

## **New UK designed OakTec Hydrogen Engine launched at All-Energy 2019**

Clean engine development company OakTec is to give the first public showing of its exciting new hydrogen fuelled engine at the All-Energy Show in Glasgow on May 15<sup>th</sup> and 16<sup>th</sup>.

Labelled the Pulse-R Zero this novel prototype research engine, which burns hydrogen gas and produces only water vapour in the exhaust, is a spin-out from an Innovate UK funded Energy Catalyst project that is developing clean, gas fuelled engines to provide power from waste in off-grid communities in Africa and Asia.

Commercial Director Tom Harrison from OakTec explains. “ Within our Innovate UK funded projects, we have gained extensive knowledge around clean, efficient combustion of gas fuels. We have always believed that our Pulse-R technology would be perfect for efficient hydrogen combustion. We were getting lots of interest from UK and EU renewable hydrogen projects and the construction and testing of a new prototype allowed us to run a series of tests using hydrogen. The results were really remarkable! The engine ran like a production unit within minutes of it first starting and showed amazing power flexibility and absolutely no harmful emissions when the fuelling was calibrated correctly.”

OakTec believes that Pulse-R Zero will be the start of an exciting and potentially huge new commercial opportunity for the company.

Tom continues; “Combustion engines still have a great future with clean gas fuels. Much of our current work is with bio-gas engines to provide global energy access from waste, but the new hydrogen opportunity is potentially transformational. Hydrogen aligns with a zero carbon economy. It is abundant and is now being produced as an energy storage medium from surplus renewable generating capacity such as offshore wind. In production, our engine would be a fraction of the cost of a fuel cell and can use lower grade hydrogen produced from a range of sources, or a combination of hydrogen with other gas fuels. We have some great ideas for large scale commercial applications, and are now seeking projects and funding to develop the engine further and demonstrate it to early adopters”

The new OakTec 5kW hydrogen engine could be used in place of any similar sized petrol or diesel unit for items such as generators and power equipment. It will be on display at All-Energy on the European Marine Energy Centre (EMEC) stand (ORK12) on Wednesday and with UK Research and Innovation (stand K40) on Thursday.

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