

SIBOX SILICON STORAGE MEDIA REVEAL

1414 Degrees Ltd (ASX:14D) is pleased to announce that its silicon storage media was heated to 1414°C in the SiBox Demonstration Module and is ready for operational cycle testing.

On reaching this milestone, and with a patent pending, the company can reveal its storage media product is a high energy density brick, currently termed 14D BRICK, composed of silicon alloy. Its unique thermophysical properties can be used for supplying a constant temperature hot air stream in the range 800°C - 1200°C.



14D BRICK wall in the SiBox Demonstration Module

The 14D BRICK is the only product that can supply stable heat in this range to replace burning fossil fuels in industrial processes. It does this by effectively harnessing the very high latent heat of silicon at melting point. This is a milestone achievement for 1414 Degrees' technical team because it does this in the presence of air that has previously proven to be very destructive of silicon storage media.

1414 Degrees executive chairman, Dr Kevin Moriarty, said "Our engineers and scientists have put in a remarkable effort in the past three years to get to this point. It has been made possible by substantial grants from our technology [partners](#), including the Australian Government through its [Modern Manufacturing Initiative](#). The next milestone will be demonstrating long-term stability in multiple cycling tests within our SiBox module."

The size and shape of the 14D BRICK can be varied to requirements. As the picture shows, in the current demonstration module the bricks form walls that could be extended upwards and lengthwise to increase storage to larger scale. The next commercial stage will be 20 to 100 times larger to supply heat to an industrial process. The company is currently in discussions with end users in the minerals and cement production industry to determine process design requirements.

Future models of 14D BRICK are being developed for mass production in the global \$32bn refractory manufacturing industry. A European refractory manufacturer has been assisting in the development of our brick for several years.

We will be asking shareholders and interested parties to participate in selection of a name for the 14D BRICK that can be trademarked.



14D closed SiBox Demonstration Module and team

AUTHORISED BY:

Dr Kevin Moriarty, Chairman, on behalf of the Board of Directors

+61 8 8357 8273

ABOUT 1414 DEGREES LIMITED

1414 Degrees is developing and commercialising its silicon-based thermal energy storage brick and thermal energy storage technology, SiBox™, to deliver high temperature carbon free industrial heat. SiBox will harness the extremely high latent heat capacity of silicon in its proprietary storage system. This will enable intermittent renewables to provide flexible, ultra-high temperature heat 24/7 for large industrial applications and to deliver reliable heat and power supply when required. It is envisaged that the flexibility of the SiBox™ modular development concept will also provide energy customers with the ability to optimise their energy systems in a way that maximises their utilisation of cheaper renewable power and simplifies their purchasing from wholesale energy suppliers.

The Company commissioned a demonstration module of the SiBox™ technology in 2022 which will accelerate the commercialisation of SiBox™ as a competitive clean energy product. The Company has previously implemented pilots which have led to the refinement and evolution of its technology.

In 2019 the Company made the strategic purchase of the Aurora Energy Project (AEP) located near Port Augusta, South Australia. The focus of the project is to develop a long-term renewable energy project delivering reliable electricity to the region and NEM. Once ready for commercialisation, the AEP site will also allow 14D to pilot and demonstrate a large commercial scale version of the SiBox™ technology.

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