



Developed and patented a hybrid based ocean current energy conversion system with integrated energy storage – the Subsea Power Hub

Enables electrical power to be provided to remote locations

The device is unique in that it can generate energy as well as store energy through an intelligent energy management system.

Short payback period

Product can be refurbished and upgraded

EC-OG Innovation

Technology provider in the energy industry based in Aberdeen, EC-OG have developed and patented an ocean energy conversion system – the Subsea Power Hub (SPH). The SPH is a subsea hybrid drive that uses a combination of a marine energy converter coupled directly to a lithium based energy storage system.

The Innovation Award recognises businesses that have developed innovative technologies, products, practices or services that bring environmental and business benefits. This category highlights the ability of businesses to encourage sustainable consumption, reduce environmental impacts and create new business opportunities. The judges found that EC-OG had a strong commitment to sustainability and felt that EC-OG were deserving of the innovation award

Winner of the Innovation Award 2017

Sponsored by Scottish Power

The SPH is unique in that it uses new and cutting-edge turbine technology as well as integrating innovative battery technology. This means that energy can be converted, delivered as well as stored in subsea environments.

An innovative feature of the SPH is that it is fully independent with inbuilt energy storage, intelligence, power conditioning and a power conversion efficiency which is 170% of that previously thought possible. It can function in a range of flow conditions to allow it to be used in a variety of locations.

The system has a long life cycle of 20 years and only needs to be maintained every 5 years.



The SPH has potential applications in the oil and gas sector, and can be applied to other areas e.g. power for remote environmental monitoring, alternative to diesel generators. There is also potential for the SPH to provide power in remote areas in particular for island communities.

Despite operating in the North East of Scotland economic downturn, the company has successfully attracted investment and created high value jobs.

Richard Knox, Managing Director at EC-OG, said: "We are delighted to have won the Innovation award at this year's VIBES – Scottish Environment Business Awards. This is a real honour for the EC-OG team who have worked hard to quickly advance the Subsea Power Hub's development. We are proud that we are bringing to the market, a device which reduces the environmental impact of producing electrical power. The VIBES – Scottish Environment Business awards sets a precedent for making Scotland a more environmentally sustainable place to do business, I would strongly encourage other companies to get involved."

