REPORT

Mobilising Capital for Sustainable Energy Infrastructure in Viet Nam: From Planning Ambition to Bankable Delivery

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Prepared by:

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The research period for this report covers information from 2016 to 2024, with a strong focus on the most recent period, 2021–2024.

Executive Summary

Viet Nam's transition toward sustainable energy infrastructure has entered a structurally new phase. This strategic direction has been established at the highest political level, most notably through Resolution No. 55-NQ/TW of the Politburo on the National Energy Development Strategy to 2030 with a vision to 2045, which calls for a secure, efficient, market-oriented and environmentally sustainable energy system. Resolution 55 explicitly emphasizes the mobilisation of social and private capital, the reform of pricing mechanisms, the development of modern power markets and the strengthening of fiscal and institutional governance to support long-term investment.

These strategic objectives were operationalised through Government Resolution No. 140/NQ-CP, which assigns specific responsibilities to line ministries. Under Resolution 140, the Ministry of Planning and Investment (now the Ministry of Finance) is mandated to play a central role in developing fiscal and financial policies that prioritise investment in sustainable energy infrastructure, strengthen regional connectivity, mobilise domestic and international capital and ensure that energy-sector support mechanisms are consistent with fiscal discipline and macroeconomic stability. This mandate places fiscal policy, investment governance and risk management at the core of Viet Nam's energy transition.

Against this policy backdrop, Viet Nam has moved decisively beyond the feed-in tariff regime that characterised the first phase of renewable energy deployment. The transition now underway is qualitatively different. It is dominated by capital-intensive and system-critical assets such as offshore wind, large-scale energy storage, flexible capacity and major transmission corridors. These assets are essential for energy security and decarbonisation, but they require long-tenor financing, predictable revenue frameworks and credible delivery conditions that differ fundamentally from earlier generations of renewable projects.

To support the implementation of Resolutions 55 and 140, the Ministry of Finance, in collaboration with ETP-UNOPS, implemented the project **"Dedicated Policy Framework for Investment in and Development of Sustainable Energy Infrastructure"** over 15 months**.** The project was designed not as a sector-specific intervention, but as a cross-cutting analytical and policy effort to address the fiscal, financial and institutional dimensions of energy investment.

The final report consolidates the full body of work produced under this mandate, including consultation insights from bilateral meetings and public workshops gathering over 300 participants. It draws on international benchmarking, analysis of Viet Nam's current investment landscape, assessment of post-FIT pricing and procurement mechanisms and extensive stakeholder consultations. It is underpinned by quantitative evidence from cost–benefit analysis (CBA) and vector autoregression (VAR) modelling, which assess the macroeconomic, welfare and fiscal implications of alternative transition pathways. The report therefore functions as both an analytical diagnosis and a policy design document, translating national energy objectives into an implementable investment architecture.

Viet Nam's Current State of Affairs

Viet Nam now operates one of the largest power systems in Southeast Asia, with installed capacity exceeding 82 GW and renewables accounting for roughly one quarter of capacity. System operation data from 2024–2025 shows that the power system is increasingly peak-constrained, transfer-limited and stressed under high utilisation. Thermal and hydropower assets continue to underpin reliability, while renewable generation remains exposed to curtailment, congestion and dispatch uncertainty.

Ownership and operational control remain highly centralised, with EVN retaining a dominant role in dispatch, transmission and settlement, even as private and foreign investors hold a growing share of generation assets.

Investment behaviour over the past five years reveals a clear slowdown relative to PDP VIII requirements. This is not driven by weak demand or limited technical potential, but by heightened sensitivity to bankability conditions following the withdrawal of FITs. As pricing shifted from fixed tariffs to negotiated and capped arrangements, investment decisions moved from "build-to-tariff" to "build-to-contract." In this environment, projects either reach financial close quickly under clear and enforceable rules or stall across the pipeline under uncertainty.

The report identifies revenue predictability as the binding financing constraint. Renewable projects rely heavily on domestic bank lending with relatively short tenors, creating maturity mismatches for assets with 20–30 year lifetimes. Capital-market instruments and long-duration institutional finance remain underdeveloped. Prolonged negotiation of transitional PPAs and unclear treatment of curtailment, dispatch and settlement have directly weakened lender confidence. In contrast, transmission investments financed through regulated, tariff-backed revenue streams demonstrate that long-tenor capital is available when cash flows are predictable and institutionally anchored.

At the same time, rapid renewable deployment during the FIT period was not matched by commensurate investment in grids and flexibility. Curtailment, congestion and inter-regional transfer constraints have become material financial risks. Storage and system flexibility remain largely non-investable due to the absence of defined revenue frameworks. These system constraints now directly shape investor returns and debt sizing, particularly for capital-intensive technologies.

Why the Transition Is Economically and Fiscally Justified

The quantitative analysis confirms that development pathways aligned with PDP VIII consistently outperform Business-as-Usual scenarios. The CBA shows that welfare gains are driven primarily by structural changes in the generation mix over asset lifetimes, notably the displacement of fossil generation by renewables, rather than by short-term electricity price suppression. BAU trajectories impose persistent welfare losses through higher emissions, fuel import exposure and system inefficiencies.

The VAR results reinforce this conclusion at the macroeconomic level. Renewable-intensive pathways can support economic growth while stabilising power-sector emissions during the 2030s, provided electricity prices are allowed to adjust endogenously under State management rather than being held rigidly through administrative controls. Rigid pricing increases volatility and raises the probability of downstream fiscal intervention through arrears, renegotiation or balance-sheet stress.

Crucially, the analysis also identifies a binding vulnerability during the 2025–2030 transition window. Many projects that are welfare-positive over their lifetimes are not financeable under current revenue, dispatch and settlement conditions. This creates a paradox: the transition is economically sound, yet investment can stall unless short-term bankability is addressed explicitly. The report therefore treats bankability not as a concession to investors, but as a form of fiscal risk management. Explicit, capped and well-governed support mechanisms are shown to be fiscally safer than implicit and reactive intervention.

Viet Nam's Binding Constraints: From Capacity Targets to Investment Credibility

The report's diagnosis of Viet Nam's current state highlights several structural constraints:

- Revenue predictability has weakened following the withdrawal of FITs, while market institutions are not yet mature enough to price volatility efficiently.
- Financing remains dominated by short-tenor domestic bank lending, creating maturity mismatch for long-lived assets such as offshore wind, storage and transmission.
- Grid congestion, curtailment risk and delayed interconnection have become material financial variables rather than technical side issues.
- Storage and flexibility lack defined revenue frameworks and therefore remain non-investable at scale.
- Legal reforms have progressed, but execution risk persists due to fragmented permitting, inconsistent contracting and weak settlement credibility.

These constraints form a reinforcing loop that raises the cost of capital and slows delivery. Breaking this loop requires an integrated policy architecture rather than incremental adjustments.

A Portfolio-Based Policy Architecture: Five Integrated Policy Packages

To address these constraints, the report proposes **five integrated policy packages (Packages A–E)** that together form a coherent investment architecture. These packages are designed to operate as a system, with each targeting a specific class of risk and each governed within explicit fiscal boundaries.

Package A – Revenue Stabilisation with Market Discipline
This package restores cash-flow predictability during the transition period through auction-based sliding feed-in premiums for mature technologies and selective two-sided CfD-type contracts for capital-intensive assets such as offshore wind. These instruments are paired with standardised, bankable PPAs and codified settlement discipline. The design objective is to stabilise revenues ex ante while capping fiscal exposure through explicit volume corridors, budget envelopes and stress-tested commitments.

Package B – Deliverability-Based Procurement and Grid Readiness
This package makes grid deliverability a formal condition of procurement. Generation volumes are linked to connection-ready zones or published network reinforcement plans, offshore wind sites are pre-developed by the State, and curtailment rules are standardised and transparent. By treating deliverability as part of the investment product, this package reduces curtailment risk, lowers financing costs and prevents procurement from outrunning the grid.

Package C – System Flexibility as an Investable Asset Class
This package monetises flexibility through contracted availability revenues for storage and flexible capacity, complemented by ancillary-services markets with clear stacking rules. It also incorporates demand-side management and time-of-use tariffs as flexibility procurement tools. The objective is to make storage and flexibility financeable, reducing integration costs and stabilising renewable revenues as penetration rises.

Package D – Financing Maturity and Fiscal Guardrails
This package extends financing tenors and diversifies capital sources beyond domestic bank balance sheets through policy-bank lending, credit enhancement, green bonds and refinancing frameworks. At its core is a Ministry of Finance-led contingent-liability governance framework, including explicit budget envelopes, a central registry of commitments, scenario stress testing and disclosure in the medium-term fiscal framework. This ensures that support mechanisms remain credible without creating hidden liabilities.

Package E – Institutional Delivery and Execution Capability

This package reduces non-financial risks that drive up the cost of capital. It includes one-stop digital permitting with statutory timelines, benefit-sharing frameworks to manage social acceptance, targeted workforce development in grid, storage and offshore wind and applied R&D to strengthen domestic capability. By lowering the execution premium, this package underpins the effectiveness of all other packages.

Implementation: From Architecture to Delivery

Design alone is insufficient. The report therefore sets out an implementation operating system anchored in fiscal control, sequencing and accountability. Support instruments are treated as fiscal commitments, not sector policy; predictability is prioritised over generosity; instruments are sequenced by technology financeability and market readiness; and market foundations are strengthened to prevent support from degenerating into de facto fixed tariffs.

Implementation requires governance that prevents fragmentation and prevents implicit liabilities. The central delivery axis is the MOF–MOIT relationship: MOF anchors fiscal envelopes, contingent liability governance and tariff pass-through analysis, while MOIT anchors market design, technical regulation and alignment with PDP VIII planning.

A standing coordination mechanism should jointly approve bidding calendars, eligibility gates, fiscal envelopes and settlement rules. The key design choice is to make adjustment rule-based, not discretionary: triggers for recalibration should be tied to observable outcomes such as auction clearance rates, delivery rates, curtailment levels, settlement performance and exposure against caps.

EVN and NSMO remain the operational settlement hub, but payment credibility depends on ring-fenced accounts, transparent funding rules and strict arrears protocols subject to audit. Clear rules on payment priority, remedial actions if shortfalls occur and publication of settlement flows are essential for bankability and fiscal oversight. Domestic finance mobilisation also depends on SBV guidance: lending norms on DSCR assumptions, tenor expectations, currency risk treatment and exposure limits materially affect WACC and therefore support needs. Coordination between MOF and SBV ensures that fiscal guardrails and financial-sector incentives operate as one system.

Local authorities remain decisive for land, licensing and readiness. Bidding scheduling and project award should be linked to enforceable readiness criteria monitored at provincial level to avoid awarding capacity that cannot be delivered.

Conclusion

One of the key energy transition challenges for Viet Nam is how to govern it as a long-term investment and fiscal-risk management programme. The transition is welfare-enhancing, compatible with growth and necessary for energy security, but it will not deliver at scale unless planning targets are matched by bankable contracts, grid-deliverable procurement, investable flexibility and explicit fiscal governance.

By implementing the five integrated policy packages proposed in this report, Viet Nam can restore investor momentum, reduce system costs, mobilise long-duration capital and avoid the accumulation of hidden liabilities. The result is a market-oriented, fiscally anchored and system-aware energy transition that supports not only climate objectives, but also long-term economic resilience, financial stability and national development.

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