



TERRAIN SOLAR

Michelle Shephard  
Commissioner  
Australian Energy Market Commission  
Level 15, Castlereagh Street  
Sydney NSW 2000  
16 September 2021

Dear Australian Energy Market Commission,

***Terrain Solar - AEMC Submission re Draft Rule Determination – ERC0280 - Integrating Energy Storage Systems into the NEM***

Terrain Solar is pleased to provide a submission to the Australian Energy Market Commission (AEMCs) Draft Rule Determination for the Integrating Energy Storage Systems into the NEM, dated 15 July 2021, reference ERC0280 (Draft Rule).

Terrain Solar is an intending participant in the National Electricity Market (NEM) as a generator and has developed a number of renewable energy projects in NSW and Queensland, many of which are either under construction or are operational, including:

- the Corowa Solar Farm;
- Junee Solar Farm;
- Wagga North Solar Farm;
- Warwick Solar Farm; and
- Molong Solar Farm.

Terrain Solar broadly supports the objectives and principles of the Energy Security Board's (ESB's) "two-sided market" in streamlining services for those who use electricity and those who sell electricity on behalf of end users. Development of market rules which encourage Network Service Providers (NSP's) to interact with the private sector and create a level playing field in the provision of network services is a critical element of the ESB's vision of a two-sided market.

Terrain Solar is supportive of the AEMC's objective to remove barriers and better facilitate the integration of storage and hybrid facilities into the NEM. We believe the new participant category, the Integrated Resource Provider (IRP) is an important step towards encouraging the uptake of energy storage with applications in both distribution and transmission systems and on a standalone basis or coupled to renewable energy projects.

Our main concern with the proposed Draft Rule and the subsequent industry consultation has been the emphasis placed on energy storage within transmission networks rather than distribution networks. As highlighted in ARENA's Grid vs Garage report<sup>1</sup>, energy storage plays an equal if not greater role in terms of providing benefits to electricity users when located in lower voltage networks.

In light of these concerns, Terrain Solar seeks to highlight the following key considerations of the Draft Rule:

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<sup>1</sup> Grid vs Garage report, AECOM, 2019, <https://arena.gov.au/assets/2020/04/arena-grid-vs-garage.pdf>

## **1. Creation of a new technology neutral participant category, Integrated Resource Participant (IRP)**

Terrain Solar supports the creation of a new technology neutral participant, the IRP, including the allowance for aggregate dispatch conformance of hybrid systems, including the introduction of the concept of an Integrated Resource Unit (IRU). As part of the proposed Rule Change, Terrain Solar provides the following comments:

1. The Rule Change should clarify the approach to assessing performance standards for hybrid and IRP projects, particularly DC-coupled systems, or otherwise clarify that the existing performance standards will apply to hybrid systems.
2. The implementation of the final rule should come into effect sooner than 18 months from the final determination given the increasingly important role IRPs will play in the NEM to maintain system stability as conventional generation retires. The final rule implementation should therefore be brought forward to be 6 months from the final determination.
3. If the implementation of the final rule cannot be brought forward then there should be an allowance made for the assessment of IRP and hybrid performance standards immediately upon the final determination to allow IRP proponents to prepare projects for the implementation.

## **2. TUOS and DUOS charges**

Terrain Solar supports the view that dispatch or generation of energy should not incur TUOS and DUOS charges, and the consumption of energy as a load should only incur TUOS and DUOS charges to the extent they reflect the nature of the service requirements and the associated level of reliability provided. For example, IRPs that accept they may be constrained in order to prioritise access for other load customers on a prescribed service should have the reduced level of service reliability reflected in their TUOS and DUOS charges. Furthermore, IRPs that provide relief for network constraints by dispatching when the network is congested should have this benefit reflected in the TUOS and DUOS charges as this ultimately leads to more load customers being able to connect to the network which better utilises network assets.

Importantly, the framework in which to negotiate cost-reflective charges should be reciprocal across transmission and distribution connected IRPs, otherwise, there will be a concentration of IRPs in either the transmission or distribution space purely as a result of perverse incentives/penalties rather than economic and technical drivers for locating IRPs in appropriate locations within the NEM, which supports the NEO.

Terrain Solar is concerned there has been a lot of emphasis placed on the framework for negotiating TUOS charges, but very little attention brought to the framework for negotiating DUOS charges. Given a number of standalone storage and hybrid facilities that have and will be located in distribution networks, we believe an appropriate reciprocal balance should be applied to both TUOS and DUOS concerns.

The Draft Rule proposes to amend the dispute resolution process to clarify that pricing for non-retail distribution customers should be based on cost-reflective principles. However, it is inappropriate and inefficient to solely rely on the dispute resolution process to apply cost-reflective pricing principles. Instead, Terrain Solar requests the following further amendments are made to the application of

Chapter 6 pricing principles to non-retail distribution customers under the TSS process:

- a) DNSPs should be required to develop an additional service class for IRPs as part of their TSS. The IRP service class should include a tariff structure which is sympathetic to the controllability of IRPs, in a similar way to how controlled load tariffs are considered.
- b) IRPs that accept that they will be metered and controlled at their connection point, thereby accepting a reduced service reliability, should receive a significantly reduced tariff based on only consumption charges (as opposed to demand and/or capacity charges). In order to receive this tariff class, IRPs will need to accept supply of energy may not be available within peak windows and may be constrained in load consumption linearly down to OMW by the DNSP.
- c) IRPs that perform network support services for deferring network expenditure should be exempt from paying DUOS charges in order to operate to the net benefit of customers.

Furthermore, the requirement to adopt cost-reflective pricing principles should be inserted in section 6.7 (Negotiated Distribution Services) of the Rules rather than just the dispute resolution section in 6.22.2(b1).

Lastly, transparency should be provided by TNSPs and DNSPs on the outcomes of negotiated service arrangements for TUOS and DUOS charges. Principles and methodologies for determining negotiated TUOS and DUOS charges should be published (i.e. within the DNSP's Negotiating Framework and Negotiated Distribution Service Criteria under clause 6.7 of the NER) and TNSPs and DNSPs should also be required to publish the negotiated TUOS and DUOS charges for individual projects. This is to ensure there is consistency and transparency across negotiations and there is no "gaming" of outcomes that leads to IRPs favouring one NSP over another. This becomes particularly important with the growing trend of NSPs desiring to own and operate their own, or related party, generation and ESS assets.

### **3. DC coupled systems**

Terrain Solar supports the option for DC coupled systems to register themselves under a single classification (scheduled or semi-scheduled) or multiple classifications (scheduled and semi-scheduled).

Terrain Solar also supports the view that no specific changes are required to performance standards for DC coupled systems compared to other forms of hybrid facilities.

Further guidance from AEMO on the assessment of DC coupled system performance standards and the telemetry and metering requirements should be released shortly after the final determination in order for IRP proponents to plan for their projects. In order to fast-track the release of these guidelines we suggest a staged approach where AEMO releases an interim methodology followed by the final methodology.

In light of the above and as an intending participant, we thank you for the opportunity to provide a submission to the AEMC's Draft Rule Determination.

If you have any questions in relation to this submission, please don't hesitate to contact Craig Peters at [craig@terrainsolar.com](mailto:craig@terrainsolar.com).

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Chris Wilson', with a horizontal line underneath it.

Chris Wilson

Director, Terrain Solar

Email: [chris@terrainsolar.com](mailto:chris@terrainsolar.com)