



Open call	CENIT 2010
Funding body	CDTI
Duration	2010-2013
Budget	€25,200,000
Partners	

PROJECT DESCRIPTION

To generate knowledge to develop a large-capacity offshore wind generator (15 MW) in 2020 and overcome the challenges that are currently keeping offshore wind energy from taking off, such as efficiency, availability and energy and investment costs. To research for systems to harness offshore wind energy and convert it into electric energy; structures, construction, operations and maintenance, and integration into the electrical system.

SCOPE OF TR'S WORK

Zinc-air redox flow batteries

To research on the potential of zinc-air redox flow batteries for large-scale energy storage and for integrating offshore wind energy into the grid. This new technology is characterised by its low cost, safety and respect for the environment.

To develop new electrodes, membranes and electrolytes

To investigate on the process of zinc electrodeposition in alkaline mediums, to develop new catalysts and electrodes for the reduction and evolution of oxygen and ion transport membranes, to model and to simulate electrochemical and hydrodynamic processes.

To fine-tune a test bench for redox flow batteries

To design and to construct a test facility for the validation of the new components and integrated system versus real operation profiles.