

Sumatra Wind Portfolio

Aceh and North Sumatra

Context

The Indonesia Wind Portfolio is a project totaling 176MW wind power that will be developed in the Province of Aceh and North Sumatra, Indonesia. The envisaged projects are expected to be located on ridges in Aceh and North Sumatra, with a possible 88MW project in Aceh and 88MW in North Sumatra. The projects will **utilize highly-efficient class IIIA wind turbines** to maximize wind resources available in the area. The erection of met masts, and detailed technical, social, and environmental studies are being conducted to confirm wind resource potential in each site whilst at the same time also the environmental impact assessments are underway.

Infunde Development, is lead-developing (including all development activities from site identification to authority engagement, to financial close) a total portfolio of wind sites / projects adding to 176MW in total, located at Lambadeuk and Padang Sidempuan sites in Indonesia.

Project Highlight

176MW	275M	Q1 2025
Multiple sites of power output	US\$ of total project cost	Expected COD



Source: @publicpowerorg, Unsplash.com

Country and Sectoral Background

Indonesia has **targeted a 23% renewable energy generation mix** by 2025. This target was set in 2015 and to date only about 12% has been achieved.

Solar and wind renewable projects are limited in implementation size and location by **constraints of the grid capacity**. In order to avoid such constraints, large utility-scale projects have to be conducted in islands with large grids such as Sumatra, Java and Sulawesi.

Currently, the North Sumatran grid is dominated by **fossil-fuel powered** plants. The presence of the Sumatra Wind Portfolio will be able to supply clean and low-cost electricity to the northern tip of the island.

The project will also provide electricity more locally to the centers of demand, hence significantly reduces line losses in the grid system. The Northern Sumatra electricity network still has significant diesel fired power plants in the mix, totaling 15% of the generation.

Project Overview

Company:	PT Majes Jaya Utama and PT Damar Jaya Utama
Country:	Indonesia
Region:	Aceh and North Sumatra, Indonesia
Sector:	Wind power
Status:	In development
Timeline:	Expected financial close Q4 2022
Shareholder(s):	InfraCo Asia Development and Vayugen

Development Impact



More affordable energy consumption and reduce fossil-fuel by clean energy

The project aims to increase clean energy generation capacity and contribute to reduce the country's dependence on fossil-fuel through diesels.



Create substantial revenues for local business by getting their services.

Including technical consultant, construction, EPC, and other local companies. This new supply chain adds value for local business.



1M people estimated to have improved access to energy.

The project is expected to generate a total of 485GWh electricity annually, given more electricity consumption per capita per year.



3,600+ jobs will be created by the project when the construction starts.

More than 3,600 short-term jobs will be created during the construction phase. The project also offers 330 jobs on site and 70 jobs for the office team in the long term.

Environment and Community



The Indonesia Wind Portfolio will be completed to target the immediate requirements of the North Sumatran grid in order to provide adequate, cost-efficient and reliable power through wind power plants.

The Sumatra Wind Portfolio is an Infunde-led project development, including all phases of development from site hunting, dealing with local authorities and community to secure necessary approvals and permits required, project structuring and financing through to exit.

Infunde Development will ensure IFC Performance Standards are followed and that social and environmental risks are well identified, avoided when possible, and otherwise minimized and mitigated.

Key Investment Strengths

A portfolio of 176MW wind power
Projects located in Aceh and Padang Sidempuan, both located on the island of Sumatra in Indonesia. There is strong class IIIA wind resource estimated 6.5-7.5m/s at 140m height at both sites.

The Indonesia government
Targets to increase the utilization of renewable energy resources up to 23% whilst reducing the relative components of diesel and coal fired capacity by 2025 as the National Energy Policy which governs under the government regulation No. 79/2014. By implementing the projects in several isolated areas there is an alignment with government plans (RUKN) to increase the electrification ratio to 100% by 2021

Power Market Overview

Demand
Driven by rapid economic development, electricity demand in Indonesia has experienced strong growth rates during the past decade.

Supply
The installed capacity has increased from 63GW in 2018 to 78GW in 2021. The expected growth from 2021 to 2030 is from 78GW to 115GW.

Renewable energy
Indonesia committed to reach 23% of renewable energy in its national energy mix by 2025 (Republic of Indonesia, 2014). The wind energy potential is estimated at 9.3GW (ESDM, 2019). The government targets 1.8GW of installed wind capacity by 2025 (ESDM, 2019).

Infunde's Role

Infunde Development is leading overall project management, negotiations with strategic partners, installers, and financing activities. It will also help the local building the business plan and investment case, obtaining the necessary licenses, project and partnership structuring, overseeing feasibility studies, management of design work, EPC procurement and contracting and arranging the necessary debt facilities. Infunde will also lead for financial modeling, structuring, environmental and social safeguards, permits and approvals, EPC procurement and tendering, grid interconnection and feasibility, overall coordination and project management.

INFRACOA

InfraCo Asia (IAD) is a commercially managed infrastructure development and investment company of the Private Infrastructure Development Group (PIDG) – an innovative infrastructure development and finance organization delivering pioneering infrastructure in the poorest and most fragile countries.