9 December 2016

Mr Terry Day
Manager/IT Grid Systems
Australian Energy Market Operator
Level 10, 10 Eagle Street
Brisbane
Queensland, 4000

DRAFT POWER SYSTEM DATA COMMUNICATION STANDARD

Dear Mr Day

Energy Networks Australia welcomes this opportunity to provide input into the Australian Energy Market Operator's (AEMO) draft Power System Data Communication Standard provided for consultation on 27 October 2016.

Energy Networks Australia is the national industry association representing the businesses operating Australia's electricity transmission and distribution and gas distribution networks. Member businesses provide energy to virtually every household and business in Australia.

The Power System Data Communication Standard is an important standard which ensures adequate communication of vital information needed for the National Electricity Market (NEM) to operate effectively. As the NEM electricity networks have evolved significantly since the latest version of this standard was produced in 2005, we consider it is timely that the standard should be updated accordingly.

As you may be aware, CSIRO and Energy Networks Australia have been collaborating to develop a blueprint for transitioning Australia's electricity system to enable better customer outcomes. The Electricity Network Transformation Roadmap (ENTR) program has identified that effective data communication between all components within the electricity network is required to enable a cost effective and secure power system into the future. These components are no longer limited to large scale generators, transmission networks and zone substations. Electricity networks are transforming and the power system is becoming increasingly complex to include large numbers of new market actors. Data communication between distributed generation, demand response and storage sources will also become vital to network operators and other market actors.

Work undertaken by Standards Australia for the ENTR has identified a number of gaps in the current suite of Australian Standards, and the highest priority areas in which need immediate attention include data communication, cyber security, terminology and data frameworks.

Within this context, a review of the current draft AEMO Power System Data Communication Standard illustrates a need for greater clarity of the document's position within the wider suite of standards describing how the various components of the power system operate, communicate and interact with each other to allow for the transparent movement of information in real-time. In terms of the actual content of the document, the Standard would benefit from a more clearly defined scope, increased certainty of exact data supply requirements between network service providers (NSPs) and AEMO, and improved descriptions of definitions and processes.

While we recognise the need to review the Standard, Energy Networks Australia would also welcome the opportunity to work collaboratively with AEMO and other interested stakeholders to develop a wider strategy and framework for addressing key issues in power system data management and communications.

Energy Networks Australia would support a thorough revision of the standard as an integrated element of a whole-of-industry strategy related to data communication within the power system.

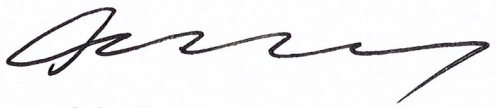
To assist AEMO in its review of this Standard, a table containing specific comments, questions and proposals identified through consultation within the Energy Networks Australia membership is included as an appendix to this letter. The following considerations are recommended when revising the Standard:

- As you know, cyber security strategy requires a whole-of-system approach and risk management extends beyond communication between NSPs and AEMO. Physical and cyber security relating to data collection and communication within the whole power system requires additional attention and may be best served in a separate document developed as part of the wider strategy and framework supported by Energy Networks Australia. Energy Networks Australia suggests that should AEMO wish to retain a sub-section on cyber security in this standard, it may be preferable to require defined outcomes or a range of equivalently rigorous frameworks (of which NIST is one) while recognising the need for a whole-of-system approach. For instance wording may include an obligation that "Registered participants' must use reasonable endeavours within a recognised systematic framework to prevent, monitor and respond to unauthorised interference';
- It may be possible to further clarify the purpose and scope of the document to make more explicit the boundaries of its application and the expected reach of the standard in terms of participant obligations and types of operational data affected;
- Performance criteria cited in various sections of the draft standard (i.e. 2.2. (f); 3.1) may be better identified and separated into a single 'Performance' section to enable clearer understanding of performance requirements of each participant; and
- Participants should be given time to implement any changes that are material in nature. The previous Standard had transitional clauses to enable this to take place. Energy Networks Australia considers this should be covered by appropriate transitional arrangements.

Energy Networks Australia strongly supports accurate and secure data communication between NSPs and AEMO, and we trust that this input assists in the revision of the Power System Data Communication Standard.

Should you have any additional queries, please feel free to contact Heath Frewin, Energy Network Australia's Senior Program Manager – Asset Management on (02) 6272 1531 or hfrewin@energynetworks.com.au.

Yours sincerely,



John Bradley
Chief Executive Officer
As of 10th November 2016, the Energy Networks Association commenced trading as Energy Networks Australia. Our website and email has changed to energynetworks.com.au. Please update your records accordingly

APPENDIX: DETAILED FEEDBACK

The following comments, questions and proposals were identified by Energy Networks Australia through consultation with its members, and are put forward for consideration.

Section	*Comment*
1.1 Purpose and Scope	The document could more clearly identify which participants and data communication facilities (DCF) this Standard will apply to. DCF refers to RME and RCE within the Glossary, with no descriptive definition provided for these two acronyms. Energy Networks Australia understands that DCFs will include DNSP facilities that provide control and data necessary for TSNPs to be able to meet the standard. Facilities that provide data and control that are not necessary for AEMO to meet its requirements are understood to be exempt from needing to adhere to the standard. Clarification within the Standard on this matter is recommended.
1.2.1 Glossary	Clarity is requested on whether RME or RCE in relation to 'Critical Outage' includes Var Dispatch System (VDS) advice issued by AEMO via ICCP to NSPs. Part of the 'Intervening Facility' definition is obscured, and clarity is required regarding whether an NSP is an intervening facility. Energy Networks Australia suggests definitions for 'Market Customer Substation' and Interconnection Substation' are added.
1.3 General Structure of DCFs	While Energy Network Australia members appreciated the positive intent of the diagram, it is suggested that it could be revised to more accurately define relationships.
2. Capacity and Performance of Operational Data	Energy Networks Australia recommends that this section is revised to focus on performance criteria. For example, the term 'capacity' infers a maximum or minimum service level, and is better described as 'performance' in regards to requirements during all operating circumstances.
3.1 Reliability requirements	Energy Networks Australia recommends AEMO consider alignment of time periods listed in Table 5 with the Spot Market Suspension (SO_OP_3706 - V31 - section 9.2). Energy Networks Australia recommends AEMO consider whether excluding 'Other Data' from Sections 3.1 and 3.2 aligns with the definition used for 'Critical Outage' within the Glossary. Energy Networks Australia interprets the current draft Standard as not setting conformance criteria for DNSPs in relation to reliability of data communication for critical outages.

	Energy Networks Australia recommends AEMO consider in the event that transmission of all SCADA information from multiple NSPs failed for 4 hours or more, whether AEMO's State Estimator and RTCA would still be able to perform system security analysis and dispatch.
4. Security	Energy Networks Australia believes cyber and physical security requirements could be more appropriately detailed within a separate industry standard. Energy Networks Australia suggests that further work may be necessary to clarify expectations and define how compliance will be demonstrated. Please note that NSPs currently utilise a number of recognised standards to address cyber security, such as NIST 800-53, COBIT 5 ISO/IEC 27001:2013, ISM; this sub-section could be best written as a set of objectives rather than requirement to meet the one type of framework.
4.1 Physical security and computer network security	The document could benefit from greater clarity in scope, in particular what devices or locations are to be considered 'DCF sites' and what constitutes 'Operational Data', to understand the exact implications for the requirements of this section. As read, this Section contains prescriptive requirements which could potentially be disproportionately responsive to the potential physical security risk. The wording used in the section may need to be revised to be outcomes-focussed or better defined; suitable wording could include 'Registered participants' must use reasonable endeavours to prevent, monitor and respond to unauthorised interference'.
4.1. (d)	Energy Networks Australia recommends further description of 'confidential' is provided within the Glossary or within the proposed separate document. 'Confidential' ratings carry varying levels of security controls, depending on the classification system used.
5.2 Data communication protocols	Energy Networks Australia seeks clarification on whether NSPs must use the ICCP TASE.2 protocol for all operational data communication, when the legacy non-secure ICCP connections will continue to be supported. If all communication must meet ICCP TASE.2 requirements, suggest greater clarification on why and how long the legacy format will continue to be accepted.
6. Maintenance	Energy Networks Australia recommends the terms 'dispatch or power system security' are used more consistently throughout the document, to ensure maximum effectiveness.
6.3 Data management and co-ordination	Energy Networks Australia has been advised that at least one NSP has existing agreement with AEMO to supply all SCADA and model changes at least 28 days prior to AEMO's load dates, which are every

	14 days. Clarification is sought whether the requirements of the Standard will supersede existing arrangements with NSPs.
6.4 Testing to confirm compliance	Energy Networks Australia recommends greater clarification on responsibilities relating to compliance reporting and remedial actions are provided within the Standard. An example could be used to better describe these responsibilities. As read, testing of 'Other Data' provided by DNSPs is potentially unnecessarily onerous on DNSPs, TNSPs and AEMO.