



11 December 2020

ASX:14D

Aurora business case projects up to \$60m annual net revenues

1414 Degrees Limited (ASX:14D) (**Company**) is pleased to report a positive business case for development of the first stages of its Aurora Solar Energy Project on the National Electricity Market (NEM).

The Company engaged independent consultants to model spot energy prices and Frequency Control Ancillary Service (FCAS) revenues from the operation of a hybrid power plant comprising 70MW of solar PV with a 70MWh/70MW battery (BESS) on the high voltage transmission line to the Davenport substation in Port Augusta. The hybrid plant simulations were then extended to include a 1414 Degrees 1GWh/42MW Thermal Energy Storage System (TESS) operating with the BESS and PV. Each device has separate inverters and operates through a Power Plant Controller to optimise dispatch of solar PV, BESS and TESS to the transmission line. The BESS and TESS charge and discharge with grid electricity or from the PV. Capital cost of the first stage of development, including inverters, substation and connection to the high voltage transmission is estimated at A\$199m.

According to volatility in any particular year, net revenues from operating in the NEM spot market could range between A\$25m and A\$30m for the PV-BESS stage. The projected net earnings almost double with the TESS, ranging between A\$45m and A\$60m. Net earnings include provision for plant operating costs estimated up to A\$3.5m for the project when all devices are operational. Electricity markets are volatile and may be greatly influenced by policy changes so these earnings estimates are indicative.

It is the Company's view that policy and energy market trends are increasingly favourable for projects with energy storage, and the TESS business case assumes some revenue from the provision of long duration synchronous storage and generation. In contrast to a gas peaker plant, the TESS can also profit from both low and high price markets. However, the business case as modelled is not yet optimised for the TESS because the unique operational characteristics of the TESS with the BESS and PV require 1414 Degrees to create its own dispatch model to optimise the revenues from FCAS during charging and revenues from the provision of long duration storage and discharge with inertia. The new dispatch model to be built over the next 12 months will allow optimisation of TESS sizing, cost, and revenues to accommodate current and future market trends. It is anticipated that there will be substantially higher price volatility and new market mechanisms in place for supporting long duration storage, further supplementing TESS revenue from arbitrage, FCAS and derivatives (e.g. price caps). The ~1GWh TESS is scheduled to be commissioned in 2028 when the increasing requirement for long duration firmed generation is projected to result in favourable pricing signals. In addition to electricity storage, the TESS can supply substantial additional thermal energy that could be monetised but is not included in the current Aurora Project business case.

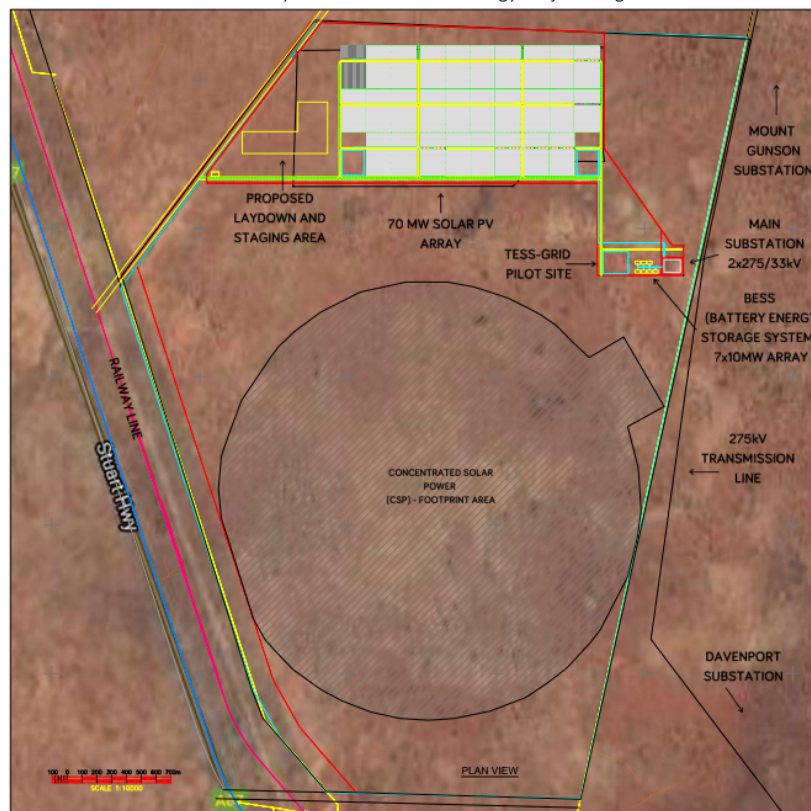
1414 Degrees TESS includes its new scalable SiBox thermal energy storage technology coupled to a turbine-based energy recovery system (ERS). The TESS is capable of charging either from the grid or the

on-site solar generation. This creates remarkable flexibility to service regulation and contingency FCAS markets and buy and sell energy on the NEM according to price signals. The bundled long duration storage and generation capacity would enable the fully developed project to sell more competitive power purchase agreements (PPAs), financial derivatives and grid support services under proposed regulatory market changes.

An alternative operating regime bundles the selling flexible power purchase agreements is not considered in the current model because large-scale energy storage that can charge from, and regenerate to, the grid at high current will operate to advantage with price signals for energy and ancillary services. In addition to the modelled scenario the Aurora Project site has potential to install more solar PV and/or concentrated solar (CSP) generation, both of which could be firmed through the TESS-GRID to provide competitive PPAs.

Approximately 12 months after commissioning the first stage PV and BESS, the Company intends to commission and test a TESS pilot of 75MWh/2MW capacity using its new SiBox storage. Following verification of its operational performance in the pilot the 1414 Degrees TESS-GRID could be expanded up to several GWh providing 100-150MW of long duration electricity generation. The large energy storage capacity will contribute to supply security in the National Electricity Market to meet the challenges of increasing intermittent renewable generation.

Indicative layout of Aurora Solar Energy Project Stage 1:





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ABOUT 1414 DEGREES LIMITED

Reliable renewable energy needs low cost long duration storage. 1414 Degrees has developed high temperature thermal energy storage technology to harness the high energy density and storage capacity of silicon. Its technology is clean, locatable, modular, and scalable. The technology secures renewable electricity and enables high temperature process heat users to decarbonise.

Following the successful development of its electrically charged TESS demonstrator, and commissioning of its pilot biogas charged GAS-TESS at SA Water's Wastewater Treatment Plant, the Company is progressing product development and commercialisation. Through its subsidiary SiliconAurora 1414 Degrees is developing the Aurora Solar Energy Project, a dispatchable renewable energy park in Port Augusta, South Australia.

For more information please visit www.1414degrees.com.au