Phu Cuong Offshore Wind Farm Project: The First Vietnam Offshore Wind Farm Projects and Challenges facing Developers

Vietnam Wind Power Conference

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800 MW Phu Cuong Soc Trang Offshore Project

- Phu Cuong Group USTDA grant
- Partnership between Mainstream and Phu Cuong Group in 2018
Project Development to Date (1)

- **Wind Measurement Campaign**
  - 4 years wind data from onshore met mast
  - LIDAR Platform Installed by HTL in August 2018 in Block 4
  - Lidar unit was placed adjacent to onshore met mast in November 2018
  - Lidar unit placed on the offshore platform in December 2018 and currently measuring.
  - Second LIDAR to be placed in Phase 1A area in Q2 2019
● Metocean Campaign

➢ Collaboration between eCoast (New Zealand) and University of Science, VNU Ho Chi Minh City.

➢ Bathymetry Survey of started in September 2018 now completed.

➢ Wave height and current speed instruments placed on the sea-bed. Data recovery in October 2018 and December 2018.

➢ Instrument loss from sea-bed due to trawling activities – replacement leading to delays in data acquisition
Development Progress to Date (3)

- Geotechnical Investigation Campaign

  - Detail Geotechnical Investigation commenced in May 2019 by Fugro, preceded by UXO Survey by Lung Lo.

  - Significant weather downtime
LESSON 1: Offshore Development needs more time than onshore
Offshore specific clauses in PPA

- Government decision No. 39/2018/QD-TTg dated 10\textsuperscript{th} September 2018

- ‘Offshore wind turbines are wind turbines whose foundations are constructed outside the lowest average sea level edge for 18.6 years.’
• Many provinces focussing on closely spaced nearshore blocks

• Concerns with wake effects – will neighbouring blocks be built or not? For bankability must assume will be built – feasibility then in question

• UK and German practice for technical authority in government to define blocks and co-ordinate award in consultation with local province.
LESSON 2: Clear Regulatory Framework for Planning
• Capex Breakdown offshore
• Early UK projects USD 4M/MW
• Vietnam offshore players targeting below USD 2M/MW
• 800MW = USD 1.6bn investment Project Finance > 1bn
• Scale too large for local banks
• International banks keen to fund but some bankability issues remain with PPA
LESSON 3: PPA bankability more important for Offshore at scale
Thank-you

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