to provide energy resources, does not only depend on the actions of a DNSP, and therefore is more risky for a DNSP to undertake than a capital expenditure solution. For a distributed generation solution to be successful, there firstly needs to be a 3rd party provider with a commercial interest in providing distributed generation into an area of the network which would enable a DNSP to defer network augmentation, at a lower cost.

It is important to note that in Victoria few DSP services are funded through the deferral of network augmentation alone due to the Victorian industry's use of probabilistic planning criteria which, due to the low probabilities of network constraint, generate relatively low values of network support.

Secondly, the timing of the distributed generation project needs to precede the timing of the network's augmentation requirements. A DNSP is exposed to both financial (S factor penalties) and reputational (unserved load) risk if there is a clear need for augmentation, meaning network reliability is low. However, the 3rd party generator is not subject to the same incentives. This could mean it becomes economic to adopt a capital expenditure solution, rather than accepting the risk of a 3rd party's timeframes falling behind. Further, third party providers do not contract for the DNSP's financial (S factor penalties) and reputational (unserved load) risks, hence even when the DG service is established in a timely fashion, the DNSP is still exposed whenever the DG provider fails to provide the contracted service.

For example, SP AusNet is currently negotiating a network support agreement to provide 10MW of generation into the network at Traralgon. This agreement will allow SP AusNet to call on up to 800MWh per year during the summer period should capacity be constrained due to a transformer failure. This agreement will allow for the deferral of the replacement of one of the transformers at Traralgon with a new higher capacity unit for at least five years.

SP AusNet has expended considerable effort in maintaining the momentum necessary to make this succeed. Delays have been experienced due to the low level of experience in establishing such services. The technical processes associated with connecting generation to the network are complex and can take 2-3 years to work through. These delays would not have been experienced were the capital expenditure solution adopted instead. However, over time, as such agreements become more common, it is expected that the time taken to establish such agreements will reduce. For example, future agreements can be based on the contract precedent.

SP AusNet also benefits from a network support agreement with Bairnsdale power station, a 80MW natural gas fired power station in East Gippsland. The station was commissioned in 2001 and SP AusNet provides monthly payments for their services. While this agreement has been in place for over 10 years, valuable lessons have been learnt through the operation of the agreement which have informed negotiations since.

To compensate for the risky nature of distributed generation solutions, at least in the short term, extra financial incentives can be justified. Over time, as both the risks and time taken to establish these agreements fall, the need for financial incentives will diminish.

It is also important to clarify the circumstances under which DNSPs can own and operate distributed generation. Without such clarity, where a DNSP can provide lowest cost solutions with greater certainty, such solutions will be less attractive. SP AusNet has previously advocated for confirmation that DNSPs have the right to own and operate distributed generation, and we strongly support the AEMC's intentions to address this issue.

In addition, providing a financial incentive per kilowatt of DSP (such as OFGEM's scheme outlined in the Directions Paper) can compensate for the risk premium associated with distributed generation as a relatively unestablished industry.

SP AusNet agrees with the following proposed changes to the Rules:

- Future payments associated with network support agreements should be automatically incorporated into the opex allowance for the regulatory period (as with TNSPs);
- DSP pilots and trials should be exempt from the reliability service standards performance incentives; and
- Reforms to the current demand management incentive scheme.

However, SP AusNet also considers that to facilitate the take-up of DSP solutions, the following should be implemented:

- Enable DSP and network capex to be treated equally and rolled into the RAB, although it is recognised that this might be treated as a "shared service" under the proposed new Chapter 6 Rules.
- Exemptions from the reliability service standards should not be limited to DSP pilots and trials but also apply to ongoing DSP solutions for an initial period
- Increasing incentives for trialling and adopting DSP options, through a targeted innovation allowance.

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.

SP AusNet supports the need to review the current demand management and embedded generation connection incentive scheme.

22. Would it be beneficial to include reference to the suggested mechanisms and provide more guidance and an overall objective in the Rules governing the demand management incentive scheme?

The mechanisms proposed should be designed to reward DNSPs marginally more for any pursued distributed generation or demand management options which benefit consumers, compared to traditional capital expenditure solutions due to several notably higher risks associated with such ventures.

If the first proposed mechanism is adopted, there will need to be an established methodology for calculating the market benefit of DSP options which is straightforward to apply. SP AusNet routinely calculate the market benefit of augmentation projects as part of its planning process, and suggests that existing practices should be used for the purposes of calculating market benefit for this incentive scheme.

Any mechanisms proposed should be broadly defined in the Rules, so the AER have flexibility to develop and improve any scheme over time. The guidance for the development and implementation should be sufficient to ensure its intent is understood and complied with. To achieve this purpose a distinct objective may be warranted.

23. Should separate provisions for an innovation allowance be included into the rules? Given the costs of the allowance would be bourne by electricity consumers, is it more appropriate for such innovation to be funded through government programs?

Given the building block regulatory approach truncates returns for innovation to regulated businesses, it is appropriate that an innovation allowance is provided to NSPs. The appropriate level of funding should be determined by the AER during revenue determinations, but the principle underlying this allowance could be codified in the Rules.

It is appropriate for electricity consumers to fund the costs of the allowance. These consumers will realise the benefits of innovation over time, through lower prices than would be the case without innovation. Once the DSP sector becomes more established it may be appropriate to phase out the allowance.

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.

SP AusNet does not support the recommendation that the pricing principles are amended to provide further guidance. The current pricing principles allow NSPs a sufficient degree of flexibility to set tariffs, and greater guidance which reduces this flexibility can reduce the ability of NSPs to manage demand (see below).

However, SP AusNet agrees with the second part of the recommendation. Including DSP tariff based projects in the foregone revenue component of the demand management incentive scheme strengthens the incentive for NSPs to adopt DSP solutions where efficient to do so, despite the potential for the NSP's direct revenue to fall.

25. What amendments are required to the current distribution pricing principles as set out in clause 6.18.4 of the national electricity rules?

SP AusNet does not see any need to make changes to these principles. The current pricing principles (note these are clause 6.18.5, not 6.18.4) allow NSPs a degree of flexibility while ensuring that tariffs are within a specified range, reflect long run marginal cost and can be understood by consumers. It is important to allow NSPs to shape their tariffs as they see fit. Restricting or removing this flexibility will remove one of the key tools of demand management, and therefore amendments to the pricing principles are not considered necessary.

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.

SP AusNet supports the clarification of the NER to allow the AER to consider non-network benefits when assessing efficient expenditure. In the absence of this, the introduction of RIT-Ds could lead to DNSPs proposing efficient expenditure on the basis of high market benefits, which the AER consider inefficient as they are unable to take market benefits into account.

The Rules should also require the AER to be transparent about the methodology they use to assess the non-network benefits of DSP, and how this translates into the efficiency assessment.

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.

SP AusNet agrees in principle, however it is difficult to comment on this as the provisions are yet to be designed. Until the details are available it is difficult to know what other implications may eventuate from a rule change in an area where the only existing restrictions are those outlined in Clause 6.18.5. It is noted that these restrictions are currently fairly broad, so a change is more likely to hinder rather than enhance the process.

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.

As explained above, SP AusNet supports this recommendation. The AER automatically accepting network support agreement costs as part of allowed operating expenditure mitigates the risk that a DNSP will be unable to recoup the costs of a network support agreement, reducing the overall risk associated with establishing these agreements.

In addition SP AusNet considers that the NER should be clarified to treat DSP and network capex on an equal footing, and allow for all DSP capex to be rolled into the RAB.

We propose that the NER is changed to permit the AER to grant temporary exemption from reliability service standards for specific DSP pilots/trials.

SP AusNet support excluding DSP pilots and trials from the service targets performance incentive scheme, but queries the application to pilots and trials. This may be because the AEMC assumes that initiatives are embryonic and not material and enduring services. We consider there is a need for all DSP to be excluded whilst experience is gained. This will provide further incentive to adopt non-network solutions.

Adopting DSP solutions is likely to result in learnings which will improve reliability. Therefore, in the short term SP AusNet consider that penalising the reliability of DSP projects under the current service standards is inconsistent with the scheme's objective to improve reliability. Instead, granting an exemption to these projects will encourage the adoption of a greater number of DSP projects, which, through improving knowledge, is likely to improve reliability outcomes over time. The exemption should be subject to review after an initial period.

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.

SP AusNet supports this recommendation. In particular, SP AusNet strongly agrees that DNSPs should be allowed to own DG assets, where the primary purpose is to provide network support. We also agree that where a DNSP owns DG assets, there are likely to be benefits associated with allowing DNSPs to export power from these assets into the wholesale market. These benefits include reducing the total cost of energy supply.

The introduction of the RIT-D will provide transparency about how DNSPs assess augmentation against non-network options. This transparency could help ensure that the optimal solution is selected, allaying any concerns about the incentives for a DNSP to favour themselves or related parties when assessing tender options for constructing DG assets.