

16 April 2018

Mr John Pierce
Chair
Australian Energy Market Commission
PO BOX A2449
Sydney South NSW 1235

Via online submission

Dear Mr Pierce,

RE ERC0227/RRC0011 - National Electricity Amendment (Register of Distributed Energy Resources) Rule 2018.

TasNetworks welcomes the opportunity to make a submission to the Australian Energy Market Commission (**AEMC**) on the National Electricity Amendment (Register of Distributed Energy Resources) Rule 2018 Consultation Paper.

As the Transmission Network Service Provider (**TNSP**), Distribution Network Service Provider (**DNSP**) and jurisdictional planner in Tasmania, TasNetworks is focused on delivering safe and reliable electricity network services while achieving the lowest sustainable prices for Tasmanian customers. This requires the prudent, safe and efficient management and development of the Tasmanian power system. In this regard, TasNetworks is supportive of the AEMC's and Australian Energy Market Operator's (**AEMO's**) efforts to implement a national register of Distributed Energy Resources (**DER**) for the National Electricity Market (**NEM**) as recommended in the Finkel report.

TasNetworks supports Energy Networks Australia's (**ENA**) submission in relation to the proposed DER register and would like to make several further comments with a particular focus on the Tasmanian context. The key points in this submission are:

- TasNetworks supports the implementation of a DER register. There are likely to be substantial benefits to a range of stakeholders flowing from the collection and sharing of information about small-scale behind the meter DER including improved network planning; more efficient network investment; enhanced power system security; better investment signals for third party aggregators and ancillary services providers; increased safety; and, ultimately, lower costs to customers.
- TasNetworks agrees that there are potentially significant efficiency benefits associated with AEMO being the entity responsible for the management of any centralised register and supports the use of AEMO guidelines to delineate DER information standards.

- TasNetworks considers the definition of DER needs further refinement and that setting a limit or threshold beyond which information would not be collected would reduce the potential benefits of a DER register.
- TasNetworks questions the consistency of having DNSPs act as an inspector of behind the meter DER infrastructure when, for all intents and purposes, DNSPs have been locked out of all other activities associated with provision of behind the meter services. Owing to earlier business changes stemming from the requirement to exit behind the meter services, there would now be substantial costs involved in retooling TasNetworks' operations to facilitate DER information collection. This is unlikely to be in the best interests of Tasmanian customers. For this reason, TasNetworks advocates that cost-recovery and proportionality in revenue sharing arising from the operation of the register must be key principals guiding its implementation.
- TasNetworks does not support the use of the connection application process as a method for collecting relevant DER information. As highlighted in the consultation paper, and consistent with TasNetworks' experience, the connection application process would be unlikely to capture all the required information, particularly with regard to any subsequent modification, upgrade, transfer or removal of DER technology. Moreover, the cost of facilitating such an initiative is likely to be substantial.
- TasNetworks contends that without the involvement of installers, retailers, electrical inspectors and electricians, the objectives of the DER register are unlikely to be met. TasNetworks advocates further consultation with these stakeholders, and consideration of the interface with other relevant regulatory and legislative regimes.
- TasNetworks notes that there a number of recent and ongoing consultation processes that bear relevance to the proposed DER register. TasNetworks suggests that monitoring these developments for consideration as part of the DER register consultation process would be beneficial.

Responses to selected questions are provided below and TasNetworks welcomes the opportunity to discuss this submission further with you. Should you have any questions, please contact Tim Astley, Team Leader NEM Strategy and Compliance, via email (tim.astley@tasnetworks.com.au) or by phone on (03) 6271 6151.

Yours sincerely,



Wayne Tucker

General Manager Strategic Asset Management

Assessment Framework

Are there other relevant considerations that should be included in the assessing the proposed rule changes?

TasNetworks notes that there a number of ongoing consultation processes that have relevance to the implementation of the proposed DER register. The Energy Security Board (**ESB**) is presently seeking feedback on a national data strategy for the NEM. The Victorian Government, in conjunction with EY, recently released findings on the utility of an energy data hub for Victoria. In addition, the COAG Energy Council has engaged HoustonKemp Economists to make recommendations for allowing third party service providers access to customer consumption data. TasNetworks suggests monitoring these developments for consideration as part of the DER register consultation process would be beneficial.

Benefits and Costs of a Register

What are the likely uses of a distributed energy resources register?

Beyond those uses identified within the consultation paper, TasNetworks considers that information from a DER register would be useful as an input into load modelling.

What costs do you believe would likely be involved in the collection of useful data about DER?

TasNetworks considers that there may be substantial costs to DNSPs involved in the collection of useful DER data, depending upon the nature of the data collected and the mechanism employed. TasNetworks no longer undertakes inspections of electrical works and with the impending roll out of advanced meters in Tasmania, will phase out its meter reading responsibilities with a commensurate reduction in staff. Any new and ongoing obligation to visit households to collect DER information would, therefore, necessitate an increase in staff, training and ancillary support costs.

If information was to be collected solely from the connection application process, this would entail substantial changes to TasNetworks' processes and systems. Of the 11 fields suggested in the consultation paper for collection through the application process, TasNetworks currently collects only three. Adding these additional fields will necessitate system upgrades and potentially entirely new system(s) to support not only the collection but secure storage and dissemination of information. This is particularly pertinent if the goal is to enable two-way, near real time communication between TasNetworks, AEMO and/or any other third party (installers/inspectors). There are also related maintenance, testing, support and opportunity costs, including those arising from rearranging the forward IT work program, that would be incurred by TasNetworks.

TasNetworks agrees with the AEMC that the benefits of a DER register are many, varied and would flow to many stakeholders. TasNetworks notes, however, that where DNSPs are solely responsible for collecting the information, the costs will almost entirely and disproportionately fall on DNSPs. As detailed further below, this is unlikely to be in best interests of Tasmanian customers. For this reason, TasNetworks advocates that cost-recovery and proportionality in revenue sharing arising from the operation of the register must be key principals guiding its implementation.

Governance

Please comment on the suitability of the following:

a) Should 'small scale' systems be limited to generation systems below 5 MW? Should any further limitations be imposed (e.g. a minimum capacity or a threshold in MWh for energy storage)?

TasNetworks agrees with AEMO that network visibility of generation below 5 MW is currently poor and there are substantial benefits to improving this. TasNetworks does not, however, agree that the

definition of small scale systems should be limited by a 5 MW threshold. As DER adoption has increased and the costs of DER and associated technology has come down, increases in system sizes, storage capacity and inverter strength have been witnessed. Moreover, TasNetworks is aware of several cases where older systems have been upgraded over time to exceed the 5 MW threshold but no notification of the increased system size has been received. This is perhaps not unsurprising given there is currently little incentive for installers and customers to report such information, in contrast with the initial connection application. Given the expected future growth of DER technology, TasNetworks advocates that where possible, and subject to cost and administrative constraints, information should be collected about any DER and load controllable appliance, regardless of capacity rating, MW threshold or similar limit.

b) *Is the NER definition of 'connection point' an appropriate spatial demarcation for 'behind the meter' DER? If not, what is an appropriate spatial demarcation for 'behind the meter' DER?*

TasNetworks notes that a connection point is defined in the National Electricity Rules (NER) as the agreed point of supply established between Network Service Provider (NSPs) and customers. TasNetworks considers that this definition may not be the best spatial demarcation for behind the meter DER and suggests that using the metering point may be a better alternative. TasNetworks also questions the consistency of having DNSPs act as an inspector of behind the meter DER infrastructure when for all intents and purposes DNSPs have been locked out of all other activities associated with the provision of behind the meter services. These restrictions have meant DNSPs have altered their business strategies, structures and systems, including reducing staff numbers, in order to meet ring fencing and related provisions and so promote competition. Given the geographic spread and relatively small number of TasNetworks' customers, along with the unique technical characteristics of the Tasmanian power system, the benefits of such restrictions in Tasmania have yet to be seen and it is an open question whether this is likely to improve in the future.

As highlighted by Western Power in their 2016 rule change request concerning stand-alone power systems, there are many cases where DNSPs are uniquely placed to provide customer solutions that could substantially lower networks costs to all customers and would not otherwise occur, given the competitive landscape. At present, these are prohibited due to the regulatory environment. TasNetworks strongly supports any solution that lowers electricity costs to customers, whether delivered via a competitive or regulated service provider. However, as a result of earlier business changes stemming from the requirement to exit behind the meter services, there would now be substantial costs involved in retooling TasNetworks' operations to facilitate DER information collection. To incur this expense is unlikely to be in the best interests of Tasmanian customers. These costs might be offset, however, were TasNetworks afforded the opportunity to provide other behind the meter solutions that lowered network costs to Tasmanian customers.

c) *Is a 'distributed energy resource' "an integrated system of energy equipment co-located with consumer load"? If not, what else could it be characterised as?*

TasNetworks considers that characterising distributed energy resources as an integrated system of energy equipment located with consumer load is potentially problematic. For instance, it is unclear whether this would capture electric vehicles (EVs), load controllable hot water cylinders or 'smart' air conditioners. From a network planning perspective, it would be very useful to include this information in the DER register as these can be large, peaky loads. However, collecting this information would then become more complicated. As alluded to in the consultation paper, connection application processes of DNSPs would likely be insufficient, necessitating reliance on electrical installers and/or retailers for further information. Issues of compliance and incentives for collecting such information by these parties would then need to be considered. TasNetworks suggests that further clarification on the DER definition would be beneficial.

Regarding the management of a DER register:

a) To what extent should the types and capacity of DER eligible for inclusion in the register be defined in the NER or in an AEMO guideline?

TasNetworks agrees that AEMO is best placed to manage and maintain a centralised DER register. As noted in the consultation paper, this is likely to be the cheapest option and the one that best leverages existing industry expertise. TasNetworks contends that if this is the case, then including the types and capacity of eligible DER in an AEMO guideline would be preferable. Although this would trade off the support of official formalisation within the rules, from a practical perspective, consulting on and updating the rules any time a change in technology or standard arises would likely prove to be unnecessarily onerous.

b) Should the nature of the information being collected and recorded in the register and any other requirements, such as how often parties need to report the data, be determined in an AEMO guideline?

Consistent with the above, TasNetworks considers that the nature of information being collected and recorded in the register should be determined in an AEMO guideline.

c) What types of principles, factors or other criteria should AEMO be required to consider when developing guidelines on the collection and recording of information on DER?

Transparency; privacy; right to information; equity; regulatory and administrative burden; technical considerations; compliance and enforcement mechanisms; and regard for stakeholders who will be using the guideline, are factors AEMO might consider when developing the guideline.

Data Collection and Compliance

How often does the data need to be collected and updated to achieve the objectives of a DER register?

In an ideal world, the DER register would be updated every time DER and associated technology was installed, updated, modified, removed or transferred. In reality, dependent upon what information is collected and by whom, this is likely to be more problematic. DNSP connection applications might pick up some of the information, some of the time but would not necessarily have visibility into modifications, upgrades or decommissioning of DER technology. Performing some form of household DER audit might pick up all the relevant details but would be administratively onerous and likely lead to data that was increasingly inaccurate as the passage of time between audits grew. As noted earlier, without the requisite incentives and/or compliance regime, leveraging installer or retailer involvement is also unlikely to result in meeting the objectives of a DER register.

Do you agree that there is a need for consistency across network regions in what data should be collected?

TasNetworks supports the harmonisation of the information collected across network regions where possible. However, in those cases where there are clear benefits for collecting information of a type in one jurisdiction that is not relevant in another, collection guidelines should provide sufficient flexibility to allow this to occur.

If DNSPs' connection application processes are considered a good method of collecting data, what changes are needed to existing processes?

TasNetworks does not consider that DNSPs' connection application processes are a good method for collecting data of the type required by the proposed DER register, particularly if the DER definition extends to EVs, home energy management systems, load controllable hot water and other resources not currently captured by a connection application process. Even if the DER definition pertained only

to batteries, photovoltaic systems and their associated inverter, there is still no guarantee that a connection process would capture all relevant data. As one example, TasNetworks is aware that there have been two to three times the number of batteries sold by retailers in Tasmania as have been registered via the connection application process. However, even with 100% compliance with the connection application process, it would be unlikely that subsequent modification, upgrade, transfer or removal of DER technology would be captured. Finally, as highlighted above, the costs to DNSPs to support such an initiative are also likely to be substantial.

Should obligations on parties other than DNSPs be considered to support data collection? If yes, which parties are best placed to collect and report this data? How would an obligation on the parties identified above best be applied and enforced? Will a register be beneficial if the levels of compliance in relation to providing information are similar to the low levels of compliance with the DNSP connection application processes? What levels of compliance are needed? How can compliance best be maintained over time as technology changes?

TasNetworks contends that without the involvement of installers, retailers, electrical inspectors and electricians, the objectives of the DER register are unlikely to be met. TasNetworks recognises, however, that this could be difficult to achieve given the extent to which the NER currently apply to these parties and the limited enforcement and compliance options that result. For instance, there is currently no category of registered participant within chapter two of the NER that captures the activities of installers. In this regard, further consultation with these stakeholders and consideration of the interface with other relevant regulatory and legislative regimes would seem beneficial.

Transparency and Confidentiality

Given the nature of information that may be required to be provided by registered participants under the proposed rule change, are existing regulatory arrangements (such as the protected information provisions under the NEL and Privacy Act 1988) regarding the collection and disclosure of information adequate to protect market participants and consumers whose DER systems are included in the register?

TasNetworks considers that the existing regulatory arrangements are adequate to protect market participants and consumers with respect to the data included in the proposed DER register.

Safety Issues and Emergency Response

Would the sharing of data collected under a DER register be useful to emergency services, and if so, how? Are there existing mechanisms currently in place (e.g. requisite IT systems) that could facilitate the practical sharing of data with emergency responders on a real time basis? Is the proposed DER register the most practical mechanism to provide emergency services with the required information? What important features does a register need to have in order to meet the needs of emergency services? To what extent is energy related information already shared between relevant bodies (e.g. AEMO/CER) to emergency services for safety reasons?

TasNetworks suggests emergency services entities are best placed to answer these questions. TasNetworks notes that with respect to information that might be useful to emergency services, information collected by DNSPs would be necessarily limited to on-grid resources. In this regard, consideration of the processes by which the hazardous good register is managed and maintained may be useful to the DER register consultation.