EVN

TẬP ĐOÀN ĐIỆN LỰC VIỆT NAM

OFFSHORE WIND DEVELOPMENT FROM EVN'S PERSPECTIVE

Presented by:
INVESTMENT MANAGEMENT DEPARTMENT

Outline

I. Introduction to EVN

II. Offshore wind development plan for Viet Nam

III. Assessment of difficulties and obstacles in offshore wind development

IV. EVN's offshore wind development plan

V. Suggestions and recommendations

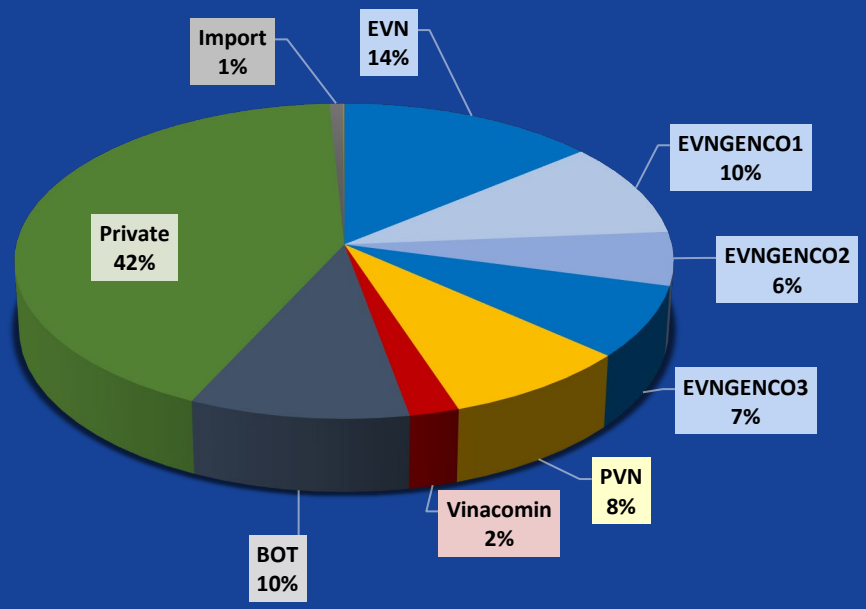
I. Introduction to EVN

I.1. Background of EVN's profile (as of 2022)

705,403 billion dong ($30 billion)	**Total assets**
441,714 billion dong ($18.8 billion)	**Total revenue**
29 million	**Customers**
242.7 TWh	**Sales electricity**
97,414	**Employees**

I. Introduction to EVN

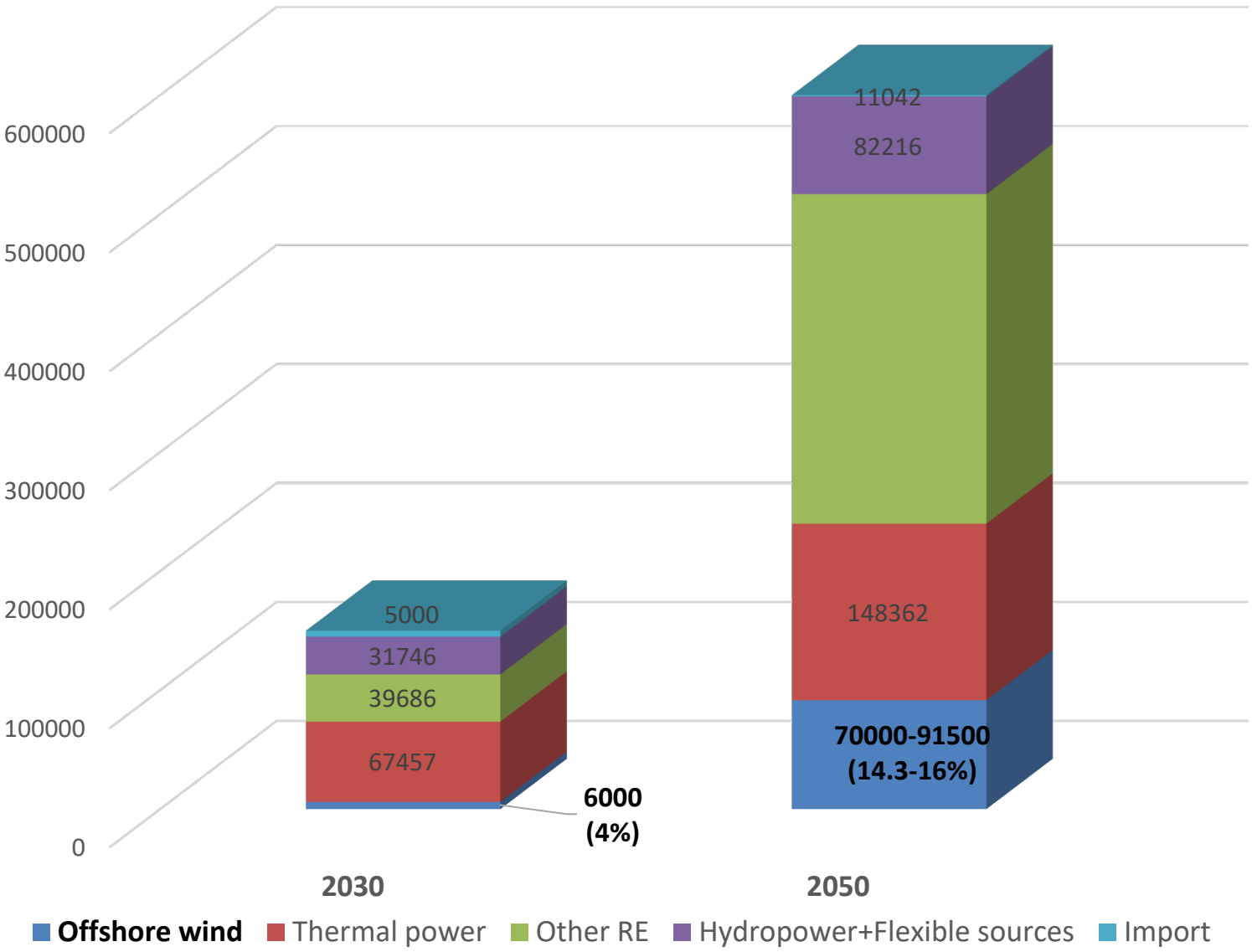
I.2. The share of EVN and its subsidiaries' power output in the national generation mix (as of 2022)



Contributor	MW	Share
EVN	11,325	14%
EVNGENCO1	7,803	10%
EVNGENCO2	4,420	5%
EVNGENCO3	5,950	7%
EVN & GENCOs	***29,498***	***37%***
PVN	6,760	8%
Vinacomin	1,780	2%
BOT	7,883	10%
Private	34,139	42%
Import	572	1%
Other	72	0%

I.3. Transmission grids: EVN invests in and manages the operation of the entire transmission grids.

II. Offshore wind development plan for Viet Nam (based on PDP VIII)



(Source: Decision 500/QD-TTg dated 15 May 2023 of the Prime Minister)

III. Assessment of difficulties and obstacles in offshore wind development

Planning:

- The National Marine Spatial Plan for the 2021 – 2030 period is pending approval.
- The implementation plan for the National Power Development Plan for the 2021 - 2030 period (PDP VIII) is pending approval.

Legislation:

- A competent authority to approve OSW investment policy (Investment Law 2020) has not been determined yet.
- No regulations on the sequence and criteria for selecting investors for OSW projects.
- No pricing mechanism and policy for OSW projects.
- No regulations on procedures, sequence, dossier, and management of measurement, observation, investigation, survey, and assessment of marine and wind resources by competent state authorities.
- Lack of regulations on construction investment for OSW projects (norms, unit prices, practice capacity, fire prevention and fighting, work grade, management of state agencies, etc.).

III. Assessment of difficulties and obstacles in offshore wind development (cont.)

Progress:
International practices suggest that it takes 8-9 years to put an OSW project into operation, including preparation and investment processes. Therefore, it is essential to have a policy on accelerating implementation progress to reach 6 GW OSW operated by 2030.

Regulations and standards:
No national regulations and standards related to the survey, design, construction, commission and operation of OSW projects.

Infrastructure:
Most of the existing infrastructure systems such as seaports, ships and auxiliary vehicles do not meet the requirements for construction and operation.

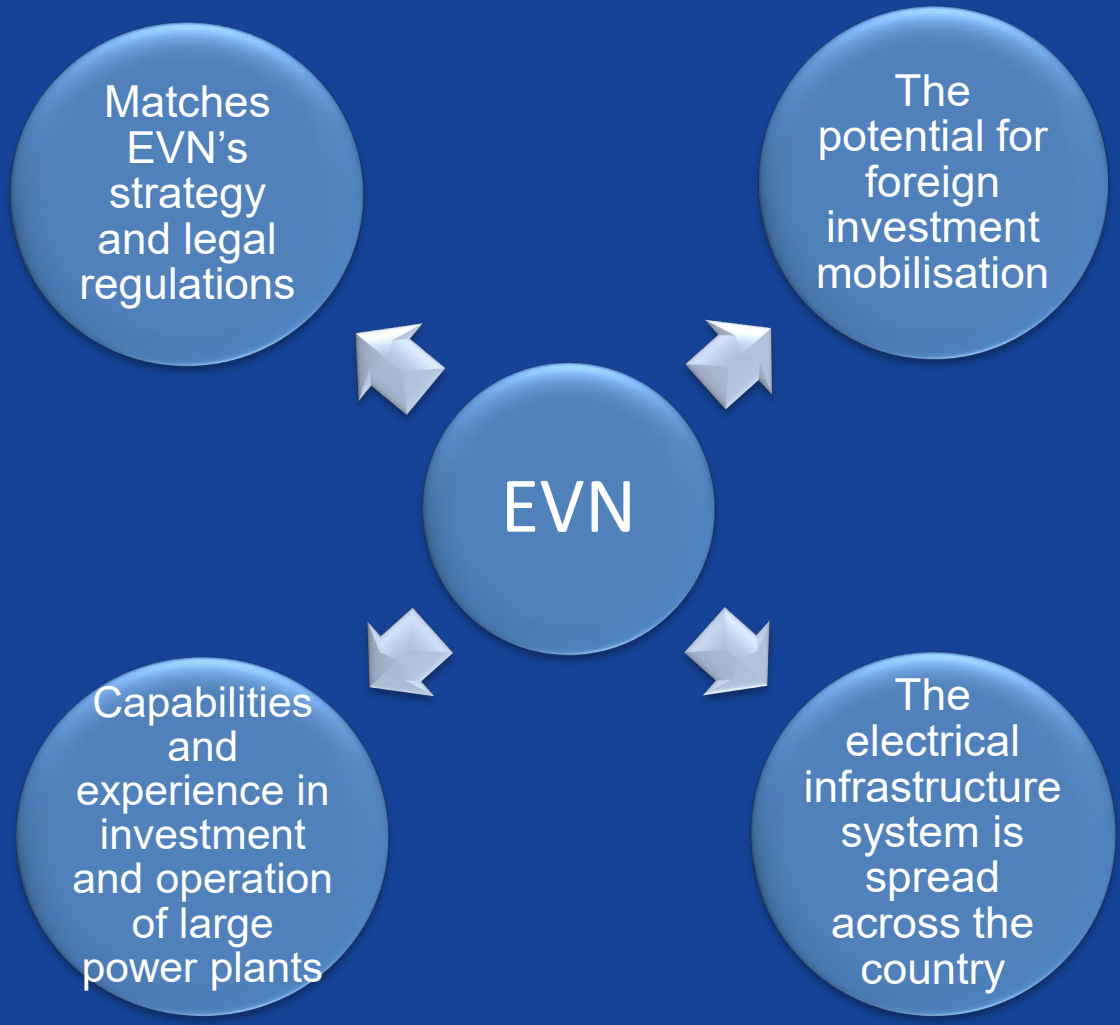
Natural conditions data: not available, insufficient

Capabilities and experience:
Viet Nam has not had any OSW projects invested, so the country does not have much experience in the management, investment, design, construction and operation of OSW plants.

Investment cost:
High investment cost leads to high electricity price

IV. EVN's offshore wind development plan (cont.)

1. Advantages for EVN in offshore investment



IV. EVN's offshore wind development plan (cont.)

2. EVN's proposal

- EVN assigned EVN PECC1 to study and evaluate the possibility of developing OSW in the Gulf of Tonkin in 2022
- EVN has proposed to the Government to consider assigning EVN to invest in 01 OSW project with a capacity of about 800 MW and continue to study other potential areas.

V. Suggestions and recommendations

V.1. Suggestions and recommendations for the Government, ministries and sectors

To review and accelerate the approval of the National Marine Spatial Plan and the implementation plan for PDP VIII

To issue legal regulations on investment and construction, guiding the finalisation of laws and policies on OSW investment and operation to eliminate the bottlenecks mentioned in Section III.

To attract investment in and upgrading infrastructure systems such as seaports, ships and auxiliary vehicles to meet the requirements for OSW development

V. Suggestions and recommendations

V.2. Cooperation with VEPG OSW Taskforce

Support ministries and sectors in formulating incentive policies for OSW development in Viet Nam

Call for investment in OSW projects development and infrastructure upgradation from economic and financial organisations

Facilitate experience exchange and capacity building on OSW for EVN and EVN's consulting companies

Thank you very much

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