

**DISCLOSURE OF INFORMATION ON THE ELECTRONIC PORTAL OF
THE STATE SECURITIES COMMISSION AND THE HANOI STOCK
EXCHANGE**

To:

- The State Securities Commission;
- The Hanoi Stock Exchange.

Company Name: Phuoc An Port Investment and Exploitation Petroleum Joint Stock Company

Stock Code: PAP

Head Office Address: Phuoc An Port, Ba Truong Hamlet, Phuoc An Commune, Dong Nai Province, Vietnam

Phone: 02513 685588/ 19005168

Person in charge of information disclosure: Nguyen Van Hoang

Position: Head of Organization & Administration Department / Secretary of the Board of Directors / Authorized Information Disclosure Representative

Type of information disclosed: Extraordinary (within 24 hours)

Content of disclosed information: On May 11, 2026, the Company's Board of Directors issued Resolution No. 53/NQ-PAP approving the investment project for the construction of the 110kV Phuoc An Port Substation and the connecting transmission line.

This information was disclosed on the Company's website on the same date at the link <https://phuocanport.com>. We hereby certify that the above-disclosed information is true and accurate, and we assume full responsibility before the law for the contents disclosed.

Respectfully./.

**PHUOC AN PORT INVESTMENT AND EXPLOITATION
PETROLEUM JOINT STOCK COMPANY
INFORMATION DISCLOSURE REPRESENTATIVE**



NGUYEN VAN HOANG

RESOLUTION

Re: Approval of the Construction Investment Project for the Phuoc An Port 110kV Substation and Connection Line

BOARD OF DIRECTORS OF PHUOC AN PORT INVESTMENT AND DEVELOPMENT JOINT STOCK COMPANY

Pursuant to the Law on Enterprises;

Pursuant to the Charter and Operation Regulation of the Board of Directors of Phuoc An Port Investment and Operation Joint Stock Company;

Pursuant to the Law on Construction No. 50/2014/QH13 which has been amended and supplemented by Law No. 03/2016/QH14, Law No. 35/2018/QH14, Law No. 40/2019/QH14 and Law No. 62/2020/QH14;

Pursuant to the Electricity Law No. 61/2024/QH15 approved by the National Assembly of the Socialist Republic of Vietnam in its XV session, 8th session on November 30, 2024;

Pursuant to the Government's Decree No. 62/2025/ND-CP dated March 4, 2025 detailing the implementation of the Electricity Law on protection of electricity works and safety in the field of electricity;

Pursuant to Decree No. 06/2021/ND-CP dated January 26, 2021, of the Government detailing certain contents on quality management, construction execution, and maintenance of construction works;

Pursuant to Circular No. 06/2021/TT-BXD dated June 30, 2021 of the Ministry of Construction regulating the decentralization of construction works and guidance on application in the management of construction investment activities (amended and supplemented in Circular No. 02/2025/TTBXD and Circular No. 09/2025/TT-BXD).

Pursuant to Decree No. 10/20/21/ND-CP dated February 5, 2021 of the Government on the management of construction investment costs; Decree No. 175/2024/ND-CP dated December 30, 2024 of the Government detailing certain articles and measures to implement the Construction Law on the management of construction activities;

Pursuant to Decision No. 995/QD-UBND dated March 28, 2025 of Dong Nai Provincial People's Committee on "approving the zoning plan for construction of Phuoc An Industrial Park at the scale of 1/2000 in Phuoc An commune, Nhon Trach district, Dong Nai province";

Pursuant to Resolution No. 72/NQ-PAP dated 30/07/2025 of the Board of Directors of the Company on the approval of the investment policy of the 110kV Phuoc An Port Substation Project and the connection line in Phuoc An Industrial Park;

Pursuant to Decision No. 1368/QD-UBND dated 23/9/2025 of Dong Nai Provincial People's Committee on the Decision on approving the investment policy and at the same time approving the investor";

Pursuant to Document No. 2815/UBND-KTN dated 26/02/2026 of Dong Nai Provincial People's Committee on the agreement on the location of the 110kV substation of Phuoc An Port and the direction of the connection line;

Pursuant to the dossier of the feasibility study report on investment in the construction of the 110kV Phuoc An Port substation project and the connection line made by the Joint Venture of S-Power Joint Stock Company and Southern Power Consulting Company;

Pursuant to the Report on verification results No. 17/CV-TBD-TVTr dated 09/04/2026 of Pacific Electrical, Civil and Industrial Construction Consulting Joint Stock Company on the report on the results of verification of the construction investment management of the project: 110kV Phuoc An Port substation and connection line;

Pursuant to Document No. 02/SCT-QLNL dated 04/05/2026 of the Department of Industry and Trade of Dong Nai City on the announcement of the results of the appraisal of the feasibility study report of the construction investment project of the investment project to build the 110kV substation of Phuoc An Port and the connecting road;

Pursuant to the Report No. /TTr - PAP dated /05/2026 of the General Director of the Company on approving the investment project to build the 110kV Phuoc An Port Substation and connection line;

Pursuant to the Minutes of vote counting for the opinion of the Board of Directors No. 52/BB - PAP dated 11/05/2026.

RESOLUTION

Article 1.- The Board of Directors unanimously approves:

1. Approving the investment project on construction of the 110kV Phuoc An Port substation and connection lines, specifically:

I. General information of the project:

1. Project name: Investment project on construction of 110kV Phuoc An Port substation and connection line.

2. Construction location; Direction of the project:

2.1. Construction location: Phuoc An Industrial Park in Phuoc An commune, Dong Nai city.

2.2. Direction of the work route: The direction of the transmission line and the location of the substation have been approved by the People's Committee of Dong Nai province in document No. 2815/UBND-KTN dated 26/02/2026

3. Investment decider: Phuoc An Port Investment and Operation Joint Stock Company

4. Investor: Phuoc An Port Investment and Operation Joint Stock Company

5. Consultancy organizations shall prepare construction investment feasibility study reports; Organizing the formulation of construction surveys; basic design consultancy organization: Joint Venture of S-Power Joint Stock Company and Southern Electricity Consulting Company.

6. Project verification consultancy organization: Pacific Electrical, Civil and Industrial Construction Consulting Joint Stock Company.

7. Type and group of projects; types and grades of main works; shelf life according to the design of the main works:

- Type and group of projects: Group C.

- Type and grade of main works: Energy works, grade II.

- Duration of the work: ≥ 50 years.

8. Project objectives:

- In accordance with the Dong Nai Provincial Planning for the 2021-2030 period, with a vision to 2050 approved by the Prime Minister in Decision No. 586/QĐ-TTg dated July 3, 2024 and Decision No. 779/QĐ-UBND dated February 27, 2026 of Dong Nai Provincial People's Committee on approving the adjustment of Dong Nai Provincial Planning for the period of 2021-2030, with a vision to 2050.

- Ensure direct electricity supply to Phuoc An Port Industrial Park and Phuoc An Port.

- Create a 22kV loop connection between 110kV substations to enhance the reliability of electricity supply, meeting the development needs of the load for the socio-economic development of the region in particular and Dong Nai province in general.

9. Scale of construction investment:

9.1. Construction scale:

a. Substation Section

Building a new 110kV substation with a scale of 03 transformers (MBA) 3x63MVA. In this period, only 01 MBA 63MVA-110/22kV will be installed (with a backup location for installing more MBAs T2 and T3 in the future); Construction of distribution control houses; Installation of equipment, surveillance camera systems, fire protection,... according to the criteria that the substation has people on duty; Building an information system, SCADA connecting to A2 according to regulations; Installing 04 22kV transmission line cabinets to supply electricity to Phuoc An Industrial Park.

b. 110kV line connection section

New construction of 110kV transmission line with a line length of 1.6km, ACSR conductor 2xACSR240/32mm².

+ Starting point: the location of G12 construction is located in the land of Phuoc An Port Industrial Park (located close to the boundary of Phuoc An Port Industrial Park).

+ Endpoint: 110kV substation pole of Phuoc An Port

9.2. Major design solutions of the works.

9.2.1. Substation section:

a. The most electric part

Station Type: Half Outdoor.

Voltage level: 110/22kV.

Capacity: 3x63MVA, in the first stage, 01 63MVA machine is pre-installed, with a backup location to install transformers No. 2,3 in the future.

On the 110kV side, the station uses outdoor equipment with the main electrical connection diagram designed according to the complete diagram of the two-busbar diagram, at this stage investment in construction and full equipment for the roads as follows:

+ 01 MBA compartment 110kV T1 – 63MVA;

+ 01 compartment of 110kV transmission line to 110kV Textile and Garment station (171);

+ 01 compartment of the 110kV transmission line to Long Thanh 220kV station (176);

+ 01 110kV communication compartment.

The roads expected in the future are estimated to have an area and ready construction of equipment foundations, including:

- + 02 MBA compartments 110kV T2, T3 – 63MVA;
- + 02 compartments of 110kV transmission lines.

The 22kV side of this phase uses indoor integrated cabinets, designed according to the diagram "A single busbar system with segments" including exposed compartments:

- + 01 22kV exposed circuit breaker cabinet.
- + 01 22kV measuring voltage transformer cabinet.
- + 01 LBS cabinet for MBA self-use 100kVA.
- + 04 circuit breaker cabinets exposed to 22kV.
- + 01 circuit breaker cabinet connected to 24 kV - 4.2MVar compensating capacitor
- + 01 22kV busbar connection cabinet

b. Protection Control System

Control system: Equipped with an integrated control system at the secondary device level to ensure the on-site and remote control requirements of switchgear at 4 levels as prescribed.

Protection system: Equipped with main protections, backup protection for 110kV, 22kV compartments and other elements in the station as prescribed. Equipped with a 110kV busbar deflection protector on the principle of low total resistance, with a full connection scale of 110kV compartments when completing the station diagram.

Measurement system: Use the measurement function built into the communication control unit (BCU) for 110kV exposed compartments and multi-function meters connected to the SCADA system.

c. Self-use electrical system

220/380VAC AC: Supplied from 3-phase self-use transformers 23+2x2.5%/0.4kV - 100kVA. In this period, 01 self-use MBA is connected to power supply from the LBS cabinet (J1.3) in the 24kV distribution room and the remaining self-use power is taken from the local medium voltage grid.

110VDC DC self-use: Supplied from 2 3-phase 4-wire rectifier cabinets 380 VAC to 110 VDC, and at the same time provide load and charge for 2 battery rigs (Nickel - Cadmium - sealed type) with a capacity of 200Ah/5h, working according to the mode of regular charging and refilling. The cabinet is equipped with a high-sensitivity DC online ground monitoring device, which monitors the ground resistance and quickly determines the ground point according to IEC61557-8 and IEC61557-9 (at least two warning thresholds) to quickly determine the ground touch point.

d. Ancillary systems

Fully equipped with grounding and lightning protection systems: The grounding system is made of a mixture of piles and wires to form a ground loop circuit in the form of a square grid. The direct lightning protection system uses lightning collectors installed on top of iron trusses, gate poles and lighting poles combined with lightning protection. Surge protection by ZnO type valve lightning protectors install line end and two force MBA ends.

Outdoor and indoor lighting systems: Use energy-saving 220VAC Led, explosion room lights for battery rooms. The DC lighting system uses 220VAC-22W ceiling hemispherical LED bulbs (via a 2kVA Inverter unit that converts DC to AC power).

Air conditioning system: Equipped with exhaust fans and air conditioners for functional rooms with appropriate capacity.

Fire protection system: Equipped with automatic fire alarm system, water fire extinguishing system in compliance with regulations and meeting the requirements of local fire protection agencies.

CCTV system: Equipped with fixed and PTZ cameras arranged appropriately according to the function and monitoring requirements, meeting the requirements of connection and transmission of surveillance signals to control centers. Connect to card readers and automatic locks at station entrance/exit doors and function control rooms for station access and exit control.

Installation of a solar energy system on the roof of the operator with an expected capacity of 24.7 kWp including a system of 38 650 Wp panels.

e. Communication Systems, SCADA

Equipped with communication systems, SCADA systems for communication and production operation of the Investor and directing the operation of the Southern Power System Dispatching Center (SSO) according to regulations.

f. Construction section

New construction of the entire outdoor equipment foundation for this phase and the proposed future installation locations. The control house is (10.6 m x 30 m), the height to the ceiling is 3.6 m with a full range of functional rooms as prescribed.

The internal road in the station is 3.5m wide and 4.5m wide (the road transporting transformers in is 4.5m wide, other sections are 3.5m wide). The entrance road to the station is 6 m wide from the existing road to the station gate.

The new construction exposes a 22kV underground cable from the assembly cabinet to the connection pillar at the end of the line outside the substation fence.

9.2.2. Main parameters of the device:

a. Transformer Parameters:

- 110kV transformer

+ Using a 3-phase transformer, oil-immersed type, placed outdoors, with a capacity of 63MVA, voltage of $115\pm 9\% \times 1.78\% / 23\text{kV}$, frequency of 50Hz, wiring unit YNyn0-d11; voltage adjustment under high-voltage side load; automatic cooling, insulation level in accordance with IEC standard. Short circuit tolerance on 110kV side busbar: 31.5 kA/1s, 35kV side, 22kV: 25 kA/1s. MBA has the following main specifications:

+ Capacity: 50/63MVA (corresponding to ONAN/ONNAF).

+ Voltage level: $115\pm 9\% \times 1.78\% / 23\text{kV}$.

+ Wiring group: YNyn0-d11.

- Self-use transformer: Type 03 phase 02 coils placed outdoors; capacity 100kVA, frequency 50 Hz, voltage $23\pm 2\% \times 2.5\% / 0.4\text{kV}$ (TD), Dyn-11 wiring group; adjust the no-load voltage on the high-voltage side; ONAN cooling mode; insulation level in accordance with IE standards.

b. 110kV Distribution Equipment

- Cutting Machine: Use Outdoor Type, 3 Phase, SF6 Insulation; 123kV - 1250A - 31.5 kA/1s; spring-loaded 3-phase actuator; control voltage 110 VDC.

- Isolation knife: Using an outdoor isolation knife, 03 phase or 1 phase, grounding 02 sides, 01 side and 0 grounding, 1250A - 31.5 kA/1s, 03-phase drive, main knife controlled by motor and manually, grounding knife controlled by motor and manually, with interlock between main knife and grounding knife, control voltage 110 VDC.

- Current transformer: Using outdoor current transformer, 01 phase; 31.5 kA/1s, variable ratio 200-400/1/1/1/1A (MBA compartment), variable ratio 400-800-1200/1/1/1/1/1A (line compartment and communication compartment) secondary coil precision grade: 5P20 for protection, Cl.0.5 for measurement.

- Voltage transformer: Using outdoor voltage transformer, 01 phase, capacitor type, ratio $110/\sqrt{3}:0.11/\sqrt{3}:0.11/\sqrt{3}:0.11/\sqrt{3}$ kV (line and busbar separation); secondary roll precision level: 3P and Cl.0.5.

- 110kV valve lightning protection: Use outdoor valve lightning protection, 01 phase, ZnO, Ur = 96 kV, 10 kA, with lightning counter and leakage current indicator.

- Standing insulation: Using 110kV outdoor standing insulation.

- Busbar and line compartment: Use Ø80/70 aluminum tube, conductor separating the line and compartment and compartment transformer using AAC700/1phase wire.

c. 22kV distribution equipment

Rated voltage 24kV, frequency 50Hz, copper busbar 2500A, insulation level in accordance with IEC standards (*lightning surge withstand voltage 125kV, industrial frequency withstand voltage 50kV*).

- Total exposure cutting machine cabinet: Use 3-phase cabinet, vacuum arc stamping or SF6: 24kV-2500A-25kA/1s; spring-loaded 3-phase actuator; control voltage 110 VDC, variable current ratio: 1250-2500/1/1/1A, secondary winding accuracy level: 5P20 for protection, Cl.0.5 for measurement.

- Exposed circuit breaker cabinet and compensating capacitor cabinet: Use 3-phase cabinet, vacuum arc stamping or SF6: 24kV-800A-25kA/1s; spring-loaded 3-phase actuator; control voltage 110 VDC, variable current ratio: 400-800/1/1A, secondary winding precision level: 5P20 for protection, Cl.0.5 for measurement.

- Protective measuring cabinet: Using a protective cabinet with 3 1-phase fuses, voltage transformer with a ratio: $22/\sqrt{3}:0.11/\sqrt{3}; 0.11/\sqrt{3}$ kV, secondary winding precision level: 3P and Cl.0.5.

- Self-use cabinet: Use a 24kV-200A cabinet (6.3A flow wire) – 25kA/1s.

- Cutlery cabinet: Use 24kV-2500A-25kA/1s cabinet.

- Valve lightning protection: Use 1-phase outdoor valve lightning protection, gapless ZnO, rated voltage 24kV, rated discharge level (8/20µs) 10kA, with lightning logger and leakage current indicator.

- Total force cable: 24kV-CXV/S/DATA-3x(3X)500mm² cable using 03 single fibers for 1 phase.

- 24kV self-use cable: CXV/DSTA-3x50mm² cable uses 1 3-phase fiber.

- Power supply cable for 24kV compensating capacitors: CXV/DSTA-3x150mm² cable uses 1 3-phase fiber.

9.2.3. Protection, measurement and metering control systems

9.2.3.1. Control system

- The control system of the substation complies with Decision No. 1603/QĐ-EVN dated 18/11/2021 of the Electricity of Vietnam: on the promulgation of the Regulation on the control system of 500kV, 220kV, 110kV substations in the Vietnam National Electricity Group.

- The control function is the main and important function of the TBA control system, which controls the entire operation of the equipment, and manages the entire chain of events in the system, controlling the interlocking circuits. The control of the TBA can be carried out at 4 levels:

+ From the Dispatching Center or Control Center: The substation is controlled from the Dispatching Center or Control Center through the SCADA system;

+ From the station control room: Control the equipment in the station from the control room located at the TBA by operating on the computer interface (HMI) software of the integrated control system (DCS);

+ At the control and protection cabinets of each compartment: Control the equipment in each compartment through the control and protection cabinets of that compartment (mimic board), communication controller (BCU);

+ At the device: The device is controlled through the control locks and buttons installed at the device.

- The control system is capable of collecting, processing data and connecting to the SCADA system, the Registration Center, including:

+ Equipped with 01 integrated control system in compliance with Decision No. 1603/QĐ-EVN dated 18/11/2021, including: 01 Gateway computer integrated with Server/HMI/HIS computer and 01 Engineering computer (including a full set of software) to collect SCADA data for the whole station.

+ Equipped with 04 LAN Ethernet Switch devices connecting computer systems and protection relays, BCUs (IEDs) according to IEC 61850 protocol optical ports.

+ Equipped with 01 synchronous device including GPS Time Receiver + antenna + rack frame and synchronous cable.

+ Equipped with 01 set of Inverter 220VAC & 110VDC → 220VAC, 4000VA.

+ Equip 01 set of HMI computer to monitor station operation data.

+ Full set of accessories: command relay, status relay, signal cable, control, ...

+ Full set of control tables and chairs, printers, monitors....

9.2.3.2. Protection relay system:

a. 110kV Side

- Transformer protection 110/22kV- 63MVA:

+ The main guard is equipped with F87T deviation protector with integrated protection functions 87T, 49, 64, 50/51, 50/51N, 50BF, FR.

+ Backup protection is equipped with 01 F67 protection set integrated with protection functions 67/67N, 50/51, 50/51N, 27/59, 50BF, 74, FR.

- 110kV line disclosure protection:

+ The main guard is equipped with the F87L Deviation Protection Relay with integrated functions 87L, 21/21N, 67/67N, 50/51, 50/51N, 50BF, 74, 85, 79/25, 27/59, FL/FR, SOFT, 68BT, 86... Fits the opposite end protection relay.

+ Redundancy protection equipped with F67/67N overcurrent relay with integrated functions 67/67N, 50/51, 50/51N, 79/25, 27/59, 86, FL/FR.

- 110kV busbar protection: F87B offset protection relay integrates 87B, 87CZ (Check zone), 50ST (Dead Zone Protection), 50BF functions.

b. 22kV Side

- Total exposure: Equipped with F67 Overcurrent Protection Relay with built-in 67/67N, 50/51, 50/51N, 50BF, 74, 79/25, 81, 46BC, 59N, 86, 27/59, FL, FR integrated control functions (BCU). The current signal is taken from the porcelain foot current transformer of the 110kV MBA.

- Leak prevention: Equipped with an F67 overcurrent protection relay with built-in protection functions 67/67N, 50/51, 50/51N, 50BF, 79, 74, 86, 27/59, FR.

- Measurement compartment: Equipped with a set of protection relays with integrated protection functions 81, 27/59.

9.2.3.3. Measurement and metering systems

Equipped with measurement and metering systems according to current regulations. The main metering meters and backup meters are installed in the meter cabinet, located in the distribution control room. The meters are connected through the power metering collection system at the station and transmit signals to EVNSPC's metering data warehouse (the connection of meters to SPC's metering system will be carried out by SPCIT). The electricity trading meters will be placed in a separate meter cabinet and sealed with lead clamps.

Comply with the contents of the project metering agreement with the Southern Power Corporation.

9.2.3.4. Battery monitoring device

Equipped with an online DC ground monitoring system, to monitor the operating parameters of each battery and battery unit to ensure that the entire load is fully powered without interruption.

9.2.4. Main construction solutions:

a. Leveling:

The 110kV Phuoc An Port substation is built at a part of Lot B-HTKT01 of Phuoc An Industrial Park in Phuoc An commune, Dong Nai province. Cos the planning foundation +2.3 m, the station level core after completion is expected to be the core of +2.8 to ensure the planning core of the area and avoid flooding and drainage of the substation. Leveling the station foundation with sand, ensuring the tightness $k \geq 0.90$ according to TCVN 4447:2012.

Total construction area of the station:	5,878.0 m ² . In which:
+ Construction area of stations along the fence axis:	5,732.0 m ²
+ Construction area of the entrance road to the station and taluy:	146.0 m ²
+ Land area where drainage pipes are placed:	28.5 m ²

b. Gates and fences:

The gate pillar is made of concrete concrete, built with tiles around it, The station gate is a type of open gate with 02 wings.

The fence wall is made of non-baked 4-hole pipe bricks, M7.5 cement mortar; plastering 2 sides of M7.5 mortar with a thickness of 15mm, 3 layers of water-based paint. The foundation and foundation bracing are made of B20 reinforced concrete, with a subsidence gap arrangement. The fence posts are made of B20 concrete 4m apart. Iron bars fence frame with protective paint.

c. Roads inside and outside the station:

Line in the station:

+ The road in the station has a structure of 1x2 and B25 stone concrete with a thickness of 25 cm, a layer of cement cover, a layer of mixed stone 0-4 with a thickness of 20 cm, $k=0.98$, the bottom is a compacted sand foundation $K=0.95$; There is an elastic joint

+ The road surface is 4.5m wide, used to transport MBA 110/22kV.

+ The road is 3.5m wide for traffic to connect the equipment in the station and at the same time combine it as a road for fire protection.

+ The internal road locations in the station are equipped with heavy trucks and fire fighting vehicles, so the design road load in the station is calculated for the largest load

- + Design road load: axle load 10T/axle.

- + The road in the station has a structure of 1x2 and B25 stone concrete with a thickness of 25 cm, a layer of cement covering, a layer of mixed stone 0-4 with a thickness of 20 cm, $k=0.98$, the bottom is a compacted sand foundation $K=0.95$; There is an elastic joint

- + The road surface is 4.5m wide, used to transport MBA 110/22kV.

- + The road is 3.5m wide for traffic to connect the equipment in the station and at the same time combine it as a road for fire protection.

- + The internal road locations in the station are equipped with heavy trucks and fire fighting vehicles, so the design road load in the station is calculated for the largest load

- + Design road load: axle load 10T/axle.

- Road outside the station:

The road surface is 6m wide (from the station gate to the industrial park road), with a structure of 1x2 concrete, B25 25cm thick, cement covering, 0-4 grade stone layer 20cm thick, $k=0.98$, the bottom is compacted sand foundation $K=0.95$; There is no elastic joint.

d. Controllers and distributors:

- Architectural plan:

- + The control house is a single-storey house with a size of (10.6x30) m with a ceiling height of 3.6m.

- + M7.5 ceiling plaster is 1.5cm thick.

- + Walls made of 100mm and 200mm non-fired 4-hole pipe bricks with M7.5 masonry mortar; M7.5 internal and external plastering mortar with a thickness of 2cm.

- + The floor is paved with type 1 granite tiles, M7.5 mortar; B7.5 base concrete is 100 thick, the ground is compacted tightly, the base is covered with granite tiles and the same type of foundation brick is 100 high. Doors and windows use aluminum frames, 8mm thick tempered white glass.

- + The bathroom is paved with non-slip granite tiles, ceramic tile walls. Particularly, the battery room, floor, and walls are paved with type 1 granite tiles.

- + Indoor cable ditches are covered with cement board.

- + The lighting system mainly uses double trough type tube lights.

- Structural plan:

- + The operator's foundation solution is an ice foundation, which is calculated to ensure the bearing capacity of the project. The station area has a surface geological layer of alluvial soil, the station floor has been leveled to the general height of the industrial park; the foundation is in the leveling sand, but it is necessary to reinforce the melaleuca at the bottom of the foundation of type D80-100 with a density of 25 trees/m² to ensure stable operation.

- + Load-bearing structures including frames, floors, and foundations made of B20 reinforced concrete poured on site. The roof floor is 10cm thick.

dd. Foundation system and outdoor equipment pillars:

- Transformer foundation:

- + The 110kV MBA foundation pit has a size of 7.4x10.4m, suitable for MBA 63MVA. The foundation is made of 1x2 B20 stone reinforced concrete cast on site, the

foundation is calculated to ensure bearing capacity. Around the foundation platform, there is an oil collection ditch to the oil storage tank.

- + 23/0.4kV self-use MBA foundation made of 1x2 B20 stone reinforced concrete cast on site.

- + Foundation Pillar Equipment:

- + The equipment foundations are made of cast-in-place concrete, 4x6 stone lining concrete with a thickness of 100; B7.5, buried from 1.0m to 2.0m deep, compacted soil to reach the tightness required

- + Use of steel with strength: $\phi \leq 10\text{mm}$: CB240-T group, $R_s=210\text{MPa}$; $\phi > 10\text{mm}$: CB400-V group, $R_s=350\text{MPa}$

- Lighting pillar foundation: The pillar foundation is made of concrete cast on site.

- Gate column truss foundation:

- + Pillar foundation made of cast-in concrete, size 3.5x5.0 (m), 4x6 stone lined concrete with thickness 100; B7.5, compacted land to reach the tightness required by leveling

- + Use of Strength Steel:

- $\phi \leq 10\text{mm}$: CB240-T group, $R_s=210\text{MPa}$

- $\phi > 10\text{mm}$: CB400-V group, $R_s=350\text{MPa}$

e. Cable raceway system inside and outside the house:

The cable racks and widths of cable ditches are designed according to the document No. 2612/EVN SPC-QLDT dated 27/4/2012.

Outdoor cable ditches use reinforced concrete, stone 1x2, B20 underground cable ditches. The slope of the cable ditch bed is 0.2% and finally collects the gathering points to go out to the rainwater drainage system in the station. There are the following types of ditches:

- + MC-600 ditch is a type of ditch with a ditch width of 600, a depth of 490mm, a wall thickness of 150, a cable trench cover made of prefabricated concrete with a thickness of 60mm, with the layout of MC1 cable trays.

- + MC-600A ditch is a type of ditch with a ditch width of 600, a depth of 710mm, a wall thickness of 150, and a cable ditch cover made of prefabricated concrete with a thickness of 60mm

- + MC-900A ditch is a type of ditch with a ditch width of 900, a depth of 540mm, a wall thickness of 150, a cable ditch cover made of prefabricated concrete with a thickness of 60mm, with the layout of MC1 cable trays.

- + MC-900 ditch is a type of ditch with a ditch width of 800, a depth of 710mm, a wall thickness of 150, and a cable ditch cover made of prefabricated concrete with a thickness of 60mm.

- + MC-1200 ditch is a type of ditch with a ditch width of 1200, a depth of 710mm, a wall thickness of 150, and a cable trench cover made of prefabricated concrete with a thickness of 60mm.

- + MC-1200A ditch is a type of ditch with a ditch width of 1200, a depth of 710mm, a wall thickness of 150, a cable ditch cover made of prefabricated concrete with a thickness of 60mm, with an MC2 cable tray layout.

- + HC-4.0 road tape cable box; 1x2 B20 stone concrete crosses under the internal road surface. The cable box thickness is 550, the width is 1000, and contains 8 D168 PVC waiting tubes for cable threading.

+ HC-8.5 Stone Ice Tape Cable Box 1x2 B20 crossing under the internal road surface. The cable box thickness is 550, the width is 1000, and contains 8 D168 PVC waiting tubes for cable threading.

+ HC-7.0 Stone Tape Cable Box 1x2 B20 crossing under the internal road surface. The cable box thickness is 550, the width is 1200, and contains 12 D168 PVC waiting tubes for cable threading.

+ HC-7.5 Stone Concrete 1x2 B20 Road Tape Cable Box Passing Under the Internal Road Surface. The cable box thickness is 550, the width is 600, and contains 4 D168 PVC waiting pipes for cable threading.

+ The underground cable ditch system is located 200mm higher than the finished station yard. Cable holders made of L50x50x5 angle steel; placed on 01 or 02 side walls with a distance of 1000mm for MC-600, MC-900A, MC 1200A with cable tray arrangement; placed at 01 or 02 sidewalls with a distance of 500mm for MC-600A, MC-900, MC-1200. The cable brackets are hot-dip galvanized with a thickness according to 5408:2007. The surface elevation on the underground cable box is 200 lower than the average road surface elevation.

+ The cable from the raceway is threaded through the waiting hole at the raceway wall and passes in Ø140 PVC rigid plastic pipe to the equipment location. The plastic tube that protects the cable is fixed to the equipment support post with 2mm thick steel belts.

f. Oil tank breakdown

- The 4.4x4.4x2.8m incident oil tank is submerged underground including the walls, lid and bottom of the tank composed of concrete, 1x2, B20 stone concrete

- Inside the tank wall, the bottom of the tank is covered with cement mortar to create a slope and waterproof grade M7.5

- The oil tank cover is made of 2mm thick corrugated iron, painted with 02 layers of anti-rust paint and 01 layer of finishing paint

- The pump pit is built of 100mm thick pipe bricks, 02 sides of M7.5 grade plaster 1.5mm thick

- Steel oil drainage pipe, 168mm diameter with a slope of 2% from the oil collection pit to the breakdown oil tank. The oil tank is designed to be capable of storing 63 MVA MBA oil.

g. Fire Water Tank

- To meet the needs of fire protection for substations. The fire water tank is designed as follows:

+ The size is 3x6.05x3.2m, poured with 1x2, B20 stone concrete.

+ The inner wall of the tank is plastered with waterproof mortar with a thickness of 15mm, M7.5 mortar. The outer surface of the M7.5 plastered surface is 15mm thick. Plaster bowl M7.5 with a thickness of 20mm to create a slope of $i=2\%$ of the bottom of the tank.

+ On the surface of the tank with the tank hole design, there are BTCT covers with 5mm thick steel plate handles for convenient inspection and cleaning of the tank.

+ The ladder to climb up and down to operate the water tank uses Ø16 steel, 01 layer of anti-rust paint, 02 layers of oil paint

+ Rust-resistant D100 steel pipe, and D100 water lock valve

+ The tank is always full of water to serve fire protection, so the volume of the tank is quite large, and at the same time, the station area is built on a weak geological layer,

it is necessary to reinforce the melaleuca at the bottom of the tank type D80-100 with a density of 16 trees/m² to ensure the stable operation of the tank.

h. Pump Station House

- The pumping station has a size: 6x4m, with a roof floor height of 3.9m with the following structural solutions:

- + The foundation and suspension system are poured with stone reinforced concrete 1x2, B20.

- + Pump foundation platform size 2.8x4.8m pouring 1x2 stone concrete, durability level B20.

- + Brick walls with 200 thickness pipes, M7.5 mortar; plaster 2 sides of M7.5 mortar, 2 layers of matite bait and 3 layers of external paint (1 primer, 2 coatings).

- + The roof is flat with B20 reinforced concrete, with a rainwater drainage shanty;

- + The door system is made of B40 steel mesh iron frames made of stainless steel, painted with 2 layers of red finishing.

k. Water supply and drainage system:

- Domestic water supply system:

The water in the station will be taken from the common water supply system of the industrial park located off the road. The operator has arranged an additional tank with a capacity of 1000 liters and a domestic water filtration system, above the toilet to store water for daily needs.

- Drainage system:

- + Domestic wastewater is collected into an underground septic tunnel under the toilet, after being sedimented through the storage tanks, it will drain into the drainage pipe of the industrial park, ensuring general hygiene. The station is equipped with a wastewater flow meter before discharging into the drain pipe, meeting the requirement when it is necessary to measure the amount of discharged water.

- + Rainwater and surface water are naturally drained to the area around the station. The drainage manhole system is located next to the water collection line on the road in the station, according to the drainage pipe system to the rainwater drainage pipe of the industrial park located in front of the station

l. Fire protection system solutions:

- Equip the system of fire fighting equipment and means according to current regulations.

- The fire alarm system for Phuoc An Port Substation is designed with an automatic fire alarm system. The automatic fire alarm center is located in the control room, fire detectors (heat, smoke) are installed in the function rooms and the 110kV MBA area, the sound and light warning equipment system, and the fire alarm push button are designed and installed in an easily recognizable place.

- On-site fire extinguishing system: Equipped with a system according to current regulations.

- MBA's breakdown oil discharge system is collected into the breakdown oil tank.

- The fire protection system must be appraised and approved by the Fire and Rescue Police according to regulations.

9.2.6. 110kV transmission line connection:

a. Connection Solution:

The 110kV transmission line belongs to the investment project to build a 110kV Phuoc An port substation and the connection line will invest in the construction of a 110kV transmission line section going in Phuoc An Port Industrial Park starting from the position of pillar G12 (located in Phuoc An Port Industrial Park, located close to the boundary of the industrial park) to the end point of the gate pole of the newly built 110kV Phuoc An Port station.

b. Design solution of 110kV transmission line:

Construction of 110kV 2-circuit transmission line (Using single-body steel poles) ACSR-2x240/32mm² conductors to supply power to 110kV substation of Phuoc An Port in detail as follows:

Starting point: the location of G12 XDM is located in the land of Phuoc An Port Industrial Park (located close to the boundary of Phuoc An Port Industrial Park).

End point: The 110kV gate column of the 110kV substation of Phuoc An port is expected to be newly built.

Voltage level: 110kV.

Approximate length: 1.6km.

Number of circuits: 2 circuits.

Conductor: ACSR 2x240/32mm².

Lightning protection wire, optical cable: Use 1 lightning protection wire combined with OPGW70 optical cable and 1 TK70 lightning protection wire.

Insulation: Insulation must ensure safe operation, fabricated according to IEC standards.

Accessories: choose suitable for insulation and conductors, lightning protection wires, ensure the safety factor according to the regulations.

Column: Using 2, 4 circuit single-body steel columns

Foundation: Use reinforced concrete.

Grounding: Use grounding of piles, beams, and mixed borewells in accordance with regulations.

10. The basic design drawings shall be affixed with the seal of certification enclosed with this Decision.

11. The number of design steps, the list of standards is mainly selected:

11.1. Number of design steps: 02-step design (basic design and implementation design after basic design).

11.2. List of Mainly Selected Standards

- Construction regulations: Current Vietnamese construction standards.

- Regulations on electrical equipment promulgated together with Decision No. 19/2006/QĐ-BCN dated July 11, 2006 of the Ministry of Industry (now the Ministry of Industry and Trade).

- EVN's Decisions promulgating Basic Technical Standards applied in Vietnam National Electricity on September 21, 2021 include: No. 104/QĐ-HDTV on Technical Standards for 22, 35 and 110kV voltage transformers; No. 105/QĐ-HDTV on technical standards for 22, 35 and 110kV current transformers; 106/QĐ-HDTV on technical standards of FCO, LBFCO and lead wires with voltage of 22 and 35kV; No. 110/QĐ-HDTV on Technical standards for lightning protection of 22, 35 and 110kV valves; 112/QĐ-HDTV dated 21/9/2021 on promulgation of technical standards for insulation of

22, 35 and 110kV voltage lines; No. 114/QD-HDTV on technical standards for medium-voltage underground cables and accessories.

- Decisions/documents of the Southern Power Corporation: No. 23/QD-HDTV dated 15/02/2026 of the Southern Power Corporation on the promulgation of the "Regulations on technical characteristics of materials and equipment of medium and low voltage and 110kV power grids applied in the Southern Power Corporation; No. 9432/EVN-SPC-KT, dated 25/10/2024, on reviewing and coordinating the separation of neutral wires, grounding the cable sheath and grounding the CSV; Document 4000/EVN SPC-KT dated 12/05/2021 of the Southern Power Corporation on the equipping of a 110kV substation relay system in accordance with Decision 2896 of EVN; Document 6362/EVN SPC-DT dated 21/07/2021 on reviewing additional designs to equip relay systems of 110kV substations under construction; Document No. 3457/EVN SPC-KH dated 29/5/2017 of the Southern Power Corporation to implement the disclosure of 22kV underground cables, 110kV substations to increase capacity; Document No. 3532/EVN SPC-KT dated 04/5/2019 of the Southern Power Corporation on investment in exposing 22kV underground cables at 110kV substations; Decision No. 21/QD-HDTV dated March 14, 2022 of the Southern Power Corporation on the promulgation of the "Regulation on Management of programs and systems Remote reading of operating parameters of 110kV substations in the Southern Power Corporation.

- Design standards: current Vietnamese standards (TCVN), Vietnam construction standards (TCXDVN), standards and regulations of the TCN sector (Electricity, Telecommunications, Construction); international standards IEC, ITU and regulations of EVN, EVNNPC.

12. Total construction investment: 202,458,554,023 VND (Two hundred and two billion, four hundred and fifty-eight million, five hundred and fifty-four thousand, zero hundred and twenty-three VND)

In which:

No.	Cost content (VND)	Value before tax (VND)	VAT (VND)	Value after tax (VND)
1	Compensation, support and resettlement costs	-	-	-
2	Construction Cost	90.885.267.410	9.088.526.741	99.973.794.151
3	Equipment Cost	49.304.271.458	4.930.427.146	54.234.698.604
4	Project Management Expenses	2.843.043.848	-	2.843.043.848
5	Construction investment consultancy expenses	11.101.888.189	1.015.188.819	12.117.077.008
6	Other expenses	10.943.184.754	282.414.692	11.225.599.446
7	Contingency costs	20.166.783.438	1.897.557.527	22.064.340.965
TOTAL		185.244.439.098	17.214.114.925	202.458.554.023

13. Project implementation schedule: 2025-2027.

14. Investment capital: Capital arranged by enterprises.

15. Applicable form of project management: The investor shall organize the project management.

Article 2.- The Board of Directors shall unanimously assign the General Director to consider and decide:

In the process of implementing the next steps, in order to accelerate the progress of project implementation, the General Director shall complete procedures related to the design of construction drawings, cost estimates and contractor selection plans and submit them to the Board of Directors for consideration and approval as a basis for construction investment.

Article 3.- This Resolution takes effect from the date of its signing. Members of the Board of Directors, the General Director and functional departments/departments of the company shall be responsible for the implementation of this Resolution./.

Recipients:

- As per Article 3;
- Head of the PAP Supervisory Board;
- Lưu VT, Board of Directors.

TM. BOARD OF DIRECTORS
CHAIRMAN 


Nguyễn Thanh Đạt