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## Final Newsflash

May 2023

### Cost-reduction for floating offshore wind: why is it crucial?

Floating wind technology opens up deeper waters. It makes offshore wind possible where it wasn't possible before. In view of international energy goals to reduce global CO<sub>2</sub> emissions and water depths, floating offshore wind will be essential for the energy transition.

More and more countries want to build floating wind, especially in geographies with good wind resources in deep waters. In Europe, France, Spain, Norway, Italy, Ireland, and Greece have already held or will hold their first offshore wind auctions. Globally, the US, the UK, South Korea, Japan and China have joined the call too.

Although France is issuing the results of the first 250 MW auction and there are many European players with large pipelines of projects, it is still unclear where and when we will see the first commercial projects coming online in this global race.

The pace and scale of floating deployment will depend on how rapidly the technology can reduce cost. Currently the largest wind farm online is 95 MW and on average the technology can be up to twice the price of bottom-fixed.

The path to commercial scale will depend on Governments auctioning large scale floating projects and research working with the industry to design wind farms using the latest knowledge, models and tools. This is where COREWIND comes into play.

### Up to 18% lower costs possible in floating offshore wind

The COREWIND project (2019-2023) sought to cut the cost of floating offshore wind technologies by 15%, leading to costs lower than 100€/MWh. Spoiler: this has been achieved! 🎉



On 25 April 2023 during the project's final event in Copenhagen, COREWIND partners announced they achieved a **cost reduction between 11% and 18%** for floating offshore wind technologies **with the lowest cost totalling €58.8/MWh**. This is less than half of the cost of current projects in operation.

The innovative solutions that helped us reach this final cost reduction include:

- **The optimisation of 2 floating sub-structures** (concrete spar and semi-sub) for 15 MW floating wind turbines with simulations in three different locations (US, UK, ES).
- **Optimised mooring and cable systems** with innovative solutions e.g. shared anchors or shared mooring lines which can halve the costs in the best cases.
- **Optimised Operation & Maintenance** strategies, e.g. to exchange major components or apply additional monitoring solutions, but also **optimised Transport and Installation** strategies for the construction phase.

Based on these solutions, the "FowApp" has been developed. This public application calculates:

- the Levelised Cost of Energy of a wind farm with a breakdown of costs and;
- the CO<sub>2</sub> Life Cycle Assessment of an asset from cradle-to-grave.

In some cases, COREWIND solutions helped **lower the emissions to less than 20g CO<sub>2</sub>/kWh**. This means it takes on average 1.5 years for a floating turbine to offset its emissions.

More than **135 experimental tests** were carried out to validate the solutions including wind tunnel and basin tests. And more than **25 exploitable results** were identified within the project including product services, but also transferable knowledge.



At the final event, [AFLOWT](#) and [FLOATECH](#) - two other EU-funded projects also working on floating wind – discussed the results and learnings from their project with COREWIND partners. Experts agreed that we no longer need to finance new floating designs. What we need now is **to support industrialisation and to allow open access data of optimised designs and tools** which are ready to use (and ready to validate) by the industry.

In total, **155 participants** (almost 80 in-person + 75 online) joined the COREWIND final event, which brought an end to a very successful project benefitting the whole floating wind sector.

All COREWIND results and publications are available on the COREWIND website [here](#) and on the Zenodo platform [here](#).

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### COREWIND's participation in FOWT 2023 and WESC 2023

On 10-11 May in Nantes, COREWIND first took part in the **Floating Offshore Wind Technology Conference (FOWT 2023)**, one of the major European events centred on floating offshore wind. At the COREWIND stand, project partners met a lot of floating wind experts and professionals interested in COREWIND's solutions and how they can strengthen their businesses.



Then on 24-25 May, COREWIND partners went to Glasgow for the **Wind Energy Science Conference (WESC 2023)** – discussing the project results with the wind scientific and academic community. A mini-symposium looking at floating wind cost reduction was chaired by José-Luis Dominguez (coordinator of the COREWIND project). But COREWIND was also promoted through a stand where partners raised awareness about the project.



### Check out the final COREWIND video!

To highlight the latest project results, a **new version of the COREWIND video** has just been published! This updated version shows the final cost-reductions achieved through COREWIND's solutions.

[Watch the final video here!](#)

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If you have any questions, please contact

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With our best wishes,  
The COREWIND Team.

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