



Report 2021

Task 49

WindFloat Atlantic final hookup at Viana do Castelo, Northern PortugalCredit:

Photo: The Windfloat Atlantic project / Principle Power. Artist: DOCK90

Integrated D_Esign of floating wind Arrays (IDEA)

IEA Wind Task 49 on the Integrated D_Esign of floating wind Arrays (IDEA) kicked off in December 2021.

THE OVERALL GOAL of the Task is to accelerate the global development of commercial-scale floating wind projects by providing resources to the research and planning communities. Expanding the industry beyond the current demonstration-scale projects will require addressing unique challenges associated with having dozens of co-located floating platforms

in a confined ocean space, such as designing reliable and effective station-keeping systems, optimizing array layouts, and considering the needs of other ocean users. Considering holistic design principles from the earliest stages of the industry will streamline the growth of cost-effective, globally deployed floating wind projects.

The primary challenge with developing commercial-scale floating wind designs is a lack of widely accepted methodologies, data, and resolutions to outstanding planning questions. The IDEA project brings together floating wind experts from around the world to consolidate their perspectives and experience. The Task will provide baseline tools and data for the research community, including reference site conditions, reference array designs and toolsets, an array-level risk assessment framework, and a register of major research and planning questions faced by the industry. Combining these resources into a unified repository will help provide a standardized foundation for future innovation, development, and industrialization of floating wind projects worldwide. Task participants include representatives from project developers, technology providers, universities, consultancies, regulatory agencies, and research institutions from 7 countries, which will provide a comprehensive and global perspective on the questions facing the industry.

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