

31 August 2021



Dr Kris Funston
Executive General Manager, Network Regulation
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

Email: AERinquiry@aer.gov.au

Dear Dr Funston

Energy Queensland submission to the Australian Energy Regulator –Distributed Energy Resources (DER) Integration Expenditure Guidance Note

Energy Queensland Limited (Energy Queensland) welcomes the opportunity to provide comment to the Australian Energy Regulator on its Consultation Paper on the DER Integration Expenditure Guidance Note. The attached submission is provided by Energy Queensland, on behalf of its network businesses Energex Limited and Ergon Energy Corporation Limited.

Energy Queensland's responses to the consultation questions are included in the attached submission, which is available for publication.

Should you require additional information or wish to discuss any aspect of this submission, please contact me on [REDACTED] or Barbara Neil on [REDACTED].

Yours sincerely

[REDACTED]

Trudy Fraser
Manager Regulation

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Encl: Energy Queensland's submission to the Consultation Paper

Energy Queensland Submission on the Draft DER integration expenditure guidance note

Consultation Paper

Energy Queensland Limited
31 August 2021



About Energy Queensland

Energy Queensland Limited (Energy Queensland) is a Queensland Government Owned Corporation that operates businesses providing energy services across Queensland, including:

- Distribution Network Service Providers, Energex Limited (Energex) and Ergon Energy Corporation Limited (Ergon Energy);
- a regional service delivery retailer, Ergon Energy Queensland Pty Ltd (Ergon Energy Retail); and
- Affiliated contestable business, Yurika Pty Ltd and its subsidiaries, including Yurika Metering.

Energy Queensland's purpose is to 'safely deliver secure, affordable and sustainable energy solutions with our communities and customers' and is focused on working across its portfolio of activities to deliver customers lower, more predictable power bills while maintaining a safe and reliable supply and a great customer experience.

Our distribution businesses, Energex and Ergon Energy Network, cover 1.7 million km² and supply 34,000GWh of energy to 2.25 million homes and businesses each year.

Ergon Energy Retail sells electricity to 738,000 customers in regional Queensland.

Energy Queensland also includes Yurika, an energy services business creating innovative solutions to deliver customers greater choice and control over their energy needs and access to new solutions and technologies. Metering Dynamics, which is a part of Yurika, is a registered Metering Coordinator, Metering Provider, Metering Data Provider and Embedded Network Manager. Yurika is a key pillar to ensuring that Energy Queensland is able to meet and adapt to changes and developments in the rapidly evolving energy market.

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1 Introduction

Energy Queensland Limited (Energy Queensland) welcomes the opportunity to provide comment to the Australian Energy Regulator (AER) on its Draft Distributed Energy Resources (DER) integration expenditure guidance note (Guidance Note). This submission is provided by Energy Queensland, on behalf of its network businesses Energex Limited and Ergon Energy Corporation Limited.

Energy Queensland broadly supports the development of a DER integration strategy as part of the regulatory proposals for distribution network service providers (DNSPs) which takes a holistic approach to augmentation, replacement, and DER enablement. Consistent with the current regulatory proposal process, the input assumptions (including development of the base case), expenditure, and format of the business case should reflect the DNSP's customers' expectations through an extensive customer engagement process. Furthermore, given the jurisdictional differences such as network topology and access to smart metering data, we suggest sufficient flexibility is afforded to DNSPs in the Guidance Note rather than a prescriptive approach to guidance.

Energy Queensland continues to successfully integrate DER and is further exploring options that enable a cost effective and smooth transition to a greater DER future that benefits all customers, both those with and without DER. Our DNSPs now have a significant amount of connected solar capacity with the majority provided by rooftop photovoltaic (PV). Almost 39% of detached houses and over 11% of businesses across Queensland have rooftop solar, with some areas well above these averages. As at 30 June 2021 we have:

- approximately 2,500 medium to large-scale PV systems, with more than 1,140 MVA of total capacity already connected; and
- in the small-scale residential and commercial-sized DER context, Ergon Energy and Energex have connected more than 689,000 PV systems with a total capacity of around 4,430 MVA.

Energy Queensland forecasts a high solar PV uptake over the next couple of years, with an average uptake of 500MW per annum. Battery Energy Storage Systems (BESS) are expected to be one of the fastest growing technologies over the coming years. Energy Queensland forecasts stronger growth in residential BESS, compared to business BESS and is expected to hit 1GWh behind the meter BESS capacity by 2027, with annual uptake of 250MWh storage capacity. In percentage terms, Energy Queensland expects Electric Vehicles (EV) to be the fastest growing component of DER over the next 15 years, with 1700% growth over the next 5 years and an annual uptake of 100,000 - 200,000 new EVs per annum in 15 years' time.

In response to the AER's invitation to provide comments on the Guidance Note, Energy Queensland has provided responses to a number of the questions raised in the consultation. We have also included additional general comments in the following section.

Energy Queensland is available to discuss this submission or provide further detail regarding the issues raised, should the AER require.

2 General comments

2.1 Options analysis

We note section 3.4 of the Guidance Note suggests that DNSPs should select the option that addresses the identified need at the *lowest cost* over the life of the investment. Consistent with the RIT-D, we suggest more appropriate wording would be the option which *maximises the present value of the net economic benefit* ...

2.2 How to determine the base case scenario

Energy Queensland questions the base case assumption in section 5.1 that networks would not actively recruit and grow DER adoption beyond projected adoption. We note the AER have suggested there may be some exceptions to this. However, we suggest DNSPs should generally be able to justify an alternative position in the business case.

2.3 Improve reliability

It is unclear why improved reliability benefits detailed in section 6.2.4 of the Guidance Note only applies to batteries. Energy Queensland suggests that other sources may provide an improvement in reliability and should be able to be incorporated into the benefits calculations where applicable.

2.4 Demand management

Energy Queensland is supportive of changes to the Demand Management Incentive Allowance Mechanism to include projects that have the potential to deliver ongoing demand reductions, including reductions in demand for export services.

Furthermore, Energy Queensland is supportive of changes to the Demand Management Incentive Scheme objectives to include ensuring efficient expenditure relating to demand management including demand for export services.

3 Table of detailed comments

Consultation Paper Feedback Question	Energy Queensland Comment
Issue 1: DER integration strategy	
1. Do you agree with the proposed guidance relating to how DNSPs should prepare a DER integration strategy?	<p>Energy Queensland agrees that consistency with other network investment activities and overall strategy is important in developing a DER integration strategy. Energy Queensland considers that a holistic regulatory submission is required, considering the requisite aspects of augmentation (AUGEX) and replacement expenditure as well as DER enablement. We support the ability to include DER enablement as part of the DNSP's AUGEX proposal, where relevant, rather than as a separate component for DER.</p> <p>We consider that the strategy will assist stakeholders and customers to better understand the scale and nature of the future investment drivers that enable a higher penetration of DER. As such, the strategy should outline a range of solutions based on a least-regret approach that supports DER integration.</p>
Issue 2: Format of business case	
2. Should the format of the business case be prescriptive? If so, how?	<p>Energy Queensland agrees with the AER's position that flexibility of the format and template for the business case is essential and will allow DNSPs to reflect their customer's expectations.</p>
Issue 3: Input assumptions	
3. Are there particular input assumptions that should be consistent for all DNSPs?	<p>Given the volatility in the energy market, scenario-based planning and forecasting is essential to determine a least-regrets development pathway. While we support the use of AEMO forecasts, we believe that DNSPs require the ability to create and use forecast data appropriate to their conditions.</p> <p>It is also noted that assumptions may differ across jurisdictions, for example, Victorian DNSPs have access to smart meter data, while similar levels of penetration of smart meters are not present in</p>

Queensland. As such, we suggest customer engagement should occur on the input assumptions as it does with the remainder of the regulatory submission.

Finally, it is unclear why a specific net present value analysis period of 20 year is required. We consider it should be up to DNSPs to identify and justify the analysis period.

Issue 4: How do determine the base case scenario

4. In what ways could DNSPs justify their assumed export limit in the base case scenario?

Energy Queensland considers that Section 5 of the Guidance Note provides sufficient guidance for DNSPs to determine an export limit. In the same way as the format of the business case and input assumptions, export limit assumptions should be left to DNSPs to determine and justify specific to each network.

5. Are there particular examples where DER adoption forecasts may vary between the base case scenario and the investment case?

Energy Queensland believes there are circumstances where an investment would result in such a significant step change in export capacity that it would materially change the likelihood of DER integration from customers. Examples of this may be for long rural and regional networks where there may have been constraints on export which may have been a consideration for DER investment by some customers in these areas.

Issue 5: Guidance for assessing hosting capacity

6. Do you agree with the proposed criteria for undertaking hosting capacity assessment?

Energy Queensland broadly agrees with the methodology proposed by SAPN. However, we consider that some jurisdictional differences may apply, therefore technical refinements to the modelling methodology could be required.

7. Are there other examples of approaches that DNSPs could adopt to assess network hosting capacity?

Energy Queensland has no comment.

Issue 6: Quantifying DER benefits

8. Do you agree that the total electricity system is the appropriate system boundary for considering DER costs and benefits?

Energy Queensland is of the firm view that no additional financial burden should be placed onto all customers to address expenditure related to the use of DER which they may not benefit from.

As such, the total electricity system is the appropriate boundary for considering DER costs and benefits as wholesale market benefits that are attributable to all customers can only be considered using this as the boundary.

Issue 7: Wholesale market benefits

9. Do you agree that the methodology used to quantify wholesale market benefits should balance shorthand and longhand approaches?	Energy Queensland agrees that the Customer Export Curtailment Value (CECV) that will be derived by the AER is an appropriate method for calculating wholesale market benefits, and that DNSPs should be able to use other models or methodologies that are appropriate to their network. As the network evolves and changes in potentially unforeseen ways, flexibility will be essential.
10. Do you know of other examples of electricity market models or analysis tools that could be used by DNSPs to quantify wholesale market benefits?	Energy Queensland has no comment.
11. Do you have views on the AER's initial analysis and whether this approach could be applied in practice?	Energy Queensland has no comment.
12. Do you agree with the proposed principles for quantifying wholesale market benefits? Are there other principles that we should consider?	As minimum system load in the middle of the day reduces from growing uncontrolled PV installations, wholesale energy costs may no longer be appropriate to include as the only measure of generation costs. Increased system services costs (such as costs associated with the fast frequency market ¹) may also need to be considered as synchronous generation decreases. Energy Queensland considers these should be incorporated into the development of the CECV as part of that consultation.

Issue 8: Network benefits

13. Do you agree with the proposed methods for quantifying network benefits?	Energy Queensland cautions it is essential not to overstate the importance or feasibility of using DER to address network issues.
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¹ ERC0296 Fast frequency response market ancillary service <https://www.aemc.gov.au/rule-changes/fast-frequency-response-market-ancillary-service>

Issue 9: Environmental benefits

14. Do you agree with the proposed methods for quantifying environmental benefits?

Energy Queensland agrees that, given the bounds of the national electricity objective, the proposed methods for quantifying environmental benefits are reasonable.

Issue 10: Changes in DER investment

15. Do you agree with the proposed method for quantifying changes in DER investment?

Energy Queensland has no comment.