TERRAIN SOLAR

12th April 2018

Mr Damien Sanford
Executive General Manager
Australian Energy Market Operator

Via email to: SystemStrengthGuidelines@aemo.com.au

Dear Mr Sanford,

Terrain Solar Submission on the System Strength Assessment Guidelines

Terrain Solar is an intending participant in the National Electricity Market (NEM) as a generator. Terrain Solar is an Australian solar and battery storage developer with a combined 45 years of industry experience. Terrain Solar are developing a portfolio of mid-scale solar PV and battery ready projects across various sites in NSW and QLD connected either within the distribution system as embedded generators or connected within the sub-transmission system.

Terrain Solar broadly supports the objectives of the Independent Review into the Future Security of the National Electricity Market recently commissioned by the Commonwealth Government and prepared by Dr Alan Finkel (the Finkel Review), namely to provide "**increased security, future reliability, rewarding consumers** and **lower emissions**". Most critically we support that the outcomes of the Finkel Review were underpinned by the "three pillars of an **orderly transition, better system planning** and **stronger governance**".

AEMO has requested submissions on the proposed draft System Strength Impact Assessment Guidelines, a document developed as a result of the National Electricity Amendment (Managing power system fault levels) Rule 2017 No.10. Terrain Solar provides the following comments on the proposed draft System Strength Impact Assessment Guidelines.

Transitional Arrangements

Issue	AEMO released the Interim System Strength Impact Assessment Guidelines (**Interim Guidelines**) on 17 November 2017 with no transition period or guidance on implementation for new connections.
Response	The Interim Guidelines were released on 17 November 2017 with no transition period applying to existing connection enquiries or connection applications. There was also very little guidance provided to connection proponents about how existing connection enquiries and connection applications would be assessed following release of the Interim Guidelines. In some cases connection proponents were informed that a Full Impact Assessment was required in order to begin assessing the connection application just after the release of the Interim Guidelines, however, EMT models of nearby generators were not available to allow a Full Impact Assessment to be undertaken, therefore, connection applications were blocked from progressing. Terrain Solar recommend practical and pragmatic transitional arrangements to be put in place to prevent connection applications being blocked with the introduction of the Interim Guidelines as there are material commercial consequences being caused by projects being delayed. Further guidance needs to be provided by AEMO and NSPs to support these transitional arrangements in a timely manner.

Preliminary Assessment

Issue	Requirement for headroom (or margin) between network capacity verses connection requirements.
Response	Terrain Solar does not support additional headroom (or margin) being imposed between network capacity and connection requirements given the preliminary assessment is normally undertaken using an extreme operating condition (generally the lowest fault current level) with asynchronous generators operating at 100% dispatch. Given the extreme unlikelihood that minimum fault current levels would coincide with maximum dispatch of asynchronous machines such as solar or wind generators, there is already a significant degree of conservatism in the preliminary assessment, therefore additional margins are not appropriate.

Consideration of Nearby Asynchronous Generators in the Preliminary and Full Assessment

Issue	Requirement for considering nearby asynchronous generators in the preliminary and full impact assessment whether generators are committed or have an available EMT model.

Response	Terrain Solar does not support consideration of nearby asynchronous generators in the preliminary of full impact assessment where they are either not committed or do not have a releasable EMT model. Where this is the case the connection applicant should be allowed to progress through the GPS assessment at their own risk, acknowledging that if another generator is subsequently committed nearby and a releasable EMT model is available then system strength remediation may be required following a full impact assessment at that time. However, this should not be used as a blocking mechanism to stop connection applications being assessed.

We thank you for the opportunity to provide a submission to the proposed draft System Strength Impact Assessment Guidelines. If you have any questions in relation to this submission please don't hesitate to contact Chris Wilson on the contact details provided below.

Yours sincerely

Chris Wilson

Director, Terrain Solar
E-mail: chris@terrainsolar.com