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Friday, 7 June 2024

The Hon. Chris Bowen MP
Minister for Climate Change and Energy
Department of Climate Change, Energy, Environment and Water
Industry House, 10 Binara Street,
Canberra

Submitted online: https://consult.dcceew.gov.au/offshore-electricity-infrastructure-framework-draft-til-guideline/

Dear Minister

DCCEEW offshore electricity infrastructure framework: draft transmission and infrastructure licence guideline

Transgrid welcomes the opportunity to respond to the Department of Climate Change, Energy, Environment and Water's (**DCCEEW**) consultation on the Draft Transmission and Infrastructure Licence Guideline and Application Content Guide as part of the Offshore Electricity Infrastructure framework. Transgrid and its affiliate Lumea, are keen to remain in collaboration with DCCEEW, Australian Energy Market Operator (**AEMO**) and relevant state government coordinating authorities on the commercial development of the declared offshore wind zones and related transmission infrastructure.

We share the Government's desire to accelerate the delivery of critical transmission infrastructure projects required to facilitate the transition to net zero emissions by 2050, whilst maintaining a secure and stable energy supply. Without urgent and sustained investment in new sources of electricity, and the transmission needed to connect it to consumers, there poses significant risks to reliability over the forthcoming decade.

Further to previous submissions made to DCCEEW in relation to proposed declared offshore wind areas, Transgrid believe that matters of importance in relation to offshore Renewable Energy Zones (**REZs**) are equally critical for consideration and coordination in relation to offshore electricity transmission infrastructure. The multiple interfaces of the subsea and platform electricity transmission infrastructure are complex both technically, commercially, and regulatory. This also includes additional complexity given it traverses Commonwealth and State waters as well as beach crossings before connecting into onshore transmission infrastructure.

This submission details our overarching views in relation to broader matters as well as specific commentary on the draft DCCEEW documents. The submission is sectioned out as follows:

- Social Licence
- System and Network Integration
- International Learnings
- Draft Transmission and Infrastructure Licence Guideline
- Draft Application Content Guide

Social Licence

Transgrid is committed to delivering the maximum benefit for local communities and businesses for transmission infrastructure projects. We recognise the integral role social licence plays into the success of these projects and take seriously the local targets and commitments our projects make to governments.

We strongly believe that real and genuine community and Traditional Owner consultation and engagement is paramount to a successful transition to net-zero. By striving for improving and maintaining social licence, our objectives are to:

- Deliver time critical transmission projects for electricity consumers across the National Electricity Market (**NEM**), with minimal risk of delay and community opposition.
- Minimise and mitigate any adverse socioeconomic impacts to communities and regions arising from our projects.
- Contribute to unlocking employment and economic development opportunities with our communities and regions in which we operate, whilst building lasting relationships and nurturing trust.
- Implement a cohesive and coordinated approach for Traditional Owner engagement and environmental protection requirements to minimise impact on cultural and marine ecosystems and disturbances to sea-based industries.

Transgrid understands DCCEEW is currently working on improving community support and social licence for all REZs. We are supportive of the parameters that assess these benefits, encompassing aspects but not limited to regional development, job creation, workforce training, local content, project emissions, grid security of supply and broader economic contributions at both State and Commonwealth levels.

The Australian Energy Regulator (**AER**) is currently undertaking a review on how to better integrate and account for social licence within the national framework. This review will further enhance the framework to accommodate for the activities and actions that are required to ensure there is an appropriate and effective level of stakeholder engagement and community acceptance. Further to measuring the impact on, and contribution of transmission projects to the Australian economy, we believe it is important to consider the following in the context of community acceptance:

- A coordinated approach during the planning and construction phases of the project, along with the integration of subsea cables leading to a multi-GW connection point at sea, minimising the amount of onshore transmission coastal crossings required and improve community acceptance.
- A comprehensive cost/benefit analysis into the procurement options for subsea transmission infrastructure, to ensure that consumers are safeguarded from paying more than necessary for the infrastructure.
- A detailed approach to extensive community engagement, particularly during the construction and deployment of infrastructure due to the substantial disruption to the environment and commercial operations.

System and Network Integration

Transgrid is eager to help DCCEEW and proponents effectively integrate offshore wind and load technologies into the NSW and Victorian (as applicable) onshore transmission infrastructure. We believe a coordinated development of offshore transmission infrastructure is essential to minimise environmental impact and the social impact to community. This may include joint planning activities.

To ensure energy security for major load centers (specifically in the context of NSW), and access to cheaper energy for consumers, we believe the following key planning considerations need to be considered:

- Installation of new infrastructure and upgrade existing infrastructure. There needs to be careful consideration of planning activities, which would take substantial time investment, to accommodate for any new offshore wind generation.
- Proposed offshore wind projects in NSW (typically 1-2 GW each) far exceed the current largest credible contingency in the NSW power system (~750 MW). A fault in a cable connecting a mega-offshore project to the transmission backbone could result in the sudden loss of a significant share of NSW's power supply, which could trigger frequency and voltage issues, with the potential for cascading failures and widespread power outages.

It will be essential to ensure the power system has sufficient reserve and redundancy provisions to maintain power system reliability and system security, including during maintenance. For further information on integration of offshore wind zones into the onshore transmission network, we refer to the August 2023 Transgrid Transmission Annual Planning Report[1].

International Learnings

Offshore wind is continuing to be a strong and growing renewable energy platform globally with technological advancements and commercial model evolution improving the reliability and cost efficiency for energy consumers. The Australian offshore wind market is well positioned to look at international offshore experience and implement significant step changes in the local market. This includes:

- Mature markets are trending towards coordinated planning of offshore infrastructure lead by governments, jurisdictional planners and Transmission Network Service Providers (**TNSP**), rather than "spaghetti-effect" proliferation of point-to-point radial connections led by offshore developers.
- Coordinated, shared-use infrastructure from the boundary of the commercial offshore wind developer's licensed areas across State and Commonwealth waters through to onshore connection hubs ('Integrated Approach') offers many superior benefits, including:
    - Increased market participation and contestability for infrastructure.
    - Reducing community impacts with fewer shoreline crossings and reduced land use impacts.
    - Improving power system reliability and resilience via limited number of TNSP operators.
    - Cost efficiency with fewer, scale-efficient connections, benefiting consumer bills.
    - Increased investor certainty in recovery of costs via methods like the current Australian Transmission Use of System (**TUoS**) charges.
- "TNSP-owned and operated model" for subsea transmission infrastructure leading to improved risk management, accountability, and reliability of an integrated onshore and offshore NEM system.
- Market benefits derived from coordination between offshore wind developers and transmission owners for the pooling and scheduling of construction materials and resources. The optimal design for offshore network topologies can be project and region-specific, given the infrastructure complexity and multi-disciplinary decision criteria involved. This is better delivered through transparent arrangements between participants.

[1] https://www.transgrid.com.au/tapr

Draft Transmission and Infrastructure Licence (TIL) Guideline

In relation to the published License Guidelines, we provide the following submission feedback:

7.1.1 (b) – possible inclusion of reference to "system strength services" in offshore BESS platforms, as well as possible inclusion of reference to "transform" for provision of offshore substation platforms.

7.4.2 – recommendation that evidence can be provided in an Application where an eligible person is still undergoing consultation and seeking approval from the Director National Parks (**DNP**), but can still able to make a TIL application prior to final authorization from DNP. This is so to ensure there is parallel progress in both DNP engagement and TIL approval as both may be lengthy processes to run in series.

7.5.7 – limits on the licence areas to a maximum of 3 x water depth is not feasible for shallower waters such as those situated in Victoria's Gippsland declared offshore wind area. These waters are typically <50m and as shallow as <20m. Large Cable Laying Vessels (**CLV**s) are required to install and service subsea transmission infrastructure. These CLVs can range 60m-170m in length and over 30m in beam. These vessels are required to have significant clear waters to safely maneuver and navigate within as part of the cable laying and maintenance activities. The license areas should consider having minimum widths suitable for these large vessels for specific construction, maintenance and decommissioning activities at times during the licence term. Similar 3 x water depth limitations for distance between subsea cables would not provide sufficient safe clearance between cables at certain seabed depths. As depths vary across the seabed, there would not be a uniform licence area, so it is recommended to also mandate uniform distances for practicality and ease of compliance. These comments also apply in relation to water depth references in clause 7.6.10 (d)(iii).

7.6.9 (c) – recommend that consideration be given to the skills and experience of the Board to deliver and operate offshore infrastructure "or other large infrastructure projects in Australia or internationally".

Draft Application Content Guide

In relation to the published Application Content Guide, we provide the following submission feedback:

- Refer to comments above in relation to references to "3 x water depth".
- Refer to comments above in relation to skills and experience of the business to delivery offshore infrastructure "or other large infrastructure projects in Australia or internationally".
- In certain circumstances financial information requested may not be relevant to the final investment decision of the transmission project and not included in financial model information provided in the TIL application.

Transgrid thanks DCCEEW for the opportunity to comment on the draft offshore electricity infrastructure framework documents and look forward to assisting DCCEEW to ensure all appropriate issues are considered as offshore transmission infrastructure is developed.

If you or your staff require any further information on this submission, please contact Zainab Dirani, Policy Manager, at zainab.dirani@transgrid.com.au.

Yours sincerely

Monika Moutos
General Manager of Regulation and Policy