

PRESS RELEASE

France inaugurates its first offshore wind turbine

Under the high patronage of Édouard Philippe, Prime Minister.

This morning, in Saint-Nazaire, Ideol, the École Centrale de Nantes and Bouygues Travaux Publics unveiled Floatgen, France's first offshore turbine, laying the foundations for a new national industrial sector.

Saint-Nazaire, 13 October 2017 – “I wish Floatgen fair winds and following seas.” With these words Catherine Chabaud, the christener of Floatgen, France's first offshore - and floating - wind turbine, described the event which took place this morning in Saint-Nazaire, and was organised by the leaders of this landmark project: Paul Guérivière, CEO of Ideol, Armel de la Bourdonnaye, director of the École Centrale de Nantes (Nantes Central School of Engineering) and Benoit Lange, Head of Sales of Bouygues Travaux Publics (Bouygues Public Works).

Wind turbine christening attended by over 300 guests from around the world

In true naval fashion, the Floatgen wind turbine was christened on the Darses Quay a few dozen metres from where its floating base, as designed by Ideol, was built by Bouygues Travaux Publics. Attending dignitaries included Sébastien Lecornu, Secretary of State to the Minister of State, the Minister for Ecological and Sustainable Transition, Paul Jeanneteau, Vice-president of the Pays de la Loire region, David Samzun, the mayor of Saint-Nazaire and President of the CARENE (Saint-Nazaire Agglomeration Community), and Francis Bertolotti, chairman of the Nantes Saint-Nazaire Grand Port Maritime supervisory board. No less than 300 international stakeholders in the wind energy sector gathered for this event, having come from France as well as from Japan, Norway and Scotland, to celebrate this first for France and the starting point of this floating offshore wind turbine industrial sector. An additional 400 students from local schools were invited to discover the floating turbine up close this afternoon.

Floating turbines: the future of offshore wind energy generation

The wind turbine has a 2 MW capacity and is primed for the École Centrale de Nantes and CNRS's SEM-REV offshore test site, after which it will be installed off the coast of Croisic for an initial period of two years. The electricity produced will be sent directly to the electrical grid during the whole of its operation. The aim of the project is to confirm the technical feasibility and economic viability of floating wind turbines, as well as to demonstrate that Ideol's technological solution is the most competitive one on the market. Floating wind turbines are not constrained by depth and they broaden the market potential considerably, with over 80% of offshore wind energy resources located at depths of over 60 metres. They can also be set up further away at sea and therefore have a low or non-existent visual impact from the coast. They also take advantage of stronger, more constant winds, which translates to increased electricity generation. Floating wind turbines represent a technological revolution and the way forward for the offshore wind energy generation sector.

Floatgen: the first step towards a turbine fleet

French potential in terms of floating wind turbines is estimated at 6 GW between now and 2030, which is the equivalent of 3.6 EPR nuclear power plants. France also has the expertise of leading businesses and stakeholders and aims to develop a competitive national industrial sector, capable of exporting energy, with a view to becoming a market leader. This is why, on 13 July 2017, the French government selected a consortium led by Quadran Energies Marines around Ideol's solution of a

floating base for the creation of the first wind farm in the Mediterranean (with four units installed off the coast of Gruissan, one of the best sources of wind energy in Europe, as part of the of the EOLMED project).

Elsewhere in the world the potential for offshore wind energy development is tremendous, both within Europe as well as in the United States and in Asia - particularly Japan, which is the most technologically advanced country in this market - where a second Ideol technology demonstration unit is under construction.

The synergy created between a start-up, an industrial group and a school of engineers

This project, which began in 2013, brings together seven European partners including Ideol, which designed the entire floating system (the foundation, anchoring system and the configuration of the electricity export cabling) and provided the wind turbine, the École Centrale de Nantes, which brought its expertise in oceanographic engineering, provided the anchoring system and allowed use of its SEM-REV offshore test site, and lastly Bouygues Travaux Publics, which constructed the floating base. The project was supported by the European Union as part of its FP7 programme, by ADEME as part of its Future Investments Programme and by the Pays de la Loire Region. This project, consisting of the first offshore wind turbine in France, is a precursor to the implementation, within the next few years, of pilot floating wind farms, followed by their commercial exploitation. It highlights the potential for creating local jobs due to the construction of Ideol's floating base, as well as France's capacity to become a leader in the emerging floating wind turbine market. For more information visit floatgen.eu.



Ideol, which is based in La Ciotat (13), was founded in 2010 to develop floating bases for offshore wind turbines, guaranteeing technical reliability and maximum economic viability. The company designed floating foundations for offshore wind turbines based on the patented Damping Pool concept, which is compatible with all the wind turbines currently available on the market. The solution was developed from the beginning with a view to optimising local economic benefits and to reducing costs over the entire life cycle, from construction to operation and dismantling. It enables offshore wind energy projects to be developed without being restricted by depth or sea floors, meaning that the focus can be directed towards finding sites which provide the best sources of wind energy. In addition to the absence of any visual impact from the coastline, there is the opportunity for the production of each individual turbine to be increase, and to therefore reduce the end cost of the energy produced.

Ideol's experienced teams, which are made up of several dozens of engineers and experts in renewable energy and offshore oil exploitation, are currently working on several projects around the world, including, aside from Floatgen, the next floating wind turbine demonstration in Japan (the installation of which is scheduled for 2018), the first floating wind farm in the Mediterranean (EOLMED) and even a pipeline with several gateways for commercial projects in the United Kingdom and Republic of Ireland. In doing so, Ideol is positioning itself as a leader in a rapidly-expanding market.



As a member of the Groupe des Écoles Centrales, the École Centrale de Nantes is a school of engineering founded in 1919. It produces engineering graduates, and MA and PhD students at the end of academic pathways that are based on the most cutting edge scientific and technological developments and on the best management practices. The École Centrale de Nantes currently teaches 2,150 students on its 16 ha campus, including 1,360 engineering undergraduates, 350 MA students and 250 PhD students.

With a comprehensive system of digital simulation platforms (ICI), ocean basin modelling systems and on-site experimentation (the SEM-REV offshore trial site), the École Centrale de Nantes is wholly committed to training and to research and innovation within the maritime sector (naval, offshore, marine renewable energy). It has therefore managed to position itself uniquely, in comparison to other engineering schools, with a focus on exploration, entrepreneurial spirit and technology, from basic research to applied research, from theory to the creation of solutions which meet the challenges faced by economic and industrial stakeholders.



A subsidiary of Bouygues Construction, Bouygues Travaux Publics has carried out a number of large-scale civil engineering projects and engineering works including underground works, river and maritime work, linear developments (railways, motorways and roads), industrial civil engineering projects (including nuclear and energy- and environment-related projects) as well as earthwork and surface mining works. Both in France and abroad, the company has recognised expertise in designing and implementing complex operations that bring together funding, large project management and mastery of cutting-edge technology. By combining nautical resources and recognised know-how, Bouygues Travaux Publics has unrivalled experience in the construction of sustainable offshore infrastructures which enables it to provide solutions to the environmental and technical challenges faced by its clients (such as the offshore extension of the ports of Calais, Nantes Saint-Nazaire, Tanger Med 2 in Morocco and Pusan in South Korea). Bouygues has been actively involved for a number of years in the development of marine renewable energy for France, working on innovating its building methods and developing new materials.

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