



Submission to Energy Policy WA

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Low Load Responses – Distributed Photovoltaic Generation Management Discussion Paper

The 'Low Load Responses – Distributed Photovoltaic Generation Management Discussion Paper' proposes two responses to conditions of minimum system load in the South West Interconnected System (SWIS):

1. A solar cut-off mechanism for household solar systems under 5kW
2. New connection arrangements for household solar systems over 5kW (details to be released by Western Power in November 2021).

The Smart Energy Council recognises that minimum system load levels are falling rapidly in the SWIS and that AEMO needs to be able to manage system security. However, the Council is very disappointed that there is no sign of a Minimum System Load protocol nor the new approach to collaboration and transparency with consumers that AEMO CEO Daniel Westerman announced at a speech to CEDA in July this year.

Mr Westerman announced a tiered approach to periods of extreme minimum system load, a protocol equivalent to the lack of reserve (LOR) notices used for the Reliability & Emergency Reserve Trader (RERT) scheme for periods of extreme peak demand. He also called for collaboration and cooperation between governments, industry, regulators and communities to address the energy transition. See <https://ieefa.org/ieefa-australia-from-coal-to-inverters-aemos-engineering-vision-is-ambitious-and-necessary/> and for detail on the MSL protocol: <https://ieefa.org/ieefa-australia-aemo-looks-to-smarter-ways-of-managing-abundant-solar/>

An MSL protocol would set out levels MSL1, 2 and 3 where market notices would be issued in the opposite circumstance to peak demand in the RERT, that is, when there is abundant supply and minimum system load. In AEMO's words this would look like:

- MSL1: advising that a minimum demand threshold was approaching and requesting a market response
- MSL2: increased risk of minimum demand threshold breach: DNSPs activate utility, large customer and C&I front stops
- MSL3: high probability of minimum demand threshold breach threatening power system security; DNSPs activate all emergency backstops.

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The development of a blunt household solar cut off mechanism for WA is surprising given this context and given the previous acknowledgement by AEMO staff that solar cut-offs lack a social licence.

The Institute for Energy Economics and Financial Analysis (IEEFA) published a critique of the South Australian solar cut-off regulation in April this year: https://ieefa.org/wp-content/uploads/2021/04/Blunt-Instrument-Uncompensated-Solar-Cut-Off-Isnt-the-Only-Solution-to-the-Minimum-Demand-Problem_April-2021.pdf which should be read in conjunction with this submission.

Rather than repeat the critique in the IEEFA report, this submission asks a series of questions that need to be answered before any further steps are taken to introduce a solar cut-off regulation.

The definition of the problem

- What are the Minimum System Load levels for the SWIS? (see above on an MSL protocol)
- And how are they defined?
- Is there a separation between the definition of the levels and the operation of the system (the distinction between reliability standard setting and operation is a requirement in the National Electricity Law and an appropriate principle also for the SWIS to follow)?

Options analysis

- What other options for increasing load or decreasing generation at times of minimum system load have been explored?
- Which of these are being put in place? When and how?
- Why does AEMO think these measures are insufficient to manage minimum system load in the SWIS?
- In particular how rapidly could gas use in the SWIS be electrified and how much of this electrification could result in flexible demand that could assist at times of minimum system load?

The solar cut-off mechanism

- What will be the total cost of implementing this measure?
- How does that compare to other measures, especially increasing battery storage capacity for charging at times of minimum system load?
- What is the cost per household of the solar cut-off mechanism?
- When will dynamic operating envelopes (DOEs) be put in place in the SWIS?

- If the solar cut-off mechanism goes ahead, is there a plan to transition from the solar cut-off mechanism to DOEs?
- How often does AEMO anticipate using the solar cut-off mechanism?
- And for how many years? [Given the AEMO CEO has also said that AEMO will be able to manage 100% instantaneous penetration of renewables in the NEM by 2025]

We are available to discuss this submission with you at any time.

Sincerely,

John Grimes
Chief Executive
Smart Energy Council

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