Attachment 1 - Stakeholder Feedback Template

This template has been developed to enable stakeholders to provide their feedback on the DER Register Information Guidelines Consultation Issues Paper.

AEMO encourages stakeholders to use this template, so they can have due regard to the views expressed by stakeholders on each issue. Stakeholders should not feel obliged to answer each question, but rather address those issues of particular interest or concern.

Stakeholder submissions will be published on AEMO's website unless they are clearly marked as being confidential. Submissions should be sent to DERRegister@aemo.com.au by Thursday, 07 March 2019.

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Questions		Feedback
Section 3.1 – Information requirements		
1	Do you agree with the suggested format and method of data submission?	The issues paper provides limited detail on the format and method of data submission. We believe ambiguities will need to be resolved before agreement is possible and a guideline can be developed. AEMO has engaged with NSPs, DER installers, the Clean Energy Council (CEC) and the Clean Energy Regulator (CER) since the issues paper was published. This consultation has led to the stakeholders suggesting the development and management of a more centralised application managed by AEMO. A centralised system would require NSPs to provide DERID level aggregated data reflective of approvals to connect to the network and allow DER installers to directly input equipment level data upon installation. We support these proposed arrangements.
2	Are there adequate access arrangements for Installers and installation software providers to submit data on behalf of NSPs into the DER Register? If not, how might this be improved?	Currently there are no systems or processes that could support the collection of DER data directly from NSPs or Installers. Discussions during recent consultation workshops confirmed that the processes and level of DER data collected by NSPs vary greatly. It was agreed that leveraging from existing

Questions		Feedback
		processes and systems would not support an accurate and fit-for-purpose DER register. Endeavour Energy's connection application and approval process considers higher level aggregate data requirements specific to each NMI, leaving the detailed installation and configuration specifics to installers. The proposed data model maintains this arrangement with data at the DERID (aggregate) level being provided by the NSP as part of the application approval process and establishing the site (NMI) as a connection point for DER. Endeavour Energy would seek to integrate the connection process to provide this data, presumably into MSATS. However, as noted from subsequent consultation workshops, a greater understanding of the proposed solution may necessitate an alternative interface. Consultation workshops have identified that the CEC's systems and interfaces used and accepted by DER installers are the closest and most sophisticated arrangements currently in place that may be emulated to develop a centralised system.
3	Are there any risks associated with the different submission frequency between the DER generation information and DSP information?	We have not identified any material risks that may arise from collecting DSP information less frequently (annually) than DER information (ongoing). We support AEMO's position that any change to a DER installation should initiate an update to the DER register. We believe input of DER data should aim to be as close as possible to real time with DERID generation following NSP approval of a connection application, thus allowing installers access to install and register information as part of the DER commissioning process. It is important to understand the different connection and commissioning interactions between NSPs and installers in different states to determine the triggering of the DER activation status. Under arrangements in NSW, activation is input by the installer tasked with the responsibility of carrying out final testing and commissioning (switching on) of the DER system.
4	What is an alternate approach to the frequency of data submission? How would this be implemented?	Given the effort required to collect and store DER information and the process flow between NSPs and installers, it is imperative that the systems

Questions		Feedback
		allow data to be input and maintained as close as possible to real time with adequate monitoring to ensure target compliance is met.
5	Are there any other relevant issues that have not been considered?	Under the proposed arrangements, NSPs will be reliant on the competency and cooperation of installers for the collection of DER data. However, the NER does not impose obligations directly on installers but rather place responsibility for the provision of DER information exclusively on NSPs. In the absence these obligations, we believe a framework is needed to ensure installers are sufficiently incentivised to collect DER data that maintains the accuracy and currency of the DER register. We note the incentives available to customers under the CER's solar panel validation (SPV) initiative has resulted in positive outcomes for management of the safety, technical compliance and customer service. We understand mandating a regime of CEC accredited (or licensed) installers for all DER installations is being considered as part of the guidelines. This has the potential to facilitate installer compliance to the guideline and legitimise installers access credentials for DER register data to allow scrutiny of DERID and installation information. We encourage AEMO to develop a guideline that provides appropriate incentives to achieve installer compliance. The guidelines will need to clearly outline the requirement of installers so that NSPs are not unfairly held accountable for the actions or inactions of installers who fail to meet their obligations (and vice versa). On a separate issue, section 3.1.1 of the issues paper states vehicle chargers should be included as DER. However, we believe these should not be considered as DER due to the lack of immediate attention for these systems to export back to the NEM. The possibility would still exist in the AC Connection Level as a sub-category in the future once technology is built up to support this model.

Questions		Feedback
Section 3.2 – DER register storage		
1	Are there any issues associated with the separate storage of DSP information and DER generation information?	No issues identified.
2	Are there any other relevant issues that have not been considered?	No response.
Section 3.3 – DER register information access to NSPs		
1	What regulatory obligations or requirement do NSPs intend to use DER register data for?	We intend to use the DER register to determine status of the DER connection and to identify DER connection points for the safe management and operation of the network. Data at all levels should be accessible when considering application for additional DER systems, carrying out load flow analysis and quality of supply investigations. Data at all levels should be available to facilitate forecasting for the purposes of efficient network planning, identifying opportunities for DM and development of tariffs.
2	Do you have a preferred process for accessing DER register information?	We believe it would be important to provide NSPs with the ability to interrogate DNSP specific data in bulk and export reports in recognised data formats. We support access via an API which would allow for fully customised reports to be developed, rather than being reliant upon centralised standard reports.
2a	Is existing NMI discovery (adding in DER) useful?	Yes, the NMI discovery is useful and should be provided for accessing valid NMI address information and registered data. particularly for installers on behalf of a customer so they are aware of the approved connections and configurations of any existing systems. Additionally, we would require positive validation of every transaction by NMI to ensure all searches are completed successfully.

Questions		Feedback
2b	Are existing C1, C4 and C7 reports (including DER) suitable? Is an additional report required? If a new report is required, what should it include?	Refer to 2c.
2c	What are your views on using an API to develop custom reports?	Yes, it would be very useful to have customised search routines for NSPs and installers. Where there is a common need across users including aggregated data for NSPs, a library of pre-existing reports would be ideal. Where there are specific requirements an opportunity to build upon the existing report library should be available. We would also support a scheduling routine for both methods.
3	Do existing C1, C4 and C7 reports need to be provided if an API is provided?	Yes, we would require these reports to continue to be provided. We consider these reports to be more transactional based on real time and will require them as per existing schedules.
4	Are there any other relevant issues that have not been considered?	Needs for correlation carried about DER registration and allocation of appropriate B channels in metering with action to ensure Retailers and Metering Service Providers are compliant with metrology. We seek to confirm the register can be accessed at any time by NSPs at no cost.
Section 3.4 – AEMO reporting and publication		
1	Are there additional variables that should be published in the DER register report (see Appendix B for list of data)? Why?	The selected variables are appropriate.
2	Is aggregation at the post code level suitable? If not, what is an appropriate aggregation variable and why?	Post code aggregation is suitable and is generally consistent with other existing solar data in the public domain.
3	Do you agree with monthly updating of the DER register report? Why/ why not?	Limited benefit for more frequent reports.
4	Are there any other relevant issues that have not been considered?	No response.
Section 4.0 – Proposed Data		

Questions		Feedback
1a	What are the costs and impacts of AEMO's proposed data requirements? Please break down and describe the costs based on: Upfront once-only costs vs ongoing costs	Given the limited detail and definitive direction available at this time, Endeavour Energy cost impacts are not yet quantifiable. However, based on the assumption that a centralised system can be developed by AEMO to allow integration of our current applications processes and systems, ongoing costs should be reasonably low. We note that NSP physical data provision is in most cases limited to level two data which in most installations should lend itself to automation by virtue of integration of applications management systems as a once off exercise. However, the level of data collected even at the level two data level needs to be incorporated in the application and approval process and systems, requiring changes to our online customer application portal and our paper-based applications and management systems for a lesser number of complex or large installations requiring greater technical review. Also, compliance with the rule change and registration requirements will require legal review and additional clauses to be drafted in all MSOs associated with DER. All customer facing documents and web content would also need to be reviewed and altered. This process also includes approvals by AER. The NSP physical collection of non-inverter systems data remains at level three. This information could potentially be more suited to Level 2 as NSPs are likely to incorporate these requirements during the application process. This may warrant further investigation to ensure that the systems and process can be aligned to facilitate entry by NSPs in an efficient manner. Installation of non-inverter DER systems are not expected to be numerous so overall cost impact is low and manual input of data for these systems may be sufficient. We note, to perform load flow analysis and quality of supply investigations, we will need level three and four information. This may need to be acquired via API's and developed at an additional cost.

Table 1: Data requirements and usage

	Requirements
Level 1: NMI	• Records the Master NMI record information as per the MSATS Procedures.
Level 2: DER Installation	• Details on the DER installation system that is associated with a NMI. Note a NMI may have multiple DER Installations.
Level 3: AC connection	• Relevant for inverter connected devices, which are part of a DER installation. • Specific details on inverter capacity, protection settings, etc.
Level 4: DER Device	• Details on DER devices (e.g. solar panels, batteries, etc). DER devices that exhibit the same attributes are proposed to be grouped together.

Questions		Feedback
1b	What are the costs and impacts of AEMO's proposed data requirements? Please break down and describe the costs based on: Separation of internal labour costs, contracted labour, system improvement	High level estimates: Once-off communications review and alteration Internal labour - $20,000; Contracted labour - $50,000 Process review Internal labour $100,000; System development/integration - $500,000
2	Do you agree with the proposed data requirements? Why/why not?	Subject to further consultation and some refinement, Level 2 aggregated data is reasonable and relevant for connection assessment. We suggest adding **total generating capacity**, **total energy storage capacity and Volt-Var/Watt limits** to level 2 data. These would provide verification of installer compliance to connection requirements. We understand that the detailed equipment and configuration data being collected will be used by AEMO for modelling purposes related to the management of the grid. We believe NSPs will also benefit from access to this data to gain a better understanding of impacts of DER on the distribution network and implement measures to manage these impacts.
3	Do you agree with the proposed data structure (see appendix B, figure 3)? If not, please explain why it would not work and propose an alternative.	We agree with the proposed data structure.
4	Should data variables that have default values prescribed by the AS4777 standards (e.g. Under-frequency protection, Over-frequency protection, Undervoltage protection, Overvoltage protection, etc) be requested as discrete inputs? Why/ why not?	We believe having discrete inputs would be useful for clarity and whilst the use of default settings may make manual input into the system easier, this approach does increase the risk that data is entered without the care required.
5	For the AC connection table (appendix B), is it relevant to include protection modes for non-inverter DER? If so, what is the relevant information that should be captured?	Consideration should be given for the incorporation of non-inverter DER data into level 2 as NSPs would specify these parameters at application.
6	Do you agree with the data source/ providers for the physical collection, listed in Appendix B? If not, explain why and who else or what other data sources should be involved.	We agree with the nominated data source/providers for the DER information as outlined in Appendix B.

Questions		Feedback
7	Are there any other requirements that have not been considered? Why are these important? Which table are they relevant to?	Installer details are not included. We believe these details should be available and an audit trail of installers interaction with data changes should be maintained.
8	In terms of the examples given, are their other DER installation configurations that AEMO should consider?	No response.
9	Are there any other relevant issues that have not been considered?	No response.
General Comments		
1	Do you have any other comments?	We believe it is essential that AEMO's guidelines should assign accountability for the input of specific DER information on data source providers in an unambiguous manner. Whilst the obligation to provide DER information to AEMO remains with the NSP (as per cl. 3.7E(d) of the NER), the guidelines will need to clearly outline the collection requirements of installers, so the register remains accurate and fit-for-purpose. We encourage AEMO to continue to work closely with installers and NSPs to develop a method of collection that minimises the risk of non-compliance and allocates the cost of non-compliance to the party best able to manage that risk.