SP AusNet™
A member of Singapore Power Group

4 May 2012

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

Dear John,

Directions Paper: Review into Demand Side Participation

We are pleased to make this submission in response to the AEMC's Directions Paper for its review of Demand Side Participation (DSP) Stage 3 in the National Electricity Market (NEM).

We support the Directions Paper in its consideration of network pricing, incentives and proactively exploring ways to encourage greater DSP and distributed generation (DG) where these provide the most efficient means of meeting consumers' energy service needs. SP AusNet reiterates its support for regulatory reforms which encourage DSP and address any impediments to its adoption.

Improvements to the Rules that encourage movement toward more cost reflective tariffs would significantly improve the uptake of efficient DSP in the NEM.

Network pricing

SP AusNet's experience is that price signals are an effective facilitator of DSP. In our submission to the Issues Paper in August 2011 we included evidence demonstrating that consumers are able and willing to respond.

Financial incentives and managing risks

SP AusNet actively investigates embedded generation alternatives to network augmentations and pursues these solutions where they offer favourable outcomes for SP AusNet. However we consider that a DSP-specific incentive and framework design changes to mitigate financial risks, including temporary measures which address the infant nature of the DSP industry, would be required to drive an efficient investment in DSP solutions.

It is recognised that the building block approach to regulation, in its current form, stifles innovation and long term R&D by network businesses. This is particularly relevant to DSP, in the investigation and deployment of emerging technologies, as are associated with smart networks. SP AusNet accordingly considers that provision for innovation incentives should be incorporated into the regulatory framework.

We look forward to continued participation in the review. We invite you to contact Kelvin Gebert, SP AusNet's Manager Regulatory Frameworks, ph. 03 9695 6603 for any inquiries regarding this submission.

Yours Sincerely,

Alistair Parker
Director, Regulation and Network Strategy

Attachment:

Submission on Directions Paper: Review Into Demand Side Participation Stage 3

Attachment

SP AusNet Submission on Directions Paper: Review Into DSP Stage 3

1. Overview

SP AusNet made a substantive submission into this review in August 2011, in response to the AEMC's Issues Paper. The information provided in that response is relevant to many of the matters canvassed by the AEMC in the Directions Paper, and we therefore commend our earlier submission.

This response addresses parts of the AEMC's Directions Paper of most relevance to SP AusNet and takes the following structure:

- Section 2 addresses network pricing;
- Section 3 addresses financial incentives for networks to support DSP and the means by which risks associated with DSP may be managed; and
- Section 4 provides commentary on market and regulatory arrangements to facilitate DSP.

1.1 Background

SP AusNet has one of the peakiest network demand profiles in Australia. Demand growth and customer connection growth associated with Victoria's population and economic growth impact heavily on SP AusNet's network. Compounding this, demand associated with new housing developments tends to be relatively peaky due to the high and increasing penetration of air conditioning (cooling). Resulting peak demand on SP AusNet's distribution network has been growing at the rate of 6.7% per year, considerably faster than energy consumption.

Therefore, our views in this review are often informed by our use of DSP as a mechanism for peak shifting, where this would provide the most benefit to SP AusNet reducing network investment and long term costs to the community.

2. Network pricing

The following discussion addresses selected questions posed in the Directions Paper.

5. Should network charges vary by time of use?

Yes. Varying network charges by time of use provides a more accurate price signal to allow customers to change behaviour, leading to greater DSP and more efficient market outcomes.

SP AusNet agrees with the AEMC's statement that efficient outcomes require:

- prices created in the wholesale market to reflect the cost of producing electricity in each half hour;
- network charges to accurately reflect the cost of building additional capacity; and
- retailers to have an incentive to offer contracts which respond to their customers' preferences.

The strongest driver of consumer behaviour is a cost reflective price signal. A well designed tariff regime should signal to consumers and potential investors the future cost of consumption, providing a financial incentive for them to change their consumption and /or investment behaviour, if beneficial. This allows the community to maximise its use of its current resources, therefore, maximising community welfare.

Other drivers will be secondary but nonetheless important. For example;

- The provision of information to customers, both with regards to the price and options to respond, will also be important as a better informed consumer is more likely to respond to the pricing signal. It should be noted that better price signals will in themselves encourage the provision of this information as it will create a "product" to sell;
- Availability of technological developments such as: home energy management systems connected to smart meters or other aggregation facilities; the integration of electric vehicles into the home for both charging and peak demand mitigation; and the placement of storage in the network at substation level or on SWER lines;
- Customer convenience will also play an important part in participation and the degree to which this is facilitated by technological developments (ie set-and-forget options) will help determine the level of participation; and
- Reliability of the proposed DSP solutions and the ability of the consumer to choose reliability/cost trade-offs.

SP AusNet has designed and implemented a cost reflective time of use (ToU) tariffs for both industrial, small commercial and residential customers. In particular, SP AusNet has received AER approval to introduce the following two new types of Distribution Use of System (DUoS) tariffs:

- A Critical Peak Demand Price for large LV customers, HV customers, and sub-transmission customers; and

- Time of Use tariffs for Residential and Small Commercial Customers (taking advantage of the functionality of the smart meters being rolled out in Victoria). These tariffs are currently under moratorium subject to Victorian Government review.

The factors underlying the design of these tariffs were discussed in our earlier submission and we refer you to that submission for further information.

6. Should NSPs charge on a volume or capacity basis?

The significant driver of network costs is customer demand, and therefore a capacity based charge is appropriate. However there are difficulties in designing a capacity based tariff for small customers, as the demand profile applied is necessarily an average for the customer class.

The Directions Paper notes that SP AusNet presented the view that charging should preferably be on a volume basis. We wish to clarify that this is not the intended reading of our submission. In our previous submission the tariff designed for small commercial and residential customers was described as being designed to best reflect the system utilisation during peak periods, without having to disaggregate that price signal by either peak day demand, or by location (for this class of customer). This is on the basis that there is a nexus between a customer's maximum energy and their demand, that the customers are more likely to better understand and hence respond to energy based charges, and that volume is an appropriate proxy for demand.

7. What changes are needed to market conditions to facilitate more cost-reflective network pricing?

SP AusNet considers that provided jurisdictional arrangements support retail competition and cost-reflective tariff structures, retailers will mirror network tariffs in the tariffs they offer customers. SP AusNet's earlier submission reasoned that this is the only way retailers can effectively hedge the network.

In addition, our submission reasoned that well designed ToU tariffs should not adversely impact the majority of vulnerable customers, but rather would lead to them being better off. We refer you to our earlier submission for further support information.

3. Financial incentives and risk mitigation

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?

Private sector DNSP's are capital constrained under current funding conditions. As such, the current financial market provides incentives to implement policies and solutions that reduce capital expenditure. In addition, the AER regulatory regime provides capital expenditure efficiency incentives.

Therefore, incentives exist for DNSPs to undertake and support DSP initiatives. In particular, the introduction of well designed cost reflective time of use network tariffs send the appropriate price signals to DSP proponents.

However, SP AusNet considers that current incentives do not provide sufficient rewards for pursuing DSP that generate benefits to society as a whole through the whole value chain, as well as through lower built network capacity. This is an impediment to the optimal deployment of DSP solutions by NSPs.

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

Some impediments in the regulatory framework may be hindering the development and uptake of DSP. The following specific framework improvements are recommended to provide improved certainty for DNSPs in implementing DSP solutions:

- exclusion of DSP opex from the efficiency carry over mechanism to encourage DSP and avoid penalising DNSPs for implementing a DSP option;

- clarification in the NER that DSP and network capex be treated on equal footing and explicitly allow for all actual DSP capex to be included in the RAB, consistent with the ex ante capex approach in the current regulatory framework;

- introduction of a DSP specific exclusion from the STPIS schemes penalties. This is justified because of the early stage of development of the demand management industry results in:

    - counterparties that are unable to take on the appropriate reliability risk on to their own balance sheet either due to size (venture capital start ups) or nature (for example, government bodies such as the CSIRO), leaving it with the DNSP; and

    - the R&D nature of many demand management programs.

In addition to above framework improvements, it continues to be our view that a positive DSP-specific incentive would be required to drive significant change and development in this area. It is also considered that seed funding and real financial rewards would be needed to assist in the development of the relatively infant embedded generation and demand side response sectors. Generally, financial incentives are the most effective way to achieve target DSP outcomes, rather than providing cost-recovery mechanisms.

The Directions Paper canvasses a number of enhanced incentive schemes for NSPs, including those presented in SP AusNet's earlier submission. Our view remains that enhanced DSP incentive schemes are required, and we suggest that the following schemes be trialled:

- a $/kW incentive rate (or revenue driver) to encourage the connection of distributed generation to the network (as implemented in the UK at £1.50/kW/yr by Ofgem). This would encourage DNSPs to explore innovative solutions which may involve installing distributed generation in key network locations.

- A wider implementation of the NSW D-factor scheme that allows DNSPs to recover:

- approved non-tariff-based demand management implementation costs, up to a maximum value equivalent to the expected avoided distribution costs (as defined in the determination);
- approved tariff-based demand management implementation costs; and
- approved revenue foregone as a result of non-tariff-based demand management activities.

A longer term goal to introduce a higher-powered incentive scheme similar to the S-factor that would recognise the value to society of reduced energy consumption by providing an additional revenue stream for network businesses would be worthwhile. It would effectively share the benefits of cost-effective or socially beneficial energy reduction. A shared benefits incentive scheme would involve:

- An appropriate measurable target to set (net benefits achieved, energy or capacity saved);
- A fair quantum of reward;
- The marginal incentive rate;
- Caps or floors to mitigate the risks of the incentive; and
- Further investigation of incentive schemes for DSP be undertaken.

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

It is not obvious under the current regime that DNSPs can sell energy generated by DSP back into the market, therefore, leading to a misalignment of private and public benefits. SP AusNet considers it is imperative that networks are not restricted from actively participating in the DSP market if the long term benefit to the community is to be maximised, and recommends that the AEMC clarify appropriate DSP opportunity for participants via this review. An in-principle policy decision needs to be made on this matter before the necessary changes to regulatory instruments are pursued.

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?

SP AusNet considers these questions can be read from two perspectives:

- How is non-firm DSP taken into account in broad demand forecasting in a macro-sense (across the wider economy) for the purposes of a price review; and
- How do network businesses forecast the expected response of a program they have initiated encouraging non-firm DSP?

Firstly, it is standard procedure that the potential demand impacts of firm DSP are estimated based on contracted DSP in place at the time of a price review.

The non-firm DSP expected across the wider economy (driven by state-based energy efficiency schemes or other broad initiatives) would be encompassed in the wider demand forecasting done by independent experts who provide demand forecasts to a DNSP. The forecasts are subject to AER scrutiny.

The network planning process then encompasses expected customer response to DSP initiatives implemented by the DNSP. SP AusNet typically analyses the key drivers for network reinforcement and then examines the applicability of different non-network alternatives to efficiently support and address network demands, taking into account:

- expected load growth in rural and regional areas, and the relative cost of augmenting lines in those areas;
- likely growth in penetration of refrigerative air-conditioning in residential homes, particularly in SP AusNet's growth corridors;
- de-rating of network assets which occurs during high temperature events, including the impact on the network and the risk of overloading;
- current and expected level of reactive load on the system which contributes to degrading of system power factor; and
- customer profiles and the potential for demand management.

Historic response to DSP initiatives (such as critical peak pricing, load curtailment rebates, etc.) is of course a major consideration in forecasting DSP impacts on demand.

In our view an overlapping framework for forecasting DSP, on top of the process via Chapters 6 and 6A of the Rules would compromise regulatory certainty.

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

The forthcoming reforms to distribution planning will strengthen the rigour of current forecasting approaches.

SP AusNet is not convinced a formal framework for DSP forecasting in a price review context is necessary, given that the Rules are quite clear that all forecasts need to consider the impacts of DSP and non-network alternatives (capex/opex criteria). There is no evidence that further formal arrangements will deliver better results.

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?

The financial impacts arising from the operation of the Service Target Performance Incentive Scheme (STPIS) are a significant factor considered by DNSPs and DSP providers in negotiating DSP solutions. This is because non-network solutions and network solutions are often not perfect substitutes and can provide different levels of reliability. With DSP integration still immature, the scale and management of the associated risk between suppliers and DNSPs has not been effectively resolved.

In SP AusNet's view non-performance from non-network solutions should be excluded from service standards performance data, at least whilst the integration of DSP remains immature, and for an initial period for individual projects, until stable performance of the DSP solution can be assured.

4. Market and Regulatory Arrangements

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?

These questions are largely addressed in Section 3 above. The following additional comments are made on two specific rules issues.

The AEMC has made or proposed two rule changes which have made DSP by embedded generators increasingly difficult.

DNSP recovery of transmission-related charges

In our earlier submission we noted that in March 2011 the AEMC made rules entitled DNSP recovery of transmission-related charges which addressed a material issue for DNSPs but impacted DNSP take-up of embedded generation solutions. Specifically, the rule change excluded network support agreement payments from being able to be passed through via the annual pricing proposal process. Instead these payments were to be recovered via a pass through process established under the DNSP's Determination. The network support pass through event would have to be established in a Determination as the Rules do not contain a general pass thorough provision for these types of costs.

However, as the Rule was implemented just five months after the AER Final Determination for Victorian DNSP's, no such specific pass through provision can exist in Victoria until after 2015.

This was problematic for the multiple proponents that were canvassing very competitive non network options to SP AusNet at the time. SP AusNet Distribution's inability to recover costs under the regime the AEMC has put in place makes these otherwise sensible proposals commercially impossible to pursue (SP AusNet is pursuing ways to contract around this problem via the transmission business).

In our previous submission SP AusNet proposed that these rules be re-examined as part of the DSP review.

Network Support Payments and Avoided TUoS for Embedded Generators

Secondly the AEMC is considering an MCE initiated Rule changes entitled Network Support Payments and Avoided TUoS for Embedded Generators. The proposed rule change appears to seek to address a concern that embedded generators may be receiving two payments for the same service. SP AusNet believes that this may be a misconception, and has provided evidence that this is not the case, at least in Victoria. It is important that any Rule change not deny embedded generators legitimate payments for network augmentation deferral benefits in different parts of the network.

SP AusNet refers to its submission on this Rule change submitted on the 21 July 2011 for further details.