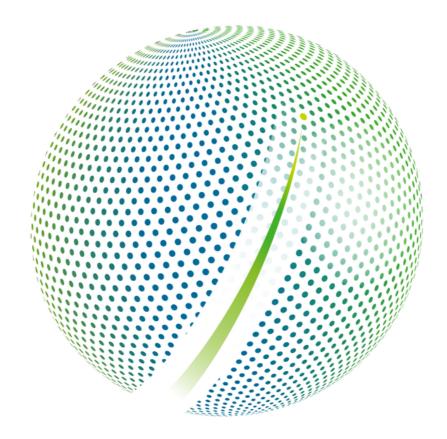
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Industry Knowledge Update

Vietnam's National Energy Master Plan

for the 2021 – 2030 period with a vision to 2050

Following the approval of Power Plan VIII by the Prime Minister in Decision 500/QD-TTg dated 15 May 2023, the Government issued Decision No. 893/QD-TTg dated 26 July 2023 on the **National Energy Master Plan for the 2021 – 2030 period with a vision to 2050** in order to ensure national energy security and encourage economic sectors to develop clean energy. The following is a summary of the key takeaways from this plan and Deloitte's perspective on emerging opportunities.

General Objectives



Ensure national energy security to drive socio-economic development, modernisation, higher living standards, and environmental protection



Achieve net zero emissions by 2050 through successful energy transformation in line with global advancements



Create a renewable energy ecosystem to become a regional clean energy hub for manufacturing and exportation

Specific Benchmarks



Objective 1:National energy security

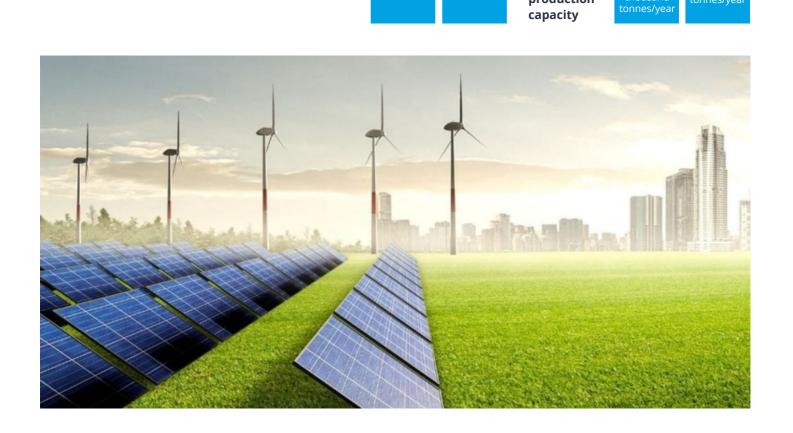


Objective 2: Equitable energy transition



Objective 3: Energy industry development

| Period | 2021- 2030 | 2031- 2050 | Period | 2021- 2030 | 2031- 2050 | Period | 2021- 2030 | 2031- 2050 |
|--|---------------------------|----------------------------------|--|----------------------------------|---------------------------|---|------------------------------------|--|
| Total final energy demand | 107 million tonnes | 165- 184 million tonnes | Share of renewables in total primary energy | 15-20 percent | 80-85 percent | Crude oil exploitation output | 6.0-9.5 million tonnes/year | 7.0-9.0 million tonnes/year |
| Total primary energy supply | 155 million tonnes | 294- 311 million tonnes | Energy saving rate (compared to normal scenario) | 8-10 percent | 15-20 percent | Natural gas exploitation output | 5.5-15 billion m3/year | 10-15 billion m3/year |
| Total petroleum reserves of the country | 75-80 days | 90 days | Greenhouse gas emissions | 399- 449 million tonnes | 101 million tonnes | Coal mining output | 41-47 million tonnes/year | 39 (2045) 33 (2050) million tonnes/year |
| | | | Rate of greenhouse gas reduction | 17-26 percent | 90 percent | Scale of green hydrogen production | 100- 200 thousand | 10-20 million tonnes/year |



Practical Solutions

Mobilization and allocation of capital

- Diversify capital sources and methods of mobilisation
- Diversify investment types (private, public, public-private partnership, etc.)
- Prioritize sustainable infrastructure, especially energy import facilities
- Increase energy business efficiency, accumulation, and equity capital

Technology, science, and the environment

a. Climate change and environmental preservation

- Establish fossil fuel-specific carbon pricing and CO2 recovery and utilization systems
- Match developed countries' energy sector emissions and waste standards
- Integrate the circular economy into energy companies' development strategy

b. Technology and science

- Encourage energy firms to enhance R&D
- Foster stronger bonds between scientific research and practical training
- Promote research into new energy sources (nuclear energy, marine energy, geothermal energy, green hydrogen, etc.)

International cooperation

- · Engage in energy deals in the wider Mekong subregion and Southeast Asia
- Develop long-term energy import and energy resource investment relationships with other countries
- Deploy the contents of the JETP effectively and proactively
- Invite non-energy stakeholders to join the energy industry
- Diversify collaboration to transfer technologies and establish domestic supply chains





Mechanisms and policies

a. Energy market, energy prices

- Create an energy market connecting subsectors with each other
- Strengthen energy sector state management
- Improve energy-saving procedures, policies, and market-based measures
- Stabilize power generation gas and coal supplies
- Complete the legal framework and prioritize renewable energy support

b. Efficient use of energy

- Establish systems, policies, and regulations for energy saving (ESCO) business models
- Revise energy standards to meet global waste recycling needs from energy generation
- Assess energy source dispersion and redistribute industrial and urban development spaces
- Complete 2020 2030 National energy efficiency program
- Reduce energy intensity in energyconsuming sectors and promote lowenergy, high-efficiency enterprises

Talent development

- Train employees to meet energy demand locally and abroad
- Introduce pay schemes to attract domestic and foreign energy experts
- Focus on professional training to create expert tool users

Implementation and surveillance

- Create a national energy development steering group to enforce the plan
- Measure national energy use to assure the economy's energy supply and demand
- Apply penalties to sluggish projects









Deloitte's Perspective

Vietnam's **clean energy revolution** opens up a world of possibilities for international investors. Positioned to be a regional leader in renewable energy and an exporter in Southeast Asia, Vietnam presents a lucrative opportunity for those seeking to tap into its **green potential**.

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Sustainable agriculture

Vietnam offers attractive potential for international companies interested in sustainable agriculture due to rising consumer demand and good investment conditions.



Environmentally friendly constructions

As urbanization rises in Vietnam, the government promotes green construction that utilizes less energy and water as well as produce less waste than conventional structures.



Green transportation

By 2050, green transportation will take center stage with electric cars, green public transit, and efficient charging infrastructure becoming the new norm.

To support this green wave, the Vietnamese government has put in place favorable policies, laws, and tax incentives to entice foreign investment in eco-friendly industries. *At Deloitte, our experienced team stands ready to provide comprehensive tax and legal compliance support, guiding investors towards success in Vietnam's thriving green sector.*

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