

Economic Regulation Authority
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Attention: Elizabeth Walters

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Dear Elizabeth,

Re: Submission on proposed Technical Rules change – DC Injection.

Infinite Energy welcomes the opportunity to make a brief submission on the proposed changes to the Technical Rules concerning the perceived issues surrounding DC injection into the distribution network.

While the changes appear to be proposed in the spirit of alleviating an existing compliance mechanism, considered an unnecessary barrier to entry for many solar PV installations, the proposal does not appear to materially improve the current circumstance.

The DC Injection requirement within the Technical Rules does not discriminate between loads (new or existing) or embedded generation. However, it is overwhelmingly being applied specifically to new embedded generation applications – particularly solar PV.

The network has operated with load-causing DC Injection without noticeable disruption to date; and no case has been presented to show that DC Injection is causing any significant damage to the Western Power network. Given any incidence of DC Injection attributable to a solar PV installation is likely to be considerably less than that attributable to the underlying and non-complying load, applying a new standard for DC Injection to target new solar PV hardware will create an unnecessary instrument that will incur unnecessary costs. This is not a requirement in other jurisdictions (that we are aware of) and will add to the already considerable costs of connecting solar PV in Western Australia, where network connection costs are higher than in other Australian states.

It would be sensible to conduct a proper cost-benefit analysis into the appropriate level of DC Injection tolerance that should be incorporated within the Technical Rules (if any); where the cost to the network caused by DC Injection from solar PV is compared to the likely cost of complying with such measures along with the foregone benefit of the solar PV that would have otherwise been installed if not for the cost of compliance. It is understood that a consultancy was engaged to determine the impacts of DC Injection into Western Power's network. This report has not been released for comment.

Rather than applying a new tolerance standard specifically targeting solar PV installations, the DC Injection threshold could be removed from the Technical Rules completely. It is already largely ignored with respect to loads. Western Power could instead consider limiting new PV inverter installation to an approved hardware list, as well as publishing a procedure for gaining approval. The approved hardware will have been shown to meet certain Western Power criteria around harmonics, flicker and electromagnetic interference; with such criteria being aligned to current practice in other jurisdictions with high levels of solar PV penetration. This would eliminate the discrimination between enforcing DC injection for new solar PV installations, but not for new load connections. And it would remove a problematic and costly compliance measure, which contains intrinsic measurement difficulties, including obtaining accurate measurements and exposing electrical contractors to HV environments.

Should a new tolerance be introduced, the additional formal enforcement mechanism included in Attachment 12 of the Technical Rules is welcome as it compels solar PV installers to comply with the Technical Rules. The previous lack of enforcement by Western Power around DC Injection created a circumstances where the decision to not incur the additional cost of compliance was perceived to be low-risk. This lead to a situation where the Technical Rules could be deliberately ignored without a likely threat of sanction. While we argue the implications of DC Injection from solar PV may not warrant a compliance regime, not enforcing a regime encourages poor practices and leads to an uneven playing field.

Should you wish to discuss this submission further, please contact myself, or Steve Richards, Manager – Commercial Energy on steve@infiniteenergy.com.au.

Yours sincerely

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