

Analytical Report

Developing Vietnam's Energy Business Models

Topic: Diversifying Financing Solutions for the EaaS Model

September 2026



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- 02** Overview of the Research Foundation
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Market Background

- **VNEEP3 (2019–2030):** Target of saving 8–10% of total energy consumption by 2030
- **Rooftop solar power:** Has reached a significant scale, particularly in the C&I segment
- **EaaS:** The provider invests in and operates the system → customers pay based on output or energy savings

Energy as a Service (EaaS) Operating Model

Investment provider

Invest, design &
install energy
system



System Operation

Operation &
Maintenance
throughout the
contract term



Client Payment

Pay based on energy
output or generated
savings

Core Paradox

Zero upfront capital
required from clients



Capital raising pressure shifts
to the **EaaS provider**

Decree No. 57/2025/NĐ-CP

Law No. 77/2025/QH15

→ Enhances legal framework but has yet to bridge the **mismatch between contract cash flows and credit requirements**.

Research Questions

01

What are the barriers to raising financing for EaaS in Vietnam?

02

Which financial instruments are suitable for supporting access to financing?

03

What does the Verdant Energy case demonstrate about the role of guarantees?

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Criteria	Traditional Model (Large-scale energy projects)	EaaS/ESCO Model
1. Customers & products	Single off taker (EVN, transmission entity, or large industrial consortium); the primary product is raw electricity (kWh) sold wholesale under FIT/PPA rates.	Multiple small and medium-sized customers (factories, commercial buildings, household businesses); products are turnkey energy solutions or energy-saving outcomes - selling output under a retail model, rather than simply selling electricity.
2. Operating model & technology application	Centralized site operations with dedicated on-site technical teams; single-technology focused (wind turbines, solar panels, LNG gas turbines); scales vertically (larger projects)	Distributed operations across multiple sites with remote monitoring; multi-layered tech integration (rooftop solar, storage, HVAC, demand response); scales horizontally (replicating contracts)
3. Risks & policy impacts	Construction risks, fuel price risks (LNG), and heavy reliance on power tariffs/planning policies (FIT, PDP VIII). Policy shifts directly impact the entire project.	Performance risks (guaranteed savings/output) and counterparty credit risks (C&I clients). Less exposed to macro policy shifts but sensitive to DPPA/ESCO frameworks. As these legal frameworks are newly enacted (effective Jan 1, 2026), execution risks remain.
4. Financial model (total investment & payback period)	Very high total Capex (trillions of VND to billions of USD for LNG); long payback periods (typically 8–15 years depending on tech), backed by 15–25 year long-term off-take contracts.	Low Capex per contract (a few to tens of billions VND), but requires high contract volume; faster asset-level payback (3–7 years for rooftop solar), with 10–15 year service contracts to secure developer returns
5. Common sources of investment and development financing	Commercial/foreign bank debt via project finance; DFI loans with/without sovereign guarantees; large-scale project bonds; strategic equity.	Primarily developer equity at early stages; limited domestic bank debt due to collateral constraints; high-yield offshore private credit used when alternative options are lacking

01

EaaS Cash Flows

Contract
portfolio

02

Credit Risk

Information
asymmetry
Performance
Offtaker / Client

03

Credit Enhancement

Guarantees
Insurance
Risk sharing
Blended finance

04

Institutional Capital

Banks
Investors

Contractual Cash Flows → Bankability

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Desk Research

- ESCO/EaaS Reports
- Regulatory Framework (2006–2026)



Secondary Data

- FiinRatings + EVN
- Market Size & Potential



Case Studies

- Verdant Energy
- Green Bonds + Guarantees



Analytical Findings

- Market Dynamics
- Institutional Setup
- Financial Viability

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Figure1: Installed Capacity of the RTS EaaS Model in Vietnam (1/2018 - 6/2025)

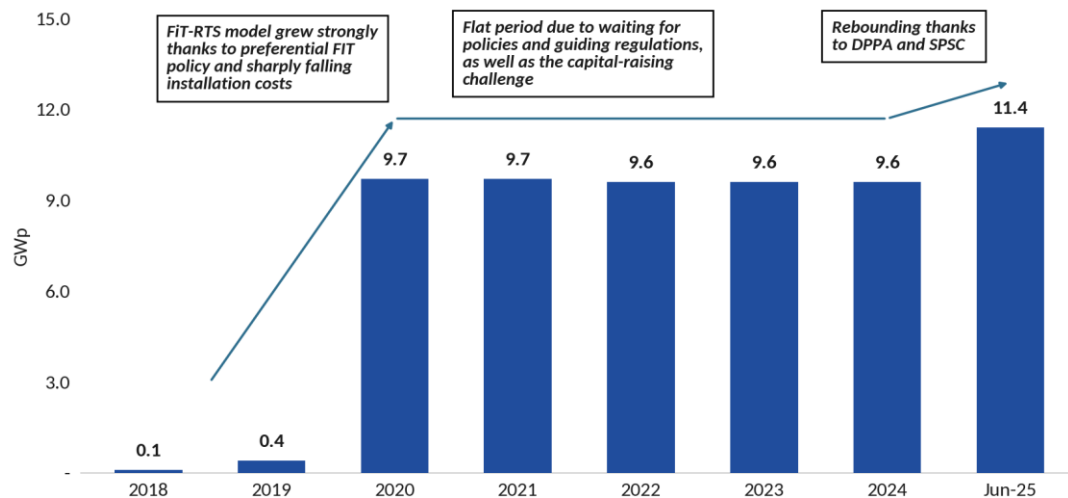
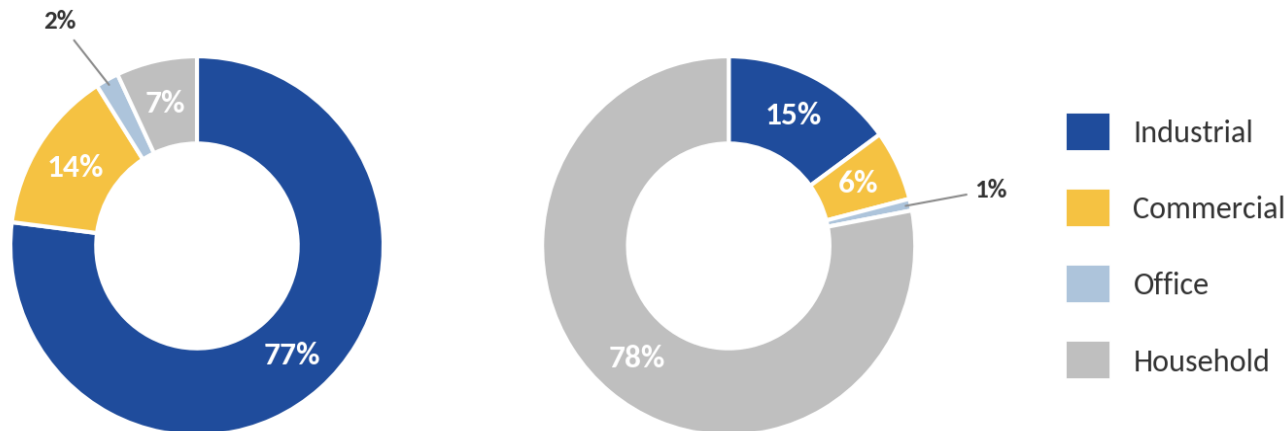


Figure 2: Classification of EaaS RTS customers by installed capacity and by number of installed systems, end 2024



- Implemented primarily through **PPA zero-capex model**, alongside leasing and energy-saving performance contracts.
- C&I (Commercial & Industrial)** leads in installed capacity with large asset scales and high electricity demand.
- Households** lead in the number of installed systems.
- >103,000 rooftop solar systems** installed nationwide.
- VNEEP3 target:** Save 8-10% of total national electricity consumption.

Rooftop Solar Adoption Rate in Industrial Parks by Region

Region	Number of Industrial Zones	Estimated number of enterprises in industrial zones	Estimated adoption rate
Northern	150	~5,800	5-8%
Central	60	~1,400	3-5%
Southeast	180	~7,200	15-20%
Mekong Delta	43	~600	8-10%
Total	433	~14,900	10-12%

Source: FiinRatings compilations.

Southeast

- High density of industrial zones, high solar irradiance hours.
- Highest penetration rate (15-20%).
- Up to 80% of industrial parks remain untapped.

Northern & Central

- Uncapped potential
- Penetration rate remains very low (<8%)
- Influenced by solar radiation seasonality and internal grid infrastructure

Bottleneck

- The nationwide adoption rate currently at only 10–12%.
- Actual demand is significant but fragmented across small-scale contracts.
- A portfolio financing model is required

Capital mobilization barriers and the role of credit enhancement instruments

01

Small scale & Dispersion

Banks' appraisal, disbursement, and supervision costs are high relative to the size of each loan.

02

Collateral constraint

Right to receive payment under the contract does not meet traditional requirements

03

Dual risk

System technical risk (generation / savings output) and C&I customer credit risk.

Financial Instruments for EaaS by Business Model Target

Financial Instruments	Main roles	Target Segments
Risk-Sharing Facility (RSF)	Reduces banks' perceived risk, unblocking initial credit	Small and medium ESCOs/EaaS, market inception stage
Green Credit Line	Provides affordable medium- to long-term funding via intermediary banks	Commercial banks facing shortages of long-term funding
Green/Sustainable Bonds, Contract Portfolio Securitization	Mobilizes large-scale capital from institutional investors	Large-scale EaaS providers with contract portfolios large enough for pooling
Blended Finance (JETP/DFI)	Seed capital absorbing first-loss risk, crowding in commercial leverage	Energy transition projects with high policy impact
Equipment Financial Leasing	Mitigates credit risk through asset ownership	New-entrant EaaS providers lacking credit history
National Credit Guarantee Fund	Standing guarantees for small-scale loans	SMEs, household businesses
DPPA as Cash Flow Collateral	Generates long-term, predictable contractual cash flows	Industrial / Industrial zone-scale EaaS providers

Information on Verdant Energy's bond offerings

	Total capacity	Issue volume	Interest
Verdant Vietnam Bravo	12.1 MWp	VND 165.4 bn	~6.96%/year
Verdant Vietnam Crystal	15.8 MWp	VND 224.6 bn	~6.95%/year
Total		VND 390 bn	

Changes in Credit Rating Pre- and Post-Guarantee

	Rating
Issuer Credit Rating	BB+
Bond Credit Rating Post - GuarantCo Guarantee	AAA
Notch Increase	6 notches

Source: FiinRatings compilations.

- **Guarantees** address credit risk and payment obligations.
- **SPOs** ensure green transparency.
- Small scale is no longer a decisive barrier if cash flows are properly structured and credit-enhanced.

Discussion: Converting Cash-Generation Ability into Bankability

Cash-Generation Ability

EaaS holds real economic value: the contractual right to receive service payments over the term.

Gap



Financeability

Property rights lack standardization, transparency, and recognition as collateral => limiting their convertibility into present capital.

Policy implications: Two-sided Approach

- Energy Market: Refine regulatory framework for distributed projects - enabling and facilitating demand.
- Capital Market: Make service contract cash flows transparent, assessable, and eligible for financing.

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01

**Refining Legal Framework
for Contracts & Cash Flows**

- Specify payment collection rights & contract assignability
- Recognize EaaS assets as eligible legal collateral

02

**Guarantee & Credit Risk-
Sharing Mechanisms**

- Financial institutions, guarantee funds, and commercial banks explore tailored mechanisms for EaaS portfolios

03

**Developing Portfolio
Financing Frameworks**

- Standardize contracts, data, and performance measurement protocols

04

**Expanding Medium- and
Long-Term Capital**

- Green credit, financial leasing, green bonds, and blended finance
- Reduce reliance on equity financing & private credit

Financial policy for EaaS needs a strategic shift

From "expanding capital supply" to "enhancing the bankability of energy service cash flows."

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