



PRESENTATION

Wind Energy Development in Indonesia

COMPONENT 2

Permitting and Regulation Assessment for Onshore Wind



ENERGY
TRANSITION
PARTNERSHIP



UNOPS



PONDERA

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Introduction

Background

- Abundant yet underutilized onshore wind energy potential in Indonesia

60.6 GW
potential



154 MW
utilization

- What are the barriers/challenges that prevent the proliferation of wind energy in Indonesia?
- Diving deeper into the **permitting and regulations**



Objectives

This study addresses three project objectives:



consolidate a selection of **suitable sites with the highest potential** for wind energy development (based on RUPTL)



analyze the **suitability and quality of selected sites** for installation and long-term operation of a commercially viable wind power project; and



inform **improved policies and regulations** and create a favorable business climate to attract investments.

Approach

Research questions

1. What are the regulations related to wind energy project in Indonesia?
2. What are the permits required to build a wind energy project in Indonesia?
3. Based on the results of the research, what are the challenges in wind energy projects in Indonesia?
4. What are the recommendations to overcome these challenges?

Methodology



Desk research



Interviews



Wind Power
Technical Working Group



Findings

Regulations

- Existing laws and regulations from the different levels are grouped into **twelve categories**.
- There are **no specific regulations** governing the construction of wind farms.

Categories		#
1	Renewable energy	9
2	Electricity	25
3	Local content	8
4	Conformity of spatial utilization activity	6
5	Forest area use approval	5
6	Environmental management	10
7	Transportation	9
8	Land acquisition for public interest development	3
9	Business licensing	6
10	Building	5
11	Fiscal facilities	9
12	Employment	6

Permitting

The introduction of an **online licensing system has had a positive impact** on the wind energy sector.

1

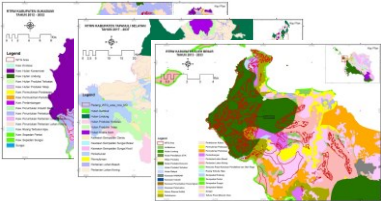
National-level

- Online permitting services
- Permitting based on project phase
 - a. Development
 - b. Construction
 - c. Operation

2

Site-specific

- Spatial plan



- Actual land use and status
- Biodiversity and environmental legislation
- Permitting based on project phase

Challenges



Tender process

Achieve **a consensus on the preparation of tenders** for wind projects

- Uncertain and unclear procurement process
- Expiry date of met mast data
- 'Blanket rule' on having mandatory partners
- Obligation to form a new SPV for wind farm expansions



Power Purchase Agreement

Establish PPA terms with **well-balanced positions** between the two signing parties

- Ceiling tariff referring to BPP
- Non-revisable PCM



Incentives

Create **just and effective allocation of incentives**

- Carbon credit distribution between PLN and IPP
- Cancellation of tax incentive



Financing & bankability

Avoid hampering bankability of projects under existing regulations

- Suboptimal support provided by existing fiscal and non-fiscal regulations
- Perception of 'risky and slow' wind project investments in Indonesia



Implementation & stability of regulations

Reduce developers' risks through a **stable regulatory environment**

- Frequent change of policies by the Government
- Inconsistent implementation of regulations
- Delays in permitting process and land acquisition



Local content requirements

Prepare Indonesia's wind sector to meet anticipated LCR

- Import of key wind turbine components
- Components produced locally may not be compatible

Challenges



Wind data availability

Obtain **accessible and reliable wind data**

- Limited availability of accurate long-term wind data
- High level of uncertainty of mesoscale models
- Financial burden of investments for wind measurements
- Difficulty for PLN to predict power production



Spatial data & standards availability

Obtain **spatial data and establish standards** to enable an efficient wind project development

- A clear Indonesian guideline on the analysis criteria and considerations for the technical, environmental, and social impact of a wind farm
- Accessible and consistent digital/hi-res spatial (planning) data
- Standardization in the development process (e.g. mandatory studies, guidelines for FS, etc.)



Infrastructure

Develop **electricity- and supporting infrastructure** near wind farm sites

- Lack of transmission and distribution network
- Hard to ensure the stability and reliability of wind power given its intermittency
- Lack of suitable ports and roads



Intergovernmental coordination

Enhance **coordination and clear responsibility allocation** between government offices are needed



Overlapping permits

Untangle overlapping permit requirements

- There is a permit (e.g. KKPR) which is a requirement for obtaining another permit (e.g. PPKH), and vice versa.



Time uncertainty

Provide **certainty of processing time** through the permitting procedure

- Re-doing data input process into the OSS system from the beginning due to an error

Recommendations

1 Establish pre-conditions for policy/regulations and permitting in the wind sector

- **Consistency:** Predictable and stable institutions and their implementation, regardless of the project location and the different levels of authority involved
- **Transparency:**
 - Consideration and incorporation of stakeholder feedback in the government's decision-making process
 - Timely announcement and consultation in case of changing policies and regulations
 - Transparent and standardized permitting for projects
- **Clarity:**
 - Reasonable and clearly-defined evaluation criteria of permit applications
 - Clear and reasonable cut on the implementation of new regulations
 - Rules and mechanisms that define land ownership and usage rights to help prevent disputes
- **Responsibility:** Assignment of authority and responsibility to government agencies by a leading body

2 Continuously improve the OSS system

- **Integration of complex regulations** into OSS system, with constant monitoring and gathering of feedback
- **Strengthening cooperation and coordination** between government bodies, including the central and regional governments, with dedicated PICs

3 Streamline land acquisition process

- **Legal clarity** with clear rules and mechanisms to resolve potential disputes
- **Attraction of investment and development** through fast-tracking and land-use priority

Disclaimer

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The full report can be accessed via ETP website



Bahasa Indonesia



English