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Northern Territory
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Sun Cable Response to Consultation Paper: Design of the capacity mechanism

Sun Cable Pty Ltd (**Sun Cable**) welcomes the opportunity to comment on the Northern Territory Government's Consultation Paper: Design of the capacity mechanism.

Sun Cable is developing the Australia-ASEAN Power Link (**AAPL**) to deliver competitively priced, dispatchable, high-capacity renewable electricity to the Northern Territory and Singapore markets.

Renewable electricity will be generated by a solar farm (**Solar Farm**) with a battery energy storage system (**BESS**) located near Elliot, NT. The Solar Farm will transmit electricity via a voltage source converter (**VSC**) to an overhead high voltage direct current (**HVDC**) transmission network. To meet overnight demand, surplus electricity generated by the Solar Farm will charge the onsite BESS.

In Darwin, a face-to-face VSC will transfer electricity to supply Darwin-Katherine Interconnected System (**DKIS**) loads. A BESS will be installed at the interconnection with the DKIS. This BESS will be largely dedicated to meeting contingency events during network faults that may occur on the DKIS or AAPL. Sun Cable is actively developing an early stage of this Darwin based BESS, to provide energy storage and ancillary services to the DKIS, after which the battery will be required to support AAPL operations.

Electricity will pass through the face-to-face Darwin VSC and be transmitted to Singapore via HVDC submarine cables, to a VSC in Singapore.

Sun Cable supports the Northern Territory in considering reforms to the Northern Territory electricity market to facilitate an increasing number of market participants and the adoption of emerging technologies in order to the support the Northern Territory Government's target of 50% renewable energy by 2030, while maintaining secure, reliable and least cost electricity for consumers and taxpayers.

In relation to the design of the capacity mechanism, Sun Cable makes the following submissions.

Renewable energy projects, such as the Solar Farm and BESS, have high capital costs, compared to non-renewable energy projects. Renewable energy project owners typically enter into long term offtake agreements in order to provide certainty of revenue (and therefore returns) for equity and debt investors. We understand that under the NTEM Priority Reform Program, the following is proposed:

(a) the required accredited capacity is calculated on a rolling four-year cycle; and

(b) the price will be subject to negotiation between generators and retailers with a published benchmark price by the Reliability Manager to inform negotiations.

Whilst Sun Cable understands that, in practice, long term forecasting of the capacity price is complex, a longer-term price signal is required to support and underpin investment in long-lived, high capital cost, renewable energy projects. Renewable energy projects can contract on a long-term basis with retailers; however, in the event of a retailer default, the capacity price baseline that will be established by the Reliability Manager is not clear in outer years. This represents a significant risk to high-capital renewable energy projects. The result of this will be higher cost of capital provided by debt financiers and therefore, higher electricity prices. There are numerous market solutions to support projects which may have a lifespan of 40+ years. We do not propose a specific solution here but ask that the design considers an arrangement that could provide greater long-term capacity price certainty.

Finally, Sun Cable also refers to the Issues Paper for Review of Essential System Services in the Northern Territory's Regulated Electricity Systems dated June 2020. Sun Cable supports the need to consider Essential System Services (**ESS**) in light of:

- Solar PV output which requires additional ESS to manage its higher level of volatility; and
- Retirement or replacement of gas-fired synchronise generation plants that currently provides ESS.

We understand that the design has proposed that "*the categorisation and definition of ESS would enable the costs of procuring these services to be unbundled and allocated on a 'causer pays' basis".* Sun Cable supports the causer pays principle as some system participants may not cause the need for as much ESS relative to their consumption. Under the current system, commercial and industrial customers in particular may be required to pay for a disproportionate amount of the ESS relative to their need.

If you wish to discuss any aspect of this submission further, please contact Andrew Coffey at andrew.coffey@suncable.sg.

Your sincerely

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