ASEANのエネルギー分野の現状・関連動向に係る調査 – 定点調査業務2025

報告書 – ベトナム

新エネルギー・産業技術総合開発機構
New Energy and Industrial Technology Development Organization

ARTHUR D LITTLE

調査項目

1. エネルギー構成・政策・監督機関
- a. 国全体のエネルギー構成
- b. エネルギー政策（マスタープラン、化石燃料選択、再生可能エネ導入予定等）
- c. エネルギー政策に係る省庁および規制当局

2. 化石エネルギー
- a. 石油、石炭、天然ガスの国内需給率と今後の予測
- b. 石油、石炭、天然ガスの輸出入先
- c. 主な油田、石炭鉱山、天然ガス田のマッピング、産出量、開発／運営事業者名
- d. 今後数年以内に開発が開始される主な油田、石炭鉱山、天然ガス田のマッピング、四総産出量、開発／運営事業者名
- e. 石炭火力発電の導入状況及び今後の導入方針
- f. 石油、石炭、天然ガスの国内販売価格

3. パイプライン（ガス・石油）
- a. 規定する法律と内容
- b. 主なガス・石油パイプライン網のマップピング、各輸送量、開発・運営事業者名
- c. 今後の政策とそれを規定する法律

4. 次世代・再生可能エネルギー
- a. 太陽、風力、地熱、バイオマス、水力、水素等の構成割合
- b. 主な太陽光、風力、地熱、水力発電事業場所のリスト（特に水力は揚水/自流/貯水式、可変式の有無情報も）とマッピング、開発者／運営事業者名
- c. 現状のバイオマス燃料の利用状況と今後の予測
- d. CCUS関連政府・民間の最新動向、主なCO2排出源、CCS貯留ポテンシャル
- e. COP30に向けたCN関連政策・技術動向（ブルーカーボン、e-fuelなど）
- f. 原子力（含むSMR）関連政府・民間の最新動向
- g. 省エネ関連政府目標および政策・制度

5. 発電事業者
- a. 参入条件を規定する法律と内容
- b. 発電事業者名とその法人形態（国営、株式会社等）、参入予定事業者名
- c. 電力自由化状況（発電、送電、配電の独占状況）
- d. 各事業者の発電量シェア
- e. 事業者に対する国からの補助金状況

6. 発電所
- a. 稼働中の主な発電所のマッピング
- b. 当該発電所の種別（石油火力、石炭火力、ガス火力等）、事業主体のリスト
- c. 発電所建設に係る問題点（土地収用の状況、地域住民のコンセンサス、燃料の調達等）整理
- d. 判明している発電所建設計画のマッピング

7. 電力品質
- a. 規定する法律と内容
- b. 電力品質の現状（停電、瞬低、電圧変動状況等）
- c. 電力品質向上に向けた主な取組状況（関連政策及び具体的事業名）

8. 送電網
- a. 規定する法律と内容
- b. 超超高電圧（UHV、500kV）・超高圧（EHV、220-275kV）・それ以下の主な送電網のマップ表示
- c. 今後の政策とそれを規定する法律
- d. 予定されている主な送電線敷設事業名

9. 電力料金
- a. 現状とそれを規定する法律
- b. 補助金投入状況
- c. 当該国での特殊事情
- d. 再生可能エネFITに関する動向

10. 電力需給状況
- a. 電力供給状況と需要状況（逼迫度）

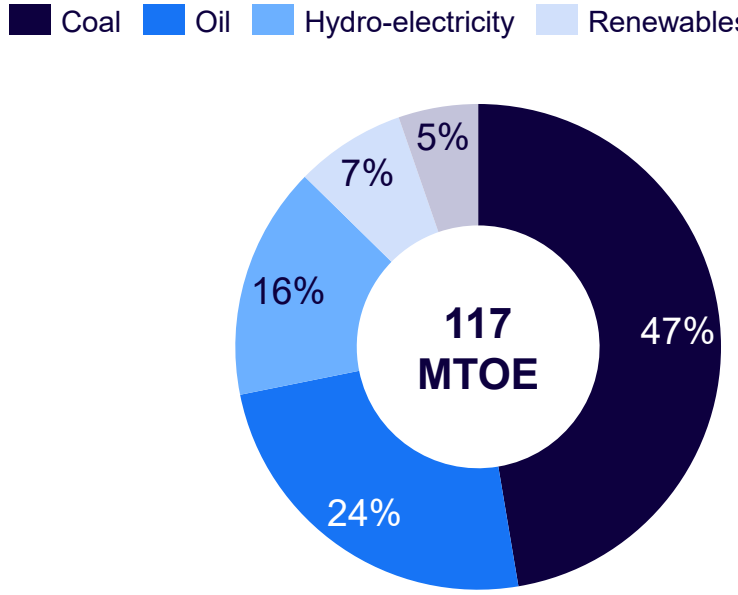
Contents

ベトナムの一次エネルギー需要は2023年に117MTOEで、その約7割を化石燃料が占め、特に石炭依存度が47%と高まる一方、再エネ比率もこの10年で0%から5%に拡大している

Primary energy consumption

2023, MTOE[1]

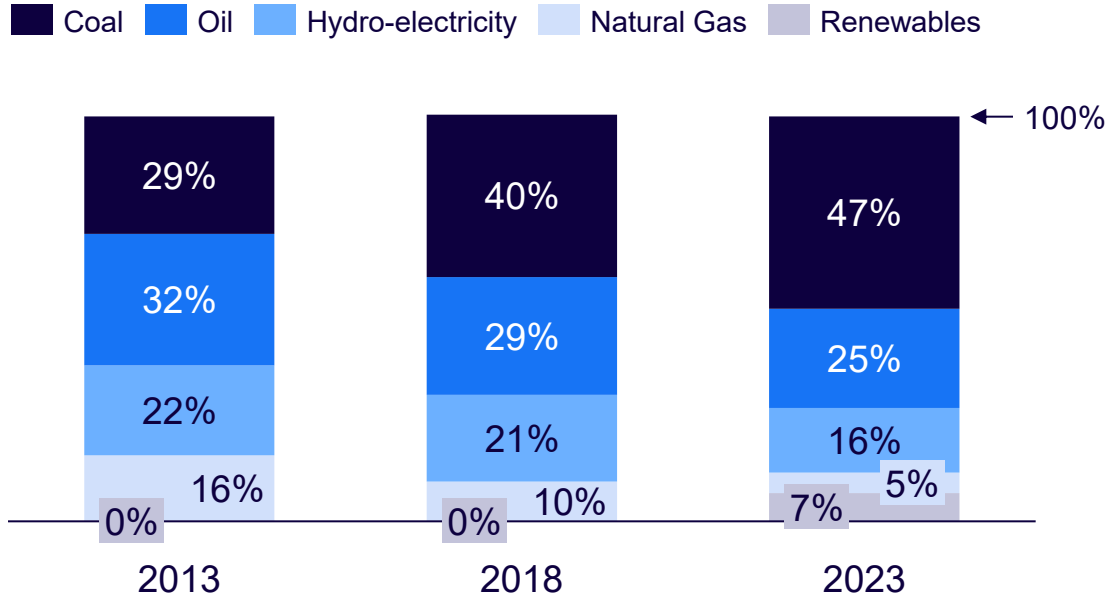
Vietnam's primary energy demand in 2023 is 117 MTOE, which comes mainly from fossil fuels (~71%), especially coal at 47% and oil 24%



Historical primary energy consumption

2013 – 2023, %

Vietnam has maintained a strong dependence on coal over the past decade, with its share in energy consumption rising sharply from 29% in 2013 to 47% in 2023. However, efforts to boost renewable energy have also gained momentum, with its share increasing from <1% to 5% over the same period.

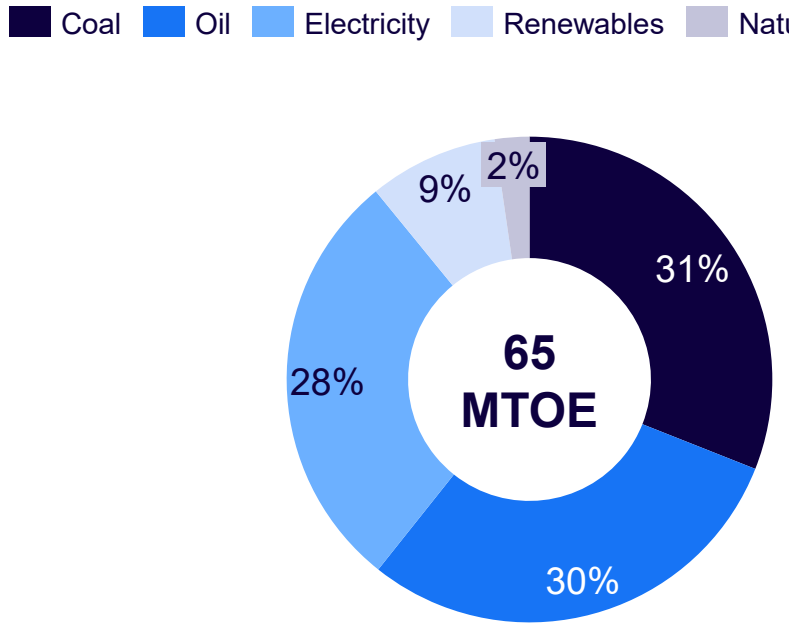


Note: 1) Convert from original data in EJ with conversion rate as 1 ET = 23.8846 MTOE
Source: Statistical Review of World Energy 2024, Arthur D. Little analysis

ベトナムの最終エネルギー消費は2020年時点で65MTOE、その約6割を石炭と石油が占め、消費部門では産業が半分以上を占めて最大の需要源となっている

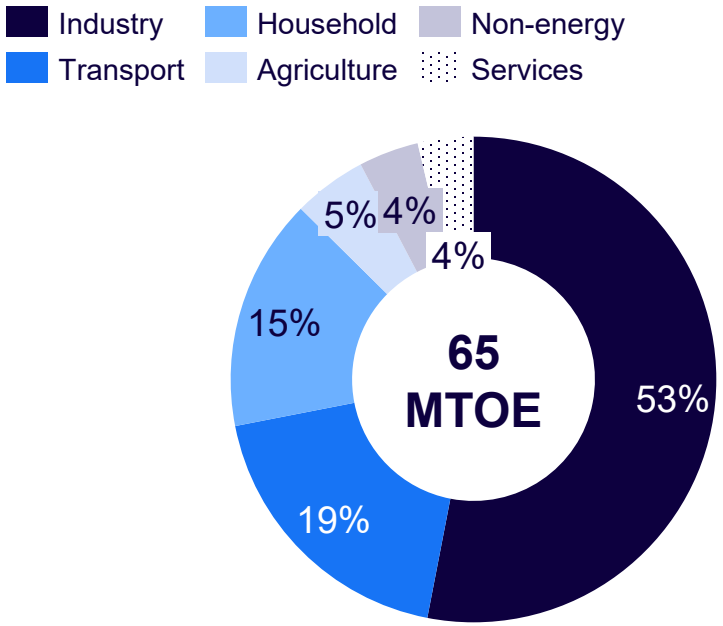
Final Energy Consumption by Fuel Type
2020, MTOE

Vietnam's final energy demand is primarily supplied by fossil fuels, with coal and oil providing 31% and 30% of the total, respectively



Final Energy Consumption by Sector
2020, MTOE

Industry is the largest consuming sector, consuming more than 50%, followed by transport (19%)

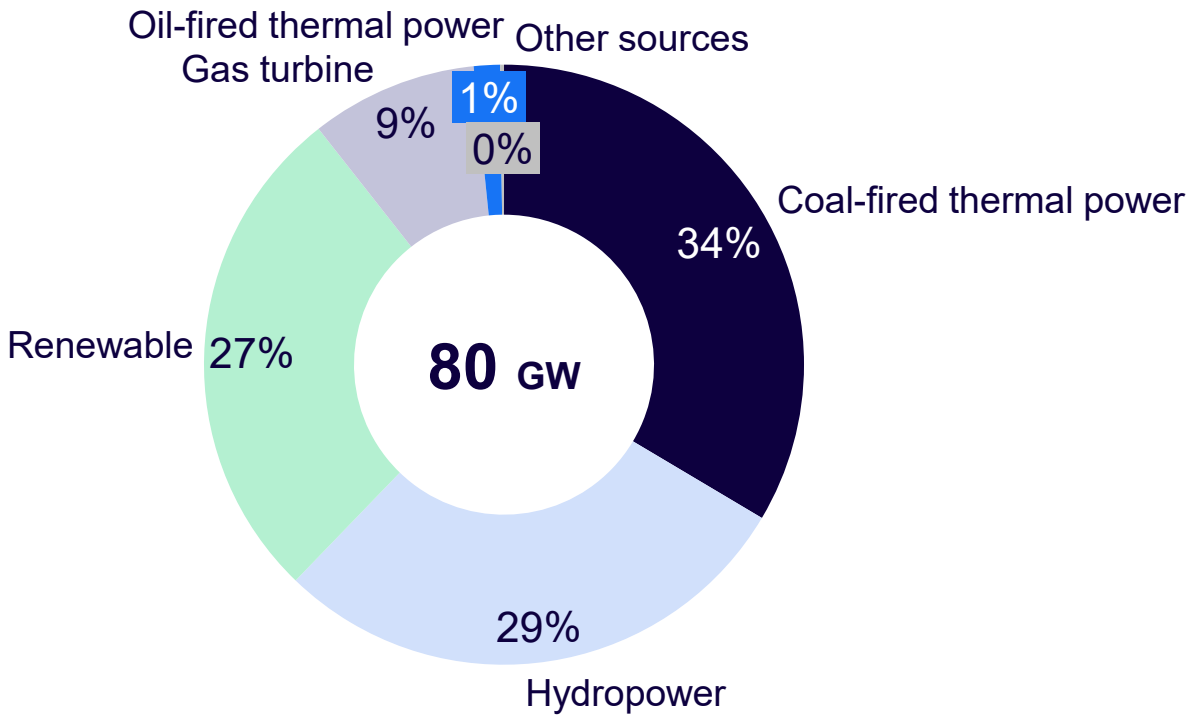


Source: Vietnam Energy Statistics 2020, Arthur D. Little analysis

ベトナムの発電設備容量は2023年に約80GWとなり、石炭火力が34%で最大、次いで水力29%、再エネ27%が主要な電源構成を占めている

Power Generation Capacity

2023, GW



Remarks

- In 2023, the total power source capacity (commercial operation accepted) of the entire system reached about 80 GW (excluding import)
- Coal-fired thermal power dominates power generation capacity at 34% of the 80 GW total, followed by hydropower (29%) and renewable sources (27%).

’25年に改訂した国家電力開発計画（PDP8）で容量目標を大幅に引き上げ、’30年に最大235 GW、’50年に最大839GWを掲げ、再エネ比率を75%に拡大。’35年以降は原子力導入も再検討

	政策	政策概要
2012	Vietnam Green Growth Strategy (VGGS)	• Orientation toward 2030: Reduce GHG emissions by 1.5%–2% per year, reduce GHG emissions in the energy sector by 20%–30% compared with BAU (the upper bound is dependent on international support). • Orientation toward 2050: Reduce GHG emissions by 1.5%–2% per year.
2015	Renewable Energy Development Strategy 2016-2030 with outlook until 2050 (REDS)	• Renewable power (excluding hydropower) aims to cover 7% and 10% of total generation by 2020 and 2030 respectively. Currently, renewable energy (biomass, wind and solar) accounts for 26% of generation capacity, ahead of target. • Reduce GHG (to BAU scenario) by 5% in 2020; 25% in 2030 and 45% in 2050
2020	Paris Climate Agreement: updated Nationally Determined Contribution	• Vietnam has unconditionally committed to reduce GHG emissions by 9% by 2030 below business-as-usual (BAU) levels - 903 MtCO2e/yr in absolute emissions levels for 2030 (excluding LULUCF) • Vietnam committed to a conditional target of reducing GHG emissions by 27% below BAU based on international support.
2023 May	National Power Development Plan (PDP8)	• Period of 2021 – 2030 – No additional development of new coal-fired power plants – Substantial development in to replace coal with natural gas plant, and renewable (wind power) to reach 21% & 13% of total installed capacity • Period of 2031 – 2045 – Ratio of renewable energy sources (including large-scale hydropower) will reach 53% of total capacity
2025 April	Revised National Power Development Plan (Revised PDP8)	Highlight changes as compared to 2023 version • Significantly increase capacity targets to reach 182 – 235 GW by 2030 and 774-839 GW by 2050 (up to 57% increase as compared to 2023 version) • Greater emphasis on renewable energy, targeting its share (excluding hydrogen) to reach 28 – 36% of total electricity generation by 2030 and 74 – 75% by 2050 • Reintroduced of nuclear power with installed capacity target of 4 – 6.4 GW by 2035 and up to 10.5 – 14 GW by 2050
2025 May	Implementation Plan for the Revised PDP9	• Detail plan to implement revised PDP8. Some focus areas include: – Development and improvement of legal framework and regulations including amendment of the Law on Economical and Efficient Use of Energy, formalization of Direct Power Purchase Agreement framework, support – Introduction of regional and cross-border strategies

Source: various news articles, Arthur D. Little analysis

改訂PDP8は、2030年に太陽光28%・水力17%・石炭15%の電源構成を目指し、2050年には再エネと蓄電で6割超を占め、石炭を完全廃止しガスも1%未満に縮小する脱炭素シナリオを示す

Revised Power Development Plan 8 (Approved April 2025)

TIMING

Planning for the period of 2021 - 2030, with a vision to 2050

OVERALL

The PDP8 focuses on:

- **Electricity production, consumption, and distribution** by expanding the electricity grid and doubling capacity
- Aiming to **boost renewable energy shares** while reducing reliance on coal (full transition away from coal by 2050)

KEY NOTES

Primary Electricity Target

(billion kWh)	2030	2050
Commercial Electricity Consumption	500.4 – 557.8	1,237.7 – 1375.1
Electricity Production & Import	560.4 – 624.6	1,360.1 – 1,511.2
Maximum capacity	89,655 – 99,934	205,723 – 228,570

Power Generation Capacity Mix Target:

- **By 2030:** Solar (28%), Hydropower (17%), and Coal (15%) are the leading sources, together accounting for nearly 50% of total power capacity. In contrast, nuclear (3%), stored power (6%), and imports (5%) make only marginal contributions.
- **By 2050:** Renewable energy and stored power are steadily increasing their dominance, with Solar (37%), wind (13%), and stored power (12%) together making up over 60% of the energy mix. In contrast, the role of fossil fuels is diminishing, with gas contributing <1%, and coal being phased out completely

Source: Revised National Power Development Plan 8 2025, various news articles,

ベトナムは石炭火力の比率を段階的に削減し、運転20年以上の設備はバイオマス・アンモニアへの転換、40年以上は廃止し、2050年までに石炭発電をゼロにする方針を掲げている

Status of introduction of coal-fired power generation

Deputy Prime Minister Trinh Dinh Dung
announcing the drafting of PDP8

“Gradually reduce the proportion of coal-fired thermal power plant” - Power Development Plan 8th

Before Power Development Plan 8

2019 Clean coal production reached **38-46** million tons (mainly from Vinacomin)

After Power Development Plan 8

Gradually reduce coal-fired power plants:

- 6 projects already included in the Power Development Plan 7th: Continue to construct until 2030.
- Plants operating for 20 years: Shift the fuel conversion direction to biomass and ammonia
- Plants operating for over 40 years: Cease operations (if fuel conversion is not feasible)

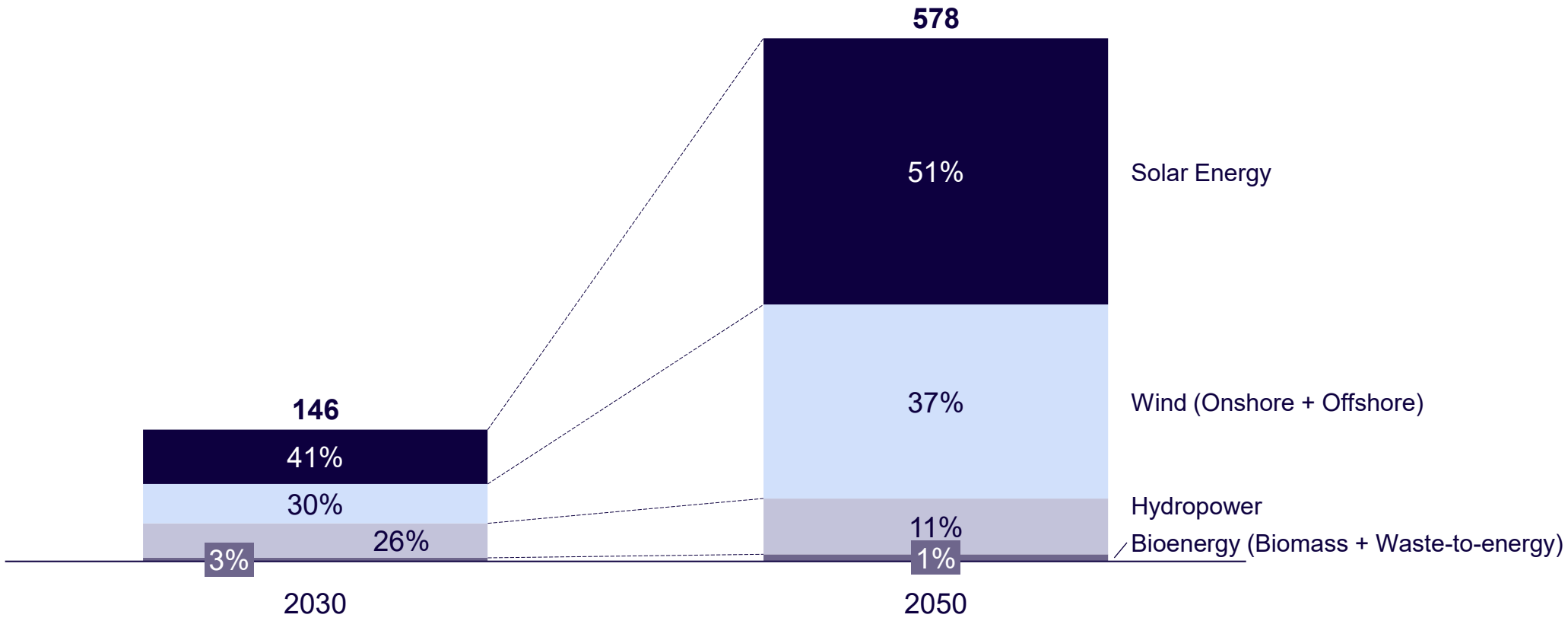
0 Coal generation: By 2050, no longer use coal for power generation and completely shift the fuel to biomass and ammonia. The total capacity of converted coal will reach ~25,789 by 2050

Source: Vietnam National Power Development Plan 8

ベトナムは2030年に太陽光41%・風力30%を中心とした再エネ導入を進め、2050年には太陽光51%・風力37%で全体の8割超を占める電源構成を目指している

Renewable Energy Mix Target

2030 – 2035, GW

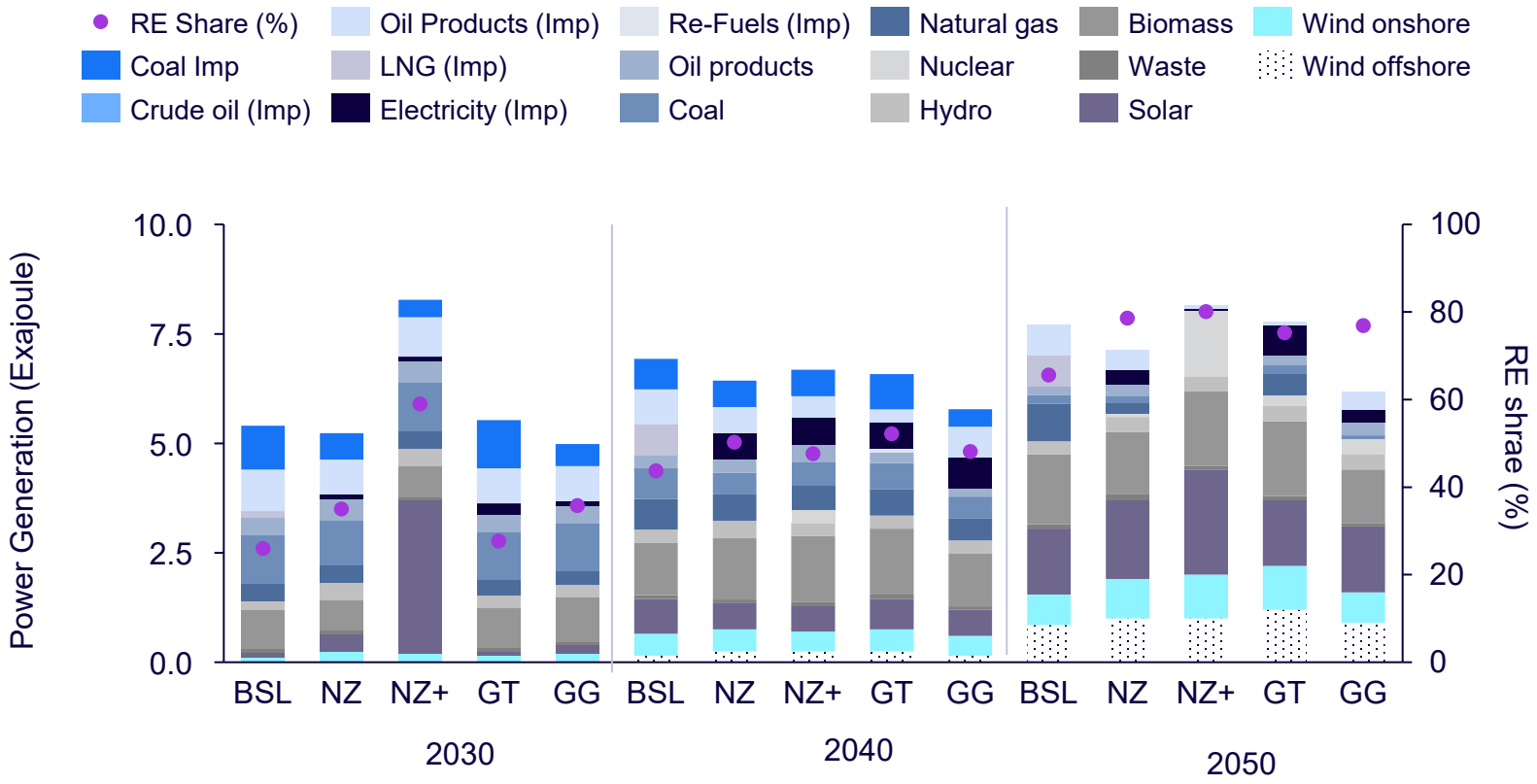


Source: Revised Power Development Plan 8 (Decision 768/QD-TTg), Athur D. Little analysis

2050年までに石炭を全廃し、再エネ比率を最大80%まで高める計画で、シナリオ別ではNZ/NZ+が最も野心的に脱炭素を進め、GTは輸送燃料を重視、BSLやGGは化石燃料依存が長引く想定

Total primary energy supply, by scenario[1]

2030 – 2050



Description

- Renewable energy share expects to rise over time across all the scenario, but at varying rates:
  - NZ and NZ+ show the most ambitious renewable penetration, surpassing 80% of energy mix
  - GT achieves similar renewable growth with a focus on green transport fuels,
  - BSL and GG see slower fossil fuel decline and lower renewable shares than net-zero pathway

Note : 1) Scenario definition: BSL = Baseline; NZ = Pathway to Net Zero; NZ+ = Net-Zero+; GT: Green Transport; GG = Green Growth
Source: Vietnam Energy Outlook Report 2024, Arthur D. Little analysis

ベトナムにおける注目すべき過去および最近の再生可能エネルギー政策の一覧

Previous Renewable Energy Policies (Pre-2016)

Title	Year	Policy Status	Policy Type	Policy Target
Vietnam Renewable Energy Development Strategy 2016-2030 (REDS)	2016	In Force	Policy Support > Strategic planning, Policy Support > institutional creation	Multiple RE Sources > All, Multiple RE Sources > Power
National Power Development Plan 7 (Revised)	2016 (March)	In Force	Policy Support > Strategic planning	Multiple RE Sources > All
Decision on support mechanisms for the development of biomass power projects	2014 (Oct 5th)	In Force	Economic instruments > Fiscal/financial incentives > Feed-in tariffs/premiums	Bioenergy > Biomass for power
Decision on support mechanisms for the development of waste-to-energy power projects	2014 (June 20th)	In Force	Economic instruments > Fiscal/financial incentives > Feed-in tariffs/premiums	Bioenergy > Biomass for power, Bioenergy > Co-firing with fossil fuels
Accelerated depreciation tax relief for renewable energy projects	2013 (Nov 25th)	In Force	Economic instruments > Fiscal/financial incentives > Tax relief	Multiple RE Sources > All
National Power Development Plan 2011-2030	2011	Superseded	Policy Support > Strategic planning, Policy Support, Economic instruments> Fiscal/ financial incentives> Tax	Wind > Onshore, Bioenergy> Biomass for power, Hydro-power, Solar, Wind
Electricity Law	2005	In Force	Relief, Economic instruments > Fiscal/financial incentives > Feed-in tariffs/premiums	Multiple RE Sources
Decree No. 45/2001/ND-CP on electric power operation and use	2001	In Force	Regulatory Instruments, Regulatory instruments > Other mandatory requirements	Multiple RE Sources > Power

Renewable Energy Policies (Post-2016)

Name	Policy Target
Implementation Plan of PDP8 (May 2025)	Operationalizes the Revised PDP8 with more detailed guideline and plans to implement the Revised PDP8
Revised National Power Development Plan 8 (April 2025)	uilding upon the PDP8 in 2023, the Revised PDP8 established more aggressive targets and roadmaps for power plan toward 2050 (e.g,, accelerating renewable energy deployment, reintroducing nuclear power, expanding battery and grid infrastructure, tightening emissions limits,).
National Power Development Plan 8 (May 2023)	Illustrate the vision of electricity production & distribution in Vietnam, aiming to boost renewable energy while reducing reliance on coal (entirely transition away from coal by 2050)
Decision 21/QD-BCT (Jan 2023)	Issues electricity generation price bracket for transitional solar & wind power plants
Decision No. 13/2020/QD-TTg	Provide for the mechanism to encourage the development of solar power in Vietnam (i.e., FiT Scheme)
Decision No. 08/2020/QĐ-TTg	Provide for the mechanism to encourage the development of biomass power in Vietnam (i.e., FiT Scheme)
Decision No.39/2018/QD-TTg	Support the development of Wind power projects (i.e., FiT Scheme for Wind power, capital subsidy, grant, or rebate; reductions in taxes)

Source: Multiple government policies and websites

ベトナムは2024年にニントゥアン省での初の原子力発電計画を再開し、総容量約4,000MWの2基を建設、30～31年の稼働を目指してエネルギー安全保障と2050年ネットゼロ達成を支える方針で

Vietnam revives its first nuclear power project

Context		In **November 2024**, Vietnam's National Assembly approved the revival of the first nuclear power plant in Ninh Thuan to ensure energy security and achievement of net-zero target by 2050 after 8-year of suspension
Project Details	Location	Ninh Thuan – a south-central coastal province
	Planned capacity	Total of ~4,000 MW, with 2 plants being developed

Key milestones	Nov 2024	Feb 2025	Aug 2025	May 2026	2030 - 2031
	National Assembly (NA) approved the revival of the project	NA approved several special mechanisms and policies for the project	Deadline for international partners negotiations for Ninh Thuan 1 project	Deadline for international partners negotiations for Ninh Thuan 2 project	Operationalize the first Ninh Thuan nuclear power plant

Design of the Ninh Thuan nuclear power plant

Source: various news articles, Arthur D. Little analysis

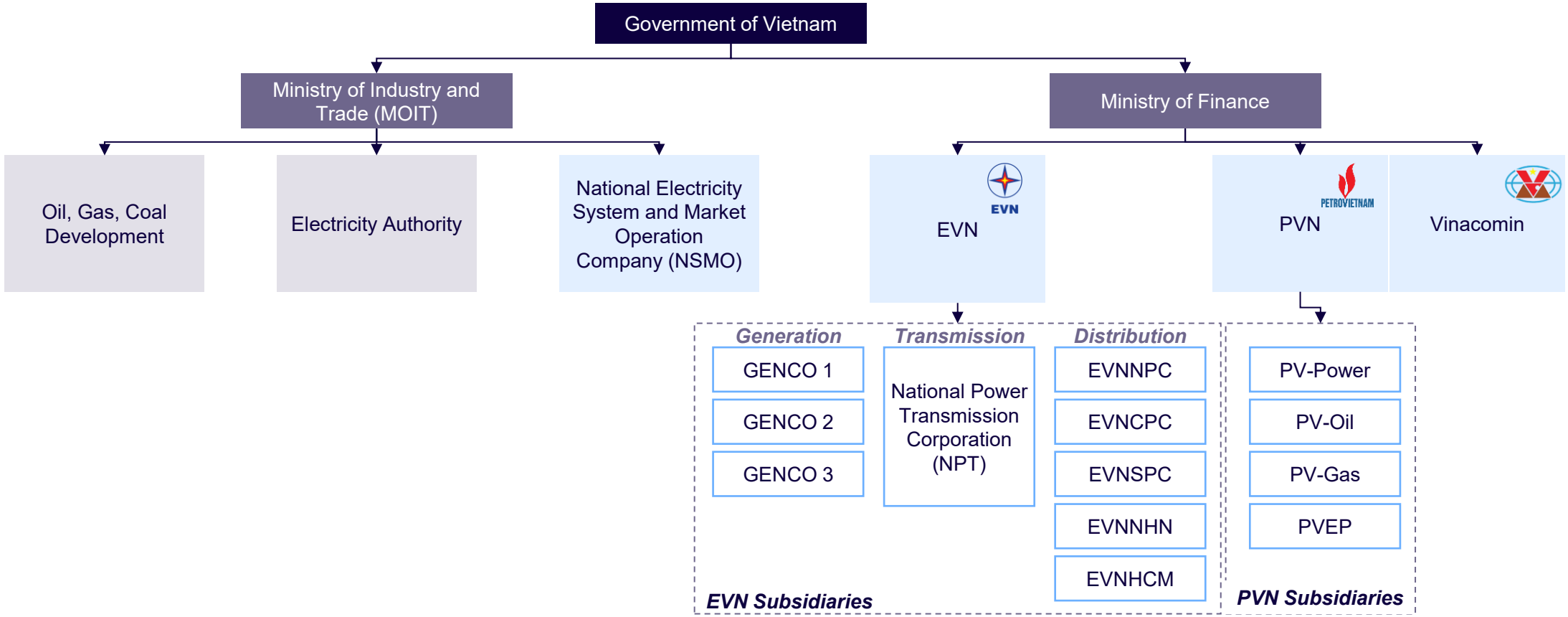
ベトナムのエネルギー政策は産業貿易省（MOIT）が主導し、石油・石炭・電力の規制や再エネ推進を担い、財務省が料金設定・投資承認を、主要国営企業が石油・石炭・電力供給を担う体制

Entity	Department	Category	Key roles and responsibilities
Ministry of Industry and Trade (MOIT)	Oil, Gas, Coal Department	Government Agency	• **Petroleum sector** – Propose and draft regulations related to petroleum sector (exploration, production, processing, and distribution) – Advise on petroleum contracts and licensing, including issuance and amendments to investment certificates – Oversee investment in petroleum infrastructure and operations in line with sectoral planning. • **Coal sector** – Draft and propose coal industry development strategies and policies to ensure coal supply for power generation – Advise on coal export standards and planning. – Supervise investment and construction projects in the coal sector
	Electricity Authority		• Advises on and develops electricity regulations, including fossil-fuel and renewable energy plans • Sets price frameworks and structures; regulates competitive markets and contracts
	Agency for Innovation, Green Transition & Industry Promotion (IGIP)		• Advise and assist Minister of Industry and Trade in state management and legal enforcement in the following areas (only selected those relevant to energy sector) – Efficient and economical energy use, sustainable production and consumption, and circular economy – Climate change, green transformation, and sustainable development
Ministry of Finance (MOF)			• Set price and tariffs for electricity, oil, and gas and formulate taxation for energy sectors and customs for energy imports & exports • Oversees and approves large-scale investments, including foreign investments, in fossil fuel projects (such as refineries, power plants, and mining projects (Take over this role from dissolved Ministry of Planning and Investment)
Petrolimex Vietnam (PVN)		State-owned company	• State-owned oil & gas corp. involved in the full value chain exploration, production, refining, gas processing, and petrochemicals • PVN operates through subsidiaries like PVEP (exploration), PV Gas, and BSR (refining)
Vinacomin			• The main coal producer in Vietnam, covering mining, processing, and supply of coal for domestic thermal power generation
Vietnam Electricity (EVN)			• National power utility company responsible for generation, transmission, distribution, and retail of electricity across Vietnam. • EVN operates the majority of Vietnam’s electricity grid and manages key power plants, including hydro, coal, and gas-fired units
National Electricity System and Market Operation (NSMO)			• Responsible for national power system dispatching & market operations • Invests in and manages IT/telecom infrastructure for power system operations

Source: MOIT website, IGIP website, MOF website, various news articles, Arthur D. Little analysis

ベトナムのエネルギーセクターの組織構造

Government Organization of Energy Sector



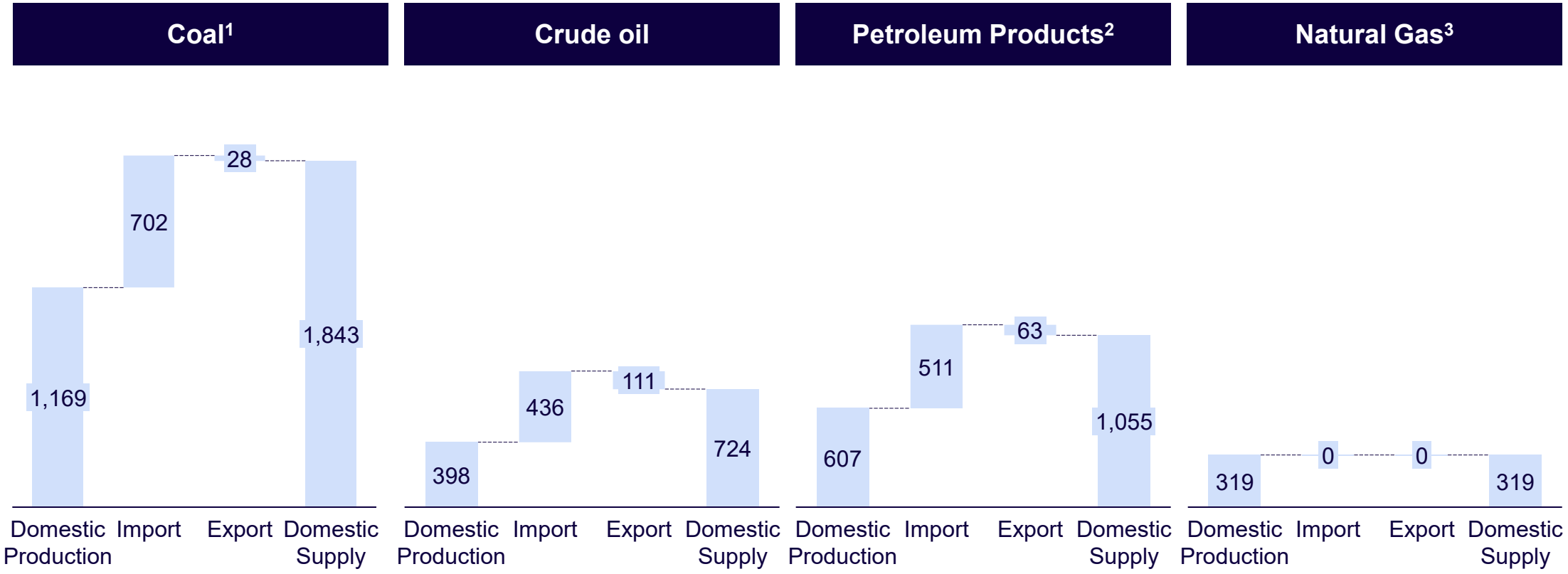
Source: MOIT, Press release, EVN, PVN, Arthur D. Little analysis

Contents

ベトナムの化石燃料供給は石炭が中心で輸入依存も大きく、原油・石油製品も輸入に頼る一方、天然ガスは国内生産で自給している

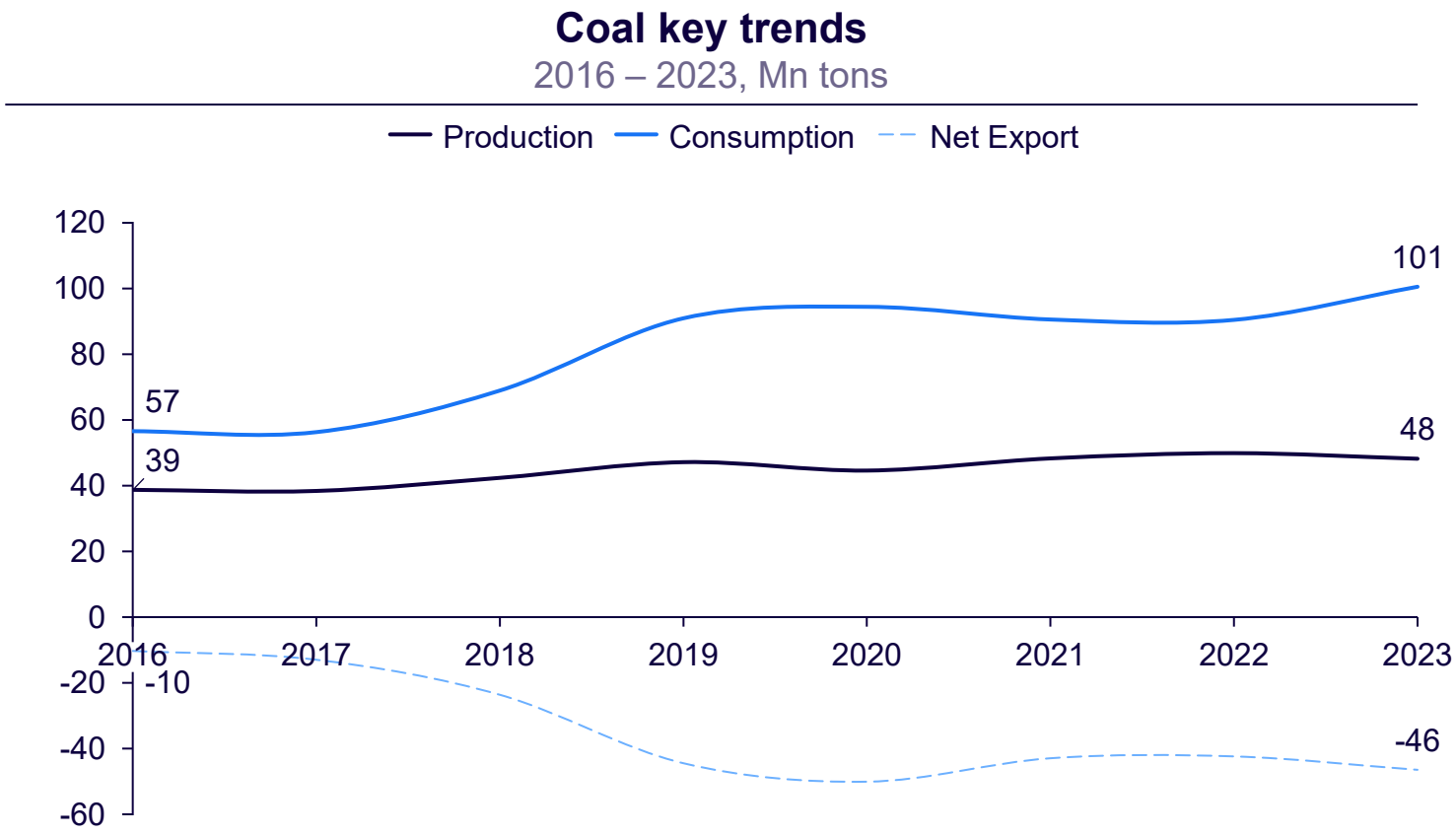
Vietnam's Fossil Fuel Supply by Production, Exports and Imports

2022, Petajoule



Notes: 1) Anthracite accounts for 100% coal production in Vietnam; 2) Refer to oil products refined 3) Did not include LNG, as Vietnam began importing LNG in 2023.
Source: International Energy Agency, Arthur D. Little analysis

2016～2023年にベトナムの石炭消費は77%増と生産を大きく上回り、輸入依存が急拡大して貿易赤字が拡大し、2023年には4600万トンの純輸入超過に達した



Description

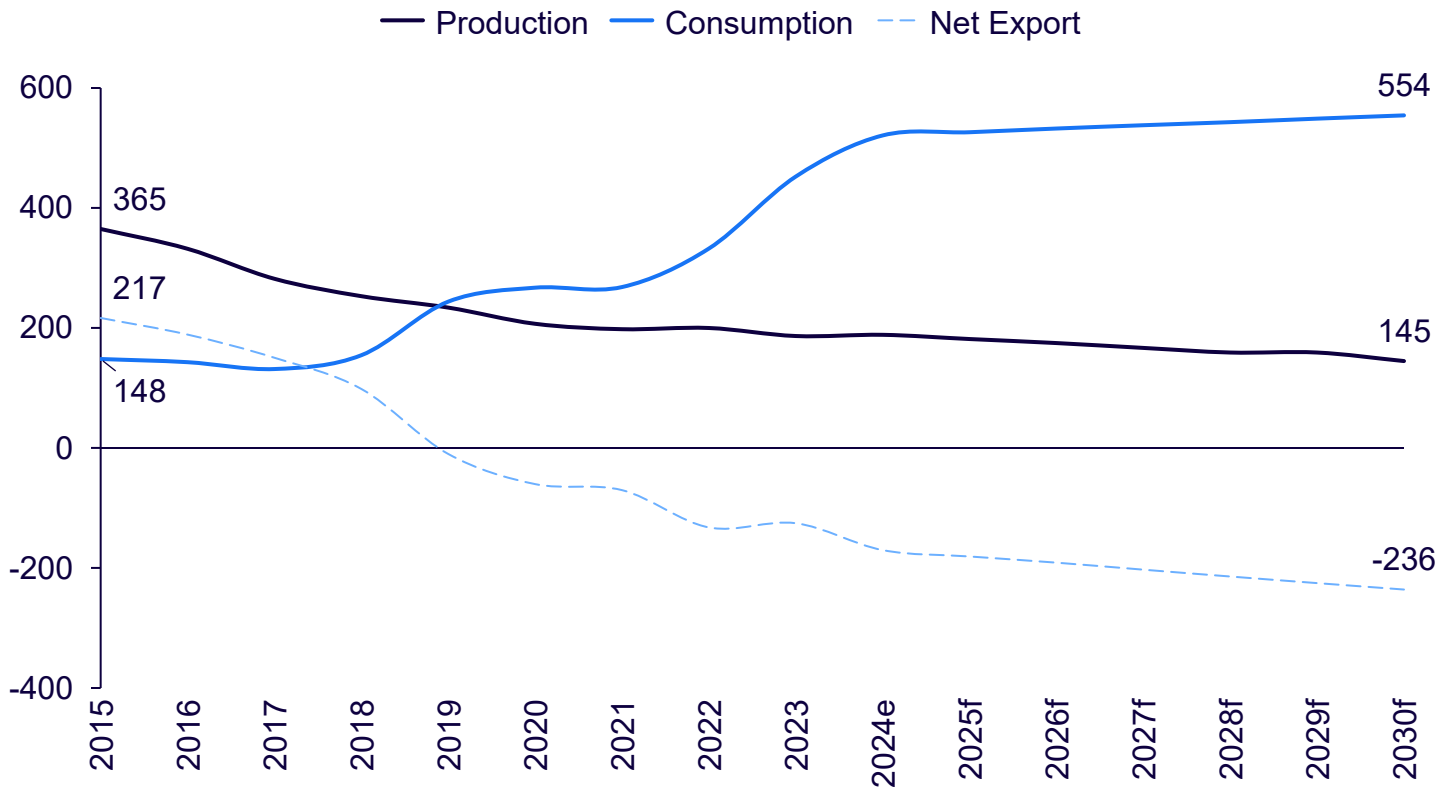
- Coal production grew moderately from 39 million tons in 2016 to 48 million tons in 2023, reflecting a 23% increase over the period of 7 years
- In the meantime, consumption surged from 57 million tons to 101 million tons in the same period, marking a 77% rise, driven primarily by industrial and power generation demand
- The growing gap between consumption and domestic production led to a significant widening of Vietnam's coal trade deficit, with net exports dropping from -10 million tons in 2016 to -46 million tons in 2023 in order to meet rising demand

Source: The Global Economy, Arthur D. Little analysis

ベトナムの原油生産は老朽油田や投資減速で減少が続く一方、消費は堅調に増加し、貿易赤字は拡大して2030年までに輸入依存が一層深まる見通し

Crude oil, NGPL & other liquids key trends

2015 – 2030, 000's bpd



Description

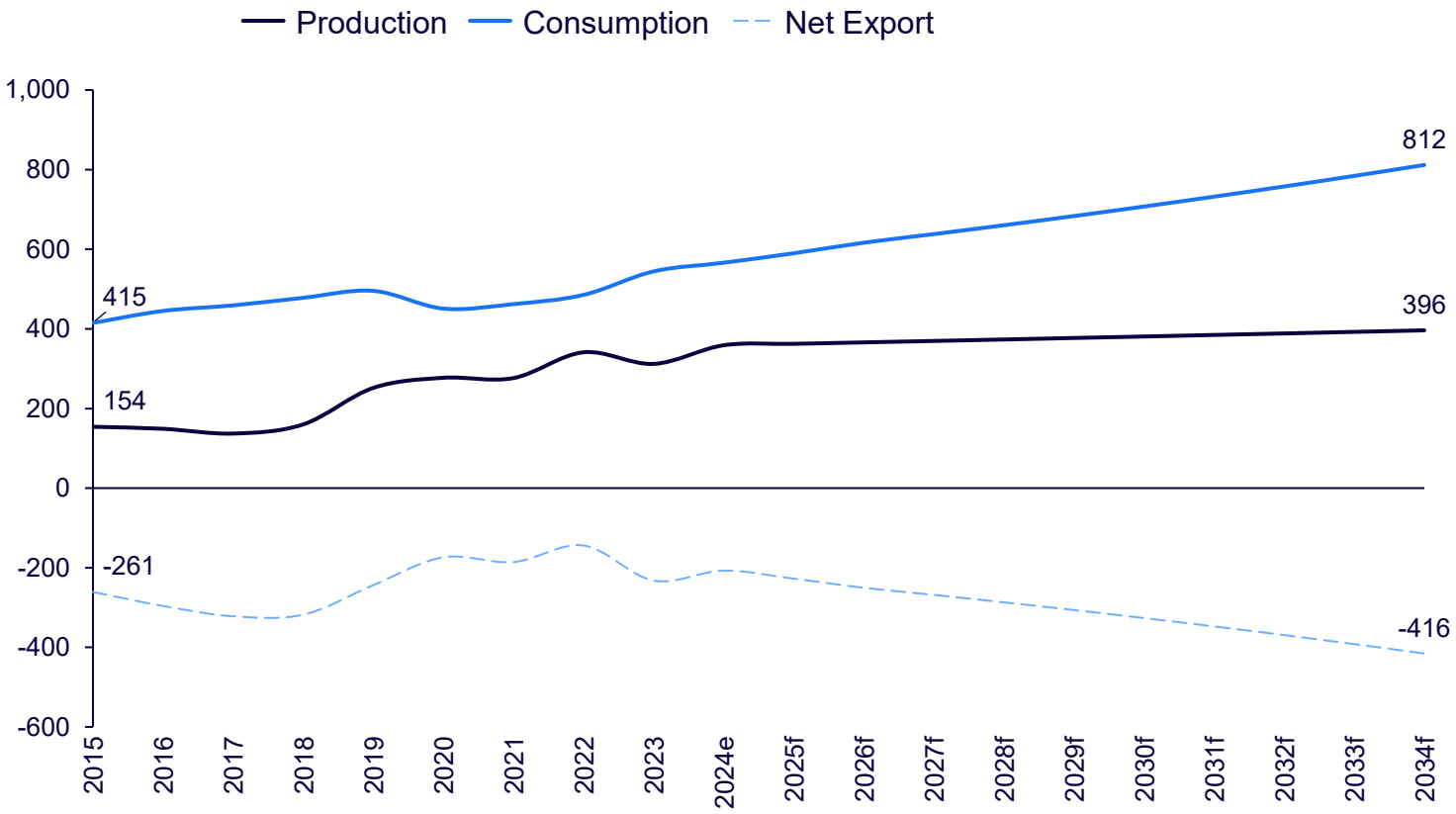
- Production expect to experience structural decline in the next few years with annual decrease of 1.7% due to maturing oil fields and slowdown in foreign investment
- Consumption is significantly higher and continues to increase steadily, rising from 452 thousand bpd in 2023 and trending upwards throughout the projection period
- As a result, the net export balance is negative and worsening, with a trade deficit of -125 thousand bpd in 2023, projected to deepen further through 2030

Source: Fitch Solutions Vietnam Oil & Gas Report 2023, BMI Vietnam Oil & Gas Report Q3 2025, Arthur D. Little analysis

ベトナムの石油製品消費は経済成長と輸送・建設需要により増加を続ける一方、精製能力が限定され生産拡大は緩慢で、輸入依存度が高まり貿易赤字が拡大していく見通しである

Refined petroleum products key trends

2023 – 2034, 000's bpd[1]



Description

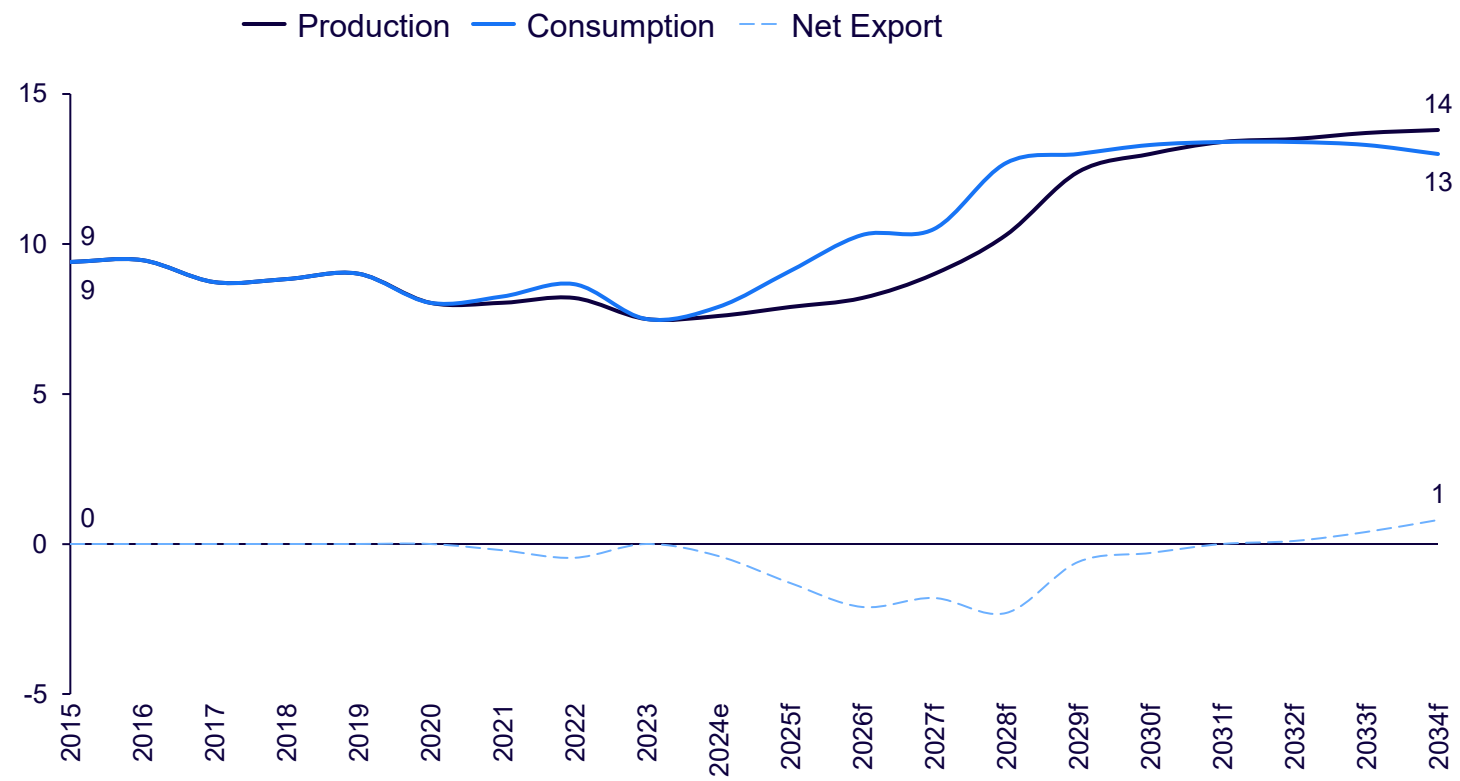
- **Consumption** is expected to grow steadily over the next decade, driven by strong economic prospects, fuel-intensive sectors like transport and construction, and short-term government support through extended fuel tax reductions.
- However, **production** will see only modest growth, constrained by limited refining capacity, only two refineries (Dung Quat and Nghi Son) are operational, while Long Son remains temporarily closed. With no major expansion plans and funding constraints, domestic supply will improve slowly.
- As a result, **net exports** will increase as Vietnam will continue to rely heavily on imports, as local production fails to keep pace with rising demand,

Note: 1) Barrel per day
Source: Fitch Vietnam Oil & Gas 2023, BMI Vietnam Oil & Gas Report Q3 2025, Arthur D. Little analysis

ベトナムの天然ガスは主要プロジェクトの進展で年6%の生産増が見込まれ、消費も年5%成長するが、おおむね自給を維持しつつ、補完的にLNG輸入を活用して石炭・水力依存を減らす方針

Dry natural gas key trends

2015 – 2030, bcm[1]



Description

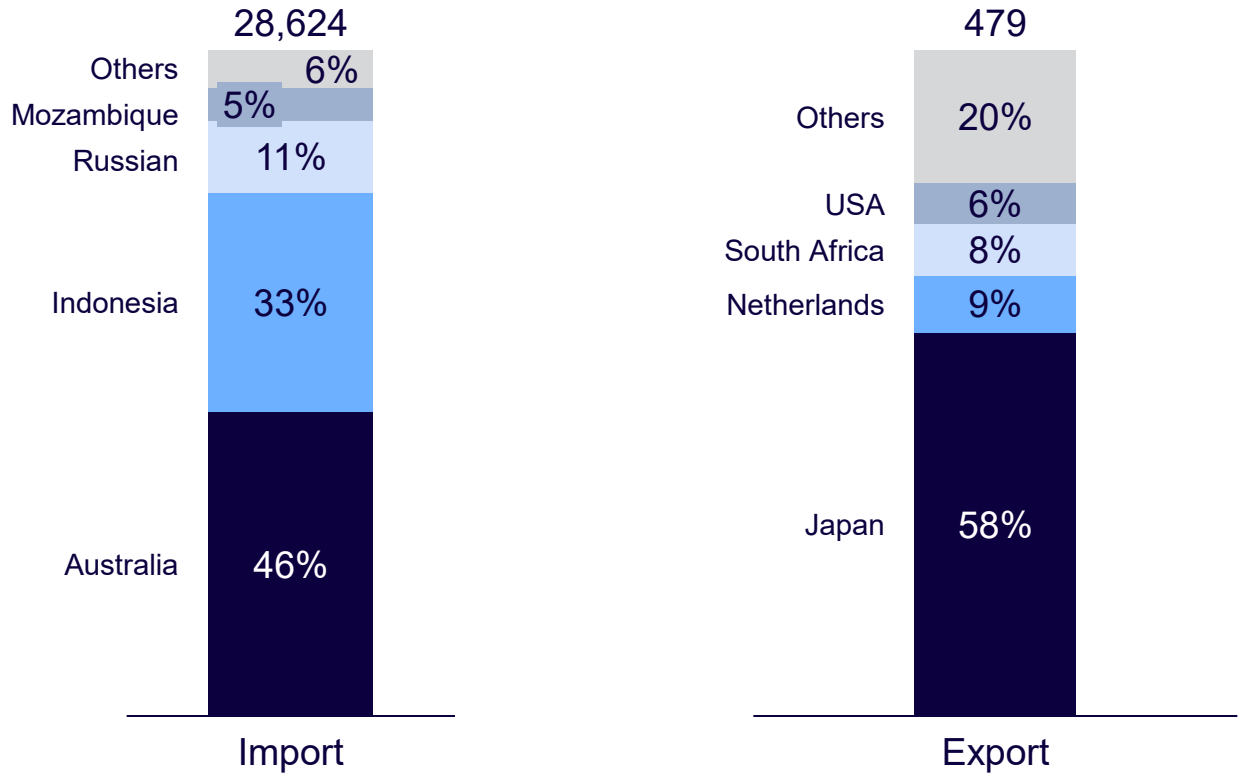
- Over the next decade, Vietnam is expected to remain largely self-sufficient in natural gas
- Production is expected to grow at 6% annually, driven from a number of major projects like Nam Du, U Minh, and Block B
- In parallel, consumption will rise at 5% per year, supported by offshore supply pipelines and LNG imports starting in 2023 to supplement domestic output and reduce reliance on coal and hydropower.

Note: 1) Billion cubic metrics
Source: Fitch Vietnam Oil & Gas 2023, BMI Vietnam Oil & Gas Report Q3 2025, Arthur D. Little analysis

ベトナムの石炭輸入はオーストラリア（46%）とインドネシア（33%）に大きく依存しており、輸出はごく少量で主に日本（58%）向けに限られている

Coal[1] major trade partners

2023, 000's tons



Description

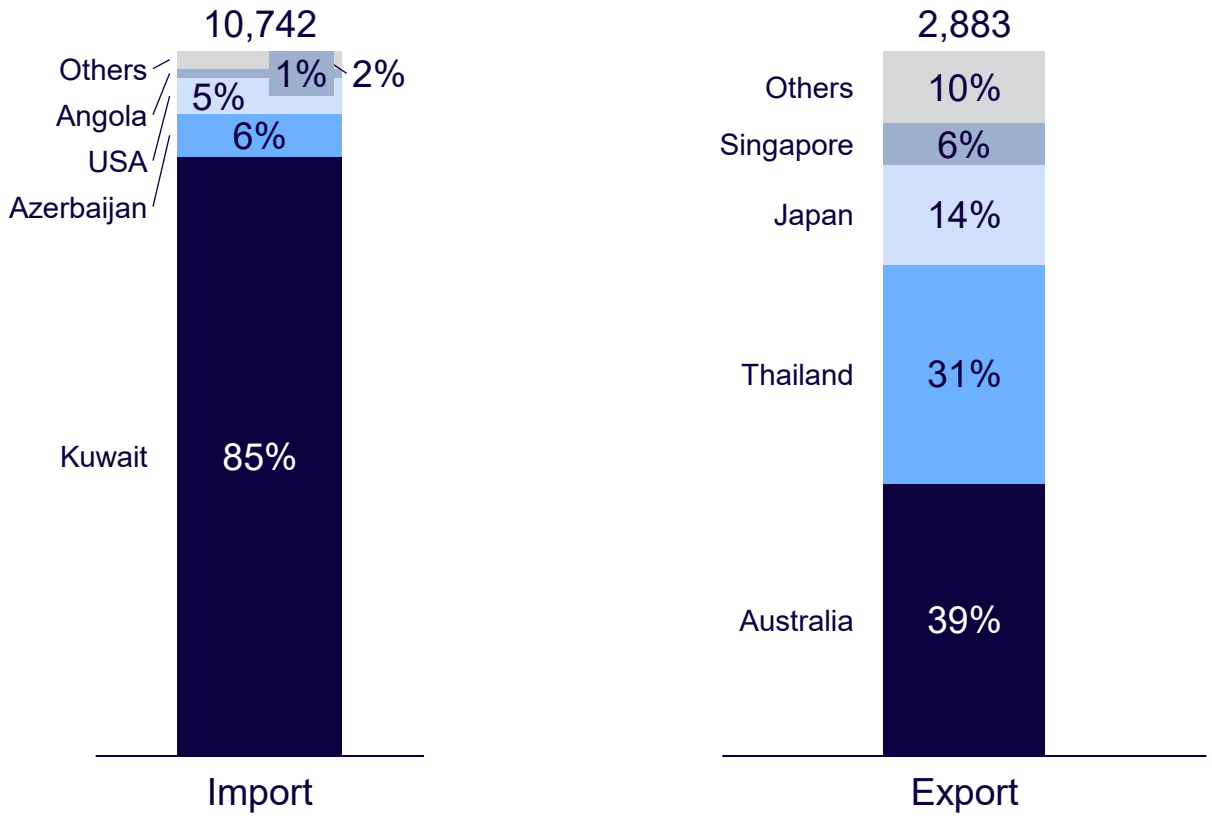
- **Import**: Vietnam's key coal import partners are Australia (46%) and Indonesia (33%), reflecting a heavy reliance on regional suppliers to meet domestic energy demand.
- **Export:** Coal exports are minimal at only 479 thousand tons compared to imports, with Japan as the largest market (58%), indicating limited surplus and strong trade ties with a single dominant partner

HS Code: 2701 Coal; briquettes, ovoids and similar solid fuels manufactured from coal
Source: ITC Trade Map, Arthur D. Little analysis

ベトナムの原油輸入の85%はクウェートに依存しており供給リスクが高い一方、輸出は少量で、主にオーストラリア（39%）やタイ（31%）など近隣アジア市場に向けられている

Crude oil[1] major trade partners

2023[1], 000's tons



Description

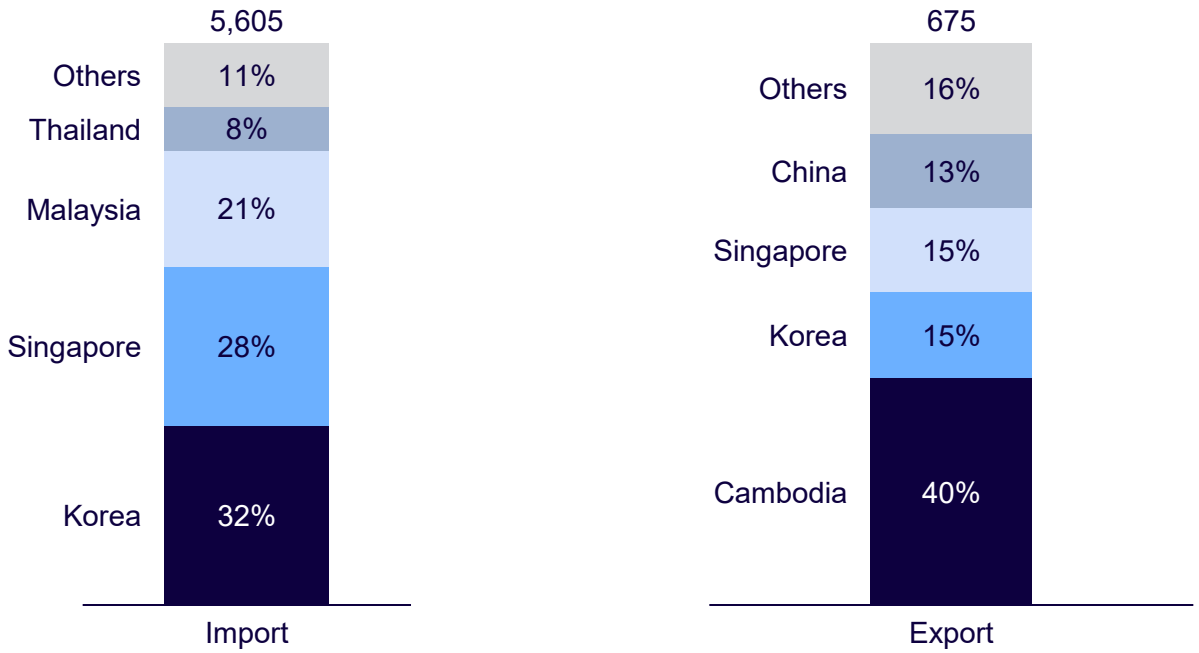
- **Import:** Vietnam imports 85% of crude oil from Kuwait, one of the world's largest oil producer, showing an overwhelming reliance on a single Middle Eastern supplier.
- **Export:** Crude oil exports are significantly lower (2,883 thousand tons) and primarily directed to regional countries, led by Australia (39%) and Thailand (31%), indicating a focus on nearby Asian markets

Note: 1) HS Code 2709 - Petroleum oils and oils obtained from bituminous minerals, crude
Source: ITC Trade Map, Arthur D. Little analysis

ベトナムの石油製品輸入は韓国（32%）、シンガポール（28%）、タイ（21%）に依存しており、輸出は大幅に少なくカンボジア（40%）を中心に韓国・シンガポール・中国向けが主

Refined petroleum products[1] major trade partners

2023, 000's tons



Description

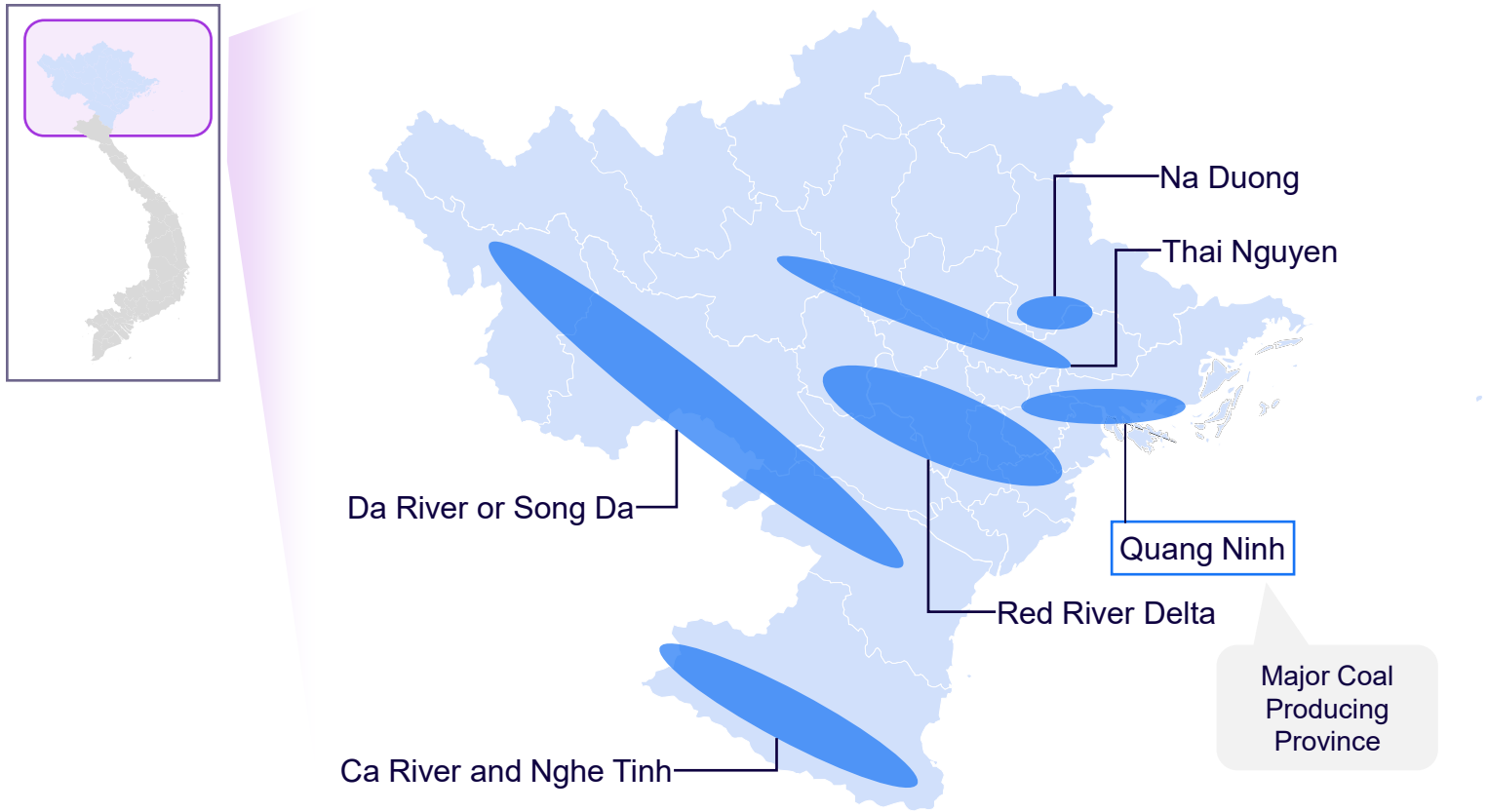
- **Import:** Vietnam imported 5.6 million tons of refined petroleum products in 2023, mainly from Korea (32%), Singapore (28%), and Thailand (21%), highlighting strong reliance on regional refining hubs in Northeast and Southeast Asia.
- **Export**: Exports were significantly lower at 675 thousand tons, with key markets concentrated in Asia (similar to Import), led by Cambodia (40%), followed by Korea, Singapore, and China (each accounting for approximately 13–15%)

1) HS Code used is 2710 Petroleum oils and oils obtained from bituminous minerals, other than crude; preparations not elsewhere specified or included, containing by weight 70 % or more of petroleum oils or of oils obtained from bituminous minerals, these oils being the basic constituents of the preparations; waste oils
Source: ITC Trade Map, Arthur D. Little analysis

ベトナムの石炭生産の90%以上は北部、特にクアンニン省で集中しており、国営企業Vinacominが大半の炭鉱を運営、2025年には同省で約1.3億トン規模の新鉱床も確認されている

Map of coal producing regions

2022



Description

- The coal producing region around the Red, Da, and Ca river deltas located in Northen part of Vietnam, and particularly in the Quang Ninh Province produce over 90% of all domestic coal in the country
- Most of coal mines in Vietnam is operated by Vinacomin a state-owned company which owns and operates most of the coal mines and plants in Vietnam
  - In early 2025, a recent exploration proposal by Vinacomin's research arm (VITE), which received government approved, identified three major coal deposits (Khe Sim, Vang Danh, and Nam Mau) in Quang Ninh, with a combined estimated reserve of 131.7Mn tons.

Source: World Bank Climate and Development report 2022, Multiple news articles 2022, Arthur D. Little analysis

確認済みの石油とガスの埋蔵量の一覧

Proven oil and gas reserves (Vietnam 2023 - 2028)						
Indicator	**2023e**	**2024e**	**2025f**	**2026f**	**2027f**	**2028f**
Proven oil reserves. bn bbl	4.3	4.2	4.1	4.1	4.0	4.0
Proven oil reserves. mn bbl	4,271.4	4,207.6	4,146.2	4087.4	4031.4	3978.3
Proven oil reserves. % y-o-y	-1.5	-1.5	-1.5	-1.4	-1.4	-1.3
Reserves to production ratio (RPR), years	62.7	61.1	62.6	64.0	66.2	68.5
Natural gas proven reserves, tcm	0.7	0.7	0.7	0.7	0.7	0.6
Natural gas proven reserves, bcm	684.6	677.0	669.1	661.0	652.0	641.7
Natural gas proven reserves, % y-o-y	-1.1	-1.1	-1.2	-1.2	-1.4	-1.6
Natural gas reserves-to-production ratio, years	91.5	89.6	85.2	80.9	72.5	62.1
e/f = Fitch Solution estimate/forecast Source: EIA, BMI						
Proven oil and gas reserves (Vietnam 2027 - 2032)						
Indicator	**2029f**	**2030f**	**2031f**	**2032f**	**2033f**	**2034f**
Proven oil reserves, bn bbl	3.9	3.9	3.8	3.8	3.7	3.7
Proven oil reserves, mn bbl	3,927.8	3,879.9	3,834.3	3,791.1	3,750.0	3710.9
Proven Oil reserves, % y-o-y	-1.3	-1.2	-1.2	-1.1	-1.1	-1.0
Reserves to production ratio (RPR), years	70.9	73.3	75.9	78.6	81.4	84.3
Natural gas proven reserves, tcm	0.6	0.6	0.6	0.6	0.6	0.5
Natural gas proven reserves, bcm	629.2	616.2	602.8	589.3	575.6	561.8
Natural gas proven reserves. % y-o-y	-1.9	-2.1	-2.2	-2.2	-2.3	-2.4
Natural gas reserves-to-production ratio, years	50.7	47.3	44.9	43.5	42.1	40.6

Source: BMI Vietnam Oil & Gas Report Q3 2025

燃料種別火力発電所の一覧(1/3)

#	Name	Installed capacity, MW	Assigned project owner/remarks	Input fuel
I	Period 2025-2030			
1	LNG Quang Ninh	1500		LNG
2	LNG Thai Binh	1500		LNG
3	LNG Quang Trach II	1500		
4	LNG Hai Lang Phase 1	1500		LNG
5	Nhon Trach 3 and Nhon Trach 4 Power Plant	1624		LNG
6	LNG Hiep Phuoc Phase I	1200		LNG
7	LNG Long An I	1500		LNG
8	BOT Son My I Thermal Power Plant	2250		LNG
9	BOT Son My II Thermal Power Plant	2250		LNG
10	LNG Bac Lieu	3200		LNG
11	LNG Nghi Son	1500		LNG
12	LNG Ca Na	1500		LNG
13	LNG Quynh Lap	1500		LNG
14	LNG Hai Phong Phase I	1600	According to commitment from Hai Phong People' Committee in March 2025	LNG
15	LNG Hiep Phuoc Phase II	1500	According to commitment from HCMC People' Committee in March 2025	LNG
16	Na Duong II Thermal Power Plant	110		Coal
17	An Khanh – Bac Giang Thermal Power Plant	650		Coal

Source: Revised Power Development Plan 8 approved in May 2025

燃料種別火力発電所の一覧(3/3)

NON-EXHAUSTIVE

#	Name	Installed capacity, MW	Assigned project owner/remarks	Input fuel
17	Vung Ang II Thermal Power Plant	1330		Coal
18	Quang Trach I Thermal Power Plant	1403		Coal
19	Long Phu I	1200		Coal
20	Nam Dinh I Thermal Power Plant	1200	Encounter difficulty during implementation	Coal
21	Quang Tri Thermal Power Plant	1320	Investor requested to suspend the project (According to EGATi 277/2023 document)	Coal
22	Vinh Tan III Thermal Power Plant	1980	Encounter difficulty during implementation	Coal
23	Song Hau II Thermal Power Plant	2120	MOIT terminated project BOT contract in July 2024	Coal
24	O Mon I Thermal Power Plant	660	Use Lot B gas	Domestically extracted gas
25	O Mon II Thermal Power Plant	1050	Use Lot B gas	Domestically extracted gas
26	O Mon III Thermal Power Plant	1050	Use Lot B gas	Domestically extracted gas
27	O Mon IV Thermal Power Plant	1050	Use Lot B gas	Domestically extracted gas
28	Dung Quat I Thermal Power Plant	750	Use Blue Whale gas	Domestically extracted gas
29	Dung Quat II Thermal Power Plant	750	Use Blue Whale gas	Domestically extracted gas
30	Dung Quat III Thermal Power Plant	750	Use Blue Whale gas	Domestically extracted gas
31	Mien Trung I Thermal Power Plant	750	Use Blue Whale gas	Domestically extracted gas
32	Mien Trung II Thermal Power Plant	750	Use Blue Whale gas	Domestically extracted gas
33	Quang Tri Thermal Power Plant	340	Use gas from Bao Vang mine	Coal

Source: Revised Power Development Plan 8 approved in May 2025Source: Revised Power Development Plan 8 approved in May 2025

燃料種別火力発電所の一覧(3/3)

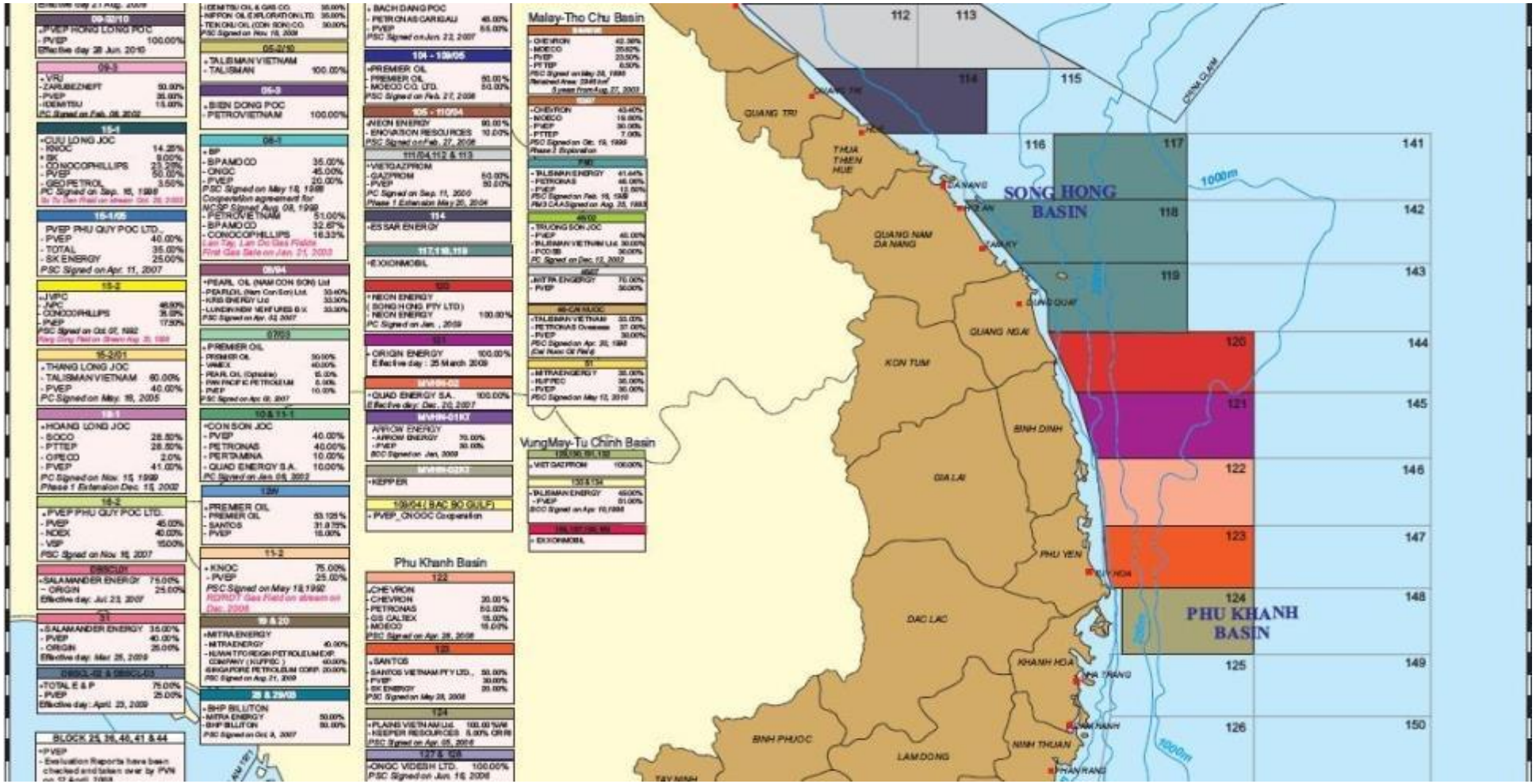
#	Name	Installed capacity, MW	Assigned project owner/remarks	Input fuel
II	Period 2031 - 2035			
1	LNG Long Son	1500	The Ba Ria–Vung Tau People's Committee has proposed to accelerate the project for the 2025–2030 period, aligning it with grid development needs	LNG
2	LNG Long An II	1500		LNG
3	LNG Cong Thanh	1500	Thanh Hoa People' Committee propose switch input fuel for the plant from coal to LNG in July 2024. Project can be accelerated to 2026-2030 period subject to grid development needs	LNG
4	LNG Hai Phong Phase II	3200	According to commitment from Hai Phong People' Committee in Mar 2025. Project can be accelerated, subject to grid development needs	LNG
5	LNG Vung Ang III	1500		LNG
6	LNG Quang Trach III	1500		LNG
7	LNG Quang Ninh 2	1500	The planned development projects for the 2031–2035 period will only be implemented upon approval by the competent authorities, to compensate for delays in other power sources in the region or in case of sudden load/demand surges.	LNG
8	LNG Thai Binh Phase 2	1500		LNG
9	LNG Hoa Ninh Phase 1	1500		LNG
10	LNG Thanh Hoa	1500		LNG
11	Expansion of Ca Mau 1 & 2 Thermal Power Plant	1500		LNG

Source: Revised Power Development Plan 8 approved in May 2025

ベトナムの石油･ガス田の地図 (1/3) – 北部

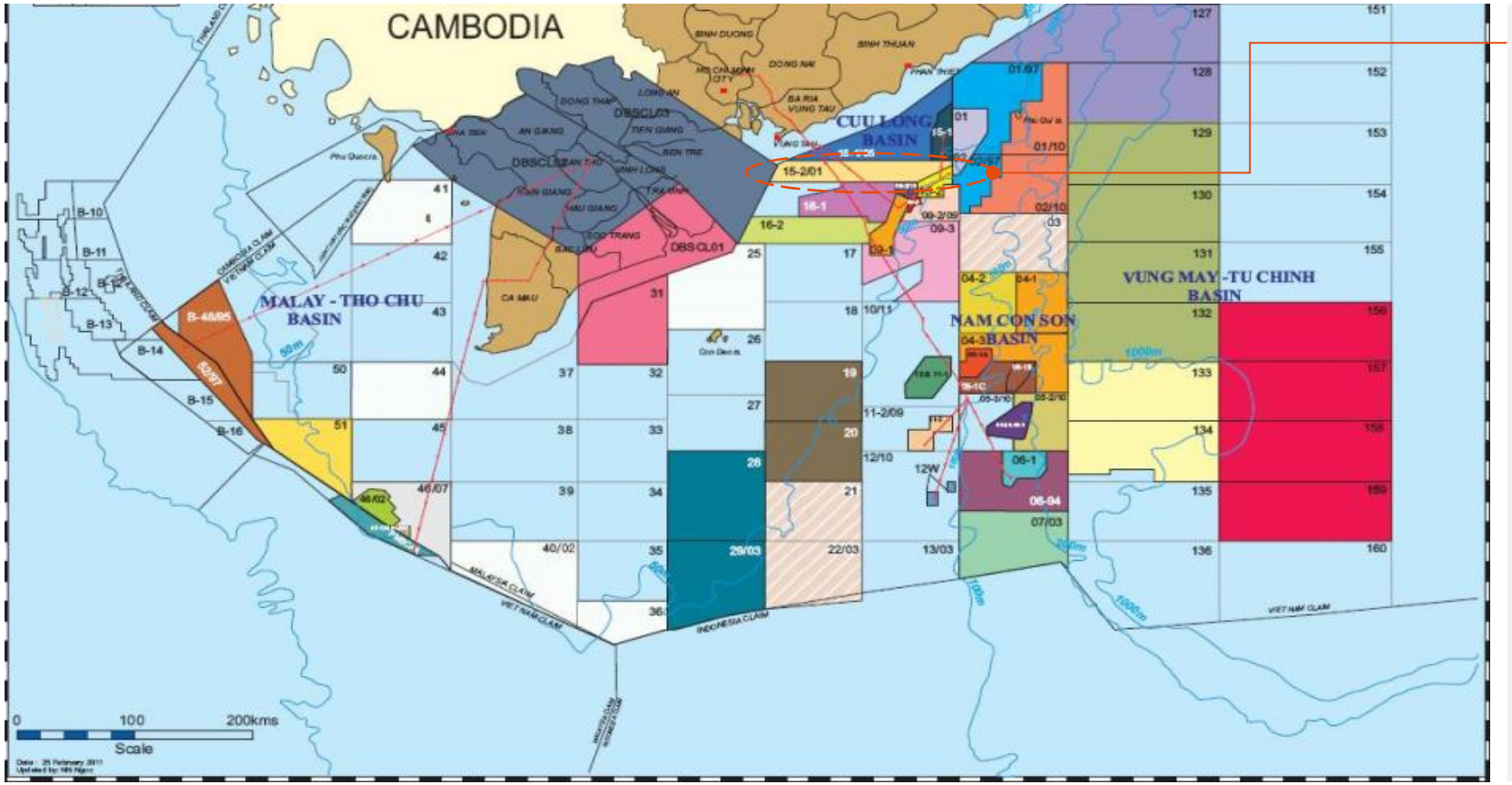
Source: Korea National Oil Corporation 2011

ベトナムの石油･ガス田の地図 (2/3) – 中部



Source: Korea National Oil Corporation 2011

ベトナムの石油・ガス田の地図 (3/3) – 南部



Recent discovery

- In early 2025, **an oil-bearing layer approximately 112 meters** thick was discovered in the “Golden Sea Lion” structure at **Block 15-2/17 in the Cuu Long Basi**n. The find lies near the producing Block 15-1 and the developing Block 15-1/05.
- The discovery followed the **drilling of the Hai Su Vang-1X** exploratory well, which was started **in Q4 2024**.
- Block 15-2/17 is **operated by Murphy Oil** under a production sharing contract (PSC), with partners **PVEP (35%)** and **SK Earthon (25%),** while **Murphy holds a 40% stake**

Source: Korea National Oil Corporation 2011, Vietnam Energy News, Arthur D. Little analysis

稼働中の主要石油・ガスプロジェクト一覧(1/2)

NON-EXHAUSTIVE

#	Name	Field	Company	Status	Est. peak oil/liquids range, bpd	Est. peak gas output, bcm	Input fuel
1	Tien Hai C, Song Hong basin	Tien Hai C	Petrovietnam Exploration Production Corporation	Production			Gas
2	Block 05-1b& 05- 1c, Nam Con Son basin	Sao Vang, Dai Nguyet	Idemitsu Kosan (43.1%), Teikoku Oil (36.9%), PetroVietnam (20%)	Production		1.5	Gas & Condensate
3	Block 06. 1, Nam Con Son basin	Lan Do	Rosneft (35%), ONGC Videsh (45%), PetroVietnam (20%)	Production		1.8	Gas & Condensate
4	Block 06. 1, Nam Con Son basin	Lan Tay	Rosneft (35%), ONGC Videsh (45%), PetroVietnam (20%)	Production		4.4	Gas & Condensate
5	Block 46, Malay-Tho Chu basin	Cai Nuoc	PetroVietnam (30%), Repsol (33.2%), Petronas (36.8%)	Production			Gas & Condensate
6	Block 01/97	Ho Xam South	Petronas (50%), PetroVietnam (50%)	Production			Oil
7	Block 05. 1A, South Con Son basin	Dai Hung	Petrovietnam Exploration Production Corporation (100%)	Production	18,000		Oil
8	Block 09- 1, Cuu Long	Bach Ho (White Tiger), Rong	Vietsovpetro Joint Venture	Production	2,63,000		Oil
9	Block 15-2/01, Cuu Long basin	Hai Su Trang, Hai Su Den	Repsol (60%), PetroVietnam (40%)	Production	35,000		Oil
10	Block 12E, Nam Con Son basin	Dua	Santos (32%), PetroVietnam (15%), Premier Oil (53%)	Production	80,000		Oil

Source: BMI Vietnam Oil & Gas Report Q3 2025

稼働中の主要石油・ガスプロジェクト一覧(1/2)

NON-EXHAUSTIVE

#	Name	Field	Company	Status	Est. peak oil/liquids range, bpd	Est. peak gas output, bcm	Input fuel
11	Block 01/97 & 02/97, Cuu Long Basin	Thang Long, Dong Do	Petronas (50%), PetroVietnam (50%)	Production	20,000		Oil
12	Block 46/02	Song Doc	PetroVietnam (100%)	Production	30,000		Oil
13	Block 05-2, 05-3	Mok Tin, Hai Thak, Kim Cuong Tay	PetroVietnam (5 1%), Gazprom (49%)	Production	13,000	2	Oil & Gas
14	Block 12E, 12W, NamCon SonBasin	Chim Sao (Blackbird)	Premier Oil (53.125%), Santos (3 1.875%), Petrovietnam Exploration Production Corporation (1 5%)	Production	30,000		Oil & Gas
15	Block 9-2, Cuu Long Basin	Ca Ngu Vang	PetroVietnam (50%), Soco International (25%), PTT Exploration and Production Public Company (25%)	Production	20,000	0.5	Oil & Gas
16	Block 15-I	Su Tu Den, Su Tu Vang, Su Tu Den Northeast, Su Tu Trang (White Lion), Su Tu Nau, Su Tu Vang Northeast, Su Tu Vang Southwest	ConocoPhillips (23.25%), Petrovietnam Exploration Production Corporation (50%), Korea National Oil Corporation (14.2%), Geopetrol (3.5%), SK Corporation (9%)	Production	82,000	1.5	Oil & Gas
17	Block 16-1 Phase II	Ngna O, Voi Trang, Voi Vang	PetroVietnam (41%), Soco International (28.5%), OPECO (2%), PTT Exploration and Production Public Company (28%)	Production	45,098	1.3	Oil & Gas
18	Block 11-2	Block 11-2	Korea National Oil Corporation (75%), Petrovietnam Exploration Production Corporation (25%)	Production		1.2	Oil & Gas
19	Blocks 102 &106	Ham Rong, Thai Binh	Petronas (50%), ATI Petroleum (10%), PetroVietnam (20%), Singapore Petroleum Company (20%)	Production	20,000		Oil & Gas

Source: BMI Vietnam Oil & Gas Report Q3 2025

主要な石油・ガスプロジェクトの一覧 (1/4)

NON-EXHAUSTIVE

#	Name	Field	Company	Status	Est. peak oil/liquids range, bpd	Est. peak gas output, bcm	Input fuel
1	Tuna Block	Kuda Laut, Singa Laut	(25%), Premier Oil (65%)	Appraisal		1.4	Gas
2	Blocks 117, 118 and 119	Ca Voi Xanh (Blue Whale)	PetroVietnam (36%), ExxonMobil (64%)	Appraisal			Gas & Condensate
3	Block 48/95, Malay-Tho Chu basin	Block 48/95	Petrovietnam Exploration Production Corporation (65.88%), PTT Exploration and Production Public Company (8.5%), Mitsui (25.62%)	Appraisal			Gas & Condensate
4	Block 52/97, Malay Basin	Block 52/97	Petrovietnam Exploration Production Corporation (73.4%), PTT Exploration and Production Public Company (7%), Mitsui (19.6%)	Appraisal			Gas & Condensate
5	Block B, Malay-Tho Chu basin	Block B	PetroVietnam (65.9%), Mitsui & Co. (25.6%), PTT Exploration and Production Public Company (8.5%)	FID reached[1]	7000	5.6	Gas & Condensate
6	Block 15-1/05, Cuu Long basin	Lac Da Vang Prospect	Murphy Oil (35%), SK Energy (25%), PetroVietnam (40%)	Appraisal			Oil
7	Block 51	U Minh, Tho Chu	Jadestone Energy (70%), Petrovietnam Exploration Production Corporation (30%)	Appraisal			Oil & Gas
8	Mang Cau, Nam Con Son basin	Mang Cau	Vietsovpetro Joint Venture	Appraisal			Oil & Gas
9	Block 46/07	Nam Du	Jadestone Energy (70%), Petrovietnam Exploration Production Corporation (30%)	Appraisal			Oil & Gas
10	Block 10-11.1, Nam Con Son basin	Gau Chua, Gau Ngua, Ca Cho	Petronas (40%), Petrovietnam Exploration Production Corporation (50%), Pertamina (10%)	Appraisal			Oil & Gas

Note: 1) FID = Final Investment Decision
Source: BMI Vietnam Oil & Gas Report Q3 2025

主要な石油・ガスプロジェクトの一覧 (2/4)

NON-EXHAUSTIVE

#	Name	Field	Company	Status	Est. peak oil/liquids range, bpd	Est. peak gas output, bcm	Input fuel
11	Block 06. 1, Nam Con Son basin	Phong Lan Dai	PetroVietnam (20%), ONGC Videsh (45%), Rosneft (35%)	Development			Gas & Condensate
12	Block 06. 1, Nam Con Son basin	Wild Orchid	PetroVietnam (20%), ONGC Videsh (45%), Rosneft (35%)	Discovery			Gas & Condensate
13	Block 107	Ky Lan Miocene	Petrovietnam Exploration Production	Discovery			Gas & Condensate
14	Block 09-3/12, South Con Son basin	Sturgeon	Vietsovpetro Joint Venture	Discovery			Oil
15	Block 11-2/11, Nam Con Son basin	Block 11-2/11	Petrovietnam Exploration Production Corporation (40%),Murphy Oil (60%)	Discovery			Oil
16	Block 16-1, Cuu Long basin	Te Giac Trang (TGT)	PTT Exploration and Production Public Company (28.5%), Soco International (30.5%), PetroVietnam (41%)	Expansion	55000		Oil & Gas
17	Block 115/09, Southern Song Hong basin	Block 115/09	KrisEnergy (100%)	Exploration			Gas
18	Block 05.3/11 , Nam Con Son basin	Block 05.3/11	Rosneft (100%)	Exploration			Gas & Condensate
19	Block 128	Block 128	ONGC Videsh (100%)	Exploration			Oil & Gas
20	Block 127, Phu Khanh basin	Block 127	Jadestone Energy (100%)	Exploration			Oil & Gas

Source: BMI Vietnam Oil & Gas Report Q3 2025

主要な石油・ガスプロジェクトの一覧 (3/4)

NON-EXHAUSTIVE

#	Name	Field	Company	Status	Est. peak oil/liquids range, bpd	Est. peak gas output, bcm	Input fuel
21	Block 125, 126, Phu Khanh basin	Block 125, 126	Soco International (70%), SOVICO, PetroVietnam	Exploration			Oil & Gas
22	Block 122, Phu Khanh basin	Block 122	Eni (60%), PetroVietnam (40%)	Exploration			Oil & Gas
23	Block 116, Song Hong basin	Block 116	Eni (100%)	Exploration			Oil & Gas
24	Block 124, Phu Khanh basin	Block 124	Eni (60%), PetroVietnam (40%)	Exploration			Oil & Gas
25	Block 144, Phu Khanh basin	Block 144	Petrovietnam Exploration Production Corporation (PVEP) (35%), Murphy Oil (65%)	Exploration			Oil & Gas
26	Blocks 135 &136/3	Blocks 135 & 136/3	Repsol (40%), Mubadala Petroleum (20%), PetroVietnam (40%)	Exploration			Oil & Gas
27	Block 105-110/4, Song Hong basin	Block 105	PetroVietnam (49%), KrisEnergy (51%)	Exploration			Oil & Gas
28	Block 120	Block 120	Eni (66.67%), KrisEnergy (33.33%)	Exploration			Oil & Gas
29	Block 114, Song Hong basin	Block 114	Eni (50%), Essar (50%)	Exploration			Oil & Gas
30	Block 111/04, 112 & 113	Block 111/04, 112 & 113	PetroVietnam, Gazprom	Exploration			Oil & Gas

Source: BMI Vietnam Oil & Gas Report Q3 2025

主要な石油・ガスプロジェクトの一覧 (4/4)

NON-EXHAUSTIVE

#	Name	Field	Company	Status	Est. peak oil/liquids range, bpd	Est. peak gas output, bcm	Input fuel
31	Block 129, 130, 131, 132	Block 129, 130, 131, 132	PetroVietnam, Gazprom	Exploration			Oil & Gas
32	Block 145, Phu Khanh basin	Block 145	Petrovietnam Exploration Production Corporation (35%), Murphy Oil (65%)	Exploration			Oil & Gas
33	Block 39	Block 39	Sumitomo (25%), Idemitsu Petroleum (75%)	Exploration			Oil & Gas
34	Block 40/02	Block 40/02	Sumitomo (25%), Idemitsu Petroleum (75%)	Exploration			Oil & Gas
35	PM3 commercial arrangement area	West Bunga Kekwa, East Bun	PetroVietnam (30%), Petronas (35%), Repsol (35%)	Upgrade/ EOR[1]	60,000	2.7	Oil & Gas
36	Block 15-2, Cuu Long basin	Rang Dong, Phuong Dong	JX Nippon Oil & Energy Corporation (46.5%), Per-enco (36%), PetroVietnam (17.5%)	Upgrade/ EOR[1]	140,562		Oil & Gas

Note: 1) EOR = Enhanced oil recovery
Source: BMI Vietnam Oil & Gas Report Q3 2025

ベトナムは2030年までに石炭火力でCCUS実証と一部削減を行い、2040年代にバイオマス・アンモニア転換と再エネ導入を拡大、2050年に石炭火力を全廃する方針

Global Coal-to-clean Energy Transition Statement

(Government approval granted in Feb 2025)

Context

- **Approval status:** In February 2025,Prime Minister Pham Minh Chinh has signed Decision No. 266/QD-TTg, approving the implementation plan for the Global Coal-to-Clean Energy Transition Statement
- **Purpose:** The plan aligns with Vietnam's commitment to low-carbon development and achieving net-zero emissions by 2050

Key milestones

2030	2031 - 2040	2041 - 2050		Post 2050
		By 2045	By 2050	
• Pilot carbon capture at selected aging coal plants • Decommission ~560 MW of coal capacity if emission targets are unmet • Complete Ninh Thuan nuclear power project	• Gradually convert existing thermal power plants to biomass or ammonia fuel, starting with a co-firing rate of 20% and increasing progressively to 100%.	• Develop at least 1,160 MW of clean energy to replace aging coal power plants • Continue the fuel conversion of coal plants, with 18,642 MW co-firing biomass/ammonia and 6,990 MW fully converted to biomass/ammonia	• Develop at least 3,335 MW of clean energy to replace aging coal plants • Fully convert 25,632–28,832 MW of coal capacity to biomass or ammonia • Install carbon capture systems on all remaining coal plants	• Completely phase out coal as fuel for power generation

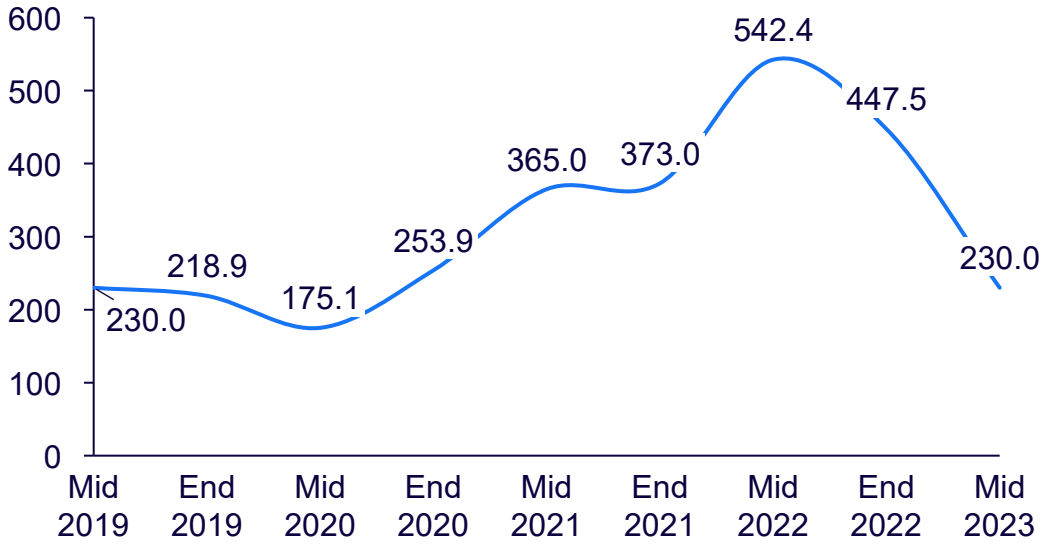
Source: Decision No.266/QD-TTg, Arthur D. Little analysis

2024～25年にかけて天然ガス価格は一時上昇後に下落し通年で約11%低下した一方、ガソリン価格は比較的安定推移した

Official selling price of Natural Gas[1]

Sep 2024 – Jul 2025, USD/ton

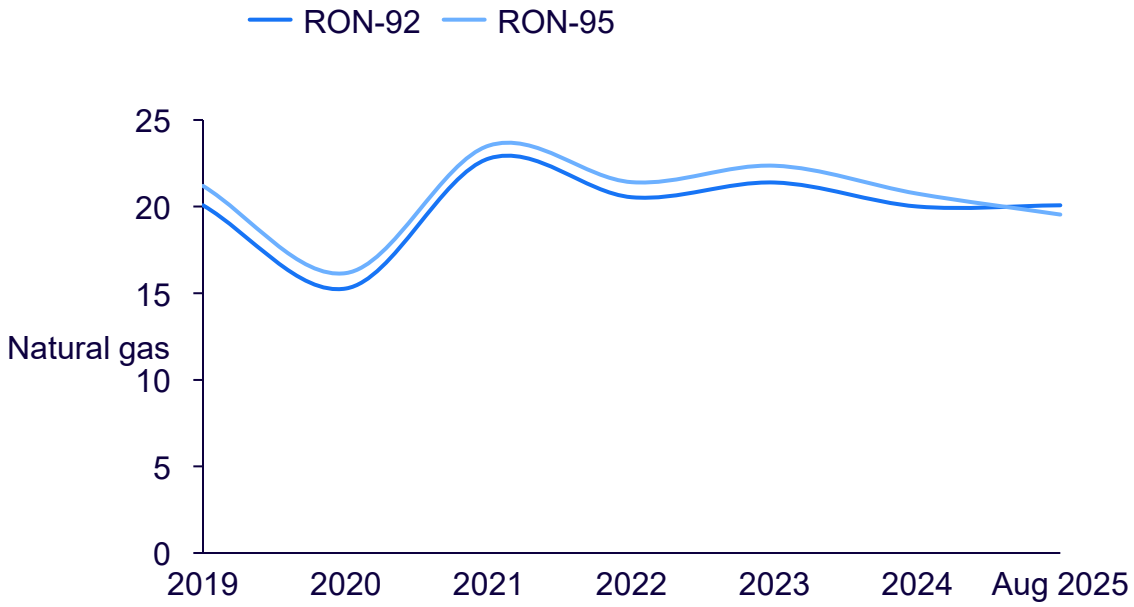
- Over the last 1 year, the selling price initially increased from USD 600.0 per ton to a peak of USD 632.5 per ton in November 2024.
- Afterward, prices gradually declined, reaching USD 560.0 by July 2025,marking an overall drop of around 11.1% from the peak.



Official selling price of Gasoline

2019 – Aug 2025, Thousand VND/liter

- Gasoline prices remained relatively stable over the year, fluctuating within a narrow range.
- Prices briefly dipped in April 2025 and peaked in June 2025, reaching USD 0.8 for RON-95, before returning to their earlier levels by July 2025

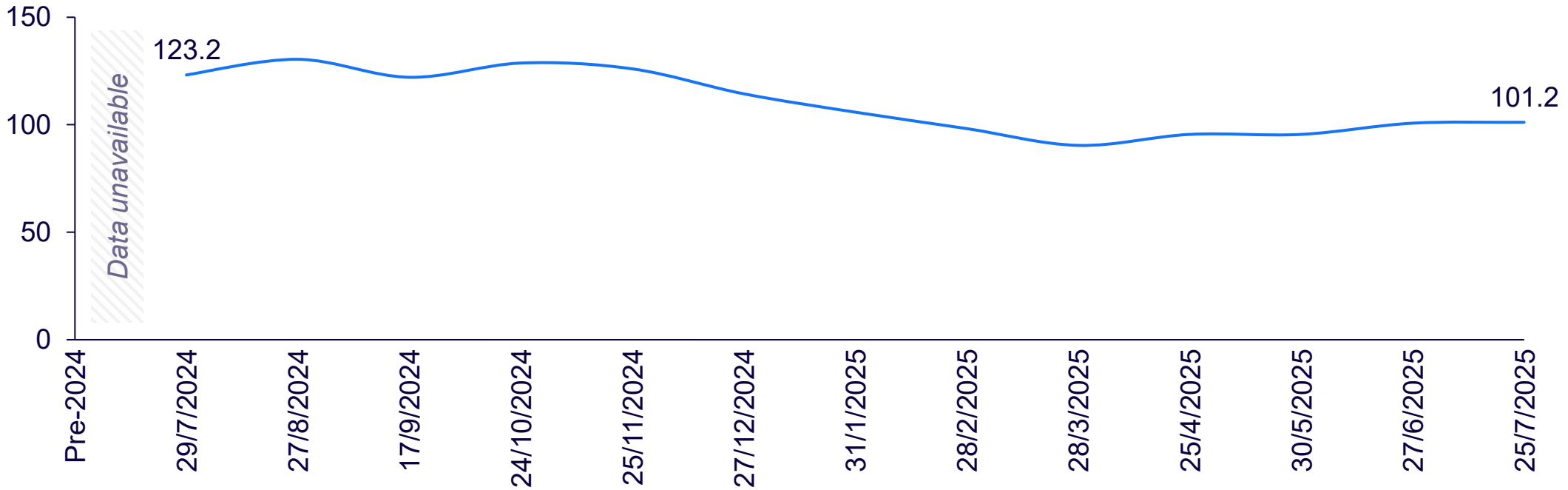


Source: JPS Gas, PVOil, Arthur D. Little analysis

石炭価格は2024年7月から2025年7月にかけて18%下落し、123.2ドル/トンから101.2ドル/トンへと一貫して下落傾向を示した

Official selling price of Coal

July 2024 – July 2025, USD/Ton[1]



Observation

Over the past 12 months, the official selling price of coal showed a gradual downward trend, reaching USD 101.2/ton by July 2025, a 18% decline from USD 123.2 / ton in July 2024

1) Average price of High-calorific coal based on a received basis of 6000 kcal/kg (6000NAR Newcastle, Australia) and High calorific value coal on the basis of 6000kcal/kg (6000NAR Richard Bay coal, South Africa)

Source: Vinacomin, Arthur D. Little analysis

Contents

ガスパイプライン規制は、2004年政令が陸上パイプラインの安全確保（立地・禁止行為・点検義務）を、2019年政令が石油・ガス施設の安全管理（安全距離・河川横断保護・監督強化）を規定

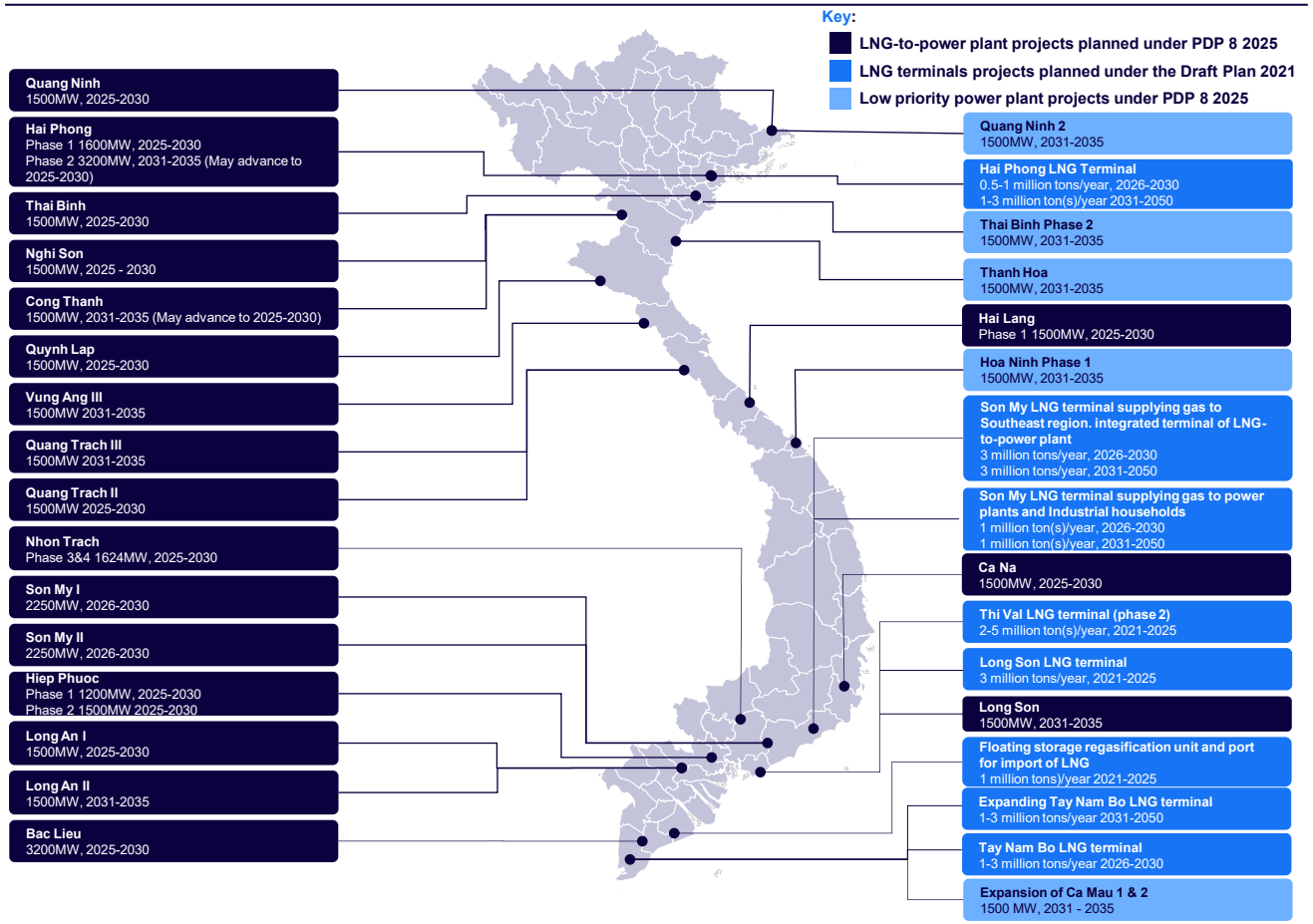
	Decree 46/2004/QD-TTg	Decree 25/2019/ND-CP
Overview	Regulation on assurance of safety for system of onshore gas pipeline	Regulation on safety management for onshore petroleum works
Key highlights – Applicable scope	All systems of onshore pipelines of gaseous hydrocarbon and gas products	Onshore petroleum and gas works, including gas and petroleum pipelines (including river crossings)
Key highlights – Detailed regulations	• **Pipeline Land Strip & Safety Corridor:** Dedicated strip allocated for construction, and a broader safety corridor with restricted activities to protect pipelines • **Prohibited Activities:** Bans blasting, storing explosives/flammables, large gatherings, and certain river works around the pipeline • **Roles & Responsibilities:** Operators must maintain safety systems, signage, emergency plans, and regular inspections • **Operations & Maintenance:** Regular pressure reassessment (every 5 years), risk monitoring, maintenance records, and prompt incident reporting/response required	• **Safe Distance Regulations:** Sets minimum safety distances for LNG and petroleum facilities, and establishes safety buffer zones around pipelines • **Prohibited Activities:** Restricts hazardous actions within safety corridors near pipelines • **Pipeline River Crossing Protections:** Mandates a 40-meter exclusion zone upstream and downstream of pipeline river crossings to prevent damage from anchoring, dredging, and underwater activities • **Coordination and Enforcement:** Requires pipeline operators and local authorities to enforce safety zones via regular inspections, safety signage, and public awareness to protect pipeline integrity

Source: Various secondary sources

ベトナムは2035年までに32のLNGプロジェクトと22本のガスパイプライン（総延長約750km）を計画し、中長期的に石炭火力を代替する電源戦略の柱として位置づけている

Proposed LNG Projects, by region

2021 – 2035



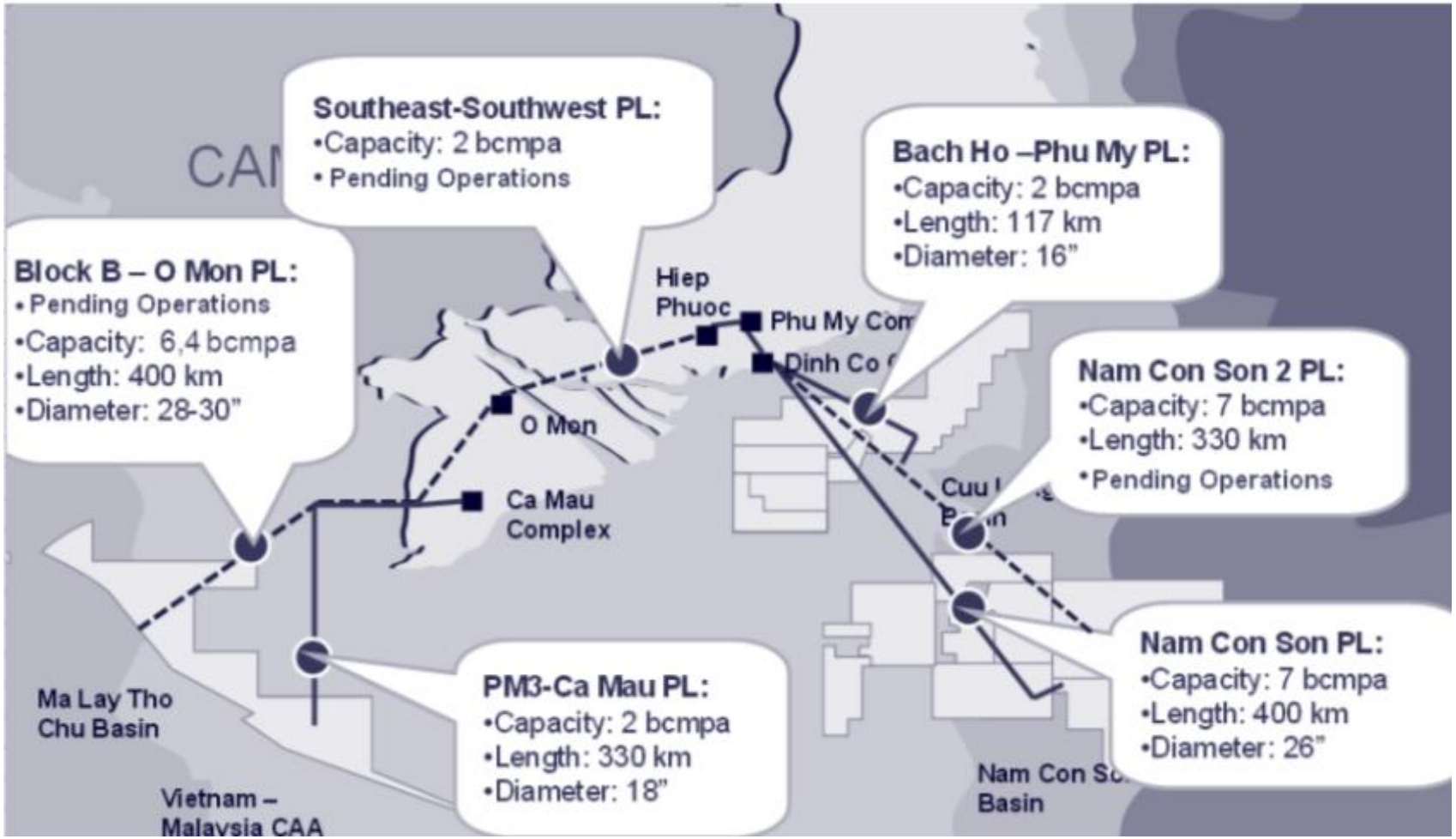
Planned Natural Gas Pipeline, by region

2018 – 2050

Region[1]	Number of pipelines	Total capacity, bcm	Total length, km
North	4	1.1-1.6	195-200
North Central	1	1.5	10
South Central	5	9.6-9.9	175-185
Southeast	6	0.6	226
Southwest	6	6.7-7.2	145-175
Total	**22**	**19.5-20.8**	**751-796**

Source: Revised Vietnam National Power Development Plan 8 2025, Baker McKenzie 2022, Arthur D. Little analysis

既存のBack Ho-Phu、PM3-Ca Mau、Nam Con Sonパイプラインに加え、今後Southeast-Southwest、Nam Con Son 2、Block B-O Monといった新規ガスパイプラインが稼働予定



Source: Petro Vietnam (PV) Gas

ベトナムの主要ガスパイプライン一覧

Name	Section	Beginning station	Ending station	Length, km	Capacity, bcm/year	2012 output, bcm/year, efficiency %	Owner(s)
Cuu Long	Su Tu Vang - Rang Dong – Bach Ho - Long Hai – Dinh Co Gas Pipeline (offshore)	Center Compression Platform	Dinh Co Gas Processing Plant	116.5	2	1.25 (62.50%)	PV Gas
	Dinh Co - Ba Ria - Phu My Gas Pipeline (onshore)	Dinh Co Gas Processing Plant	Customers (eg. Ba Ria power plant)	28.8	1.5		
	Dinh Co - Thi Vai liquid pipelines	Dinh Co Gas Processing Plant	Customers	N/A	N/A		
Nam Con Son	Offshore pipeline	Blocks 06.1, 11.2 and 12W	Phu My Gas Distribution Center	370	7	6.215 (88.79%)	Rosneft (32.7%), Perenco (16.3%) and PV Gas (51%).
	Phu My - Nhon Trach - Hiep Phuoc Gas Pipeline	Phu My Gas Distribution Center	Customers	40	2	-	
Phu My – My Xuan – Go Dau	Phu My – My Xuan – Go Dau Low-Pressure Gas Pipeline	Dinh Co Gas Processing Plant	Customers	7	1	0.25 (25%)	PV Gas
PM3 - Ca Mau	-	Blocks PM3 CAA & 46-Cai Nuoc	Ca Mau Gas Distribution Center for customers	298 km (offshore) + 27 km (onshore)	2	1.903 (95.10%)	PV Gas

Source: PVN, Offshore Technology, Arthur D. Little analysis

ベトナムの計画中ガスパイプライン一覧表

Name	Section	Beginning station	Ending station	Length, km	Capacity, bcm/year	Status	Owner(s)
Blue Whale	Offshore section	-	-	88	150 (total)	• Nov 2021, Exxon confirmed on working on the final development plan, regulatory approval issues • Pre-FID, commercial production pushed to 2028	Vietnam National Oil and Gas Group (36%) Exxon Mobil (64%)
Nam Con Son 2	Offshore section	Hai Thach, Moc Tinh (block 05.2, 05.3), Thien Ung, Mang Cau (block 04.3), block 04.1	Long Hai station	325 (offshore) 39 (onshore)	7	• Phase 1 construction began in 2013 with operations beginning in 2015 • Phase 2 was expected to commission by 2022	PV Gas (51%), Gazprom International (49%)
	Onshore section	Long Hai station	Dinh Co Gas Processing Plant Fumi's fertiliser plant and gas refinery	9 (onshore)			
Block B – O Mon	Offshore section	Center Processing Platform	Mui Tram Landfall station	246 (offshore)	6.4	• As of Q1 2025, 18% of the onshore work has been completed • Feb 2025, PetroVietnam announced plans to complete key facilities by year end • O Mon 2, 3 and 4 set to begin operations between 2026 and 2028	PetroVietnam Gas Corporation (51%), the rest owned by Mitsui Oil Exploration Company (Japan), PTT Exploration and Production Public Company (Thailand)
	Onshore section	Mui Tram Landfall station	O Mon Gas distribution center	152 (onshore)			
		O Mon Gas distribution center	Tra Noc Gas Distribution Station	9.5 (onshore)			

Source: BMI Vietnam Oil and Gas report Q3 2025

石油・ガスの主要上流プロジェクト一覧 (1/6)

NON-EXHAUSTIVE

Name	Field	Companies	Status	Est. peak oil/ liquid range, bpd	Est. peak gas output, bcm	Project type
Tuna Block	Kuda Laut, Singa Laut	GS Energy (10%), Moeco Oil & Gas (25%), Premier Oil (65%	Appraisal	-	1.4	Gas
Blocks 117, 118 and 119	Ca Voi Xanh (Blue Whale)	PetroVietnam (36%), ExonMobil (64%)	Appraisal	-		Gas & Condensate
Block 48/95, Malay-Tho Chu Basin	Block 48/95	Petrovietnam Exploration Production Corporation (65.88%), PTT Exploration and Production Public Company (8.5%), Mitsui (25.62%)	Appraisal	-	-	Gas & Condensate
Block 52/97, Malay Basin	Block 52/97	Petrovietnam Exploration Production Corporation (73.4%), PTT Exploration and Production Public Company (7%), Mitsui (19.6%)	Appraisal	-	-	Gas & Condensate
Block B, Malay-Tho Chu Basin	Block B	PetroVietnam (65.9%), Mitsui & Co. (25.6%), PTT Exploration and Production Public Company (8.5%	FID Reached	7,000	5.6	Gas & Condensate
Block 15-1/ 05, CuuLong Basin	Lac Da Vang Prospect	Murphy Oil (35%), SK Energy (25%), PetroVietnam (40%)	Appraisal	-	-	Oil
Block 51	U Minh, Thọ Chu	Jadestone Energy (70%), Petrovietnam Exploration Production Corporation (30%)	Appraisal	-	-	Oil & Gas
Mang Cau, Nam Con Son basin	Mang Cau	Vietsovpetro Joint Venture	Appraisal	-	-	Oil & Gas
Block 46/07	Nam Du	Jadestone Energy (70%), Petrovietnam Exploration Production Corporation (30%)	Appraisal	-	-	Oil & Gas

Source: Fitch Solutions Oil & Gas Report 2025

石油・ガスの主要上流プロジェクト(2/6)

NON-EXHAUSTIVE

Name	Field	Companies	Status	Est. peak oil/ liquid range, bpd	Est. peak gas output, bcm	Project type
Block10-11.1, Nam Con Son Basin	Gau Chua, Gau Ngua, Ca Cho	Petronas (40%), Petrovietnam Exploration Production Corporation (50%), Pertamina (10%)	Appraisal	-	-	Gas & Condensate
Block 06.1, Nam Con Son Basin	Phong Lan Dai	PetroVietnam (20%), ONGC Videsh (45%), Rosneft (35%)	Development	-	-	Gas & Condensate
Block 06.1, Nam Con Son Basin	Wild Orchid	PetroVietnam (20%), ONGC Videsh (45%), Rosneft (35%)	Discovery	-	-	Gas & Condensate
Block 107	Ky Lan Miocene	Petrovietnam Exploration Production Corporation	Discovery	-	-	Gas & Condensate
Block 09-3/ 12, South Conson Basin	Sturgeon	Vietsovpetro Joint Venture	Discovery	-	-	Oil
Block 11-2/ 11, Nam Con Son Basin	Block-11-2/11	Petrovietnam Exploration Production Corporation (40%), Murphy Oil (60%)	Discovery	-	-	Oil
Block 16-1, Cuu Long Basin	Te Giac Trang (TGT)	PTT Exploration and Production Public Company (28.5%), Soco International (30.5%), PetroVietnam (41%)	Expansion	55,000	-	Oil & Gas
Block 115/ 09, Southern Song Hong Basin	Block 115/09	KrisEnergy (100%)	Exploration	-	-	Gas
Block 05.3/ 11, Nam Con Son Basin	Block 05.3/11	Rosneft (100%)	Exploration	-	-	Gas & Condensate
Block 128	Block 128	ONGC Videsh (100%)	Exploration	-	-	Oil & Gas
Block 127, Phu Khanh Basin	Block 127	Jadestone Energy (100%	Exploration	-	-	Oil & Gas

Source: Fitch Solutions Oil & Gas Report 2025

石油・ガスの主要上流プロジェクト(3/6)

NON-EXHAUSTIVE

Name	Field	Companies	Status	Est. peak oil/ liquid range, bpd	Est. peak gas output, bcm	Project type
Block 125, 126, Phu Khanh Basin	Block 125, 126	Soco International (70%), SOVICO, PetroVietnam	Exploration	-	-	Oil & Gas
Block 122, Phu Khanh Basin	Block 122	Eni (60%), PetroVietnam (40%)	Exploration	-	-	Oil & Gas
Block 116, Song Hong Basin	Block 116	Eni (100%)	Exploration	-	-	Oil & Gas
Block 124, Phu Khanh Basin	Block 124	Eni (60%), PetroVietnam (40)	Exploration	-	-	Oil & Gas
Block 144, Phu Khanh Basin	Block 144	Petrovietnam Exploration Production Corporation (PVEP) (35%), Murphy Oil (650	Exploration	-	-	Oil & Gas
Blocks 135 & 136/3	Blocks 135 & 136/3	Repsol (40%), Mubadala Petroleum C20%), PetroVietnam (40	Exploration	-	-	Oil & Gas
Block 105-110/4, Song Hong Basin	Block 105	PetroVietnam (49%), KrisEnergy (51%)	Exploration	-	-	Oil & Gas
Block 120	Block 120	Eni (66.67%), KrisEnergy (33.33%	Exploration	-	-	Oil & Gas
Block 114 Song Hong Basin	Block 114	Eni (50%), Essar (50%)	Exploration	-	-	Oil & Gas
Block 111/ 04, 112 & 113	Block 111/04, 112&113	PetroVietnam, Gazprom	Exploration	-	-	Oil & Gas
Block 129, 130, 131, 132	Block 129, 130, 131, 132	PetroVietnam, Gazprom	Exploration	-	-	Oil & Gas
Block 145, Phu Khanh Basin	Block 145	Petrovietnam Exploration Production Corporation (35%), Murphy Oil (65%	Exploration	-	-	Oil & Gas

Source: Fitch Solutions Oil & Gas Report 2025

石油・ガスの主要上流プロジェクト(4/6)

NON-EXHAUSTIVE

Name	Field	Companies	Status	Est. peak oil/ liquid range, bpd	Est. peak gas output, bcm	Project type
Block 39	Block 39	Sumitomo (25%), Idemitsu Petroleum (75%)	Exploration	-	-	Oil & Gas
Block 40/02	Block 40/02	Sumitomo (25%), Idemitsu Petroleum (75%)	Exploration	-	-	Oil & Gas
Tien Hai C, Song Hong Basin	Tien Hai C	Petrovietnam Exploration Production Corporation	Production	-	-	Gas
Block 05-1b & 05-1c, Nam Con Son Basin	Sao Vang, Dai Nguyet	Idemitsu Kosan (43.1%), Teikoku Oil (36.9%), PetroVietnam (20%)	Production	-	1.5	Gas & Condensate
Block 06.1, Nam Con Son Basin	Cai Nuoc	Rosneft (35%), ONGC Videsh (45%), PetroVietnam (20%)	Production	-	1.8	Gas & Condensate
Block 06.1, Nam Con Son Basin	Cai Nuoc	Rosneft (35%), ONGC Videsh (45%), PetroVietnam (20%)	Production	-	4.4	Gas & Condensate
Block 46, Malay-Tho Chu Basin	Cai Nuoc	PetroVietnam (30%). Repsol (33.2%), Petronas (36.8%)	Production	-	-	Gas & Condensate
Block 01/97	Ho Xam South	Petronas (50%), PetroVietnam (50%)	Production	-	-	Oil
Block 05.1A, South Con Son Basin	Dai Hung	Petrovietnam Exploration Production Corporation (100%)	Production	18,000	-	Oil
Block 09-1, Cuu Long Basin	Bach Ho (White Tiger), Rong	Vietsovpetro Joint Venture	Production	263,000	-	Oil
Block 15-2/ 01, Cuu Long Basin	Hai Su Trang, Hai Su Den	Repsol (60%), PetroVietnam (40%)	Production	35,000	-	Oil
Block 12E, Nam Con Son Basin	Dua	Santos (32%), PetroVietnam (15%), Premier Oil (53%	Production	8,000	-	Oil

Source: Fitch Solutions Oil & Gas Report 2025

石油・ガスの主要上流プロジェクト(5/6)

NON-EXHAUSTIVE

Name	Field	Companies	Status	Est. peak oil/ liquid range, bpd	Est. peak gas output, bcm	Project type
Block 39	Su Tu Den, Su Tu Vang, Su Tu Den Northeast, Su Tu Trang (White Lion), Su Tu Nau, Su Tu Vang Northeast, Su Tu Vang Southwest	ConocoPhillips (23.25%), Petrovietnam Exploration Production Corporation (50%), Korea National Oil Corporation (14.2%), Geopetrol (3.5%), SK Corporation (9%)	Production	82,000	1.5	Oil & Gas
Block 16-1 Phase II	Ngna 0, Voi Trang, Voi Vang	PetroVietnam (41%), 5000 International (28.5%), OPECO (2%), PTT Exploration and Production Public Company (28%)	Production	45,098	1.3	Oil & Gas
Block 11-2	Block 11-2	Korea National Oil Corporation (75%), Petrovietnam Exploration Production Corporation (25%)	Production	-	1.2	Oil & Gas
Blocks 102 & 106	Ham Rong Thai Binh	Petronas (50%), ATI Petroleum (10%), PetroVietnam (20%), Singapore Petroleum Company (20%)	Production	20,000	-	Oil & Gas
Block 13-03, Nam Con Son Basin	Block 13-03	Government of Vietnam	Suspended	-	-	Oil
Block 102/ 10, Song Hong Basin	Block 102/10	Government of Vietnam	Suspended	-	-	Oil & Gas
Block 106/ 10, Song Hong Basin	Block 106/10	Government of Vietnam	Suspended	-	-	Oil & Gas
Block 07/03, Nam Con Son Basin	Ca Rong Do (Red Emperor)	Government of Vietnam	Suspended	-	-	Oil & Gas

Source: Fitch Solutions Oil & Gas Report 2025

石油・ガスの主要上流プロジェクト(6/6)

NON-EXHAUSTIVE

Name	Field	Companies	Status	Est. peak oil/ liquid range, bpd	Est. peak gas output, bcm	Project type
Block 04-2	Block04-2	Government of Vietnam	Suspended	-	-	Oil & Gas
PM3 Commercial Arrangement Area (CAA	West Bunga Kekwa, East Bunga Kekwa-Cai Nuoc, East Bunga Raya, West Bunga Raya, NW Bunga Raya and Bunga Seroja, Bunga Orkid	PetroVietnam (30%. Petronas (35%), Repsol (35%)	Upgrade/ EOR	60,000	2.7	Oil & Gas
Block 15-2, Cuu Long Basin	Rang Dong Phuong Dong	JX Nippon Oil & Energy Corporation (46.5%), Perenco (36%), PetroVietnam (17.5%	Upgrade/ EOR	140,562	-	Oil & Gas

Source: Fitch Solutions Oil & Gas Report 2025

主要な石油精製所一覧

NON-EXHAUSTIVE

Location	Name	Capacity, bpd	Status	Construction completion date	Main owner(s)
Quang Ngai	Dung Quat	148,000	Active	2009	Petro Vietnam (Binh Son Refinery Limited)
Thanh Hoa	Nghi Sơn	200,000	Active	2018	Nghi Son Refinery& Petrochemical LLC
Ba Ria-Vung Tau	Long Son	200,000	Suspended (expected to resume in 2025)	2024	Siam Cement Group
Khan Hoa	Nam Van Phong	200,000	Cancelled	-	Petrolimex
Phu Yen	Vung Ro	160,000	Cancelled	-	Vung Ro Petroleum
Binh Dinh	Nhơn Hoà	400,000	Cancelled	-	PTT, Saudi Aramco

Source: Fitch Solutions Oil & Gas Report 2025

主要なガスパイプライン

NON-EXHAUSTIVE

Name	Status	Capacity, bcm/year	Owner	Remarks
Nam Con Son	Active	4.8	TNK-BP	Transports gas from the Lan Tay-Lan Do gas fields to an onshore processing and distribution facility in Ba Ria Vung Tau, largely for power generation.
Cuu Long	Active	NA	NA	Transports gas from the Bach Ho field to an onshore processing and distribution facility in Ba Ria Vung Tau, mostly for commercial use
Su Tu Vang- Rang Dong- Bach Ho – Long Hai - Dinh Co	Active	3.3	NA	Transports gas from the Bach Ho, Rang Dong. Su Tu Vang gas fields to the Dinh Co processing facility
Dinh Co - Phu My	Active	NA	NA	Carries dry gas processed at the Dinh Co processing plant to end-users.
Phu My - Nhon Active Trach-Heip Phuoc	Active	NA	NA	Sends gas from the Nam Con Son field to the Nhon Trach and Heip Phuoc districts for distribution into power plants and industrial zones.
PM3-Ca Mau	Active	NA	NA	Delivers gas from the offshore PM3 CAA and 46-Cai Nuoc fields to the Ca Mau gas distribution center, to be fed into two power plants and a fertiliser plant in the Ca Mau industrial area.
Vietnam Gas Project	Construction	NA	NA	Planned to distribute gas from the Block B gas development in the Cuu Long Basin, to the power plants and fertiliser plants along the southwest coast of Vietnam. However, development remains stunted due to Chevron's exit from the joint venture.
Can Tho	Proposed	5.8-6.6	PetroVietnam	PetroVietnam has announced plans to build a 398km gas pipeline to transport gas from the offshore fields in the southwest coast to the power plants in the city of Can Tho. However, it has yet to specify which field would supply the gas.

Source: Fitch Solutions Oil & Gas Report 2025

主要なLNG輸入ターミナル

NON-EXHAUSTIVE

Name	Location	Status	Type	Capacity, mpta	Capacity, bcm	Owner(s)	Start-up date
Ca Na	Ninh Thuận	Approved	Onshore	6.0	8.2	Gulf Energy Development	2025-2026
Haiphong I	Cat Hai	Approved	Onshore	3.0	4.1	ExxonMobil	2026-2027
Haiphong II	Cat Hai	Approved	Onshore	3.0	4.1	ExxonMobil	2029-2030
Ca Mau	Hon Khoai	Proposed	Onshore	3.0	4.1		2026
Mul Ke Gal	Binh Thuan	Proposed	FSRU	1.5	2.0	Energy Capital Vietnam, KOGAS	2025
My Glang	Khanh Hoa	Proposed	Onshore	3	4.1		2030-2035
Son My Phase II	Bin Thuan	Proposed	Onshore	2.4	3.3	AES Corporation	2024-2025
South East LNG	Tien Giang	Proposed	Onshore	4.0-6.0	5.4-8.2		2023-2025
Thai Binh FSRU	Thai Binh	Proposed	FSRU	0.2-0.5	0.3-0.7		2026-2030
Son My Phase I	Bin Thuan	Under construction	Onshore	3.6	4.9	EDF (37.5%), Pacific Corporation (25.0%), Sojitz (18.75%), Kyushu Electric (18.75%)	2023-2024
Thi Vai	Vung Tau	Operational	Onshore	1.0	1.4	Petro Vietnam (PV Gas)	2023
Thi Vai	Vung Tau	Operational	Onshore	3	4.2	Petro Vietnam (PV Gas)	2026

Source: Fitch Solutions Oil & Gas Report 2025

現在の天然ガスおよびLNGプロジェクト (1/2)

NON-EXHAUSTIVE

Name	Location	Capacity, mtpa	Type	Start-up date
Ca Na	Ninh Thuận	6.0	Onshore	2025-2026
Haiphong I	Cat Hai	3.0	Onshore	2026-2027
Haiphong II	Cat Hai	3.0	Onshore	2029-2030
Ca Mau	Hon Khoai	3.0	Onshore	2022-2025
Mul Ke Gal	Bình Thuận	1.5	FSRU	2025
My Glang	Khanh Hoa	3	Onshore	2030-2035
Son My Phase I	Bin Thuần	3.6	Onshore	2025
South East LNG	Tien Glang	4.0-6.0	Onshore	2022-2025
Thai Binh FSRU	Thai Binh	0.2-0.5	FSRU	2026-2030
Son My Phase II	Bản Thuận	24	Onshore	2028
Thi Val	Vung Tau	1.0	Onshore	2022
Bac Lieu	Bac Lieu	3,200	LNG-To-Power Plant	2024
Ca Na I	Ninh Thuan	1,500	LNG-To-Power Plant	2025-2026
Ca Na II	Ninh Thuan	4,500	LNG-To-Power Plant	-
Chan May I	Thua Thien Hue	2.400	LNG-To-Power Plant	2024
Chan May II	Thua Thien Hue	1,600	LNG-To-Power Plant	2028
Dung Quat I	Quang Ngai	750	Gas-To-Power Plant	2023
Dung Quat II	Quang Ngai	750	Gas-To-Power Plant	2024

Source: Fitch Solutions Oil & Gas Report 2025

現在の天然ガスおよびLNGプロジェクト (2/2)

NON-EXHAUSTIVE

Name	Location	Capacity, mtpa	Type	Start-up date
Haiphong	Haiphong	4,000	LNG-To-Power Plant	2025-2030
Kien Giang II	Kien Giang	750	Gas-To-Power Plant	2023
Long An I	Mekong Delta	1,500	LNG-To-Power Plant	2026
Long An II	Mekong Delta	1,500	LNG-To-Power Plant	2027
Long Son I	Ba Ria-Vung Tau	1,200	LNG-To-Power Plant	2025-2026
Long Son II	Ba Ria-Vung Tau	2,400	LNG-To-Power Plant	-
Mien Trung I	Quang Nam	750	LNG-To-Power Plant	2023
Mien Trung II	Quang Nam	750	LNG-To-Power Plant	2024
Mul Ke Ga I	Binh Thuan	3,200	LNG-To-Power Plant	2025
Nam Van Phong I	Khanh Hoa	4,800	LNG-To-Power Plant	-
Nam Van Phong II	Khanh Hoa	4,800	LNG-To-Power Plant	-
Nghi Son I	Thnah Hoa	4,800	LNG-To-Power Plant	2030
Nhon Trach III	Dong Nai	750	LNG-To-Power Plant	2023
Nhơn Trach N	Dong Nai	750	LNG-To-Power Plant	2023
Son My I	Binh Thuan	2,000	LNG-To-Power Plant	2023-2024
Son My II	Binh Thuan	2,250	LNG-To-Power Plant	2024-2025
Hai Lang	Quang Tri	1,500	LNG-To-Power Plant	2028

Source: Fitch Solutions Oil & Gas Report 2025

提案された天然ガスプロジェクト(1/2)

NON-EXHAUSTIVE

Project	Location	Capacity, MW	Construction completion date	Project cost, USD bn	Gas source	Developer(s)
Bac Lieu	Bac Lieu	3,200	2024	4.3	LNG	Delta Offshore
Ca Nal	Ninh Thuận	1,500	2025-2026	2.0	LNG	Gulf Energy Development
Ca Nall	Ninh Thuận	4,500	-	5.9	LNG	Gulf Energy Development
Chan May I	Thua Thien Hue	2,400	2024	6.2	LNG	Chan May LNG
Chan May II	Thua Thien Hue	1,600	2028	-	LNG	Chan May LNG
Dung Quat I	Quang Ngai	750	2023	1.8	Blue Whale	Vietnam Electricity
Dung Quat II	Quang Ngai	750	2024	-	Blue Whale	Vietnam Electricity
Haiphong	Haiphong	4,000	2025-2030	-	LNG	ExxonMobil
Kien Giang II	Kien Giang	750	2023-2024	0.5	Block B	Petro Vietnam
Long An I	Mekong Delta	1,500	2026	3.1	LNG	GS Energy
Long An II	Mekong Delta	1,500	2027	-	LNG	GS Energy
Long Son I	Ba Ria-Vung Tau	1,200	2025-2026	1.5	LNG	Vietnam Electricity

Source: Fitch Solutions Oil & Gas Report 2025

提案された天然ガスプロジェクト(2/2)

NON-EXHAUSTIVE

Project	Location	Capacity, MW	Construction completion date	Project cost, USD bn	Gas source	Developer(s)
Long Son II	Ba Ria-Vung Tau	2,400	-	3.0	LNG	Vietnam Electricity
Mien Trung I	Quang Nam	750	2023-2026	1.7	Blue Whale	PetroVietnam, GE
Mien Trung II	Quang Nam	750	2024-2026	-	Blue Whale	PetroVietnam, GE
Mul Ke Ga I	Binh Thuan	3,200	2025	-	LNG	Energy Capital Vietnarh, KOGAS
Nam Van Phong I	Khanh Hoa	4,800	-	8.0	LNG	Millenium Group
Nam Van Phong II	Khanh Hoa	4,800	-	7.0	LNG	Millenium Group
Nghi Son I	Thnah Hoa	4,800	2030	7.0	LNG	Millenium Group
Nhơn Trạch III	Dong Nai	750	2023-2025	1.5	LNG	PetroVietnam
Nhơn Trạch IV	Dong Nai	750	2023-2025	-	LNG	PetroVietnam
Son My I	Binh thuan	2,000	2023-2024	1.3	LNG	EDF, Pacific Corp, Sojitz Corporation & Kyushu Electric Power
Son Myll	Binh thuan	2,250	2024-2025	1.7	LNG	AES Corporation
Hai Lang	Quang Tri	1,500	2028	2.3	LNG	KOGAS, Hanwha Energy Corp, KOSPO, T&T Group

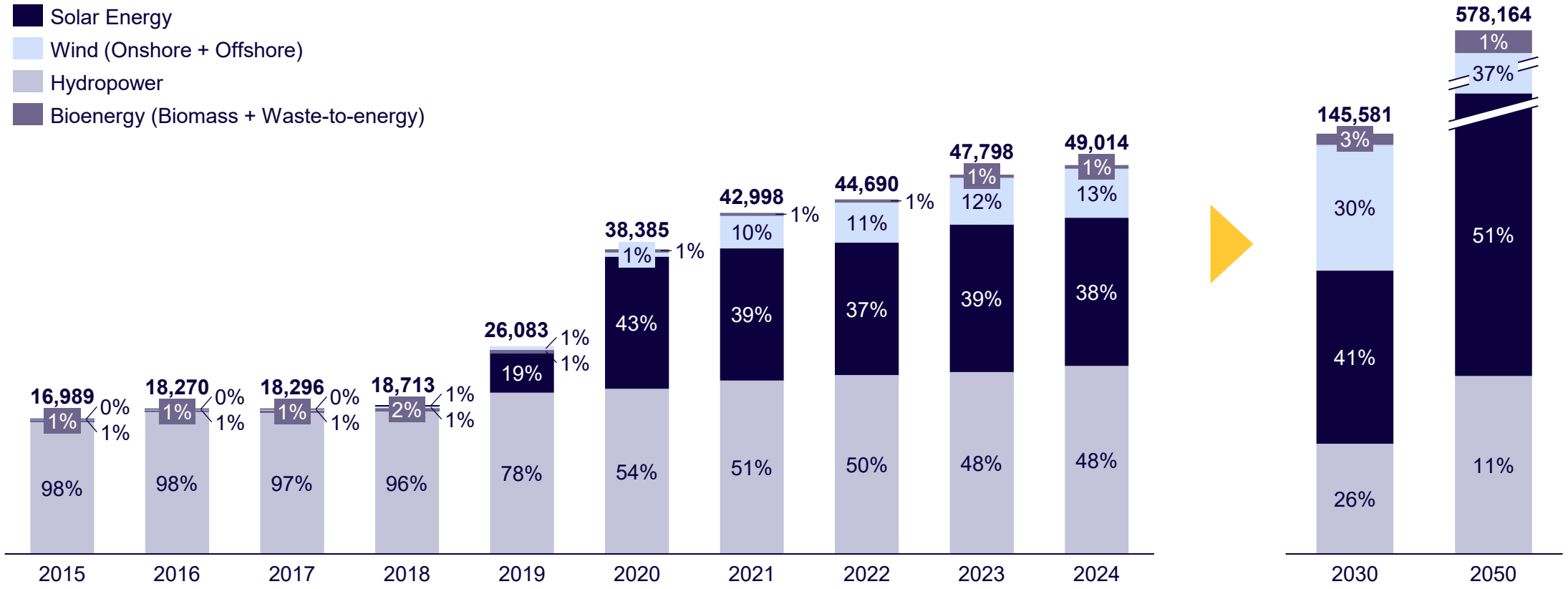
Source: Fitch Solutions Oil & Gas Report 2025

Contents

ベトナムの再エネ構成は水力中心から太陽光・風力へシフトし、2030年には両者で7割超、2050年には再エネ全体の8割（太陽光51%、風力37%）を占める見通し

Historical Renewable Energy Mix
2015 – 2024, MW

RE Mix Target
2030 – 2035, MW

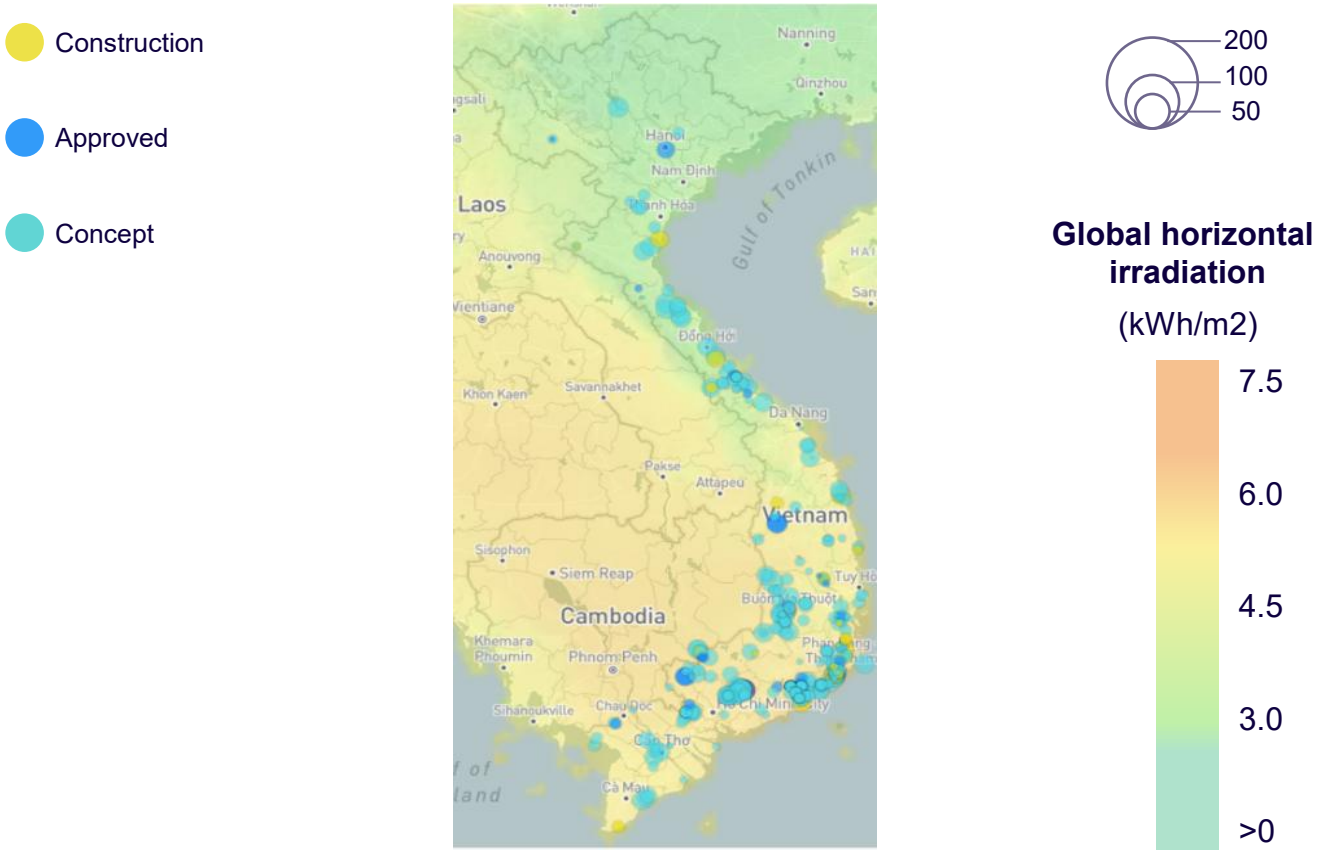


Source: Renewable Energy Statistics 2025 by IRENA, Arthur D. Little analysis

ベトナムのソーラー発電は高い日射条件を背景に投資が活発化しており、海外資本の参入で設備容量が今後数年で大幅に拡大すると見込まれている

Map of pipeline solar projects

2023 - 2050



Description

Overall, there has been an inflow of FDI, with some notable transactions being:

- **ACEN Corp**, Ayala Group's energy platform has finished the first phase of acquiring a significant 49% stake in Super Energy Corp. Public Company Limited's solar power business in Vietnam, estimated at US$ 165 mn, deal is expected to close at the ned of the year, bringing ACEN's Vietnam-Lao PDR portfolio to 1,200 MW in attributable renewables capacity
- Singaporean utilities company **SP Group** acquired 100 MWp[1] of solar power assets via 2 solar farms; Europlast Phu Yen Solar PP (50 MWp) and Thanh Long Phu Yen Solar PP (50 MWp)
- British **ThomasLloyd Energy Impact Trust** made its first investment in Vietnam of US$ 30mn in 2022 with Solar Electric to acquire Viet Solar System
- International firms like Indian conglomerate **Adani Ports** (US$ 3 bn[2]), Dutch development bank **FMO** (US$ 8.2 mn) and Swiss **Susi Partners** investing in existing projects either via equity or loan products

Source: Rystad Energy 2023, Multiple news sources, Arthur D. Little analysis
Note: 1) Megawatts Peak; 2) US$ 3bn is split between seaport ecosystem, solar and wind project investements

進行中の太陽光発電プロジェクト一覧

NON-EXHAUSTIVE

#	Name	Installed capacity, MW	Investor(s)/Owner(s)	COD
I	**Period 2025 - 2030**			
1	An Cu solar power plant	40	Sao Mai Group	2025 – 2030
2	An Giang solar power plant	80	N/A	2025 - 2030
3	Phu My solar power project	50	BCG Energy	2025 - 2030
4	Yen The solar power plant	50	Song Lam Investment and Construction Company	2030
5	Da Ong Lake and Cau Re Lake solar power plant	50	N/A	2030
6	An Phu Dong Hai solar power plant with storage capacity	50	N/A	2025 – 2030
7	Ben Tre solar power plant	50	Dong Hai Ben Tre Joint Stock Company	2025 – 2030
8	Hoai Duc solar power plant	50	N/A	2027 – 2028
9	Hoai Thanh solar power plant	60	N/A	2027 – 2028
10	Nui Mot Lake solar power plant	60	Truong Thanh Investment and Construction Joint Stock Company	2028 – 2029
11	Phu My I Industrial Park solar power plant	100	Bamboo Capital Group	2027 – 2028
12	Phu My II Industrial Park solar power plant	100	Bamboo Capital Group	2027 – 2028

Full list of project pipeline can be found in Decision No.1509/QD-BCT

Source: Implementation Plan of Revised Power Development Plan 8

進行中の陸上および沿岸風力発電プロジェクトの一覧

NON-EXHAUSTIVE

#	Name	Installed capacity, MW	Investor(s)/Owner(s)	COD
1	BCG Dien Bien 1 wind power plant	175		2026 – 2030
2	Envision Nam Po wind power plant	125		2026 – 2030
3	Thien Long Ngan Son wind power plant	130		2029
4	Ngan Son wind power plant	150		2029
5	Thien long Cho Moi wind power plant	120		2028
6	Nam Binh wind power plant	200		2028
7	Bac Gang 1 wind power plant	55		2028
8	Bac Giang 2 wind power plant	55	N/A	2030
9	Cam Ly wind power plant	50		2030
10	Song Dong wind power plant	100		2027
11	Yen Dung wind power plant	150		2029
12	Al Quoc wind power plant	100		2029

Source: Implementation Plan of Revised Power Development Plan 8

Full list of project pipeline can be found in Decision No.1509/QD-BCT

進行中の陸上および沿岸風力発電プロジェクトの一覧

NON-EXHAUSTIVE

#	Name	Installed capacity, MW	Investor(s)/Owner(s)	COD
1	Bac Bo 1.1 offshore wind power plant	500		2030
2	Bac Bo 1.2 offshore wind power plant	500		2030
3	Bac Bo 1.3 offshore wind power plant	500		2030
4	Bac Bo 2 offshore wind power plant	500		2030
5	Bac Bo 3 offshore wind power plant	500		2030
6	South Central 1.1 offshore wind power plant	500		2030
7	South Central 1.2 offshore wind power plant	500		2030
8	South Central 1.3 offshore wind power plant	500		2030
9	South Central 2 offshore wind power plant	500		2030
10	South 1 offshore wind power plant	500		2030
11	South 2 offshore wind power plant	500		2030
12	South 3 offshore wind power plant	500		2030

Source: Implementation Plan of Revised Power Development Plan 8

Full list of project pipeline can be found in Decision No.1509/QD-BCT

進行中の水力発電プロジェクト (1/6)

#	Name	Installed capacity, MW	Investor(s)/Owner(s)	COD
I	Period 2025 - 2030			
1	Hoa Binh hydropower plant expansion	480	EVN	2025
2	Yen Son hydropower plant	90	Binh Minh Construction and Tourism Group JSC	2025 - 2030
3	Nam Cum 1, 4, 5 hydropower plants	94	IPP	2025 - 2030
4	Nam Cum 2, 3, 6 hydropower plants	66	IPP	2025 - 2030
5	Hoi Xuan hydropower plant	102	IPP	2027
6	My Ly hydropower plant	120		2029 - 2030
7	Nam Mo 1 hydropower plant	51	IPP	2029 – 2030
8	Yaly hydropower plant expansion	360	EVN	2025 - 2030
9	Dak Mi 1 hydropower plant	84	IPP	2025 - 2030
10	Tri An hydropower plant expansion	200	EVN	2027
11	Song Lo 9 hydropower plant	87		2025 – 2030
12	Tuyen Quang hydropower plant expansion	120		2025 - 2030
13	Sesan 3 hydropower plant expansion	130	EVN	2025 - 2030

Source: Approved Implementation Plan of Power Development Plan 2021 – 2030 Period, vision 2050 (Decision 1509/QD-BCT in 2025)

進行中の水力発電プロジェクト (2/6)

#	Name	Installed capacity, MW	Investor(s)/Owner(s)	COD
14	Sesan 4 hydropower plant expansion	120	EVN	2025 - 2030
15	Ban Chat hydropower plant expansion	110		2025 - 2030
16	Da Nhim hydropower plant expansion (phase 2)	80	EVN	2025 - 2030
17	Srepok 3 hydropower plant expansion	110	EVN	2025 - 2028
18	Buon Kop hydropower plant expansion	140	EVN	2025 - 2028
19	Viet Thanh hydropower plant	55		
20	An Binh hydropower plant	65		2030
21	An Thinh hydropower plant	70		2030
22	Bao Ha hydropower plant	75		2025 - 2030
23	Thai Nien hydropower plant	75		2025 – 2030
24	Suoi Hung hydropower plant	50		2027
25	Sesan 4A hydropower plant expansion	29		2029
26	Muong Lat hydropower plant	45		2030
27	Dong Van hydropower plant (capacity increase)	29.8		2025 - 2026

Source: Approved Implementation Plan of Power Development Plan 2021 – 2030 Period, vision 2050 (Decision 1509/QD-BCT in 2025)

進行中の水力発電プロジェクト (3/6)

#	Name	Installed capacity, MW	Investor(s)/Owner(s)	COD
28	Efficient utilization of Song Ba Ha hydropower plant	18		2027 – 2028
29	Song Bo hydropower plant	26	IPP	2026
30	Cam Son hydropower plant	36	IPP	2029 – 2030
31	Thong Thu hydropower plant	28		2029 – 2030
32	Thai An hydropower plant expansion	41	IPP	2030
33	Da R'Sal hydropower plant	42		2030
34	Ban Nga hydropower plant	24		2025 – 2030
35	Bac Ai storage pump hydropower plant	1200	EVN	2029
36	Phuoc Hoa storage pump hydropower plant	1200		2023 – 2029
37	Dong Phu Yen storage pump hydropower plant	900		2025 – 2030
38	Dong Duong 1 storage pump hydropower plant	300		2025 - 2030
39	Dien Bien 3 Phase 1 storage pump hydropower plant	400		2025 - 2030
40	Cam Son 1 storage pump hydropower plant	30		2030

Source: Approved Implementation Plan of Power Development Plan 2021 – 2030 Period, vision 2050 (Decision 1509/QD-BCT in 2025)

進行中の水力発電プロジェクト (4/6)

#	Name	Installed capacity, MW	Investor(s)/Owner(s)	COD
41	Song Muc – Dong Long storage pump hydropower plant	110		2030
42	Yen My – Bong Bong storage pump hydropower plant	16.5		2030
43	Kim Son – Thuong Song Tri storage pump hydropower plant	530		2028
44	Ke Go – Boc Nguyen storage pump hydropower plant	174.5		2028
45	Cam Lo storage pump hydropower plant	246		2025 - 2030
46	A Vuong storage pump hydropower plant	300		2025 – 2030
47	Ba To Phase 1 storage pump hydropower plant	300		2030

Source: Approved Implementation Plan of Power Development Plan 2021 – 2030 Period, vision 2050 (Decision 1509/QD-BCT in 2025)

進行中の水力発電プロジェクト (5/6)

#	Name	Installed capacity, MW	Investor(s)/Owner(s)	COD
II	Period 2031-2035			
1	Son La hydropower plant expansion	800	EVN	2031 - 2035
2	Lai Chau hydropower plant expansion	400	EVN	2031 - 2035
3	Huoi Quang hydropower plant expansion	260	EVN	2031 - 2035
4	Sesan 3A hydropower plant expansion	54	EVN	2031 - 2035
5	Thuan My hydropower plant	250		2031 - 2035
6	Trung Son hydropower plant expansion	130	EVN	2031 - 2035
7	A Vuong Hydropower plan expansion	130		2031 - 2035
8	Da Kho	50		2031 - 2035
9	Dak R'lap 1 hydropower plant	53		2031 - 2035
10	Dak R'lap 2 hydropower plant	68		2031 – 2035
11	Dak R'lap 3 hydropower plant	82		2031 - 2035
12	Sesan 5 hydropower plant	30		2033
13	Song Ba Ha hydropower plant expansion	30		2032 – 2033

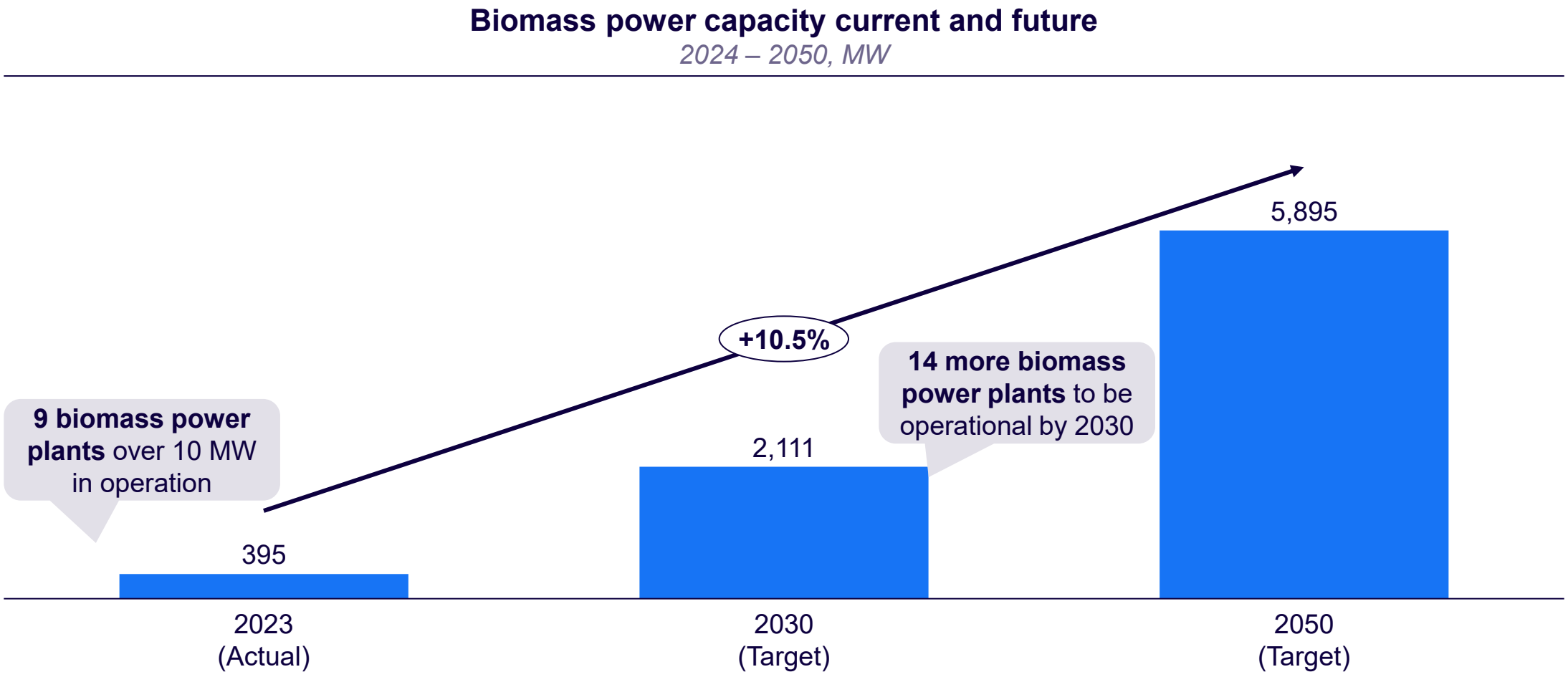
Source: Approved Implementation Plan of Power Development Plan 2021 – 2030 Period, vision 2050 (Decision 1509/QD-BCT in 2025)

進行中の水力発電プロジェクト (6/6)

#	Name	Installed capacity, MW	Investor(s)/Owner(s)	COD
14	Sin Ho Phase 1 storage pump hydropower plant	300		2030
15	Sin Ho Phase 2 storage pump hydropower plant	400		2032
16	Dien Bien 3 Phase 2 storage pump hydropower plant	400		2031 – 2035
17	Dong Phu Yen storage pump hydropower plant	300		2031 – 2035
18	Cam Son 2 storage pump hydropower plant	300		2035
19	Cam Lo Phase 2 storage pump hydropower plant	1200		2031 – 2035
20	Da Nang Phase 1 storage pump hydropower plant	595		2031 – 2035
21	Vinh Thanh storage pump hydropower plant	600		2031 – 2032
22	Don Duong 2, 3 storage pump hydropower plant	600		2031 - 2035

Source: Approved Implementation Plan of Power Development Plan 2021 – 2030 Period, vision 2050 (Decision 1509/QD-BCT in 2025)

ベトナムのバイオマス発電容量は2023年の395MWから急拡大し、2030年に2,111MW、2050年には5,895MWに達する見通し

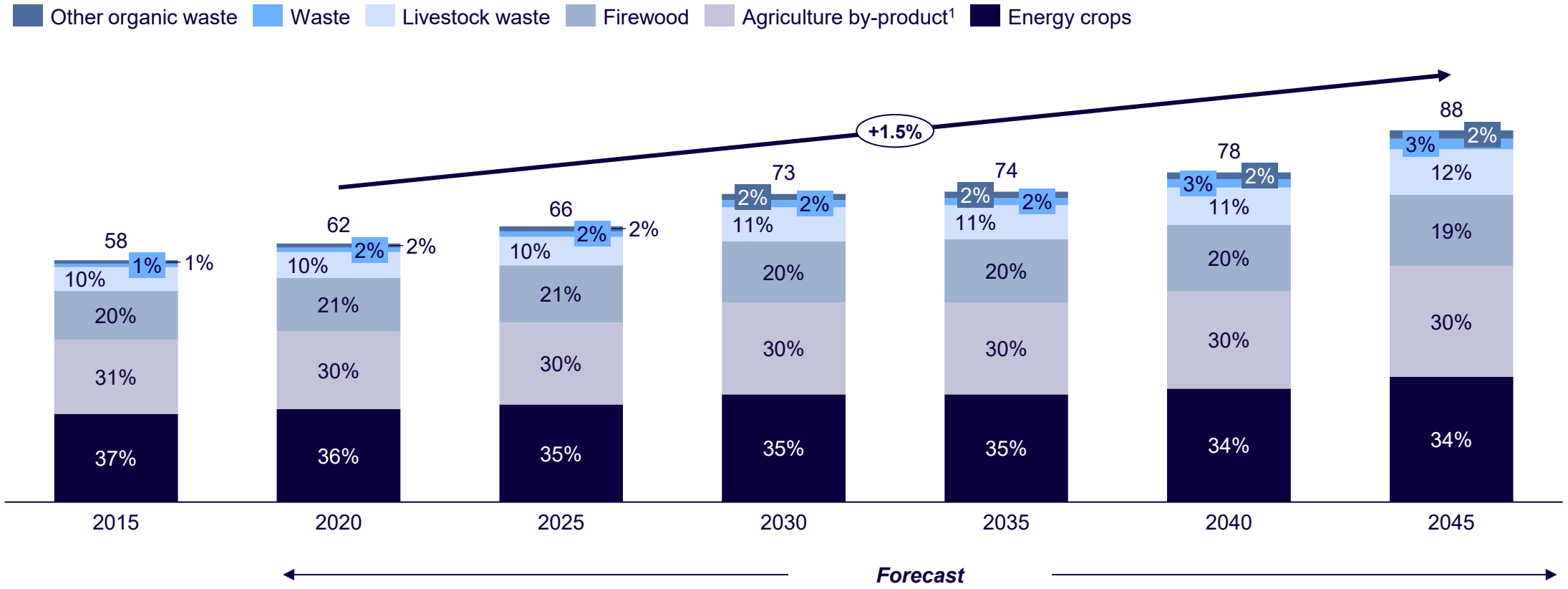


Source: Revised Power Development Plant 8, Arthur D. Little analysis

ベトナムのバイオマス資源量は2015年の58MTOEから2050年に88MTOEへ増加見通しで、エネルギー作物や農業副産物が全体の約3分の2を占める構成が続く

Biomass Reserves Forecast

2015 – 2050, MTOE

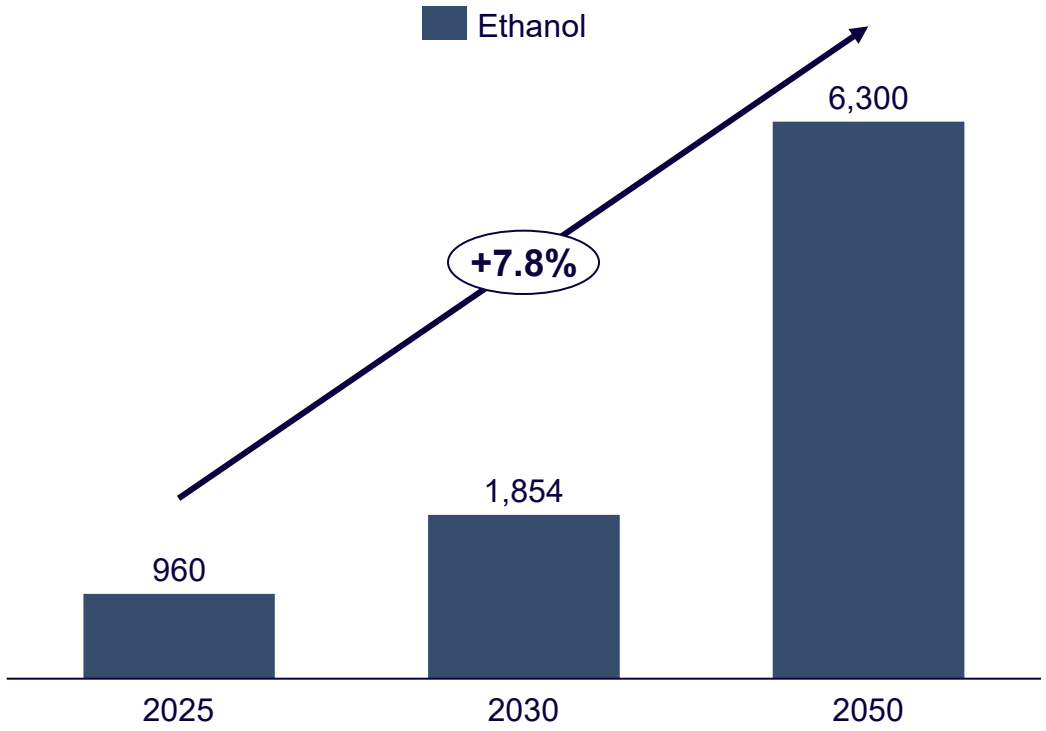


Note: 1) Agriculture by-product is residue left over from farming or crop processing. Examples include bagasse, rice husks
Source: Vietnam Green Handbook published by Vietnam Energy Development Support Center, Arthur D. Little analysis

ベトナムはエタノール生産を2025年の96万トンから2050年に630万トン、バイオディーゼルを192万トンから1,250万トンへ拡大する計画で、年率7.8%の成長が見込まれている

Targeted Production of Ethanol (Vietnam)

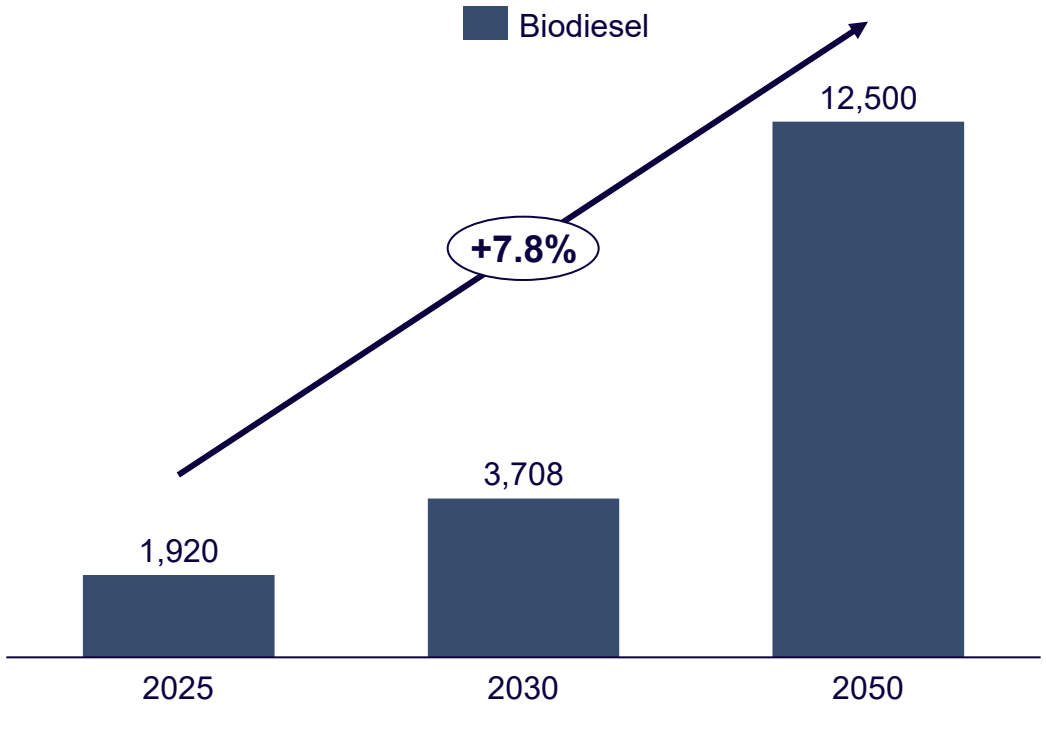
In Thousand Tons



Only 2 domestic ethanol plants were observed in Vietnam in 2020, with a total capacity of 200,000 cubic meters/year

Targeted Production of Biodiesel (Vietnam)

In Thousand Tons



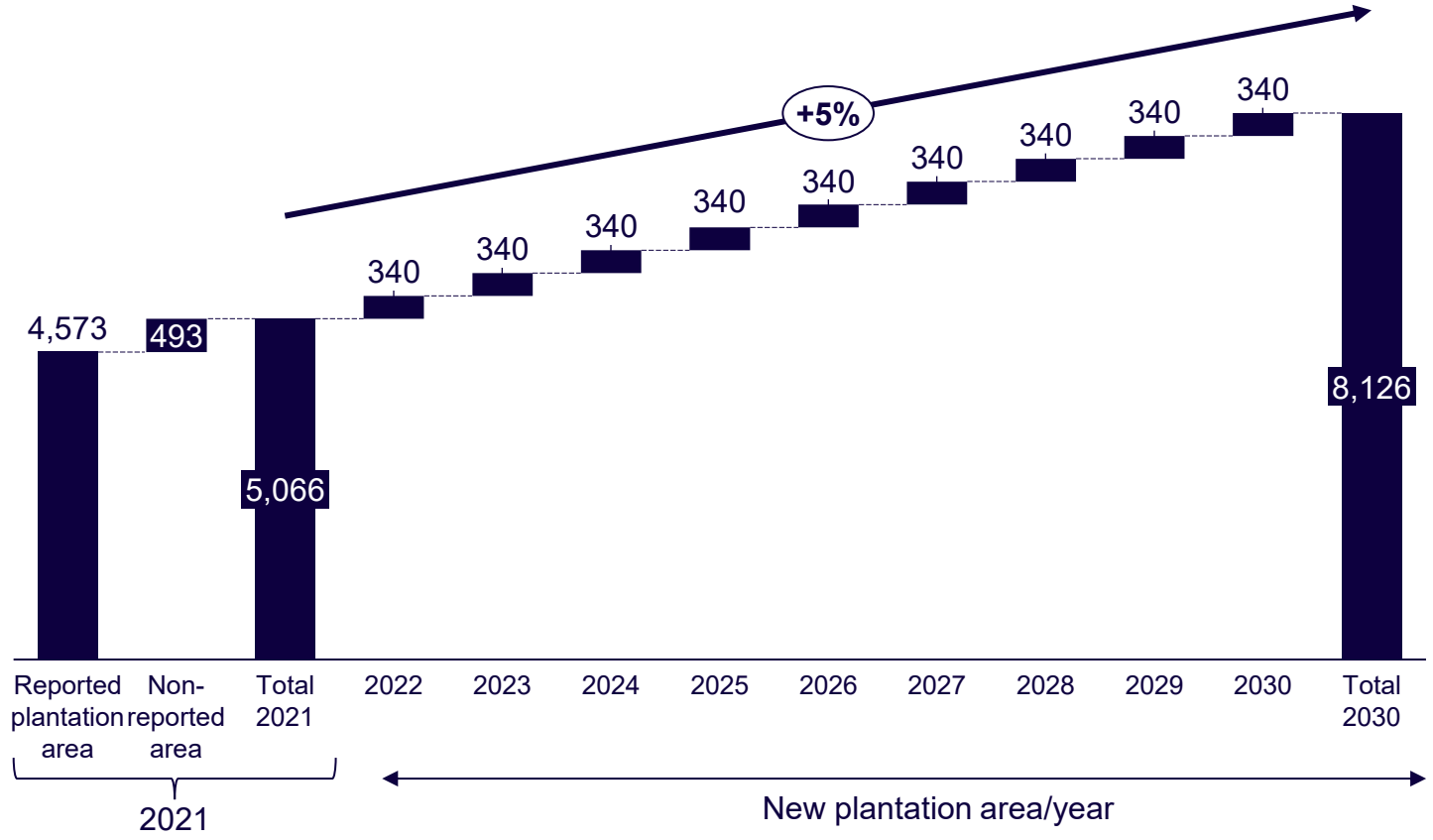
In PDP8, Vietnam government revised biodiesel target to reach 12,500 thousand tons by 2050

Note: Based on Decision No. 177/2007/QD-TTg which targeted biofuels as a new renewable energy source and an alternative to conventional fossil fuels to promote energy security and environmental protection
Source: United States Department of Agriculture 2020, Asian Development Bank 2009, National Energy Development Master Plan for 2021- 2030 period,vision to 2050

ベトナム政府は2030年までに年間34万haの植林拡大を目標とし、その大半をアカシアとユーカリが占め、総面積は812万haに達する見通し

Vietnam forest plantation development plan

2021 – 2030, kHa



Description

- Vietnam government targets to develop 340 thousand ha of new plantation areas per year up to 2030
- Assuming acacia accounts for at least 80% of the new plantation area each year, in total 8,1 mn ha by 2030, there will be around 74% of the areas are acacia and eucalyptus by 2030

Source: Expert interviews, Decision 523/QD-TTg of the government on Forestry development strategy, Arthur D. Little analysis

進行中のバイオマスプロジェクト (1/2)

#	Name	Installed capacity, MW	COD	Location
1	Yen Bai 1 biomass power plant	50	2027	Yen Bai
2	Truong Minh biomass power plant	58	2030	Yen Bai
3	Luc Yen biomass power plant	50	2029 – 2031	Yen Bai
4	Bac Kan 1 biomass power plant	50	2028	Bac Kan
5	Bao Thang biomass power plant	50	2026 – 2030	Lao Cai
6	Tuyen Quang biomass power plant	50	2028	Tuyen Quang
7	Tuyen Quang biomass power plant phase 2	50	2031 – 2035	Tuyen Quang
8	Phu Thu biomass power plant	50	2025 – 2035	Phu Tho
9	An Giang 1 biomass power plant	50	2026 – 2030	An Giang
10	An Giang 2 biomass power plant	54	2031 – 2035	An Giang
11	Muong Nhe biomass power plant	55	2026 – 2030	Dien Bien
12	Hoa Binh biomass power plant	100	2029 – 2031	Hoa Binh
13	Thuan Phat biomass power plant	50	2028 – 2029	Phu Yen
14	Quang Binh biomass power plant	50	2029	Quang Binh

Source: Approved Implementation Plan of Power Development Plan 2021 – 2030 Period, vision 2050 (Decision 1509/QD-BCT in 2025)

進行中のバイオマスプロジェクト (2/2)

#	Name	Installed capacity, MW	COD	Location
15	PIR-1 Quang Binh biomass power plant	50	2028	Quang Binh
16	An Viet Phat Quang Binh biomass power plant phase 1	58	2028	Quang Binh
17	An Viet Phat Quang Binh biomass power plant phase 2	14	2033	Quang Binh
18	Tien Phuoc biomass power plant	50	2031 - 2035	Quang Nam
19	Quang Nam biomass power plant	50	2031 – 2035	Quang Nam
20	Tu Nghia biomass power plant	50	2025 – 2035	Quang Ngai
21	Thanh Hoa 1 biomass power plant	50	2029	Thanh Hoa
22	Thanh Hoa 2 biomass power plant	50	2029	Thanh Hoa
23	Binh Dinh biomass power plant	50	2028 – 2029	Binh Dinh
24	Dak Lak biomass power plant	120	2025 – 2028	Dak Lak
25	An Khue biomass power plant expansion	40	2027	Gia Lai
26	Gao Village biomass power plants (3 plants)	66	2035	Gia Lai
27	Long An biomass power plant	75	2028 – 2032	Long An
28	Binh Phuoc biomass power plant	50	2025 - 2030	Binh Phuoc

Source: Approved Implementation Plan of Power Development Plan 2021 – 2030 Period, vision 2050 (Decision 1509/QD-BCT in 2025)

廃棄物発電プラントの計画

#	Name	Installed capacity, MW	COD	Location
1	Soc Son waste-to-energy power plant	50	2025	Ha Noi
2	Ha Noi waste-to-energy power plant	60	2029	Ha Noi
3	VWS waste-to-energy power plant	60	2025 – 2030	Ho Chi Minh
4	Waste-to-energy power plant of Tam Sinh JSC (plant capacity adjustment from 40 to 60 MW)	60	2025 – 2030	Ho Chi Minh
5	Waste-to-energy power plant phase 2 of Tam Sinh JSC	140	2025 – 2030	Ho Chi Minh

Source: Approved Implementation Plan of Power Development Plan 2021 – 2030 Period, vision 2050 (Decision 1509/QD-BCT in 2025)

ベトナムは2025年からCCUS導入方針を明確化し、2030年までに石炭火力で実証導入、2050年までに全石炭火力と約2GW規模のLNG火力にCCUSを設置する計画

Evolution of CCUS in Vietnam

Pre-2025

- **Limited progress** in integrating Carbon Capture, Utilization, and Storage (CCUS) into national strategies and policies
  - There were no dedicated CCUS-related policies or regulations in place
  - Vietnam's Nationally Determined Contribution (NDC) made no mention of CCUS.
  - The only reference to CO_2 capture and utilization appeared in the action program of the Orientation of Vietnam's National Energy Development Strategy[1]

Current

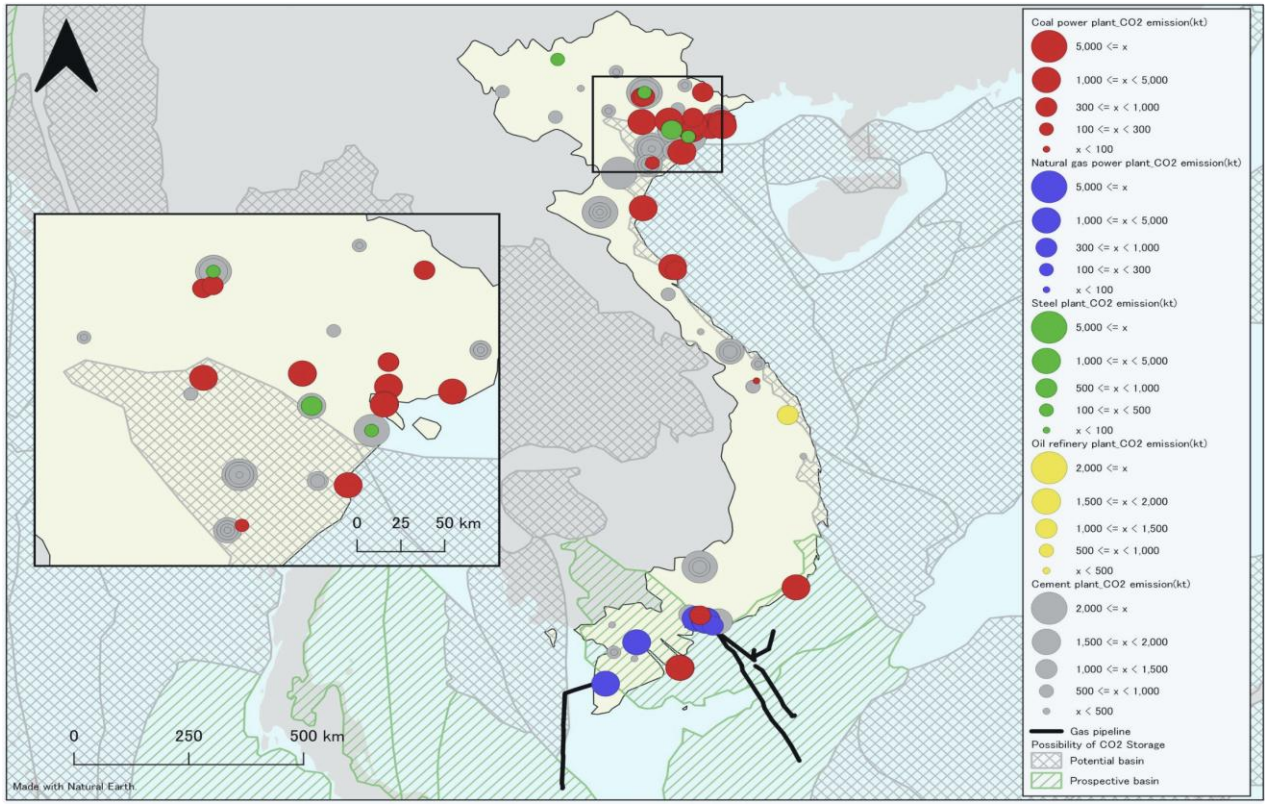
- To achieve its net-zero target by 2050, starting in 2025 **government adopted clear directions and set specific targets** for CCUS deployment, focusing on installations in coal-fired and LNG-fired thermal power plants.

Use case	Legal basis	Approval date	Detail targets / plans
CCUS installation in coal-fired power plant	Implementation plan for the Global Coal-to-Clean Energy Transition Statement 2025 *(Decision 266/QD-TTg)*	February 2025	• By 2030: Pilot carbon capture at selected aging coal plants. • By 2050: Install carbon capture at all coal fired power plan
CCUS installation in LNG thermal power plant	Revised Power Development Plan 8 2025 (*Decision 768/QD-TTg)*	April 2025	• By 2050: Install CCS for 1,887 – 2,269 MW LNG thermal power plant

Note: 1)令和2年度二国間クレジット取得等のためのインフ ラ整備調査事業（国際貢献定量化及びJCM実現可能 性調査（CCUS含む）、人材育成事業支援事務局及 びCEFIA国内事務局業務）報告書
Source: Implementation plan for the Global Coal-to-Clean Energy Transition Statement 2025 (Decision 266/QD-TTg), Revised Power Development Plan 8 2025 (Decision 768/QD-TTg), Arthur D. Little analysis

ベトナムにはCO_2の地中貯留ポテンシャルが23～357百万トン存在し、特に南部の海域が有望とされ、北部でも可能性はあるが商業規模は小さいと見られている

ベトナムのCCS適地



Description

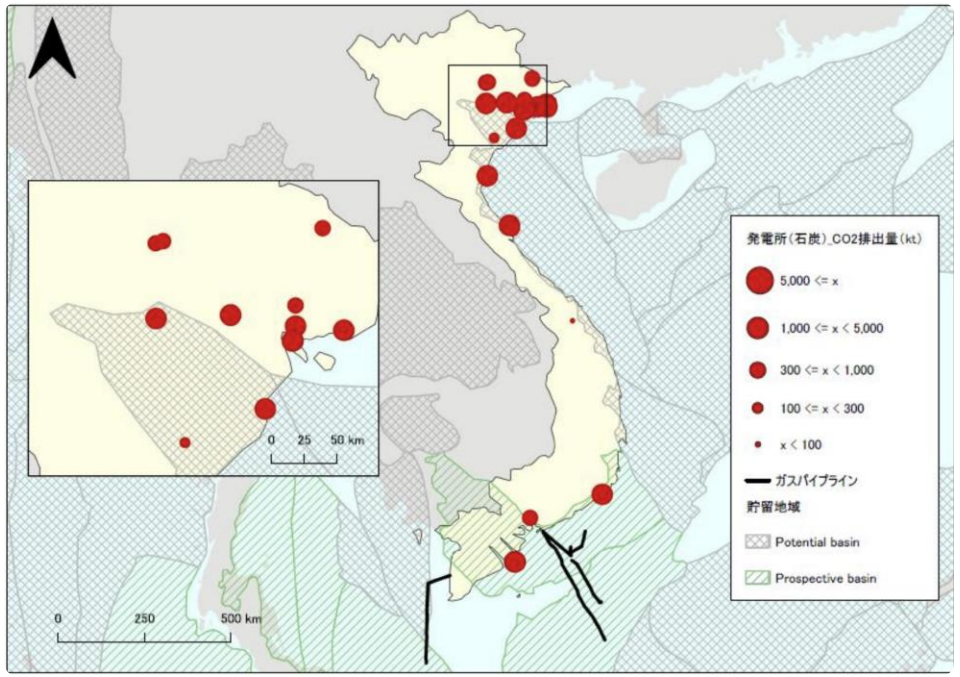
ベトナムでは南部の海域に貯留ポテンシ ャルがあることが示されている。北部の海域にも貯留ポテンシャルはあるものの、商業化を 鑑みると、小規模とされる。ベトナムにおける上位 10 カ所の貯留サイトを合計すると、貯 留ポテンシャルは 23 Mt から 357 Mt CO2 と推計されている

Source: Asia CCUS Network

ベトナムの石炭火力発電所は北部・中部・南部に分布し、年間CO_2排出量300～5,000kt規模が多く、国内排出の約9割を占める一方、天然ガス火力発電所は主に南部に集中

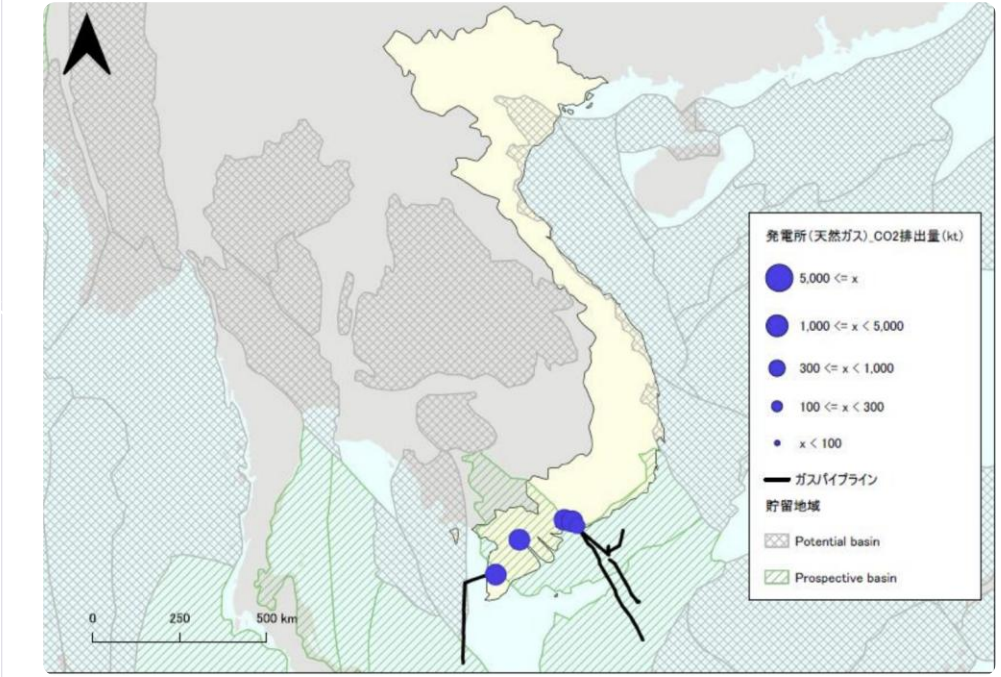
石炭火力発電×貯留地

石炭火力発電所は、主に北部・北中部・南部に分布している。年間 CO2排出量 が 300 ~ 1,000kt または 1,000 ~5,000kt である石炭火力発電所がベトナム国内の約 90%を占め ている。



天然ガス火力発電×貯留地

天然ガス火力発電所は主にベトナム南部に分布している。天然ガス火力発電所の年間 CO2排出量は 1,000 ~5,000kt のものが多い。

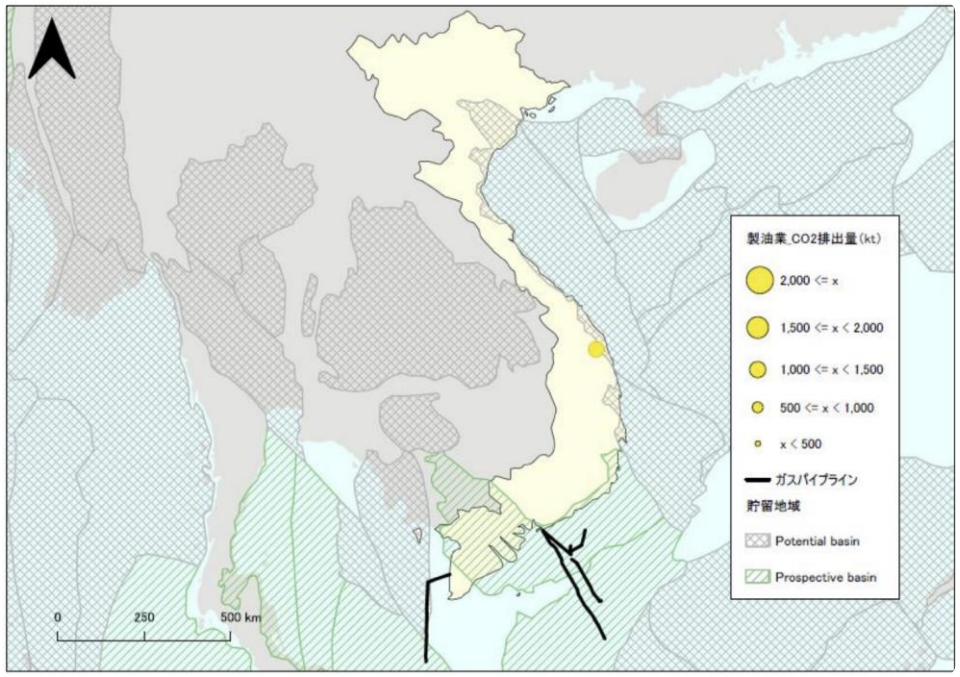


Source：令和2年度二国間クレジット取得等のためのインフラ整備調査事業（国際貢献定量化及びJCM実現可能 性調査（CCUS含む）、人材育成事業支援事務局及 びCEFIA国内事務局業務）報告書

ベトナムの製油所は中部に多く分布し年間CO_2排出量は1,000～1,500kt規模が中心、製鉄所は北部にあり100～500kt規模が多く、排出量・数ともに比較的少ない

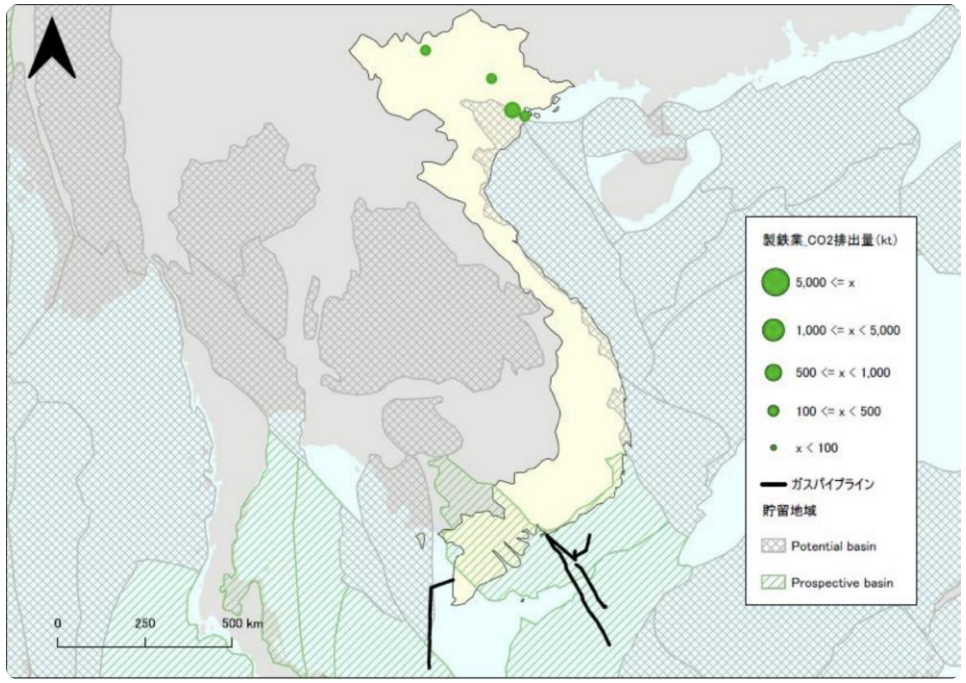
製油所・ガス×貯留地

製油所は主にベトナム中部に分布している。製油所の年間 CO2 排出量は 1,000 ~1,500kt 程度のものが多い



製鉄所×貯留地

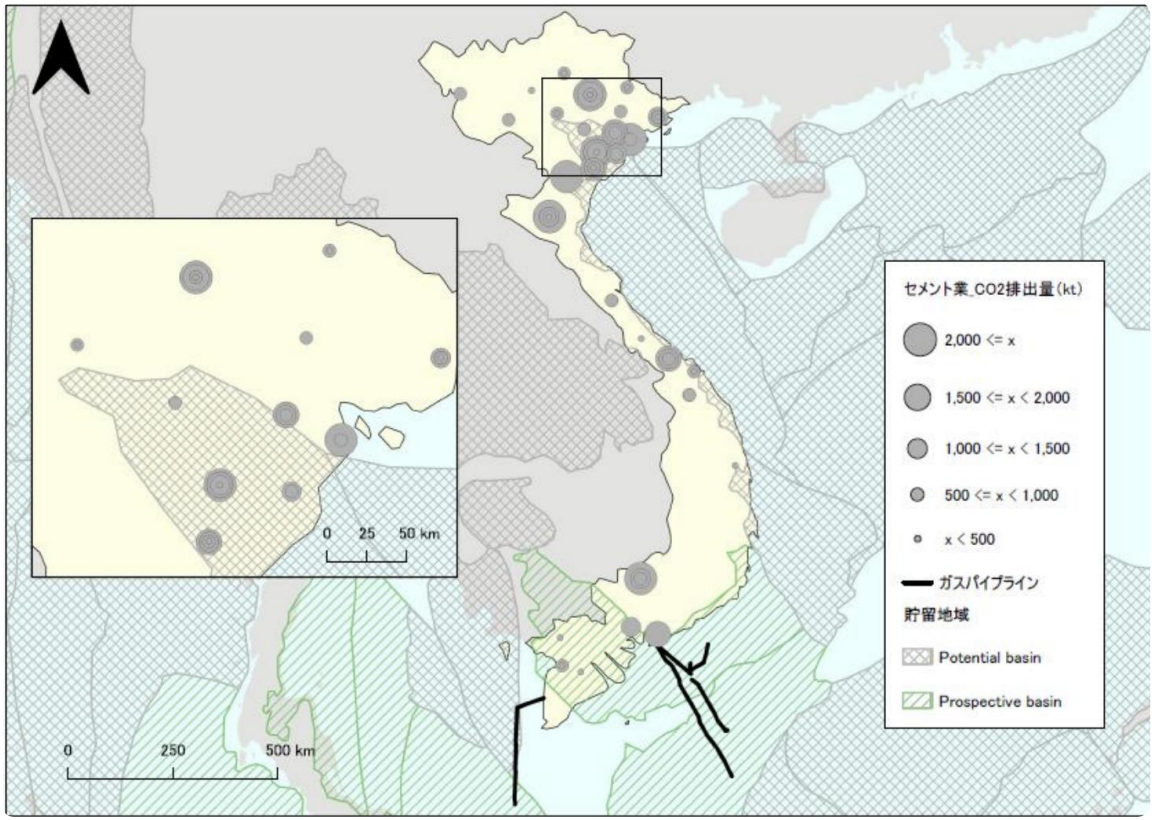
製鉄所は主にベトナム北部に分布している。製鉄所の年間 CO2 排出量は 100 ~500kt 程 度のものが多い。同北部にある排出源（石炭火力発電所等）と比較して、数も排出量も少な い



Source：令和2年度二国間クレジット取得等のためのインフラ整備調査事業（国際貢献定量化及びJCM実現可能性調査（CCUS含む）、人材育成事業支援事務局及びCEFIA国内事務局業務）報告書

ベトナムのセメント工場は全国に分布するが特に北部に集中し、年間CO_2排出量は工場ごとの規模によって500～2,000kt超まで幅広い

セメント×貯留地



Description

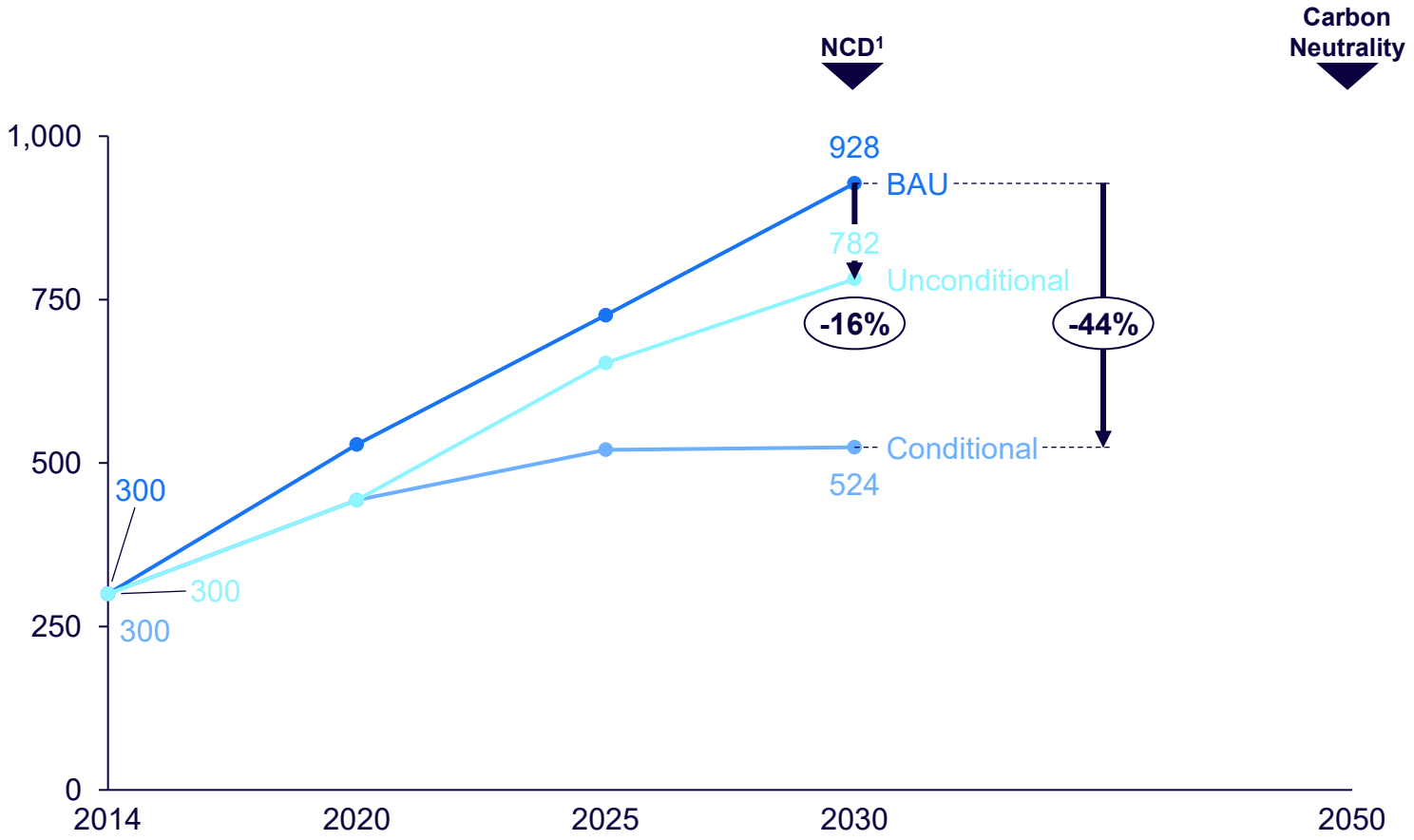
セメント工場はベトナム全国に幅広く分布しているが、南部・中部よりも北部の 方に密集している。セメント工場の年間 CO2 排出量は様々であり、それぞれの規模による ものと考えられる。

Source：令和2年度二国間クレジット取得等のためのインフ ラ整備調査事業（国際貢献定量化及びJCM実現可能 性調査（CCUS含む）、人材育成事業支援事務局及 びCEFIA国内事務局業務）報告書

ベトナムは2022年のNDC改定で2030年GHG削減目標を強化し、無条件で15.8%、国際支援を前提とする条件付きで43.5%削減（BAU比）を掲げた

GHG emission reduction target in NDC[1] 2022

Million tCO_2e



Note: 1) NDC = Nationally Determined Contribution
Note: NDC 2022, Arthur D. Little analysis

Remarks

- In November 2022, Vietnam submitted its updated Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC), outlining its enhanced commitments to reduce greenhouse gas emissions
- This update significantly increased both unconditional and conditional emission reduction targets compared to the previous NDC in 2020
  - Compared to the 2020 NDC, unconditional cuts rose from 9% to 15.8% and conditional cuts from 27% to 43.5% (relative to BAU).

ベトナムは再エネ導入を軸に温室効果ガス削減を推進。助成金・税制優遇・排出権取引に加え、石炭火力新設禁止や排ガス規制強化を組み合わせ2050年の再エネ比率80%達成を目指す

	GHG Target Action	Details (Selected example)
アメの政策	助成金	• Exemptions from the land use fees • Feed-in tariff (FiT)	• Land lease exemptions for up to 3 years during construction and 11–15 years after completion • Feed-in-tariffs for RE project (Wind, Solar, Biomass, Waste to energy)
	税制優遇措置	• Tax related incentives such as reduced overall tax or tax exemptions overall financial viability	• RE projects can get CIT rates as low as 10% for up to 15yrs (17% for up to 10yrs in difficult areas) with tax holidays of up to 4yrs full exemption. • Import duty exemption on fixed assets and unavailable materials for RE projects for up to 5 year
ムチの政策	排出権取引制度 (ETS)	• Carbon credit trading system to meet carbon credit/emission related criteria	• Launch of pilot emissions trading system (ETS) in August 2025 and the development of a fully functional carbon market by 2029.
	罰則	• Penalty imposed via increased taxes	• Increase tax on oil and petroleum products • Carbon tax to be introduced as a part of emission trading scheme according to Environmental Protection Law (2022)
	規制	• Mandates to increase renewable energy mixture ratio • Limiting new coal fire plant construction • Higher emission standard for all road vehicles	• Target to have RE share up to ~80% in the energy mix by 2050 • No new coal-fired power plant will be approved after 2030, and coal plant will be completely phased out by 2050 • Road vehicles to apply EURO 5 emission standard by 2022

Source: Arthur D. Little Analysis, Secondary Research, Expert Interview

ベトナムは2030年に向け、エネルギー部門で再エネ拡大と高効率発電導入により51.5MtCO_2eq削減、産業で7.2Mt、廃棄物で9.1Mt、農業で6.8Mt削減を目指している

産業別		GHG emission reduction target	Selected measures to promote GHG reduction
エネルギー起源		• **51.5** MTCO2eq. by 2030 – 5.5% reduction compared to BAU scenario	• Energy usage: – Use of high-efficiency house appliances in commercial and residential buildings – Increase of the load factor of cars; use of CNG and biofuels; use of electric motorbikes, cars, and buses. • Energy supply: – Development of renewable energy such as small hydroelectricity, wind energy, solar energy; – Use of combined gas turbine technology using LNG; development of supercritical thermoelectric technologies
非エネルギー起源	産業プロセス	• **7.2** MTCO2eq. by 2030 – ~0.8% reduction compared to BAU scenario	• Use of natural mineral additives to replace clinker • Use of additives that are waste from the clinker replacement industry
	廃棄物	• **9.1** MTCO2eq. by 2030 – 1% reduction compared to BAU scenario	• Implementation of measures to manage and reduce solid waste generation; • Development and application of solid waste recycling technologies; • Production of compost and refuse-derived fuel (RDF); recovery, burning and use of methane from solid waste landfills
	農業	• **6.8** MTCO2eq. by 2030 – ~0.7% reduction compared to BAU scenario	• Application of integrated crop management solutions and farming technologies such as alternating wet and dry irrigation and SRI in areas with adequate infrastructure Circulation of agricultural waste as organic fertilizer; development of using biogas.

Note: 1) Energy usage includes energy generation and consumption e.g., Power generation, Transport, Manufacturing
Source: Ministry of Environment and Water (KASA)

ベトナムはニントゥアン省に2基の原発を建設し、2030年までに6,400MWの原子力容量を達成する計画で、ロシアなど国際パートナーと協力し2030～35年に稼働を目指している

Roadmap to Realize Nuclear Power Plan in Vietnam

Feb 2025

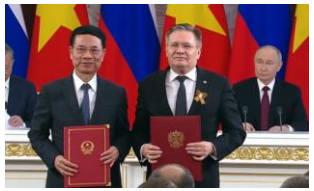
- The Prime Minister assigned state-owned enterprises PVN and EVN to construct two nuclear power plants in Ninh Thuan by 2030

April 2025

- Vietnam revised PDP8[1] to include nuclear energy in the national energy plan
- Target capacity of 4,000-6,400 MW by 2030-2035, and 10,500-14,000 MW by 2050

May 2025

- Vietnam and Russia's Rosatom signed a roadmap for the development of nuclear technologies
- Negotiations on the provision of nuclear reactors are currently underway



2025 - 2030

- Target to complete of the construction and renovation of 500 kV transmission lines connecting the plants and southern regions

2030 - 2035

- Target to complete two nuclear power plants in 2030
- The plants are expected to operate in 2030 - 2035 with an expected capacity of 2,000 MW - 3,200 MW

Note: 1) PDP8 = National Power Development Plan
Sources: Decision No. 768/QD-TTg, Rosatom press release, and News articles

ベトナムは2030年までにエネルギー消費の8～10%削減を目標に掲げ、省エネ法改正や性能基準・ラベリング義務化、ESCOモデル推進、国際機関との協力を通じて省エネ施策を強化している

Energy Saving Targets

Context

- In 2018, Vietnam announced **National Energy Efficiency Program (VNEEP) III** aimed at enhancing energy efficiency, reducing energy consumption, and promoting sustainable development.
- The plan lays out **Vietnam's energy saving targets** from 2019-2025 and 2019-2030.

VNEEP III Energy Savings Target Road Map

Timeline	2019 - 2025	2019 - 2030
Target	**5% – 7% energy saving** on overall national energy consumption	**8% – 10% energy saving** on overall national energy consumption

Government Actions

- To realize the energy saving target, the government has been **actively setting up different regulations**
  - National Assembly adopted Amendment Law on Energy Efficiency and Conservation (No. 77/2025/QH15) to enhance state oversight of energy efficiency by mandating energy labelling, requiring metering for major energy users, and boosting ESCO[1] models
  - Decision No. 04/2017/QD-TTg specifies energy performance standards and energy labelling for appliances and vehicles.
  - Decision QCVN 09:2017/BXD (sets energy efficiency standards for large buildings (≥ 2,500 m²).
- In addition, the government also **works with international institutions** to promote the adoption of energy efficiency projects
  - In 2019 the government approved VSUEE[2], which tapped onto funding from the World Bank to provide credit guarantees and financing for ESCOs and enterprises for energy efficiency projects

National Assembly meeting to pass Amendment Law on Energy Efficiency and Conservation

Note: 1) ESCO = Energy Service Companies; 2) VSUEE = Vietnam Scaling Up Energy Efficiency Project,
Sources: National Energy Efficiency Program (VNEEP) III, News Articles, Arthur D. Little anlaysis

Contents

ベトナムの電気法2024改正は、発電分野で民間参入を競争入札により促進する一方、送電・配電は国家独占を維持し、安定した系統運用と再エネ投資促進の両立を図っている

Selected Amendments in Electricity Law 2024

- **Streamlined approvals**: Simplifies investment procedures and land use for energy projects
- **More competitive bidding process**: Power projects under PDP8 with multiple investors must go through transparent bidding
- **State control of critical assets**: national power dispatching system, nuclear power plant, strategic hydropower plants, high voltage transmission grids, and operation of state-invested national transmission grid;

Selected Market Entry Regulations across Value Chain

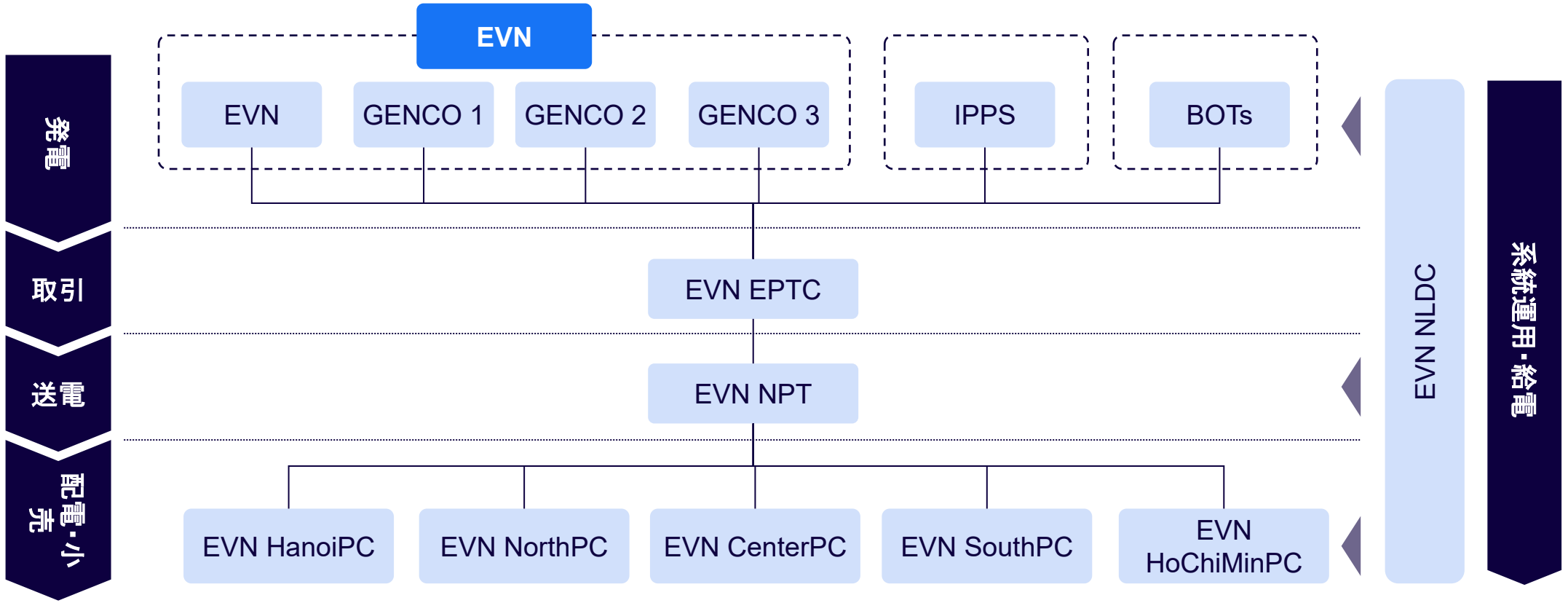
Generation	Transmission	Distribution
Liberalization for private players	*Maintain state monopoly position for high-voltage system*	*Maintain state monopoly position for power dispatching system*
Decree 56/2025/ND-CP	Decree 56/2025/ND-CP	
Selection of Investors for Power Projects: Sets a competitive bidding process for power generation investors, evaluated by proposed tariffs or state budget contributions	**State Monopoly: T**he national high-voltage power transmission system (>220 kV) continues to be state-owned and operated by EVN NPTC. Private companies cannot own or operate the main transmission grid	*The Electricity Law 2024 stipulates state control of the national power dispatch system, with no subsequent decree referencing this provision.*

Vietnam retains **state control over transmission and distribution** due to their natural monopoly and strategic important for a stable grid, while allowing competition in generation to **attract investments**, **improve efficiency**, and **promote renewable energy development**

Source: Vietnam Briefing, Vietnam Investment Review, various news articles, Arthur D. Little analysis

ベトナムの電力市場は発電が自由化され、EVN傘下のGENCOや民間IPP・BOTが発電を担う一方、送電・配電はEVN系子会社が運営し、国家機関（NLDC）が系統運用を統括している

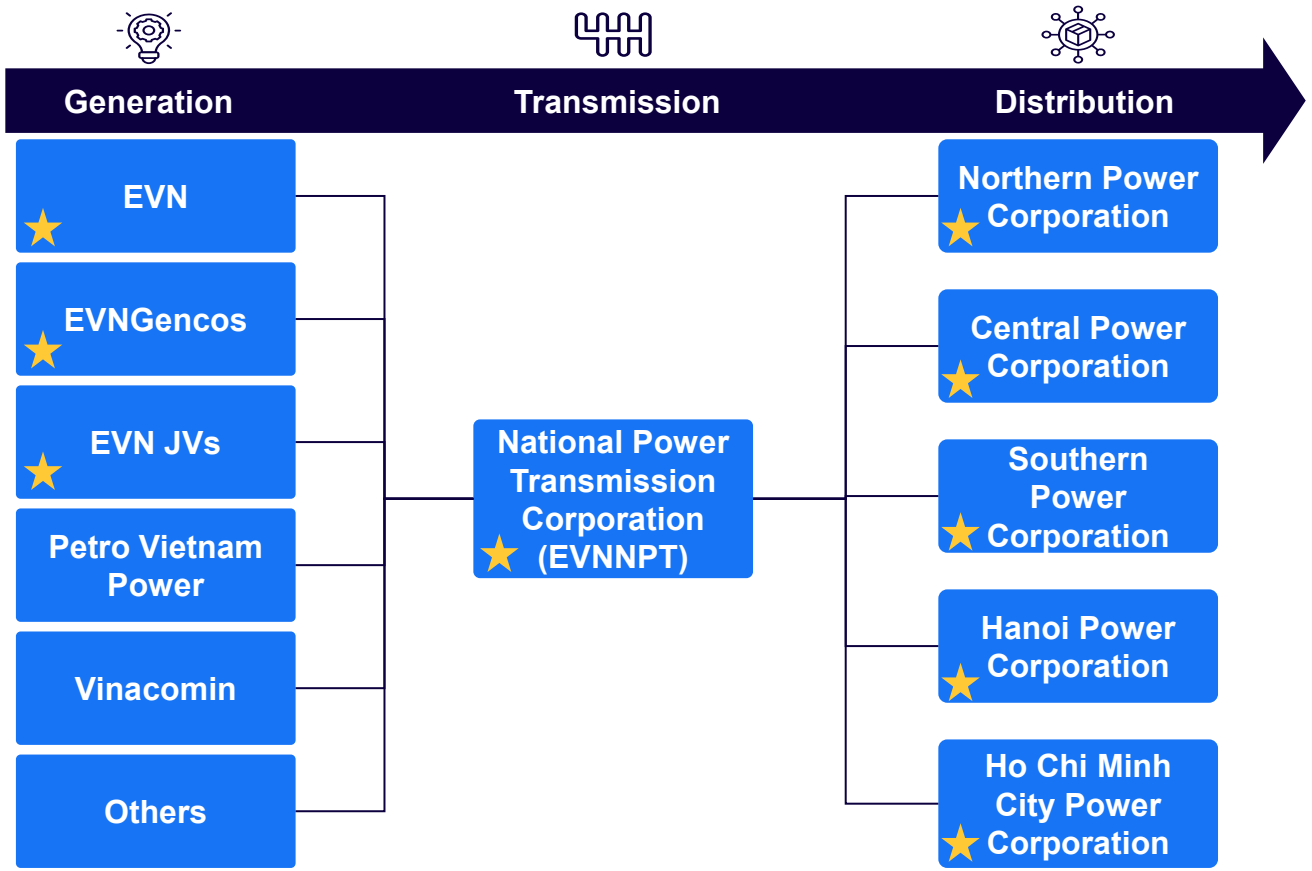
Vietnam Power Generation Structure



Source: JICA「ベトナム国電力セクターにまつわる情報収集・確認調査」, EVN Annual Report 2023

ベトナムの電力セクターはEVNが中心で、発電子会社や合弁会社を通じて発電に関与しつつ、送電はEVNNPTが独占、配電も5つの地域配電会社を通じて全国をカバーしている

Value chain of the power sector



EVN **monopolizes electricity distribution** through three power corporations across Vietnam as well as the National Load Dispatch Centre which controls the electricity load and conduct market trading

- EVN owns **National Power Transmission Corporation (EVNNPT)** which is responsible for development and operation of Vietnam's power transmission system
  - Charges distribution companies for using the transmission network, with the price set by the Electricity Regulatory Authority of Vietnam
- It also manages the **five distribution companies** that cover all provinces and cities, and sells electricity to end users countrywide, namely Northern Power Corporation (EVNNPC), Central Power Corporation (EVNCPC), Southern Power Corporation (EVNSPC), Hanoi Power Corporation (EVNHANOI) and Ho Chi Minh City Power Corporation (EVNHCMC)

Source: EVN Annual Report 2023, 2021 and 2018

ベトナムは発電市場を2011年に自由化、2016年から卸電力市場、2021年から小売市場の自由化を段階的に進め、2024年にはNLDCをEVNから分離し独立市場運営者として再編した

Roadmap for the development of electricity power liberation

Competitive Generation Market (VCGM) (2011 – 2015)

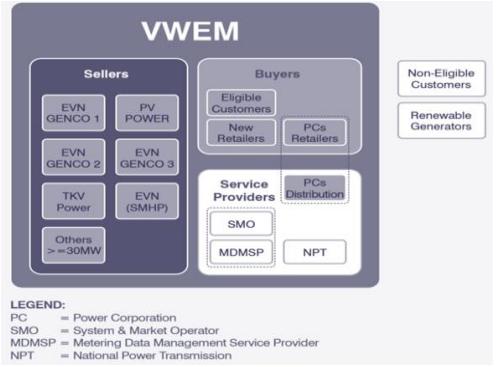
- VCGM **started** on July 01, **2011** and was followed by full VCGM on July 01, 2012.
- The VCGM has operated for more **than 5 years** with the **tasks** including: (1) Construction and operation of the IT infrastructure for the electricity market; (2) Development of procedures, regulations for electricity market; (3) Training human resources for the electricity market operation
- **Since 2018**, the Vietnam's competitive generation market has been operating in a transparent manner
- **90 power plants** with a total installed capacity of **23,054 MW** directly participated in the electricity market, accounting for **52.6%** of the national power system.

Electricity Wholesale Market (VWEM) (From 2016, full operation 2019 – 2021)

- The Vietnam's wholesale electricity market (VWEM) has been **piloted since 2018**, in which Power Purchase Agreement of nominated power plants were located to Power Corporations while specific trade volume and payment were contracted following market base.
- **Since early 2019**, the VWEM (wholesale electricity market) has **officially operated**.
- By the end of 2020, **100 power plants** directly participated in the power market with a total installed capacity of **27,640** MW, accounting for **40%** of the national power system.

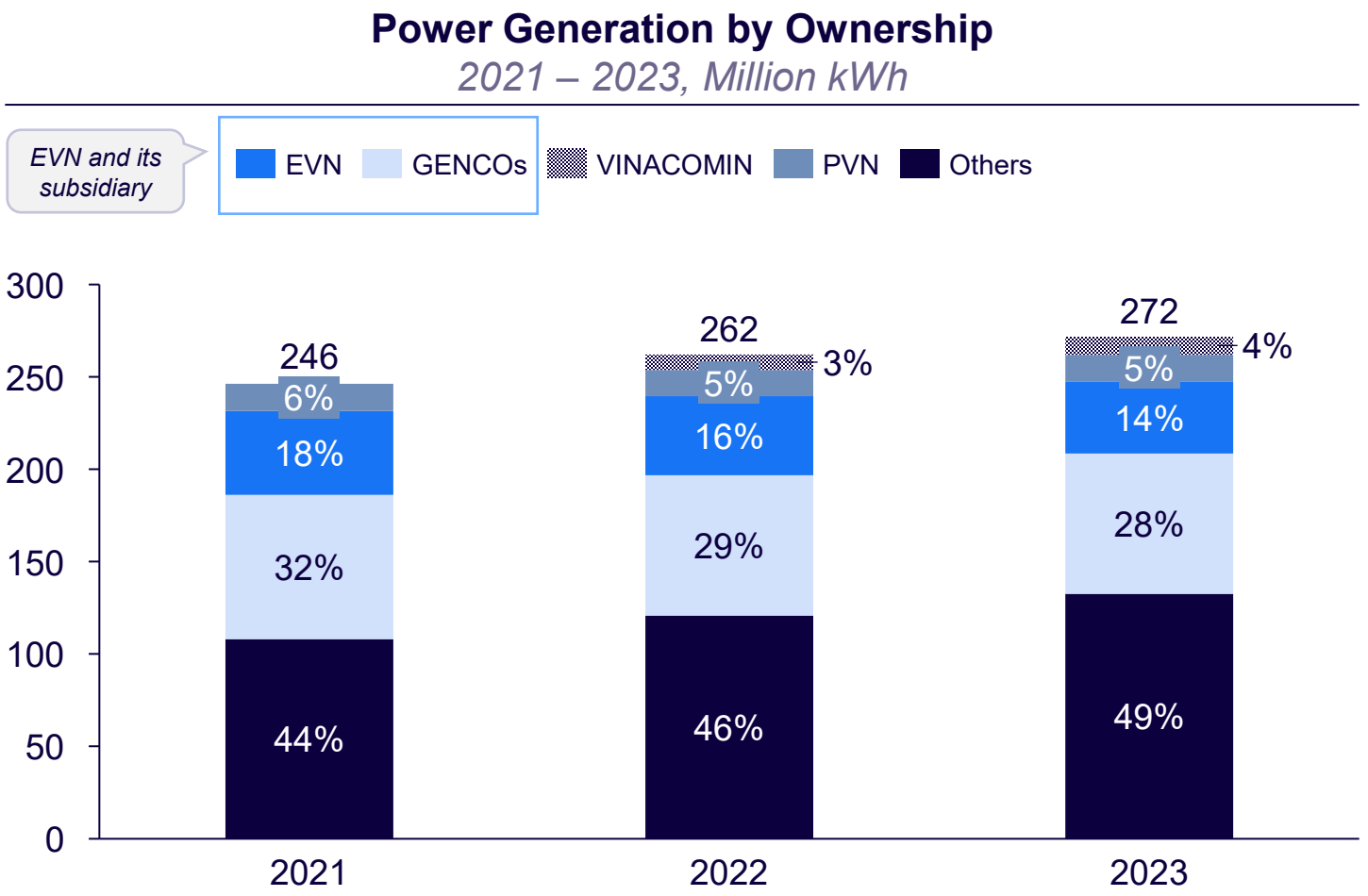
Electricity Retail Market (VREM) (From 2021, full operation in 2023)

- Moving towards a **competitive retail power market**, where end users can freely choose their electricity suppliers
- In **2024**, the National Load Dispatch Center was **spun off from EVN** and restructured under MoIT, forming an independent market operator



Source: EVN Annual Report 2023, 2021, 2018, and 2016

EVNおよびその子会社GENCOの発電市場シェアは、民間や外国資本の参入拡大に伴い、時間とともに徐々に縮小



Description

- From 2021 to 2023, EVN and its subsidiaries (GENCOs) have seen a slight decline in market control, with their combined share falling from 50% in 2021 to 42%.
- Meanwhile, other players, including state-owned energy companies such as PVN and Vinacomin, as well as foreign and domestic enterprises, have expanded their share from 50% to 58%.

Source: EVN Annual Reports, Vietnam Wholesale Electricity Market Report 2021 by EVN, Arthur D. Little analysis

ベトナムは再エネ投資促進のため、土地使用料免除、法人税優遇（最大15年間10%）、設備輸入関税免除、低利融資（最大投資額の70%・最長12年）など多様なインセンティブを提供 NON-EXHAUSTIVE

Applicable incentives offered for renewable energy projects

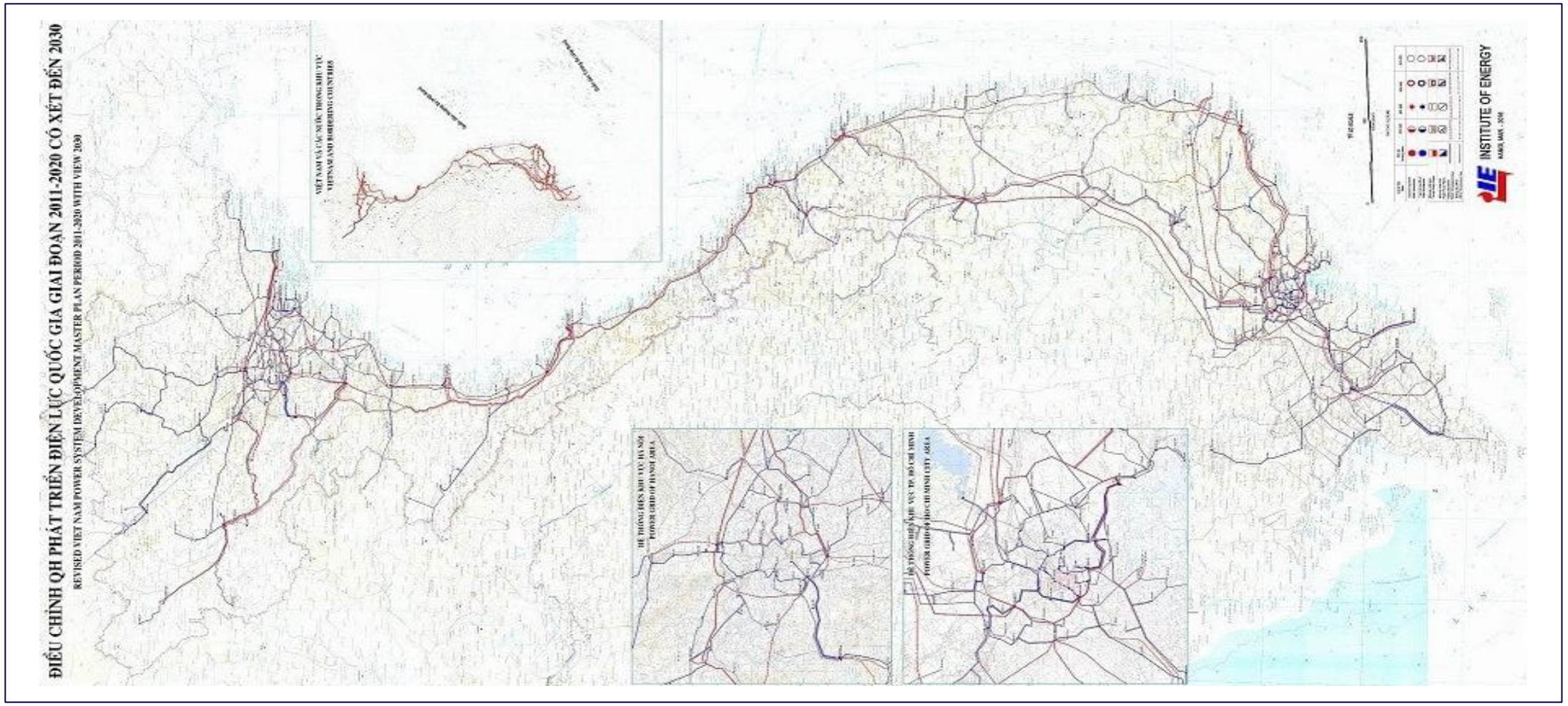
Description	Details
Reduction or exemption of fees	• Potential exemption of land rental for up to 3 years • Power developers using 100% green hydrogen or green ammonia can benefit from fee exemptions for up to 12 years (exemption from maritime area use fees for 3 year during infrastructure development, and a 50% reduction for the next 9 years)
Corporate income tax	• A preferential tax rate of 10% for 15 years from the year the project generates revenue • 4 years exemption and reduction of 50% of the payable tax in the next 9 years • The current standard CIT rate in Vietnam is 20%
Exemption of import duties	• For equipment and machinery imported to create fixed assets of the renewable energy projects
Capital incentives	• Access to low-interest loan from VDB: can obtain loans of up to 70% of the investment cost, with the maximum term of 12 years, at an interest rate equivalent to government bond interest rates with a term of 5 years plus 1%

Various incentive schemes are **in place to support investors**, covering capital, land rental, corporate income tax, and import duties

Source: Freshfield Bruckhaus Deringer 2021, Clifford Chance 2017, Vietnam Plus 2023, Reccessary 2025

Contents

発電所のマップ



Source: Institute of Energy

発電所一覧 (1/9): EVN & GENCO

#	Power plant name	Installed capacity, MW	Owner
a	**Coal-fired**		
1	Duyen Hai 1	1245	EVN
2	Duyen Hai 3	1245	EVN
3	Hai Phong 1–2	1200 (4x300)	EVNGENCO 2
4	Mong Duong 1	1120	EVNGENCO 3
5	Nghi Son 1	600 (2x300)	EVNGENCO 1
6	Thai Binh 1	600 (2x300)	EVN
7	Uong Bi I extension	300	EVNGENCO 1
8	Uong Bi I	105 (1x50, 1x55)	EVNGENCO 1
9	Uong Bi II extension	330	EVNGENCO 1
10	Vinh Tan 2	1245	EVNGENCO 3
11	Vinh Tan 4	1200 (2x600)	EVN
b	**Gas Turbine**		
1	O Mon	2x330	EVNGENCO 2
c	**Solar**		
1	Vinh Tan Power Center Phase 1	6.2	EVNPECC 2
2	Vinh Tan Power Center Phase 2	34.9	EVNGENCO 3
3	Phuoc Thai 1	42	EVN
4	Dien Luc Mien Trung	50	EVNCPC
5	Se San 4	40.6	EVNPMB 2
d	**Wind**		
6	Phu Lac wind farm	24	EVN

#	Power plant name	Installed capacity, MW	Owner
e	**Hydroelectricity**		
1	Lai Chau #2, 3	2x400	EVN
2	Huoi Quang #2	260	EVN
3	Bung River 2	2x50	EVNGENCO 2
4	Thuong Kon Tum	2x110	EVN
5	Ka Nak	13	EVNGENCO 2
6	Hoa Binh expansion	2x240	EVN
7	Ialy expansion	2x180	EVN
8	Tri An expansion	200	EVN

Source: Wikiwand

発電所一覧 (2/9)：その他発電事業者

#	Power plant name	Installed capacity, MW
a	**Coal-fired**	
1	An Khanh 1 (Khanh Hoa power station)	120 (2x60)
2	Cam Pha Phase I-II	680 (2x340)
3	Cao Ngan	115 (2x57.5)
4	Dong Nai Formosa Unit 1–2	300 (2x150)
5	Dong Nai Formosa Unit 3	150
6	Formosa Ha Tinh	650
7	Lee & Man	125 (1x50, 1x75)
8	Mao Khe	440 (2x220)
9	Mong Duong 2	1245
10	Na Duong 1	110 (2x55)
11	Ninh Binh	100 (4x25)
12	Nong Son 1	30
13	Pha Lai 1	440 (4x110)
14	Pha Lai 2	600 (2x300)
15	Quang Ninh 1–2	1200 (4x300)
16	Son Dong	220 (2x110)
17	Thang Long (Le Loi power station)	620 (2x310)
18	Vedan Vietnam Cogeneration	60
19	Vinh Tan 1	1240 (2x620)
20	Vung Ang 1	1200 (2x600)

#	Power plant name	Installed capacity, MW
b	**Gas Turbine**	
1	Ca Mau 1&2 gas power plant	2x750
2	Nhon Trach 1 gas power plant	450
3	Nhon Trach 2 Combined Cycle Gas Turbine Plant	750
4	Phu My 2.1	477
5	Ba Ria	340
6	Phu My 2.1 extension	468
7	Phu My 4	477
8	Phu My 1	1118
9	Phu My 3	720
10	Phu My 2.2	720
11	Ca Mau 1&2 gas power plant	2x750
12	Nhon Trach 1 gas power plant	450
13	Nhon Trach 2 Combined Cycle Gas Turbine Plant	750
14	Phu My 2.1	477
15	Ba Ria	340
16	Phu My 2.1 extension	468
17	Phu My 4	477
18	Phu My 1	1118
19	Phu My 3	720
20	Phu My 2.2	720

Source: Wikiwand

発電所一覧 (3/9)：その他発電事業者

#	Power plant name	Installed capacity, MW
c	**Solar**	
1	TTC Phong Dien	35
2	TTC Krong Pa	49
3	BP Solar 1 (Vietnamese power plant)	37.5
4	Srepok 1	42.1
5	Long Thanh 1	43.8
6	Quang Minh solar power	40.9
7	TTC 1 solar power	48
8	TTC 2 solar power	40.8
9	BIM 1	25
10	BIM 2	199.3
11	BIM 3	41.2
12	Yen Dinh solar power	30
13	TTC Ham Phu II	40.8
14	Da Mi Floating	42.5
15	Sao Mai Solar PV1 Phase 1 & 2	174
16	Mui Ne	32.5
17	Hong Phong 4	40
18	LIG Quang Tri	40.8
19	Hau Giang	29
20	Hong Phong 1A	150
21	Hong Phong 1B	100

#	Power plant name	Installed capacity, MW
22	Hong Liem 3	42
23	Cu Jut solar power	50
24	Nhi Ha - Thuan Nam 13	40
25	CMX Renewable Energy Vietnam	131.3
26	Thuan Nam 19	49
27	Ninh Phuoc 6.1, 6.2	49
28	Dam Tra O	41.7
29	Dohwa Le Thuy	47.6
30	Cam Hung	23.2
31	Cat Hiep	42
32	Ha Do Ninh Phuoc	40
33	Phuoc Huu	50
34	Song Luy 1	39
35	SP – Infra Ninh Thuan	
36	Bau Ngu Lake	37.4
37	Gelex Ninh Thuan	42
38	Xuan Tho 1	45.9
39	Xuan Tho 2	45.9
40	BCG Bang Duong/BCG-CME Long An 1	31.25
41	Cam Lam VN	45
42	KN Cam Lam	45
43	Hoa Hoi (power station)	214.2

Source: Wikiwand

発電所一覧 (4/9)：その他発電事業者

#	Power plant name	Installed capacity, MW
c	**Solar**	
44	Truc Son	36.5
45	Phong Phu	38
46	BMT Solar farm Dak Lak	25
47	Jang Pong Solar farm Dak Lak	24
48	Mo Duc solar farm	19.2
49	Binh Nguyen solar farm	40.8
50	AMI Khanh Hoa	47.5
51	KN Van Ninh	86.7
52	Krong Pa 2	39
53	Loc Ninh 1	187.5
54	Loc Ninh 2	187.5
55	Loc Ninh 3	125
56	Loc Ninh 4	162
57	Loc Ninh 5	40
58	Long Son	140
59	My Hiep	40.8
60	Phu My 1	100
61	Phu My 2	93.8
62	Phu My 3	81.3
63	Phuoc Ninh	36.9
64	Song Giang	42

#	Power plant name	Installed capacity, MW
65	Tan Chau 1	41.2
66	Thac Mo	40.8
67	Thanh Long Phu Yen	32.8
68	Thien Tan 1.2	85.4
69	Thien Tan 1.3	43
70	Thien Tan Solar	43
71	Thuan Nam Duc Long	43
72	Trung Nam Thuan Nam	450
73	Trung Son	29.6
74	VNECO	42
75	Xuan Thien - Ea Sup 1	600
76	Chu Ngoc - EVNLICOGI 16	12.8
77	Vinh Hao solar farm	30
78	Vinh Hao 4 solar farm	36.8
79	Vinh Hao 6 solar farm	40.6
80	Van Giao 2 solar power	40
81	Van Giao 1 solar power	40
82	Solar Park 01	40.8
83	Solar Park 02	40.8
84	Cam Hoa solar farm	43.8
85	Eco Seido Tuy Phong	40
86	TTC Duc Hue 1	40.8

Source: Wikiwand

発電所一覧 (5/9)：その他発電事業者

#	Power plant name	Installed capacity, MW
c	**Solar**	
87	Trung Nam Ninh Thuan solar power	204
88	Da Bac solar power	48
89	Da Bac 2 solar power	48
90	Da Bac 3 solar power	42
91	Da Bac 4 solar power	42
92	Dau Tieng 1, 2	350
93	Dau Tieng 3	60
94	VSP Binh Thuan II	26.5
95	Binh Hoa	10
96	Ham Kiem	45
97	KCN Chau Duc	58
98	Thuan Minh 2	42.5
99	Thinh Long - AAA Phu Yen	43.8
100	Tuan An	10
101	Phong Dien 2	40
102	Fujiwara Binh Dinh	40
103	My Son	50
104	My Son 2	40
105	Sinenergy Ninh Thuan 1	42.5
106	Hacom Solar	46
107	Tuy Phong	30

#	Power plant name	Installed capacity, MW
108	EuroPlast Long An	40.8
109	EuroPlast Phu Yen	40.6
110	Solar Park 03, Solar Park 04	83
111	Bach Khoa A Chau 1	24.2
112	Tri Viet 1	24.2
113	HCG	40
114	HTG	40
115	Phan Lam 1 solar power	30
116	Phan Lam 2 solar power	
117	Gio Thanh 1,2	83.5
118	Thuan Nam 12	46
119	Thuan Nam 19	49
120	Nui Mot Lake solar power plant	42.5
121	Trung Nam Tra Vinh solar power	140.8
122	Binh An	42.5
123	Bau Zon	20
124	Nhon Hai Solar Farm	28
125	Hong Phong 5.2	38.4
126	Phuoc Huu - Dien luc 1	28.1
127	My Son - Hoan Loc Viet	37.5
128	Adani Phuoc Minh	38
129	Xuan Thien Thuan Bac - 1	125

Source: Wikiwand

発電所一覧 (6/9)：その他発電事業者

#	Power plant name	Installed capacity, MW
c	**Solar**	
130	Xuan Thien Thuan Bac - 2	75
131	Gia Hoet 1	27.5
132	Tam Bo	27.5
133	Sơn My 3.1	43
d	**Wind**	
1	Tuy Phong Phase 1	30
2	Mui Dinh	37.6
3	Dong Hai 1	50
4	Phu Quy [vi]	6
5	Bac Lieu (phase I, II)	99.2
6	Dam Nai (phase I)	7.8
7	Dam Nai (phase II)	30
8	Huong Linh 1	30
9	Huong Linh 2	30
10	Trung Nam Ninh Thuan phase 1	39.95
11	Trung Nam Ninh Thuan phase 2	64
12	Trung Nam Ninh Thuan phase 3	48
13	Dai Phong wind farm	40
14	HBRE Tay Nguyen phase 1	28.8
15	Phuong Mai 3	20.8

#	Power plant name	Installed capacity, MW
e	**Hydroelectricity**	
1	Sơn La Dam	6x400
2	Lai Chau	1200
3	Ban Chat	220
4	Huoi Quang	520
5	Hoa Binh	1960
6	Tuyen Quang	342
7	Pleikrong	100
8	Yaly	720
9	Se San 3	260
10	Se San 4	360
11	Tri An	400
12	Thac Mo expansion	75
13	Ban Ve	320
14	Khe Bo	100
15	Trung Son	4x65
16	Quang Tri	64
17	A Vuong	210
18	Buon Tua Srah	86
19	Buon Kuop	280
20	Srepok 3	220

Source: Various secondary sources

発電所一覧 (7/9)：その他発電事業者

#	Power plant name	Installed capacity, MW
e	**Hydroelectricity**	
1	Song Tranh 2	190
2	An Khe	160
3	Song Ba Ha	220
4	Song Bung 4	156
5	Dong Nai 3	180
6	Dong Nai 4	340
7	Thac Mo	150
8	Da Nhim	160
9	Da Nhim expansion	80
10	Ham Thuan	300
11	Da Mi	175
12	Dai Ninh	300
13	Ba Thuoc 1	60
14	Ba Thuoc 2	80
15	Bac Ha	90
16	Bac Me	45
17	Bao Lam 3	50.6
18	Chiem Hoa	48
19	Chi Khe	41
20	Cua Dat	97
21	Hua Na	180

#	Power plant name	Installed capacity, MW
22	Huong Son	33
23	Muong Hum	32
24	Nam Chien 1	200
25	Nam Chien 2	32
26	Nam Cun	40
27	Nam Muc	44
28	Nam Na 2	66
29	Nam Na 3	84
30	Nam Phang	36
31	Nam Toong	34
32	Ngoi Hut 2	48
33	Ngoi Hut 2A	8.4
34	Ngoi Phat	72
35	Nhan Hac A	55
36	Nhan Hac B	4
37	Nho Que 1	32
38	Nho Que 2	48
39	Nho Que 3	110
40	Song Bac	42
41	Su Pan 2	34.5
42	Ta Thang	60
43	Thac Ba	120

Source: Wikiwand

発電所一覧 (8/9)：その他発電事業者

#	Power plant name	Installed capacity, MW
e	**Hydroelectricity**	
44	Thai An	82
45	Thuan Hoa	42
46	Van Chan	57
47	A Luoi	170
48	Binh Dien	44
49	Dakdrinh	125
50	Dak Mi 3	63
51	Dak Mi 4	208
52	Dak R'Tih	144
53	Dong Nai 5	150
54	Huong Dien	81
55	Krong H'nang	64
56	Se San 3A	108
57	Se San 4A	63
58	Song Bung 4A	49
59	Song Bung 5	57
60	Song Con 2	63
61	Song Giang 2	37
62	Song Tranh 3	62
63	Srepok 4	80
64	Srepok 4A	64

#	Power plant name	Installed capacity, MW
65	Vinh Son	66
66	Song Hinh	70
67	Bac Binh	33
68	Can Don	77.6
69	Da Dang 2	34
70	Dam Bri	75
71	Dong Nai 2	73
72	Srokphumieng	51
73	Small hydro North	1931
74	Small hydro Center	1137
75	Small hydro South	254
76	Sông Pha	7.5
77	My Ly	250
78	Nam Mo	90

Source: Wikiwand

発電所一覧 (9/9)：その他発電事業者

#	Power plant name	Installed capacity, MW
f	**Biomass**	
1	KCP - Phu Yen Phase 1	30
2	Tuyen Quang	25
3	An Khe	110
4	Go Cat	2.5
5	Can Tho	7.5
6	Nam Son	2
7	Sugar mills	150
8	Soc Son	90
9	KCP - Phu Yen Phase 2	30

Source: Wikiwand

2024年、ニョンチャックLNG火力発電所は土地賃料紛争で6か月遅延したが、政府の介入により解決が進み、2025年6月時点で99.7%完成している

Land Disputes in Nhon Trach Delayed LNG Project Development

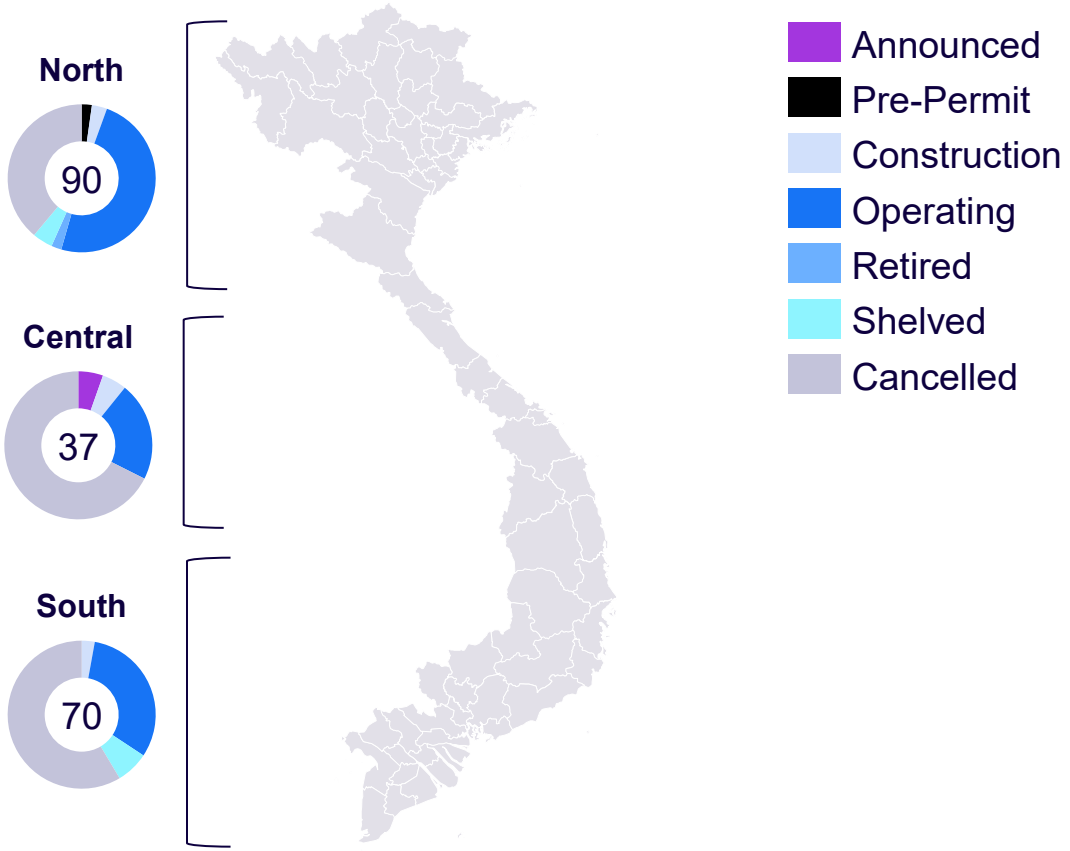
Project Overview	The **Nhon Trach 3 and 4 Thermal Power Projects**, worth $1.4 Bn, have a combined capacity of 1,500MW and are expected to generate 9 Bn kWh of electricity annually
Land Dispute Breakdown	As reported in May 2024 • PetroVietnam Power, the developer, was unable to secure a lease agreement for the remaining 30.7-hectare plot of land the project required due to the **exorbitant land lease rate** demanded by Tin Nghia, the industrial park developer • The land lease rate demanded was nearly **30 times higher** than that of an adjacent plot which PV Power already pays for
Implications	• As reported in **May 2024**, the projects were **delayed for ~6 months** with the potential **daily losses estimated at VND13 Bn**
Latest Status	• Given the project's importance, the central government stepped in to mediate and set a deadline for Dong Nai provincial authorities to issue a land use rights certificate to PV Power • **As of June 2025**, **99.7% of the project** is completed, with all procurement and equipment installation finalized

Source: Various secondary sources

ベトナムでは197件の石炭火力プロジェクトのうち稼働中74件、建設中7件に対し、残りの大半は中止・棚上げとなっており、これは2050年石炭ゼロ目標を反映した電力開発計画の影響

Coal Fired Power Plant

2025



Description

- According to Global Energy Monitor, out of **197 Coal-fired projects in Vietnam**, **74 of them are operating** and other **7 are under construction.**
- While the number of projects being cancelled or shelved or in pre-permit accounts for a larger portion with 101, 9, and 2 projects, respectively.
- This significant number of Coal projects being shelved or cancelled might be explained by the issuance of Power Development Plan 8th which reflects Vietnamese goal of 0 coal economy in 2050.

Source: Global Energy Monitor

Contents

電力品質と信頼性はMOITとERAVが配電コード・送電コードを通じて規制し、系統周波数・電圧・高調波・電圧不平衡などの技術基準やサービス指標を定め、EVNが運用・ERAVが監督

Governing framework

The Electricity Law

- **Top-level Legislation**
- It empowers **the Ministry of Industry and Trade (MOIT)** and its **Electricity Regulatory Authority of Vietnam (ERAV) to issue and enforce codes**
- **The Codes specify the technical requirements and procedures for the power system**

Two Codes in force

- **Distribution Code**
  - Regulation: Circular 39/2015/TT-BCT
- **Grid/Transmission Code**
  - Regulation: Circular 30/2019/TT-BCT

MOIT/ERAV regulate power quality and reliability via Distribution and Grid Codes defining technical, reliability, service, and connection standards.

Regulatory Requirements & Standards

Codes Overview

- **Distribution Code sets out:**
  - **Focus:** Technical requirements, reliability and quality standards, and connection procedures for LV and MV users (including embedded generation).
  - **Users affected:** Distribution companies, large consumers connected at distribution voltage, and distributed generators (e.g., rooftop solar, small wind)
- **Grid/Transmission Code sets out:**
  - **Focus:** Technical and operational rules for high-voltage transmission, system stability, and coordination with the national dispatch center.
  - **Users affected:** Transmission system operator, large power plants, and high-voltage consumers connected directly to the grid

Regulatory Scope

Key Technical Limits

- **System frequency (50 Hz):** ±0.2 Hz normal, ±0.5 Hz instability.
- **Voltage at PCC**: ±5% normal; +10/–5% at plant PCC; ±10% post-fault
- **Harmonics (THD):** 110 kV ≤3% (1.5% single); MV/LV ≤6.5% (3% single).
- **Flicker (Pst/Plt):** 110 kV 0.80/0.60; MV 1.00/0.80; LV 1.00/0.80.
- **Unbalance**: ≤3% (110 kV), ≤5% (<110 kV).
- **Current distortion (THDC)**: <50 kW or MV/LV ≤20%; ≥50 kW or HV ≤12%.
- **Power factor:** ≥0.9 for industrial/commercial ≥40 kW demand
- **Earth-fault factor**: ≤1.4 (solidly earthed) or ≤1.7 (impedance/isolated)

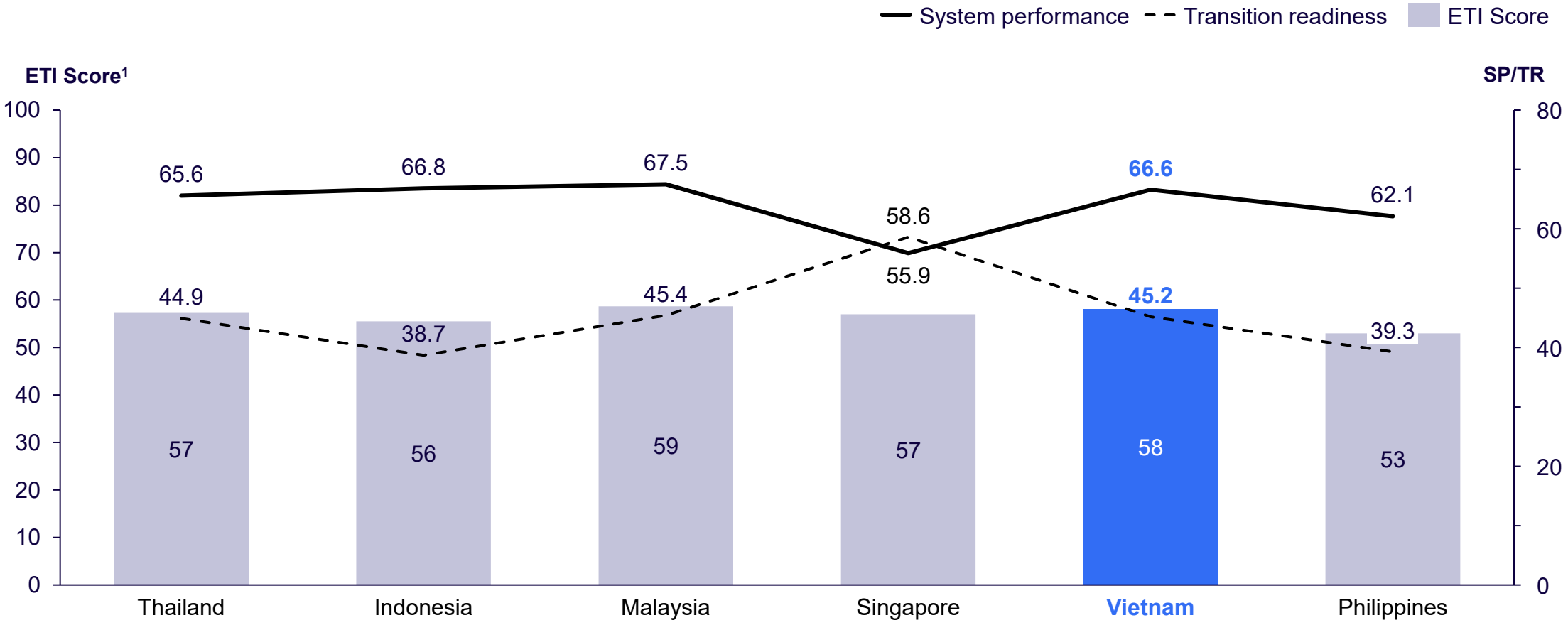
Reliability & Service Standards

- **Indices:** Reliability tracked via SAIDI, SAIFI, MAIFI for overall and grid reliability.
- **Target-setting cycle:** EVN[1] operates the grid while ERAV[2] sets and enforces the technical and regulatory requirements their projects must meet
- **Customer-service KPIs**: ≥95% written complaints answered in 5 days

Note: 1) EVN is Vietnam Electricity, the state-owned utility responsible for power generation, transmission, distribution, and retail in Vietnam
2) ERAV is Electricity Regulatory Authority of Vietnam, a unit under the Ministry of Industry and Trade (MOIT) that regulates the electricity sector, sets standards, and approves plans and tariffs
Source: Vietnam Electricity Law, Secondary Resources, Arthur D. Little analysis

ベトナムのETIスコアは高いシステムパフォーマンスに支えられており、今後はトランジション準備度を強化することで、より迅速かつ持続可能なエネルギー移行を実現することが求められます。

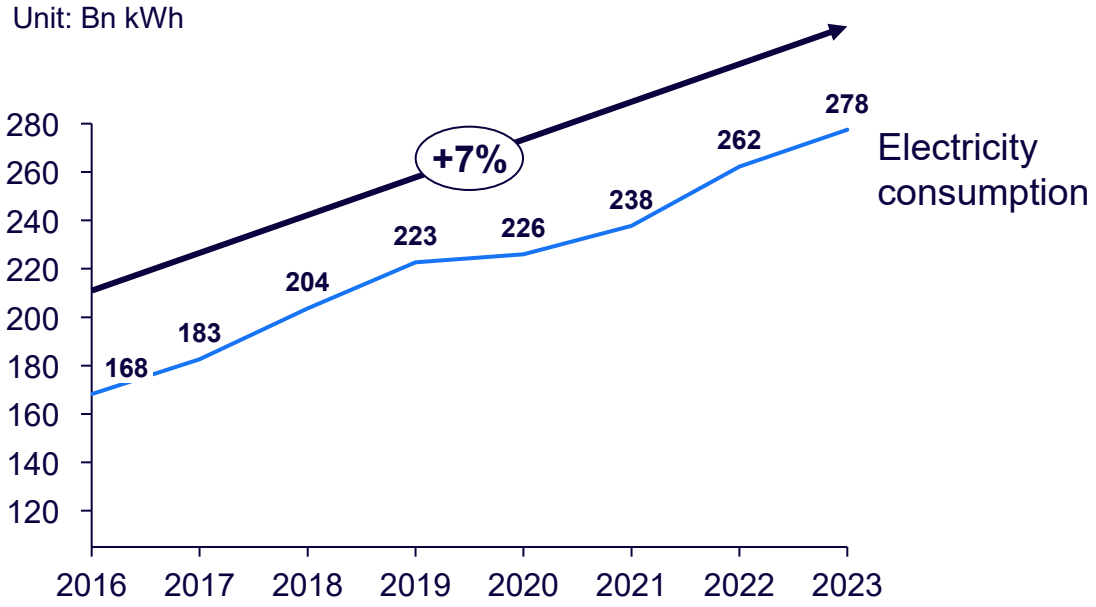
World Economic Forum's Energy Transition Index (ETI)



Note: 1) Energy Transition Index score consists of System Performance (60%) and Transition Readiness (40%).
Source : World Economic Forum Report, *Fostering Effective Energy Transition 2025*

ベトナムの電力消費は2016～2023年に年率7%で急増し、地域需給の偏り、送電網のボトルネック、配電レベルでの電力品質低下、系統柔軟性の不足といった課題が顕在化している

Current Electricity Quality Challenges Amid Rising Demand



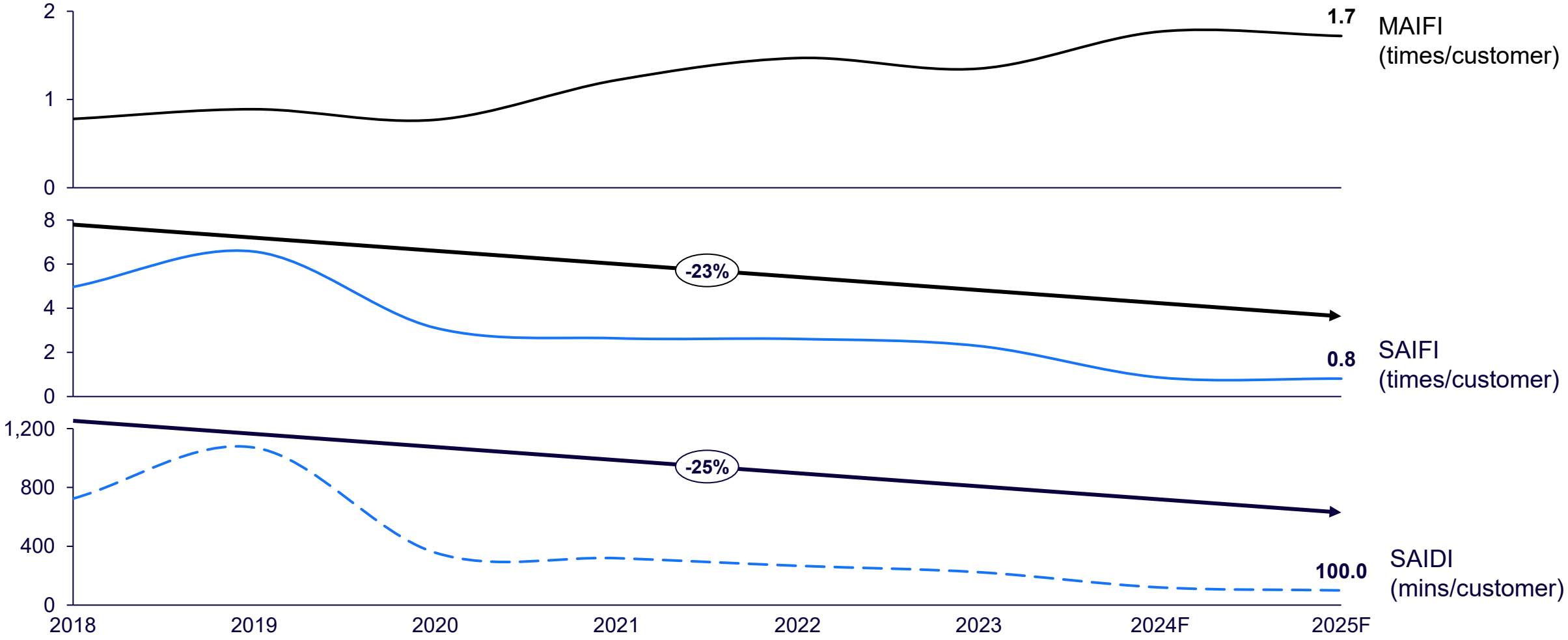
- **Total electricity consumption rose strongly** from 168 to 278 bn kWh between 2016 and 2023, growing at around 7% CAGR.
- According to forecasts by the MOIT[1], electricity consumption in 2025 is expected to grow between 10.5% and 14.3%

With electricity demand growing, the following are the key current electricity quality challenges:

- **Regional supply–demand imbalance**: Load growth is concentrated in the North while most new wind/solar sits in South-Central provinces
- **Transmission bottlenecks:** Limited 500-kV transfer and substation capacity cause congestion, curtailment, and stress on voltage/frequency during peaks
- **Inconsistent Distribution-level power quality:** Large industrial loads and high rooftop-PV penetration drive voltage swings, THD exceedances, and phase imbalance on MV/LV feeders
- **Lack of system flexibility & reserve adequacy:** Hydro variability, thermal outages, and tight LNG/coal logistics reduce available reserves. Also, limited fast-ramping resources, ancillary services, storage, and demand response leave the system vulnerable to hot-season peaks and contingencies.

Note: 1) MOIT refers to the Ministry of Industry and Trade
Source: The Global Economy.com (Vietnam), Arthur D. Little analysis

ベトナムの電力供給品質は改善傾向にあり、2018年以降で停電回数（SAIFI）は約23%、停電時間（SAIDI）は約25%減少し、2025年には顧客当たり100分程度まで短縮が見込まれている



Note: 1) MAIFI refers to Momentary Average Interruption Frequency Index; 2) SAIFI refers to System Average Interruption Frequency Index; 3) SAIDI refers to System Interruption Duration Index
Source: EVN Annual Report 2022-2023, Arthur D. Little analysis

ベトナムの電力部門は送電網拡充、省エネ強化、電気料金制度改革、EVN独占縮小、再エネ重視、石炭資金調達縮小といった政策的動きによって2023～24年に大きな転換期を迎えている

Key Drivers of Trend In Vietnam's Power Sector	Key Initiatives (2023–2024)
Upgrade of the national grid	• Vietnam commissioned the **500-kV Quảng Trạch–Phố Nối line (circuit 3, 2024)** to move power north and ease congestion. • In 2024, the Prime Minister approved **the PDP8 Implementation Plan** (Decision 262/QĐ-TTg), which lists 28 priority 220–500 kV projects and assigns ministries to fast-track delivery.
Increase in awareness about energy efficiency	• In 2023, the Prime Minister issued **Directive 20/CT-TTg**, which **targets at least 2% annual electricity savings**, system losses below 6% by 2025, and full LED street lighting by 2025. • In 2024, EVN implemented **a system-wide demand-response and load-shifting program** to support peak supply and reduce curtailment.
Electricity price reform	• In 2024, **Decision 05/2024/QĐ-TTg** established a new mechanism to **adjust the average retail tariff**, replacing the 2017 rule. Moving forward, MOIT and EVN[1] applied a tariff adjustment under the new mechanism.
Reduction in EVN monopoly position	• In 2024, **Decree 80/2024/NĐ-CP** launched **the corporate DPPA scheme[2]**, enabling eligible consumers to buy power directly from renewable generators.
Emphasize on renewable energies	• In 2023, **Decision 500/QĐ-TTg** approved PDP8, which **raises renewable targets and caps additional coal capacity.** Also, **Decision 21/QĐ-BCT set a transitional price framework for wind and solar projects** that missed FIT deadlines, allowing them to move toward commercial operation.
Reduction in global financing for coal	• PDP8 and its Implementation Plan confirmed that **Vietnam would not approve new coal projects** beyond those already under construction and would prioritize LNG and renewable alternatives.

Note: 1) MOIT and EVN refer to Ministry of Industry and Trade of Vietnam and Vietnam Electricity 2) The corporate DPPA scheme refers to Corporate Direct Power Purchase Agreement, a mechanism that allows large electricity consumers (corporates) to buy power directly from renewable energy generators through long-term contracts
Source: Arthur D. Little analysis

Contents

ベトナムの新しい送電法（2024年制定）は、送電網の国家独占を基本としつつ、非国家主体による建設・投資案件には例外を認め、信頼性・効率性・統合性の高い電力系統運用を目指している

Overview of Vietnam Transmission Grid Law

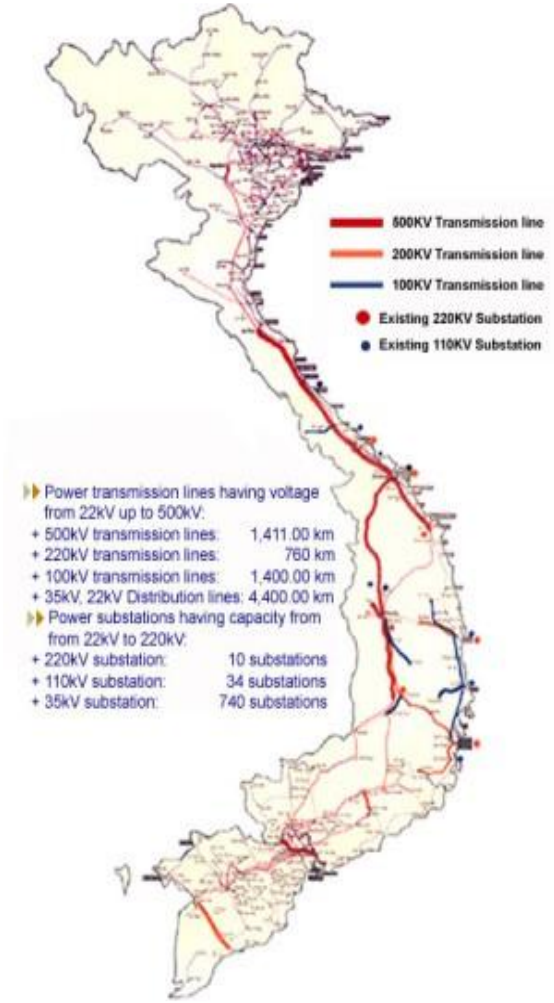
Electricity Law

Law No. 61/2024/QH15

Objective	In relation to the transmission grid, the law seeks to ensure a **reliable, efficient, and integrated** power system that is aligned with generation sources to meet regional and local load growth
Detail	• Stipulates that the State retains a monopoly over the operation of transmission grids, except in cases where the grids are constructed by non-state economic sectors. • Regulates licensing for electricity activities, including transmission, with specific exemptions for smaller or emergency projects. • Provides methods and forms for determining the valuation of transmission grids that are invested in and constructed by non-state economic sectors.
Status	**Active.** Approved by Vietnam's National Assembly on November 30, 2024. Effective from February 1, 2025. Replaces and revokes the previous Electricity Law No. 28/2004/QH11 along with its amendments in 2012, 2018, 2022, and 2023.

Source: Vietnam Electricity Law, Secondary Resources, Arthur D. Little analysis

送電網地図（500kV、220kV、110kV）



Source: Global Energy Network Institute 2010

ベトナムは2025～30年にかけて500kV・220kV送電網を大規模に拡張し、近隣諸国（ラオス・カンボジア・中国）との連系を強化し、将来的には750～1000kV超高圧や直流送電の可能性も検討

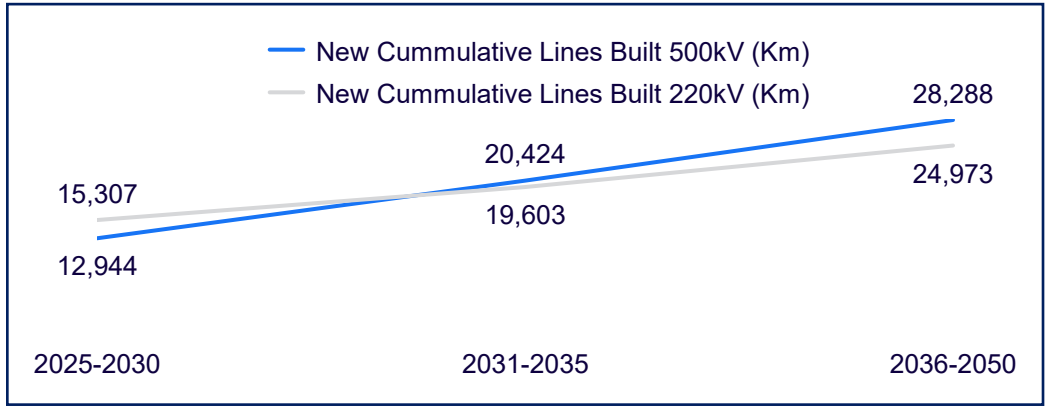
	Objectives	Planned & ongoing initiatives
Extend existing transmission & distribution network, domestically and internationally	• Provide sufficient electricity for domestic demand, aligning with the socio-economic development target of an average GDP growth rate of about 10 percent per year during the period from 2026 to 2030 • Enhance grid interconnection with neighboring countries, including Laos, Cambodia, and China	• **Planned:** In the revised Power Development Plan 8, Vietnam prioritises the expansion of the national power grid, with specific directions to upgrade and expand existing infrastructure, develop new 500 kV and 220 kV transmission lines. • **Planned:** Between 2025 and 2030, a total of approximately 102 GVA of 500 kV substation capacity and 106 GVA of 220 kV substation capacity are planned for construction • **Ongoing:** Research and development of the application of a smart grid and technology 4.0 in power transmission
Higher voltage transmission study	• Study the possibility of developing voltages of 750 kV, 1000 kV or DC transmission	• NIL. Still in proposal stage

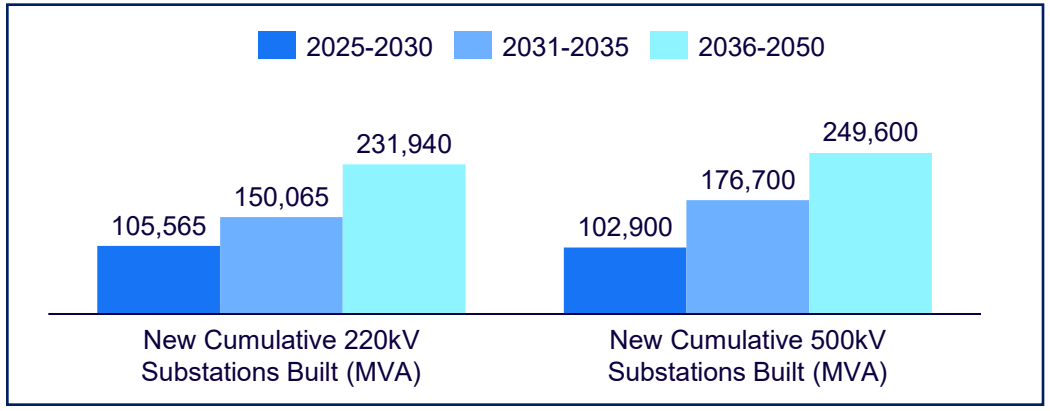
Source: Frasers, International Trade Administration (United States of America) 2024, Vietnam Electricity Corporation 2022, Asian Development Bank 2015, Vietnam Briefing, Arthur D. Little analysis

ベトナムは2030～50年にかけて500kV・220kV送電線と変電所の大規模拡張を進め、ラオスから最大8,000MW、中国から3,700MWを輸入し、更に再エネをASEAN諸国へ輸出する戦略を描く

Targets of Domestic Transmission Network

Cumulative across time periods 2025 - 2050





Targets of International Transmission Network

Electricity Imports:

- Vietnam imports about 1,000 MW of electricity from Laos through 220 kV interconnected transmission lines.
- Total import capacity from Laos is expected to climb to 5,000-8,000 MW by 2030.

Electricity Imports:

- Vietnam Ministry of Industry and Trade proposes importing about 3,700 MW of electricity from China by 2030
- Vietnam has purchased electricity from China since 2005, via transmission lines in Lao Cai and Ha Giang provinces

Electricity Exports:

- Export **renewable energy** to neighboring countries in the ASEAN region
- E.g., Connected to the Cambodian power grid through the Chau Do-Ta Keo 220kV transmission line for 10+ years

Source: Vietnam Briefing, Vietnam Electricity Corporation 2023, The Investor Vietnam, Arthur D. Little analysis

進行中の送電線プロジェクト (500 kV) – 北部

NON-EXHAUSTIVE

#	Names	No. of circuit x km	Notes
I	2025-2030		
1	Nho Quan - Thuong Tin	1x75	Converting a single circuit into two circuits
2	Dan Phuong - West Hanoi - Vinh Yen	4x5	Connection to the 500 kV Dan Phuong Substation
3	Hung Yen 1 - Phu Noi Junction - Thuong Tin	2x8	Connection of the 500 kV Hung Yen 1 Substation, replacing the 500 kV Long Bien - Rẽ Phố Nối - Thường Tín transmission line in Power Plan VIII
II	2031-2035		
1	Vân Trì - Vĩnh Yên	4x40	New construction
2	Ha Nam - Thai Binh	4x20	New construction
3	Nam Dinh 2 - LNG Nghi Son Branch - Hung Yen 2	4x5	New construction

Full list of project pipeline can be found in Decision No.1509/QD-BCT

Source: Implementation plan of Revised National Power Development Plan for the period 2021-2030, with a vision to 2050, Arthur D. Little analysis

進行中の送電線プロジェクト (500 kV) – 中部

NON-EXHAUSTIVE

#	Names	No. of circuit x km	Notes
I	2025-2030		
1	Quang Binh - Vung Ang - Quang Tri (*)	4x5	New construction and connection of the 500 kV Quang Binh Substation
2	Quang Tri Thermal Power Plant - Quang Tri	2x17	New construction, in the event that the Quang Tri Thermal Power Plant is continued
3	Quang Tri - Turn off at Vung Ang - Da Nang	4x6	New construction and connection of the 500 kV Quảng Trị substation
II	2031-2035		
1	NLTT Quang Tri - Quang Tri 2 Substation (*)	2x31	New construction
2	Connection of the HVDC converter station in Central Vietnam 1 (*)	6x20	New construction, detailed connection design, length, cross-section, and route alignment of the transmission line will be finalised during the project implementation phase
3	Renovation of Da Nang - Dốc Sỏi into two lanes	2x100	Renovation

Full list of project pipeline can be found in Decision No.1509/QD-BCT

Source: Implementation plan of Revised National Power Development Plan for the period 2021-2030, with a vision to 2050, Arthur D. Little analysis

進行中の送電線プロジェクト (500 kV) – 南部

NON-EXHAUSTIVE

#	Names	No. of circuit x km	Notes
I	2025-2030		
1	Ninh Son - Turn off NMNĐ Van Phong I - Thuan Nam	4x18	New construction and connection of the 500 kV Ninh Son substation
2	Ninh Son - Chon Thanh	2x275	New construction, power capacity expansion. Replacement of the 500 kV transmission line Thuận Nam - Chơn Thành
3	Bác Ái - Ninh Sơn Power Plant	2x25	New construction and modernisation of the Bác Ái Substation, replacing the 500 kV transmission line from Bác Ái to Rẽ Vân Phong - Thuan Nam
II	2031-2035		
1	500 kV Ninh Thuan 1 - Branch Van Phong - Ninh Son (*)	2x50	New construction, synchronisation in scale and progress of power supply in the area
2	500 kV Ninh Thuan 2 - Thuận Nam Branch - Ninh Son (*)	6x20	New construction, synchronised with the scale and schedule of the regional power supply.
3	Don Duong - Branch Nuclear Power Plant Ninh Thuan 2 - Binh Duong 2	4x20	New construction and modernisation of the Đơn Dương Hydropower Plant

Full list of project pipeline can be found in Decision No.1509/QD-BCT

Source: Implementation plan of Revised National Power Development Plan for the period 2021-2030, with a vision to 2050, Arthur D. Little analysis

進行中の送電線プロジェクト (220 kV) – 北部

NON-EXHAUSTIVE

#	Names	No. of circuit x km	Notes
I	2025-2030		
1	Dong Anh 500 kV - Van Tri	2x16	New construction
2	Dai Mo (My Dinh) - Turn west towards Hanoi - Thanh Xuan	4x2	Connection to the 220 kV Dai Mo Substation
3	West Hanoi - Thanh Xuan	4x16	Connection to the 220 kV Thanh Substation Xuan
II	2031-2035		
1	Dan Phuong 500 kV - Phuc Tho	2x13	New construction
2	Dong Anh 2 - Turn off at Van Tri - Tay Ho and Van Tri - Chèm	4x2	New construction
3	Dong Anh 3 - Van Tri Branch - Dong Anh 500 kV	4x2	New construction

Full list of project pipeline can be found in Decision No.1509/QD-BCT

Source: Implementation plan of Revised National Power Development Plan for the period 2021-2030, with a vision to 2050, Arthur D. Little analysis

進行中の送電線プロジェクト (220 kV) – 中部

NON-EXHAUSTIVE

#	Names	No. of circuit x km	Notes
I	2025-2030		
1	Ba Don - Turn off at Vung Ang - Dong Hoi	2x3	New construction, transfer of Line 2
2	Le Thuy - Turn off at Dong Hoi - Dong Ha	4x2	New construction and connection of the 220 kV Lệ Thủy Substation
3	Wind power B&T1 - Dong Hoi - Dong Ha Line 2	4x10	New construction
II	2031-2035		
1	Quang Tri - Rẽ Southeast - 500 kV Quang Tri	2x5	New construction
2	Quang Tri 3 - Quang Tri 500 kV Power Transmission Line (*)	2x16	New construction
3	Quang Tri 4 - Quang Tri 500 kV Power Transmission Line (*)	2x20	New construction

Full list of project pipeline can be found in Decision No.1509/QD-BCT

Source: Implementation plan of Revised National Power Development Plan for the period 2021-2030, with a vision to 2050, Arthur D. Little analysis

進行中の送電線プロジェクト (220 kV) – 南部

NON-EXHAUSTIVE

#	Names	No. of circuit x km	Notes
I	2025-2030		
1	Bao Loc - Song May Route 2	2x118	Upgrade Line 1, construct Line 2, enhance reliability
2	220 kV Da Nhim Substation - Rẽ Tháp Chàm - Đa Nhim	2x1	New construction and modernisation of the substation 220 kV Đa Nhim
3	220 kV Đa Nhim Substation - Đức Trọng - Di Linh	2x96	New construction and power supply relocation in the area. Replacement of the 220 kV Da Nhim - Duc Trong - Di Linh power line renovation project from a single circuit to a double circuit.
II	2031-2035		
1	Hong Liem - 500 kV Hong Phong (*)	2x6	New construction
2	Dalat - 220 kV substation Da Nhim	2x30	New construction
3	Upgrade the load capacity of Di Linh - Bao Loc	2x34	Upgrade and enhance load capacity

Full list of project pipeline can be found in Decision No.1509/QD-BCT

Source: Implementation plan of Revised National Power Development Plan for the period 2021-2030, with a vision to 2050, Arthur D. Little analysis

Contents

ベトナムの電気小売価格は政府によって厳格に規制され、消費者区分・電圧レベル・利用時間帯に応じた階層型料金制度や価格上限・下限の設定が行われ、MOITと首相承認を経て調整

NON-EXHAUSTIVE

	Policy	Legal Basis	Policy Targets on Electricity Retail Prices
2025	Stipulating the structure of electricity retail tariff	Decision No.14/2025/QD-TTg	• New tiered tariff structure based on consumer categories, voltage levels, and time-of use[1] • Electricity retail prices can be adjusted by ±2%, based on consumption patterns and average price • Extends electricity pricing framework to include areas not connected to the national grid
2025	Average electricity retail price bracket	Decision No.07/2025/QD-TTg	• Set maximum retail electricity at VND 2,444.09 (USD 0.093) per kWh (exclusive of VAT), and minimum price at VND 1,826.22 (USD 0.069) per kWh (exclusive of VAT)
2023	Electricity prices	Decision No.1062/QĐ-BCT	• Increase in the average retail electricity price to VND 1,920.37 (USD 0.073)per kWh (exclusive of VAT), to cover rising costs of production
2013	Mechanism for adjustment of avg electricity retail price	Decision No. 69/2013/QD-TTg	• EVN can recover cost increases <7% in the next tariff adjustment; 7–10% requires MOIT approval, and >10% or beyond the approved range requires Prime Minister approval • Revised retail tariffs are calculated every 6 months instead of every 3 months
2013	Price frame of avg retail price of electricity from 2013 - 2015	Decision No. 2165/QD-TTg	• Retail tariff between $6.81 cents-$8.70 US cents/kWh. Any adjustment to this bracket due to cost fluctuations will be decided by the MOIT, Ministry of Finance, and PM
2011	Power Deevelopment Plan 7	Decision No. 1208/QD-TT	• Prices increase gradually to $8–9 US cents/kWh to cover long-term marginal cost of the system by 2020

Electricity retail prices are recommended by the Ministry of Industry and Trade, before requiring approval by the Prime Minister

Note: Exchange rate used: 1 VND to 0.000038 USD, 1) The new electricity pricing system would only be applied following the next adjustment of the average retail electricity price, which could be as early as August 2025
Source: International Trade Administration (United States of America) 2022, Vietnam Electricity Corporation 2025, Arthur D. Little analysis

電力小売価格は、電力消費グループのプロファイルと消費期間に基づいて区別される（1/2）

Retail electricity tariff for manufacturers

May 2025

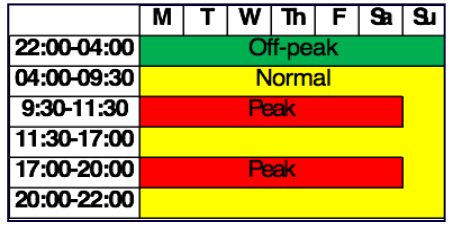
Voltage of 110kV and above	Rate, VND/kWh	Rate, USD/kWh
a) Standard hour	1,811	0.07
b) Off-peak hour	1,146	0.04
c) Peak hour	3,266	0.12
Voltage of 22kV - 110kV		
a) Standard hour	1,833	0.07
b) Off-peak hour	1,190	0.05
c) Peak hour	3,398	0.13
Voltage of 6kV - 22kV		
a) Standard hour	1,899	0.07
b) Off-peak hour	1,234	0.05
c) Peak hour	3,508	0.13
Voltage of <6kV		
a) Standard hour	1,987	0.08
b) Off-peak hour	1,300	0.05
c) Peak hour	3,640	0.14

Retail electricity tariff for admin. offices

May 2025

Hospitals, nurseries, kindergartens, schools	Rate, VND/kWh	Rate, USD/kWh
Voltage of 6kV and above	1,940	0.07
Voltage of <6kV	2,072	0.08
Public lighting, administrative units		
Voltage of 6kV and above	2,138	0.08
Voltage of <6kV	2,226	0.09

Definition of Hours



Note: Data as of May 2025, Exchange rate used: 1 VND to 0.000038 USD
Source: Vietnam Electricity Corporation 2025

電力小売価格は、電力消費グループのプロファイルと消費期間に基づいて区別される（2/2）

Retail electricity tariff for businesses

May 2025

Voltage of 22kV and above	Rate, VND/kWh	Rate, USD/kWh
a) Standard hour	2,887	0.11
b) Off-peak hour	1,609	0.06
c) Peak hour	5,025	0.19
Voltage of 6kV - 22kV		
a) Standard hour	3,108	0.12
b) Off-peak hour	1,829	0.07
c) Peak hour	5,202	0.20
Voltage of <6kV		
a) Standard hour	3,152	0.12
b) Off-peak hour	1,918	0.07
c) Peak hour	5,422	0.21

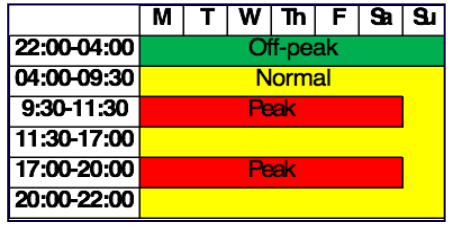
Note: Data as of May 2025, Exchange rate used: 1 VND to 0.000038 USD
Source: Vietnam Electricity Corporation 2025

Retail electricity tariff for households

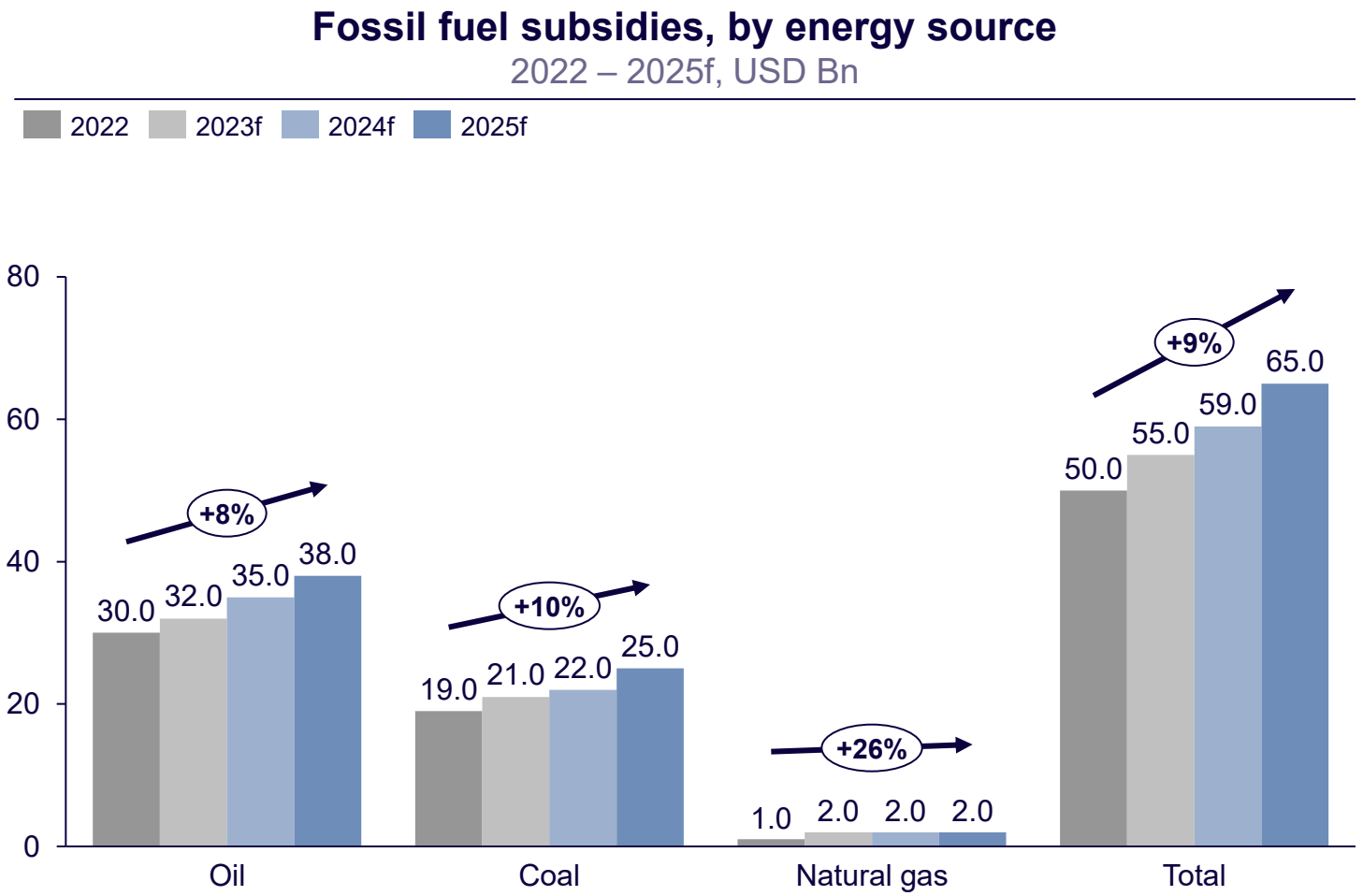
May 2025

Retail price for household electricity	Rate, VND/kWh	Rate, USD/kWh
Rate 1: For the kWh from 0 – 50	1,984	0.08
Rate 2: For the kWh from 51 – 100	2,050	0.08
Rate 3: For the kWh from 101 – 200	2,380	0.09
Rate 4: For the kWh from 201 – 300	2,998	0.11
Rate 5: For the kWh from 301 – 400	3,350	0.13
Rate 6: For the kWh from 401 onwards	3,460	0.13
Retail price for household electricity via prepaid card meter	2,909	0.11

Definition of Hours



化石燃料補助金は2025年まで増加傾向にあり、石炭は年率10%、石油は8%の伸びを示す一方、天然ガス補助金は年率26%と最も高い成長率で、LNG導入拡大方針を反映



Description

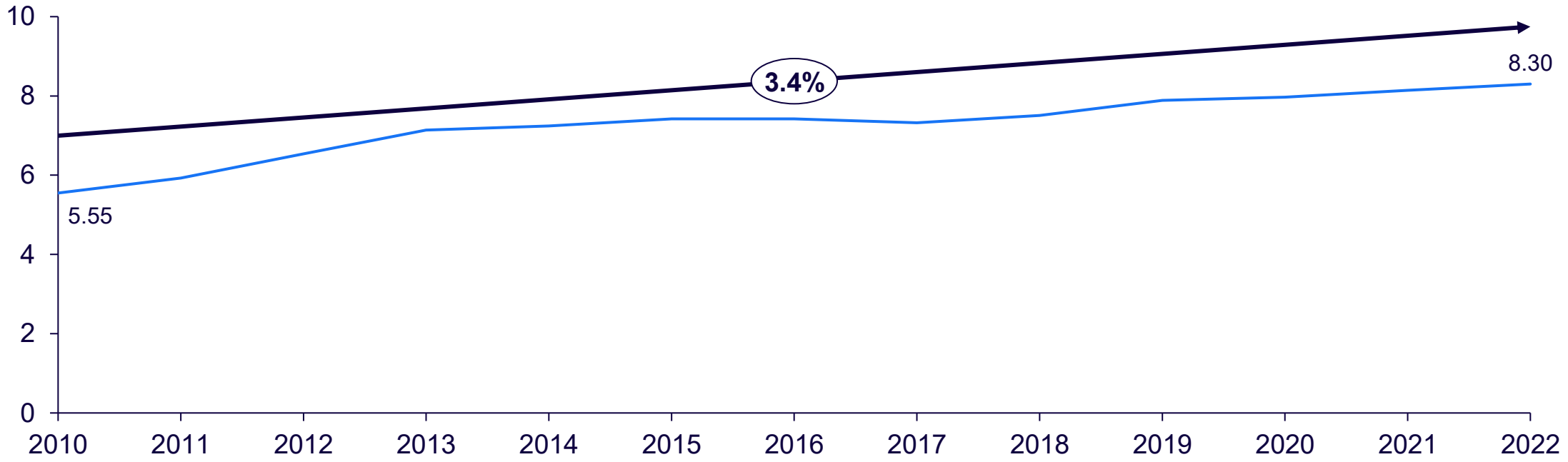
- Coal subsidies is expected to grow at a **CAGR of 10%**, from USD 19 bn to USD 25 bn in 2025
- On the other hand, natural gas is projected to experience the strongest growth of **~26% CAGR** from USD 1 bn in 2022 to USD 2 bn in 2025
  - This is likely due to the government's shift towards LNG as an energy source, as highlighted in PDP 8 which aims to **increase natural gas and LNG to 25%** of the total energy output

Source: International Monetary Fund 2024, Multiple news sources, Arthur D. Little analysis

ベトナムの平均電力小売価格は2010～2022年に年平均3.4%で上昇したが、依然としてASEAN諸国と比べ低水準にとどまっている

Historical average electricity retail price

2010 – 2022, US cents/kWh



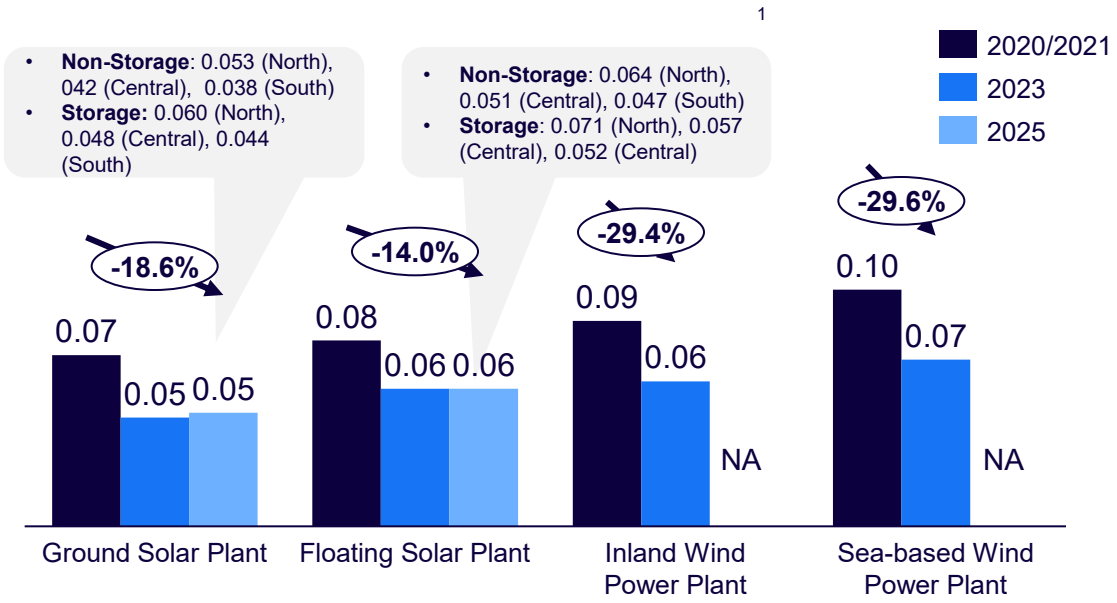
Vietnam's average electricity retail price has witnessed a **CAGR of 3.4%** for the period 2010 - 2022

Note: (1) Prices for households referenced, for selected ASEAN countries
Source: Statista 2025, Arthur D. Little analysis

ベトナムは2025年に再エネFiTを地域・技術別に改訂し、買取価格は引き下げられる一方、蓄電導入を促進して系統安定を狙い、再エネ容量は2035年までに112GWへと4倍超拡大する見通し

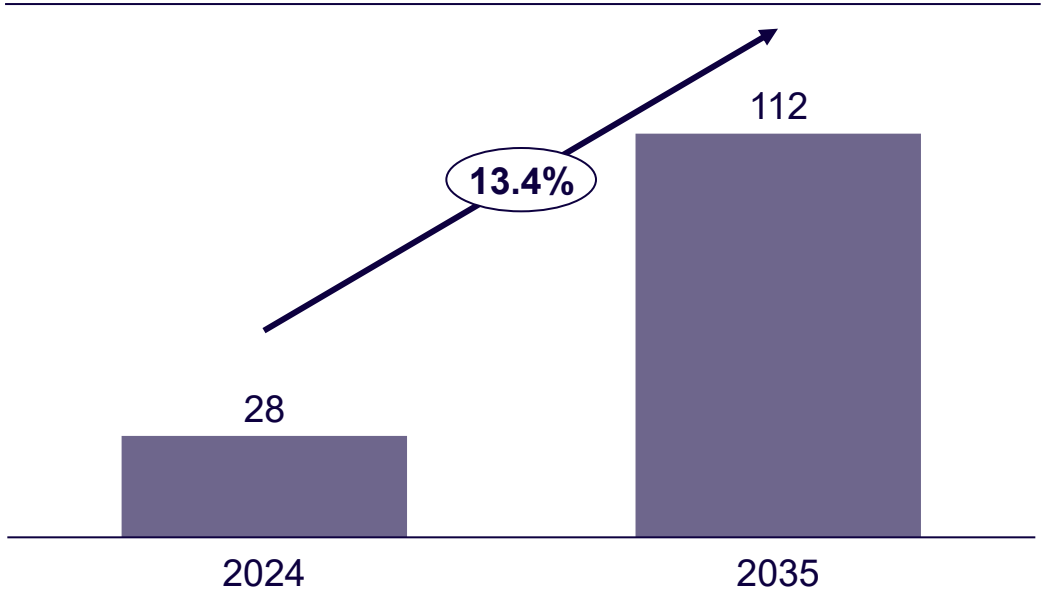
Change in FiTs, solar and wind

2020/2021 – 2023, USD/kWh



Renewable Capacity

2024 – 2035, GW



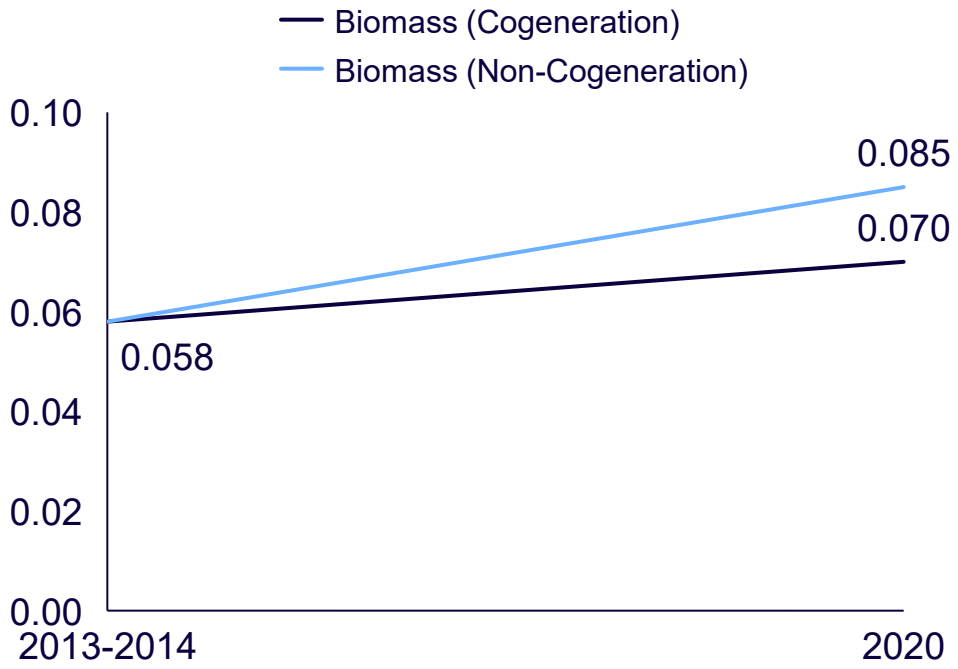
- FiTs across both solar and wind projects are observed to decrease by ~16.3% and ~29.5% respectively over the years
- The 2025 Solar FiTs changes aim to reflect **differing solar radiation** levels across various geographic regions and signals a policy shift towards encouraging **storage integration** to support **grid stability**

- Vietnam's renewable power capacity is projected to soar to **112.1 GW** by 2035, reflecting a **CAGR of 14.3%** from 2024 to 2035
- This can be credited to Vietnam's green energy revolution, including **feed-in tariffs (FiTs)** and the revised **Power Development Plan 8**

Note: Data as of May 2025, Exchange rate used: 1 VND to 0.000038 USD, 1) Average values for 2025 Solar FiT taken, accounting for different regions and presence of storage; there are no updated 2025 wind FiT identified
Source: Vietnam Electricity Corporation 2025, GlobalData 2025, Various Secondary Sources, Arthur D. Little analysis

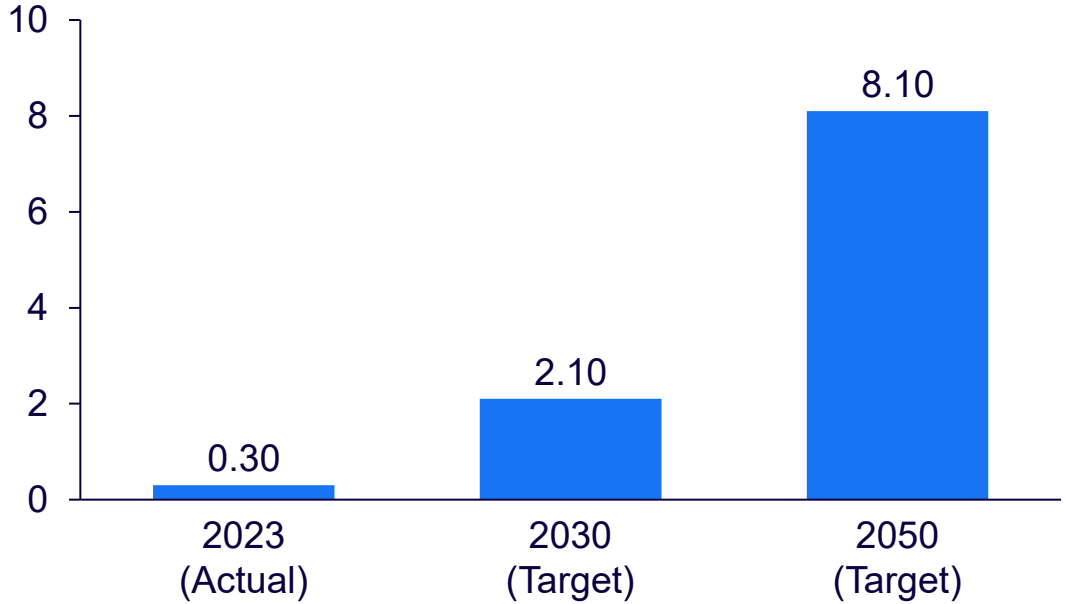
ベトナムはバイオマス発電比率を2050年までに8.1%へ引き上げる目標を掲げ、FiTを引き上げて投資を促進し、年平均7%成長で導入拡大を進めている

Change in FiT, biomass
2013/2014 - 2020, USD/kWh



Between 2014 and 2020, the **FiT price of biomass power generation was significantly raised** by the Prime Minister's decision (No.8 / 2020 / QD-TTg)

Biomass share of electricity output
2023 – 2050, %



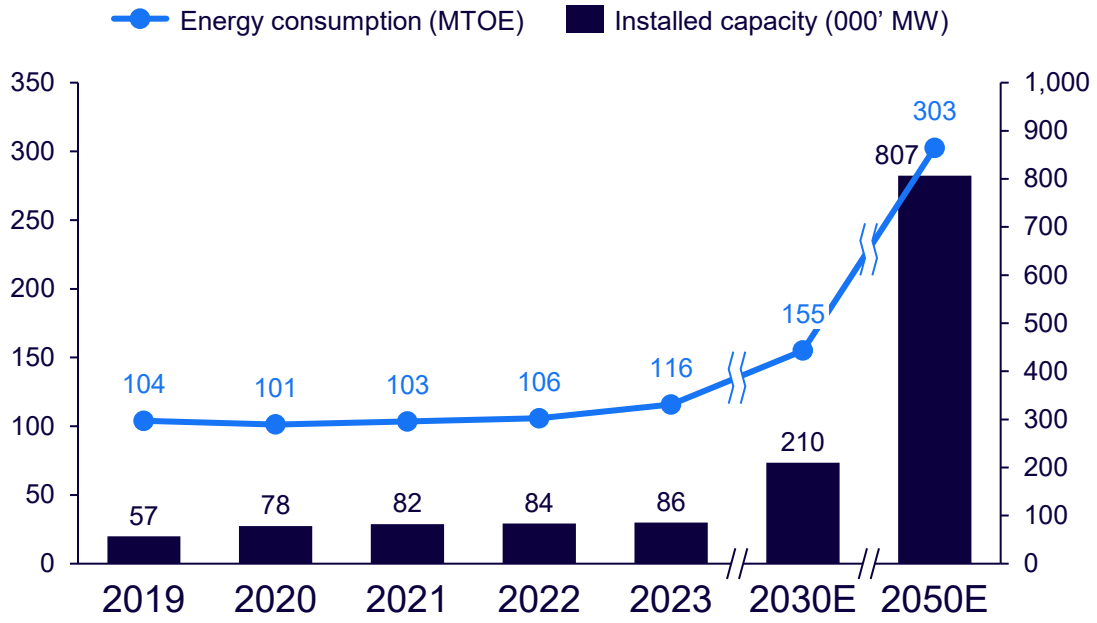
Vietnam aims to increase share of electricity output by biomass at a **CAGR of 7.0%**

Source: Vietnam Investment Review 2022, Vietnam Plus 2022, EVN 2023

Contents

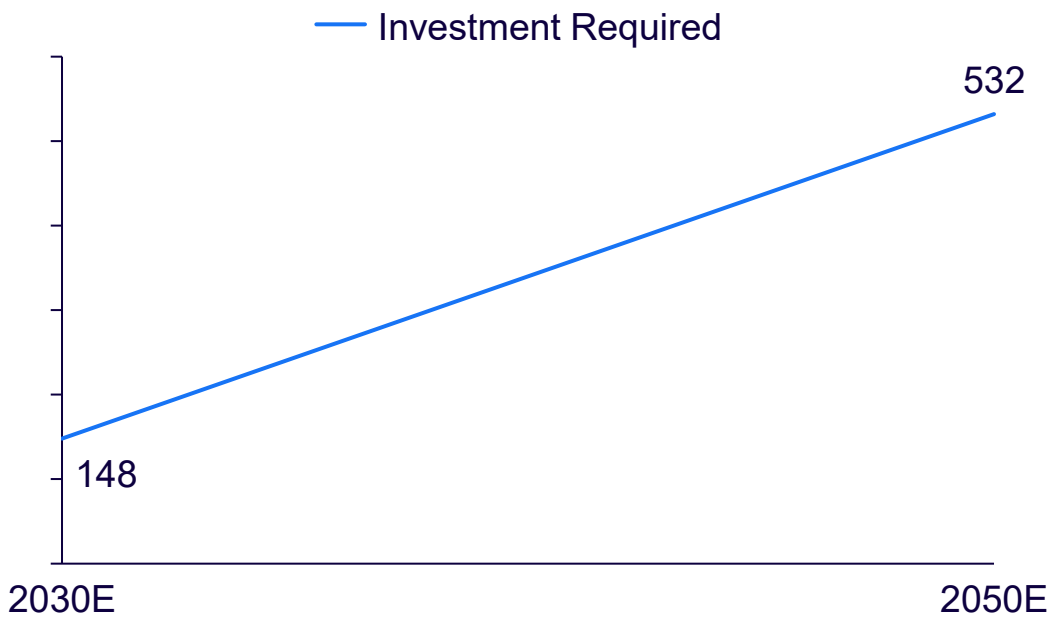
電力需要増により2025年までに設備容量を約800GWに拡大し、2050年までに需要303MTOE、設備容量807GWに達すると予測され、2030～2050年に累計5,320億ドル規模の投資が必要

Power supply and demand
2019 - 2050



By 2025, electricity installed **capacity is expected to reach ~800 GW**, while **demand** is forecasted to increase to **303 MTOE**

Investment required in energy sector
2030 – 2050, USD Bn



Vietnam requires **significant investment in its energy sector** to increase electricity capacity and production

Source: Enerdata, CountryEconomy, PDP8, International Trade Administration 2022, Multiple news sources 2023, Arthur D. Little analysis

ARTHUR D LITTLE

THE DIFFERENCE