



## PRESS RELEASE

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### **FlanSea (Flanders Electricity from the Sea) starts 'Blue Energy' research project.**

**With the financial backing of the Flemish Agency  
for Innovation by Science and Technology (IWT)**

Ostend – 1 December 2010. This morning, on the premises of the 'AG Haven Oostende' on Esplanadestraat in Ostend, a cooperative agreement is being signed by the University of Ghent and six Flemish enterprises, signalling the start of the FlanSea project – a so-called "blue energy" project that, in the future, is meant to ensure the sustainable and reliable production of electrical power based on wave energy. In support of its endeavours, the FlanSea research project has received a subsidy from the IWT in the amount of EUR 2.4 million.

The diversity and experience of the partners in the project team ensure that the individual fields of expertise will be efficiently and effectively deployed to bring this project to a successful conclusion. The cooperative agreement FlanSea was started at the initiative of the University of Ghent and also involves the enterprises AG Haven Oostende, DEME Blue Energy, Electrawinds, Cloostermans-Huwaert, Spiromatic and Contec.

Within the context of the FlanSea project, which is to run for three years, a wave energy converter will be developed for use in wave action experienced in moderate climates such as commonly found along the Belgian coast. During the third and final year of the research project, a wave energy converter will be constructed at approximately 1 km outside of the port of Ostend to be used for intensive monitoring activities. This wave energy converter will feature all sorts of different measurement and registration devices meant to provide scientists, on the one hand, with insights into the production capabilities (efficiency) and, on the other, with knowledge of the degree of resistance of the system to prevailing conditions – the so-called 'survivability' of the system.

The ultimate goal is the development and the production of robust, efficient, and sustainable wave energy converters for moderate climates that will in mass production be cost-competitive with other renewable energy sources, such as offshore wind generated energy.



The FlanSea wave energy converter is based on the so-called “*point absorber*” technology. These *point absorbers* are complex buoys that keep in synch with the motion of waves, whereby the motion of these buoys vis-à-vis the seafloor as a fixed point of reference generates the production of electrical power. With the FlanSea buoy, the generator will be mounted on/inside the buoy itself. Moreover, inside the buoy there is a special winch with a cable coiled around it. The other, far end of the cable is fixed into the seafloor. The buoy will use the rising and falling motions of the waves to wind or unwind the cable on the winch, thus to produce electrical power (see illustration).

The project team anticipates that this research study will in the long term lead to the installation of several wave energy converters in parks out at sea. Likewise, the installation of these converters in offshore wind farms amongst the wind turbines is considered one of the possibilities, thus allowing optimal use of the limited available space at sea to increase the production of offshore electrical energy. When placed among the wind turbines, there exists, in fact, a favourable synergy between both types of renewable energy sources, enabling optimal usage of the electrical infrastructure.

The project applicants are delighted to hear about the positive decision by the IWT to give the FlanSea research project their financial support.

This project will offer our country additional possibilities and opportunities to meet its European objectives in the area of renewable electricity production as established by the EU for 2020. Moreover, the project provides renewed stimulus for the development of Flemish technology and ensures the capability to produce and operate energy sources and facilities in its own and, likewise, in foreign waters, resulting in additional employment for Flemish workers within the growing sector of renewable energy.

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