



The unofficial translation of Submittal Letter No 4548/TTr-BCT on requesting the approval for promulgation of the Implementation Plan for the National Power Development Plan for the 2021-2030 period, with a vision to 2050, dated July 12, 2023.

Bản dịch tiếng Anh không chính thức của Tờ trình số 4548/TTr-BCT về việc Đề nghị ban hành Kế hoạch thực hiện Quy hoạch phát triển điện lực quốc gia thời kỳ 2021-2023, tầm nhìn đến năm 2050, ngày 12 tháng 7 năm 2023.

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This document is an unofficial translation of the Submittal Letter No 4548/TTr-BCT on requesting the approval for promulgation of the Implementation Plan for the National Power Development Plan for the 2021-2030 period, with a vision to 2050, dated July 12, 2023, by the Ministry of Trade and Industry. The translation is for informational purposes only and is not a substitute for the official legal text. The original version of the document, found in [Tờ trình số 4548/TTr-BCT về việc Đề nghị ban hành Kế hoạch thực hiện Quy hoạch phát triển điện lực quốc gia thời kỳ 2021-2023, tầm nhìn đến năm 2050](#), is the only official version. In case of a discrepancy, the Vietnamese original shall prevail. This translation is delivered by AMPERES to the best of our knowledge and goodwill. It does not indicate our commitment to a particular course of action. AMPERES takes no responsibility or liability for the precision of the translation nor any damage, loss or expense incurred as the result of the reliance on information contained in this document.

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**MINISTRY OF INDUSTRY
AND TRADE**

**THE SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom - Happiness**

No 4548/TTr-BCT

Hanoi, July 12, 2023

SUBMITTAL LETTER

On requesting the approval for promulgation of the Implementation Plan for the National Power Development Plan for the 2021-2030 period, with a vision to 2050

Respectfully addressed to: - Deputy Prime Minister Tran Hong Ha;
- Cced: Prime Minister.

In implementing the provisions of the Law on Planning and the tasks assigned under Decision No. 500/QD-TTg dated May 15, 2023 of the Prime Minister approving the National Power Development Plan for the 2021-2030 period, with a vision to 2050 (PDP VIII), the Ministry of Industry and Trade has taken the lead and coordinated with relevant agencies to study and develop the Draft Decision of the Prime Minister promulgating the Implementation Plan for PDP VIII.

The Ministry of Industry and Trade would hereby submit to the Prime Minister and Deputy Prime Minister Tran Hong Ha the Draft Implementation Plan for PDP VIII with the following key details:

I. NECESSITY TO PROMULGATE THE IMPLEMENTATION PLAN

According to Article 45 of the Law on Planning, an approved master plan must be followed by the promulgation of its implementation plan. In addition, under Clause 2 and Point a, Clause 4, Article 55 of the Law on Planning, the Ministry of Industry and Trade is responsible for coordinating with the Ministry of Planning and Investment in formulating and submitting to the Prime Minister for promulgation of such an Implementation Plan for the national sectoral master plan.

PDP VIII was approved by the Prime Minister under Decision No. 500/QD-TTg dated May 15, 2023, specifying viewpoints, goals, visions, development orientations and list of priority investment projects in the power sector, as well as specific solutions to develop the power industry with a long-term, effective and sustainable vision, creating a foundation for promoting rapid and sustainable national development, building an independent economy, improving people's living standards and ensuring national defense and security while adapting to climate change and embracing the development trends of science - technology in the world, especially in renewable energy,

new energy, associated with the process of transforming the country's economy towards green economy, circular economy, low carbon economy; promoting just energy transition while modernizing production, developing smart grid, practicing advanced power system management, in line with the trends of green transition and greenhouse gas emission reduction.

To organize the implementation of PDP VIII effectively within the sector's development resources from time to time, at Point b, Clause 1, Article 2 of Decision No. 500/QD-TTg, the Prime Minister assigned the Ministry of Industry and Trade to elaborate an Implementation Plan for PDP VIII based on the criteria and arguments specified in this Decision to actualize the objectives and tasks set out in the PDP.

An Implementation Plan for PDP VIII is critical to implement the contents identified in the PDP VIII, especially to specify responsibilities, schedule and resource mobilization for the implementation of the sector's priority investment projects.

II. GROUNDS FOR PROMULGATION

The promulgation of the PDP VIII's plan is based on the following grounds:

- Law on Planning dated November 24, 2017; Law amending and supplementing some articles of 11 Laws related to planning dated June 15, 2018; Law amending and supplementing some articles of 37 Laws related to planning dated November 20, 2018.
- Resolution No. 81/2023/QH15 dated January 9, 2023 of the National Assembly on the National Master Plan for the period 2021-2030, with a vision to 2050.
- Resolution No. 61/2022/QH15 dated June 16, 2022 of the National Assembly on further strengthening the effectiveness and efficiency of planning policies and laws and some solutions to expedite the formulation and improve the quality of master plans for the period 2021-2030.
- Resolution 90/NQ-CP dated June 16, 2023 of the Government promulgating the Government's action program to implement Resolution No. 81/2023/QH15 of the National Assembly on the National Master Plan for the period 2021-2030, with a vision to 2050 and the Implementation Plan for the same National Master Plan for the period 2021-2030, with a vision to 2050.
- Decree No. 37/2019/ND-CP dated May 07, 2019 of the Government detailing the implementation of some articles in the Law on Planning.
- Decision No. 500/QD-TTg dated May 15, 2023 of the Prime Minister approving the task of developing PDP VIII.

III. DRAFTING PROCESS

Pursuant to Article 45, and Clause 2 and Point a, Clause 4, Article 55 of the Law on Planning, the Ministry of Industry and Trade has coordinated with relevant agencies to study and develop a Draft Prime Minister Decision promulgating the Implementation

Plan for the PDP VIII.

According to the Government under Resolution No. 97/NQ-CP dated July 8, 2023, the Ministry of Industry and Trade was directed to urgently finalize the Draft Implementation Plan for PDP VIII and submit it to the Prime Minister by July 15, 2023. Due to the urgent timeline, the Ministry of Industry and Trade did not have a chance to consult relevant ministries and agencies on the Draft Implementation Plan for PDP VIII.

IV. KEY CONTENTS OF THE PLAN

The draft Decision consists of 03 articles: 01 Article on the promulgation and details of the Implementation Plan for PDP VIII, 01 Article on implementation effectiveness, and 01 Article on responsibility arrangements for implementation of the Decision.

Among these, key details include:

1. Objectives and requirements

a) Objectives

- To effectively implement the Prime Minister's Decision No. 500/QD-TTg dated May 15, 2023 approving PDP VIII; and development of a roadmap for the effective implementation of programs and projects to actualize the objectives, tasks and solutions set forth in PDP VIII.

- Specify the timeline and resources for the implementation of programs and projects to develop policies and solutions to attract social resources for the PDP VIII implementation; and accelerate the energy transition process according to the approved PDP.

- Establish a result framework for the implementation in each phase as a basis for reviewing and evaluating the PDP VIII progress; thereby informing adjustments to the tasks and solutions to achieve the determined development goals.

b) Requirements

- Ensure alignment with and inherit approved resolutions, action programs, sectoral master plans and their associated implementation plans;

- Ensure balanced development across regions, and then balance supply and demand within the region to effectively operate power sources, ensure locally-sourced reliable power supply and reduce power transmission over long distances.

- Further promote renewable energy sources (hydropower, onshore and offshore wind power, solar power, biomass power, waste-to-energy power, etc.), new energy, clean energy (green hydrogen, ammonia power, etc.) in line with the ability to ensure system safety with reasonable electricity tariff, especially behind-the-meter and rooftop solar power sources.

- Efficiently exploit and use domestic fossil energy sources in combination with

imports: Gradually reduce the proportion of coal-fired power plants, prioritize power development with domestically sourced gas and imported LNG with appropriate scale.

- Ensure the feasibility and flexibility in implementing projects from time to time, ensure the security of power supply, in accordance with the national context and resources.

- Drastical transition from fossil fuels to renewable and new energy to reduce emission of pollutants and greenhouse gases, aiming towards net zero by 2050.

2. Contents of the draft Implementation Plan for Power Development Plan VIII

The implementation plan for PDP VIII consists of 9 chapters, specifically including: ⁽¹⁾ Detailed forecast of load demands; ⁽²⁾ Investment plan for power generation and grid; ⁽³⁾ Land use plan and demand for power investment and development; and ⁽⁴⁾ Solutions and resources for implementation.

3. Programs and projects to implement PDP VIII

Pursuant to Clause 2, Article 45 of the Law on Planning, PDP VIII provides a list of projects financed by public investment and other funding sources.

- Large power projects with a long preparation and construction time take into account both system needs and actual deployment situation to determine the operation timeline.

- Offshore wind power projects will be assigned by region until 2030 because it now unclear who will be the authority to approve investment policy and project scope;

- Rooftop solar power will be assigned based on the size of the industrial park's land area by 2025 and 2030 approved by the Prime Minister under Decision No. 326/QD-TTg dated March 9, 2022 on allocating national land use planning target for the five-year period 2021-2025;

- Other renewable energy sources (concentrated solar power, wind power) by region/sub-region/locality will be calculated taking into account the assessment of transmission limits across regions and sub-regions and inspection of grid operation mode.

a) Major power sources

Based on the list of flagship power source projects and investment priorities of the power sector stated in Appendix 2, Decision No. 500/QD-TTg dated May 15, 2023 of the Prime Minister approving the task of developing PDP VIII and actual construction situation, these power sources will be classified by type, region and expected operation timeline.

For major coal power projects, which are at risk of delay due to bottlenecks in investment preparation and unspecified operation timeline, the Ministry of Industry and

Trade will work with the developers to clarify the possibility of continued implementation or termination in accordance with the law.

For base load power sources, which play an important role in ensuring the security of power supply (thermal power sources fueled by imported LNG, domestically sourced gas, large hydropower, etc.), the implementation progress should be reviewed on an annual/quarterly to have the most accurate assessment of national electricity supply capacity in each year to 2030 and propose solutions in the event of any delay.

b) Offshore wind power sources

Offshore wind power projects will be assigned by region.

The offshore wind power capacity will be made accurate during the project implementation.

The selection of the specific size and location of the offshore wind power projects will be decided by the local authorities based on some key factors including electricity production costs, the capacity of the grid to release capacity, the cost of electricity transmission and the overall socio-economic efficiency of the localities.

c) Solar power sources

Concentrated solar power projects' capacity will be calculated for each locality based on:

- Feasibility and actual implementation progress.
- Capacity of the local power grid to release capacity.
- Levelized cost of energy, taking into account the cost of electricity transmission.

Rooftop solar projects in industrial parks, with a development scale of about 2,600 MW by 2030, are based on the following principles:

- Calculation of incremental rooftop solar capacity in accordance with the development scale in PDP VIII.
- Rooftop solar capacity for each province is based on calculating the potential technical capacity of rooftop solar power in industrial parks.

Behind-the-meter rooftop solar power in office buildings and residential houses: Follow the roadmap to target 50% coverage of office buildings and residential houses by 2030.

Calculate capacity for each province on the basis of:

- Electricity production costs and transmission costs at potential development locations.
- Feasibility and capacity release potential of the grid.

- Other criteria and rationale in Decision No. 500/QD-TTg.

d) Small-scaled hydropower

Based on the small-scaled hydropower potential proposed by the provinces and the capacity added to PDP VIII

Feasibility and capacity release potential of the grid

Transmission costs.

Other criteria and rationale in Decision No. 500/QD-TTg.

e) Other renewable energy sources

Biomass power and waste-to-energy power:

- Based on the potential of biomass power and waste-to-energy power proposed by the provinces.

- Province-specific capacity on the basis of ensuring feasibility, ability to release capacity and other criteria and rationale in Decision No. 500/QD-TTg.

g) Electricity imports and exports

Connect and exchange electricity effectively with countries in the region, harmonizing parties' interests, enhancing the safety of the power system; promoting the import of electricity from Southeast Asian countries (ASEAN) and the Greater Mekong Subregion (GMS) with hydropower potential. Properly invest and source power from foreign countries to supply electricity to Vietnam. By 2030, import about 5,000 MW from Laos under the bilateral Agreement between the two Governments; could increase to 8,000 MW. By 2050, import about 11,000 MW while balancing with exports to ensure optimal overall efficiency.

Prioritize unlimited capacity development of renewable energy sources for export and new energy production (green hydrogen and ammonia power, etc.) on the basis of ensuring energy security and delivering high economic efficiency. By 2030, target the electricity export capacity of about 5,000 - 10,000 MW.

4. Expected demands (land use plan)

Land use demand will be calculated according to the list of power generation and transmission grid projects expected to be invested in the 2021-2030 period. The land use demand is consistent with the national and local land use master plans.

The total land use demands for power development in the 2021-2030 period is about 86.5 thousand hectares, including about 46,236 ha in the 2022-2025 period and 40,202 ha in the 2026-2030 period. The calculated land use demand complies with Resolution No. 39/2021/QH15 dated November 13, 2021 of the National Assembly on the National Land Use Master Plan for the 2021-2030 period, with a vision to 2050, and the National Land Use Plan for 5 year period 2021-2025.

The demand for sea surface area is about 111.6 thousand hectares in the period to 2030.

5. Capital mobilization plan

According to the expected time line and construction volume of power generation works, including brownfield and greenfield works, the total investment capital to finance the power source development program in the period 2021 - 2030 is expected to be USD 113.3-134.7 billion, including about USD 98.6-119.8 billion (87-88.9%) for power generation and about USD 14.6-14.9 billion (11.1-12.9%) for power grid.

- Investment capital for the period of 2021-2025: USD 57.1 billion, including USD 48.1 billion for power generation and USD 9.0 billion for transmission grid

- Investment capital for the period of 2026-2030: USD 77.6 billion, including USD 71.7 billion for power generation and USD 5.9 billion for transmission grid

6. Solutions for PDP implementation

The solutions need to be coordinated to ensure effective delivery of the PDP VIII's implementation plan, specifically as follows:

- Solutions for ensuring the security of power supply by 2025 and 2030;
- Solutions for generating and mobilizing investment capital for development of the power sector;
- Solutions for laws and policies;
- Solutions for environment protection and natural disaster prevention;
- Solutions for science and technology;
- Solutions for energy efficiency;
- Solutions for human resource development;
- Solutions for international cooperation;
- Solutions for building national capacity, localizing power sector's equipment and developing electricity mechanical industry;
- Solutions for reforming management, enhancing efficiency of power activities;
- Solutions for organization, implementation and monitoring of PDP VIII's implementation.

V. ARRANGEMENTS FOR IMPLEMENTATION

On the basis of the proposed plan, mechanisms, policies and solutions to implement the above and based on the functions and tasks of the ministries, agencies and localities, the Government shall assign the following tasks to respective agencies:

1. Ministry of Industry and Trade

a) Take the lead and coordinate with ministries and agencies in organizing the effective implementation of the Plan in compliance with the Law on Planning and relevant laws, ensuring adequate power supply for socio-economic development.

b) Take the lead and coordinate with ministries, agencies and localities in finalizing and submitting to the Government the revised Law on Electricity and the Law on Renewable Energy for early submission to the National Assembly for approval. Submit to the Government for promulgation of policies on direct power purchase and sale.

d) Take the lead and coordinate with ministries, agencies and People's Committees of provinces and centrally-run cities in continuing to work with developers of coal-fired power plants currently being implemented to carefully review the provisions of the law, commitments and agreements between the parties to completely handle the projects.

2. Ministries, agencies, and Commission for the Management of State Capital at Enterprises (CMSC)

Fully perform functions, tasks and powers to ensure the progress of projects assigned under the Implementation Plan for PDP VIII; propose mechanisms, policies and solutions to remove obstacles and actualize the objectives of PDP VIII, ensure alignment and coordination with the implementation of the 10-year socio-economic development strategy for 2021-2030, as well as sector-specific and locality-specific socio-economic development plans.

3. People's Committee of provinces and municipalities

- Review the local master plan for the period 2021-2030, with a vision to 2050 to ensure alignment and coordination with the Implementation Plan for PDP VIII.

- Organize the selection of developers for power projects in accordance with the law and capacity scale of each type of power source identified for the province in the Implementation Plan for PDP VIII. For thermal power projects fueled by LNG without a developer being identified, urgently complete developer selection in Q3 of 2023; accelerate the preparation and submission of the project's feasibility study report, to be completed in Q4 of 2023.

- Allocate land bank for the development of power works in accordance with the law; take the lead and closely cooperate with developers in the implementation of site clearance, compensation, relation, resettlement for power source and power grid projects in accordance with the laws.

4. Electricity of Vietnam

- Play the key role in ensuring stable and safe power supply for the cause of socio-economic development. Carry out investment in power generation and transmission grid projects in accordance with assigned tasks.

- Regularly review and evaluate the electricity supply - demand balance, the

operation status of the national and regional power systems, and report to the competent authorities.

- Thoroughly implement solutions to innovate corporate governance, improve production and business efficiency, increase labor productivity, reduce power loss, save costs, and reduce costs.

5. Vietnam Oil and Gas Group

- Increase searching, exploration and exploitation activities for domestic gas sources supplying for power generation in line with the load demands. Quickly and effectively deploy the Block B, Blue Whale, Ken Bau gas fields in accordance with the approved schedule.

- Implement solutions to build warehouse and port infrastructure, connect the domestic gas system and the area serving the import of natural gas and LNG to secure gas sources for power plants.

- Implement the assigned power projects on schedule.

6. The Vietnam National Coal - Mineral Industries Holding Corporation, Dong Bac Corporation

- Play the key role in ensuring coal supply for power generation in line with the energy transition roadmap. In the immediate future, improve domestic coal production capacity, combined with coal import to provide fuel for power plants.

- Carry out investment in power source according to assigned tasks.

VI. CONCLUSION & RECOMMENDATIONS

The Implementation Plan for PDP VIII has complied with the Law on Planning No. 21/2017/QH14 dated December 26, 2017, Decree No. 37/2019/ND-CP dated May 7, 2019 of the Government and Decision No. 500/QD-TTg dated May 15, 2023 of the Prime Minister approving PDP VIII.

The Ministry of Industry and Trade would hereby propose the Prime Minister to promulgate the Implementation Plan for PDP VIII with the key details stated in the attached Draft Decision which serves as a basis for implementation.

The Ministry of Industry and Trade respectfully looks forward to consideration and decision from the Prime Minister and Deputy Prime Minister Tran Hong Ha./.

Recipients:

- As above;
- OOG;
- The minister (for information);
- For filing: Admin., DL.

**ON BEHALF OF THE MINISTER
VICE MINISTER**

Seal: [MINISTRY OF INDUSTRY AND TRADE]

[Signature]

Dang Hoang An

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