



AVPI Sector Brief: Clean Energy Transition

Vietnam's Vision for a Clean Energy Transition

Vietnam has set ambitious targets to achieve net-zero emissions by 2050, including achieving 47% renewable power by 2030. Through the Just Energy Transition Partnership (JETP), it has secured US\$15.5 billion in concessional finance from G7 partners to retire coal, scale renewables, and upgrade its electricity grid. Other early progress includes pilot projects in offshore wind power, solar Direct Power Purchase Agreements (DPPA) that allow large electricity consumers to buy from private generators (rather than state utilities), and regulatory reforms designed to better attract private investment.

In 2024, new electricity regulations ([No. 61/2024/QH15](#)) were passed to support and incentivise the sector's further expansion. Vietnam's [Power Development Plan VIII \(PDP8, updated 2025\)](#) outlines significant developments in offshore wind, solar, liquid natural gas (LNG), and regional transmission grid infrastructure. The vision is to reduce reliance on coal from 33% of electricity generation to just 13-17% by 2030, and zero by 2050:

Year/ Source	Hydro	Solar	Onshore Wind	Offshore Wind	Nuclear	Coal	LNG
2023 (Actual)	22.9 GW (~28%)	16.4 GW (~20%)	5.8 GW (~7%)	0 GW	0 GW	26.7 GW (~33%)	7 GW (~9%)
2030 (Planned, PDP8)	33-35 GW (~15-18%)	46-73 GW (~25-31%)	26-38 GW (~14-16%)	6-17 GW (~3-7%)	4-6GW (~2-3%)	31 GW (~13-17%)	33-37 GW (~15-19%)
2050 (Long-term Vision)	41 GW (~5%)	293-296 GW (~35- 38%)	85-91 GW (~11%)	114-139 GW (~15-17%)	11-14 GW (~1-2%)	0 GW (0%)	44-55 GW (~5-7%)

The Australian Context

Australia has undergone a rapid transformation to clean energy. In 2024, renewables accounted for 36% of total electricity generation, primarily driven by solar (18%), wind (12%) and hydro (5%), and the Australian Government has committed to a target of 82% renewable energy by 2030. To achieve this, Australia's federal and state governments have invested heavily in grid integration and energy storage, and undergone regulatory reform with targeted funding for green hydrogen research, battery supply chains, and critical minerals processing - technologies crucial to Vietnam's energy ambitions

Vietnam's Key Industry Partnerships

International Community

In 2023, Australia committed A\$105 million to support Vietnam's energy transition and a further A\$94.5 million for climate change adaptation in the Mekong Delta. Additional funds flow through the Australia-Vietnam Energy Transition Platform, which leverages private sector investment. Other partners include: the JETP coalition, Japan, South Korea and Singapore.

Industry Leaders

Ørsted and Equinor exited Vietnam's offshore wind market in 2024 due to regulatory reform delays. Key investors now include energy companies from South Korea, Japan and Thailand. In 2025, Malaysia's MY Energy Consortium, Vietnam's PTSC, and Singapore's Sembcorp Utilities signed a cross-border renewable energy collaboration.

Universities

Collaborations with RMIT University Vietnam, Hanoi University of Science and Technology (HUST), Vietnam National University (VNU), and Australian institutions such as UNSW, CSIRO, Swinburne, and Curtin University, focus on energy modelling, renewables engineering, and regulatory frameworks.

Key Challenges Facing Vietnam

Grid Capacity & Infrastructure Bottlenecks

Vietnam's electricity grid limitations are slowing renewable rollout, with supply often outpacing or mismatching the infrastructure. Transmission and distribution loss rate remains higher than many emerging economies, at approximately 6.5%.

Regulatory & Market Uncertainty

Unclear frameworks for Power Purchase Agreements, tariffs, and licensing pose challenges for investors in Vietnam. Retroactive changes to feed-in tariffs (FiTs) have undermined confidence, with potential revenue cuts of 25-46% for existing solar and wind projects.

Financing & Technology Costs

High financing costs in Vietnam, driven by limited access to concessional finance, foreign exchange risks, and the need for advanced technologies (e.g. offshore wind, hydrogen, and energy storage), make it difficult to mobilise large-scale private capital for renewable energy projects.

Opportunities for Collaboration

Knowledge Exchange & Research Collaboration

Joint projects on offshore wind engineering, hydrogen development, battery technology, and energy efficiency, led by Australian universities and the CSIRO. fintech, and policy expertise.

Green Finance & Carbon Markets

Leveraging Australia's Australia-Vietnam Energy Transition Partnership (AVETP) and ASEAN investment fund to encourage further private investment for grid and renewable projects.

Policy & Regulatory Expertise

Sharing lessons from Australia's National Electricity Market (NEM) on competitive wholesale design, renewable integration, and consumer-driven energy markets.

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