





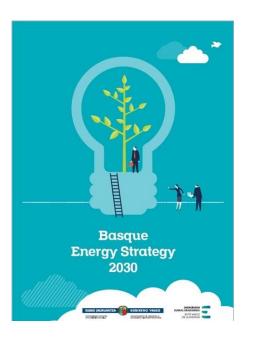
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Strategies

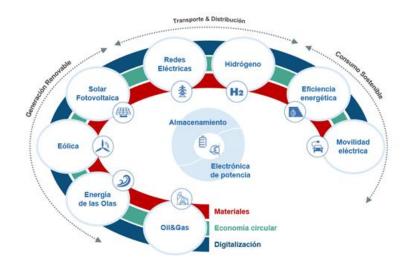
Basque Energy Strategy 2030



MRE Objectives

INSTALLED CAPACITY		2015	2020	2025	2030
Hydro	MW	173	175	177	183
Wind	MW	153	167	463	783
Photovoltaic	MW	25	55	108	293
Solar thermal	Thousand sq. m.	64	90	137	202
Biomass	MW	71	69	106	111
Marine Energy	MW	0	10	20	60
Geoexchange	MWg	13	41	96	253
Geothermal energy	MW	0	0	4	10

Technology and Industrial Development Strategy





BiMEP Offshore Infrastructures

https://www.bimep.com/en/

Mutriku Wave Power Plant



Armintza



HARSHLAB







Financial support

https://www.eve.eus/Programa-de-ayudas/2020.aspx



Grant programme for investment in the demonstration and validation of emerging marine renewable energy technologies

Eligible actions

Pilot testing at the demonstration and validation phase of full scale, or almost full scale, prototypes of:

- wave energy converters
- floating platforms for wind turbines
- offshore wind turbines
- auxiliary equipment or components considered as complementary to any of the prototypes described above



Financial support EuropeWave



https://www.europewave.eu/





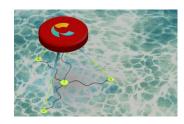




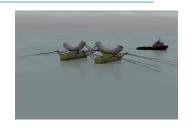


Financial support EuropeWave

https://www.europewave.eu/phase-1-awards



CETO Wave Energy Ireland Ltd: ACHIEVE



AMOG Consulting Ltd: Sea-Saw WEC



Arrecife Energy Systems SL: Trimaran



Mocean Energy Ltd: Blue Horizon 250



IDOM Consulting, Engineering, Architecture SAU: MARMOK Atlantic



Waveram Ltd: The Waveram



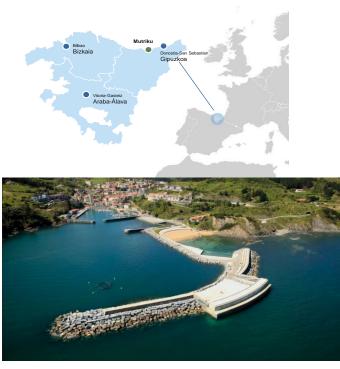
Bombora Wave Power Europe Ltd: emWave





Background: Mutriku WPP

- Fist commercial wave energy plant in Europe (2011), with more than 2,4GWh exported to the grid
- 16 Air chambers, for a total installed capacity of 286 kW.
- Intensive work on improvement of the instrumentation system, data acquisition and sharing to steer scientific activities and promote sector-wide knowledge



www.eve.eus



The Challenge

"Procurement for the R&D Services for the design development and testing of air turbines for wave energy In Mutriku Wave Power Plant"

Expected Outcomes (Phase3)

Air turbine prototypes deployed and operational during a 12-month period in Mutriku Wave Power Plant

Product Development and Commercialization Plan

Development and implementation of Technology Qualification Plan





Phases, Budget

Total Budget: **€3,200,000** *

Phase 1:

Concept Development

Budget:

€100,000*

№ Contracts:

6

Duration

6 months

Phase 2:

Design Refinement and Lab Testing

Budget:

€300,000*

Nº Contracts:

4

Duration: 12 months

Phase 3:

Detailed design, manufacture and testing in MWPP

Budget:

€700,000*

Nº Contracts:

2

Duration:

18 months

Phase 4:

Supply and commissioning of small batch of units

Budget:

Nº Contracts:

1

Duration:

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Preliminary Market Consultation

