

**MINISTRY OF INDUSTRY AND TRADE**  
ELECTRICITY AND RENEWABLE ENERGY AUTHORITY

**VIETNAM RENEWABLE ENERGY DEVELOPMENT  
STRATEGY UP TO 2030, WITH AN OUTLOOK TO 2050**

**PROGRESS REPORT BY 2023**

Hanoi, March 2024

According to Decision No. 2068/QĐ-TTg dated 25 November 2015 of the Prime Minister on the approval of Renewable Energy Development Strategy for 2030, with a vision to 2050, Vietnam will focus on traditional hydropower development to contribute to the local socio-economic development, provide on-site power supply, improve power supply safety. The hydropower production target increases from about 56 billion kWh in 2015 to nearly 90 billion kWh in 2020, and reaches about 96 billion kWh from 2030. Pumped-storage hydropower is specifically intended to perform the tasks of storing and demand response in the power system, contributing to improving flexibility and efficiency in operating the power system; the capacity will reach about 2,400 MW by 2030 and about 8,000 MW by 2050.

The strategy has clearly defined that power distribution companies are responsible for purchasing all electricity produced from grid-connected renewable energy sources in the area under their management.

The expense for purchasing RE sources generated electricity shall be accounted for in the electricity cost price of the power distribution companies, and calculated and sufficiently included in the retail electricity tariff structure and, recovered through increased sales revenue. The power projects using RE sources to produce electricity are given priority to connect to the national electricity system. The cost for grid connection and relevant costs reasonably incurred of the power grid companies (power transmission companies and electricity distribution companies) due to the purchase of RE generated electricity are included in the transmission and distribution costs of the power grid companies.

The electricity selling prices are determined according to the conditions of different regions and the characteristics of electricity generation technologies from different RE sources, based on the principle facilitating the promotion of developing and using RE, ensuring that investors can get their investment costs back and have reasonable profits.

Regarding independent power systems from RE sources, investors shall make proposals for electricity prices and determine the total sum of support from the state budget, then submit to directly related ministries for appraisal and reporting to the Prime Minister for approval. The total sum of support shall be extracted and/or deducted from the Fund for Sustainable Energy Development.

Projects that develop and use renewable energy sources are exempted from import duties on imported goods to form fixed assets for the project; the imported goods include raw materials, supplies, and semi-finished products that cannot be locally manufactured and are imported to serve the production of the project following current laws on export and import taxes; are exempted from corporate income tax or eligible for tax reduction as applicable to projects in the field of investment incentives stipulated by the current law provisions.

Regarding land use, RE projects shall be exempted or reduced in land use fees and land rents as applicable to projects in the field of investment incentives according to the current legal regulations.

In the coming time, to develop RE, Vietnam should encourage and mobilise all resources from the community and the people to improve the access to modern, reliable and affordable energy sources with reasonable price. It is to promote the development and use of RE sources, increase domestic energy supply, gradually increase the share of RE sources in national energy production and consumption to reduce dependence on fossil fuels, contributing to ensuring energy security, climate change mitigation, environmental protection and sustainable socio-economic development.

Regarding biomass energy, priority will be given to the production of electricity, biogas, biomass pellets directly used as fuel, and liquid biofuels, increasing the utilisation rate of crops and agricultural by-products and waste for energy generating purposes from 45% in 2015 to 50% in 2020, 60% in 2030 and 70% in 2050; the rate of livestock waste treatment for energy purposes (biogas) should also increase from about 5% in 2015 to 10% in 2020, to 50% in 2030, and by 2050 most of livestock waste will be properly handled; the rate of municipal waste treatment for energy purposes will be from negligible level at present to 30% in 2020, 70% in 2030 and most of it will be utilised for energy purposes by 2050.

Regarding wind power, priority will be given to on-shore wind power development; off-shore wind power will be further studied and developed after 2030. The target of electricity output produced from wind power sources increases from about 180 million kWh in 2015 to about 2.5 billion kWh in 2020; and about 16 billion kWh are expected to be produced in 2030 and about 53 billion kWh in 2050. It is to increase the proportion of wind power in total electricity production from a negligible level at present to about 1.0% by 2020, about 2.7% in 2030, and about 5.0% in 2050.

Regarding solar energy, it is expected that electricity produced from solar energy will increase from about 10 million kWh in 2015 to about 1.4 billion kWh in 2020; about 35.4 billion kWh to be produced in 2030 and about 210 billion kWh in 2050. It is to bring the proportion of solar power in the total electricity production from the current negligible level to about 0.5% in 2020, about 6% in 2030, and about 20% in 2050. In particular, it will develop equipment that uses solar energy to provide heat for households; industrial production, agriculture and services.

Based on the REDS key points, assessment of the REDS implementation in 2023 are summarised as follows:

### **1. Update RE capacity and production output in 2023**

As of 2023, the total installed capacity (with COD) of the entire system reached about 80,555 MW, an increase of ~2,800 MW compared to that of 2022, of

which the total installed capacity of RE sources (wind and solar power) was 21,664 MW, accounting for 27%; that of hydropower (including small-scale hydropower) at 22,872 MW, accounting for 28.4%. The total power capacity of Vietnam ranked first in the ASEAN region<sup>1</sup>. Electricity produced from RE sources in 2023 reached 118,826 million kWh.

**Table 1. Installed capacity by source (MW)**

No.	Source	Year 2023
1	Hydropower	23,191
2	Solar power	16,568
3	Wind power	5,059
4	Biomass	395
<b>5</b>	<b>Total</b>	<b>45,213</b>

**Table 2. Power production by source (million kWh)**

No.	Source	2023
1	Hydropower	80,904
2	Solar power	25,702
3	Wind power	11,367
4	Biomass	853
<b>6</b>	<b>Total</b>	<b>118,826</b>

## **2. Assessment of electricity selling price for transitional wind and solar power projects**

- On 03 October 2022, MOIT issued Circular No. 15/2022/TT-BCT stipulating the method of building a price bracket for power generated from transitional solar and wind power plants (Circular 15).

- On 7 January 2023, MOIT promulgated the price bracket for power generated from transitional solar and wind power plants through Decision No. 21/QD-BCT.

Transitional wind and solar power projects as prescribed at Point b, Clause 2, Article 1 of Circular 15 shall negotiate with the EVN to determine the electricity selling price.

- On 8 November 2023, MOIT issued Circular No. 23/VBHN-BCT stipulating regulations on project development and sample Power Purchase Agreement (PPA) applicable to solar power projects.

## **3. Implications for RE development**

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<sup>1</sup> EVN's progress update report of 2023 and goals, tasks and plan of 2024.

- Supplementing a clean power source in the Viet Nam's power system, ensuring electricity supply for economic development and national energy security.

- Strongly promote domestic enterprises to invest in RE power projects; Mobilise domestic financial resources and domestic banks to participate in lending for RE power projects; Stimulate the capital market and domestic loan market for RE power projects.

- Facilitate driving force for the new technology market; Domestic investors, Engineering– construction - installation companies, domestic banks... have accumulated experience in investment activities in RE power projects.

- Stimulating the local manufacture of solar and wind power equipment such as photovoltaic panels, electrical equipment, electric cables, electrical panel cabinets, etc.

- Effective exploitation of arid lands, areas with low agricultural production efficiency, even being abandoned.

- Mobilising capital from the people to invest in rooftop solar power, contributing to providing on-site power supply, reducing investment costs and transmission loss.

Implementing Decision No. 500/QD-TTg of the Prime Minister approving the national power development plan for the period 2021-2030, with a vision to 2050 (PDP8); Decision No. 262/QD-TTg of the Prime Minister approving the plan to implement the PDP8, the tasks of RE development has been specified in Decision No. 262/QD-TTg to meet the goal of strong energy transition from fossil fuels to new energy and renewable energy sources to reduce environmental degradation and greenhouse gas emissions, contributing to achieving the goals specified under Viet Nam's Nationally Determined Contributions and its Net-zero emissions target by 2050.