

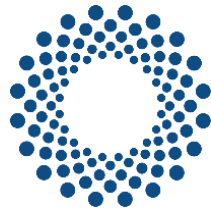
Pioneer  
International  
Consulting

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Vietnam

**PDP8 and JETP**

November 2023



**PIC is a strategic consultancy firm focused on energy transition and renewable energy project development in Vietnam.**

**The firm brings over 25 years of experience in Vietnam's power sector and has been actively advising on Vietnam's onshore and offshore wind market since 2019.**

**Combining international and local expertise PIC provides:**

- **Strategic consulting  
(macro and sector research, policy and regulatory analysis).**
- **Project development advisory services  
(project strategy, stakeholder strategy, permitting and licensing).**
- **Transaction advisory services**

# PDP8 and its implementation (November 2023)

## Vietnam macro outlook

- **GDP:** Target of 7% annual GDP growth between 2021 to 2030 period, and between 6.5% to 7.5% between 2031 to 2050 (PDP8). 8% GDP growth in 2022 and 4.7% forecast for 2023 (World Bank).
- **Power demand:** 8% annual increase in near term (Fitch).
- **Population:** 99 million in 2023. Forecast to be 104.16 million by 2030, increasing to 109.61 million by 2050 (UN, World Population Prospects 2019).
- **Inflation:** 3.4% for 2023 (IMF).
- **Interest rate:** 2023 refinancing rate: 4.5%. Discount rate: 3.0% .

## PDP8 targets and Government strategy:

- **Offshore wind:** 6 GW grid-connected by 2030. 70 GW to 91.5 GW by 2050. Unlimited cap on OSW for new energy development (where feasible) (forecast of 15,000 MW by 2035 and up to 240,000 MW by 2050).
- **Export** 3 GW to 4 GW of renewable energy export by 2030. Initial focus on Singapore interconnector with offshore wind.
- **Coal:** (i) No new coal power generation after 2030 (30 GW cap); and (ii) All coal power plants to convert to biomass/ammonia by 2050 or be decommissioned.
- **LNG:** 22.4 GW by 2030.
- **Grid:** Improve the 500kV north-south connection with a new high-voltage HVDC line by 2030

## PDP8 and its implementation

- **PDP8:** Approved under Decision 500/QD-TTg dated 15 May 2023 of the Prime Minister.
- **12 Oct 2023:** MOIT submitted 3<sup>rd</sup> draft of the PDP8 Implementation Plan (Official Letter No. 7146/TTr-BCT) to the Prime Minister.
- **19 Oct 2023:** Government Office issued Official Letter No. 8144/VPCP-CN directing the MOIT to finalize the PDP8 Implementation Plan by 25 October 2023.
- **31 Oct 2023:** Deputy Prime Minister Mr. Tran Hong Ha led a meeting with government ministries, agencies, and local authorities to refine the draft PDP8 Implementation Plan.

## Latest proposal on PDP8 Implementation Plan

- Outline detailed development plan of LNG, coal-fired, co-generation, domestic thermal gas, hydropower, pumped storage hydropower and storage battery.
- RE capacity (onshore and offshore wind, self-consumption rooftop solar, biomass, waste-to-energy, small-scaled hydropower) allocated depending on province/region.
- Development of RE sources with no cap on capacity subject to safety and balance for whole electricity system.
- Provincial authorities required to identify (i) capacity of RE sources in province; (ii) select coal-fired plants to be converted to gas.
- The MOIT shall (i) evaluate potential risks and propose alternatives for power source projects that cannot be implemented; (ii) identify funding sources, (iii) develop policies to facilitate the implementation; (iv) expand the capacity of rooftop solar projects with safe technical solutions, and (v) research on new technologies and alternative fuels.

Official Proposal  
4548/TTr-BCT  
(cont.)

Projected land demand

Principles	<ul style="list-style-type: none"> <li>Based on planned electricity source and transmission projects for 2021-2030.</li> <li>Alignment with national and local land use plans.</li> </ul>
Power development in 2021-2030	<ul style="list-style-type: none"> <li>Total demand: 86.5 thousand hectares.</li> <li>Period 2022-2025: 46,236 hectares.</li> <li>Period 2026-2030: 40,202 hectares.</li> </ul>
Compliance with relevant resolutions and plans	<ul style="list-style-type: none"> <li>Resolution No. 39/2021/QH15 by the National Assembly</li> <li>National land use planning for 2021-2030 with a vision towards 2050</li> <li>5-year national land use plan for 2021-2025</li> </ul>
Land area required for coastal use by 2030	<ul style="list-style-type: none"> <li>111.6 thousand hectares.</li> </ul>

Funding plan for the power sector

Criteria/Period	2021-2030	2021-2025	2026-2030
Total investment	USD 113.3-134.7 billion	USD 57.1 billion	USD 77.6 billion
Power generation	USD 98.6-119.8 billion <i>87-88.9%</i>	USD 48.1 billion	USD 71.7 billion
Power grid	USD 14.6-14.9 billion <i>11.1-12.9%</i>	USD 9.0 billion	USD 5.9 billion

OSW total installed capacity by region by 2030

Region	Total installed capacity (MW)
Northern	2,500
North Central Coast	0
Central	500
South Central Coast	2,000
Central Highlands	0
Southern	1,000
<i>Total capacity</i>	6,000



# Power mix under PDP8

### 2050 High Scenario



### 2050 Low Scenario



### 2030



- Onshore wind
- Offshore wind
- Concentrated solar
- Biomass power and waste-to-energy
- Hydropower
- Pumped-storage hydropower and Battery storage
- Coal thermal
- Biomass/ammonia thermal
- Domestic gas
- Power domestic gas converted to LNG
- Power from domestic gas completely converted to hydrogen
- LNG power
- Power from LNG blended with hydrogen

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# Draft JETP RMP

## Financial mobilisation

JETP package:  
USD 15.5 billion

Funding catalyst

IPG  
(public sector)

USD 7.75 billion

- Grants, in the form of TA and capital grants.
- Concessional finance at below-market rates.
- Commercial Development Finance Institution (DFI) instruments (loans, guarantees and equity) based on risk-based pricing.

GFANZ  
(private sector)

At least  
USD 7.75 billion

- Commercial loans at market rates.
- Funding is assessed individually for each project.

GFANZ loans depend on the IPG finance and reformed legal framework.

## Selected projects

Eligible projects

1. Promoting the development of RE and EE, contributing to the GHG emission reduction and ensuring national energy security.

2. Providing clear socio-economic benefits for communities, businesses and/or workers affected by the transition.

3. Be catalytic for further investment.

4. Having significant positive impact on the just energy transition.

Investment projects

- Projects on acceleration of transition from coal power to clean energy.
- Projects on the development of the industrial and service ecosystem for RE.
- Projects on power transmission and energy storage
- Projects on EE
- Projects on green energy transition and GHG emissions reduction in the transport sector

TA programmes

- Projects on supporting the completion of institutions and policies to promote the energy transition.
- Projects on innovation, development and technology transfer.
- Projects ensuring a just transition .

• RMP is a “living document” to be continually assessed, adapted, and expanded throughout JETP’s implementation.

• IPG and GFANZ have proposed 10 Concept Notes for early implementation, including: (1) Power transmission and distribution grid development; (2) Energy storage (BESS and pumped-storage hydropower); (3) Solar power; (4) Offshore wind power; (5) Green hydrogen; (6) Flexibility of coal-fired power plants; (7) Repurposing of coal-fired power plants; (8) E-mobility; (9) EE; and (10) Just transition.



# Denzel Eades

CO-FOUNDER AND MANAGING DIRECTOR

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Denzel is the Co-founder and Managing Director of PIC and manages the firm's offices in Vietnam and Singapore

He brings over 17 years experience in energy and infrastructure finance and development having worked with both global financial institutions and leading law firms in both Europe and Asia. Prior to founding PIC in 2018 he worked with Clifford Chance LLP, HSBC and MUFG Bank delivering financing solutions and transactions for leading corporates, private equity and project sponsors.

Denzel qualified with Clifford Chance in LLP in 2004 and had a global career with the firm based in London, Tokyo, Moscow, Hanoi and Bangkok. Following Clifford Chance he worked for HSBC in Hong Kong with a focus on distressed debt and global restructurings. He was based in Hanoi, Vietnam from 2010-2012 and was seconded to MUFG Bank's project finance team in Tokyo in 2013.

Having worked on some of the largest and country first project and leveraged financing in the UK and Asia he has broad and deep expertise in project, leveraged finance and complex global restructurings.

Denzel is a graduate of the London School of Economics (BSc Hons) and Kellogg School of Management MBA.

## Contact

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