

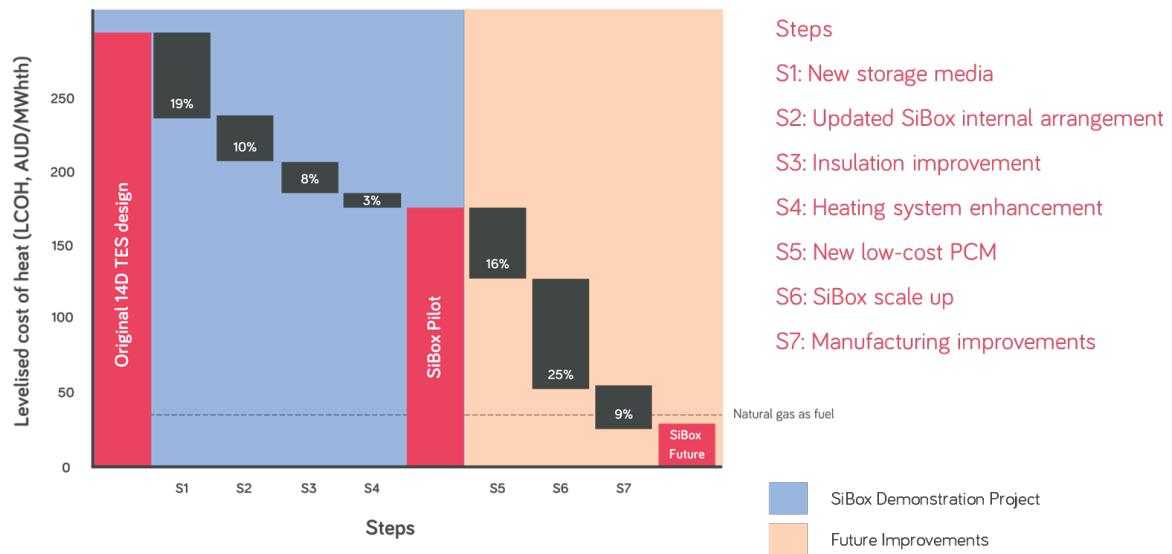
SiBox Commercialisation Pathway

1414 Degrees (ASX:14D) is pleased to report that it has identified the pathway to commercialise its modular SiBox technology and will build a demonstration module. This follows twelve months of testing of SiBox storage media under a variety of operating conditions in laboratory furnaces.

SiBox is the latest generation of 1414 Degrees proprietary silicon based thermal energy storage technology. The demonstration module will accelerate the commercialisation of SiBox as a competitive clean energy product; advance the Technical Readiness Level (TRL); and provide confidence to large scale industrial and utility customers. The module is designed to be replicable to build any scale of energy storage device.

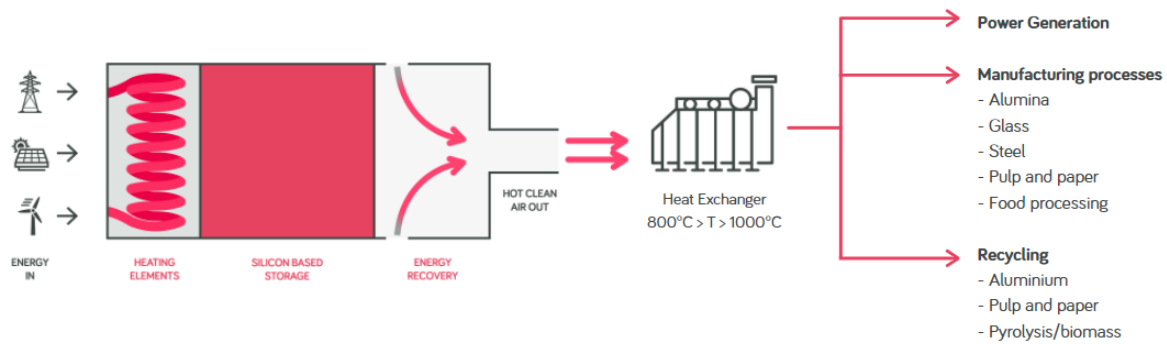
The \$2m 1 MWh demonstration module is scheduled to be commissioned in September 2022. A comprehensive test program will enable the Company to build a multi-module 75 MWh commercial pilot, scheduled to be commissioned in 2025, as previously announced. The Company is progressing partnerships and grants for the full commercialisation process.

Successful delivery of the project will initiate a cost-effective pathway to future integration into industrial applications as shown in the SiBox cost reduction pathway below.



About the technology

14D’s SiBox technology harnesses the exceptionally high latent heat of molten silicon to store energy in the form of high temperature heat. SiBox presents a paradigm-shift in how thermal energy is stored and recovered. The heart of the SiBox technology is a robust storage media solution that protects the silicon-based phase change material from degrading, while storing and transferring heat efficiently and cost-effectively. SiBox consists of modular sections of the new storage media, heating elements and a heat exchanger to recover the stored thermal energy in the form of hot air in a closed loop.



14D SiBox: how it works

Single product

The SiBox module is designed to be tailored for specific applications with minimal design or operational changes, providing the potential to fast-track commercialisation with a single product capable of servicing multiple heat and/or electricity applications.

Decarbonising

SiBox offers a unique solution to the challenge of decarbonising heat: it can use intermittent renewable energy sources to produce the high temperature heat needed by industry, with the temperature able to be customised for different applications.

SiBox's operating temperature of more than 1000°C far exceeds the capabilities of current commercial TES alternatives, such as molten salts (<600°C). Most high temperature process heat >800°C in Australia (730 PJ/y) is provided by fossil fuels such as natural gas, coal and diesel. SiBox is the only close-to-commercialisation technology capable of decarbonising this industrial sector.

In addition to ultra-high temperature heat, the output from SiBox also facilitates long duration renewable electricity storage to enable the clean energy electricity networks of the future.

Competitive

Globally energy suppliers and users are grappling with how to adjust to and manage the energy transition with least cost and least risk. Validating the technical and commercial advantages of SiBox with the demonstration module will give manufacturers and networks the confidence to innovate and adopt a new technology. Reliable energy in the form of heat or electricity is crucial for their successful operation in competitive markets, being able to view, monitor and test a SiBox module at actual scale and operating conditions, will enable them to invest in subsequent large-scale deployments and enable 14D to progress commercialisation of SiBox as a clean energy product.

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ABOUT 1414 DEGREES LIMITED

1414 Degrees is developing and commercialising its silicon-based thermal energy storage technology, SiBox™ to enable a clean energy future. The Company's vision is to harness the extremely high latent heat capacity of silicon and firm intermittent renewables to provide high temperature heat 24/7 for large industrial applications and energy storage to deliver reliable electricity.

The Company has implemented demonstration pilots which have led to the refinement and evolution of its technology. SiBox™ is the next generation based on the learnings and complementary R&D.

In 2019 the Company made the strategic purchase of the Aurora Energy Project (AEP) located near Port Augusta, South Australia. The immediate focus of the project is to develop a hybrid power plant to generate revenues for 1414 Degrees to further develop its core SiBox™ technology. Once ready for commercialisation, the AEP site will allow 14D to pilot and demonstrate a grid-scale version of the SiBox™ technology.

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