



# Vietnam Power and Energy Future with Power Development Plan 8 - Getting deals done

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# Vietnam Economy at a glance



- Nominal GDP: US\$449.09 billion
- GDP per capita: US\$4,110 (2022)
- GDP Growth in the first 6 months of 2023: increased by 3.7% over the same period last year. Vietnam's economy is expected to grow by 4.7 percent in 2023, with a slow projected recovery to 5.5 percent in 2024 and to 6.0 percent in 2025
- Inflation: 2.96% (as of August 2023)
- Population: About 98.9 million
- Labor force aged 15 and above: 59.1%
- Total export and import turnover in 2022: US\$ 730.2 billion (increase by 9.1% compared with 2021)
- Regional Minimum wage (Region I): VND 4,680,000 (US\$ 201.7) per month (effective from July 2022)
- Vietnam's average age: 32.8 years old

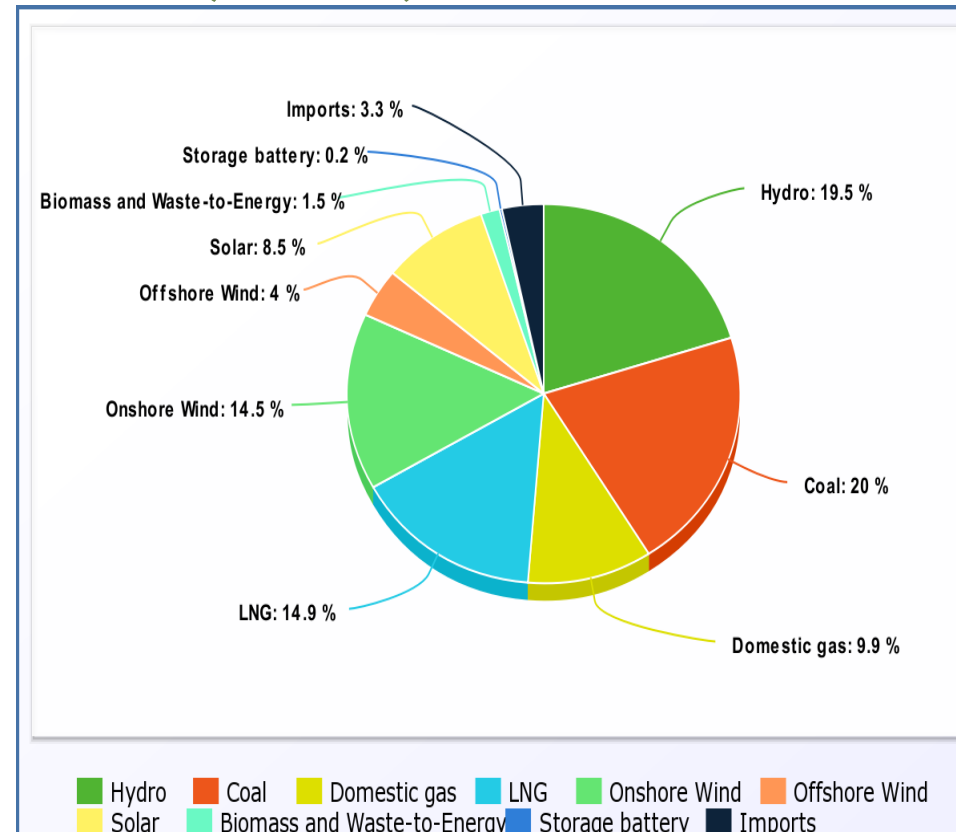
## Power Development Plan 8

- The Power Development Plan 8 was approved on 15 May 2023 under Decision No. 500/QĐ-TTg.
- PDP8 sets out the goal of ensuring national energy security for Vietnam by 2050 to meet the target of socio-economic development with an average GDP growth rate of about 7%/year in the period of 2021-2030; 6.5%-7.5%/year for the period 2031-2050.
- The goal is to achieve a renewable energy ratio of 47% according to the commitment on equitable energy transition with Vietnam (JETP). With an orientation to 2050, the ratio of renewable energy is expected to be up to 67.5 - 71.5%.



## Power Development Plan 8 (cont.)

- According to the PDP8, by 2030, the planned energy resource for local consumption shall reach 150,489 MW consisting of: (i) Hydro energy: 29,346MW; (ii) Coal-fired power: 30,127MW, (iii) Domestic gas: 14,930MW; (iv) LNG: 22,400MW; (v) onshore wind power: 21,880MW; (vi) offshore wind power: 6,000MW; (vii) solar power: 12,836MW; (viii) biomass and WTE 2,270MW, (ix) storage battery energy around 300MW and (x) foreign imported power 5,000MW. Meanwhile, the capacity for exporting is 5,000 – 10,000 MW.





## Power Development Plan 8 (cont.)

- From 2021 to 2030, investment for power generation and transmission systems is estimated to be \$134.7 billion, including \$119.8 billion for power generation and \$14.9 billion for transmission systems.
- By 2030, two inter-regional renewable hubs will be set up for electricity generation, transmission and consumption, and manufacturing and services of renewable energy equipment
- The smart grid system is encouraged to be developed.
- The transmission grid system is given the green light for investment and development by private investors at a later stage.
- It is the aim of the PDP8 to have 50% of residential houses and offices to have rooftop solar system for on-site consumption.
- The pilot program for the Direct Power Purchase Agreement (DPPA) mechanism is encouraged and urged by the Prime Minister to be implemented.

## Power Development Plan 8 (cont.)

- Initially, to implement the PDP8, a plan for implementation of PDP8 was intended be drafted by MOIT and submitted to the Prime Minister for approval by June 2023 (Plan for Implementation).
- On June 17, 2023, the Energy Institute issued the Official Letter No. 0975/VNL-P8 to report to the Ministry of Industry and Trade (the MOIT) about the development of the implementation plan of the PDP8 in response to the Letter No. 3748/BCT-DL from the MOIT to the Energy Institute. In this Letter, the Energy Institute explained the completing the Plan for Implementation by June 2023 is impossible. Therefore, it is recommended that the MOIT allocate a reasonable timeframe for the Energy Institute to implement the planning tasks. Additionally, it is recommended to arrange funding to support the Institute in developing the planning tasks and reviewing the annual plan. It is expected that the Plan for Implementation will be released this October at the soonest.

## Power Development Plan 8 (cont.)

- The main instruments for bringing the PDP8 into life being the amended Electricity Law and the Law on Renewable Energy will be prepared by MOIT and it is expected that the draft for the mentioned laws will be submitted for the National Assembly's approval by 2024. Regarding the DPPA mechanism to be in line with PDP8, the regulations on DPPA will be finalized by MOIT and submitted to the Government for approval within this year.
- Following the issuance of the PDP 8, on 31 August 2023, the Deputy Prime Minister Tran Hong Ha passed the Decision No. 1009/QD-TTg on the Approval for the Implementation Plan of the Political Declaration on establishing the Just Energy Transition Partnership (Decision 1009). The main goals of the implementation plan under Decision 1009 are to implement the Just Energy Transition Partnership (JETP Declaration), to promote the development of renewable energy to achieve net zero greenhouse gas emissions by 2050, and to ensure the efficient use of energy.

# CURRENT ELECTRICITY SITUATION

- Insufficient electricity supply due to drought in the North and malfunctions of thermal power machineries.
- Offices in Hanoi have experienced short power outages and there have been incidents of people trapped in condominium elevators due to blackouts.
- As reported, one of the industrial park's developer in the North of were told to cut power 50% on blackout risk, leading to suspension of production of many factories.





# CURRENT ELECTRICITY SITUATION (cont.)

- The transmission network is under great pressure and is experiencing congestion since transmission grids are not enough in quantity, especially in Ninh Thuan and Binh Thuan provinces, to accommodate the increasing number of solar power projects and reduction in construction time of them due to advanced technology. As a result, most projects that have come into operation in such localities are being subjected to daily decrease in generating capacity to avoid overloading the regional grid.



# CURRENT ELECTRICITY SITUATION (cont.)

- 220 renewable power plants have not been fully dispatched due to local congestion.
- During low-peak hours, over-generation occurs due to high renewable penetration.
- Lack of incentive mechanism for ancillary services and currently, there is no mechanism for operations of smart grid/battery energy storage system.



# Direct Power Purchase Agreement (DPPA)

- Major international companies, including Samsung, Adidas, LG, etc. wish to take part in the pilot program of the DPPA.
- As believed, the DPPA is an important mechanism to attract investors and private investments, not only in the energy sector but also in other sectors where companies have made commitments in the space of renewable energy, carbon reduction, and sustainability, e.g. trading of carbon credits.
- In 2022, a draft decision of the Prime Minister on a pilot program for the DPPA mechanism was published. Such a program offers a look into the possible structure of the DPPA mechanism under PDP 8.

# Direct Power Purchase Agreement (DPPA)

## (cont.)

Under the draft pilot program, the DPPA mechanism works as follows:

1. the renewable energy generator will enter into a DPPA in the form of a forward contract with a customer, under which the customer will guarantee a fixed price for the energy produced by the renewable energy project and in return, the generator will transfer the “environmental attributes” created by the project to the customer;
2. the generator will sell all of the generated electric energy to EVN in the wholesale electricity market under a template power purchase agreement provided in the Draft Decision. The power companies of EVN will then sell electric energy to the customer at retail prices. Such electric energy may not necessarily come from the project; and
3. if the price that the generator sells its energy in the wholesale electricity market (Floating Price) is lower than the fixed price, the customer will pay the generator the shortfall. If the Floating Price is higher than the fixed price, the customer will pay the generator the excess.



# Transmission Grid

- Electricity of Vietnam (EVN) currently holds a monopoly on electricity transmission, distribution, wholesale, and retail.
- Under the PDP 8, in the future, private entities can take part in the development of electricity.
- Under the Implementation Plan of the JETP Declaration, one of the main tasks assigned to the MOIT and EVN is to involve private entities to develop the transmission grid.
- Currently, National Power Transmission Corporation – a subsidiary of EVN – is the only company to manage and operate the transmission system.



## Transmission Grid (cont.)

Power Grid development plan under the PDP 8

- Developing both 500 kV and 220 kV transmission power grids to support the capacity of power sources, improve the reliability of power supply, reduce power loss
- Fostering collaboration in research and grid connection implementation with neighboring countries, Southeast Asian nations, and Greater Mekong Sub-region (GMS) countries.
- Connecting the power grid with Laos with 500kV and 220kV transmission lines to import electricity from power plants in Laos according to the memorandum of understanding signed between the two governments.

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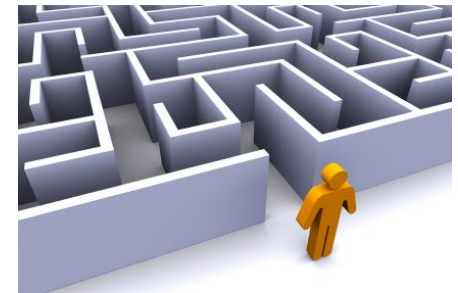
# Project Development





## Market access and Forms of investment

- No foreign ownership restriction
- Investment forms:
  - ✓ A wholly-owned foreign enterprise
  - ✓ A joint venture company between a foreign investor and domestic investor
  - ✓ Investment pursuant to the BOT legal framework
  - ✓ Through the purchase of shares in either an EVN subsidiary being or having been equitized or a private IPP holding power assets.



# WTO ANALYSIS OF LIBERALIZATION OF MARKET ACCESS

Country	Limitation of market access*	Country	Limitation of market access*
Malaysia	medium	Myanmar	high
Indonesia	medium	Cambodia	medium
Philippines	medium	Laos	medium
Singapore	low	India	high
Thailand	medium	China	medium
Brunei	high	Vietnam	low

\* Typical restrictions: number of opened sectors, JV requirement, limits on foreign-owned shares, permission requirement

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## Financing options for power projects

- Government investment funding and preferential policies
- Official Development Assistance (ODA)
- Loan/Debt Instruments from commercial banks or financial institutions
- Clean Development Mechanism (CDM)
- Public Private Partnership (PPP)

## BOT – BEST INVESTMENT FORM

- Law on Investment in the form of Public-Private Partnership came into effect on 1 January 2021 - making projects more bankable:
  - Easier to negotiate more favorable electricity rates.
  - Easier to obtain more government guarantees, especially in terms of EVN's obligations to purchase all electricity from the project.
  - More fiscal and financial incentives.
- Precedent large-scaled BOT power projects in Vietnam: Phu My, Vung Ang, Mong Duong 2, Dung Quat 2, Song Hau 2, and many others



## Step-by-step Project Licensing

- **Step 1:** The investor obtains approval from the competent authority [e.g., Prime Minister, MOIT] approving the power plant as part of the PDP 8 (if required).
- **Step 2:** The investor obtains in-principle approval from the competent authority.
- **Step 3:** The investors carries out feasibility study of the project.
- **Step 4:** Application for issuance of the Investment Registration Certificate and the Enterprise Registration Certificate.
- **Step 5:** Preparation of construction/operations of the power plant (for example, acquiring land area, site clearance, preparation, land investigation, conducting environmental assessment)
- **Step 6:** The project company to obtain and relevant agreements (*e.g.* PPA, agreement on connection to the grid, land lease agreement) and permit (*e.g.* construction permit, electricity generating permit) to prepare for the power plant's construction and operation.
- **Step 7:** Construction of the power plant and commercial operation.



## RECOMMENDATIONS FOR INVESTORS

- Public private partnerships (e.g. - BOT) should be the first option.
- Due care on negotiations of the PPA and grid connection agreement with EVN.
- Electricity selling in off-grid areas can be a good choice.
- Sound financing structure, good business model and great legal assistance are keys to success.
- To pay attention to the carbon credit market in Vietnam.
- To monitor the regulation framework on DPPA to take part in the pilot program.
- Investment into renewable energies and the grid should be prioritized in the coming times.
- Accurate prediction of where the market is heading to, in the context of Vietnam's critical power shortage and congestion of the grid, should be considered.
- More pressure on the government to adequately address key issues on tariff increase, demonopolization of the power market and government guarantee.

# RECOMMENDATIONS FOR INVESTORS

## (cont.)

- Vietnam's market is extremely in need of financing and EPC capability. There are rooms for cost-effective and high quality EPC contractors and resourceful lenders.
- To ensure the bankability of the PPAs, foreign investors should pay attention to the following provisions:
  - FX guarantee convertibility (if applicable);
  - Change-in-law;
  - Land compensation and site clearance;
  - Government offtake guarantee (if applicable);
  - Default and Termination;
  - Force Majeure;
  - Dispute settlement.

# MAKING USE OF THE CPTPP, THE EVIPA AND THE EVFTA

- EU – Vietnam FTA (“EVFTA”) and the Investment Protection Agreement (“IPA”):
  - EVFTA came into effect on 1 August 2020, making Vietnam has more legal certainty than even Germany.
  - IPA implements **investor-to-state dispute settlement** (ISDS) mechanisms – investors can claim in case that an investor protection obligation has been breached
  - Domestic courts cannot question the legal validity of the decisions
- Comprehensive and Progressive Agreement for the Trans-Pacific Partnership (CPTPP):
  - TPP continues without the US, effective from 30 December 2018.
  - New TPP accounts for 12.9% of global GDP and 14.9% of global trade.
  - The CPTPP recognizes the ISDS mechanism.

## MAKING USE OF THE CPTPP, THE EVIPA AND THE EVFTA (cont.)

- While the EVIPA is pending for approval from the EU, the CPTPP is expected to be in force in the next one or two years.
- To ensure the bankability of PPAs for power projects, it is important to:
  - Design appropriate clause on change in law to utilize the EVIPA and the CPTPP to ensure the legal certainty of the PPAs and to utilize the benefits from these international instruments.
  - Agree on the ISDS mechanisms to further ensure the legal certainty of the PPAs.



## Key department EVN – Electricity Market Department

- Officials from Ban Thi Truong Dien (Electricity Market Department) are responsible for negotiating Power Purchase Agreements.
- Responsible persons (Last updated on August 2022):
  - Mr. Tran Dang Khoa: Head of Market Department
  - Ms. Minh Loan, Mr. Minh Tuan, Mr. Trung: Deputy Heads of Market Department

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**Thank you very much!**

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