

MARINE ENERGIES: THE MOMENTUM IS BUILDING!



REPORT #4

Summary of results
June 2020

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ÉDITO



THE FRENCH MARITIME CLUSTER, WITH THE BACKING OF MAJOR INDUSTRIAL PLAYERS IN THE SECTOR AND THE ADEME, IN PARTNERSHIP WITH SER, GICAN AND FEE, **CONTINUES ITS ANALYSIS OF THE FRENCH MARINE ENERGY SECTOR WITH THIS 4TH EDITION OF THE OBSERVATORY.**



2019 FIGURES THAT GIVE CAUSE FOR OPTIMISM

Commissioning of the first French parks, particularly the one in Saint-Nazaire, is driving development in the sector. Recruitment has largely resumed, with the sector now accounting for 3,000 jobs and investment is soaring, particularly among project developers. We are only at the start of the first of the seven French parks already allocated, and exports continue to play an important role in driving growth. As a result, there is every reason to hope for a bright future.

SUSTAINED PACE OF DEVELOPMENT

To strengthen the sector, scheduled commercial parks will need to be accelerated and procedures simplified, while ensuring that the targets set by the recently published Multiannual Energy Programme (MEP) are met. France is catching up with the main European leaders, but still needs to step up the pace and raise its ambitions.

A VALUE-CREATING SECTOR

In the context of a global health crisis leading to a sharp economic slowdown, the marine energy sector is demonstrating its ability to provide timely and competitive support for the green and blue economy in the future, a source of diversification and job creation for companies in many sectors. The data in this report demonstrate how reactive the sector can be when it gets support and visibility. All the French regions, especially on the coast, are benefitting from this energy, which they also contribute to, for example by investing massively in port infrastructures.

More than ever, marine energy represents an opportunity for France. Blue growth is on the way!

FRÉDÉRIC MONCANY DE SAINT-AIGNAN

President of the French Maritime Cluster



→ **3 064 JOBS** **+47%**

The 3,000 jobs in France level was passed in 2019.

The increase in jobs can be explained by the rise in the number of companies responding to our survey, showing a renewed interest in the sector, but above all by companies recruiting in the sector.

→ **452 M€** **+70%**
INVESTED

Sector-wide investment increased significantly by 68% in 2019. (2.15 billion euros have been invested by the sector since 2007). Investment remains strong among providers and suppliers in the value chain and is growing rapidly among developers/operators with an increasing number of pilot and commercial projects in progress. The rise in investment, and to a lesser extent jobs, is directly linked to the start of construction of the first offshore wind farm off the coast of France, in Saint-Nazaire.

→ **69%**
ANNUAL SALES FOR EXPORT

The export business remains the majority for French marine energy companies, confirming the competitive edge of the sector.

→ **91** **+45%**

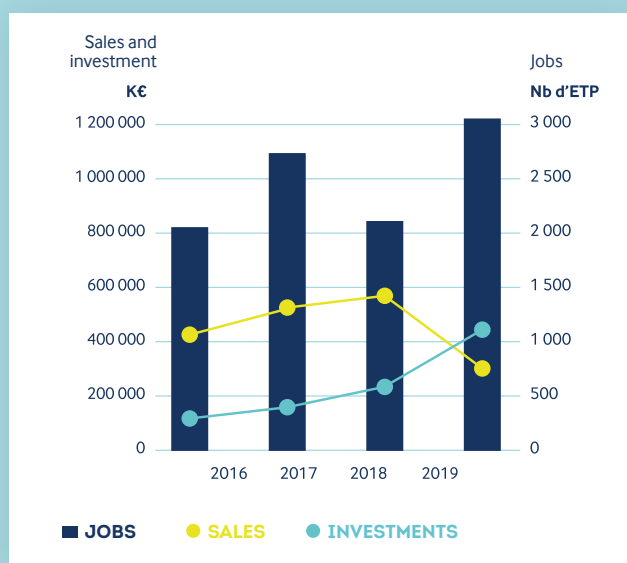
ADDITIONAL RESPONDENTS

The 2020 survey has now had **291 respondents** mainly thanks to service providers and suppliers in the value chain, returning to a market that is finally taking shape.

A SECTOR ALREADY BENEFITTING FROM THE START OF CONSTRUCTION OF FRENCH PARKS

CHANGE IN MAIN INDICATORS

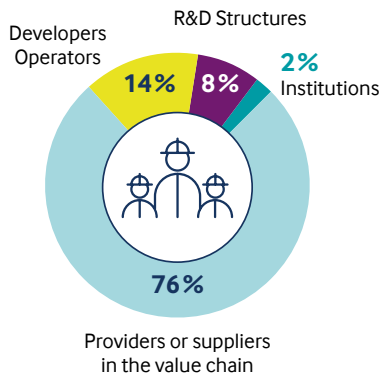
2019 results point to a potential for significant growth in jobs and sales, particularly with the future construction of the Sant-Nazaire, Fécamp and Saint-Brieuc parks, which recently received their final investment decision.



	Training and R&D organisations	Developers Operators	Providers or suppliers in the value chain	Institutions	TOTAL
Number of FTEs* <small>*full-time equivalent jobs</small>	257	437	2 323	47	3 064
Sales Revenues 2019 000's€	9 585	200	294 178	1 750	305 712
Investment 2019 000's€	2 688	289 968	82 037	77 320	452 013
Respondents	32	15	205	39	291

AN INCREASING NUMBER OF INDUSTRIAL JOBS IN WIND ENERGY

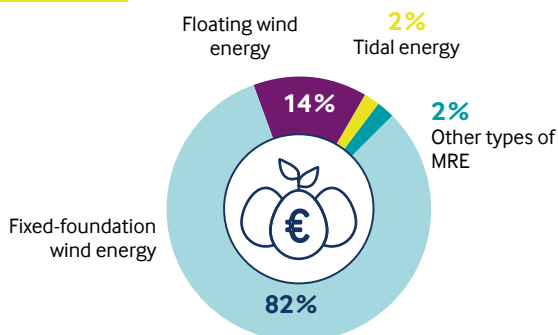
DISTRIBUTION OF FTES IN THE SECTOR BY CATEGORY



The overall rise in jobs is driven mainly by suppliers and providers in the value chain, which accounted for 2,323 FTEs in 2019 (+854 FTEs). These companies now account for 76% of jobs in the sector, confirming the dynamic industrialisation of the MRE sector in France, particularly in offshore wind energy, as this technology has seen an increase of 759 FTEs over one year (+81%). The organisations in the sector (developers-operators, research and training organisations, institutions) are seeing their numbers stabilise or increase slightly. These significant developments show that the French MRE sector is capturing the additional activity linked to the development of French parks and is reacting quickly to produce on an industrial scale when the context is favourable.

DOMESTIC SALES REVENUES ON THE RISE, AN EXPORT MARKET STILL DRIVING BUSINESS

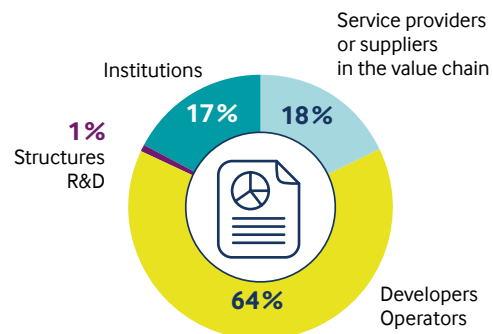
SALES REVENUE BY TECHNOLOGY SECTOR-WIDE



The sales revenue of service providers and suppliers in the value chain, which represents 96% of total sales, fell significantly over one year, by around €257 million (-47%). This situation is mainly due to a decrease in export sales (-€290 M), despite domestic sales increasing to €91 M (+58%). The delays in renegotiating tariffs for French parks in 2018 resulted in sales revenues deferred to 2019. However, the start of the construction of the Saint-Nazaire park and first orders led to an increase in domestic sales. The fall in export sales was due to the end of invoicing on major completed projects, although export represents the majority of French companies' sales.

INVESTMENT UP SIGNIFICANTLY, DRIVEN BY DEVELOPERS-OPERATORS

INVESTMENTS BY CATEGORY

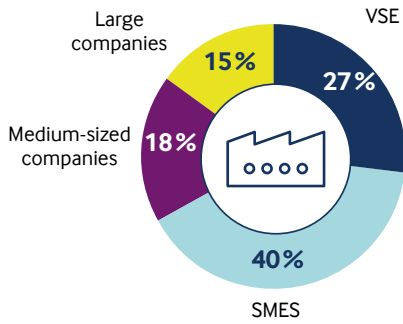


Investments jumped by almost 70% in 2019 to reach nearly €452 million, the highest level since the start of the OEM. Developers-operators tripled their investments over the period on projects resulting from the first calls for tenders. Institutions are continuing to invest (+7 million euros or +6%) in port infrastructures in particular, whilst industrial investments made by service providers and suppliers in the value chain have remained at a high level and will rise over coming years in view of new investments made by GE Renewable Energy in Saint-Nazaire and Cherbourg to produce the Haliade-X 12MW wind turbines, and by Siemens Gamesa Renewable Energy in its future plant in Le Havre.



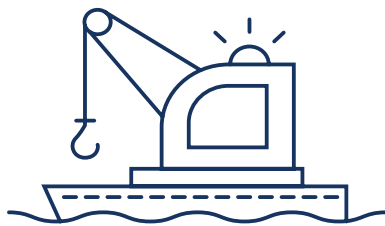
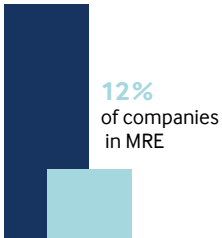
A VALUE CHAIN MARKED BY SMALL BUSINESSES SPECIALIZED IN MRE

DISTRIBUTION OF PROVIDERS AND SUPPLIERS IN THE VALUE CHAIN BY COMPANY SIZE



DISTRIBUTION OF COMPANIES ACCORDING TO SECTOR OF ORIGIN

40% of companies in the maritime economy



A dynamic that concerns all sizes of business

Although very small and medium-sized enterprises are the most numerous companies in the sector, they account for only 18% of jobs (4% for VSEs and 14% for SMEs), with large companies accounting for more than half of the jobs (52%) and medium-sized companies for 30%. In the wake of medium-sized (+403 FTEs) and large companies (+307 FTEs), VSEs (+4 FTEs) and, to a greater extent, SMEs (+80 FTEs) experienced positive growth in jobs in 2019.

For the vast majority of companies, MREs represent diversification of business

Only 12% of the companies in the value chain are pure players in marine renewable energy. For the vast majority of companies, MRE represent a diversification; these companies are mainly operating in the maritime economy (15% of shipbuilding, 6% of maritime and port works, 7% of O&G) or in other sectors such as the environment (11%), energy (8%), construction, logistics, aeronautics, etc.

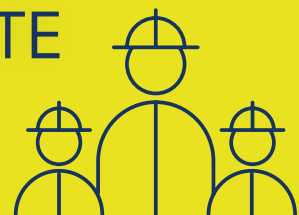


© LM Wind Power

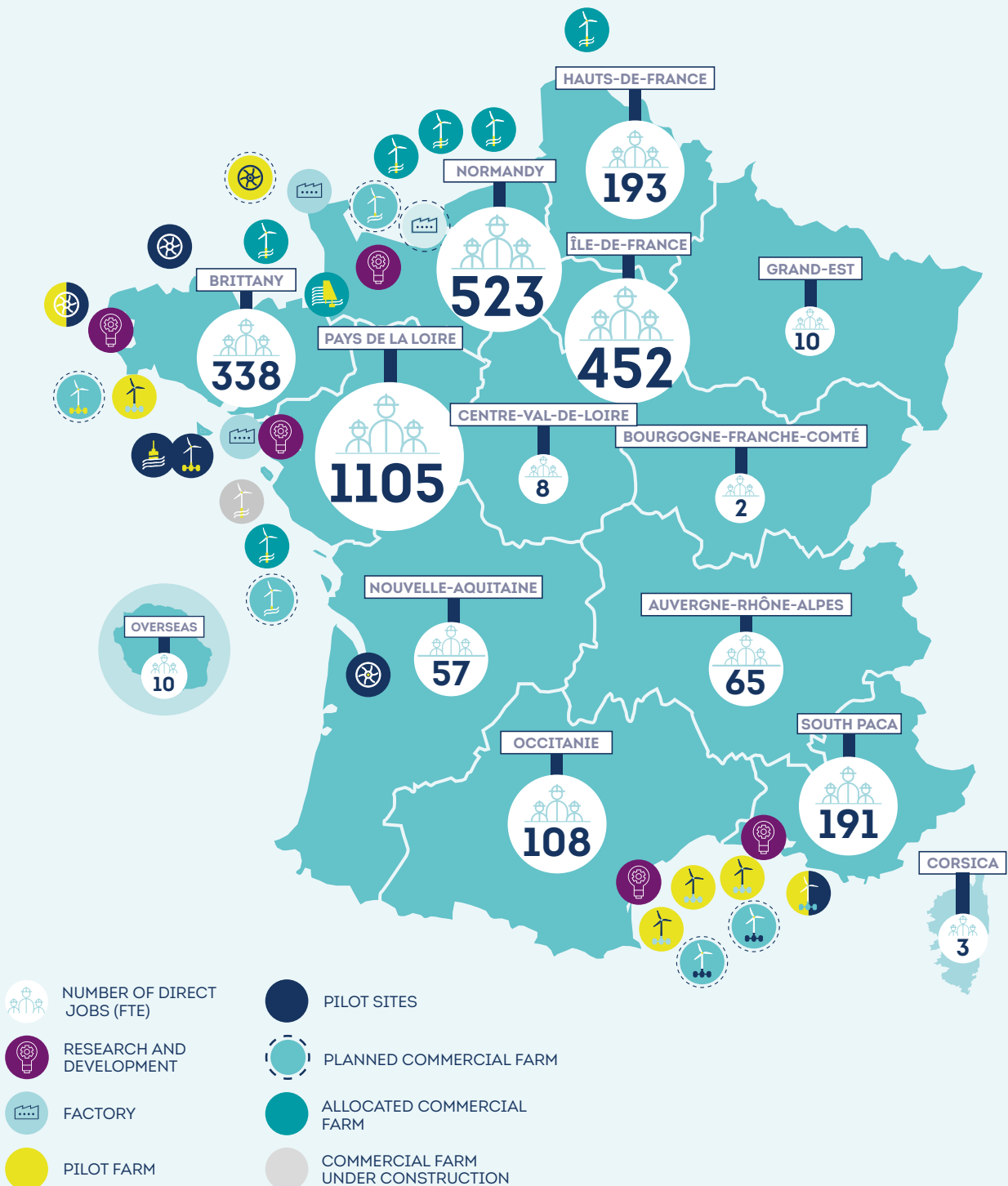
A RESPONSIVE, FORWARD-LOOKING SECTOR

The figure presented here should be put into context as the survey took place before the Covid-19 global health crisis. The responsiveness shown by the sector from the very first project (in particular its immediate translation into jobs) means the marine renewable energy sector represents a real opportunity for a prolonged industrial upturn nationwide.

+1 000 FTE
NUMBER OF JOB CREATIONS PLANNED IN 2020



GEOGRAPHICAL DISTRIBUTION OF JOBS



The strongest growth in jobs was in the west of France, with the Pays de la Loire region ranked ahead of Normandy.

In 2019, overall employment grew by 980 FTEs. While this increase can be seen in all regions (except Nouvelle-Aquitaine), it is mainly concentrated in **four coastal regions** (Pays de la Loire: +332 FTE, Normandy: +273 FTE, Hauts-de-France : +117 FTE, and Brittany: +135 FTE) **directly concerned by the most advanced fixed wind turbine projects** and large industrial sites, each of which represent job rises of more than 100 FTE.

The Mediterranean regions of Occitanie (+36 FTE) and Sud-Provence-Alpes-Côte-d'Azur (+57 FTE), are seeing the benefits of **more and more floating wind projects**.

The **overall growth** in employment should continue in all French regions with the start of construction of the next bottom-fixed wind farms, the deployment of new industrial facilities and the ramping up of floating wind power and its first pilot farms.

HIGHLIGHTS BY CATEGORY

DEVELOPERS-OPERATORS



Investment by developers/operators is focused on wind energy and now represents 64% of total investment in the sector.

INSTITUTIONS AND PORTS



In this category, port stakeholders are making the biggest investments and are also most likely to generate sales (€1.7 million in 2019).

PUBLIC RESEARCH AND TRAINING ORGANISATIONS

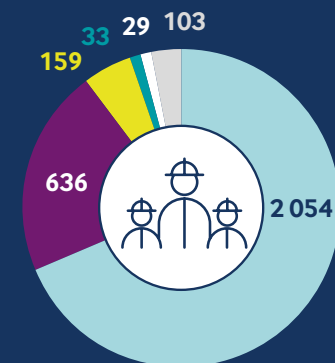


This year, 93 laboratories were identified as working in MRE. Such structures have generated 11 patents and 69 theses on the subject of MREs in 2019.

FOCUS BY TECHNOLOGY

Bottom-fixed and floating wind is the most mature and competitive technology with projects at advanced stages, and logically represent the majority of the three indicators presented. It is noteworthy that sales of floating wind turbines rose by 50% among service providers and suppliers in the value chain over the past year thanks to the French pilot projects.

DISTRIBUTION OF FTES BY TECHNOLOGY



- FIXED WIND ENERGY
- FLOATING WIND ENERGY
- TIDAL ENERGY
- WAVE ENERGY
- OCEAN THERMAL ENERGY
- OTHERS



Offshore Energy increased investments

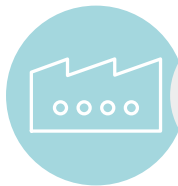
These technologies remain at the R&D or seed stage, and are not yet ready for industrialization. **Tidal power** remains the most resource-intensive technology, with increased investment of more than one million euros between 2018 and 2019. While **wave** and **ocean thermal energy** have seen both the number of jobs and sales fall, investment in these 2 technologies has increased (+€0.8 M in wave energy and +€0.7 M over 2 years in OTEC).

291 RESPONDENTS:

a record figure for this edition of the Observatory

The Observatory's questionnaire was published online and relayed by our partners: French Maritime Cluster, Syndicat des énergies renouvelables, Groupement des Industries de Construction et Activités Navales, France Energie Éolienne, CCI Business and also regional organisations (clusters and competitiveness clusters, Regions and economic development agencies, etc.).

AS EVERY YEAR, OUR RESPONDENTS ARE DIVIDED INTO 4 CATEGORIES ACCORDING TO THEIR ROLE IN THE SECTOR:

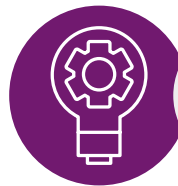


205

138 IN 2018
147 IN 2017
169 IN 2016

PROVIDERS AND SUPPLIERS IN THE VALUE CHAIN

This category has the highest increase in respondents, reflecting the mobilization of businesses around the development of the first parks.



32

19 IN 2018
28 IN 2017
23 IN 2016

PUBLIC RESEARCH AND/OR TRAINING ORGANISATIONS

The number of respondents in this category is at its highest level since the survey began, with a similar increase in the number of laboratories and training courses related to marine energy.



15

15 IN 2018
12 IN 2017
6 IN 2016

DEVELOPERS / OPERATORS OF COMMERCIAL PARKS OR PILOT FARM PROJECTS

The number of developers/operators has remained stable and we have also noted the arrival of international companies interested in the French market.



39

28 IN 2018
24 IN 2017

INSTITUTIONS AND PORT AUTHORITIES

This category includes a wide range of actors: public and local authorities; local economic development agencies; and port operators.

L'OBSERVATOIRE DES ÉNERGIES DE LA MER aims to garner support for the marine renewable energy sector and help build a national consensus around the development of this sector. It was created by the French Maritime Cluster (CMF), working closely with the Syndicat des Énergies Renouvelables (SER), the Groupement des Industries de Construction et Activités Navales (GICAN) and France Energie Eolienne (FEE). It is supported by major organisations in the sector. The Observatory works alongside the Workinblue job board and is developed by C2Strategies and Bluesign, managed by Christophe Clergeau, Marc Lafosse and Etienne Pourcher.

You can download the full report at www.merenergies.fr



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