



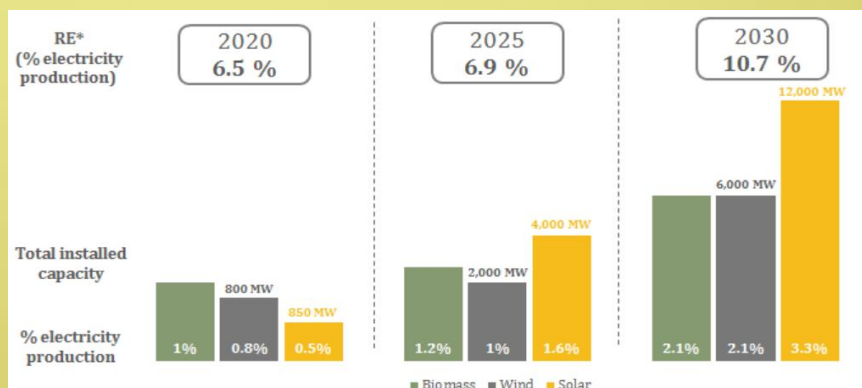
VIETNAM RENEWABLE ENERGY

Vietnam is considered to be a great potential for renewable energy

- Vietnam's power demand has grown and continues to grow rapidly, reflecting the country's economic development.
- Vietnam's three main energy resources are crude oil, coal and electricity, while hydroelectric has played an important role.
- In 2016 the Revised Power Development Plan (RPDP) VII was published indicating a significant change in the power generation structure. The total installed capacity for power generation is forecasted to increase massively from 39,000 MW in 2015 to 129,5000 MW in 2030.
- According to the RPDP VII, Vietnam aims to increase its renewable energy share in power production from 3.7% in 2015 to 6.5% in 2020, 6.9% in 2025 and 10.7 % in 2030.

•Source: Vietnam revised national power development plan VII

Renewable Target for 2020, 2025 and 2030



Potential

Vietnam has a wide range of natural resources to develop renewable energy.

- Solar PV: More than 2,000 sunny hours per year produces 4-5 kWh/m²/day with highest potential in Southern and Central Vietnam. Current solar power capacity is 4.5 MW.
- Wind power: Located in the monsoon area with a 3,000 km long coastline, Vietnam has great potential estimated about 10 GW, wind speed in Central Vietnam can reach 4m/s at 12 metres of height. However, current total wind capacity is only 140 MW.
- Biomass from agricultural production is equal to ten million tons of oil.

Challenges

- Low level of Feed-In-Tariff (FIT)

Lack of a road map of future electricity inflation.

- Legal framework and institutional development: key issue is unbanksable Power Purchase Agreement (PPA)
- Lack of financial resources, low technology, human resources, local supply chains, infrastructure, etc...

FIT rate (ex VAT) & Investment incentives

Onshore Wind: 8.5 US cents/kWh ¹

Offshore Wind: 9.8 US cents/kWh ¹

All solar projects: 9.35 US cents/kWh ²

Draft Decision tentatively applied from July 2019 for solar projects propose new FIT rates based on solar project types. It is now under review.

Investment incentives: Long term power project agreement, import duty exemption on equipment, corporate income tax exemption and reduction, land rental exemption.

1: Only if COD before 1st Nov 2021 and secured a 20 year PPA with EVN

2: Only if COD before 31st Jun 2019 and secured a 20 year PPA with EVN