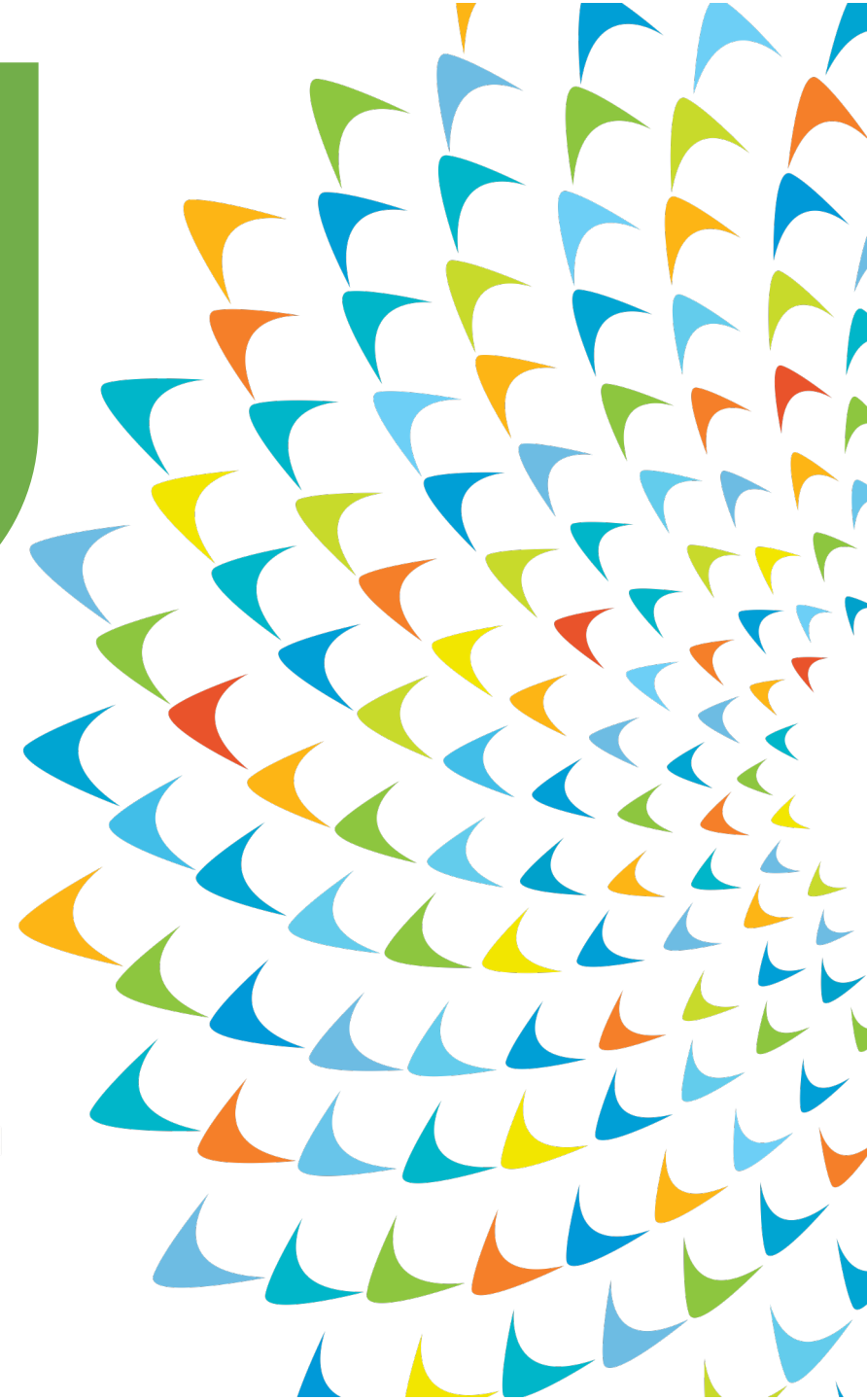


ACEF 2023

Monsoon Wind Power Project

14 June 2023





Monsoon by the numbers



600
MW

22km
transmission line

1,500
GWh net annual
generation¹

\$950m
project cost

\$670m
debt mobilized
by ADB

750,000
tCO₂ emissions
offset per year

1. Based on a P90 estimate.

1st
wind project in Lao PDR

Largest
wind project in ASEAN

1st
cross-border wind
project in Asia



A natural cross-border relationship

“The Battery of Southeast Asia”



- History of exporting hydropower.
 - ✓ Hydropower exports currently account for **~10% of GDP**
- Renewables ambition.
 - ✓ Targets **30% non-hydro renewables** production by 2025
- Significant wind potential.
 - ✓ Utility scale wind potential in the range of **100-500GW**

Massive Demand for Renewable Power



- High GDP growth = increasing energy demand.
 - ✓ 8.0% in 2022; **6.5%-7.0%** in 2023 and 2024
- Renewables ambition.
 - ✓ PDP8 targets generating up to **39%** of power from renewables 2030
- 2015 established MoU.
 - ✓ Target to import **3 GW** of Lao renewable power by 2025, 5GW by 2030

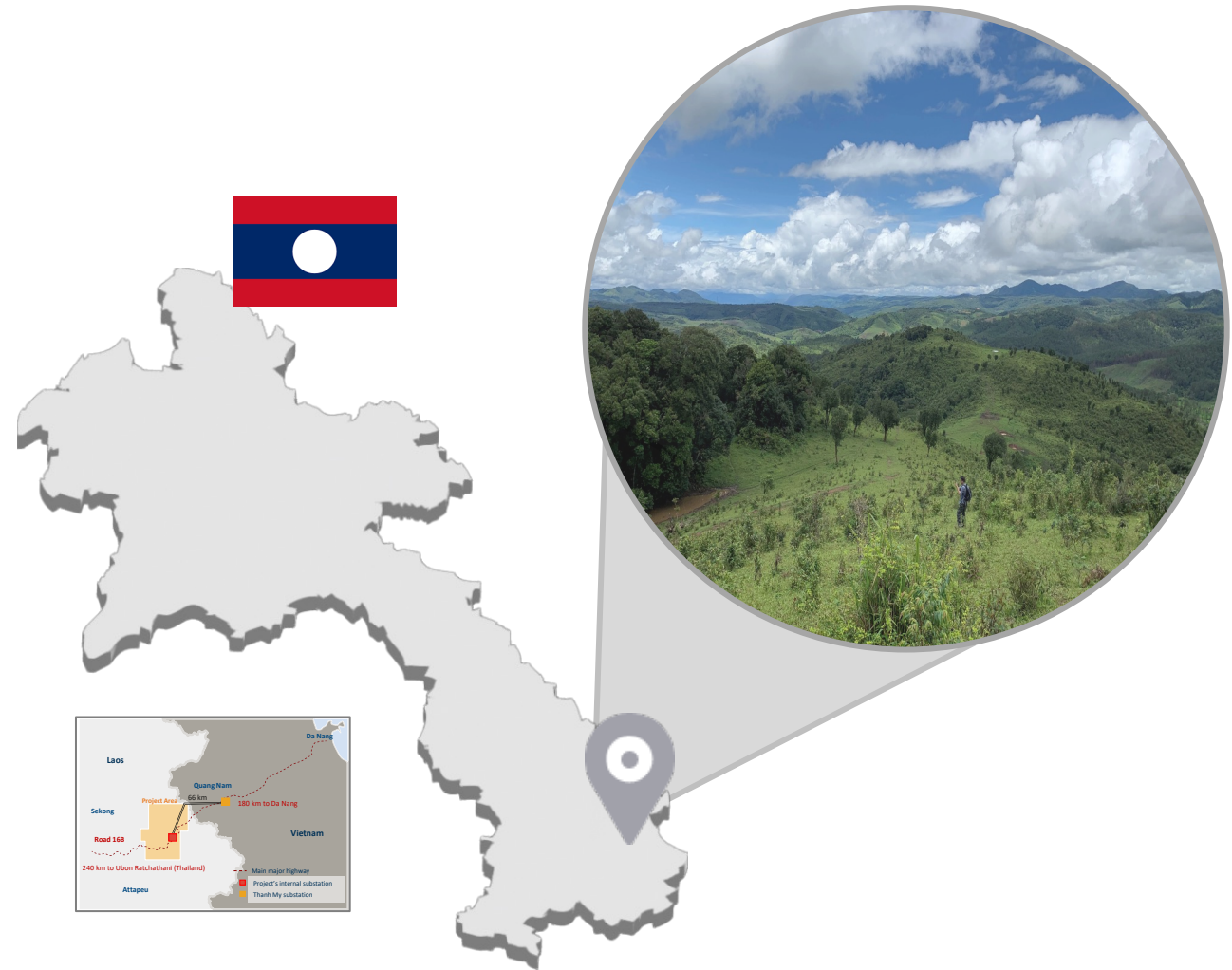
Against this backdrop, Viet Nam's PDP8 incorporates the MOU target to import 5,000 MW by 2030



Project site in southern Lao PDR

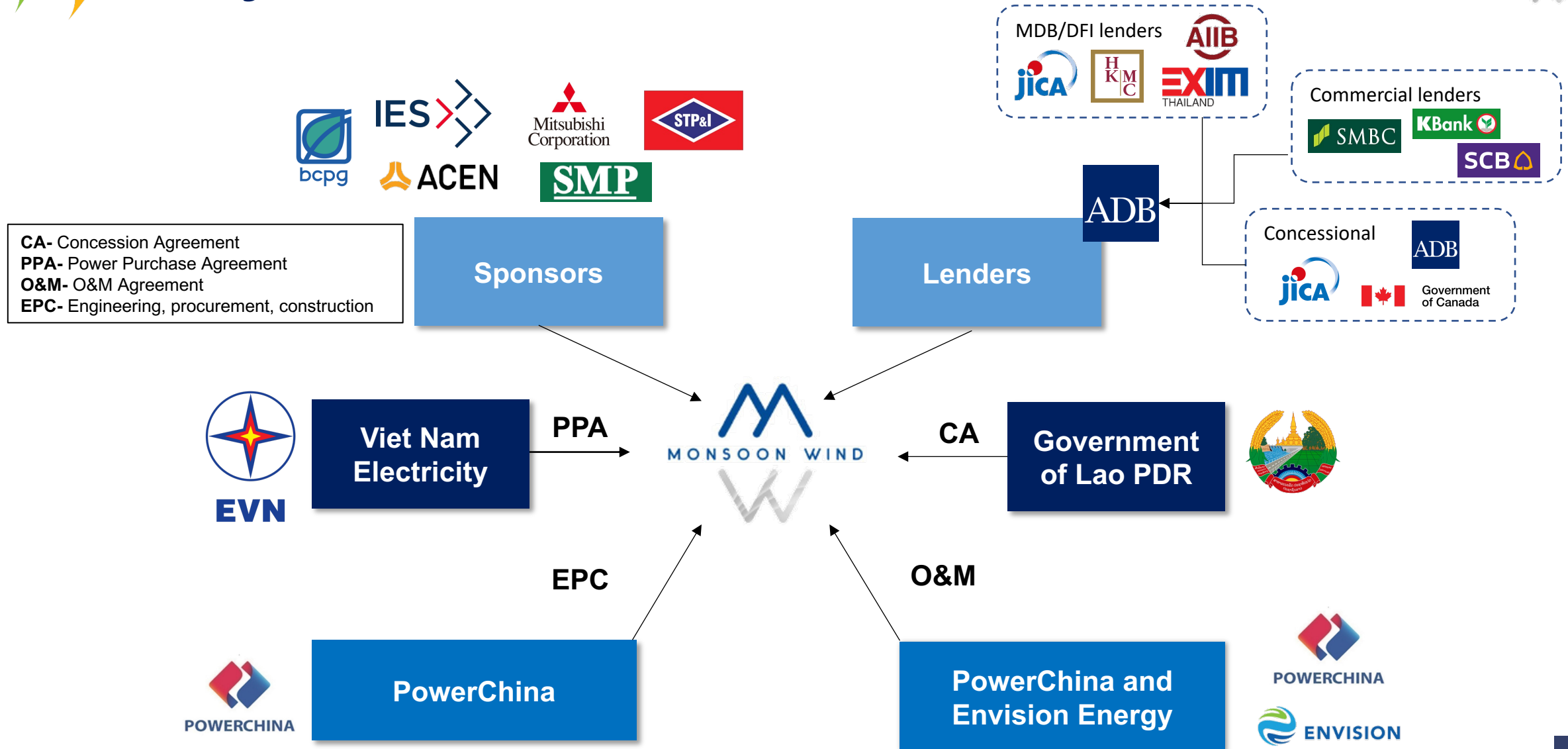
Site Highlights

- Located in Sekong and Attapeu provinces in Lao PDR, 22km from the Viet Nam border, and at an elevation of 1,000-1,600m
- Project area comprises 68,000 hectares, but requires footprint of only 1,050 hectares
- Along the road connecting Ubon Ratchathani (Thailand) to Danang (Viet Nam), (Danang), with road infrastructure adequate for transportation of wind farm components
- Unexploded ordinance (UXO) clearance a key EPC activity in early construction





Project structure





Further project details

Project

- **133 x 4.5MW Envision turbines**; project cost of approx. \$950m
- Project developed under an MoU between Lao PDR and Viet Nam for import of renewable power
- Complementarity of wind with hydro compelling given large existing hydro exports from Lao PDR

Transmission

- **22km 500kV transmission line (TL)** from the project to the border constructed by Project
- Project TL will connect to 44km 500kV TL constructed by EVN, with interconnection at the border

Power Purchase Agreement

- **25-year Power Purchase Agreement with EVN** signed in 2021, amended 2022
- US\$ tariff paid offshore Viet Nam; PPA governed by English law with Singapore arbitration
- Termination payments for GoV Force Majeure; deemed generation payments for delay in EVN TL
- “Take-and-pay” for electrical power generated, with curtailment only for technical EVN grid issues

Concession Agreement

- **25-year Concession Agreement** with the Government of Lao PDR
- Royalties payable as a % of gross revenue; key bank accounts to be held offshore

E&S

- Strong community support with a focused community development programme, including \$1.1m contributed to **Community Development Fund** annually

EPC

- Fixed-price, date-certain, turnkey, fully-wrapped EPC with PowerChina

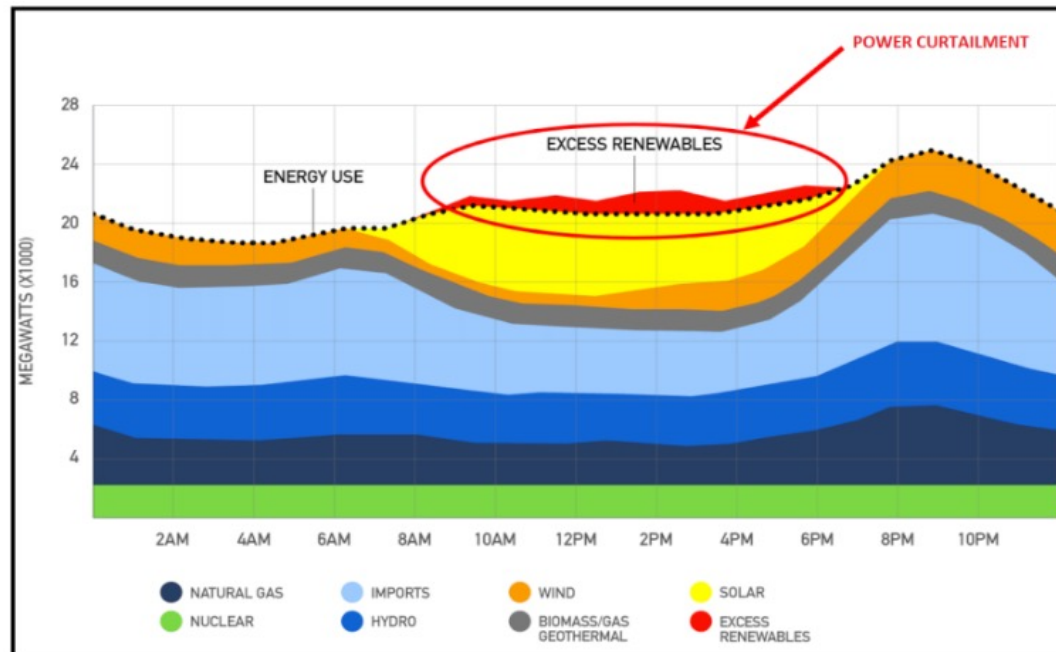
O&M

- O&M with Envision Lao for the turbines, and PowerChina Lao for the balance of plant (BoP) facilities



Innovative blended finance structure

Key bankability concern – curtailment



* Diagram for illustrative purposes only

\$60m to address curtailment risk

- “Take-and-pay” PPA structure means there is risk if EVN were to curtail power from the project
- Curtailment risk is mitigated in other ways, but in part, the blended finance package was designed to address this significant risk in two ways:
 1. **\$30m** applied to project costs as **longer-tenor** and **subordinated** debt to mitigate effects of ordinary curtailment
 2. An additional **\$30m cash reserve** to mitigate cases of one-off or extreme curtailment
- With the blended finance package, it is estimated the project can withstand *extreme* curtailment (50% of potential output) for more than three years without triggering a default



Development impact



OP3: Tackling Climate Change

748,867 tons of CO2 emissions avoided per annum



OP2: Accelerating Progress in Gender Equity

Effective Gender Mainstreaming (EGM)



OP7: Regional Cooperation and Integration

Improved connectivity by developing cross-border energy infrastructure



Support Least Developed and FCAS Country

Employment and revenues through collection of royalties, lease payments, and taxes



Support Clean Energy Supply

1,519 GWh of clean electricity delivered per annum to meet Viet Nam's energy demand



Support Rural Development

\$1.1 million annual development fund to support education, agriculture, health, and infrastructure in local rural community



SDG5: Achieve gender equality and empower all women and girls

SDG7: Ensure access to affordable, reliable, sustainable, and modern energy for all

SDG13: Take urgent action to combat climate change and its impact



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THANK YOU!

