

Project:

WAVEROLLER®

LOCATION:

Peniche, Portugal

YEAR:

2015-2016

CLIENT:

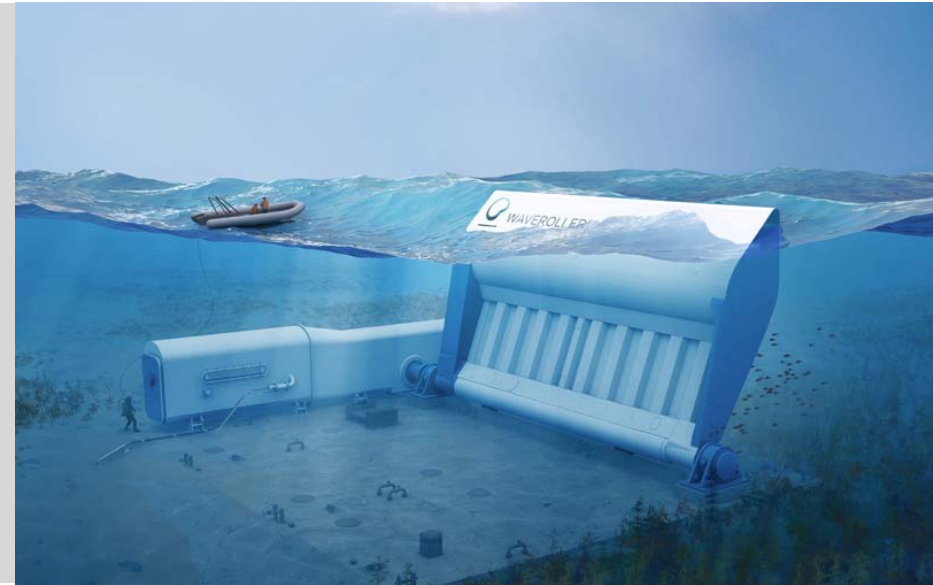
AW-Energy Oy

SCOPE/PHASE:

Conceptual design & Detail Design

PROJECT RESPONSIBLE:

Trond Landbø (tl@olavolsen.no)



Project description:

AW-Energy Oy (aw-energy.com) has developed a unique concept, WaveRoller®, for harvesting energy from waves in shallow water. The WaveRoller is a unit that converts ocean wave energy into electricity, which is transferred through a cable to the onshore grid. The latest development consists of a large wave panel working together with a specially designed Power Take Off (PTO) unit. The panel and PTO unit are supported by a concrete barge foundation structure developed and designed by Dr.techn.Olav Olsen AS. The complete unit is fully submerged during operation and is designed to resist forces from large, near breaking, waves coming towards the beach. The unit is designed for quick and simple transport and installation, by simple towing and ballasting of the concrete barge. It can also be refloated by reverse installation. The concrete barge concept is robust and can be installed onto different soil types and can be adapted to different wave panel sizes. The concrete structure has a long design life (50 years or more) which makes it possible to replace panel and PTO in the future and reuse the foundation structure at new sites.

The demonstrator unit was installed in Portugal (Peniche) in the fall of 2019. [See assembly-movie on Youtube.](#)