23 July 2020

Alex Oeser

Australian Energy Market Commission PO Box A2449

Sydney South NSW 1235

Dear Alex,

Technical standards for distributed energy resources - ERC0301

The Intellihub Group welcomes the opportunity to provide feedback to the Australian Energy Market Commission's consultation paper on Technical standards for distributed energy resources – ERC0301.

23 July 2020

Who we are

The Intellihub Group (Intellihub) is an Australian and New Zealand based utility services company focussed on electricity, gas and water metering services. We are a leading provider of electricity smart meter services in Australia and are currently deploying advanced digital meters to residential and business customers in most states and territories in Australia. We partner with electricity retailers, distributors and other energy sector participants to utilise smart metering technology to deliver data and services that improve the affordability, reliability and security of the electricity sector.

Intellihub's services include managed connectivity to behind-the-meter DER at small sites, leveraging the smart meter infrastructure. This service provides cost effective remote monitoring and control of a wide range of DER, including solar PV systems, hot water heaters, air conditioners, pool pumps, EV chargers and more.

Background

Intellihub understands that AEMO have requested a rule change which will require them to set minimum standards for which DER must meet before being connected to the grid. The AEMC have initiated the rule change process and are seeking input from stakeholders.

Intellihub's state-of-the-art metering platform employs a contemporary IoT architecture, providing managed connectivity to both smart meters and behind the meter DER as well as edge application enablement.

A utility grade sub-GHz RF mesh network provides behind the meter connectivity to DER with a bulletproof interference rejection, excellent range and best-in-class security. This ensures a high-availability communications link to carry out activities critical to system security and reliable grid operation, such as dynamic export control.

This platform enables edge applications resident on the smart meter to monitor and control on-site DER. Remote control commands to DER are delivered through Intellihub's proven reliable, secure and scalable smart metering infrastructure.

By leveraging the smart meter's measurement and communications capability, this platform represents the lowest-cost mechanism to enable the wide area orchestration of fleets of DER as needed by integrated high-DER power systems.

23 July 2020

Overview

This submission is in response to the consultation paper on Technical Standards for Distributed Energy Resources rule change request by AEMO.

Intellihub recognises that there is a gap in a set of nationally consistent set of standards for the grid connection of DER. The absence of such a standard is impacting and will increasingly impact the ability to operate and augment (or otherwise) the energy system in an efficient manner.

Smart meters are a key component required to efficiently manage the energy system in the high-DER scenario that Australia is rapidly headed. The smart meters of today provide advanced capabilities well beyond billing to manage DER in low cost, secure and scalable manner. It is widely accepted that broad adoption of smart meters provides a positive cost-benefit outcome.

Any mechanism that allows minimum standards to be set for DER and requires that all DER meet these standards to be allowed to connect to the grid must ensure that these standards:

- Are consistent with both the NEO and NERO in the long term
- Ensure that risk and cost is fairly balanced and allocated between parties in the energy supply chain and consumers
- Apply at a site or connection point level wherever possible, and not to specific classes of equipment or devices
- Prescribe only outcomes, not specific technical requirements
- Are developed following robust stakeholder consultation

In order to ensure efficient low-cost outcomes, the market should be allowed to determine the most appropriate mechanism to meet any minimum DER standard at the site or connection point level. This allows the market to innovate and provide flexible solutions providing additional value to consumers, such as site level orchestration of multiple DER units. In addition, consumer choice is maintained – allowing the selection of a basic system meeting only the minimum specification or a premium solution providing a suite of additional functionality.

If technical mechanisms are prescribed for specific DER devices (eg inverters) instead of outcomes at the site or connection point level, innovation is suppressed and the most efficient outcome may not be realised, ultimately penalising consumers. Additionally, conflicts arise with other well-established mechanisms designed to provide specific technical mechanisms for specific devices, specifically Australian and International Standards.

23 July 2020

Response to Relevant Questions Posed in Consultation Paper

Question 1: Assessment Framework

"Do you agree with the proposed assessment framework? Should the assessment framework include any additional considerations, and if so, what are they and why?"

Intellihub Response

Yes, Intellihub agrees with the proposed assessment framework. Intellihub considers the most *cost-efficient operation of the electricity* system to be the most material aspect.

Question 2: Setting the Initial Standard and Definition of DER

"3. What should the standard apply to and is a DER definition needed in the NER?"

Intellihub Response

Regardless of whether DER is defined in the NER, any standards should to the extent possible be limited to specifying outcomes that must be met at the connection point level, rather than specific technology solutions that must be adopted by individual devices. This ensures flexibility in how each site co-ordinates multiple on-site DERs and the mechanism in which this occurs. This is consistent with the approach taken to generator performance standards for large generators in the NER.

Question 3: Content and Duration of the Initial Minimum Technical Standard

"1. Should the scope of the initial technical standard be limited by the NER?"

Intellihub Response

Yes, the scope of the technical standard should be limited to prescribe outcomes only, not the specific technical mechanisms.

"2. If so, should there be arrangements to allow for a review of the scope at a future date?"

Intellihub Response

Yes, a governance mechanism is required to ensure the standard remains relevant and consistent with the NEO and NERO and that comprehensive stakeholder consultation is carried out.

23 July 2020

"3. Should the role of AEMO in setting DER minimum technical standards (the subordinate instrument) be limited in time, with the ESB's governance review outcomes to be introduced into the framework at a later date?"

Intellihub Response

If a rule is made, AEMO's role in setting DER standards should be limited in time and scope. In the longer term, a governance model with broader representation from a range of affected stakeholders including industry and consumer representatives is likely to lead to more efficient outcomes. AEMO's role should be limited to any issues that urgently require new standards to address system security risks before a longer-term governance model is implemented.

Question 5: Cost of the Initial Standard

"1. Considering AEMO's proposed initial standard in section 5.2, Box 1, what are the expected costs and benefits of implementing the initial standard for consumers, other affected parties and DNSPs?"

Intellihub Response

Intellihub considers that the costs and benefits cannot be quantified without an understanding of what the minimum standards themselves will be.

Robert Lo Giudice
General Manager, Metering Coordinator & Operations
P +61 38610 6544
M +61 419 539 638
E robert.logiudice@intellihub.com.au
W www.intellihub.com.au
Level 14, 570 Bourke Street, Melbourne, VIC 3000