

How a state-owned oil and gas company accelerates energy transition: The case of PetroVietnam and the offshore wind power development

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BACKGROUND

- ❖ **Background:** Vietnam has strong offshore wind power (OWP) potential (~600 GW) & ambitious targets (6GW by 2030), yet limited OWP projects.
- ❖ PetroVietnam, a national oil & gas company, has shifted its business model toward OWP development.
- ❖ **Question:** To what extent and how have PetroVietnam accelerated OWP development in Vietnam?
- ❖ **Frameworks:** Complementarity framework and business model innovation (BMI)

METHODOLOGY

Step 1

- To conduct literature review on (1) the complementarity components in offshore wind power-RES-based system and (2) the roles of oil and gas companies in OWP development

Step 2

- To conduct case study of PetroVietnam in Vietnam by collecting data (corporate reports, research reports, policies updates with semi-structured interviews with policy-makers, managers) and to analyze data



Site visits at PTSC (PetroVietnam's OWP jacket foundation construction yards and ports (Jan, 2025 – Ba Ria Vung Tau, Vietnam)

RESULTS

Fig. 1: Complementarities of offshore wind power-linked-renewable energy system

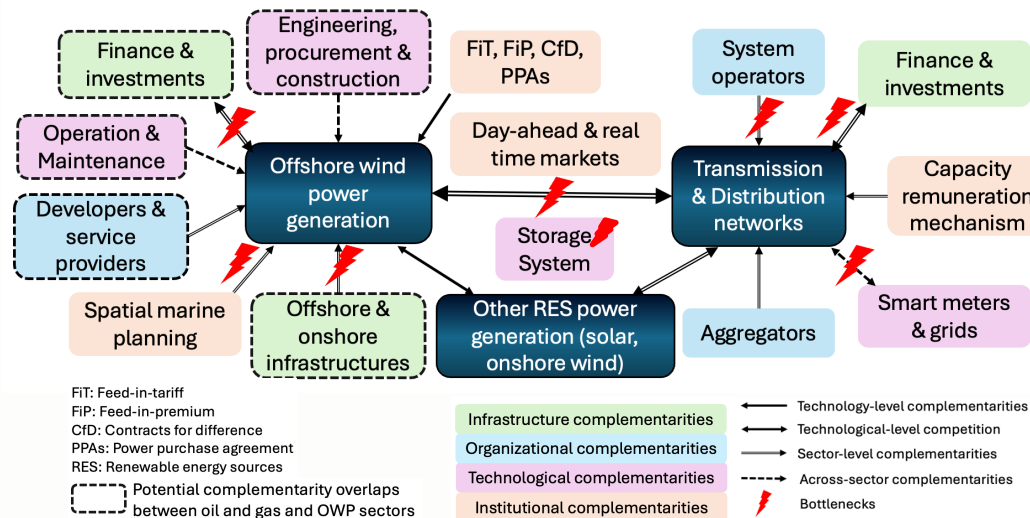


Fig. 2: PetroVietnam has leveraged its existing resources and capabilities as entry points to participate in offshore wind power sector in Vietnam

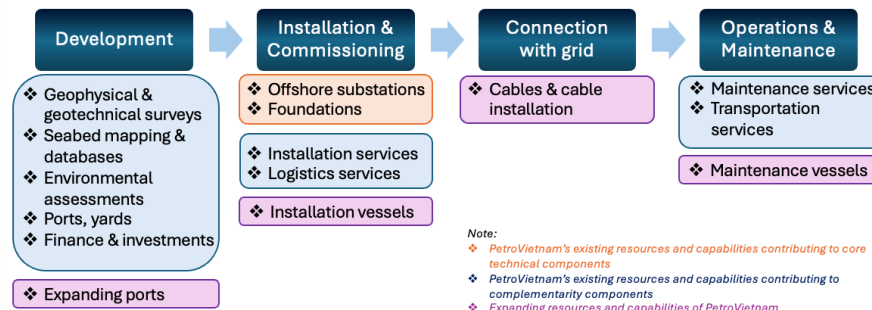


Fig. 3: (Expected) changes in complementarity components in energy system in Vietnam



DISCUSSION

- ❖ PetroVietnam laid the groundwork for OWP development by mobilizing existing resources and capabilities.
- ❖ **Remaining challenges:** Lack of synchronization among other complementarity components, which may result from: (1) Overlapping responsibilities and authorities among stakeholders that impede spatial marine planning processes; (2) Limited electricity market competitiveness and price mechanisms that are yet to attract broader participation.

CONCLUSION

- ❖ PetroVietnam's BMI bridges oil and gas and OWP sector through complementarity overlaps and formation or changes of other complementarity components.
- ❖ The study extends system complementarity and cross-sectoral overlap frameworks (Markard & Hoffmann 2016; Mori 2020, 2021) by operationalizing them through an incumbent's BMI process; illustrates how incumbent can act as transition orchestrators in emerging renewable sectors.