

This study is part of the European Union Climate Dialogues (EUCDs) project

Executive Summary

The development of offshore wind farms can provide Indonesia with a large-scale, affordable renewable energy source, while only limited land resources will be required. To capitalize on this opportunity, smart long-term planning by the Government of Indonesia and close coordination between Indonesian ministries is needed. How can this be done? This study examines the Indonesian context and will explore the best practices and lessons learned from various EU Member States that have recently developed offshore wind farms.

Contextual Differences Between The EU and Indonesia

Compared to the EU, Indonesia has...



Lower windspeeds and a different geography



A lower level of economic development



A decentralized grid



Self sufficiency in fossil energy resources



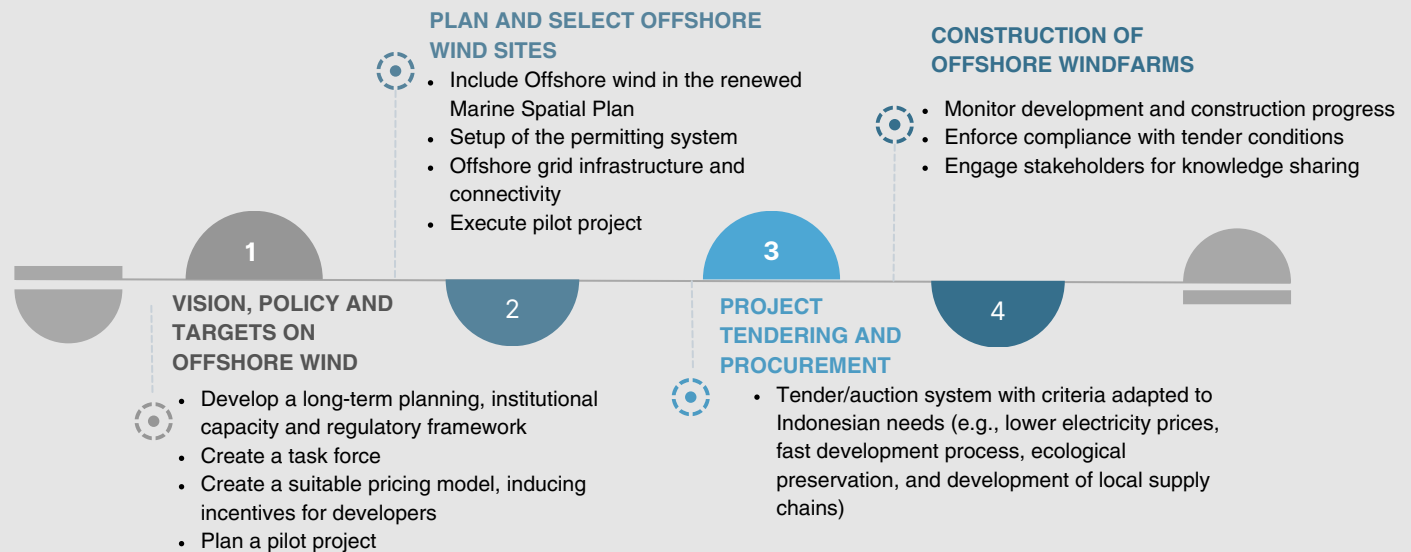
A bundled electricity utility



More upstream mineral industries

Components of A Regulatory Framework for Offshore Wind

The process of developing a regulatory framework for the offshore wind sector is shown in the graphic below. These phases are roughly similar in any country. Steps within each phase can be executed simultaneously.



Offshore Wind Best Practices & Lessons Learned Derived from EU Member States

Please note that the infographic only shows a few specific elements per country and does not show all details of the country's regulatory framework.

Denmark, Germany, The Netherlands

- Transparency and certainty of capacity targets and timelines
- Single window permitting
- Avoid open-door procedure
- Bankable power purchase agreement (PPA), support scheme and subsidy

All countries

- Create a roadmap
- Create a Marine Spatial Plan

Denmark

- The construction of pilot projects
- Open dialogue between administrator and developers

Germany

- Streamlining site investigation processes
- Avoid open door procedure

Baltic States

- Direct community benefits
- Tender requirements can support small local companies
- Cross-border cooperation
- Capacity development and blueprint infrastructure planning

Poland

- New job creation
- Cooperation between local and international companies
- Cross-departmental offshore wind taskforce

The Netherlands

- Securing grid connection and grid offtake capacity by the national grid operator
- Having one offshore grid system operator has clear strategic and financial advantages
- The tender system allows the government to set requirements for developers

France

- Target setting related to employment goals
- Avoid permitting problems
- Allow fair competition in tenders
- Avoid too stringent local requirement

Spain

- Contract for Difference support
- Environment Impact Assessment regulation

Ireland

- Creating cross-departmental offshore wind taskforce

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Current Status of Indonesian Regulatory Framework in Offshore Wind

Specific regulations for the offshore wind sector have not yet been developed. The analysis therefore focused on existing regulations in related sectors, such as the onshore wind sector and the offshore oil & gas sector. Indonesia's Blue Economy strategy has also been reviewed.



VISION, POLICY AND TARGETS ON OFFSHORE WIND

- The energy sector is governed by Law 30/2007 and Law 30/2009
- Guiding Documents are the National Energy Policy (KEN) and General Plan of National Energy (RUEN)
- RUEN aims for 23% renewable energy by 2025 and 31% by 2050
- Corresponding to 45.2GW in 2025 and 167.6 GW renewable energy generating capacity in 2050
- Offshore wind is not yet part of the latest RUPTL (National Electricity Supply Business Plan)



PLAN AND SELECT OFFSHORE WIND SITES

- RTRLN (Marine Spatial Planning Plan) is the reference for marine planning
- RTRLN includes national and regional zoning plans
- No offshore wind projects or designated areas in the current plan.
- No specific regulations for offshore wind permits
- Permen KP 42/2022 establishes legal structure for marine permits



PROJECT TENDERING AND PROCUREMENT

- Currently there is no specific framework for offshore wind tenders
- Presidential Regulation (PR) 112/2022 outlines a new tariff structure and new tender processes, but lacks specific renewable energy quotas
- PR 112/2022 allows PLN to use direct appointment or direct selection methods to simplify procurement of renewable energy
- PR 112/2022 introduces incentives for renewables in remote areas, a capped transmission tariff and limits on battery storage costs

Recommendations to Develop A Regulatory Framework for Offshore Wind in Indonesia

Several recommendations for each phase have been listed below. Additional recommendations and an explanation of each recommendation can be found in the Full Report.



PLAN AND SELECT OFFSHORE WIND SITES

Marine Spatial Plan:

- Include offshore wind in Indonesian RTRLN
- Ensure a conflict resolution mechanism is in place
- Promote transparency by making the plan public

Permitting System:

- Develop an efficient permitting framework which is (legally) accepted by all relevant ministries
- Design a "single window permitting" approach

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VISION, POLICY AND TARGETS ON OFFSHORE WIND

Long-Term Strategy:

- Appoint a leading government agency
- Gain commitment from all relevant ministries
- Showcase international success stories
- Include offshore wind in the RUPTL

Institutional Capacity Development:

- Seek expertise through international support
- Ensure offshore wind is sufficiently prioritized within the government

Regulatory Framework:

- Assess which regulations are required, and decide which existing regulations can be kept / altered

Taskforce Creation:

- Form a taskforce with diverse representation with providing guidance and expertise

Pricing Model Design:

- Explore support schemes and subsidy reallocation

Pilot Project:

- Start with a small-scale test project
- Learn from international experiences

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PROJECT TENDERING AND PROCUREMENT

Project Tendering and Procurement:

- Design a tendering system which advances the priorities of Indonesia
- Ensure that the grid operator (PLN) is made responsible for arranging the grid connection
- De-risk the project to lower costs and stimulate competitiveness between developers

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