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## **CASCADE TECHNOLOGIES TO DESIGN NEW EMISSIONS MEASUREMENT TECHNOLOGY FOR BP**

Cascade Technologies has secured a technology licensing deal with BP, valued at in excess of £4million to the company over the next three years.

The partnership will see Cascade Technologies, the world leader in the application of quantum cascade lasers (QCL), exclusively design and supply emissions monitoring systems for use in the marine industry.

BP Marine, a subsidiary of the energy giant, has invested in Cascade Technologies for access to the advanced QCL system. Cascade will be providing on-board technical support to approve the laser-based analyser system.

Krystallon – a joint venture between BP Marine and Kittiwake established to develop innovative pollution abatement methodologies – will supply the sensors develop the data recording and data transmission systems. The QCL technology is lightweight, rapidly installed, virtually maintenance-free and has capabilities to measure greenhouse gases, including carbon dioxide, nitrogen oxides (NOx) and sulphur dioxide (SOx).

John Fuller, chief executive of Cascade Technologies, said: "We are excited at the prospect of working alongside BP to develop this new application for our ground-breaking technology, which will allow BP to measure emissions more quickly, accurately and cost-effectively.

"Cascade Technologies developed and patented the world's first real-time technology for the detection of emissions, as well as gas and explosives compounds, through its revolutionary use of QCLs. This technology offers unprecedented levels of sensitivity and the ability to quickly analyse complex gases in harsh industrial environments.

"Its highly portable and robust nature has enabled it to be applied in a number of new and previously unavailable areas."

The deal with BP was struck in response to the introduction of sulphur emission control areas (SECAs), which set limits on sulphur oxide emissions from ship exhausts. Furthermore, recent maritime legislation limits the emissions of oxides of nitrogen from ship engines, as well as deliberate emissions of ozone-depleting substances.

BP Marine believes that the new technology will help the shipping industry

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demonstrate compliance with regulations governing the emissions of NOx, SOx and future more stringent in-port requirements of the European Union. Today all ships must carry an International Air Pollution Prevention certificate, (IAPP), which certifies that the ship is in compliance with the International Maritime Organisation's requirements, whilst from the 1<sup>st</sup> January 2010, the European Union requires that all marine fuel used in EU ports must have a sulphur content of less than 0.1 percent.

Don Gregory – Director, Environment and Sustainability at BP Marine – said: "BP Marine has led the field in supporting this pioneering work; it underlines our commitment to a sustainable environmental approach for our customers to manage emissions from ships. The first step in managing emissions is to be able to measure emissions. Cascade's technology enables practical and reliable continuous emissions monitoring of marine diesel engines and boilers to be achieved.

"Since the turn of this century, BP Marine has a track record of seeking and delivering ways for our customers to monitor and manage emissions reductions from our products, (marine fuels). We remain committed to leading the industry in the creation of technology that will make the use of our products safer for the environment."

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**Notes to editors**

- **Cascade Technologies** uses its revolutionary, patented core technology – based around the application of Quantum Cascade Lasers – to design, develop and supply innovative solutions for a wide range of global markets. These include the monitoring of greenhouse and general industrial emissions, hazardous gases, and explosives and drugs. Based at Stirling University Innovation Park, Cascade Technologies currently has world-class scientists and engineers working under development and supply agreements on several revolutionary products for key blue chip clients, whilst further bespoke product development, manufacturing, marketing and distribution agreements are being sought with customers worldwide. The company's technology provides highly specific and sensitive measurement, whilst its portable size offers cost savings compared to competitive offerings. It is also immune to many outside influences that typically affect sensors of this type.

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