

MAINSTREAM IN VIETNAM



*UK energy mission
October 2023*



**A WORLD ELECTRIFIED BY
RENEWABLE ENERGY**

AGENDA

1. MAINSTREAM RENEWABLE POWER INTRODUCTION
2. MAINSTREAM PORTFOLIO IN VIETNAM

Overview of Mainstream



an AKER HORIZONS company

Renewable Energy Developer

Core Technologies



Background



Origin

- Founded in 2008 in Ireland by Airtricity founder Dr. Eddie O'Connor
- Pioneer in offshore wind – developed and sold Hornsea 1 and Hornsea 2 (4GW)



Key Markets

- Europe, Africa, Latin America and Asia Pacific
- **1.4 GW** of projects in construction and operations



Business

- Successfully delivered **6.5 GW+** of wind and solar generation assets to financial close
- Raised more than **EUR 3.0 billion** in project finance to date
- Employs more than **600 people**



Norwegian & Japanese Relations

- Aker Horizons acquired a majority stake in Mainstream in 2021
- Merger of Aker Offshore Wind with Mainstream in 2022
- Mitsui & Co., Ltd joined Aker as a long-term strategic investor in 2022

Mainstream by the numbers



Global Pipeline

Of renewable energy assets in development, construction and operation

20.8 GW (net)*



Competitive Auctions

Won competitive auctions in the US, UK, South Africa, Chile and Colombia

7+ GW



Development Experience

Bringing projects from development to financial close-ready globally

6.5+ GW



Finance Ability

Key relationships with international banks and lenders. Project Finance raised to date:

€3 billion



Constantly Expanding

Actively expanding our networks and capabilities to tap global markets

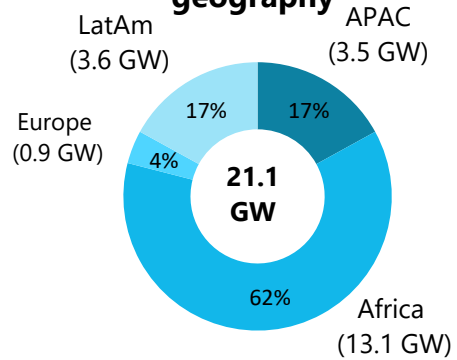
18 offices
4 continents
600+ employees

** on a net ownership basis at 30 June 2023*

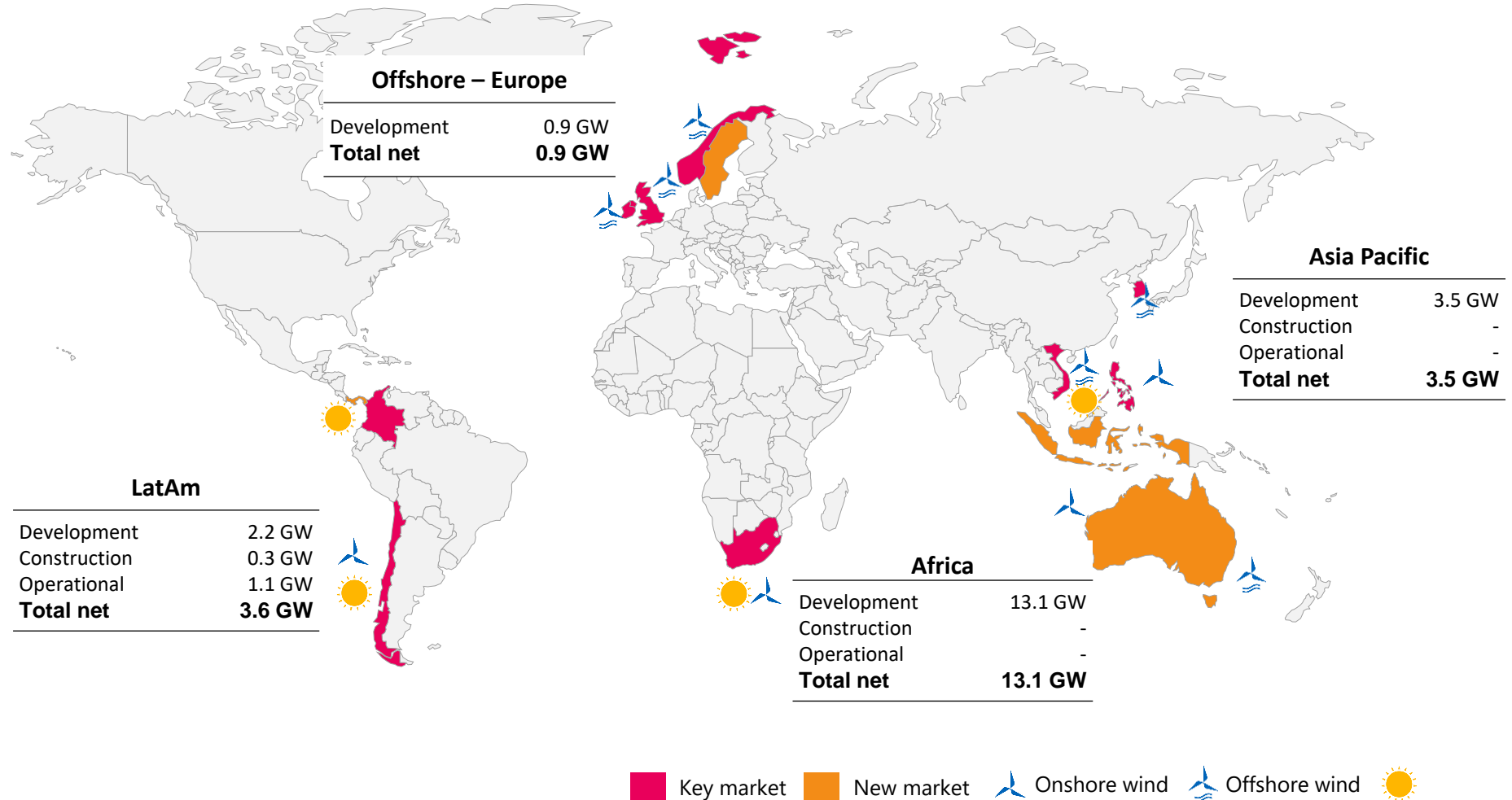
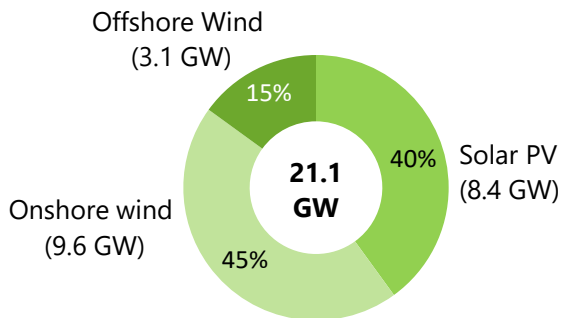
Global pipeline of wind and solar assets

Pipeline reflects assets in development, construction and operational

Capacity distribution by geography



Capacity distribution by technology



Note: All figures shown on a net ownership basis at 31 March 2023

MAINSTREAM PORTFOLIO IN VIETNAM



I. OFFSHORE WINDFARM: 1,900 MW

1) SOC TRANG PROVINCE: 1,400 MW – PHU CUONG SOC TRANG PROJECT

- Phase 1A: 200MW – PDP7 inclusion, Investment license
- Phase 1B: 200MW – PDP8 inclusion
- Phase 2: 1000MW – PDP8 inclusion

2) BEN TRE PROVINCE: 500 MW – BENTRE AIT OFFSHORE WIND PROJECT (PDP8 inclusion)

II. GROUND MOUNTED SOLAR FARM: 405 MW

3) DAKNONG PROVINCE: 405 MW DAKNONG SOLAR PROJECT (PDP7 Inclusion)

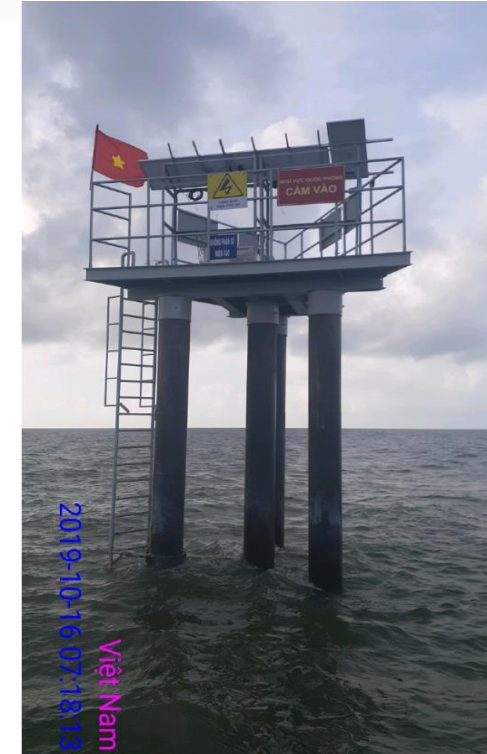
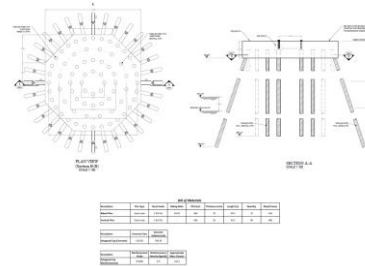
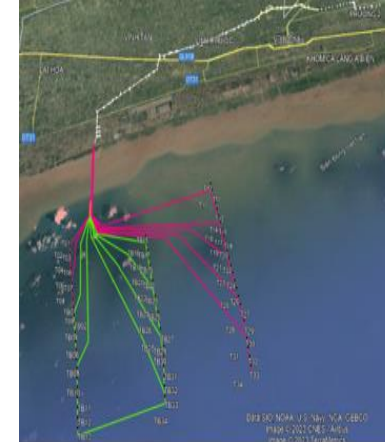


1.400 MW Phu Cuong Soc Trang Offshore Project



- **Wind Measurement Campaign**
 - 6 years onshore met mast, 2 LIDAR Installed in August 2018 and July 2019, bankable data
- **Metocean Campaign**
 - Bathymetry survey 2018/2019, wave height/current on the sea-bed
- **Geotechnical Investigation Campaign**
 - Started in 2016, supplemented in 2019 and 2020
 - Detail Geotechnical Investigation preceded by UXO Survey
- **Environmental Impact Assessment Studies (ESIA and regulatory EIA)**
 - ESIA DD by some potential international lenders interested in the project
 - EIA – Institute of Energy
 - FPIC (Free, Prior, Inform, Consent) with IP and Fishing Community with 200 people
- **Wind Turbine Foundation Design**
 - Two concept designs completed (steel monopile and concrete piled raft)
 - Selection of Balance of Plant contractors is on going
- **Feasibility Study (FS) and Technical Design**
 - FS ongoing by Institute of Energy (Vietnamese consultants)
 - Frozen FS design on end of December 2021
 - Grid Connection Agreement was submitted

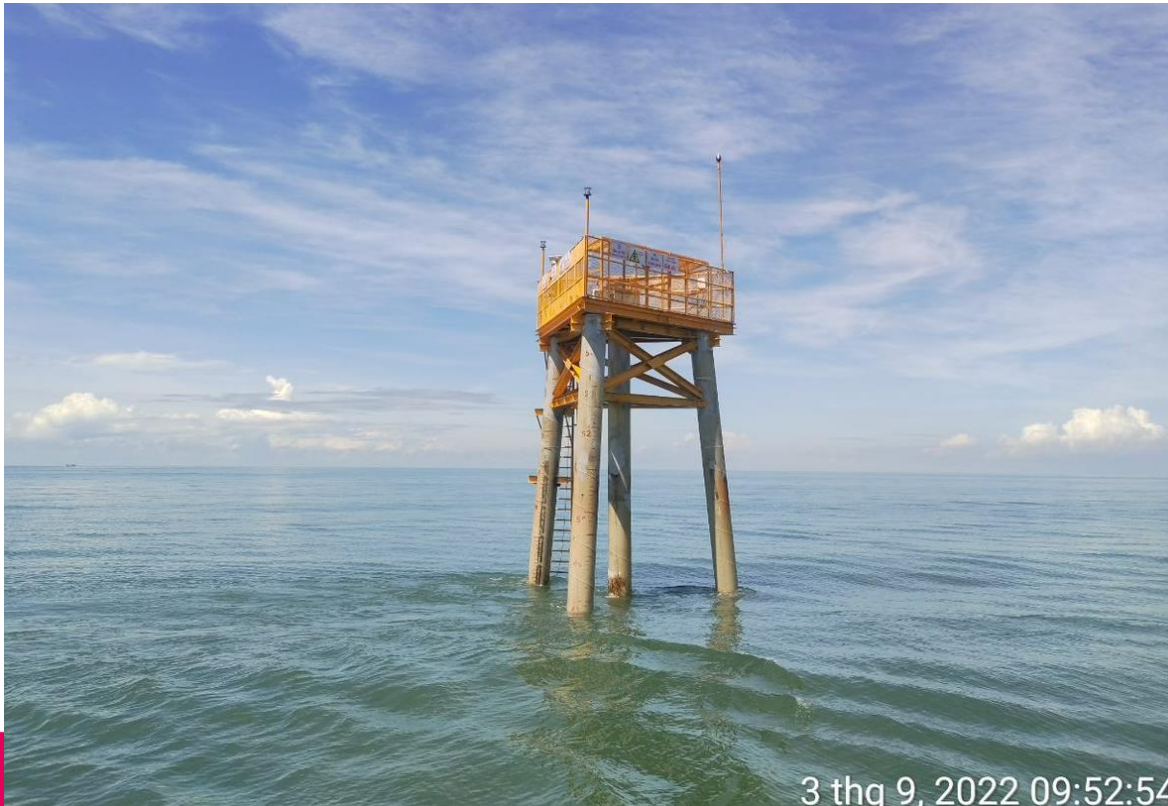
..... waiting for PDP 8 implementation plan



2019-10-16 07:18:13
Việt Nam

500MW AIT Ben Tre Offshore Wind Project

- Partnership between Mainstream and AIT Group signed in 2020
- Site survey license since 2021 for a location at project site is granted to kick-off wind measurement campaign on site
- 1 year of continuous wind data collection has been collected



Metric	Value
Nr. Of turbines:	78
Turbine Type:	6.45MW (GW)
EPE (GWh) – P50:	1462.3
Capacity Factor (%):	33.2
Grid Length:	10km
Connection Complexity:	Thanh Phu 220kV Onshore Substation Offtaker
OHL Complexity:	Onshore + offshore
Line Voltage:	220kV



Dak Nong Solar PV Power Project

Location: Dak Nong Province, Vietnam

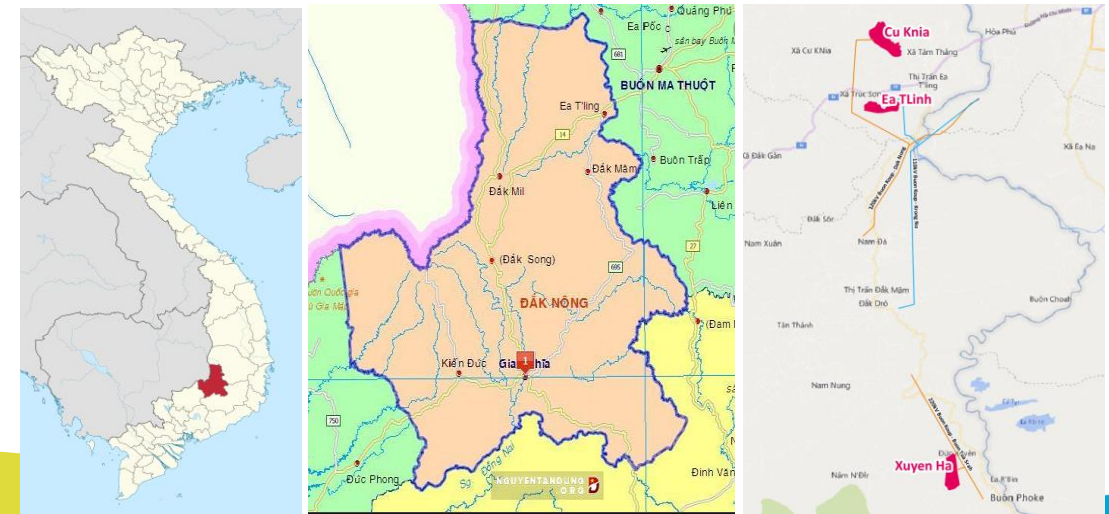
Technology: Solar PV

Capacity: A portfolio of 405 MWp consists of three sites each 95MW; 130MW; and 180MW.

Project's status: PDP7-extension approved project. Preliminary studies e.g Topographic survey 1/500; Flood risks assessment; and Load flow study have been conducted.

Key Metrics

Metric	Value
Panel Type:	545 Wp, Mono type, Tier 1
Resource (kWh/m2/yr):	Ave. 1860
EPE (GWh):	632.5 GWh @P50
Grid Length (km):	8.5km of 220kV and 4.0km of 110kV
Connection Complexity:	2 Step-up Substations & 1 Bypass SS (Cu Knia; Xuyen Ha) + 1 Step-up SS 110kV (Ea Tling).
Connection Line Voltage (kV):	110kV and 220kV



Mainstream Renewable Power Vietnam

Next Steps & Challenges



- Soc Trang: With a clear route to market published on Q4 2024, below milestones are achievable:
 - In Principle Approval for PPA, Grid Connection agreement, environment approval Q1 2024
 - Concluding Tender Process for Tier 1 Contractor Q2 2024
 - Financial Close Q4 2024
 - Construction Start Phase 1 Q1 2025

- Ben Tre: Awaiting route to market, proposed as pilot project (JETP eligible)

- Dak Nong: Waiting for further clarity on policy for Solar PV and PDP8 Implementation Plan in alignment with Just Energy Transition Partnership (JETP) and DPPA mechanism.

- Challenges:
 - PDP 8 implementation plan uncertainty
 - Tariff uncertainty
 - Offshore wind regulations (Decree 11)
 - Solar PV policy

WINDS IN REVENUE



Thank-you



30/10/2023