
First Graphene and ZEBCO to Develop Graphene-enhanced Heating Device

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First Graphene will be developing and marketing a unique heating device using its PureGRAPH graphene, along with UK-based ZEBCO Heating. The parties have signed a joint development agreement (JDA) to develop the device, which is suitable for new installations or retrofitted into existing domestic and commercial heater systems.

ZEBCO has secured an initial \$87,000 grant from Innovate [UK](#)'s Fast Start Innovation Fund to fund feasibility studies and develop a proof-of-concept unit within the next six months. The device is expected to deliver energy efficiency savings, reduce greenhouse gas emissions, and be an enabler to more resilient and secure domestic heating supply.

[First Graphene](#) managing director and chief executive officer, Michael Bell, said: "This agreement with ZEBCO is an important step towards improved gas-energy efficiency, at a time when global natural gas supplies are under incredible pressure. The technology is reliant upon the unique thermal properties of our PureGRAPH products. The science is proven and the focus is now on rapid development of a working prototype for evaluation and commercialization with leading players in the heating and utilities sector. This technology presents yet another application for First Graphene's diversified opportunity pipeline."

The graphene-enhanced heating tech is expected to improve natural gas usage by 20-30% over current domestic boilers. Also, because of the nature of the device, nitrous oxide (NO_x) and carbon monoxide emissions are reduced or eliminated, which is important considering NO_x has a Global Warming Potential Factor that is 300 times higher than carbon dioxide.

The device is also compatible with hydrogen gas as a fuel source, which makes it a key enabler for the growing hydrogen economy.

First Graphene and ZEBCO have already initiated discussions with leading [UK](#)-based utility companies and heating system suppliers to explore commercial opportunities for the new technology.

Read the [original article](#) on Graphene Info.