



Atlantic Arc Commission

Marine Renewables Energies: Sources of growth for the Atlantic Regions

*Note approved by the Atlantic Arc Commission
on 24 September 2014*

European context:

In January 2014, the European Commission adopted two major Communications concerning renewable energies, including one specifically dedicated to Marine Renewable Energies (MRE):

- On 20 January 2014: *“Blue Energy Action needed to deliver on the potential of ocean energy in European seas and oceans by 2020 and beyond”*¹
- On 22 January 2014: *“Policy framework for climate and energy in the period from 2020 to 2030”*²

The aim of this Atlantic Arc Commission paper is threefold. First, this document is a reaction to the Communication on Blue Energy which puts forward the assets of the Atlantic Regions that can enable them to become leaders in MRE development in Europe. Secondly, the Atlantic Arc Commission members also aim to establish policy recommendations from the Regions’ point of view in order to ease the rapid deployment of MREs along the Atlantic façade. Finally, the Atlantic Arc Commission wishes to contribute to the Ocean Energy Forum (2014-2016) with regard to the preparation of the strategic roadmap on ocean energies which will be released by the end of 2016.

This note also covers part of the work carried out within the CPMR in two of its working groups: “Climate – energy” and “maritime industries”. With the support of these working groups and its Geographical Commissions, the CPMR plans to develop a roadmap for a European maritime industrial strategy, which includes MRE and takes into account the specific features of each sea basin.

The Atlantic Arc Commission stresses that this is a critical phase for the deployment of Renewable Energy in Europe. With new (minimum) renewable targets and a new European energy security strategy³, all the policy drivers are in place at the European level. In the Communication *“Policy framework for climate and energy in the period from 2020 to 2030”*, the European Commission announced a Climate framework to be adopted by EU leaders in October 2014. This new package will be hugely influential in the development of Marine Renewable Energies. If the EU leaders set their ambitions high, this will provide the necessary legal stability for industrial actors to invest in this area over the long term.

Given the Ukrainian crisis and potential risks for the security of energy supply, the European Commission needs to promote the development of internal EU sources of energy, which in addition will create local and non relocatable jobs. Moreover, only strong political commitment will help to lower the cost of this emerging energy in the foreseeable future.

Finally, ahead of the United Nations Climate Change Conference due to take place in Paris in 2015, the European Union needs to show that efforts are being made to reduce greenhouse gas emissions. For the Atlantic Arc Commission, all these elements provide a clear window of opportunity to intensify efforts to speed up the deployment of Marine Renewable Energy in Europe, particularly in the Atlantic.

More precisely, we might also mention the general consensus on the conclusions proposed by the “Strategic Initiative for Ocean Energy” project⁴. This project organised its final conference⁵ in Dublin in June

¹ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0008&from=EN>

² <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0015&from=EN>

³ COM(2014) 330 final published 28/05/2014

http://ec.europa.eu/energy/doc/20140528_energy_security_communication.pdf

⁴ <http://www.si-ocean.eu/>

2014, prior to the second meeting of the Ocean Energy Forum. The SI Ocean project concluded its work calling for the deployment of wave and tidal energy-producing facilities and the launch of a marketing strategy. This Strategy presents a holistic vision to develop a European industrial initiative for ocean energy, which is also mentioned in the European Commission Communication as a second phase, after the Forum and its roadmap.

Since 2010, the Atlantic Arc Commission has been addressing in detail the development of marine energy, setting up a dedicated Working Group on “Marine Renewable Energies”, where the different dimensions (climate, industry, grid connections, training, etc.) are taken into account through five priorities:

- Cluster development and networking;
- Training and exchange of human capital;
- Social and environmental acceptability;
- Funding and harmonisation of funds;
- Connection to the European electricity grid.

The Atlantic Power Cluster (APC) project⁶, funded by the Interreg Cooperation Programme Atlantic Area 2007-2013, is a direct result of this Working Group. The CPMR Atlantic Arc Commission contributed by producing a benchmarking study on the current situation of Marine Renewable Energies and their development in the 16 partner Regions of the five Atlantic states (Ireland, United Kingdom, France, Spain, Portugal). All the deliverables of the APC project provide a sound basis to facilitate a harmonised deployment of marine renewable energy devices all along the Atlantic coast. The report on training will help training institutes meet the need of industry in the sector. Cluster and stakeholder mapping will help every actor from the supply chain to better know where potential partners are located. The report on facilities will help business developers know where they can test their devices according to the specific features of each facility. The report on current market opportunities and industrial capacities will help bridge the gap between existing capacities and needs to meet the future market. The report on social acceptance will help to identify how to avoid conflict and promote a better use of the sea. Finally, the cluster agreement sets up a framework for cooperation between Atlantic companies, universities and public actors.

This holistic project follows on from a previous initiative led by the Atlantic Transnational network which published one of the first reports⁷ on ocean energy in the Atlantic in 2010.

This brief note will answer the three following questions:

- I. What role can the Atlantic Arc Regions play in the development of MRE in Europe?**
- II. What are the reactions of the Atlantic Arc Commission’s member Regions on the European Commission’s Communication on Ocean energy?**
- III. What are the policy recommendations for the future?**

⁵ <http://www.si-ocean.eu/en/News-Events/SI-Ocean-Final-Conference/>

⁶ <http://atlantic-power-cluster.eu/>

⁷ <http://rta-atn.eu/wp-content/uploads/2011/10/rapport-emr.pdf>

I. The Atlantic Ocean is the European sea basin with the highest development potential in Marine Renewable Energies

I.1. A potential for development identified by the European Commission in the Atlantic sea basin

The Communication of November 2011 on the Atlantic Maritime Strategy⁸ highlights the particularly favourable conditions for the development of marine renewable energies:

- “The Atlantic has stronger winds than the other seas that wash Europe's shores”.
- “The potential of the Atlantic's powerful waves and strong tides needs to be exploited as well. The predictable nature of energy from tides can complement the fluctuating energy from wind”.

These features are taken up again in the Action Plan of the Atlantic Strategy⁹, adopted by the Commission on 13 May 2013 and approved by the General Affairs Council in June 2013.

In this new Communication, the issue of ocean energies is broadly highlighted in the second priority of the Action Plan: “Protect, secure and develop the potential of the Atlantic marine and coastal environment”. This priority stresses the need to speed up the implementation of a sustainable production of marine renewable energies while putting an emphasis on the following points¹⁰:

- Encouraging assessment and mapping of the potential of the European Atlantic Ocean's energy resource
- Providing better links between offshore and onshore energies;
- Promoting research, development and demonstration of technologies for the construction and maintenance of renewable energy installations
- Encouraging the harnessing of the special geological, oceanographic and meteorological conditions of the Outermost Regions of the Atlantic

Moreover, the first priority of the Action Plan “*Promote entrepreneurship and innovation*”, also supports the development of Marine Renewable Energy, especially by “improving skills” in traditional Atlantic industries as well as in the emerging sectors of the blue economy.

Since the Communication on “Blue Growth” (13 September 2012)¹¹, the European Commission has strongly focused on the maritime issue and its energy dimension; an outcome that was welcomed by the Atlantic Arc Commission. Several Communications deal directly or indirectly with this subject¹². The Atlantic Arc Commission's member Regions wish to express their enthusiasm and interest in participating in this European mobilisation in favour of Marine Renewable Energies.

In conclusion, the AAC underlines the fact that the Atlantic is an obvious “natural” European potential power for developing tidal, wave and offshore wind energy. Moreover, there is in the Atlantic a real industrial, technical and academic know-how in already existing sectors such as the shipbuilding industry and marine science. As expressed in CPMR positions on LeaderShip 2020¹³, the potential of emerging sectors such as marine renewable energies strongly relies on existing industries in several regions. It is essential for the EU to take this industrial heritage into consideration and to support diversification of shipyard activities towards marine renewable energies. Consequently, the CPMR Atlantic Arc Commission

⁸ COM (2011) 782 final

⁹ <http://eur-lex.europa.eu/legal-content/FR/TXT/?qid=1395674057421&uri=CELEX:52013DC0279>

¹⁰ Cf. page 7 of the Atlantic Strategy Action Plan COM(2013)279 final

¹¹ [Communication from the Commission: Blue Growth opportunities for marine and maritime sustainable growth \(13.09.2012\)](http://ec.europa.eu/maritimeaffairs/policy/ocean_energy/index_en.htm)

¹² http://ec.europa.eu/maritimeaffairs/policy/ocean_energy/index_en.htm

¹³ http://www.cprm.org/pub/docs/391_cprm_opinion_leadership_2020.pdf

advocates in favour of real development of these energies with genuine European support in order to fully unlock the growth potential of our Atlantic coastal Regions. The AAC underlines the need to place MRE development in the context of the European Commission’s Communication on Blue Growth, and beyond this, as a key element for the development of a European maritime industrial strategy.

I.2. The Regions’ competencies in this area:

Regional authorities are key actors in the development of the marine renewable energies sector in their territories. They can intervene at different stages of the development process of this industrial sector, from the beginning with a clear remit on professional training, through to the final installation of devices in the sea thanks to financial support. Here are some concrete examples of Regions’ actions to support the development of Marine Renewable Energy:

- Carrying out territorial diagnosis through Smart Specialisation Strategies (RIS3)
- Supporting education and training
- Financing projects
- Supporting research
- Supporting innovation
- Supporting companies/business development
- Favouring social acceptance

The States have jurisdiction over the marine space in all the countries of the Atlantic Arc. However, the Regions have essential competencies enabling them to contribute to the development of marine renewable energies. Below is a table summing up the main regional competencies in the five Atlantic Member States:

PORTUGAL	SPAIN	FRANCE	IRELAND	UK
For continental Regions, coastal zones depend on the Regional Hydrographic Administration that develops coastal development plans in a joint coordinated manner with two national institutes (INC for nature and biodiversity and APA for national waters).	The regional authorities have jurisdiction over coastal areas and the territory, while the State retains jurisdiction over the maritime field. Regions are also in charge of promoting regional economic development	Promotion of economic development in its territory. Coordination of actions for economic development (defining the system of economic aid for companies, and preparing a regional planning and development scheme). Organisation of professional training to meet the needs of the Regions Drawing up of a Regional “Climate-Air-Energy” Plan	Competence is currently being reviewed, to provide a streamlined approval process for both onshore and offshore installations. Development in the inshore area is the responsibility of local authorities. At regional level, Regional Assemblies will produce Regional Economic and Spatial Development Strategies.	In Scotland, “Marine Scotland” is a directorate of the Scottish Government, which is the competent authority and grants authorisation for maritime project development.

In conclusion, the Atlantic Arc Regions are essential actors to ensure the successful development of the marine renewable energy sector in Europe.

II. Reaction to the European Commission's Communication on "Blue Energy" and on the Communication "Policy Framework for climate and energy in the period from 2020 to 2030"

The Atlantic Arc Commission expresses its satisfaction after the publication of the European Commission's Communication on ocean energy, the first sector-specific Communication for this type of energy.

The Atlantic Arc Commission also welcomes the setting up of the Ocean Energy Forum aiming to collect proposals and opinions from the different actors within the sector between 2014 and 2016.

While some Atlantic Regions are members of the Forum's different Steering Committees, we hereby want to underline that a macro-regional and transnational approach is highly desirable to create synergies and avoid duplication. We strongly believe that good cooperation between actors, from the private or public sector, will be of benefit for the development of the Marine Renewable Energy sector in the Atlantic. For these reasons, we want the Atlantic Regions to be able to pass on information, proposals and reactions at every step of the Forum on their own behalf but also on behalf of the Atlantic Arc Commission. We strongly support the idea of developing a specific European industrial initiative in the marine renewable energy sector once the Roadmap is adopted. This industrial initiative should include offshore floating wind farms¹⁴ as well as ocean energies (wave, tidal, current, ocean thermal energy conversion and salinity gradient). In this area, we should follow the example of "AIRBUS", a strong European company which is the result of a fruitful European cooperation in the aeronautics industry. The Atlantic Arc Commission members express their wish to be part of the designing of this future industrial initiative on ocean energy.

In order to develop this industrial partnership, we would like to point out already some existing initiatives on which we need to capitalise with an Atlantic Sea Basin approach:

- **Initiative to support the creation of a Marine KIC¹⁵ in the framework of the European Institute of Technology:** This initiative was supported by the CPMR. It aimed at establishing a "Knowledge Innovation Community" (KIC) related to the tremendous growth potential in Europe's maritime economy. In May 2014, the European Commission stated that the feasibility of such a KIC will be further explored.
- **JPI Oceans:** this Joint Programming Initiative (JPI) strives to increase the value of relevant national and EU Research and Development and infrastructure investments through combined effort to jointly plan, implement and evaluate national research programmes.
- **SI Ocean:** this project supported by the Intelligent Energy Europe (IEE) Programme aims to deliver a common strategy for maximising the capacity of wave and tidal energy installations by 2020 as well as to pave the way for exponential market growth by 2030/2050.
- **Seas-ERA:** Seas-ERA is an ERA-NET project (designed to step up cooperation and coordination in research activities carried out at national or regional level) aiming at constituting a platform to promote knowledge and expertise in any sea related area. This project adopted a sea-basin approach so as to give greater consideration to the specific characteristics of each maritime basin.
- **Ocean Energy ERA-NET¹⁶:** an ERA-NET dedicated to MRE. It is a Network of 16 national and regional funders and managers of research and innovation programmes, from 9 European countries. Its objective is to coordinate funding programmes between European countries and regions to support R&I in the ocean energy sector.

In this context, the Regions of the Atlantic Arc Commission underline the fact that an **integrated regional approach is necessary** to develop the marine renewable energies sector in the Atlantic Regions.

¹⁴ An industrial initiative already exists for offshore fixed wind farms <http://www.windplatform.eu>

¹⁵ <http://www.marinekic-initiative.eu/index.php?sp=en&id=home>

¹⁶ <http://www.oceaneranet.eu/>

Only with the adoption of a clear bottom-up approach will we ensure the successful development of this industrial sector. Atlantic Regional authorities are central to structuring the MRE value chain, setting up training centres, supporting SMEs and infrastructures, as well as ensuring a balanced sharing of the maritime space between all users of the sea (offshore wind and ocean energy, fishing, transport, recreational activities, etc.).

Within the framework of the future implementation of the Maritime Spatial Planning directive, regional authorities have an essential role to play in order to ensure risk-free and bankable industrial projects (from the point of view of finance, planning, social acceptance, technology). By organising a dialogue between the different users of the sea and the different levels of governance, regional authorities are key actors to achieve true acceptance for MRE development in the dedicated zones.

III. Policy recommendations

This third and final part of our position paper summarises three necessary policy recommendations for an integrated development of the Marine Renewable Energy Sector along the Atlantic shores.

III.1 Financial aid in two essential areas: Research and development, and grid connection of MREs

- Regulation of State aid should not set back or undermine the development of MRE projects covering the whole spectrum of technologies (including floating offshore wind farms). The Atlantic Arc Commission will pay special attention to the convergence of national aid schemes, as underlined by the European Council of March 2014.
- A higher level of support should be given to R&D projects than to industrial projects
- Strong financial support is needed to connect offshore devices to the grid insofar as the excessive cost of grid connection is still a major barrier to MRE deployment.
- Support is also needed to strengthen research in energy storage (e.g. hydrogen).
- The Atlantic Arc Commission encourages the European Commission to keep on providing strong support to marine renewable energies through EU sectoral programmes such as H2020 and Cosme EU programmes, as well as through territorial cooperation programmes (especially the Atlantic Area programme). At the same time, Regions are investing, as reflected in their smart specialisation strategies.

III.2 Establishing a sustainable framework that facilitates the development of MRE by ensuring visibility and legal stability for the next 15 years

- **Visibility** in terms of maritime spatial planning: defining in advance potential locations for MRE development in accordance with existing uses (fishing, tourism, transport, environment, etc.). In this respect, Regions have a real coordination role to play. The Atlantic Arc commission will follow the implementation of the MSP directive in the Atlantic.
- **Visibility** in terms of applicable regulations in this sector :
 - o Strengthening coordination at the European level between administrative procedures during project examination (installation and funding approval, etc.)
 - o Simplifying procedures (economic, legal and fiscal), in order to offer real long-term visibility for operators, especially in terms of jurisdictional appeals and applicable taxation.
 - o Clarifying and harmonising the procedures to follow in the event of conflict between EU environmental recommendations (marine protected areas, Natura 2000 areas), particularly concerning grid connection of offshore wind farms through protected coastal areas
 - o Ensuring a harmonised interpretation of legal decisions at European level
- **Visibility** in terms of economic viability in order to allow operators to leverage necessary long-term funding.

III.3 Developing, promoting and harmonising professional training for jobs needed for the installation and maintenance of offshore MRE farms

- Capitalising on projects developing good practices, e.g. Vasco da Gamma¹⁷
- Promoting the development of training as recommended by the European Council following the LeaderShip report
- Developing training institute exchanges in the different sea basins so as to set up training programmes designed to address the specific conditions of the Atlantic Ocean.

Conclusion

This document, both technical and political, will be circulated to the organisations involved in the implementation of the Ocean Energy Forum. In particular, it aims to contribute to the ministerial meeting in Paris organized by Ocean Energy Europe and the European Commission DG MARE, taking place on the 1 and 2 October 2014.

Within its Marine Renewable Energy working group, the CPMR Atlantic Arc Commission will continue its work to develop and specify the political recommendations presented in this document.

The Atlantic Arc Commission clearly states its interest in being an active contributor to the preparation of the strategic roadmap on ocean energies. The AAC will act as a dynamic pool of proposals in order to develop the Marine Renewable Energy sector in the Atlantic Regions.

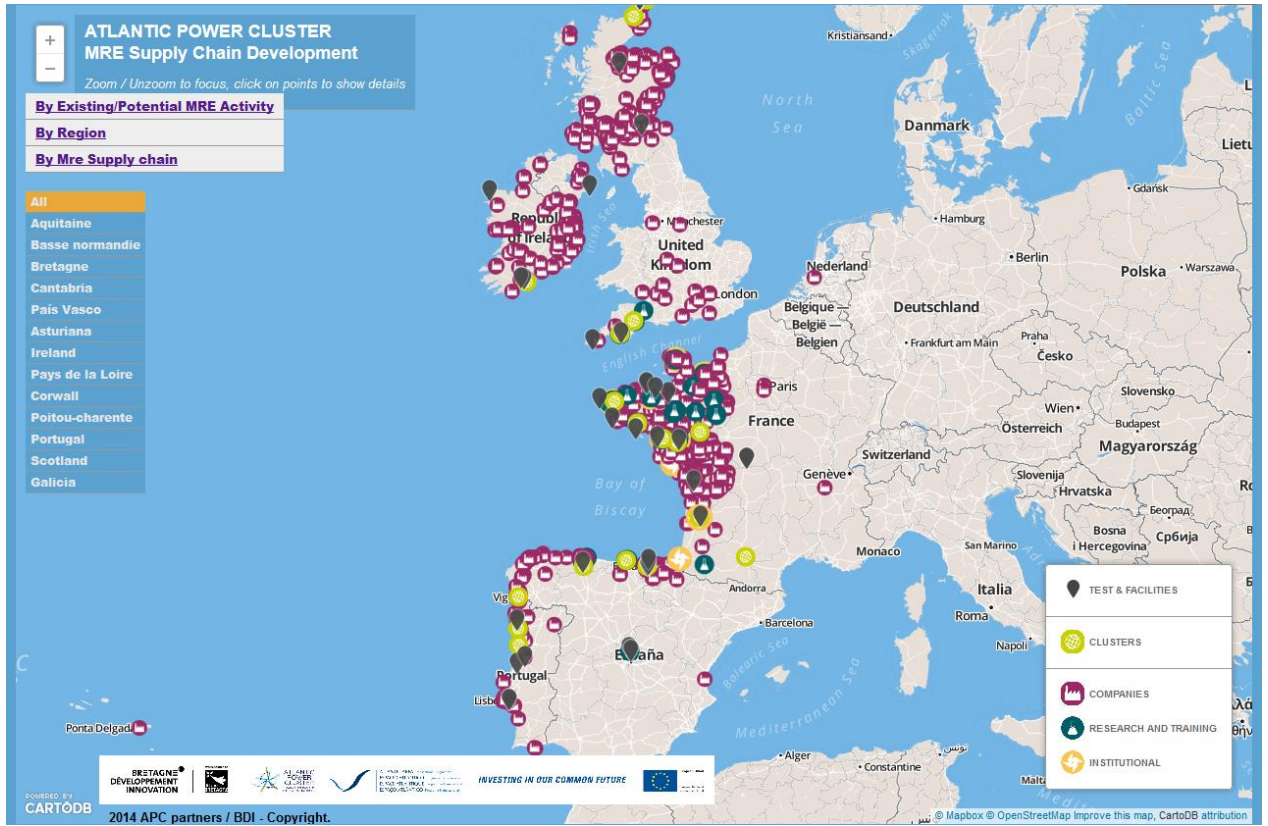
Marine Renewables are an important source of growth for our Regions located at the periphery of Europe, which have suffered greatly from the economic and financial crisis. We are now at a crucial time when a genuine European public investment can create growth and jobs in the Atlantic Regions. Let us seize this opportunity!

¹⁷ Vasco da Gama is an EU funded project led by CPMR aiming at developing exchanges between training institutes and Regions on maritime issues, more information: <http://www.vasco-da-gama.eu/>

ANNEXES

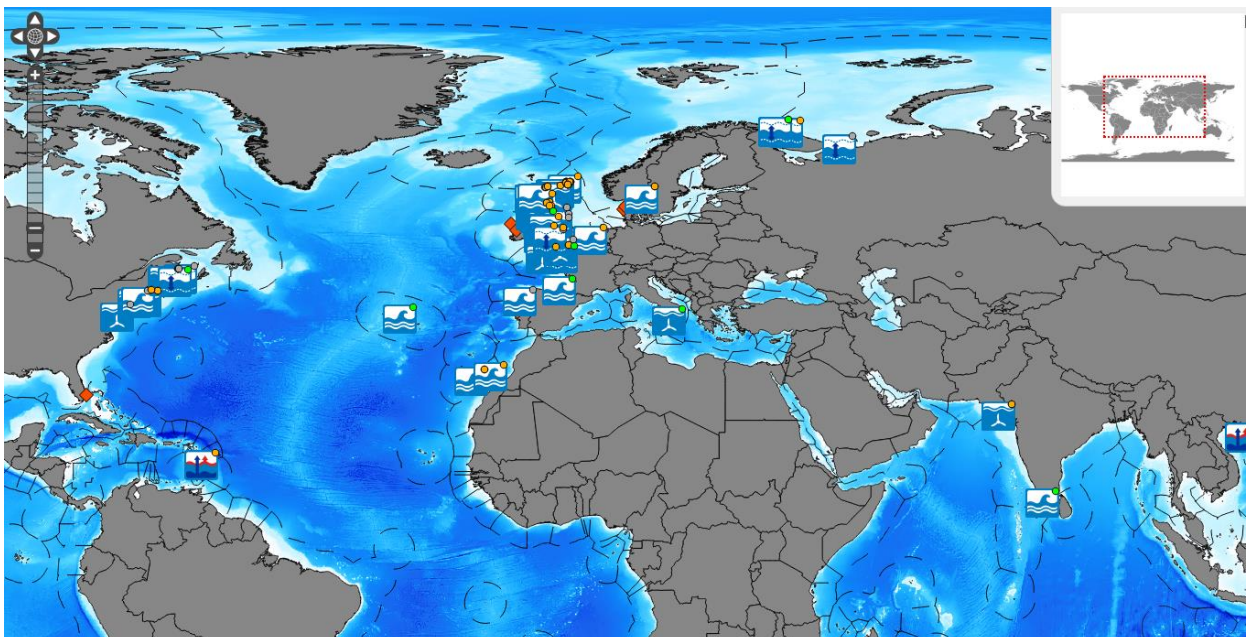
Annex 1: Interactive map of the Marine Renewable Energy supply chain in Europe

http://ressources.bdi.fr/cartes/apc_region.html



Annex 2: Ocean energies offshore installation worldwide - Large concentration on the Atlantic Arc

http://www.ocean-energy-systems.org/ocean_energy_in_the_world/gis_map/



[Zoom on the Atlantic façade]

