
INNOVATION DAY ENERGIA 2023

WINDCRETE

Pau Trubat

ATEM – Universitat Politècnica de Catalunya



23
NOVEMBRE





RESEARCH AND DEVELOPMENT TEAM

Professor Dr. Climent Molins

Dr. Pau Trubat

MSc. Daniel Alarcón



COMMERCIAL TEAM

Duncan Cameron

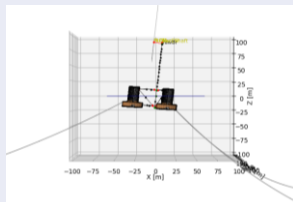


PRODUCTS

WINDCRETE



FLOWDYN



PROJECTES

WINDCRETE PLATFORM DEVELOPMENT

- AFOSP (KIC-InnoEnergy Project): 2014-2015
- COREWIND (EU H2020): 2019 - 2023
- WICAP (AGAUR – PRODUCTE): 2023-2024



ANALYSIS AND SIMULATION OF FLOATING WIND TUBINES

- OC5 (DeepCWind, Jacket)
- OC6 (DeepCWind, MonoPile, Aerodynamics, TetraSpar)
- OC7 (2024)

PATENTS

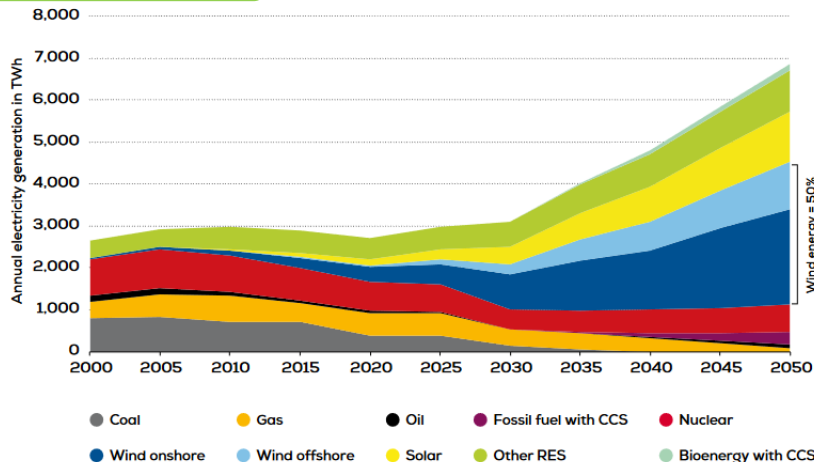
- Concept (ES2415767): Europe (Spain, Norway, Ireland, UK, Portugal, France), US, Japan
- Installation Process (ES2422664): Spain
- Transition element (ES2572327): Europe (Spain, Norway, Ireland, UK, Portugal, France), US

Challenge: EU Objective of Offshore Wind Installed Capacity



UE OBJECTIVE

Europe's electricity mix to 2050



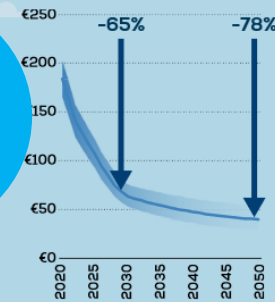
OFFSHORE WIND
EU:
2023: 30 GW
2030: >60 GW
2050: >300 GW

FLOATING WIND:
70% OFFSHORE
CAPACITY
2030: +3,000 WT
2050: +27,000 WT

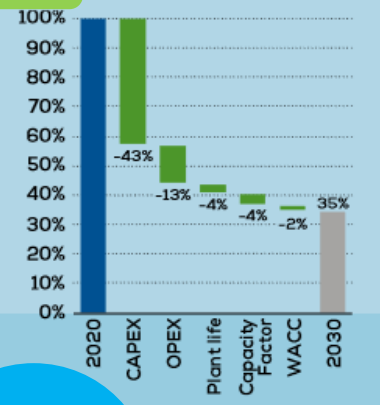
By 2030:
€2billion
predicted to
be INVESTED
in FLOATING
foundations

TARGETS

Floating Offshore Wind



LCOE
REDUCTION



SUPPLY CHAIN:
HARBOURS
CRANE VESSEL





WINCRETE PLATFORM



CONCRETE
MONOLITHIC
SPAR
STRUCTURE

CHARACTERISTICS

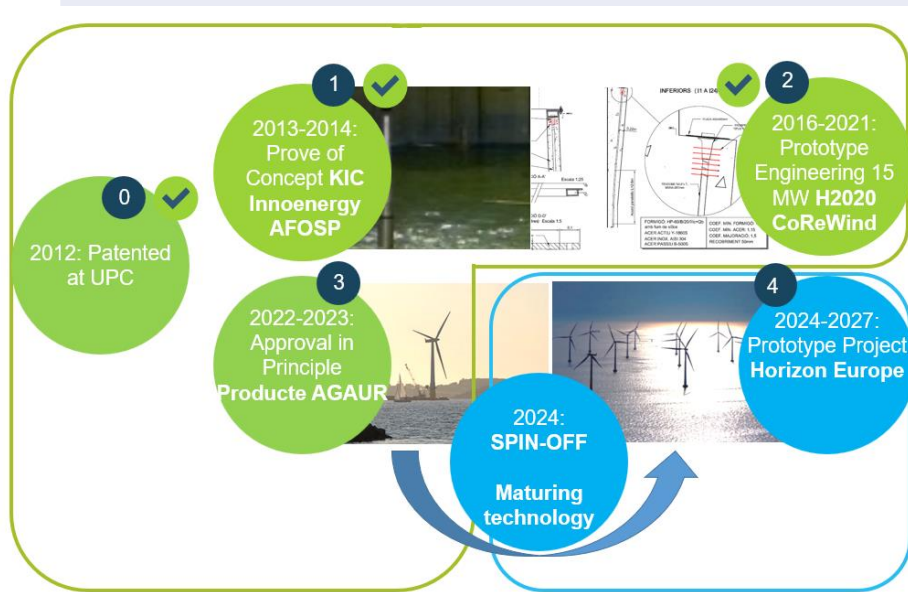
- Concrete Construction -> **life span of 50 years**
- **No Moving Parts** – Minimal O&M
- **Horizontal** Transport & Construction – **Many locations** for production (shipyards and ports)
- Well Suited to **Industrialised Production**
- Installation **out of harbour** by **novel technology**
- **Lower LCOE** for Larger Turbines (up to **15MW**)

TECHNOLOGY REDINESS

- TRL 5 (LABORATORY EXPERIMENTAL TESTS -> COREWIND PROJECT)
- APPROVAL IN PRINCIPLE



ROAD MAP



BUSINESS MODEL

LISCENING WINDCRETE



CLIENTS:

Floating Offshore Wind Parks

BIDDERS &/or ENERGY Co

SERVICES

- Construction direction



- Health monitoring assessment



CLIENTS:

Floating Offshore Wind Parks

MANAGERS



THANK YOU

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