SCER
Standing Council on Energy and Resources
Senior Committee of Officials

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear Mr Pierce

The Standing Council on Energy and Resources (SCER) has agreed to submit a rule change request to the Australian Energy Market Commission on improving the demand side participation information provided to the Australian Energy Market Operator.

This rule change request has been developed based on recommendations contained in the AEMC Power of choice review and is in line with the broad energy reform package to support investment and market outcomes in the long term interests of consumers agreed by the Council of Australian Governments and SCER in December 2012.

The rule change proposal and associated draft rule are attached for your consideration.

Sincerely

**Martin Hoffman**

Chair
Standing Council on Energy and Resources Senior Committee of Officials

29 November 2013

Enc



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Improving DSP information provided to AEMO by registered participants

**SCER Rule change request**

**November 2013**

**1) Name and address of rule change request proponent**

Standing Council on Energy and Resources
SCER Senior Committee of Officials
Standing Council on Energy and Resources Secretariat
GPO Box 1564
Canberra ACT 2601

**2) Description of the proposed rule**

The proposed rule seeks to amend the National Electricity Rules (NER) to create a new provision that:

- Requires registered participants to provide to the Australian Energy Market Operator (AEMO) information on contracted and price responsive demand side participation (DSP) specified by AEMO in new demand side participation information guidelines.[1] This is to support AEMO's information about DSP in the NEM for its market operational functions. AEMO will be able to periodically review information provided under this new requirement to assess its general accuracy.
- Requires AEMO to develop guidelines, in accordance with consultation procedures, for the collection and management of information provided by registered participants. When making the guidelines AEMO is required to take into account the reasonable costs of registered participants in providing information on contracted and price responsive DSP compared to the likely benefits associated with the provision of that information.
- Requires AEMO to take into account the DSP information it receives under the Rules when developing or using load forecasts in relation to its market operational functions under the NER. For example, AEMO should take DSP levels into account as they are relevant to:
    - Projected Assessment of System Adequacy (PASA) reporting requirements;
    - Energy Adequacy Assessment Projection;
    - Central dispatch;
    - Pre-dispatch schedule;
    - Electricity Statement of Opportunities (ESOO);
    - Load forecasting; and
    - Annual forecast information for planning purposes.

AEMO will be required to protect confidential DSP information in accordance with its obligations to protect information under Part 5, Division 6 of the NEL.[2]

[1] A range of DSP information may be relevant to AEMO in its DSP surveys. Currently AEMO requests information on load that is able to be significantly reduced in response to pricing or other contractual arrangements that are in place that provide an incentive for (but may not guarantee) consumer response on a half hourly basis. This includes load that is reduced in response to either short-term wholesale prices or short-term adverse network loading conditions; output from a small generator that offsets load that is responding to either wholesale prices or adverse network conditions; or organised aggregated demand side response that is responding to either wholesale prices or adverse network conditions.
[2] Please note, some of these functions may be renamed or redefined subject to relevant Rule change requests which are currently underway. SCER has also agreed to make a separate Rule change request (regarding AEMO developing demand forecasts that could be used by the Australian Energy Regulator in interrogating

## 3) Background to the rule change request

In December 2012, the Council of Australian Governments (COAG) and SCER agreed to a broad energy reform package to support investment and market outcomes in the long term interests of consumers. This included consideration of DSP in the electricity market.

As part of the implementation of reforms, SCER agreed to progress a number of rule change proposals that were recommended by the Australian Energy Market Commission (AEMC) in its final report for the Power of Choice (PoC) review.[3]

*AEMC Power of choice review*

In November 2012, AEMC published its final report for the PoC review.[4] The purpose of the review was to investigate and identify the market and regulatory arrangements needed across the supply chain to facilitate efficient investment in, operation and use of DSP in the NEM.

The review identified the opportunities (information, education, and technology, and flexible pricing options) for consumers to make more informed choices about the way they use electricity. The review also addressed the market conditions and incentives required for network operators, retailers and other parties to maximise the potential of efficient DSP and respond to consumers' choices. The overall objective of the review was to ensure that the community's demand for electricity services is met by the lowest cost combination of demand and supply side options.

The AEMC made a number of recommendations to facilitate the efficient uptake of DSP in the NEM. The recommendations for reform were made across nine priority areas and included changes to the electricity market rules, jurisdictional regulations and proposed action for SCER and jurisdictions to progress.

A key area of focus in the final report of the review related to DSP in the wholesale and ancillary services markets of the NEM. As part of the reforms for this area, the AEMC recommended that the NER be amended to allow AEMO to collect better information on the demand side in the NEM for its market operational functions.

The AEMC PoC review final report contained a set of draft specifications. This rule change proposal places a requirement on registered participants to provide DSP information to AEMO, rather than focusing on AEMO information gathering powers.[5]

## 4) Nature and scope of the issues the proposed rule will address

Demand forecasting contributes to a broad range of decision making processes within the NEM, including AEMO's dispatch and pricing decisions, as well as decisions regarding system security and reliability. AEMO uses DSP information as an input into demand forecasts and various other reporting processes such as the ESOO.[6]

AEMO typically collects this information from registered participants annually through its DSP surveys. Currently there is no obligation on registered participants to provide information

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network regulatory proposals). While the purpose of each proposal is distinct, in implementing each the AEMC is expected to manage any overlap to the extent they affect the same parts of the Rules.

[3] Refer to http://www.scer.gov.au/workstreams/energy-market-reform/

[4] See AEMC, *Power of choice review – giving consumers options in the way they use electricity*, final report, 30 November 2012.

[5] See AEMC, *Power of choice review – giving consumers options in the way they use electricity, final report – draft specifications*, 30 November 2012.

[6] See NER, clause 3.13.3 regarding reporting requirements relating to the ESOO.

regarding contracted or price responsive DSP in the NEM. Typically, in AEMO's experience, the response to the DSP surveys from registered participants is limited.

This means that while AEMO uses this information as an input into various market operational functions that provide important information to the market, there is no commensurate requirement for registered participants to provide this information. Therefore, it is difficult for AEMO to form a view as to the levels of DSP in the NEM if they are not provided with better quality information.

The lack of clarity and quality of information regarding DSP levels in the NEM means that AEMO is unable to utilise the best available information for its various operational functions. As the levels and responsiveness of DSP in the NEM increase over time, better information regarding DSP will be needed to help AEMO, and the market more generally, make better decisions regarding whether to consume or generate electricity, including improving the accuracy of forecasts for pre-dispatch processes.[7]

There are a number of immediate market benefits to improving the accuracy of DSP forecasting, including its use as an input into AEMO's operational demand forecasts. Better quality information regarding DSP in the NEM can potentially be used by AEMO to improve the operation and efficiency of AEMO's market operational functions such as dispatch and pre-dispatch schedules.

Better quality information can also be used as input into various reporting obligations, such as reporting for PASA and the ESOO. Better information on DSP may also provide AEMO with important information regarding their procurement of network support control ancillary services, frequency control ancillary services, and the Reliability and Emergency Reserve Trader (RERT).

Better quality information regarding DSP levels in the NEM should also assist registered participants, as this information is used to inform their operational decisions. For example, non-scheduled loads may use the pre-dispatch schedule prepared by AEMO when making an economic assessment of whether they will offer demand response in the wholesale market.

Improvements to AEMO's DSP forecasting abilities were considered important for the AEMC's PoC recommendation regarding the proposed Demand Response Mechanism (DRM), which seeks to encourage DSP in the wholesale market.[8]

**5) How the proposed rule will address the issues**

The NER currently includes provisions that require AEMO to produce a number of market operational reports and hence gather information with respect to Short Term PASA,[9] Medium Term PASA [10] and the ESOO.[11] These reports assess reserve conditions in the NEM over various

[7] In their submission to the PoC directions paper, the AER provided a table of "Potential Demand Side Responses in the NEM" which is based on the investigations that the AER is required to undertake when the wholesale spot price for electricity exceeds $5,000/MWh.

[8] [SCER has provided in principle support for the wholesale market demand mechanism and AEMO is now working on rule change request (http://aemo.com.au/About-the-Industry/Working-Groups/Demand-Response-Mechanism-Working-Group)]

[9] The ST PASA process is run every two hours and provides reserve forecast information for every half-hour over the next seven days.

[10] The MT PASA process is run at least once per week and provides a reserve forecast for the next two years.

[11] The ESOO provides a broad analysis of opportunities for generation and demand-side investment in the NEM. The ESOO also provides information about demand projections, generation capacities, and NEM supply adequacy for the next 10 years.

timeframes to determine whether projected reserves are sufficient to meet reliability requirements.[12]

The AEMC identified that these provisions do not enable AEMO to obtain specific information regarding the levels of contract and price responsive DSP in the NEM.[13] This is because there is no obligation on registered participants to provide this information to AEMO. Consequently, registered participants are only required to provide information to AEMO on their DSP activities on a voluntary basis.[14].

In the final report for the PoC review, the AEMC considered that there is scope to improve the quality of DSP information made available to AEMO by requiring registered participants to provide this information to AEMO. The AEMC also considered that the current provisions with respect to AEMO's demand forecasting role could be improved to require AEMO to update its expectations regarding DSP in the NEM on a regular basis, which includes scope for AEMO to forecast DSP in the NEM.[15]

This recommendation builds on Stage 2 of the AEMC's Review of Demand Side Participation in the National Electricity Market and Review of Energy Market Frameworks in light of Climate Change Policies, which recommended that the current arrangements should be strengthened to give clarity to AEMO's ability to gather information regarding DSP levels in the market. In that review, the AEMC also recommended that AEMO be required to use this information in a more sophisticated manner to analyse the different degrees of "firmness" of DSP.[16]

*Enable AEMO to collect better information regarding DSP in the market*

To achieve the recommendations outlined in the PoC review, and stated above, it is proposed that the rules are amended to:

- Create a provision in Chapters 3 of the NER that requires registered participants to provide to AEMO, on a routine basis, information regarding the levels of contracted and price responsive DSP.
- Ensure that information is collected at a reasonable cost to registered participants. . AEMO will be required to protect confidential DSP information in accordance with its obligations to protect information under Part 5, Division 6 of the NEL.
- Require AEMO to develop guidelines for the provision of the information in accordance with relevant consultation procedures. The guidelines would outline processes relating to: the range of information to be provided by registered participants; the frequency with which information must be provided by registered participants; and the timeframes within which registered participants are to provide information to AEMO. Further, the guidelines would outline AEMO's approach to assessing the accuracy of DSP information provided to it by registered participants.

[12] Please note, some of these functions may be renamed or redefined subject to relevant Rule change requests which are currently underway.
[13] See AEMC, *Power of choice review – giving consumers options in the way they use electricity, final report, AEMC*, 30 November 2012, p.142.
[14] AEMC, op.cit, p.142
[15] AEMC, op.cit, p.142
[16] See AEMC, *Review of Demand-Side Participation in the National Electricity Market*, final report, 27 November 2009 and AEMC, *Review of Energy Market Frameworks in light of Climate Change Policies*, final report, 30 September 2009.

*Taking DSP levels into account when developing or using load forecasts*

Increased volumes of DSP may impact on AEMO's ability to accurately forecast demand. This is particularly the case as more non-scheduled and price responsive DSP enters the market. DSP in this regard includes both demand response action and embedded generation.

Non-scheduled DSP is not subject to the dispatch process and is therefore less visible to AEMO and the market as a whole. As increased volumes of this type of DSP enter the market, there is a corresponding risk that AEMO's demand forecasts (and related publications and analysis) may become less accurate.

The AEMC, in the PoC final report, further proposed that there are opportunities to improve AEMO's ability to use the best available information on active and price responsive DSP to improve price signals for pre-dispatch timeframes or to supplement its exiting pre-dispatch modelling. Improving the accuracy of pre-dispatch price signals is likely to benefit registered participants, and in particular, commercial and industrial end-users. This may allow such consumers to better estimate the potential value of their demand response at least 24 hours in advance of their operational decisions.[17]

To address the above, it is proposed that the rules are amended to require AEMO to take into account the DSP information it receives from registered participants when developing or using load forecasts in relation to its functions under the NER. It is expected that such DSP information could potentially relate to:

- price responsiveness of demand;
- response to time variable network tariffs;
- contracted DSP level in aggregated form;
- response to mechanisms by which the network companies directly manage network loading; this may also extend to include retailer initiated direct load control for managing system load; and
- the proposed wholesale market demand response mechanism (once in effect).

For example, AEMO would be required to take this information into account when conducting pre-dispatch scheduling and preparing PASAs and the ESOO.

**5) How the proposed rule will or is likely to contribute to the achievement of the National Electricity Objective**

The National Electricity Objective (NEO) is set out in section 7 of the National Electricity Law. The NEO states:

> "The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to –
>
> a) price, quality, safety, reliability, and security of supply of electricity; and
> b) the reliability, safety and security of the national electricity system."

[17] See AEMC, *Power of choice review – giving consumers options in the way they use electricity*, final report, 30 November 2012, p.143.

The proposed changes would contribute to the achievement of the NEO by improving the accuracy of information available to AEMO and to the market. These improvements will help facilitate more efficient market operation by AEMO as well as contribute to more efficient operational, investment and usage decisions by registered participants.

Given the potential and likely increase in the level of DSP in the market, there are both immediate and longer term market benefits to improving the accuracy of demand forecasts.

In the shorter term, participants can benefit from improved information to enhance the quality of their decision making as it relates to either electricity consumption or generation. This should contribute to efficient operational decisions and therefore more efficient use of resources. For example, improving the accuracy of pre-dispatch schedules will help consumers make more economically efficient decisions regarding the potential value of offering demand side response.

By improving the accuracy and completeness of DSP information provided to AEMO, the proposed changes should also contribute to AEMO's ability to operate the power system in the most efficient manner possible.

In the longer term, improvements in the quality of participant decision making enabled by more accurate demand forecasts should lead to a better allocation of resources. This may contribute to investment signals and may help deliver more efficient long term investment in generation and networks.

Improving the accuracy and completeness of DSP information provided to AEMO should also enhance the quality of information contained in AEMO's reporting documents, such as the ESOO. Given that these documents are used by participants to inform investment decisions, improved accuracy may contribute to more efficient long term investment decisions.

**6) Australian Energy Market Operator's Declared Network functions**

This proposed rule change will not affect AEMO's declared network functions.

**7) Expected costs, benefits and impacts of the proposed rule**

AEMO may face some costs associated with preparing and consulting on the new guidelines, collecting new information and determining how this information is to be assessed and used when developing or using load forecasts for its functions under the Rules. These costs for AEMO are not expected to be significant as the activities can be undertaken as part of existing administration functions.

Registered participants who are required to provide additional information, such as DNSPs and retailers, may also face some costs in complying with these reporting requirements.

The extent of these costs for registered participants should be minimal. DNSPs and retailers are already likely to possess this information. For example, retailers would typically have a good understanding of the levels of DSP contracted to them as it forms part of their risk management portfolio and hedging arrangements. Complying with the requirement to provide information to AEMO should not impose substantial costs on registered participants. The fact that some registered participants already provide similar information voluntarily in response to the AEMO DSP survey indicates the costs cannot be too onerous.

As discussed above, the main benefits associated with these proposed changes relate to improvements in the accuracy of demand forecasts. Demand forecasts are used in a number of market processes, including AEMO's operation of the market, its existing planning responsibilities,

and the operational decisions of registered participants. It is therefore likely that improving the accuracy of demand forecasts will result in improved operational decisions in the short term and improved investment outcomes in the longer term.

**8) Summary of consultation**

Consultation on the above issues took place through the various stages of the AEMC PoC review. A summary of stakeholder positions can be found in the Power of Choice final report.

Submissions were received from a large number of stakeholders during each stage of the review. A number of stakeholders supported the AEMC's proposal to improve clarity around AEMO's role in demand forecasting. There were some network businesses who considered that any changes made to AEMO's role should not result in a central planner approach.[18]

[18] See AEMC, *Power of choice review – giving consumers options in the way they use electricity*, final report, 30 November 2012, p.140.

# Proposed National Electricity Amendment (Improving DSP information provided to AEMO) Rule

## New Rule 3.7D Demand side participation information

After rule 3.7C, insert:

## 3.7D Demand side participation information

### Definitions

(a) In this rule:

**contracted demand side participation** means, for a *Registered Participant*, a contractual arrangement under which a person agrees with the *Registered Participant* to curtail *non-scheduled load* or provide *non-scheduled generation* in response to the demand for, or price of, electricity.

**demand side participation information** has the meaning in paragraph (c)(1).

**demand side participation information guidelines** means the guidelines as made and amended by *AEMO* in accordance with paragraphs (c) and (d).

### Registered Participants to provide demand side participation information to AEMO

(b) *Registered Participants* must provide information to *AEMO* in accordance with the demand side participation information guidelines.

### Demand side participation information guidelines

(c) *AEMO* must develop and *publish* guidelines (the demand side participation information guidelines) that specify:

(1) the information *Registered Participants* must provide to *AEMO* in relation to:

(i) contracted demand side participation;

(ii) forecast ability of load to respond to the price of electricity; and

(iii) forecast ability of embedded generation to respond to the price of electricity.

(2) when *Registered Participants* must provide and update demand side participation information;

(3) how demand side participation information is to be provided, including, for example:

(i) the format in which the information must be provided; and

(ii) any information *AEMO* requires to assess the accuracy of the information; and

(4) *AEMO's* approach to assessing the accuracy of demand side participation information provided to it under this rule.

(d) In developing and amending the demand side participation information guidelines, *AEMO* must:

(1) have regard to the reasonable costs of efficient compliance by *Registered Participants* with the guidelines compared to the likely benefits from the use of the information provided in accordance with the guidelines by *AEMO* in forecasting *load* for the purposes of its functions under these *Rules*; and

(2) comply with the *Rules consultation procedures*.

(e) Despite subparagraph (d)(2), in making minor and administrative amendments to the demand side participation information guidelines, *AEMO* is not required to comply with the *Rules consultation procedures*.

(f) There must be demand side participation information guidelines in place at all times after the initial demand side participation information guidelines are published by *AEMO* under these Rules.

*[note: transitional provisions will specify the date by which the initial guidelines are to be made by AEMO, being a date not more than 18 months from commencement of the Rules]*

**AEMO to take into account demand side participation information**

(g) *AEMO* must take into account the demand side participation information it receives under this rule when developing or using *load* forecasts for the purposes of its functions under the *Rules*.