

18 January 2019

Heath Frewin
Project lead, ENA Connection Guidelines
Energy Networks Australia
Unit 5, Level 12, 385 Bourke St
Melbourne 3000

By email: hfrewin@energynetworks.com.au

Dear Mr Frewin,

**RE: National Distributed Energy Grid Connection Guidelines - draft technical guidelines
for basic micro and low voltage embedded generation connections**

GreenSync is an energy technology company based in Melbourne providing software services to network operators and energy retailers to meet current needs. We also lead the decentralised energy exchange (deX) initiative, a common platform to enable system operator and market operator interoperability required in the near future for increasing integration of DER, high-volume renewable generation and increased value for customers.

deX, now with over 80 industry partners, has developed a clear framework for decentralised energy markets and practical roadmap for a technology platform that brings benefit for all. deX will enable “smart” DER owners to gain incentives for making their asset(s) services available to other parties via deX. Ensuring that connection approaches are well articulated and support digital and dynamic data capture is an important enabling aspect to the capabilities that will be possible through the deX marketplace.

Over the past 18 months we've delivered the foundations for this platform; bringing to life the principles of plug and play access for DER technology and network visibility into production software that is being deployed in a growing number of projects in partnership with network entities, including SA Power Networks, United Energy and Evo Energy. Over the next three years our network partnerships will grow on the expectation that DER visibility and control will increasingly feature and/or become required standards for connections to low-voltage grids.

Given our corporate context, we have a direct and clear interest in the design, scope and implementation approach undertaken through the ENA's national low voltage connection



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guidelines project. We appreciate the opportunity to provide direct feedback to the ENA at this moment.

These guidelines present an opportunity to set the direction and approach for connections - at scale - of increasingly smart devices that can integrate with and provide services to the electricity grid.

We would hope to see these guidelines develop from their present form (as circulated in December 2018) to a status that is consistent with a future where decentralised energy assets play a major role in providing grid and market services. This orientation would also be consistent with the directions indicated through the Open Energy Networks initiative which the ENA is also leading.

Our chief reservations about the guidelines in their present form are that they appear to be:

- **Historically oriented** - Implying every connection is perceived as passive, regardless of the actual capabilities or technology
- **Size obsessed** - Setting numeric thresholds restricting system size to 5kW and (additionally) export limits to 10kVA
- **Pushing consumers into limited options** - Pushing consumers towards power phase upgrades being in place for bigger or more sophisticated systems seems a blunt and limiting approach when those systems are (likely) smart today
- **Anti-competitive** - Innovative technology product offerings may be discouraged from being sold where restrictive, costly or globally inconsistent settings apply
- **At risk of irrelevance** - Emerging initiatives and incentives for 'VPP ready' tech are being rolled out in South Australia, NSW and Victoria in 2019, making this guide inconsistent with respect to those initiatives and tech capabilities.

Our **recommendations** are:

- **Orient to consumers** - Assume that consumers will play a role in supporting the grid via their investment choices and articulate this context in the guidelines. Support initiatives to improve understanding about current connection requirements across jurisdictions (this is a gap today) and consult with consumer representatives.
- **Orient to the future** - Assume technology change and sophistication are coming and will see more than just solar PV and batteries featuring 'behind the meter'.
- **Allow differentiation** - The guides should facilitate and empower networks to set the limitations upon their systems which best suit their requirements and acknowledge these may change over time and in response to technology. (What works in Sydney metro isn't the same as what will work in Townsville).

- **Be technology agnostic** - Establish connection settings and system access on the basis of functional capacity and capabilities, not on arbitrary sizes and limitations to a few technology types
- **Be approachable and responsive** - Set a clearer pathway to facilitate experiential feedback from industry - not just networks - to enable improvement and iteration on these guidelines
- **Establish active connection options** - Establish LV connection guidelines that specifically focus on active, dynamic DER connections. This should encourage smart DER capabilities with export control to connect and be contracted with fair terms that do not default to arbitrary size or export restrictions, giving the best options for future interoperability, optimisation and fair remuneration to asset owners.
- **Build from experience and engage with experts** - For active DER and dynamic export connection arrangements it is important to consult directly with technology providers to develop consistent requirements and refer to internationally recognised standards (incl. for control capabilities and communications settings).

A **practical approach** is on offer:

GreenSync has an open offer to the ENA to support development and iteration on these guidelines, specifically on the approach to dynamic export connection settings for active DER management. We look forward to ongoing engagement and partnerships with many ENA member distribution businesses underway today and in new projects. We would welcome the ENA taking an active and direct interest in these developments as well.

In summary, establishing common approaches for active DER is a present need, not a future possibility. Our ambition is to enable the most economically efficient use of assets connected to, or part of, our grids. To meet consumer expectations and best support them and the capabilities of their technology choices, the ENA guidelines should include a focus on active DER dynamic export connection settings. The current draft does not yet do this.

We look forward to ongoing dialogue and engagement with you through finalisation, implementation and iterative improvement on these guidelines.

Yours sincerely,



Bruce Thompson
Chief of Strategy & Partnerships