



Spanish Strategy for Offshore Wind deployment up to 2030

OCEANIC
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Session

Global Strategies for Oceanic Renewables

Company and title

AEE (SP Wind Power Association)

**Spanish Strategy for
Offshore Wind
deployment up to 2030**

With more than 310 members AEE represents **100% of value chain** and more than **95% of the wind sector activity**, both onshore and offshore

- Consultancy
- Developers
- Manufacturers
- Integration
- Engineering
- Logistics
- Services O&M
- Recycling
- Insurance
- Financial
- Legal
- Regional bodies
- Others.

Our mission: To promote the growth of wind power by **defending its interests**, R&D, communications and training.

Our vision: Wind power is key for **Spain's Energy independence**, its **economy development and environment's sustainability**.

Our obsessions: Supply chain & Industrial mindset & Added value policies & Regional/Local partnerships & European leadership & Local development & Long term vision/proposals & collateral synergies

Offshore Wind Industry Energy in Spain. Main messages.

Track record / Capabilities

Leadership in **blue economy**: international reference in **manufacturing, fleet, port facilities and shipyards.**

- Despite **not having commercial / utility scale offshore windfarms so far**, Spanish Wind Industry has been playing a **relevant role in this OW industry.**
- Currently, bottom fixed **structures**, **floating** platforms and support **vessels** are **being built in Spain.**
- Spanish **engineerings**, **maintenance** companies, and component **suppliers** are **market leaders** in offshore Wind.



International reference in **R&D FOW technology.**

World ranking: - **1st country** - **FOW Platforms patents**

Opportunity

Iberia offers perfect conditions to play a **key role in taking off FOW.**

100% SUPPLY CHAIN of **Floating Substructures**, **Moarings** and **OW Towers**, **Ports** and **O&M capabilities**

FOW = Disruptive solution =
Potential new markets =
Alliances are mandatory

Spanish Strategy: Offshore Wind Energy Roadmap



- ✓ **Roadmap approved DEC21**
- ✓ Specific OW objectives: **3 GW for 2030 (FOW)**.
- ✓ Coordination between **Transmission Grid Planning** and areas identified in the MSP.
- ✓ A **tender framework** is proposed (approach).
- ✓ Action **lines for industry and R&D**. European Funds to be applied

Already approved:

- Maritime Spatial Planning (MSP) – 28th FEB 23

Under development:

- Auctions - calendar & detailed design
- Long term targets - beyond 2030
- Regulatory package in depth - permitting, access & connection)

Spanish approach for Auctions: Hybrid tenders

To reach 3GW in 2030 optimun schemes must be undertaken to **speed the process up.**

The Government **decides when, where and the size.**

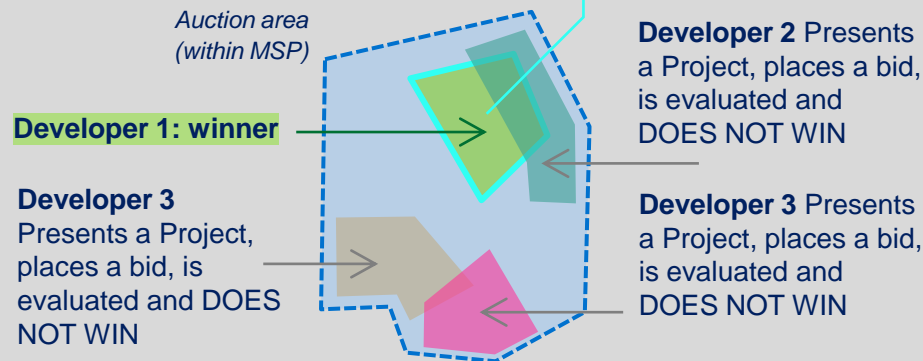
The Government **selects the projects** to be developed through competitive **auctions.**

Value based criteria will be applied

SP Auctions approach

Projects will be developed through competitive auctions that will **allocate** :

1. A **long term contract (CFD)** for the energy produced (€/MWh)
2. The **leasing of the maritime area** where the Project will be located.
3. **Connection permits** to the grid.



The awarded project **must obtain the favourable Environmental Impact Assessment** and the rest of the permitting authorizations

Leadership in R&D. Essay Facilities & Prototypes



Unique combination of services for hydrodynamic simulation & testing.

- Numerical laboratories.
- 3D basins for physical model testing.
- Big Tanks in Maritime Engineering.
- Integrated Coastal Infrastructures for Experimentation and Modelling (iCIEM)



Industrial Capabilities. Supply chain

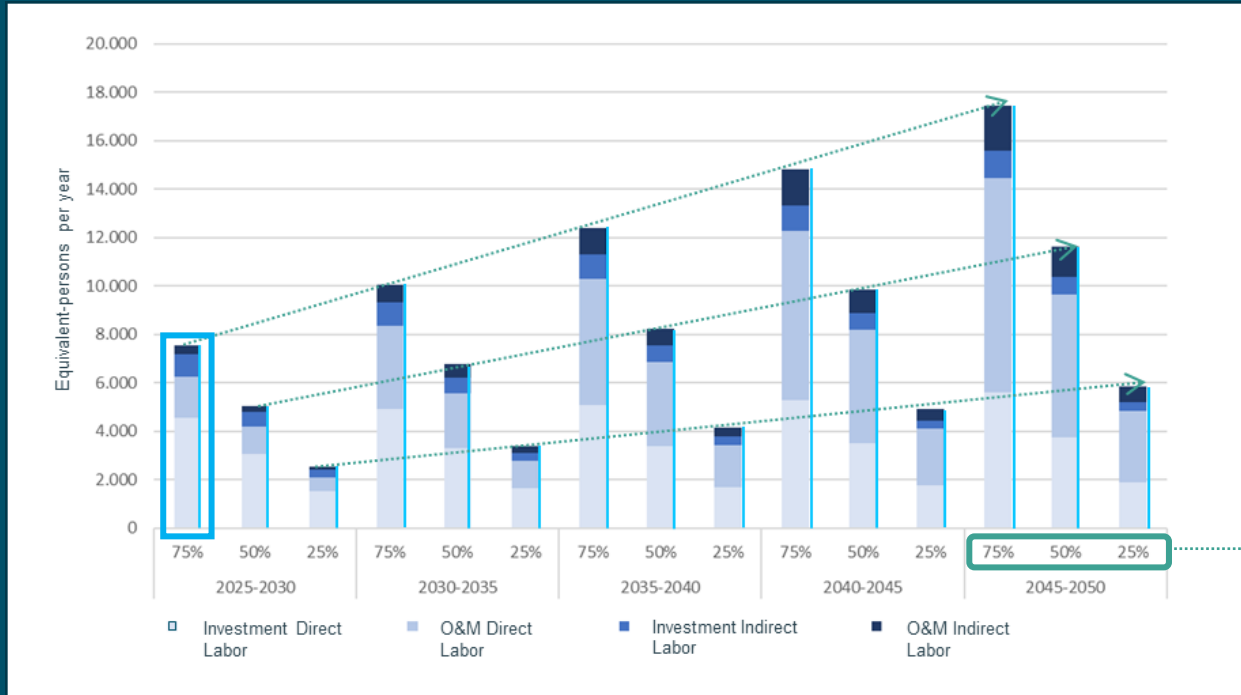
Spain has over 75% of OW supply chain

R&D and Training	Consultancy services	Engineering	Manufacturing	Logistics	Installation on site	O&M	Shipyards & Ports	Dismantling
Essay Platforms / R&D Centres / Universities / Training Centres ...	Wind Data Loggers / Site Assessment / Environm. Studies / Feasibility / Risk Assurance ...	General purpose / Specialized / Detailed ...	Metallurgy / Big components (tower/Blades/ floating platforms) Power Electronics / lifting / Mooring ...	Land / Maritime / Ad-hoc solutions ...	Cranes / Substations / Ports / fleets	Predictive / Corrective / Spares / sensing/ market Operators ...	Storage / Hybrid / Green Hydrogen ...	Repowering / Dismantling / second life / recycling ...
> 20	> 110		> 40	> 24		> 25	> 27	> 3

Num. Companies & Institutions ≈ 250

SP OW Road Map achievement. Jobs creation

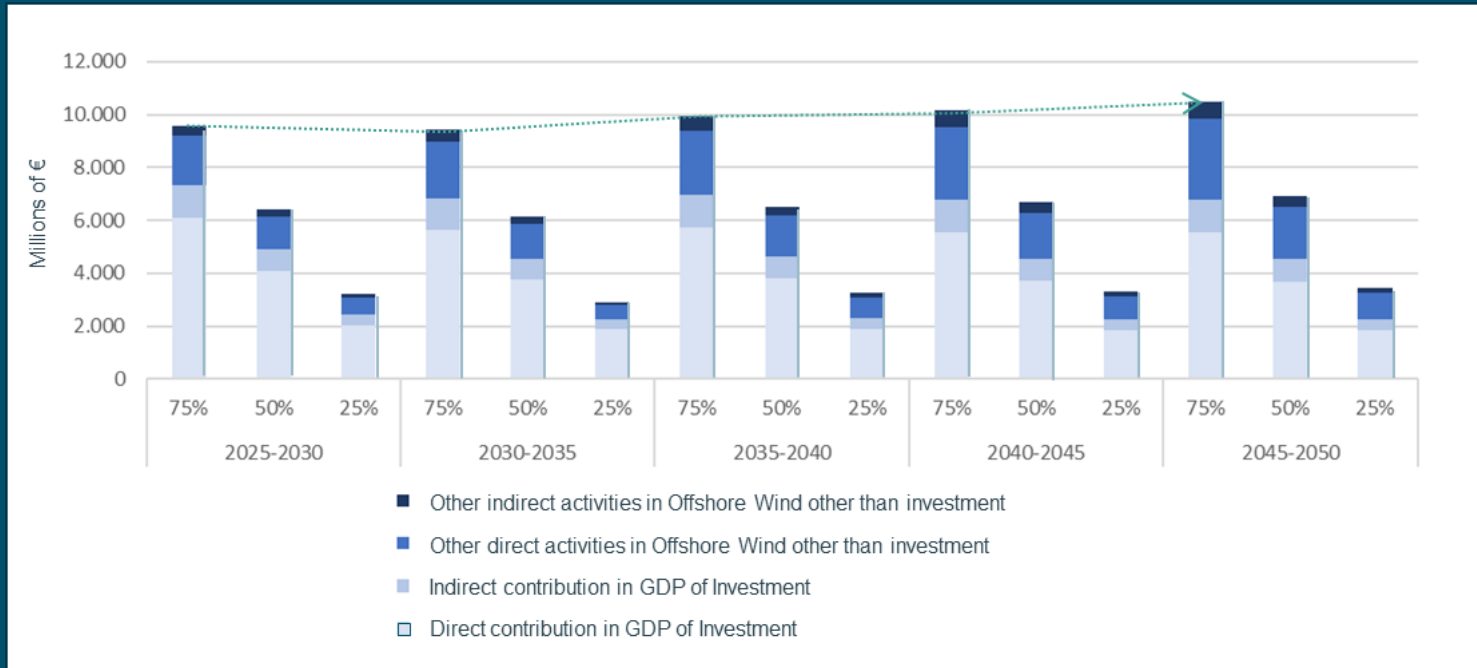
By 2030 – 3GW of Offshore Wind in Spain could generate **7.500 additional permanent Jobs** (direct + indirect). By **2050 – 17 GW – 18.000 permant jobs**



Different scenarios - % local supply chain availability

SP OW Road Map achievement. GDP contribution

By 2030, 3GW of Offshore Wind in Spain could imply an annual contribution of more than **9.000 M€ to Spain´s GDP.**



Future calendar – Offshore wind in SP



Offshore Wind Challenges – Global vision.

FOW is a **global disruptive opportunity** and must be undertaken from a **global perspective based on strategic alliances**.

Challenges

Supply Chain capabilities	Planning & Regulation	"Value based" mechanisms	Infras & Networks	Local impact	Market evolution
<ul style="list-style-type: none">▪ Strategic Alliances▪ Planning for Short range & Long range	<ul style="list-style-type: none">▪ Level of ambition▪ Political consensus▪ Steady scenario▪ Energy & Industrial policies▪ Permitting	<ul style="list-style-type: none">▪ Auction design based on value▪ Markets synchronization in UE	<ul style="list-style-type: none">▪ Availability▪ Planning▪ Risk assurance for developers	<ul style="list-style-type: none">▪ Social acceptance▪ Socio-economic positive externalities for collateral sectors	<ul style="list-style-type: none">▪ Electricity demand▪ Hydrogen take-off

Obrigado!
Thank you!