MEDIA RELEASE – 22 June 2017

Renewables Game-Changer for Alice
Battery Energy Storage Project Gets Green Light

Government-owned corporation Territory Generation has today announced one of the game-changers in the transition to renewable energy for Alice Springs and the Northern Territory.

T-Gen CEO Tim Duignan said the announcement of Vector Energy as its preferred supplier to install a 5MW Battery Energy Storage System (BESS) would change the face of Alice Springs as it transitions to a renewable energy future.

The 5MW battery energy storage solution – at this stage understood to be one of the largest grid-connected storage solution in Australia – is primarily being installed for generation stabilisation, and is timed to coincide with the shift from the ageing Ron Goodin Power Station to the upgraded Owen Springs Power Station at the end of 2017.

"This Energy Storage system, along with our new machinery at Owen Springs, heralds a new era of power supply for Alice Springs," Mr Duignan said. "We're replacing aged electricity generators with the latest equipment, to provide efficient and reliable power supply, drive down the cost of producing electricity and to support a transition to renewable energy."

The BESS will be used to provide improved power generation reliability for the region, by assisting in smoothing the output of Territory Generation's solar power during cloud cover events.

"There is significant expectation from industry, business and the community in Alice Springs to increase solar penetration on the grid, however without storage to smooth the solar output, there is limited opportunity to integrate further solar without impacting on grid stability," Mr Duignan said.

"Reliability of base-load power is a major issue in Australia at the moment and these new technologies are an important step to ensuring reliability in a controlled transition to renewables. Vector Energy's comprehensive solution will integrate into our existing system and is one of the reasons we have chosen them. Ultimately it will assist in supporting the system to be able to increase the solar profile in Alice Springs."

Territory Generation has undertaken extensive modelling of the Alice Springs grid with its new generators at Owen Springs Power Station, engaging consulting engineers Aurecon to provide the technical advisory services for the development of the BESS project.

"The system to be installed has the ability to augment the storage capacity with further batteries in the future, which is a game changer for the energy generation industry in the NT. We hope this is the first of many similar solutions and by proving this technology, Territory Generation is building the case for other renewable energy generation and energy storage solutions into the future," Mr Duignan said.

Vector CEO, Simon Mackenzie, said he's excited that TGen has recognised Vector's experience and skillset, to partner with them on this significant project. "New technologies allow systems to be tailored to solve customer needs, much like the unique challenges and aspirations of the Alice Springs network. When completed it will be one of the two largest grid-tied battery storage projects in Australasia, both delivered by Vector," he said.

Modelling determined that the total cost of the wider Alice Springs Battery Energy Storage System Project – at $8.3m – would, on a simple payment basis, be recouped within 4-5 years due to the efficiencies and savings realized.

The Energy Storage System is expected to be complete by late 2017.

**Further information and images attached*

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FACT SHEET – Battery Energy Storage Solution (BESS)

Project background

Territory Generation has been investigating energy storage technology solutions for some time, as part of its major projects to replace ageing machinery in Alice Springs in an effort to assist with generation stabilisation.

A relatively large amount of thermal spinning reserve is required to counter solar intermittency and provide backup for other contingency events. This is inefficient, expensive and consumes fossil fuels.

Alice Springs has a highly variable load profile and a high penetration of solar PV on the network. Solar generation is at its peak mid-afternoon, which does not necessarily coincide with evening peak demand.

The intermittent nature of solar generation due to cloud cover causes rapid ramping up and down of thermal plant, and these sharp changes on the network can cause frequency instability, which can lead to load shedding.

Greater solar PV penetration without technological enablers (eg storage) will exacerbate these issues.

An expression of interest (EOI) process was undertaken in October 2017. Tenderers were shortlisted and selections occurred in March 2017.

Storage solution

- 5MW total storage capacity for 40 minutes
- Includes capacity to 'absorb' overloads into the system up to 7.5MW for 60 seconds
- Can assist to prevent major or widespread outages

Location

The BESS system will be located at the Sadadeen Valley, connected to the Sadadeen Substation.

Images of the storage solution

Images are attached and to see a video overview of the Vector solution, please go to:
https://player.vimeo.com/video/210792675?title=0&byline=0&portrait=0

About Aurecon

Aurecon provided technical advisory services to Territory Generation for the development of the Battery Energy Storage System (BESS) Project. Its deep expertise in emerging technologies enabled them to develop an optimised BESS concept to help improve grid stability, reduce spinning reserve and fuel costs, defer transmission system upgrades and enable greater solar PV penetration in Alice Springs.

Aurecon's services include dynamic grid modelling, project concept development, expression of interest process, functional specifications and RFP documents, tender evaluation and contract negotiations. Aurecon has previously partnered with Territory Generation on the Owen Springs and Tennant Creek Power Station Upgrade projects.

About Vector

Vector Energy, part of the Vector group, offers end-to-end Battery Energy Storage and hybrid renewable energy solutions in Australia. We are working on opportunities in the commercial, utility and off-grid sectors, to partner with businesses to create a new energy future.

- New Zealand's largest distributor of electricity/gas, owning and operating networks in the Auckland region
- Smart metering business (more than 1 million meters) throughout NZ, expanding into Australia in 2016
- Build, monitor and maintain fibre network for fast, reliable and secure data networks
- Strong record of health, safety and environmental leadership, and a focus on diversity and inclusion

For further information about Vector Energy, please visit www.vectorenergy.com.au.
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