

ENVIRONMENTAL EFFECTS METADATA SURVEY FORM

Name of person updating the form

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Project name: Site d' Expérimentation en Mer pour la Récupération de l'Energie des Vagues

Planned In Operation Completed

Project description:

Project Developer: Ecole Centrale de Nantes (ECN)

Technology Developer:

Technology type: Wave and floating offshore wind energy devices

Resource (wave, tidal): Wave and wind

Project scale (test site, prototype, array, commercial): Full scale grid connected wave energy test site

Installed capacity (MW): 8 MW (grid connected)

Project Website: <http://www.semrev.fr/en/>

Launch Date: 2009

Additional Description: The test site occupies approximately a 1 km² test zone area and is fully instrumented and monitored. The test site will comprise a 8 MVA power cable connected to the national grid through an onshore substation. A new substation will be built on land and will be the connection point to the 20 kV local electricity distribution grid which is connected to the national Electricity Transport Network through an existing substation. The SEM-REV is a fully fitted wave energy test facility intended to test and improve the efficiency of Wave Energy Converters at an early stage of development. The facilities for monitoring and controlling the systems are currently available on the site. The test site is also suitable for testing floating offshore wind turbines.

Project Support: Regional Development Programme (CPER) 2007-2013 "Alternative Energy & Research" Scheme (about 15 M€ of funding).

Location:

Ocean/Water body:

Closest city: 15 kilometres off north of Le Croisic in Pays de la Loire, France

Country: France

Coordinates (please use Mercator): 47°14'20.4" N, 2°46'4.8" W

Depth: 30 m water depth

Process status: Test site operational since the consents have been approved in July 2011. Full electrical connection during October 2012.

Licensing information (brief description): Concession on the maritime public domain (accepted July 2011). Authorization regarding the Water Act (Accepted July 2011). Building permits: onshore substation, cable shore approach, etc.

Key Environmental issues: Physical characteristics: waves, currents, winds, water level, tides, geophysics, geotechnics, geology and hydrogeology, geomorphology and bathymetry. Water quality. Biological medium. Protected sensitive areas. Landscape. Uses and activities.

Several surveys have been carried out. Here are a few examples:

- Point measurements of waves and currents surrounding wave energy test sites
- Surveys of marine invertebrates around test sites
- Benthic sediment studies at test sites
- Monitoring sites of national heritage

Environmental webpage: [link to project official environmental webpage \(if available\)](#)

Baseline studies and project effects studies: Site d' Expérimentation en Mer pour la Récupération de l'Energie des Vagues				
General description				
Receptor	Study description including question and/or objective (several can be listed per receptor)	Design and methods (brief description)	Results (brief description)	Status (planned, underway, completed, with dates)
Physical environment				
Benthos				
Fish and fisheries				
Large vertebrates				
Birds				
Marine uses / users				
Other* (can be				

named)				
Reports or Papers	(Key papers on the areas addressed should be listed here; when possible the files themselves can be made available in downloadable PDF format, alternatively links to the files or project website can be provided when available e.g. SeaGen.)			
Research Projects	(past or on-going environmental research projects at the site)			

Monitoring and adaptive management: Site d' Expérimentation en Mer pour la Récupération de l'Energie des Vagues

General description				
Receptor	Monitoring program description including question and/or objective (several can be listed per receptor)	Design and methods (brief description)	Results (brief description)	Status (planned, underway, completed, with dates)
Physical Environment	Initial state to EIA	Environmental act	Negligible effects	Completed
Benthos	Initial state to EIA	Environmental act	Negligible effects	Completed
Fish and Fisheries	Initial state to EIA	Environmental act	Negligible effects	Completed
Large Vertebrates	Initial state to EIA	Environmental act	Negligible effects	Completed
Birds	Initial state to EIA	Environmental act	Negligible effects	Completed
Marine Uses / Users	Initial state to EIA	Environmental act	Negligible effects	Completed
Reports or Papers	* Reports are not publically available.			
Research Projects	EU projects: SOWFIA, MARINA PLATFORM, MARINET, TROPOS			