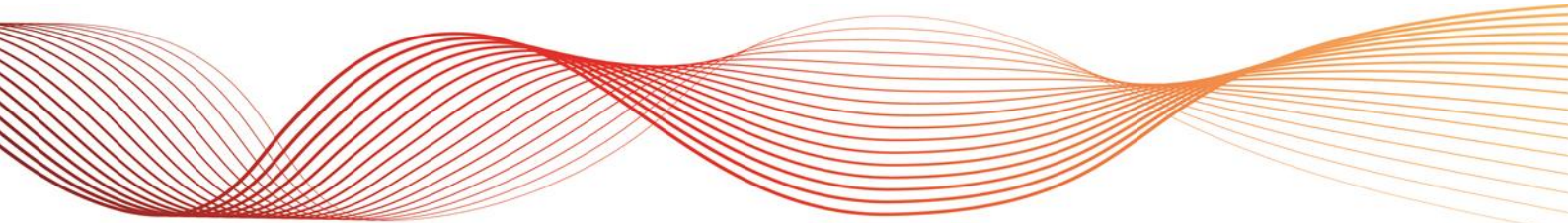




DEMAND SIDE PARTICIPATION INFORMATION GUIDELINES CONSULTATION

FINAL REPORT AND DETERMINATION

Published: **19 April 2017**





EXECUTIVE SUMMARY

The publication of this Final Report and Determination (Final Report) concludes the Rules consultation conducted by AEMO to develop the Demand Side Participation Information Guidelines (Guidelines) under the National Electricity Rules (NER).

The Guidelines specify the information that Registered Participants must submit to AEMO for AEMO's use when developing or using electricity load forecasts, with the objective of giving AEMO better quality information to further develop and improve its current load forecasting.

AEMO published an Issues Paper in November 2016, including a preliminary data model detailing the Demand Side Participation (DSP) information that AEMO initially proposed to collect.

Based on seven submissions to the Issues Paper, AEMO revised the proposal and published a Draft Report and Determination (Draft Report) in February 2017, which included a draft of the Guidelines.

Three submissions were received in response to the Draft Report, on the following topics:

- Availability of the requested data.
- Technical requirements of the data submission process.
- Costs associated with the data submission process, and the need for ongoing review.
- Specific definition of the data requirements relating to network controlled load.

AEMO has prepared this Final Report to detail the key issues raised by the three submissions to the Draft Report, and to communicate AEMO's final determination.

The key points in AEMO's final determination are:

- The Guidelines will require Registered Participants to submit their DSP data annually, with the first submission scheduled to occur in April 2018.
- Submission of DSP information will be via a web portal where Registered Participants can securely submit their data. Options will be provided to allow for either manual entry of data or partly automated submission using Comma Separated Values (CSV) files.
- The scope of the obligations imposed on Registered Participants by the Guidelines is to provide data that is obtainable under their current business processes.
- The format, content, and extent of DSP data is largely consistent with the proposal in AEMO's Draft Report, apart from the minor amendments noted in this Final Report.

AEMO's final determination is to make the Guidelines in the form published with this Final Report.



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1. STAKEHOLDER CONSULTATION PROCESS

As required by clause 3.7D of the National Electricity Rules (NER), AEMO has consulted on the development of Demand Side Participation Information Guidelines (Guidelines) in accordance with the Rules consultation procedures in rule 8.9.

The Final Report is published in accordance with clause 8.9(k) of the NER.

All submissions received during the second stage of consultation are summarised in Section 3, and discussed in Section 4.

All submissions received during this consultation have been published on AEMO's website at: <http://www.aemo.com.au/Stakeholder-Consultation/Consultations/NEM-Demand-Side-Participation-Information-Guidelines-Consultation>.

2. BACKGROUND

2.1 NER requirements

This Final Report concerns the application of clause 3.7D of the NER, which was introduced by the Australian Energy Market Commission (AEMC) on 26 March 2015.¹

Clause 3.7D(e) of the NER requires:

- AEMO to develop, maintain, and publish guidelines that require Registered Participants to provide Demand Side Participation (DSP) information to AEMO.
- AEMO to take this information into consideration when developing its electricity load forecasts in accordance with the NER.

It further requires that the Guidelines specify:

- The information required to be submitted by Registered Participants.
- When the information must be provided and updated by Registered Participants.
- How the information must be provided by Registered Participants.
- AEMO's methodology for assessing the accuracy of DSP information submitted in accordance with the Guidelines.
- The manner and form in which AEMO will publish details in accordance with clause 3.7D(d).

Clause 3.7D(d) requires AEMO to, no less than annually, publish details on the extent that the information received has informed AEMO's development, or use, of load forecasts.

Clause 3.7D(h) requires that the Guidelines will commence no sooner than three months following publication of the first version.

AEMO was required to develop and publish the Guidelines by 26 September 2016, with a minimum three months' period before they came into effect. In June 2016, AEMO notified the Australian Energy Regulator (AER)² that it would be unable to publish the Guidelines by 26 September 2016, and will now publish these by 31 May 2017.

2.2 Context for this consultation

Before the commencement of clause 3.7D of the NER, AEMO had a practice of surveying Registered Participants for DSP information, but not all responded, and the responses varied in quality.

AEMO could make better use of quality DSP information to improve the efficiency of its market operational functions under the NER, and as an input into its public reports. This could, in turn, provide Registered Participants and consumers with better information to support investment and consumption decisions.

Clause 3.7D allows AEMO to establish a process to obtain information on DSP from Registered Participants.

2.3 First stage consultation

AEMO issued a Notice of First Stage Consultation on 21 November 2016. AEMO developed and published an Issues Paper that outlined the questions and issues central to the development of the Guidelines.

¹ Australian Energy Market Commission, Final Rule Determination: National Electricity Amendment (Improving demand side participation information provided to AEMO by registered participants) Rule 2015 No. 4. Available at: <http://aemc.gov.au/getattachment/1a82fefa-a1a1-453d-8afc-11c52a20851a/Final-rule.aspx>.

² Australian Energy Regulator, Quarterly Compliance Report: National Electricity and Gas Laws (April – June 2016). Available at: <https://www.aer.gov.au/system/files/Quarterly%20compliance%20report%20April%20-%20June%202016.pdf>.



The Issues Paper proposed that the Guidelines:

- Provide for the annual collection of DSP data in a manner that does not require analysis or interpretation by Registered Participants, which reduces the impact on them and allows AEMO to analyse and interpret the data effectively and efficiently.
- Focus on obtaining details relating to intra-day demand response, either due to price signals or network loading.
- Commence on a date that will be determined after consultation with affected Registered Participants.

AEMO received seven submissions in the first stage of consultation. Copies of these submissions (excluding any confidential information) have been published on AEMO's website at: <http://www.aemo.com.au/Stakeholder-Consultation/Consultations/NEM-Demand-Side-Participation-Information-Guidelines-Consultation>.

2.4 Second stage consultation

On 20 February 2017, AEMO issued a Notice of Second Stage Consultation along with the Draft Report and the draft Guidelines both of which are available on AEMO's website.³

AEMO received three submissions in the second stage of consultation. Copies of these submissions (excluding any confidential information) have been published on the same page of AEMO's website at: <http://www.aemo.com.au/Stakeholder-Consultation/Consultations/NEM-Demand-Side-Participation-Information-Guidelines-Consultation>. Responses to these submissions are included in this Final Report.

³ <http://www.aemo.com.au/Stakeholder-Consultation/Consultations/NEM-Demand-Side-Participation-Information-Guidelines-Consultation>.



3. SUMMARY OF MATERIAL ISSUES

Submissions in response to the Draft Report and draft Guidelines were received from Energy Networks Australia, Energy Queensland, and SA Power Networks.

The key material issues arising from these submissions are summarised in the following table:

Table 1 Key material issues in response to Draft Report and draft Guidelines

| No. | Issue | Raised by |
|-----|----------------------------------|---|
| 1. | Data availability | Energy Queensland SA Power Networks |
| 2. | Submission format | Energy Queensland SA Power Networks |
| 3. | Review of requirements and costs | Energy Networks Australia Energy Queensland SA Power Networks |
| 4. | Data definitions | SA Power Networks |

A detailed summary of issues raised by Consulted Persons in submissions, together with AEMO's responses, is contained in Section 4.

4. DISCUSSION OF MATERIAL ISSUES

This section addresses each of the material issues raised in submissions and listed in Section 3.

4.1 Data availability

4.1.1 Issue summary and submissions

AEMO's draft Guidelines require Registered Participants to provide all requested data that is available through their current DSP information collection processes.

Two submissions commented on the availability of data.

- Energy Queensland:
 - "Energex and Ergon Energy operate extensive load control programs involving hundreds of thousands of customers. In some instances these programs operate on a base schedule with more targeted variations for specific areas and other programs are triggered based on particular network constraints meaning that their operational times can vary on a daily basis. Therefore, gathering this information from existing systems will be a complex task, even at an aggregated level."
 - "The Draft Report proposes that National Metering Identifiers (NMIs) associated with particular load categories (e.g. hot water, air conditioning, pool pumps) be separately grouped. However, in some cases this information is not known. For example, Energex is able to isolate NMIs with air conditioning load control but other load control programs are associated with an individual tariff without knowledge of what particular appliance may be connected behind the meter. The Draft Report (*sic*) emphasises the provision of data captured from current business processes in which case aggregation would be performed based on the groupings currently available."
- SA Power Networks:
 - "Customers are required in accordance with their ongoing connection contract to seek approval for the installation of energy storage devices where that device will draw energy from or export energy to the network. However, we are aware that not all customers seek approval prior to installing additional devices, so we expect that some customers will not notify us when they install storage devices. Conversely, some customers may gain our approval to install a device and then not install it."

4.1.2 AEMO's assessment

In determination of this issue, AEMO considered the following points:

- Classes of load control – Registered Participants operate a wide range of load control programs, so the data model needs to incorporate a degree of flexibility on the level of aggregation that can be applied to various classes of data. By allowing this flexibility, AEMO considers that the accuracy of the data submitted will be preserved, as it will more closely reflect the raw data stored in Registered Participants' systems.
- Energy storage connections – AEMO acknowledges that data collection policies relating to energy storage devices vary across the NEM, resulting in differing quality of data amongst Registered Participants. AEMO also recognises that the Council of Australian Governments (COAG) Energy Market Transformation Project Team (EMTPT) is currently undertaking a work program that may affect the processes Registered Participants are obliged to follow with regards to energy storage system registration.



4.1.3 AEMO's conclusion

AEMO determines:

- The field validation for 'Connections with network controlled load' will be amended in the Guidelines to allow free text to be entered, rather than requiring selection from a list of specific load classes. This will allow for greater flexibility of aggregation level.
- The requirement for data to be submitted according to current business processes will remain unchanged, with the expectation that data on energy storage devices will be submitted as per information stored in Registered Participants' systems.

4.2 Submission format

4.2.1 Issue summary and submissions

The Draft Report provides detail on the web portal that Registered Participants will use to upload DSP data. Two submissions commented on the form and requirements of the portal.

- Energy Queensland:
 - "Energy Queensland is unable to comment on the ease with which data could be uploaded without first previewing the web portal. Although it is stated that the portal will be able to accommodate the uploading of CSV files it is unclear whether the file/s would represent the entirety of Sections 1 and 2 or be associated only with particular fields (e.g. NMI(s)) in which case the remaining fields would still require manual data entry. Notwithstanding, the system should be robust enough to handle the uploading of very large CSV files."
- SA Power Networks:
 - "SA Power Networks will require more detail about the format of data (eg. length of field, validation rules) to enable the automated collection of the Demand Side Participation Information (DSPI) and to automate the population of the AEMO DSPI portal."

4.2.2 AEMO's assessment

In determination of this issue, AEMO considered the following points:

- Registered Participants who intend to automate the provision of DSP data will require specific detail on the technical requirements of the portal. This detail will need to be provided as soon as practicable to allow time for automated systems to be developed.
- The portal will need to cater for those Registered Participants who wish to automate as much of the submission process as possible, as well as those who prefer to manually enter their DSP data.

4.2.3 AEMO's conclusion

Where feasible, AEMO will allow submission of as many of the requested data categories as possible in CSV format, to minimise the amount of manual data entry required from those who automate their submission process. The system will be designed to accept files large enough to contain the DSP data required from any Registered Participant.

AEMO will provide further information relating to the web portal as soon as practicable.

4.3 Review of requirements and costs

4.3.1 Issue summary and submissions

Two submissions commented on the potential costs of providing DSP data, and addressed the need for ongoing review of the requirements.

- Energy Networks Australia:
 - "... NSPs will still have to gather data from multiple sources in multiple formats and thereby be required to manually, or automatically process the data into the required format. This work should not be underestimated. Energy Networks Australia maintains that provision of the data should continue to meet a cost versus benefit test. We therefore encourage AEMO to undertake a review of the costs and benefits of data collection after 12 months operation and continue to monitor this over time."
 - "We appreciate that AEMO has considered the concerns expressed in Energy Networks Australia's previous submission on this matter regarding linkages to related consultation processes, and subsequently determined not to extend data collection requirements.
Energy Networks Australia would still like to offer to work with AEMO and other stakeholders to develop a wider strategy for addressing key issues in power system data management, communications and reporting as stated in AEMO's Draft Report."
- Energy Queensland:
 - "Although aligning the submission with other related data submissions will help to minimise costs this does not mean that the costs will be insignificant."
 - "We request that AEMO undertake a review of the DSP Guidelines after implementation to ensure they add value and that the costs of compliance are outweighed by the benefits to energy market stakeholders and consumers of electricity."

4.3.2 AEMO's assessment

In determination of this issue, AEMO considered the following:

- AEMO is obliged under clause 3.7D(f)(1) of the NER, when developing or amending the Guidelines, to "*have regard to the reasonable costs of efficient compliance by Registered Participants*".
- AEMO intends to engage with Energy Networks Australia further on this matter, and welcomes input from network businesses and other interested parties on what information should be shared with AEMO to ensure forecasts remain fit for purpose as DSP in energy markets increases.

4.3.3 AEMO's conclusion

AEMO is committed to ensuring that the DSP data collection process is kept as efficient as possible, with regard to both the effort and expense required from Registered Participants and AEMO.

AEMO does not intend to collect data that does not contribute to improving AEMO's load forecasts, and would consider, subject to consultation, revising the Guidelines if particular categories of data were found to not contribute to this forecasting improvement.

Any future change to the process would require a further formal consultation with industry, and would be subject to clause 3.7D(f)(1) requiring AEMO to assess the cost against benefit.

4.4 Data definitions

4.4.1 Issue summary and submissions

One submission commented on the detail of a data model category.

- SA Power Networks:
 - "Connections with network controlled load – we assume that the phrase 'directly controlled' in the description means that a Network Service Provider actively controls the load (e.g. by

remote control) and would not include controlled load which is passively controlled (e.g. via a time clock)."

4.4.2 AEMO's assessment

In determination of this issue, AEMO considered the following:

- Load that is controlled by a time switch can be considered to be DSP, because the device is set to trigger at a time that aims to move the load to an off-peak period of the day. However, changing the time switch settings is a manual and expensive process, and is not likely to occur regularly.
- Time-switched load cannot be controlled from a central location and is, therefore, unable to be used to reduce demand on an intra-day basis.

4.4.3 AEMO's conclusion

AEMO determines that load controlled by a time switch alone does not fall within the scope of the 'Connections with network controlled load' category of data. A note has been added to the Guidelines to clarify that only load that can be controlled from a central location is included in this category.

4.5 Clarifications

4.5.1 Meaning of Non-market Participant

In the course of reviewing the submissions, AEMO became aware of a potential anomaly in its definition of Market/Non-market Participant in Appendix A and has rectified it to ensure that the only Non-market Participants required to comply with the Guidelines were those with assets (other than a meter) connected to a network.

4.5.2 Validation of NMI fields

To promote consistency across the systems that participants use to provide data to AEMO, the validation of NMI fields has been amended in the Guidelines:

- NMIs are to be provided in 10 digit format, separate fields for NMI checksum or data stream suffix are therefore not required
- NMIs are no longer required to be separated with a semicolon, each NMI can be provided on its own line (regardless of whether the manual data entry or CSV upload option is used)

4.5.3 Meaning of Connection

The definition of the term Connection has been corrected in the Guidelines, to ensure DSP connected to any electricity network is included. By keeping this definition generic, AEMO will be able to analyse DSP regardless of where it connects to the network.



5. FINAL DETERMINATION

Having considered the matters raised in submissions, AEMO's final determination is to make the Demand Side Participation Information Guidelines in the form of Attachment 1, in accordance with clause 3.7D(e) of the NER.



GLOSSARY

| Term or acronym | Meaning |
|-----------------|-------------------------------------|
| AEMC | Australian Energy Market Commission |
| AEMO | Australian Energy Market Operator |
| AER | Australian Energy Regulator |
| CSV | Comma Separated Values |
| DSP | Demand Side Participation |
| NEM | National Electricity Market |
| NER | National Electricity Rules |
| NMI | National Metering Identifier |



ATTACHMENT 1 – FINAL DEMAND SIDE PARTICIPATION INFORMATION GUIDELINES

The Final Demand Side Participation Information Guidelines can be found at:

<http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Demand-Side-Participation-Information-Guidelines>