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Utilities Commission of the Northern Territory
GPO Box 915
Darwin NT 0801
By email: utilities.commission@nt.gov.au

Attention: Adam Hadley

Dear Commissioner

Submission in relation to RPS1101 Pty Ltd Generation Licence Application

Territory Generation (**TGen**) appreciates the opportunity to provide submissions in relation to the RPS1101 Pty Ltd (**Applicant**) application for a Generation Licence to construct, own and operate a 2 MW aggregated solar photovoltaic virtual power plant (VPP), with an associated 684 kWh of aggregated battery energy storage systems, on the Alice Springs electricity network (**Application**). The Applicant proposes to sell electricity primarily to the Alice Springs Town Council. The VPP is to be located across multiple premises owned and operated by Alice Springs Town Council, with any surplus electricity sold to other electricity entities holding a retail or generation licence.

TGen is generally supportive of VPPs as an orchestrated and more stable behind the meter solar resource, with behind the meter batteries as proposed. TGen has no objections to the Application, however notes the following:

(1) Alice Springs Power System has the most significant solar PV penetration in the Territory – Impact during low load periods

Alice Springs Power System has the most significant solar PV penetration in the Territory Power Systems. As a consequence the power system has been experiencing periods of decreasing demand on TGen's synchronous generation. This occurs either side of midday during the autumn and spring seasons when the ambient temperatures are moderate and there is little requirement for air conditioning or heating and the solar PV generation is at its peak. During 2019, the aggregated output of TGen's generators dropped as low as 8.1 MW, a record low.

TGen believes that there needs to be urgency placed on deploying other technologies to manage the stability of the power system during these low load periods than the current plant that is installed in the power system. TGen welcomes increased renewable energy but is concerned that the commissioning of the aggregated 2 MW of installations identified in this licence application will exacerbate this issue.

On occasion, during periods of low demand on TGen's generators or periods of variable solar generation, System Control has curtailed the large solar farm connected to the Alice Springs Power System to maintain stability of the power system. This is the only tool that System Control has available to manage system stability during these low load periods.

2 MW is very large for the Alice Springs System, and will need the ability for System Control to curtail particularly during periods of low system load, otherwise a reduction in TGen regulating machines online will be required as the TGen units will not be able to operate stably. Alice Springs load during lower demand is forecasted to go further down to 5-6MW. Refer to NT-Electricity Outlook Report 2017-18 UC report. If that happens, TGen will not be able to run four regulating machines as per current system control requirements for system load below 17MW (excl. Uterne).

If there are no other technologies to be deployed to manage the low system load periods in the short term, TGen respectfully requests that the installations identified in this licence application be required to be capable of being curtailed by System Control during the periods of low demand.

This process by the UC is the only notification that TGen has received in relation to this project and TGen does not have input into PWC's connection nor System Security processes. TGen has requested PWC to advise how it intends to accommodate TGen's concerns outlined above in processing the connection application that RPS indicate was submitted to PWC on 21 January 2020. TGen has also requested if PWC will be requiring the proposed development be capable of forecasting the capability of the virtual power plant as required under the new *Generator Performance Standards (GPS)*. Furthermore, under the GPS, TGen's understanding is that the Applicant will need to provide SCADA visibility and possibly control in certain circumstances to System Control. The PWC connection agreement should suitably address visibility and control issues.

TGen has raised concerns in the past. Please see at the end of section 3.3 of the following document: https://treasury.nt.gov.au/data/assets/pdf_file/0009/686808/Territory-Generation.pdf

(2) Generation Licence Application

The Applicant states that the Application is for a Generation Licence. However, the Application makes it clear that the Applicant proposes to supply electricity to a customer, namely, the Alice Springs Town Council. The Applicant might require a retail licence as well.

(3) Ancillary Services – capacity of BESS

TGen queries how the Applicant will contribute to the provision of ancillary services currently undertaken by TGen even though the proposed Battery Energy Storage System (BESS) may be present only to maintain steady predictable outcome. It may help with voltage control, but it is unlikely to fully address the issue of spinning reserves. Such a small system is unlikely to provide the spinning reserves required over long periods in which the VPP is operating during the day. Hence, the battery storage capacity and how long it can provide the support should be acceptable to System Control and should not result in additional spinning reserve requirement from TGen. Moreover, with the project being mostly for supply to the Alice Springs Town Council with only excess exported, there will be very little payment by the Applicant for ancillary services.

TGen welcomes a discussion with the Applicant, as well as the Utilities Commission and other electricity entities to appropriately address this matter.

(4) Project Description

As the Applicant has not provided details of its project / not made publicly available, and more importantly, on the nature, capacity and type of batteries that are to be installed, TGen is not in a position to understand the details of the Applicant's proposed project and how it will impact on TGen's operations.

(5) Gentailer

TGen notes that the Applicant is proposing to carry out functions of a generator and a retailer. As such, the approval of this application will mark the first active 'Gentailer' entrant to the Alice Springs power system. It is unclear how the market rules in the Northern Territory electricity market will deal with pricing that may lessen competition which would inevitably result in increased electricity prices for consumers. May also require changes to the technical codes to deal with these developments.

(6) Stand-By Power Arrangements

TGen queries how the Applicant will meet its market customer peak demand at all times and if stand-by arrangements with TGen will be required. The matters raised in paragraph (3) above, will affect the likelihood and magnitude of such stand-by power arrangements. TGen welcomes a discussion with the Applicant, as well as the Utilities Commission and other electricity entities to appropriately address this matter.

(7) Impact of cloud cover

The Applicant has indicated that the VPP is to be located across multiple premises owned and operated by Alice Springs Town Council. This will still mean the sites are relatively close to each other. All the panels being close will mean that clouds will likely affect all or none of the output making it potentially very intermittent.

The Uterne solar facility is also within the Town Council area. Putting more solar energy into a centralised area makes the issue of localised cloud cover an issue.

(8) Costs – ancillary services

There is no market mechanism to recover TGen's actual costs for ancillary services. TGen's ancillary services costs are likely to go up because of this project. Hence, TGen respectfully requests that the Applicant makes arrangements with TGen and the regulators for a suitable solution so no party is adversely affected. May also require code changes to capture costs for ancillary services in the Alice Springs Power System.

T-Gen would welcome further consultation with the Applicant, Utilities Commission and other electricity entities.

If you have any queries or require further information please do not hesitate to contact Hieu Nguyen on (08) 7979 2509 or at hieu.nguyen@territorygeneration.com.au

Yours sincerely



David Brown
Chief Executive Officer

24 March 2020