

# OECD Clean Energy Finance and Investment Policy Review

## VIET NAM

**POLICY HIGHLIGHTS**





# The Clean Energy Finance and Investment Policy Review of Viet Nam

The Clean Energy Finance and Investment Policy Review ("the Review") provides a comprehensive overview of key measures, policies and regulations that form Viet Nam's clean energy finance and investment environment.

The Review provides a number of recommendations that can help Viet Nam to scale up foreign and domestic investment in clean energy, while highlighting Viet Nam's success stories, good practice and relevant country experiences.

## Clean Energy Finance and Investment Mobilisation Programme



The OECD Clean Energy Finance and Investment Mobilisation (CEFIM) Programme supports emerging economies in unlocking finance and investment in renewable electricity (RE) and energy efficiency (EE).

Thanks to financial support from the Government of Denmark, the programme works in close co-operation with partner countries to strengthen policy frameworks to help catalyse private sector finance and investment in clean energy.

The CEFIM programme, in collaboration with the Government of Viet Nam, covers activities that draw on extensive stakeholder engagement to achieve Viet Nam's clean energy objectives. This includes a *Clean Energy Finance and Investment Review*, implementation support, investor dialogues and regional peer-learning.

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The Government of Viet Nam is to be commended for its prioritisation of clean energy development and for recent progress in becoming one of the largest regional renewable energy markets in just a few short years. Strong incentives have created a boom in solar development and drawn attention to the country's abundant renewable resource potential.

To maintain market growth sustainably, Viet Nam must resolve critical new challenges over the coming years including the successful integration of higher shares of variable generation; the mobilisation of diversified sources of capital; ensuring continued cost reductions; and maintaining a stable investment environment while managing the transition of its support schemes. Despite tremendous economic potential, the energy efficiency market remains largely untapped and stronger incentives, regulation and new business models are needed to drive the market.

As an increasing number of countries and corporates pledge stringent commitments to climate action and sustainable development, Viet Nam will need to further accelerate its clean energy transition if it is to maintain its current position as a leading destination for foreign direct investment.

# KEY RECOMMENDATIONS

## IN THE NEAR TERM, THE GOVERNMENT CAN:

- Strengthen and expand minimum energy performance standards and labelling to remove inefficient products from the market and drive market transformation.
- Fill regulatory gaps to provide market confidence for energy performance contracting.
- Streamline project approval and permitting processes to reduce costs and timelines for project development by establishing a nodal agency (or “one-stop shop”) as a single point of contact for developers.
- Prioritise implementing an effective framework for corporate sourcing to keep-up with global trends on decarbonising supply chains and to provide new routes to market for renewable electricity.
- Establish a comprehensive green bond framework that defines eligibility, and reporting and verification protocols. Support green bond issuances from sovereign, sub-sovereign and corporate issuers.
- Begin planning the enabling framework to develop a solar photovoltaic recycling industry drawing from the experience of mature solar markets.

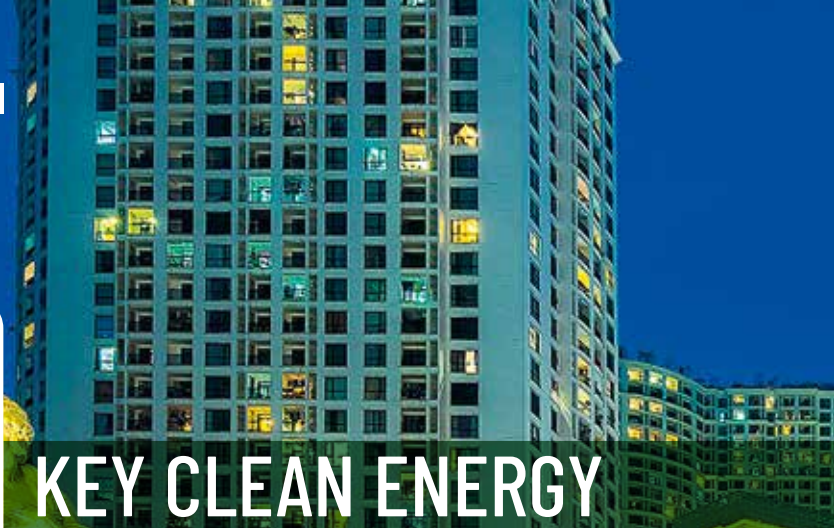
## IN THE MEDIUM TO LONG-TERM, THE GOVERNMENT CAN:

- Develop a roadmap to move to full cost recovery levels in the tariff structure to provide consumers long-term visibility to adapt to tariff uplifts and to promote energy efficiency investment.
- Establish a centralised agency, a variant of the Super Energy Services Company (ESCO) model, to support provincial authorities to develop, procure, finance and monitor public energy efficiency programmes, and support private sector ESCO development.
- Increase the frequency of Power Development Plan (PDP) revisions to continually deliver the most cost-effective energy system development pathway.
- Enhance the independence of the system operator (NLDC) and the regulator (ERAV) so that market participants view decision-making as fair, objective and free of political interference.
- Clarify RE procurement mechanisms to provide medium-long-term visibility of pipelines. This is particularly important for offshore wind where supply chain development is at a formative stage.

## OPPORTUNITIES TO ENHANCE DEVELOPMENT ASSISTANCE INCLUDE:

- Enhance efforts to support policy makers in designing and implementing policies to facilitate variable renewable energy (vRE) integration, design competitive auctions, strengthen EE regulation and support the development of capital markets to deliver green financial products.
- Support skills development in the banking sector for the development and integration of environmental and social considerations and non-recourse project financing.
- Develop on-lending schemes or other financing mechanisms that facilitate access to long-term capital by domestic finance institutions and take advantage of low cost capital from multilateral and bilateral development banks.
- Improve the availability of clean energy finance and investment data to help identify funding gaps, track climate finance flows, build investor confidence and reduce perceived risks.

Rapid solar deployment in recent years coupled with electricity demand disruption caused by the COVID-19 pandemic created system integration challenges as well as wider uncertainty over the sustainability of current renewable energy market growth. Despite this, Viet Nam's energy demand will grow quickly as a post-pandemic economic recovery builds momentum. Energy efficiency markets are at a formative stage but offer an economic option to enhance energy security and displace more costly supply-side investments.



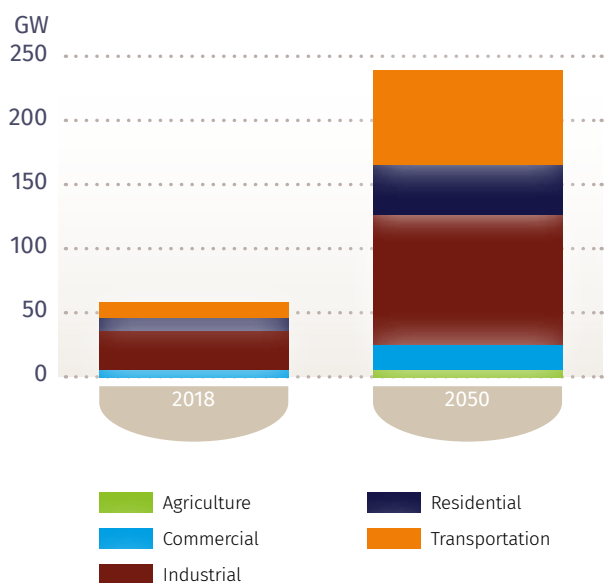
# KEY CLEAN ENERGY FINANCE AND INVESTMENT TRENDS

## INDUSTRIALISATION HAS DRIVEN RISING ENERGY DEMAND GROWTH

- Demand for electricity is growing, nearly doubling its share of overall energy demand between 2010 and 2018.
- Viet Nam has an energy-intensive economy, ranking amongst the highest in the world. Industry accounted for over half of energy demand in 2018, a share which has more than quadrupled since 2000.
- Total energy demand is expected to more than quadruple by 2050.

FIGURE 1

The growing industrial sector accounts for a large share of energy demand

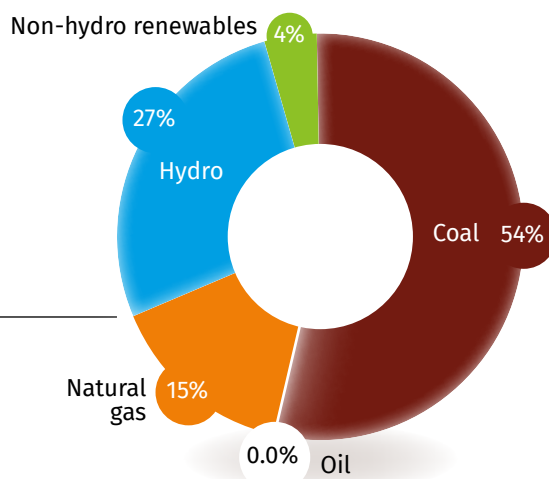


Note: business-as-usual forecasts. Mtoe = million tonnes of oil equivalent  
Source: IEA World Energy Balances; EREA & DEA (2019), Vietnam Energy Outlook Report

## FOSSIL FUELS MAINTAIN A LARGE ROLE IN THE ENERGY MIX

- Hydro was historically a dominant source in Viet Nam's energy mix, but as cost-effective resources were utilised, fossil fuels began to take a larger role. In 2020 fossil fuels accounted for over two-thirds of generation.
- RE has been prioritised in recent years as Viet Nam became a leading regional solar market with 17 GW installed by the end of 2020. A priority will be to deliver steady and sustainable market growth while managing integration of increasing shares of variable renewable energy (vRE).
- Increased private investment in new generation will be critical as a post-pandemic economic recovery builds momentum. Installed capacity is predicted to more than triple by 2040 with RE taking an increasing role.

FIGURE 2  
Viet Nam electricity mix 2020



Source: EVN

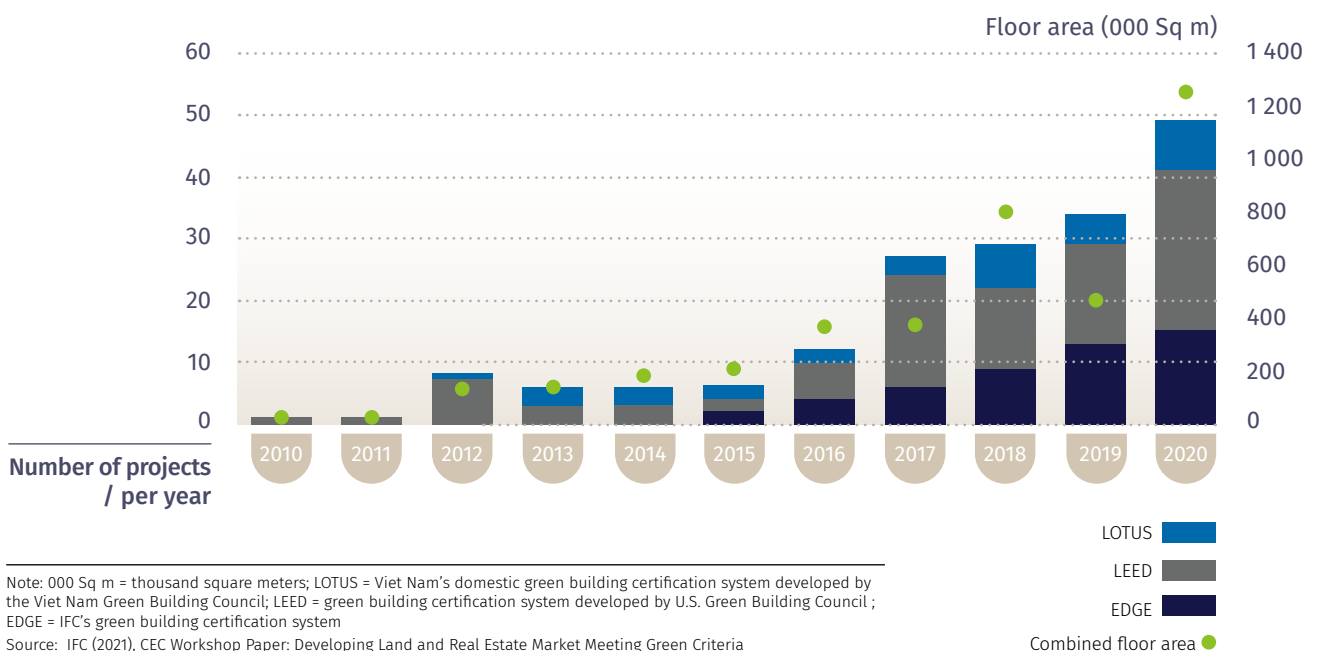


## INVESTMENT IN RENEWABLES HAS BOOMED WHILE ENERGY EFFICIENCY LAGS BEHIND

- Investment in RE has boomed, but a large proportion of the capital channelled into the sector during the solar expansion of 2019-2020 came from domestic and regional sources. Large, non-regional investors and lenders have had restricted activity to date due to concerns with the bankability of the standardised power purchase agreement (PPA).
- When considering economic potential, private investment in energy efficiency has lagged behind. The ESCO market is still immature and existing ESCOs face challenges accessing finance due to their weak balance sheets and the high collateral requirements of domestic commercial banks.
- The green building market is at a formative stage, but has been on an upward trend since 2010. The total number of green certified projects by the end of 2020 reached 179. Despite this progress, green buildings represent a small proportion of the total new-build market and continued market intervention will be required to mainstream green building design.



**FIGURE 3**  
Green building certification has increased significantly since 2010



*Viet Nam has a top-down planning model that brings challenges adapting to the rapidly evolving energy sector trends. Delivering optimal sector development requires more efficient co-ordination between local and central government and increased flexibility in the planning process. Steady progress is being made to develop a competitive power market, and the role and independence of ERAV should be strengthened to ensure effective oversight. The national utility, Viet Nam Electricity (EVN), has made progress adapting its processes and system operation to integrate the growing share of variable renewable electricity but planning for greater flexibility with a range of technical and market-based solutions will be required.*



## PLANNING AND PUBLIC GOVERNANCE

### POWER SECTOR PLANNING LACKS FLEXIBILITY

- Viet Nam has set ambitious climate goals through Nationally Determined Contributions (NDCs) and national policies, such as the National Green Growth Strategy and National Climate Change Strategy.
- Viet Nam’s clean energy governance and planning has a complex structure, involving several government agencies. While the new Planning Law provides a consolidated structure for policy coherence and co-ordination, modifying master plans that orient policy direction remains a slow process.
- Clean and sustainable energy development is prioritised in Resolution 55 orienting the National Energy Development Strategy and the Draft PDP VIII which, once approved, sets the strategy for the electricity sector to 2030.
- The PDP VIII will cover a period of 10 years, with a review every five years. In a rapidly changing context for clean energy, the lack of a flexible planning process raises concerns about the ability to maintain least-cost sector development.
- The Viet Nam Energy Efficiency Programme (VNEEP) III and the inclusion of energy efficiency in the PDP VIII recognises the multiple economic benefits that energy efficiency can deliver given that annual growth rate of electricity demand is expected to be 9.1% from 2021-2025 and 7.9 % from 2026-2030.



### PARTIAL POWER SECTOR LIBERALISATION IS ONGOING

- The 2004 Electricity Law formalised Viet Nam’s intention to liberalise power markets and open the generation subsector to private investment. While EVN holds a monopoly over system operation, transmission, distribution, and retail, partial unbundling has paved the way for further liberalisation.
- The plan for wholesale and retail power markets can deliver significant economic benefits but implementation will be complex and market participants need long-term visibility to support investor confidence.
- Electricity Regulatory Authority of Viet Nam’s (ERAV) effective oversight of market operation is critical. As power markets develop, ERAV’s role and independence will need to be strengthened and expanded.
- The National Load Dispatch Centre (NLDC) is strengthening its capabilities for system operation under vRE including introducing 30-minute dispatch cycles, improved load forecasting and development of wind and solar generation forecasting capabilities.



## RECOMMENDATIONS

- Increase NLDC's ability to balance the system efficiently by adopting incentives for renewable generators to deliver accurate and regular forecasts leading up to dispatch.
- Improve ERAV's independence and ensure it is fully resourced to perform its required functions. Consider expanding authority to cover transmission planning and approval, as well as other areas that impact system costs.
- Increase frequency of PDP revisions and introduce mechanisms for ensuring optimised course-correction updates to support cost-effective and optimal sector development.
- Clearly define and embed the co-ordination processes between central and provincial government agencies to support effective and timely PDP development, as well as the annual/biennial plans and updates.
- Undertake a strategic review of "non-wires alternatives" within the planning process for transmission infrastructure, which can help avoid costly investments in transmission.

## TECHNICAL AND MARKET-BASED SOLUTIONS CAN DELIVER GREATER SYSTEM FLEXIBILITY

- Coal-fired power generation still plays a large role in Viet Nam's power sector, albeit much lower than in previous PDPs.
- The increased share of variable renewable generation has significant implications for how the power system is planned and operated. Under the Draft PDP VIII, renewable energy (excluding hydropower) is set to increase to almost 30% of installed capacity by 2030.
- To ensure planned solar PV and wind additions are integrated affordably, securely, and in a timely manner, large investment in grid infrastructure will be necessary.
- "Non-wires alternatives" such as distributed energy resources, demand-side response, and various storage technologies could support variable renewable energy generation at a lower cost than some transmission upgrades. Planning processes should be updated to fully recognise the costs and benefits of alternative solutions.

TABLE 1

### THE DRAFT PDP VIII FEATURES HIGHER LONG-TERM TARGETS FOR RENEWABLES

SOURCE	Installed capacity	PDP VII revised (2016)	PDP VIII first draft (02/2021)		PDP VIII revised draft (09/2021)	
	2020	2030	2030	2045	2030	2045
Coal-fired	22 077	55 477	37 323	49 918	40 649	50 699
Gas-fired and oil-fired	8 977	19 016	28 871	66 504	27 471	61 933
Hydro (including small-scale) + Pumped storage hydro	20 859	27 871	25 992	33 492	26 684	35 677
Wind	538	5 990	18 010	39 610	11 820	48 110
Solar	17 126	11 765	18 640	55 090	18 640	51 540
Biomass and other renewables	325	3 444	3 150	5 310	1 170	5 250
Power import	1 236	1 508	5 677	5 677	3 936	8 743
Nuclear	0	4 600	0	0	0	0
<b>Total installed capacity</b>	<b>69 258</b>	<b>129 671</b>	<b>137 663</b>	<b>276 601</b>	<b>130 370</b>	<b>261 952</b>

Note: values expressed in Megawatt capacity  
Source: MOIT (2021) Draft PDP VIII

Viet Nam’s energy policy landscape has undergone significant transformation over the past two decades pivoting the sector towards greater levels of private participation, market-based principles, and, more recently, prioritisation of non-hydro renewable and energy efficiency development. The Government of Viet Nam has made laudable progress implementing the regulatory framework to achieve these policy objectives. The government must continue to strengthen these reforms in a transparent, consultative process to ensure the regulatory framework evolves to address emerging challenges and remaining market barriers. Particular focus should be paid to building the enabling framework to attract diversified sources of capital to deliver the deployment targets set in the PDP VIII and VNEEP III.



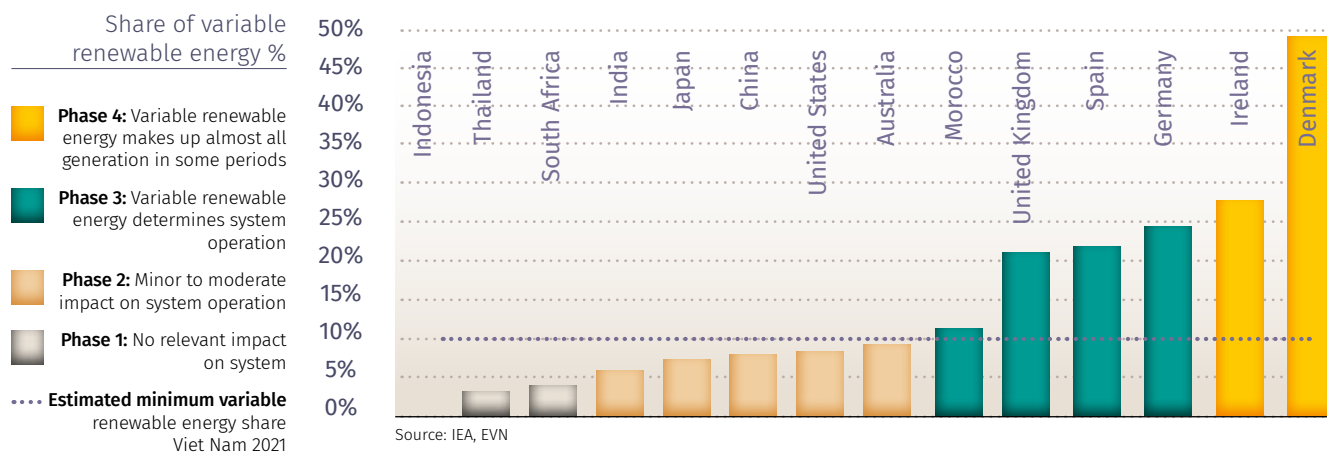
# REGULATORY FRAMEWORK

## NEW REGULATORY PRIORITIES FOR RENEWABLE INTEGRATION

- Rapid solar photovoltaic (PV) deployment over 2019-2020 has quickly increased the share of variable renewable (vRE) energy generation up to levels of 10% expected in 2021. Important regulatory developments are prioritised to support system operation under higher vRE levels including the development of an updated grid code.
- The regulatory environment must evolve quickly to ensure incentive structures and other enabling regulatory frameworks are strengthened for the procurement of balancing services and flexible demand and supply side resources that will be required to facilitate the continued clean energy transition.

FIGURE 4

### Variable renewable energy generation in Viet Nam has risen to mature-market levels



## A SHIFTING PROCUREMENT APPROACH

- A transition from feed-in tariff (FIT) to auction based procurement is planned. The solar FIT expiry in December 2020 and the wind FIT’s planned expiry in November 2021 will leave a regulatory vacuum as details of the future auction programme are currently unavailable.
- Abrupt changes to support mechanisms can have detrimental effects on industry, local supply chains, investor confidence and local employment, which could ultimately disrupt cost reduction momentum for renewables.
- Maximising cost savings through competitive auctions requires risks to be sufficiently mitigated or apportioned appropriately across contract partners and other stakeholders. The current standardised power purchase agreement falls short of international bankability requirements in some aspects and therefore may increase cost of capital.
- A robust regulatory framework for corporate sourcing of renewables will be important as investors increasingly look to decarbonise supply chains. The planned direct PPA pilot planned for 2022 will be critical to support effective implementation and wider scale-up.





## RECOMMENDATIONS

- Strengthen the regulatory framework for procurement of ancillary services. Forward looking ancillary services procurement can ensure changing system needs are met at least cost by allowing all technical solutions to compete on a level playing field.
- Resolve regulatory uncertainty related to RE procurement mechanisms to provide medium-long-term confidence on pipelines for investors and new market entrants.
- Carry-out a review of PPA terms for RE independent power producers to ensure appropriate risk mitigation and optimum allocation of risks between bidders and sector stakeholders.
- Prioritise an effective framework for corporate sourcing to align with global trends on decarbonising supply chains. The direct PPA pilot will be crucial to ensure implementation challenges can be resolved prior to a larger scale-up.
- Strengthen minimum energy performance standards and labelling to accelerate market transformation.
- Establish a dedicated regulatory framework for EPC to build market confidence. The framework should cover accounting procedures, incentives, public procurement, public budgeting, EPC loan guidelines and arbitration procedures.

## MORE ACTION NEEDED TO SUPPORT ENERGY EFFICIENCY MARKET DEVELOPMENT

- Viet Nam has taken important steps to implement the legal and regulatory framework for energy efficiency promotion during VNEEP I & II periods (2006-2015), including passing the energy efficiency law, minimum energy performance standards (MEPS) and energy labelling, mandatory specific energy consumption targets, energy auditing obligations, and efficient building codes.
- The VNEEP III period (2019-2030) offers an opportunity to enhance monitoring and enforcement capacity at provincial levels, to evaluate policy effectiveness, and to strengthen regulation to keep pace with market conditions.
- The uptake of energy performance contracting (EPC) business models has been limited to date. Although no regulatory barriers restrict EPC agreements between two private enterprises, the lack of awareness and novelty of EPC creates hurdles and long business development cycles. A dedicated regulatory framework would do much to develop market confidence.





## CASE STUDIES



### THE BROOKLYN QUEENS DEMAND-SIDE MANAGEMENT (BQDM) PROGRAMME

In 2014, Consolidated Edison Company (Con Edison), a New York utility, estimated demand growth would surpass distribution capacity by 2018, with required upgrades costing 1 billion USD. As an alternative the regulator, New York Public Service Commission (PSC), requested that Con Edison explore “non-wires alternatives” establishing the BQDM programme, aiming to reduce 69 MW of peak demand with customer-side savings, distributed energy generation and voltage optimisation.

PSC introduced incentives to encourage the utility to deliver a full-range of solutions using cost-effective, third-party providers. Con Edison earned an increasing rate of return on programme costs based on performance. A shared savings mechanism also allowed Con Edison to earn 30% of net benefits accrued. Based on its success and cost efficiency, the BQDM programme was extended beyond 2018 using unspent programme budget. “Non-wires alternatives” can offer many of the same benefits of transmission and distribution investment at a lower cost, whilst supporting integration of vRE. Full inclusion of “non-wires alternatives” into Viet Nam’s planning process and strengthening technology-neutral incentives to scale-up Viet Nam’s existing pilots such as the Demand-Side Management pilot can help deliver cost savings.



### PEOPLE’S REPUBLIC OF CHINA REGULATORY DRIVERS FOR ESCO DEVELOPMENT

The Energy Services Company (ESCO) market in China has seen remarkable growth over the last two decades becoming the leading market globally, accounting for 59% of ESCO revenues in 2017. China’s long-running industry targets under the Top 1 000 and Top 10 000 programmes since 2005 effectively kick started the energy services market. This market-making policy was later complemented with a range of regulations that fostered ESCO growth and energy performance contracting (EPC). Over a number of years regulations and guidelines provided financial and tax incentives; dedicated EPC accounting rules; support for accessing finance; and certification and standards.


A critical enabler for ESCO development is improving access to finance; in China, this was achieved by providing dedicated capital to banks for on-lending, but also by focusing on adapting underwriting processes to address barriers specific to ESCOs. The ability for ESCOs to pledge future revenues under EPC projects as security was important and not commonly found in other markets. Supporting ESCOs to develop a credit history in this way has enabled ESCOs to grow their balance sheets and businesses.



## PRIVATE INVESTMENT IN TRANSMISSION INFRASTRUCTURE: THE EXPERIENCE OF BRAZIL

Brazil has mobilised over USD 38 billion in private capital for transmission expansion projects since 1999. Although Eletrobras, the government-owned transmission company, owns the majority of the transmission grid, private concessionaires have successfully entered the sector. Brazil's Independent Power Transmission (IPT) model uses incentive structures to ensure efficiency across the project lifecycle, for example, ensuring timely construction and high service availability over the contract period, substantially bringing down overall costs.

Competitive procurement of IPT concessions can help Viet Nam meet the sizeable grid investment needs predicted in the PDP VIII draft. The Brazil example highlights that the IPT model can successfully mobilise large amounts of capital for grid upgrades, and that having multiple owners of transmission infrastructure does not necessarily compromise system efficiency or security of supply.



## COMMUNITY BENEFITS INTEGRATED INTO RE AUCTION DESIGN: LESSONS FROM SOUTH AFRICA

South Africa's Renewable Energy Independent Power Producers Procurement Programme (REIPPPP) has created a legal framework to incentivise renewable IPPs to channel benefits to communities surrounding renewable project locations. This is done through the competitive bidding procedures which includes scoring on social and economic development criteria and incentivises IPPs to allocate a minor share of generated revenue towards socio-economic development projects that benefit local communities.

Between 2011 and 2020, REIPPPP procured more than 6 000 MW of electricity from 112 wind and solar projects enabling USD 82 million of investments in associated community projects. While the competitive bidding framework for renewable projects in Viet Nam is still under development, REIPPPP can provide an example of how procurement models can be designed to balance bankability and cost competitiveness while delivering real benefit to communities.



## LESSONS FROM DEVELOPING INDONESIA'S GREEN BOND MARKET

Indonesia was the first country to issue a sovereign green sukuk in 2018 raising USD 1.25 billion in the foreign bond market. This first issuance was followed by subsequent issuances in 2019 and 2020 that raised a further USD 1.5 billion to fund green projects including energy efficiency and renewable energy projects. The 2020 Green Sukuk Issuance in the global market has made notable achievements including obtaining the lowest coupon rate for a 5 year tenor, oversubscription by 7.4 times and attracting a greater share of green investors.

To support the development of the green bond market, Indonesia's financial services authority (OJK) issued Regulation No. 60/2017 that outlines the conditions for green bond issuances in the domestic market. The regulation defines 11 eligible sectors (including renewable energy and energy efficiency) that qualify as a green project and is in line with both the Green Bond Principles and the ASEAN Green Bond Standards issued by the International Capital Market Association. Issuers are also required to report on the use of proceeds and environmental benefits from the projects must be reported and verified by an independent third party.



Renewable energy development has driven a wave of private ownership in the generation subsector which has risen from 20% of installed capacity in 2018 to 30% in 2020. The upcoming framework for competitive procurement of renewable projects, the full launch of the wholesale market, the continued equitisation of EVN generation companies and the unbundling of NLDC will be key milestones for promoting fair competition and equal access between private developers and SOEs. Viet Nam has been successful in attracting FDI over the last decade and investment in clean energy will play an important role in supporting ambitions to become a leading manufacturing hub.

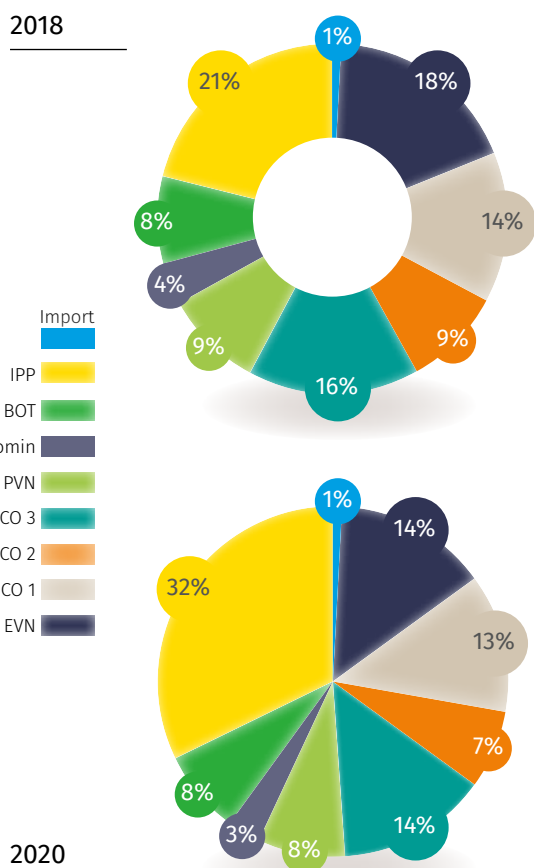
## INVESTMENT AND COMPETITION POLICY

### VIET NAM IS PROGRESSING TOWARDS A COMPETITIVE POWER MARKET

- Significant progress on power market reform has been delivered, including the restructuring of EVN into subsidiaries to enhance operational independence and pave the way for divestment of non-strategic generation assets.
- A surge of private renewable energy IPPs has entered the market since 2019. Yet, the presence of SOEs in the generation subsector and EVN's dominant role across all stages of the electricity market is problematic to achieving the level playing field needed to deliver the electricity market liberalisation agenda prioritised under the 2004 Electricity Law and Resolution 55.
- The establishment of the wholesale market is the next milestone for Viet Nam's power market reforms. As more vRE capacity is introduced a well-structured electricity market can play a role in delivering system flexibility and efficiency.
- Viet Nam will transition to a structured competitive procurement program for renewable energy in the near future. This can support cost reductions if a level playing field is achieved and key project risks mitigated, for example, with simplified land acquisition and clearance processes.
- Viet Nam's updated Public Private Partnership (PPP) law may provide a valuable framework for procuring larger-scale projects, for example offshore wind, where negotiable contract terms can provide reassurance to investors. However, uncertainty over the availability of sovereign revenue protection guarantees; the 30% cap on currency convertibility protection; and the requirement for Vietnamese law as contract governing law will likely remain problematic and may be a source of PDP VIII implementation risk.

FIGURE 5

#### Renewable deployment is driving an increased share of private ownership of generation assets



Notes: excludes rooftop solar; GENCO = EVN unbundled generation company; PVN = Petrovietnam, state-owned oil and gas group; BOT = 'build-operate-transfer' power plant procured under Viet Nam's public private partnership law; IPP = independent power producer

Source: VIET (2020), State management role in power sector



## THERE REMAINS OTHER HURDLES TO INVESTMENT

- Despite low FDI restrictiveness, RE capacity has primarily been developed and financed by leading Vietnamese conglomerates and major ASEAN developers. FDI from OECD countries has been restricted due to perceived sectoral risks, a lack of protection in the standardised PPA, and a lack of confidence in domestic arbitration.
- Dispute resolution and arbitration under the standardised PPA is governed by Vietnamese law with mediation through EREA and, if unresolved, escalation to ERAV, with the right to appeal in Vietnamese courts. It is important to strengthen ERAV's independence to provide investors with confidence that decisions are fair, objective and free of political interference.
- Land access through the purchase of Land Use Right Certificates (LURC) represents a risk for both transmission and RE projects given complicated approval processes and constraints on land availability. There is a need to improve the transparency and co-ordination of various approval processes to achieve cost-effective and expedient project development.

## RECOMMENDATIONS

- Ensure the wholesale market incentivises system-friendly operations by providing accurate and high-resolution price signals to all appropriate market participants.
- Strengthen ERAV's independence and consider providing recourse to arbitration as a standard practice for renewable electricity PPAs.
- Enhance the independence of the NLDC and consider a timeline for the independence of EVN NPT and the separation of distribution and competitive activities.
- Consider revising the legal framework to allow private participation in the transmission subsector with competitive bidding and bankable concession agreements.
- Establish guidelines for competitive procurement of renewable energy to support a level playing field and addressing development risks regarding allocation of LURCs.





# INVESTMENT PROMOTION AND FACILITATION

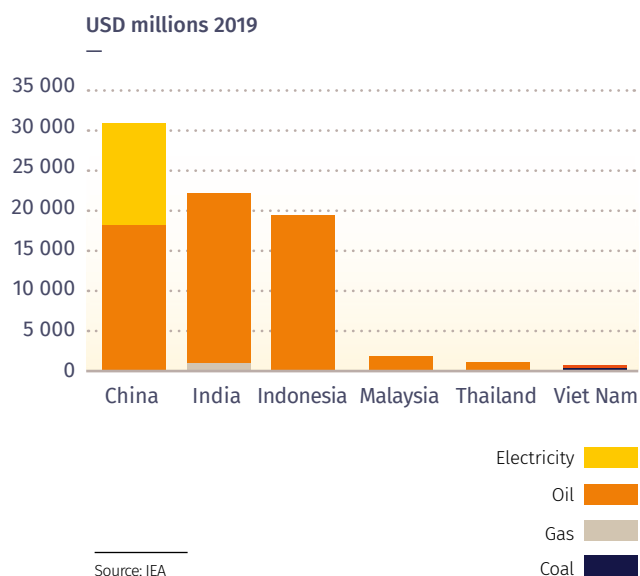
Strong action to reduce direct fossil fuel subsidies coupled with plans to develop a carbon market will do much to ensure capital is directed towards projects that support the country’s green growth ambitions. Corporate tax benefits provide important incentives to clean energy investors. The doing business environment could be improved, particularly for foreign investors with less familiarity with Viet Nam’s legal and regulatory environment. Due to Viet Nam’s decentralised governance structure, renewable energy project developers must interact with multiple contacts across different agencies whereas implementation of national laws and regulations is not always uniform across provinces.

## SUPPORTING THE CLEAN ENERGY INVESTMENT CASE

- Viet Nam has acted strongly to reduce direct fossil fuel subsidies and prioritise market mechanisms for the pricing of energy products. Retail electricity tariffs remain administratively set but reforms have improved transparency and shifted tariffs gradually to approach cost-reflective levels. Further tariff uplifts may be required to maintain EVN’s profitability and to promote investment.
- Viet Nam is one of few countries in the region with an environmental tax and revenues have been channelled to support clean energy through concessional financing and by offsetting the costs of the FIT programme. A planned carbon market (currently at concept) will go further to value the economic benefits of clean energy but must be carefully designed to ensure price signals can shape investment decisions in the energy sector.
- A preferential corporate income tax (CIT) rate, exemption from import tax, and land lease charges in certain localities have supported renewable energy investment. Incentives are also available to manufacturers of efficient appliances, however not for investors in efficient infrastructure and equipment. Incentives for green buildings, efficient technical infrastructure, and retrofitting can be an important facilitator for energy efficiency (EE) market development.

FIGURE 6

### Fossil fuel subsidies in selected countries



## THE “DOING BUSINESS” ENVIRONMENT CAN BE IMPROVED

- Administrative processes for RE projects require developers to liaise with multiple public agencies whereas it’s been noted that laws and regulations are not applied uniformly across provincial authorities. Detailed, up-to-date investor guidance is also not readily available. With a transition to competitive auctions it will be important to ensure processes are streamlined to drive cost reductions.
- Drawn out exchanges with tax authorities is often required for the granting of tax incentives and tax procedures are generally time consuming. The World Bank’s Doing Business ranking concludes that 384 hours on average are required by businesses each year for tax administration compared to the regional average of 178.





## A LARGER PUBLIC ROLE CAN FACILITATE ENERGY EFFICIENCY INVESTMENT

- Public energy retrofit programmes can be an effective driver of EE market development due to the large quantity of project pipeline and the ability to demonstrate and scale business models such as EPC. To date there has been limited activity on a large scale.
- Provinces and municipalities play a key role in facilitating public EE investment due to fiscal decentralisation. This creates challenges for project aggregation due to fragmented management responsibilities of public facilities.
- Establishing a centralised agency to co-ordinate preparation, procurement, and financing of public EE programmes can achieve economies of scale, high-quality project design, standardisation, and improved monitoring. Such an agency can support ESCO market development and should be mandated to contract implementation services to private-sector ESCOs.

## RECOMMENDATIONS

- Develop a clear roadmap to move to full cost recovery levels in the retail tariff structure to provide consumers sufficient long-term visibility to adapt to uplifts and to provide a market signal for the promotion of EE investment.
- Design and integrate the plan for a carbon market into the overall roadmap for power market reform to ensure price signals can be effectively passed through to power market participants and drive investment decision-making.
- Prioritise the development of demand-side incentives for investors in energy efficient equipment, infrastructure, and green buildings.
- Streamline project permitting processes to reduce administrative costs for project development. This could be achieved by establishing a nodal agency (or “one-stop shop”) providing a single point of contact for developers.
- Consider establishing a centralised agency (a variant on the Super ESCO model) mandated to support provinces to develop EE programmes. The agency can provide a key facilitation role to aggregate high-quality projects for contracting to private-sector ESCOs.





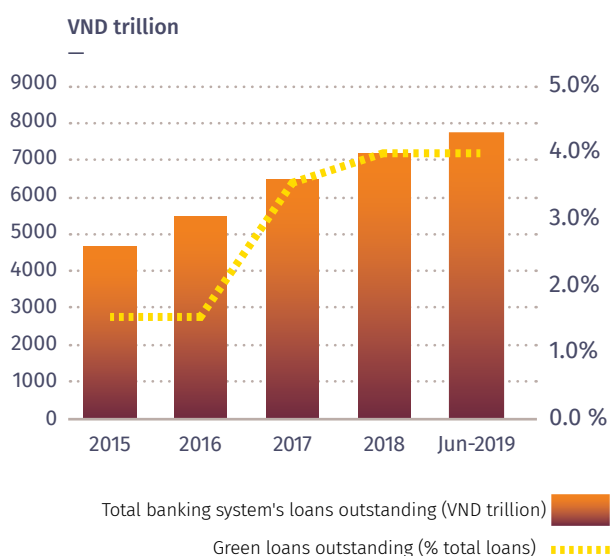
# FINANCIAL MARKET POLICY

A major scale-up in financing will be needed for Viet Nam’s clean energy transition requiring both domestic and international public and private sources of finance. Creating a clean energy finance ecosystem that has reach across governments, financial markets, industry and development co-operation can support this goal. The green banking policies led by the State Bank of Viet Nam (SBV) are commendable and have played an important role in facilitating domestic finance for clean energy projects. The impressive solar expansion was financed to a large degree through domestic and regional banks. This signals positive momentum among domestic and regional financial institutions on the attractiveness of renewable energy projects and a recognition of the need to integrate environmental considerations into the finance sector.

## REGULATION HAS FACILITATED DOMESTIC LENDING FOR CLEAN ENERGY

- SBV should be commended for strong policy direction that has guided the greening of the finance sector by requiring banks to integrate environmental and social (E&S) risk management into their lending practices.
- Some Vietnamese banks have indicated that they will not finance coal fired power plants, joining a fast expanding group of financial institutions around the world who are making it increasingly difficult to raise capital for coal, helping to accelerate its eventual phase out.
- Growing difficulty in financing coal both domestically and internationally combined with a strong outlook for electricity demand has helped to increase the attractiveness of financing renewables in Viet Nam.
- While some domestic banks have been active in financing clean energy projects, others still lack sufficient technical capacity to undertake project due diligence and additional support is required to develop domestic capacity and reduce perceived risks.
- Data from the end of June 2019, shows clean energy projects accounted for 15% of the green lending portfolio in Viet Nam, the second largest after green agriculture which accounts for nearly half of all outstanding green credit. While lending to green projects has more than quadrupled between 2015 and June 2019, green credit still represents a very small share of total credit availability in Viet Nam reaching just over 4% in June 2019.

**FIGURE 7**  
Green lending is rising but still a relatively small share of the market



Source: SBV

## LACK OF ACCESS TO LONG-TERM DEBT WILL CONSTRAIN FUTURE GROWTH

- The rapid expansion of domestic lending to clean energy projects coupled with a tightening macro-prudential regulatory environment and a lack of access to long-term capital sources may restrict the availability of credit from local banks to finance the next phase of deployment.
- Refinancing mechanisms will be needed to recycle capital from operational projects to support those that are at the development or construction phase. Such refinancing strategies can allow new financial institutions to gain valuable experience and exposure to clean energy projects and drive more private capital (both domestic and international) into the sector.





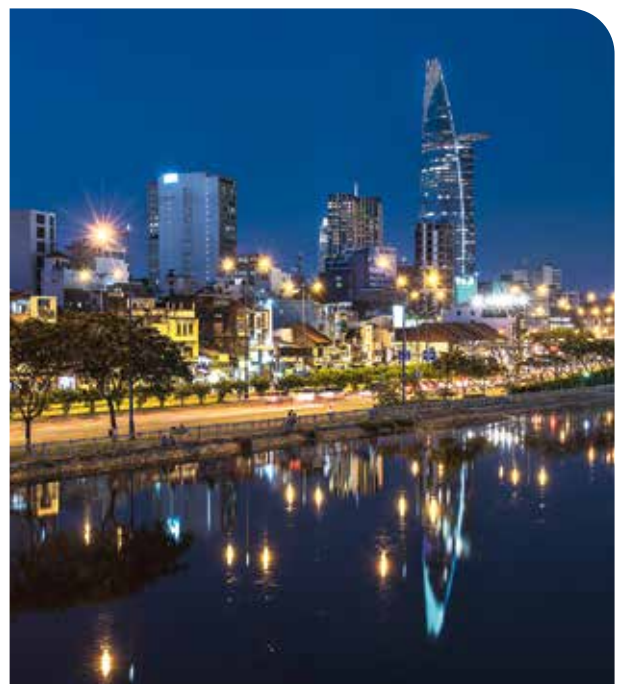
- While there is good appetite to finance clean energy projects, a lack of access to long-term debt capital has meant typical debt tenors of 5 to 7 years are well below that of OECD and some major emerging economies where tenors are often above 15 to 20 years.
- The absence of non-recourse project finance in Viet Nam, which is the norm for large renewable energy projects in OECD countries restricts the funding capacity of individual developers with limited equity capital.
- High collateral requirements also pose a challenge for smaller developers, including energy service companies that are implementing energy efficiency projects as their limited capital is often used up after just one or two projects.

## INTERNATIONAL CAPITAL REQUIRED TO MEET FUTURE FINANCING NEEDS

- Development finance institutions have played a key role in financing hydropower, transmission and distribution network expansion and industrial energy efficiency in Viet Nam, they have only played a limited role in financing solar and wind projects as the domestic finance sector has so far had sufficient liquidity.
- Liquidity issues may arise as Viet Nam looks to develop its offshore wind resources which require funding above USD 2-3 billion in a single project. This is beyond the capacity of the domestic market and will require international consortia of development and private finance institutions to address the risk characteristics of large projects.
- International lenders have also maintained that current PPA conditions are not bankable due to high perceived risks related to arbitration and curtailment. PPA contracts in Viet Nam are also not as comprehensive as those in Europe or other OECD countries, leaving uncertainty which is difficult for financial institutions to manage.

## RECOMMENDATIONS

- Implement regulation that includes a clearly defined green bond framework including definitions for eligibility, reporting and verification protocols.
- Develop solutions that can facilitate on-lending schemes or other financing mechanisms that can facilitate access to long-term capital by domestic finance institutions.
- Consider the creation of a clean energy fund that can support the use of blended finance structures to mobilise financing from the private sector for clean energy projects.
- Develop a sustainable finance roadmap that outlines key requirements for financial institutions to develop action plans and regular reporting on alignment of portfolios to sustainable development criteria and exposure to climate change impacts.
- Improve the availability of clean energy finance and investment data through the development of monitoring and evaluation tools.



*Viet Nam needs to accompany efforts to accelerate clean energy finance and investment with supportive policies targeted at a number of cross-cutting areas. These include regional integration, research and development (R&D) and innovation, e-waste control and recycling, and skills and capacity development, all of which are critical to realise the country's clean energy transition.*



## RECOMMENDATIONS

- Accelerate power grid integration with the long-term aim of multilateral power trading.
- Provide targeted support for innovation in the clean energy sector to reduce energy costs and support commercialisation of localised technical solutions.
- Begin planning and implementing the enabling framework to develop domestic solar photovoltaic recycling drawing from the experiences of mature markets.
- Collect gender-disaggregated data on women's participation in the clean energy sector to mainstream gender in mitigation efforts while supporting women entrepreneurial networks.
- Develop an integrated strategy for technical and vocational education and training for the clean energy sector or for the green economy as a whole.
- Expand skills development programmes in technical vocations and in the banking sector for the development of environmental and social management systems and non-recourse or limited recourse project finance.

## REGIONAL BANKING AND POWER SYSTEM INTEGRATION

- Power trading through the ASEAN Power Grid can be a key flexibility resource to support integration of vRE and efficient asset utilisation. The enabling conditions to move to full multilateral trading should be accelerated.
- As local banks achieve Basel II standards there will be opportunities for integration through the ASEAN Bank Integration Framework. Opening the sector to competition can promote sector efficiency, technology and expertise transfer, inward investment, and diversification of the customer deposit base.

## TARGETED CLEAN ENERGY R&D

- Viet Nam has made progress developing the legal framework to support innovation most notably with the alignment of intellectual property rights to international norms.
- Government support to clean energy R&D can reduce the cost of delivered energy and create local value. This is particularly applicable in the offshore wind industry where localised technical solutions may be required.
- Viet Nam has one of the most open business environments for women among peers, but challenges remain. The National Statistical Indicators on gender development can be extended to cover women's participation in the green economy and lending to women-led businesses.
- A number of associations support women-led businesses through networking, mentoring and training opportunities. Supporting dedicated networks for women active in the clean energy sector can support clean energy investment

## SKILLING-UP AND DELIVERING A JUST TRANSITION

- A just energy transition roadmap can maximise local economic benefits from the clean energy transition while reducing impacts on communities affected by the changing energy sector landscape.
- Avoiding the environmental impacts of end of solar waste will require long-term planning to build sufficient recycling capacity.
- Skills development for a green economy will require integrated planning to ensure relevant technical skills are available in vocational occupations and in the financial sector.

# CHECK OUT THE CEFIM WEBPAGE

Visit [www.oecd.org/cefim](http://www.oecd.org/cefim) for on-going insights into CEFIM programme activities and events. This includes CEFIM country pages with interactive data and analysis on clean energy market trends, governance, finance and investments to provide investors, development partners, policy makers and related stakeholders with market intelligence on opportunities for clean energy investment in CEFIM partner countries.

## About our work



[Find out more](#) about our CEFIM programme activities to support countries in unlocking finance and investments for clean energy development.

The **Viet Nam page** builds upon the OECD's strong engagement with Viet Nam and includes insights into the country's clean energy finance and investment context. It hosts interactive figures with on-going updates of market trends and outlooks, energy governance, policy highlights and the current state of sustainable finance for clean energy in Viet Nam. There are equally summaries and presentations from on-line and in-country CEFIM events.

## Policy highlights

(Click to unselect) ● Cross Cutting ● Energy Efficiency ● Renewable Energy ● Sustainable Finance

<p><b>Investment Law</b> 2007</p> <p>Indonesia Investment Board</p> <p>notably regulates the type of businesses that can be open to foreign investment.</p>	<p><b>Energy Law</b> 2007</p> <p>National Energy Council</p> <p>mandates the government to establish the National Energy Policy and National Energy Plan.</p>	<p><b>Regulation on Energy Conservation</b> 2009</p> <p>Ministry of Energy and Mineral Resources</p> <p>covers 4 main areas: supply and demand conservation action (including 5 000 tonnes of oil equivalent reporting obligation); standards and labelling; incentives and dis-incentives; and assistance and monitoring from the government.</p>	<p><b>Electricity Law</b> 2009</p> <p>Ministry of Energy and Mineral Resources</p> <p>provides a legal framework for the electricity sector in Indonesia.</p>
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**This Policy Highlights is based on the OECD publication:**

*Clean Energy Finance and Investment Policy Review of Viet Nam.*

Viet Nam has become a leading regional market for renewable energy in a short space of time led by private sector investment facilitated by favourable support mechanisms. Achieving the government's clean energy targets will require a strengthening of the investment environment to enable larger-scale projects and increased flows of international capital. Domestic banks and investors will continue to play an important role in Viet Nam's clean energy market, and this could be supported by improving access to long-term capital through accelerated capital market development. Investment in energy efficiency still faces barriers and further support for scalable business models, improving access to finance, and stimulating increased demand will be required.

The Clean Energy Finance and Investment Policy Review of Viet Nam aims to support Viet Nam achieve its ambitious clean energy targets. The review provides a comprehensive overview of the current policy framework in Viet Nam, highlighting successes and identifying areas that can be strengthened. It also contains a number of tailored recommendations for the Government of Viet Nam and development partners to mobilise private finance and investment for clean energy development.

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