

SDWIG MINUTES

MEETING: DEIP – Standards, Data and Interoperability Working Group #4
DATE: Wednesday, 15 July 2020
TIME: 14:00 – 16:00
LOCATION: WEBEX

ATTENDEES:

COMPANY / DEPARTMENT
AEMO
AER
AGL
ANU
ARENA
CER
Clean Energy Council
CSIRO
ENA
Energy Council – joined for part of meeting
ESB
Standards Australia

APOLOGIES:

COMPANY / DEPARTMENT
AEMC
AEMO
ANU
ARENA
ECA
PIAC

Actions

Action 2.1: AEMO to share letter of support to SDIWG members for approval for Battery Standards.

Action 2.2: AEMO to respond to questions raised regarding to Agenda Item 4 – Rule Change Update.

Action 2.3: SDIWG members to advise feedback on the DER Device Standard Taskforce discussion document by 31 July 2020.

Action 2.4: AEMO to develop TOR for DER Device Standard Taskforce for review and discussion at August SDIWG.

Action 2.5: SDIWG members to advise of any concerns with holding August SDIWG on Tuesday, 18 August from 14:00 – 16:00.

Action 2.6: AEMO to draft letter on behalf of SDIWG to support AS/NZS 4777.2 uplift for submission during public comment phase for member review and approval at August WG.

Action 2.7: SDIWG Members to advise of any future agenda items for consideration by 31 July 2020.

Minutes:

Items to note

Agenda item 2 – Previous Action Items

- No questions/concerns.

Agenda Item 3 – SA Operations Report

Discussion:

- AEMO have considered various options to address minimum operational demand requirements and identified 2 options that can be implemented sufficiently rapidly and provide the required response at sufficient scale – Enhanced voltage management and Smart meter capabilities for PV shedding.
- (AGL) – Smart meters are referred to as a ‘quick win’ to support power system security and PV shedding – is this capability only going to be required on new smart meters being installed, or will it apply retrospectively to previously installed smart meters.
 - *AEMO is currently only looking to mandate this on new smart meters, however, eventually there may be some need for retrofitting this capability. In this case, incentivising owners to make this function available, or utilising market-based solutions could be considered.*
- (AGL) Requiring this capability in new installs may negatively impact those customers (i.e. penalising them)
- (AGL) Has AEMO considered stored generation in batteries as a method of supporting system security?
 - *AEMO have considered this, however, current battery storage capacity does not provide the required amount of MWh. PV shedding capabilities are required regardless, and as distributed storage capacity grows, this could reduce the need to deploy that capability (note - does not remove the need to have the capability in the first place).*
- (ANU) The longer-term flexible export requirements will need certain communications capabilities. Is this being considered currently to ensure capabilities are in place for 2023?
 - *AEMO are currently working to ensure these capabilities are in place for future.*
- (AGL) There is the capability for some inverters to be used to curtail PV. Is there the opportunity to use the inverter to manage the PV curtailment, rather than a smart meter?
 - *Where the communications capability is robust and meets the requirements to support system security, AEMO will consider this. However, there are also requirements to achieve system restart/black start in times where the system goes black. As communications to inverters are established through consumer household modems, there is a lag that occurs between the system coming back online and the modem being connected (which could be a few minutes).*

During this time, PV may already be connected which will negatively impact the capability for system restart. Smart meters are able to be communicated to instantaneously therefore avoiding this issue.

- *There are also questions around timing for comms to inverters and getting coverage of the devices.*
- (CEC) In Victoria, all newly installed inverters are required to be connected via internet. Is this requirement and this capability being looked at as a potential solution for communications to inverters in South Australia?
 - *This is a consideration for market participation and incentive-based solutions, however, due to the delays with modem start up and reliability of internet connections, this is not suitable for emergency response and system restart requirements.*
- (CEC) Are smart meters all going to be reliable during black start?
 - *AEMO consider smart meter response to be the most reliable option for emergency response.*
 - *AEMO is focussed on emergency management in SA. The potential for consumer incentives and load shifting is something in the longer term that will support this but is not capable of providing the emergency response reliability required.*
- (ARENA) In relation to PV shedding, can you explain how the tripping of solar PV assists with Under Frequency Load Shedding (UFLS)?
 - *AEMO are not proposing to shed PV to manage UFLS issues. Instead, the focus will be ramping down interconnectors to manage frequency deviations.*
- (ARENA) In relation to UFLS – the problem identified relates to when SA is importing; what happens when SA is exporting?
 - *This will result in an over frequency event which requires over frequency generation shedding. DER provides effective over frequency droop and effectively responds to these events. AEMO are studying this in more detail and may include findings in the stage 2 report and consultation on Power System Frequency Risk Review.*
- (CEC) The South Australian government are looking to require the inverter voltage disturbance ride through capabilities to be in place in September 2020. This leaves very little time for testing to be completed by manufacturers and compliance to be established. When will AEMO publish the test procedure and what options are being considered?
 - *AEMO are looking to publish final test procedure by end of July 2020.*
 - *The SA govt is looking at alternative options for the interim period between test procedure and testing completion – this should assist with providing time for testing to be completed.*

Agenda Item 4 – AEMO Rule Change Request

Discussion:

- (ARENA) The DNSPs have a specific interest around the incentives and avoiding peak demand/local voltage issues. Will this be part of the remit of the future technical standard requirements or will DNSPs be responsible for building this functionality?
 - *AEMO is working across the market to encourage developing real time active control of fleets. To this end, AEMO notes many DNSPs are engaged in this space with trials, but we are not aware of any DNSPs that have AER funds to invest in rolling out the capability network wide except for SAPN and it appears this would be required in their mid-2020 regulatory proposals – meaning there is a long lead time before fleet coverage with minimum demand issues forecast to arise in other mainland states mid-2020s actions to develop these dynamic operating envelopes or API capability except for SAPN.*
- (ARENA) Do AEMO want the functionality so DNSPs can participate in markets or that AEMO needs the capability?
 - *This is an AEMO system security capability. As the market evolves for customers, incentives will be available for people to participate in the market and planning for this is underway with the ESB DER markets workplan targeting post 2025 for them. AEMO considers this an off-market capability that provides a last resort back-stop to maintain system security where their market does not meet requirements as occurs with load shedding.*
- (AER) We understand that DNSPs are not yet developing those dynamic capabilities. What could we do to avoid a similar situation that we are in with SAPN at the moment (i.e. introduction of such capabilities at a point in time after the situation has reached emergency levels) – how can we drive DNSPs to start developing this capability and bring forward these developments?
 - *AEMO are undertaking work within the Operations stream to demonstrate the need for this via minimum demand analysis. This information will be shared with DNSPs to raise awareness and collaboratively take action.*
 - *AEMO would also like to emphasise that there are still a lot of unknowns around the development of the SGAM model, especially around communication and reliability that needs to be resolved to establish markets for these dynamic capabilities.*
- (ANU) We are currently working very heavily with ARENA, NSW and QLD DNSPs around developing dynamic operating envelopes resulting in increased hosting capacity. These capabilities that AEMO discussed are not front of mind for DNSPs. There are also lead times that need to be considered and these can be quite significant.
 - *Agree.*
- (ENA) When you refer to emergency backstop, are you explicitly talking about smart meter wiring? Is this the only backstop mechanism?
 - *Given the PoC capability is already implemented, we think this should be considered as it uses a lot of the current latent capability. We are open to considering other back-stop mechanisms and have taken a preliminary review of the them in the minimum DER standard issues paper but consider others*

do not provide the capabilities for a system security tool the metering option does and we are seeking feedback in this regard.

- (ARENA) The metering capability currently doesn't have the wiring requirements. We would need to move to a different meter – what is the cost of that?
 - *AEMO has researched that this would be around 30-\$50 for the standard 2 wire meter or \$130 for 3 wire meters. The 3 element meter would allow the customer to push their controlled load against their PV off setting this cost in under a year.*
- (ARENA) How does the remote disconnection work – how will AEMO interface with the metering coordinator?
 - *This would follow current processes – i.e. through TNSP to DNSP/metering coordinator which is currently already available via system security requirements.*
- (ENA) Speaking to metering coordinators, they do have capability to turn of single load. They currently don't have the capability to turn off specific generation amounts. This would be a capability uplift requirement.
 - *Metering coordinators are currently not raising this with AEMO, but AEMO will take this into consideration and obtain further information.*
- (ENA) With regards to sharing and discussing minimum demand reports with DNSPs and the current focus on QLD and Vic, is there information on when the analysis reports will be shared?
 - *AEMO is currently working with EQL and Powerlink; currently looking at how to assess Victoria and will get involved with Victorian DNSPs in the next few months*
- (ENA) How far progressed is AEMO with EQL?
 - *Currently preparing content that will go into the upcoming ESOO with preliminary analysis on QLD and Vic. AEMO are currently assessing the need for specific reports with this information or if this gets rolled into other reports.*
- (AGL) working with metering coordinators – the retailer is now the owner of the meter and the metering coordinator only services the meter. Does AEMO still have the power to provide direction to MC to carry out the emergency function, or is this via Retailer?
 - *AEMO is keen to test different modes – however the flow of instructions will be AEMO -> TNSP -> DNSP -> (MC/RETAILER) - initial review of the rules indicate that AEMO is able to direct any market participant.*
- (AGL) What is the process for implementation of different security measures? Will the uplift of AS/NZS 4777.2 replace smart meter stop gap measures?
 - *AEMC is consulting on the rule change to give AEMO the power to set technical standards.*
 - *AEMO will consulting on the initial standard that will come into play pending the final determination of the rule change.*
 - *ESB is consulting on the longer-term Governance of technical standards.*

- *Stop gap capability for smart meters is currently not being replaced with AS/NZS 4777.2 uplift. The uplifted AS/NZS 4777.2 will replace the interim VDRT requirements, however, this will be consulted on as part of the initial standard.*
- (AGL) Does AEMO have the authority through the rule to mandate the initial or future technical standard through DNSP connection agreements?
 - *The rule would stipulate that the DNSP connection agreements would need to pick up and mandate the standard.*

Additional questions tabled after the agenda item was closed:

- (CEC) Will this work in Victoria with its existing smart meter fleet? If not, what is Plan B?
 - *Yes, the existing metering fleet has remote disconnect and DNSP have used two element metering for load control. We have held initial conversations with both DNSPs in Vic and Solar Homes Vic which are keen to explore this further.*
- (ARENA) The load shedding works via the following communication process AEMO > TNSP > DNSP.
 Ultimately it is up to the DNSP to decide how to share the pain between rotational load shedding and contract/voluntary load reduction. QUESTION: How are the pain sharing arrangements proposed to be used for small-scale generator shedding. Will AEMO prescribe how the solar curtailment will be allocated to customers or will this be up to the party responsible for the meter (i.e. the metering coordinator acting for the retailer).
 - *AEMO is prescribing the minimum standards for the connection of DER. This minimum will allow markets to develop on top of this capabilities whilst providing the backstop needed if/when markets fail – it proposed that this standard will be implemented by DNSPs e.g. in connection arrangements.*
- The load shedding "pain sharing" so called are usually managed by the jurisdictional arrangements - AEMO sets the requirements how much load response will be required, the JSSE then determines the areas of the network which will be shed - the DNSP "pulls the fuse" on those areas. I expect any solar curtailment would need to follow a similar approach. (<https://aemo.com.au/en/news/explaining-load-shedding>)
 - *We would seek input from JSSC and how the shedding will be “coordinated” – AEMO believe that keeping NSP evolved is critical for this coordination of shedding activities.*
- Given that under PoC, DNSPs no longer have a role in metering (load shedding occurs at the network level) does that mean the local pain sharing will be the responsibility of the metering coordinator/retailer? Or are you saying that DNSPs will be brought back into the metering game?
 - *AEMO is not proposing DNSPs “are brought back into metering”. The shedding of customers at a NMI level (via the PoC meters) was not contemplated in the rules – however this finer/granular shedding should be explored especially with the concerns surrounding the effectiveness of network shedding with DPV, and process would need to be established as to how this occurs with the Market Participants/JSSC.*

- DNSPs are still involved in many of the metering related processes, although as you rightly point out do not have responsibility over meter installation or operation. But there are B2B procedures to allow DNSPs to request Meter Co-ordinators or Providers provide specific services already and this could be a new one of those. But it's a TBD.
 - *The current process for the instruction's issues from AEMO are voice calls with confirmation protocol (control center to control center) – the shedding requirement is not currently viewed as an automatic mechanism (i.e. manual operation). The development of B2B can occur but is not currently viewed as a critical requirement to deliver the capabilities.*

Agenda Item 5 – AS/NZS 4777.2 Update

For Consideration:

- Letter of support from group following review and discussion.
- AEMO to draft letter on behalf of SDIWG for SDIWG review and Approval in August.

Agenda Item 6 – DER Device Standard Taskforce

To Note:

- Members to provide feedback by EOM July on the drafted discussion document for the DER Device Standard Taskforce.
- TOR to be developed for the August SDIWG

Agenda Item 7 – National API Working Group Update

To Note:

- What is the timeline for the implementation guide for IEEE2030.5 standard?
 - Draft guide – September 2020
 - Final version – December 2020

Agenda Item 8 – Other Business

To Note:

- Next meeting to be held on Tuesday 18th August (instead of Wednesday 19th August) – please advise of any concerns.

Next Meeting:

- Tuesday, 18 August 2020
- 2.00pm – 4.00pm

Further questions/feedback:

- Stuart Johnston: Stuart.Johnston@aemo.com.au
- DER Program: DERProgram@aemo.com.au