

ASEAN WIND ENERGY WEBINAR –

OCTOBER 1ST 2021

1.1. CONCEPT NOTE

[Basque Trade & Investment](#), Trade Promotion Agency of the Basque Country Government, through our office in Singapore and in collaboration with the [Basque Energy Cluster](#) is organizing a webinar on the Wind Energy sector in ASEAN.

The objective of this webinar is to introduce this sector and its opportunities among Basque companies in the Wind Energy industry.

Main Target Audience: Wind Energy companies from the Basque Country. Also, open for local ASEAN companies to participate as well.

Date: 1st October 2021.

Speakers:

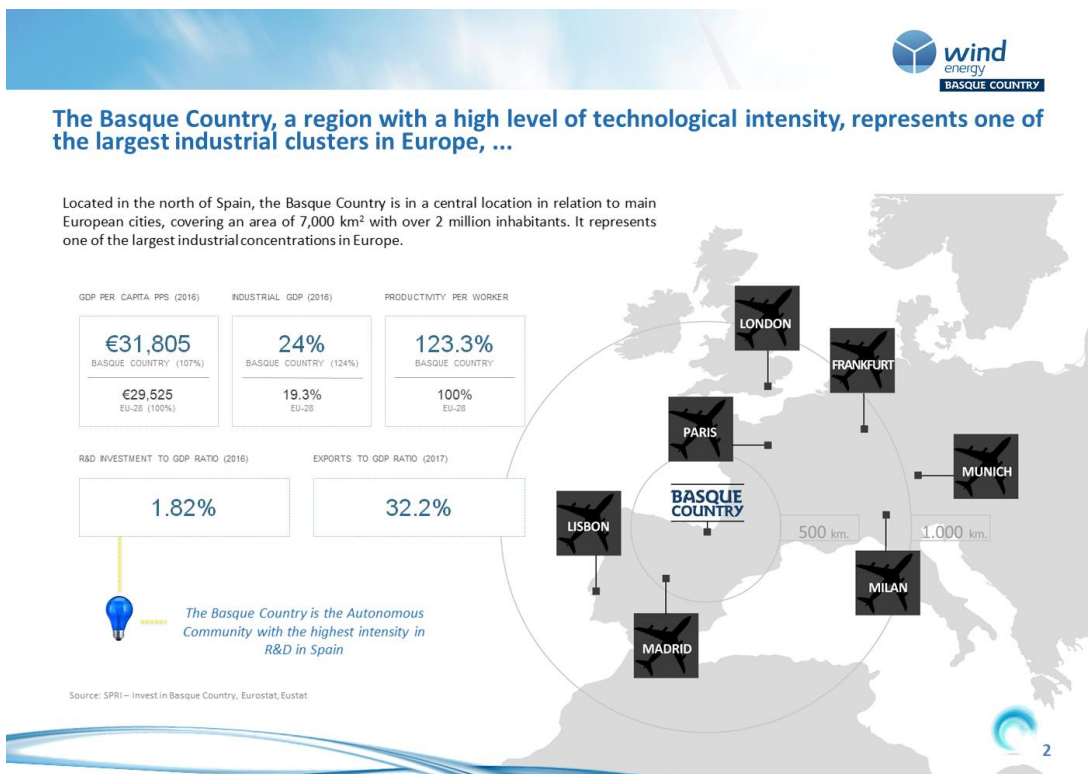
- Speaker 1: Borja de la Cruz, Senior Manager Service Sales Manager at Vestas. Borja is a professional from the Basque Country with more than 10 years of experience in major wind energy companies in Asia and ASEAN.
- Speaker 2: To be confirmed by ADB.

1.2. WEBINAR AGENDA

The webinar will start at 10 am (Basque Country) / 4 pm (Manila).

- 10:00 am - Pablo Huidobro (Director BT&I Singapore): Opening notes and welcome remarks.
- 10:05 am - Borja de la Cruz (Senior Manager Service Sales Manager at Vestas): Review of ASEAN Wind Energy sector and Vestas projects in the region.
- 10:25 am - ADB Business Opportunities: Project Pipelines, brief presentation on ongoing and upcoming business opportunities ASEAN, Wind Energy.
- 10:40 am – ADB Procurement System
- 11:00 am - Q&A
- 11:10 am – Pablo Huidobro: Closing remarks.

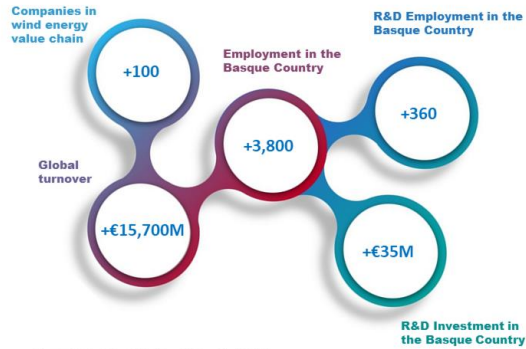
1.3. WIND ENERGY PRESENTATION – BASQUE COUNTRY



... with a long tradition in the wind energy sector, making it one of the regions of the world with a highest concentration of companies...



Key figures of wind power activity in the Basque Country



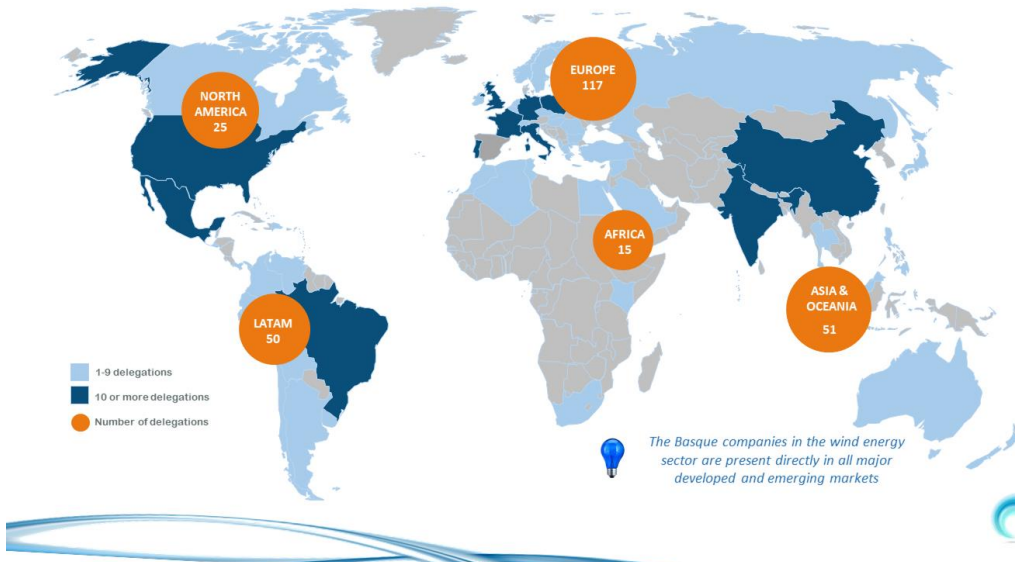
Source: General view of the Basque Energy Cluster 2017



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... which are present in major key international markets, with over 250 delegations all over the world

Number of delegations in the wind energy sector by region



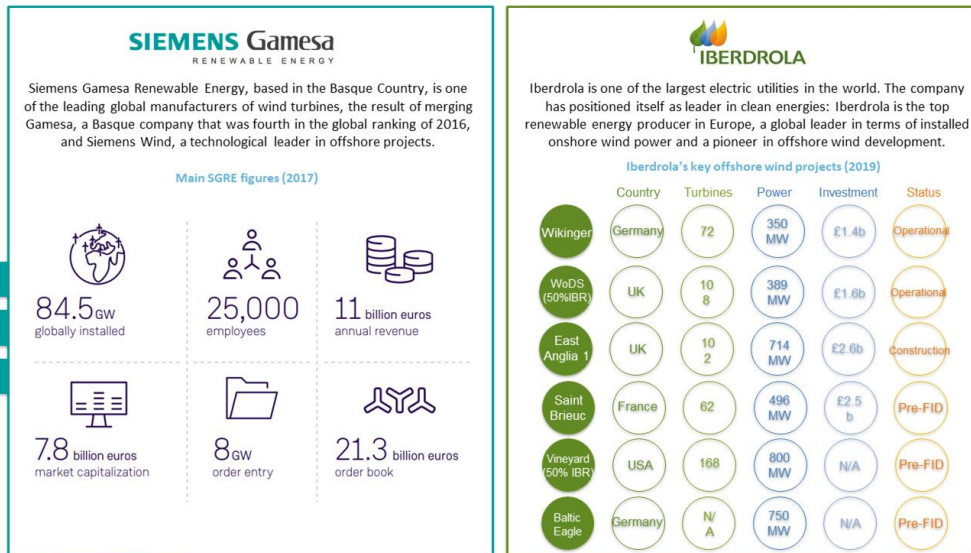
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Basque companies cover most of products and services of the wind energy value chain



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The Basque Country is home to the headquarters of global leaders in the wind energy market, such as Iberdrola and Siemens Gamesa, ...

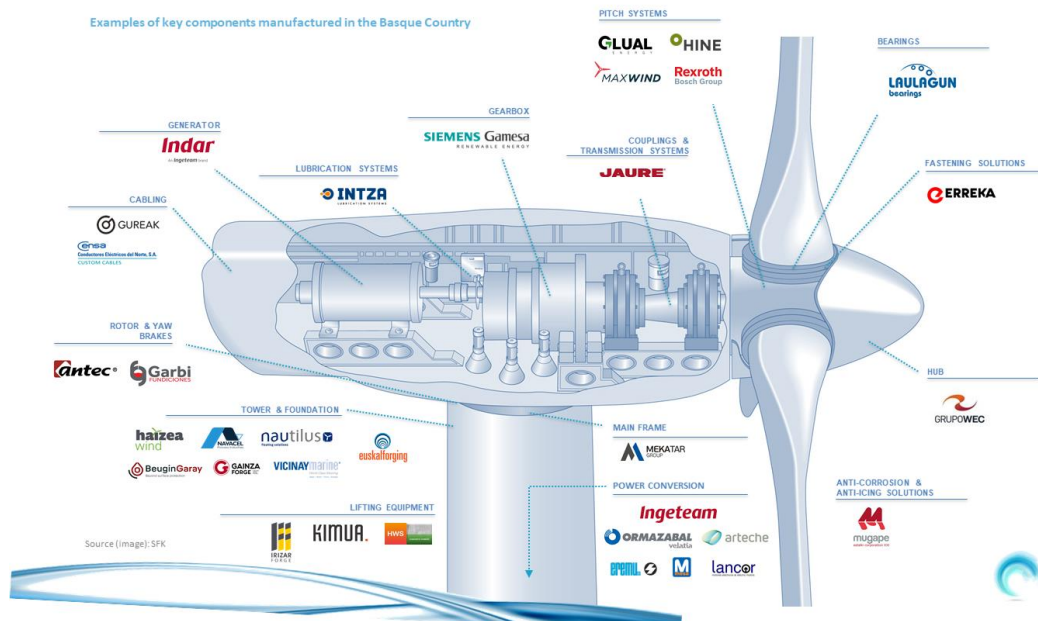


Source: Siemens Gamesa/Iberdrola

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... and to manufacturers for every single key component of a wind turbine

Examples of key components manufactured in the Basque Country

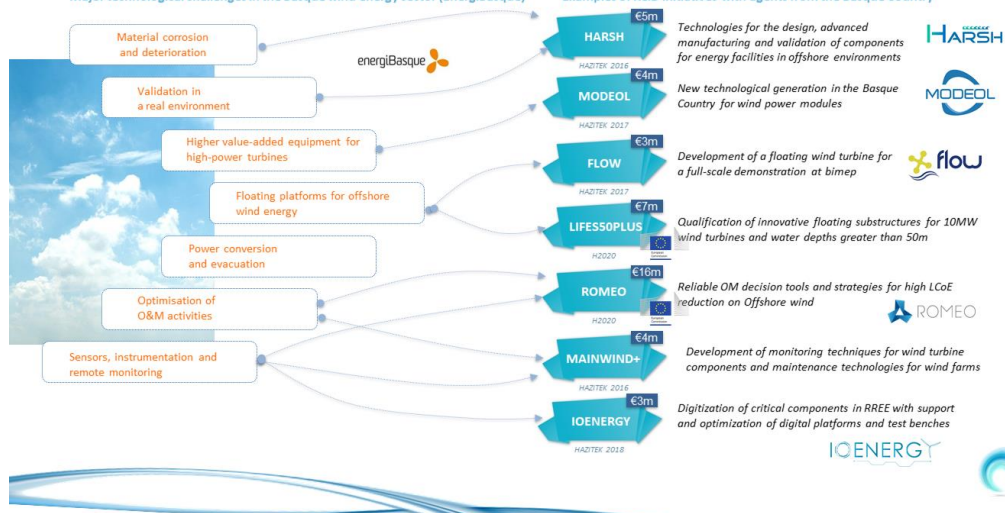


Companies are involved in collaborative R&D projects in all major current technology challenges for the wind sector, ...

The Basque Country's Technological and Industrial Development Strategy (EnergiBasque) identifies the key technological challenges for the sector, forming the starting point for the main R&D initiatives in recent years, including the participation of Basque agents in consortia for the H2020 programme.

Major technological challenges in the Basque wind energy sector (EnergiBasque)

Examples of R&D initiatives with agents from the Basque Country



... highlighting several projects aimed at promoting the sector DIGITALIZATION...

The wind turbine components and systems digitalization, in order to optimize their design and to reduce the cost of O&M activity is one of the European industry main priorities



MAINWIND+

The challenge consists in making the most of the potential offered by information generated by components developed to date and in providing smart technologies in terms of sensors, communication, data storage and exploitation so that all the above can be built into the overall value chain of the wind power business.

Leader:

Ingeteam



ROMEO main objective is to develop models and tools allowing early fault detection on key turbine components and the transition from a corrective and calendar based maintenance to a Condition Based maintenance. Physical and machine learning models for key turbine components and for the foundation will be developed and fed with operational data. The models, hosted in cloud based IoT, will provide valuable maintenance information to fault detection, diagnosis and prognosis.

Leader:

IBERDROLA



IOENERGY seeks to display bi-directional knowledge flows, combining knowledge of wind and photovoltaic power generation components, and knowledge of digital and advanced analytical platforms data, thus bringing together the capabilities required to produce significant advances in R&D activities in the field of operation data exploitation of renewable energy.

Leader:

NEM solutions



Digitalization is especially important for the offshore wind sector, an area which special activity in the Basque Country, due to the greater relevance of the O&M activity in the final cost of energy



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... as well as with the commitment to the development of floating alternatives, with three companies with their own technology and numerous suppliers with experience within the sector



nautilus

NAUTILUS Floating Solutions has developed a floating foundation for offshore wind energy that presents an optimized semi-submersible four-leg design, that will allow the reduction of the LCoE from current designs. Promoted by a powerful industrial group, Nautilus is working on installing its first full-scale prototype over the next two years in a suitable location that is still to be decided.



saitec

SAITEC has developed **SATH**, a floating concrete platform that offers a competitive solution for the offshore wind power market. The manufacturing and assembly processes at the port, low material cost, easy plug&play installation and reduced maintenance costs, among other factors, lead to a significant reduction in costs compared to other floating solutions, and even compared to fixed solutions in medium to deep waters (from 35 m and above).



esteveco

TELWIND Floating Platform integrates a novel substructure and a self-erecting telescopic tower. It allows the entire assembly to be done at the port during low draft and height conditions, in turn leading to a reduction in offshore works and auxiliary resources. This therefore eliminates the limitations in the availability of onshore infrastructure and high-capacity crane vessels, ensuring a reliable and robust solution with the ability to drastically reduce the LCoE.



Components suppliers and floating foundations services

Many other Basque suppliers have also experience as suppliers in demonstration floating technologies projects. For example, the Equinor HYWIND Scotland Project included the participation of four Basque suppliers in tower (Navacel), anchoring systems (Vicinity Marine), flanges (Euskal Forging) and protection of secondary Steel (Beugin Garay).



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The Basque Country is also home to WINDBOX, a unique infrastructure of advanced manufacturing and component validation

- Driven by the Basque Government and SPRI within the framework of the Advanced Manufacturing Strategy, and with the support of Gipuzkoa Provincial Council, eight wind energy sector companies created WINDBOX in January 2015, an advanced testing center for the integration and validation of wind subsystems, coordinated by the Basque Energy Cluster.
- WINDBOX is an open access facility that provides fully equipped test benches to support the development of highly reliable wind power systems and components, as well as the improvement of design and manufacturing processes.
- The centre includes four test benches, which simulate the operating conditions of a wind farm and are specially oriented to validate critical wind turbine systems and subsystems for offshore environments.

HYDRAULIC PITCH TEST BENCH

AIMED AT TESTING AND OPTIMISING WIND TURBINE PITCH ACTUATION SYSTEMS AND THEIR COMPONENTS



GENERATOR SLIP RING TEST BENCH

AIMED AT TESTING AND OPTIMIZING WIND POWER GENERATOR SLIP RINGS



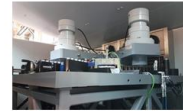
BLADE BEARING TEST BENCH

AIMED AT CONDUCTING TESTS ON THE HUB, THE BLADE BEARINGS AND THE BEARING-HUB AND THE BLADE-BEARING JOINTS



YAW TEST BENCH

AIMED AT TESTING AND VALIDATING THE YAW SYSTEM



PARTNERS



SUPPORTERS



www.clusterenergia.com/windbox



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