

ELECTRICITY AUTHORITY OF VIET NAM

REGULATORY FRAMEWORK FOR ENERGY STORAGE SYSTEMS IN VIET NAM

HANOI, 12/2025



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POLITICAL FOUNDATION

Resolution No. 70-NQ/TW dated 20/8/2025 of the Politburo on ensuring national energy security until 2030, with a vision to 2045:

"Develop a robust policy framework to encourage large electricity consumers to build energy recovery systems for power generation; establish reasonable preferential mechanisms and policies to promote rooftop solar power for self-production, self-consumption, and energy storage systems."

"Develop energy storage systems suitable for the increasingly high proportion of renewable energy to enhance the reliability and stability of the power system. Invest in building large-scale battery storage systems and other advanced energy storage technologies."

POLITICAL FOUNDATION

Resolution No. 328/NQ-CP dated 13/10/2025 of the Government of Viet Nam, issuing the Government's Action Program to implement Resolution No. 70-NQ/TW dated August 20, 2025 of the Politburo on ensuring national energy security through 2030, with a vision to 2045:

"Develop reasonable preferential mechanisms and policies to promote rooftop solar power for self-production, self-consumption, and energy storage systems."

"Develop energy storage systems suitable for the increasingly high proportion of renewable energy to enhance the reliability and stability of the power system. Invest in building large-scale battery storage systems and other advanced energy storage technologies."

This includes an Appendix listing specific targets.

EXISTING LEGAL NORMATIVE DOCUMENTS

ELECTRICITY LAW 2024

Clause 31 Article 4: "An electricity storage system is a collection of equipment to receive electricity from power sources, store energy, and generate electricity."

Clause 3 Article 20: Encourage organizations and individuals to invest in wind and solar power projects combined with investments in electricity storage systems or green hydrogen, green ammonia production to serve power generation and electricity usage activities.

Point a Clause 8 Article 20: Assign the Government to regulate preferential mechanisms and support for developing electricity storage systems of renewable energy power projects suitable to the technological level in this field.

ELECTRICITY LAW 2024

Point a Clause 2 Article 22: Based on technical capabilities, economic conditions, and state budget capacity in each period, **the Prime Minister and provincial People's Councils** shall issue financial support policies for investment in installing rooftop solar power and electricity storage systems for households installing self-produced, self-consumed electricity systems.

Clause 5 Article 51: Stipulates that the electricity buyer and the electricity seller shall agree on developing a pricing methodology for power generation services in cases where no pricing methodology or power generation price framework currently exists.

GOVERNMENT DECREE

Decree No. 58/2025/ND-CP dated 3/3/2025 detailing certain articles of the Law on Electricity regarding the development of renewable energy power and new energy power:

- Stipulates preferential mechanisms and support for the development of electricity storage systems for renewable energy projects (**Guidance on Point a, Clause 8, Article 20 of the Law on Electricity**).
- Requires compliance with electrical safety, environmental protection, and fire prevention and fighting standards when installing storage systems

DECISION OF PRIME MINISTER

Decision No. 768/QĐ-TTg dated 15/4/2025 approving the Adjustment to the National Power Development Plan for the period 2021-2030, with a vision to 2050

Centralized solar power development must be combined with the installation of storage batteries with a minimum capacity ratio of 10% and a storage duration of 2 hours.

Storage batteries are developed to serve system demands and are combined with renewable energy, distributed near wind power and solar power source centers or on the electrical system at load centers.

By 2030, the projected capacity reaches approximately **10,000-16,300 MW**; **in orientation to 2050**, storage battery capacity will reach **95,983-96,120 MW** to align with the high proportion of renewable energy.

CIRCULAR OF MINISTER OF INDUSTRY AND TRADE

- **Circular No. 05/2025/TT-BCT dated 01/02/2025 regulating electricity transmission, distribution, and metering systems, as amended and supplemented by Circular No. 46/2025/TT-BCT dated August 6, 2025**

This regulation stipulates that BESS must meet technical requirements regarding frequency, rate of change of frequency, voltage range at the connection point, phase angle oscillations, post-fault power recovery, active power control, frequency control, voltage, reactive power, etc.

Voltage	Capacity	Technical requirements	Regulations
	≤ 1 MW	General requirements on frequency, voltage, RoCoF, phase angle, etc.	Clause 1, 2, 3, 4 Article 44 Circular No. 05/2025
	> 1 MW	Require voltage control mode.	Point b Clause 9 Article 44 Circular No. 05/2025
	≥ 3 MW	Capable of participating in primary frequency control.	Point a Clause 8 Article 44 Circular No. 05/2025
	≥ 10 MW	<ul style="list-style-type: none"> - Participate in secondary frequency control; - Capable of rapid fault current support, maximizing reactive power (Q) output; - Emergency active power control, post-fault active power recovery; - Information systems, SCADA, PMU compatible with the dispatch level; - Protection systems 	Clause 5, 6, point b Clause 8, 13, 17 Article 44 Circular No. 05/2025
≥ 110 kV		<ul style="list-style-type: none"> - Fault recording monitoring with GPS time synchronization function; - Power quality (PQ) monitoring; - Information systems, SCADA, PMU connected to dispatch level; - Protection systems. 	Clause 12, 13, 17 Article 44 Circular No. 05/2025
≥ 110 kV	≥ 10 MW	Equipped with an Automatic Generation Control (AGC) system that provides stable, reliable, and secure connectivity with the National Load Dispatch Center.	Clause 14 Article 44 Circular No. 05/2025 (amended and supplemented by Circular No. 46/2025)
	≥ 30 MW	Equipped with power system stabilizer (PSS).	Clause 11 Article 44 Circular No. 05/2025

DECISION OF MINISTER OF INDUSTRY AND TRADE

➤ **Decision No. 988/QD-BCT dated April 10, 2025, approving the power generation price framework applicable to solar power plant types**

The maximum price (excluding value-added tax) in the generation price framework for solar power plants with battery storage systems (VND/kWh):

Type	Northern	Central	Southern
Grounded solar power	1,571.98	1,257.05	1,149.86
Floating solar power	1,876.57	1,487.18	1,367.13

➤ **Decision No. 1509/QD-BCT dated May 30, 2025, approving the Implementation Plan for the Adjusted National Power Development Plan for the period 2021-2030, with a vision to 2050.**

Concentrated solar power development must be combined with the installation of storage batteries at a minimum capacity ratio of 10% and storage duration of 2 hours.

Specifications of the electricity storage system used to calculate the maximum price within the power generation price framework for solar power plants with integrated battery storage:

- Capacity: Minimum 10% of the solar power plant's output.
- Storage/Discharge time: 02 hours.
- Charging power output ratio: 5% of the solar power plant's output.

OTHER RELATED DOCUMENTS

NATIONAL STANDARDS

On 15/10/2025, Vietnam Standards and Quality Institute (under the National Standards, Metrology and Quality Commission) has announced 15 National Standards (TCVN) on Battery Energy Storage Systems in Vietnam.

Vocabulary, Unit parameters and testing methods

Planning and performance assessment of electrical energy storage systems

Guidance on Environmental issues

Safety considerations for grid-integrated EES systems

NATIONAL STANDARDS

Part 1: Vocabulary, Unit parameters and testing methods

TCVN 14499-1:2025: Vocabulary

TCVN 14499-2-1:2025: Unit parameters and testing methods – General specification

TCVN 14499-2-2:2025: Unit parameters and testing methods – Application and performance testing

TCVN 14499-2-200:2025: Unit parameters and testing methods – Cases study of electrical storage systems located in EV charging station with PV

NATIONAL STANDARDS

Part 2: Planning and performance assessment of electrical energy storage systems

TCVN 14499-3-1:2025: General specification

TCVN 14499-3-2:2025: Additional requirements for power intensive and renewable energy sources integration related applications

TCVN 14499-3-3:2025: Additional requirements for energy intensive and backup power applications

NATIONAL STANDARDS

Part 3: Guidance on Environmental issues

TCVN 14499-4-1:2025: Guidance on environmental issues – General specification

TCVN 14499-4-2:2025: Guidance on environmental issues – Assessment of the environmental impact of battery failure in an electrochemical based storage system

TCVN 14499-4-3:2025: Protection requirements of battery-based energy storage systems (BESS) according to the environmental conditions

TCVN 14499-4-4:2025: Environmental requirements for battery-based energy storage systems (BESS) with reused batteries

NATIONAL STANDARDS

Part 4: Safety considerations for grid-integrated EES systems

TCVN 14499-5-1:2025: Safety considerations for grid-integrated EES systems – General specification

TCVN 14499-5-2:2025: Safety requirements for grid-integrated EES systems – Electrochemical-based systems

TCVN 14499-5-3:2025: Safety requirements for grid-integrated EES systems – Performing unplanned modification of electrochemical based system

TCVN 14499-5-4:2025: Safety test methods and procedures for grid integrated EES systems – Lithium ion battery-based systems.

DEVELOPMENT ORIENTATION

DEVELOPMENT ORIENTATION

- According to the Power Development Plan VIII-revised, Vietnam targets approximately 10,000-16,300 MW storage capacity by 2030; orientation to 2050 reaches approximately 96 GW.
- EVN is considering assigning 5 Power Corporations to implement approximately 1,200 MW BESS.
- Pricing methodology for power generation services of **BESS combined with renewable energy power plants** follows **Circular No. 12/2025/TT-BCT** regulating power generation service pricing methodology, electricity pricing principles for power projects, and main contents of power purchase agreements.
- Pricing methodology for **BESS power generation services invested by 5 Power Corporations** follows **Circular No. 17/2025/TT-BCT** regulating methodology for establishing, sequence, and procedures for approving wholesale electricity price frameworks; wholesale electricity pricing methodology; and main contents of wholesale electricity sales contracts.
- The Ministry of Industry and Trade **is developing** a Circular regulating dossiers, procedures, methodology for determining and approving power generation price frameworks and power generation service pricing methodology for BESS (BESS pricing).

THANK YOU!

ELECTRICITY AUTHORITY OF VIET NAM

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