



# VIETNAM Renewable Energy Guide May 2024

# Contents

Abbreviation	
Background	2
Legal Framework	
The strategic roadmap for renewable energy development	
Regulatory Authorities and Key Stakeholders	6
Legislation	8
Financial incentives	8
Highlights on Investment Implementations	10
Brownfield versus Greenfield Investment	10
Regulatory Approvals	12
Project Financing	16
Approaches for On-site Consumers	17
Contact Us	19

#### **Abbreviation**

CIT Corporate Income Tax
COD Commercial Operation Date

COP United Nations Climate Change Conference

CHP Combined Heat and Power DOC Department of Construction

DOIT Department of Industry and Trade

DONRE Department of Natural Resource and Environment

DPI Department of Planning and Investment
DPPA Direct Power Purchase Agreement

ERAV Electricity Regulatory Authority of Vietnam
EREA Electricity & Renewable Energy Authority

ERC Enterprise Registration Certificate

EVN Vietnam Electricity

EPTC Electricity Power Trading Company

FiT Feed-in Tariff

GCA Grid Connection Agreement

IRC Investment Registration Certificate

IPA In-principal Approval
IZA Industrial Zone Authority
LURC Land Use Right Certificate
LNG Liquefied Natural Gas

MOIT Ministry of Industry and Trade

MONRE Ministry of Natural Resources and Environment

MPI Ministry of Planning and Investment

MOC Ministry of Construction

NPT National Power Transmission Corporation

Provincial PC Provincial People's Committee

PDP8 National Power Development Plan VIII

PPA Power Purchase Agreement
PPP Public-Private Partnership

PM Prime Minister

RPCo Regional Power Corporation

RE Renewable energy RTS Rooftop Solar

SBV State Bank of Vietnam

SCADA Supervisory Control and Data Acquisition Agreement

WTE Waste to Energy

# Background

- 1. Vietnam possesses approximately 3,260 kilometres of coastline and ample sunshine averaging 1,700-2,500 hours annually,¹ making Vietnam an ideal location for developing renewable energy, particularly through wind and solar power. With the global shift towards green energy and increasing domestic energy demands, Vietnam has become a promising market for renewable energy investment. According to Vietinbank Securities, there is an average 8.5% annual increase in energy demand in Vietnam in the next five years.² Furthermore, the year 2021 witnessed a remarkable growth of wind power, with the total capacity from only 540 MW in 2020 increased to approximately 4,000 MW by the end of 2021,³ which has positioned Vietnam as the second fastest country in East Asia in terms of development rate of renewable energy sources.
- 2. At COP26, Vietnam government committed to achieving net zero emissions by 2050. Continuously, the PM participated in COP28 and announced the Resource Mobilization Plan to secure financial assistance for this commitment. The plan includes an initial fund of US\$15.5 billion and is focused to implement the Joint Environmental Transition Partnership (JETP), established between Vietnam and the International Partners Group (IPG) at the EU-ASEAN summit in Brussels in December 2022. The JETP aims to mobilize US\$15.5 billion of public and private finance over the next three to five years, supporting Vietnam's transition to a green economy and achieving its net zero emissions goal by 2050.4

While the economic and political factors are shaping a promising future for the renewable energy market in Vietnam, potential challenges may arise due to the early development of the legal framework. Several areas of practice, such as DPPA, carbon credit, and self-generation for RTS, that lack regulation by laws. However, the enactment of PDP8 in May 2023 and its detailed implementation plan recently released in April 2024 have emphasized Vietnam's commitment to renewable energy development and encouraging private investment in power grid infrastructure. It can be seen as an attractive opportunity for investors since government efforts are underway to support the growth of Vietnam's renewable energy market, aligning with its focus on sustainable development.

ty-usd-ho-tro-viet-nam-chuyen-doi-nang-luong.htm accessed 6 May 2024.

Vietnam energy (2020) Update the data on solar radiation intensity in Vietnam.

Available at <a href="https://nangluongvietnam.vn/cap-nhat-so-lieu-khao-sat-cuong-do-buc-xa-mat-troi-o-viet-nam-24728.html">https://nangluongvietnam.vn/cap-nhat-so-lieu-khao-sat-cuong-do-buc-xa-mat-troi-o-viet-nam-24728.html</a> accessed 6 May 2024.

EVN (2022) Energy demand to outpace supply in short term.

Available at <a href="https://en.evn.com.vn/d6/news/Energy-demand-to-outpace-supply-in-short-term-66-163-3194.aspx">https://en.evn.com.vn/d6/news/Energy-demand-to-outpace-supply-in-short-term-66-163-3194.aspx</a> accessed 6 May 2024.

<sup>&</sup>lt;sup>3</sup> Britcham Vietnam (2022) Vietnam Renewable Energy report.

Chu Khoi (2023) The international partners group is mobilizing US\$15.5 billion plan to support Vietnam's energy transition.

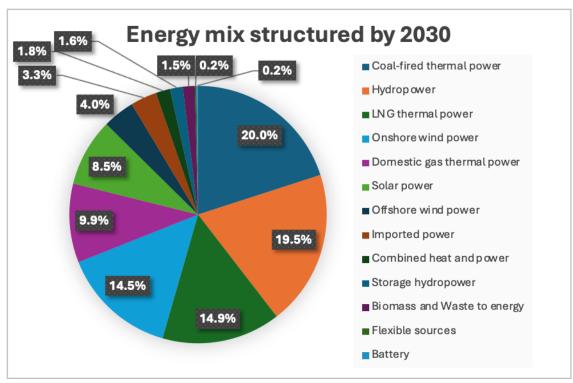
Available at https://vneconomy.vn/nhom-doi-tac-quoc-te-thong-qua-ke-hoach-huy-dong-15-5-

3. In this guidance, we aim to provide an insightful overview of the renewable energy landscape in Vietnam, exploring the legal framework governing renewable energy initiatives, as well as practical guidelines for implementation.

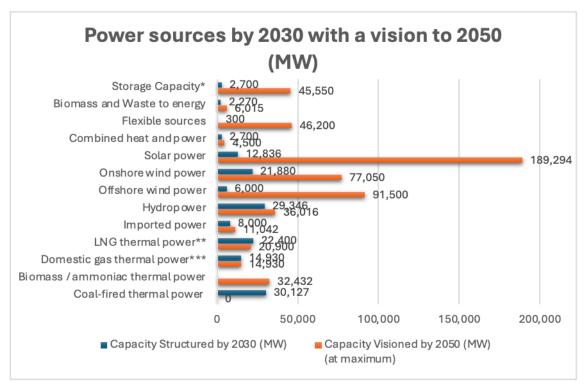
# Legal Framework

#### The strategic roadmap for renewable energy development

- 4. As Vietnam looks towards the future, renewable energy sources are rapidly becoming an essential component of the national strategic economic plan. Two key documents that shape the macro landscape for Vietnam energy market are Decision No. 500/QD-TTg issued on 15 May 2023 ("Decision 500"), and Decision No. 262/QD-TTg issued on 1 April 2024 ("Decision 262"). Decision 500 introduced the National Power Development Plan VIII ("PDP8") whilst Decision 262 provided a detailed implementation plan for the PDP8 (the "Implementation Plan").
- 5. In Decision 500, the PDP8 aims to raise the contribution of renewable energy sources to nearly 50% of the energy mix by 2030. This includes targeted shares of 8.5% from solar energy and 18.5% from wind power, comprising 14.5% from onshore wind and 4% from offshore wind. The goals for each type of renewables by 2030, with the vision to 2050 set out in the PDP8 as follows:



(Source: Decision 500, visualized by Indochine Counsel)



(Source: Decision 500, visualized by Indochine Counsel)5

- 6. The release of PDP8 has brought significant changes to policy-making in Vietnam's renewable energy market, in particular:
  - National Energy Transition to fulfil Vietnam's Commitment to Net Zero Emissions: PDP8 has set out a decisive shift from fossil energy to clean energy to fulfil Vietnam's commitment to achieving net zero emissions by 2050, as affirmed at COP26 by the PM. The national energy transition will require diverse investment forms, with a focus on securing international support and capital from JETP, AZEC, and others.
  - Focus on Offshore Wind Power Development (2023-2030): A strategic pivot towards large-scale offshore wind power development positions it as a primary source of renewable resources by 2030. Accordingly, PDP8 has set an ambitious target for offshore wind power to reach 6 GW by 2030.

<sup>\*</sup> Storage Capacity includes storage hydropower and battery storage by 2030 (2,400 MW and 300 MW, respectively).

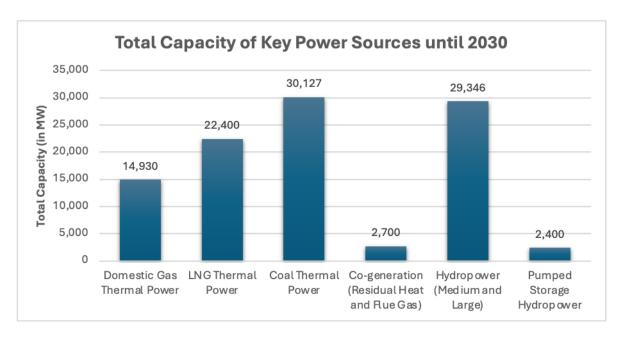
<sup>\*\*</sup> By 2050, domestic gas thermal power will be structured to include domestic gas thermal power and a part converted to operate with LNG (projecting at 7,900 MW) and domestic gas thermal power converted to operate totally in hydro (projecting at 7,030 MW).

<sup>\*\*\*</sup> By 2050, LNG thermal power will be structured to include LNG thermal power converted to operate in combination with hydro (projecting at 4,500 – 9,000 MW) and LNG thermal power converted to operate totally in hydro (projecting at 16,400 – 20,900 MW).

- Transition of EVN's Role as Electricity Purchaser: EVN's role as the exclusive electricity purchaser in the renewables sector is phased out, encouraging selfconsumption and participation in the DPPA mechanism for renewable projects.
- **FiT Price Mechanism Adjustments:** The FiT price mechanism no longer applies to wind and solar power projects. Instead, pricing negotiation focuses on determining electricity prices for Transitional Projects, rather than newly built ones.
- Private Sector Participation in National Grid Development: PDP8 estimates a substantial investment of around US\$14.9 billion for transmission grid development from 2021 to 2030, highlighting the pressing need for private sector involvement in renovating and upgrading the national transmission grid. Preceding the PDP8, many regulatory efforts have been planned by the Government to leverage private sector resources in upgrading the transmission grid, e.g., Resolution No. 55-NQ/TW dated 11 February 2020 of the Politburo (encouraging private sector participation in national transmission grid development), the draft of amended Electricity Law (which is set to authorise private sector investment in the national transmission grid), etc. These initiatives provide a promising opportunity for investors to contribute to the nation's energy infrastructure improvement.
- 7. Decision 262 outlines a detailed plan for implementing PDP8, providing a clear direction for Vietnam's energy market with a focus on green power, in particular:
  - Allocation Of Renewable Energy Power Capacities by Region Until 2030: Wind power (including offshore and onshore wind) and small hydropower are allocated with a larger total capacity compared to other renewable energy sources. Geographically, the renewable energy sources by 2030 are allocated as follows:

Regions	Offshore Wind	Onshore Wind (including Nearshore)	Small Hydropower	Biomass	WTE	Rooftop Solar
Northern	2,500 MW	3,816 MW	2,619 MW	434 MW	424 MW	927 MW
North Central	0	1,948 MW	226 MW	40 MW	127 MW	231 MW
Central	500 MW	1,229 MW	576 MW	6 MW	60 MW	168 MW
Central Highlands	0	3,062 MW	609 MW	5 MW	21 MW	32 MW
South Central	2,000 MW	2,121 MW	352 MW	29 MW	66 MW	136 MW
Southern	1,000 MW	5,720 MW	80 MW	252 MW	414.1 MW	1,109 MW

Allocation of Key Operational Power Capacities until 2030



- Land Requirement: Approximately 90,3 thousand hectares of land will be needed for the establishment of national power sources and transmission grids.
- Private Capital Demand: The total private investment needed is estimated to be VND3,223 trillion (equivalent to US\$134.7 billion). This includes investments in power sources, expected to be around VND2,866.5 trillion (equivalent to US\$119.8 billion), and investments in transmission grids, anticipated to be about VND356.5 trillion (equivalent to US\$14.9 billion).
- Importing Power from Laos and China: Following the Implementation Plan, on 2 April 2024, under <u>Decision No. 270/QD-TTg</u>, the PM approved a list of important national energy programs and projects, which includes four projects for purchasing / importing electricity from China and three from Laos.
- Timeline for Completing the Legal Framework for Prioritized Projects: It is set until 2025 for the relevant authorities to complete the following legal framework: (i) Price for different types of power sources; (ii) Mechanism for direct power purchase; (iii) Mechanism for the development of self–generated and self-consumed rooftop solar projects; (iv) Revision and amendment of the Law on Electricity; and (v) Mechanism for developing carbon credit markets.

#### Regulatory Authorities and Key Stakeholders

8. The Vietnam's renewable energy sector is subject to the oversight of multiple specialised authorities. At the national level, the PM and the Ministry of Industry and Trade (MOIT) hold the ultimate roles in governing the sector. At the provincial level, the Provincial People's Committee, and its electricity-specialised department, *i.e.*, the Department of Industry and Trade, are responsible for regulating the electricity market within their respective regions. Other authorities are involved mainly in licensing procedures and/or providing guidance to

ensure compliance with relevant regulations throughout the development of renewable energy projects. Details of the roles and responsibilities of certain key authorities may include:

Regulatory Authorities	Role
Prime Minister (PM)	has the authority to approve key regulation related to
Trans number (Fin)	renewable industry such as the national power
	development plan, legislation on each type of
	renewables.
Ministry of Industry and Trade	responsible for supervising and promoting the
(MOIT)	renewable energy industry such as formulating and
(111011)	proposing national power development plan to the PM,
	overseeing the competitive power market.
Other central specialised	has the authority to approve matters within their
authorities (e.g., the Ministry of	specialization, and profession.
Natural Resources and	openium zameni, ama protessionii
Environment (MONRE), the	
Ministry of Planning and	
Investment (MPI), etc.)	
Provincial People's Committee	has the authority to approve projects development,
(Provincial PC)	allocate land or sea area, and manage certain
	licensing procedures at the provincial level.
Other specialised provincial	has the respective authority to approve licensing
authorities (e.g., the Department of	procedures within their specialisation, and profession.
Planning and Investment (DPI), the	
Department of Construction (DOC),	
the Department of Natural	
Resources and Environment	
Resources and Environment	
· ·	Role
Resources and Environment (DONRE), etc.)	Role an authortiy established and supervised under MOIT
Resources and Environment (DONRE), etc.)  Key Stakeholders	
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy	an authortiy established and supervised under MOIT
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including thermal power, nuclear power, hydropower, electricity
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including thermal power, nuclear power, hydropower, electricity transmission, distribution, rural electrification, new
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy Authority (EREA)	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including thermal power, nuclear power, hydropower, electricity transmission, distribution, rural electrification, new energy, and renewable energy.
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy Authority (EREA)	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including thermal power, nuclear power, hydropower, electricity transmission, distribution, rural electrification, new energy, and renewable energy.  a State-owned enterprise overseen by the MOIT,
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy Authority (EREA)	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including thermal power, nuclear power, hydropower, electricity transmission, distribution, rural electrification, new energy, and renewable energy.  a State-owned enterprise overseen by the MOIT, currently holds a pivotal position as the sole electricity
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy Authority (EREA)	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including thermal power, nuclear power, hydropower, electricity transmission, distribution, rural electrification, new energy, and renewable energy.  a State-owned enterprise overseen by the MOIT, currently holds a pivotal position as the sole electricity purchaser and possesses exclusive jurisdiction over
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy Authority (EREA)	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including thermal power, nuclear power, hydropower, electricity transmission, distribution, rural electrification, new energy, and renewable energy.  a State-owned enterprise overseen by the MOIT, currently holds a pivotal position as the sole electricity purchaser and possesses exclusive jurisdiction over the administration and operation of the national
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy Authority (EREA)	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including thermal power, nuclear power, hydropower, electricity transmission, distribution, rural electrification, new energy, and renewable energy.  a State-owned enterprise overseen by the MOIT, currently holds a pivotal position as the sole electricity purchaser and possesses exclusive jurisdiction over the administration and operation of the national
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy Authority (EREA)	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including thermal power, nuclear power, hydropower, electricity transmission, distribution, rural electrification, new energy, and renewable energy.  a State-owned enterprise overseen by the MOIT, currently holds a pivotal position as the sole electricity purchaser and possesses exclusive jurisdiction over the administration and operation of the national transmission grid.
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy Authority (EREA)	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including thermal power, nuclear power, hydropower, electricity transmission, distribution, rural electrification, new energy, and renewable energy.  a State-owned enterprise overseen by the MOIT, currently holds a pivotal position as the sole electricity purchaser and possesses exclusive jurisdiction over the administration and operation of the national transmission grid.  The current model of electricity generation is focused
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy Authority (EREA)	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including thermal power, nuclear power, hydropower, electricity transmission, distribution, rural electrification, new energy, and renewable energy.  a State-owned enterprise overseen by the MOIT, currently holds a pivotal position as the sole electricity purchaser and possesses exclusive jurisdiction over the administration and operation of the national transmission grid.  The current model of electricity generation is focused on selling to EVN, but this may change due to the
Resources and Environment (DONRE), etc.)  Key Stakeholders  Electricity and Renewable Energy Authority (EREA)	an authortiy established and supervised under MOIT that specified in managing state affairs and organizing law enforcement in the electricity sector, including thermal power, nuclear power, hydropower, electricity transmission, distribution, rural electrification, new energy, and renewable energy.  a State-owned enterprise overseen by the MOIT, currently holds a pivotal position as the sole electricity purchaser and possesses exclusive jurisdiction over the administration and operation of the national transmission grid.  The current model of electricity generation is focused on selling to EVN, but this may change due to the evolving policies that favour self-consumption over

#### Legislation

9. Renewable energy is primarily regulated by the Electricity Law along with other overarching statutes such as the Investment Law, the Enterprise Law, the Land Law, the Construction Law, the Environmental Protection Law, the Tax Law, among others. Therefore, depending on the specific type of renewable energy, specialised legislation may also apply as follows:

Types	Specialised legal documents
Solar	✓ Decision No. 13/2020/QD-TTg ("Decision 13")
	✓ Circular No. 18/2020/TT-BCT, amended by Circular No.
	01/2023/TT-BTC
	✓ Circular No. 15/2022/TT-BCT ("Circular 15")
	✓ Decision No. 21/QD-BCT ("Decision 21")
Wind	✓ Decision No. 37/2011/QD-TTg, amended by Decision No.
	39/2018/QD-TTg (" <b>Decision 37</b> ")
	✓ Circular No. 02/2019/TT-BCT, amended by Circular No.
	01/2023/TT-BTC
	✓ Circular 15
	✓ Decision 21
Small Hydropower <sup>6</sup>	✓ Circular No. 32/2014/TT-BCT, amended by Circular No.
	29/2019/TT-BTC
Biomass	✓ Decision No. 24/2014/QD-TTg, amended by Decision No.
	08/2020/QD-TTg
	✓ Circular No. 44/2015/TT-BCT, amended by Circular No.
	16/2020/TT-BCT
WTE	✓ Decision No. 31/2014/QD-TTg ("Decision 31")
	✓ Circular No. 32/2015/TT-BCT ("Circular 32/2015")

10. Overall, despite the enormous potential for growth in renewable energy market, the legal framework governing this industry has not kept pace with its rapid transition. Key legal documents, such as amendments to the Electricity Law, laws on renewable energy, electricity pricing mechanisms, and the DPPA mechanism, which are crucial for charting the nation's transition from fossil fuels to renewable sources, are in the drafting phase and awaiting finalisation. According to the Implementation Plan, these legal frameworks are set to be completed in 2025<sup>7</sup>.

#### Financial incentives

11. Vietnam has become an increasingly popular location for renewable energy investment, largely due to the attractive financial incentives offered by the government, especially the appealing FiT rates and tax advantages.

In Vietnam, small-scale hydropower energy with an installed capacity of from 1MW and up to 30MW is classified as a form of renewable energy resource (*Article 1 of Decision No. 2394/QD-BCN dated 1 September 2006*).

Annex I of Decision 262.

#### (a) FiT prices

The FiT prices for solar and wind projects provided in Decision 13 and Decision 37 respectively are no longer valid for projects that fail to achieve the Commercial Operation Date (COD). Instead, Decision 21 introduces a negotiation-based pricing mechanism with capped maximum prices for transitional projects. Transitional projects refer to projects which are in development but have missed FiT conditions before specified deadlines (the "Transitional Projects"). However, investors perceive the pre-determined maximum prices for solar and wind as less favourable compared to the previous preferential FiT. Additionally, there is uncertainty regarding the policy governing pricing mechanisms for newly built projects, which has led to investor hesitancy in initiating greenfield solar and wind projects.

Up to date, only FiT prices for biomass and solid waste power are currently still in effect, while that of solar and wind power is now only applied to Transitional Projects.

Sources	Type of Project	FiT Prices / Capped	Conditions to apply
Solar	Rooftop solar	None	N/A
	Floating	1,508.27 VND/kWh8	Applicable to Transitional
	Ground-mounted	1,184.90 VND/kWh <sup>9</sup>	Projects only. EVN and
Wind	Offshore	1,815.95 VND/kWh <sup>10</sup>	investors will negotiate
	Onshore	1,587.12 VND/kWh <sup>11</sup>	the specific electricity
			price based on these FiT
			Capped prices
Biomass	CHP	7.03 US cents/kWh <sup>12</sup>	None
	Non-CHP	8.47 US cents/kWh <sup>13</sup>	
WTE	Waste	10.05 US cents/kWh <sup>14</sup>	None
	incineration		
	Combustion of	7.28 US cents/kWh <sup>15</sup>	
	landfill gas		

#### (b) Tax and other investment incentives

In addition to the preferential FiT rate that mentioned earlier, subject to conditions set forth by laws, investors are entitled to certain investment incentives as listed in table below:

Framework for Electricity Prices of Transitional Wind and Solar Projects attached to Decision No. 21/2023/QD-BCT.

<sup>9</sup> See Fn.8 above.

<sup>&</sup>lt;sup>10</sup> See Fn.8 above.

<sup>&</sup>lt;sup>11</sup> See Fn.8 above.

Article 14.1, Decision No. 24/2014/QD-TTg as amended by Decision No. 08/2020/QD-TTg.

Article 14.2, Decision No. 24/2014/QD-TTg as amended by Decision No. 08/2020/QD-TTg.

<sup>&</sup>lt;sup>14</sup> Article 8.1, Circular 32/2015.

<sup>&</sup>lt;sup>15</sup> Article 8.1, Circular 32/2015.

Category	Incentives
Land Incentives	Subject to the type of economic areas / regions, the project
	company may be exempt from land rent during the basic
	construction period and up to 15 consecutive years thereafter.
	Notably, the land rent for a project built in an extremely difficult
	socio-economic areas / regions is exempt for the entire land lease
	term. <sup>16</sup>
Taxes	Project company is exempt from Non-agricultural Land Use Tax. 17
Incentives	Project company is exempt from Import Tax (for goods imported to
	create fixed assets, and materials, raw materials, and semi-
	finished products which Vietnam is unable to produce, and which
	are imported for the project's production).18
	For Corporate Income Tax (CIT):
	- Tax holiday up to four (4) years, and 50% reduction up to nine
	(9) years from the first year of taxable income (or from the
	fourth (4th) year of revenue, if no taxable income within three
	(3) years from the first year of revenue).19
	- A preferential CIT rate of 10% for a period of 15 years from
	the first year of generating venue. <sup>20</sup>
Credit	Investment ventures aimed at renewable energies are eligible for
Incentives	state investment loans from the Vietnam Development Bank
	(VDB) with amount of up to 70% of the total investment capital
	and a maximum repayment term of 15 years. <sup>21</sup>
Others	Project company is allowed to receive a quick depreciation when
	operating with high economic efficiency. <sup>22</sup>

# Highlights on Investment Implementations

#### Brownfield versus Greenfield Investment

12. Greenfield and brownfield investments are the two primary approaches that investors adopt when entering the Vietnamese market. Greenfield investments involve developing new projects while brownfield investments focus on revitalizing existing infrastructure. In the current renewable energy landscape in Vietnam, both approaches present their own set of advantages and challenges.

<sup>&</sup>lt;sup>16</sup> Article 19, Decree No. 46/2014/ND-CP.

Article 9.1, the Law on Non-Agricultural Land Use Tax 2010, and Article 10.1, Circular No. 153/2011/TT-BTC.

Article 16.11, the Law on Export, and Import Tax 2016.

Article 14.1, the Law on Corporate Income Tax 2013 (the "CIT Law").

Article 13.1(b), the CIT Law.

Articles 7 and 8, Item III.2, Appendix of Decree No. 32/2017/ND-CP.

Article 13.2(a), Circular No. 45/2013/TT-BTC and Article 4, Circular No. 96/2015/TT-BTC.

#### (a) Greenfield Investment

Greenfield project development typically involves three key phases: Preparation (Phase 1), Development (Phase 2), and Operation and Maintenance (Phase 3). Each phase requires obtaining key regulatory licenses, permits, and agreements.

\*Key documents: The Decision on Inclusion in the National/Provincial Power Master Plan.

 \*Key documents: Land Lease Agreement/ Land Allocation Decision.

 \*Key documents: Opersation and Maintenance (O&M) Agreement, an Electricity Generation Licensee.

It's worth noting that it is customary to establish a special purpose vehicle (SPV) as a limited liability company or a joint-stock company at early stage to go through the required licensing procedures in greenfield investments. This is subjected to support the capital funding raising during the ongoing period of project deployment thereafter.

#### (b) Brownfield Investment

Given the regulatory complexities involved in developing greenfield projects, investors tend to learn towards the brownfield investment option. This approach involves acquiring equity in existing project companies that already meet regulatory requirements, are included in the national/provincial power master plan and have been operational within the preceding FiT period. In contrast to those advantages, acquiring an existing project company entails certain licensing procedures for M&A activity, such as M&A approval and amendments to IRC, that may challenge investors to some extent.

Despite the recent downturn in M&A deals and market value due to various factors such as the Covid-19 epidemic, geopolitical conflicts, and increasing interest rates leading to higher capital mobilization costs, brownfield investment in the renewable energy sector has been thriving compared to other sectors. This is because private investors prefer a non- Public-Private Partnership (PPP) investment due to concerns over the risk allocation mechanism under the Public-Private Partnership (PPP), which tends to serve large-scale projects. Additionally, a non-PPP may also overcome certain challenges that a greenfield project may face during its deployment process. The M&A trend in brownfield investment is expected to continue after the expiration of preferential FiT periods for solar and wind power, particularly targeting solar and wind power projects that are eligible for expired FiT prices.

### Regulatory Approvals

13. For renewable power projects, the necessary requirements and additional licenses or permits differ depending on the type of renewable energy source, nevertheless, a typical list of key required documents include the following:

Permits, Licenses, and Agreements	Issuers
Phase 1: Preparation	
Decision on the project	MOIT for national PDP
inclusion in national/provincial PDP	Provincial PC for provincial PDP
In-principle Approval	National Assembly in case investment projects having great effects or potentially serious effects on the environment and social. <sup>23</sup>
	PM in case investment projects subject to the power of at least two Provincial PC. <sup>24</sup>
	Provincial PC / Industrial Zone Authority in case investment projects requesting the Government to allocate or lease out land without auction or bidding, and investment projects requesting permission to repurpose land. <sup>25</sup>
Investment Registration Certificate	DPI
Enterprise Registration Certificate	DPI
Preliminary PPA acceptance	EVN / EPTC
Escrow account	Local banks
Phase 2: Development	
Loan agreements / Encumbrance agreements	Local banks and/or foreign lenders
Land Lease Agreement / Other Land-Related Contracts	The Provincial PC
Construction Investment Feasibility Study <sup>26</sup>	MOC appraises for the projects:  (i) with works of special class and class I;  (ii) with investment policies approved by the National Assembly or the PM; or  (iii) located in two (2) provinces upwards.  DOC for others
Technical Design <sup>27</sup>	MOC / DOC for the projects with construction works of

Article 30, Law on Investment 2020 (the "Investment Law").

Article 31, the Investment Law.

<sup>&</sup>lt;sup>25</sup> Article 32, the Investment Law.

<sup>&</sup>lt;sup>26</sup> Article 13.4, Decree No. 15/2021/ND-CP.

Article 82.3, Law on Construction 2014, amended in 2020 (the "Construction Law").

Permits, Licenses, and	
Agreements	Issuers
	special class or class I, public works and construction works having great impacts on landscape, environment, and community safety.
	The power of competent authorities to appraise Technical Design is regulated similarly to the Construction Investment Feasibility Study. <sup>28</sup>
	Project owners for others
Environmental impact assessment <sup>29</sup>	MONRE for certain specified projects and the Provincial PC for others.
EPC Contract / Equipment Supply Contract	Private contractors
Appraisal on Fire Prevention and Firefighting Design and Inspection Minutes <sup>30</sup>	Police Department of Fire Prevention and Fighting
Construction Permit <sup>31</sup>	DOC
Insurance Policies	Insurers
GCA <sup>32</sup>	National Power Transmission Corporation (NPT) in case the voltage is 220kV upwards.
	Regional Power Corporation (RPCo) in case the voltage is 110kV downwards.
Metering agreement	NPT/RPCo
SCADA/ EMS (DMS) agreement and Protective relay system agreement	NPT/RPCo
PPA	EVN
Land Use Right Certificate	DONRE
Water Resources Permit <sup>33</sup>	MONRE for  (i) the offshore wind power projects exploit and use sea water with a flow rate of at least 1,000,000 m3/day and night; or
	(ii) the small hydropower projects exploit and use surface water serving power generation with an installed capacity of from at least 2.000 kW.
	DONRE for others

<sup>&</sup>lt;sup>28</sup> Article 36.4, Decree No. 15/2021/ND-CP.

Article 35, the Law on Environment Protection 2020.

<sup>&</sup>lt;sup>30</sup> Article 13.12, Decree No. 136/2020/ND-CP.

Article 103, the Construction Law.

Article 3, Decision No. 1431/QD-EVN.

<sup>&</sup>lt;sup>33</sup> Article 28, Decree No. 02/2023/ND-CP.

Permits, Licenses, and Agreements	Issuers
Decision on the allocation of marine area <sup>34</sup>	The PM for the investment projects with marine resources subject to approval or decision on its investment policies by the National Assembly and Government, except for assignment of sea areas for sea dumping and aquaculture.  MONRE for the following cases:  (i) project subject to approval or decision on its investment policy by the PM;  (ii) project located in inter-regional sea areas;  (iii) project with sea areas lying outside 06-nautical mile waters from the mean lowest waterfront in multiple years of the mainland and islands; or  (iv) project is implemented by foreign investors and foreign-invested business entities.  PC of coastal provinces for sea areas lying within 06-nautical
	mile waters from the mean lowest waterfront in multiple years of the mainland and islands.
Phase 3: Operation and Mai	
Electricity Generation License <sup>35</sup>	The MOIT or ERAV or the Provincial PC, depending on the scale, and capacity of the power plant.
Operation & Management (O&M) Agreement	Private contractors

14. **Power Purchase Agreement**: Among these regulatory approvals, it is necessary to highlight the importance of a Power Purchase Agreement (PPA) to energy projects in Vietnam. PPA is a contract standardised by the MOIT that outlines the commercial arrangements for electricity sales between an electricity generator (mostly medium/large-scale project) and EVN. PPAs serve as fundamental documents in brownfield projects that have been operational within the preceding FiT period because they dictate the project's potential revenue and credit quality. Currently, PPAs are typically non-negotiable, and EVN is not open to modifying the agreement terms, except for the negotiated-based pricing mechanism in the Transitional Projects. However, with the development of PDP8 in the latter, the shift from traditional PPAs to DPPAs aimed at reducing EVN's exclusivity as a sole purchaser may present an attractive option for investors seeking greater flexibility. Generally, the most concerned matters over terms of a PPA may include:

Terms	Details
Term	20 years, except for solar and wind power project
Governing law	Vietnamese laws
Dispute resolution	The PPA does not allow for offshore arbitration. Any
	disputes must be resolved under the forum of the MOIT
	(i.e., Electricity Regulatory Authority of Vietnam, the ERAV),

<sup>&</sup>lt;sup>34</sup> Article 8, Decree No. 11/2021/ND-CP.

Article 12, Circular No. 21/2020/TT-BCT, supplemented by Circular No. 10/2023/TT-BCT.

Decision 21.

Terms	Details
	and if either party disagrees with the ERAV's decision, they may initiate court litigation.
Step-in right	PPA does not consider the existence of any direct
	agreement between the lenders and the investors. As such,
Torrefreedok	step-in right of the lenders is not explicitly recognised.
Transfer right	The transfer of any obligations of the seller shall need to
	obtain a written consent of EVN, however, the reverse does not apply to EVN.
Changes in law / taxes	PPA lacks risk allocation solutions for changes in laws and
	taxes that may impact project cash flow, particularly when
	dealing with a public entity like EVN. Although the
	Investment Law provides general provisions on
	guaranteeing investment incentives in case of a law
	change, financial institutions may not feel entirely secure in
	investing in the sector.
Grid connection	Generator is accountable for constructing and establishing
	the connection of their power plant to EVN's grid system. In
	addition, there is a lack of protection for the investor
	against the possibility of incomplete grid connection caused
	by EVN, even if their project is fully prepared to generate
	power.
Curtailment risk	EVN is not contractually obligated to purchase power
	during grid disruption, leaving generators without
	compensation for their financial losses.
Termination	The lack of clarity regarding the termination of the PPA may
	make investors feel unsafe, as EVN is currently the sole
	purchaser in the electricity market and the DPPA
	mechanism has not yet been implemented. This would
	make it challenging for investors to seek alternative off-
	takers if the PPA is terminated.

15. **Direct Power Purchase Agreement:** Despite the fact that MOIT considers DPPA as a sustainable and long-term development, they have yet to set out a complete legal regulation governing such mechanism. In 2021, MOIT aimed to pilot the DPPA mechanism via Letter No. 94/BC-BCT dated 29 October 2021 to the PM; however, there has been no further update on this approach. The DPPA approach aims to remove the monopolistic control in Vietnamese energy market held by EVN where it accounts for 37% electricity generation capacity and being the sole purchaser<sup>37</sup>. Between 2021 and 2023, MOIT submitted several reports to the PM, providing updates on the legal mechanism for DPPA<sup>38</sup>, and expects to submit its first draft to the PM in the second quarter of 2024. There are two key models were proposed:

Vietnam Investment Review (2021) EVN loses electricity monopoly, holding 37 per cent of total system capacity.

Available at: <a href="https://vir.com.vn/evn-loses-electricity-monopoly-holding-37-per-cent-of-total-system-capacity-106336.html">https://vir.com.vn/evn-loses-electricity-monopoly-holding-37-per-cent-of-total-system-capacity-106336.html</a> accessed 6 May 2024.

MOIT (2023) Ministry of Industry and Trade: Efforts to complete the DPPA mechanism.

- (i) **Model 1**: Large consumers directly purchase electricity from generators through their own transmission grid system.
- (ii) Model 2: Electricity sales occur through the national grid system, involving large consumers, generators, and EVN (as the wholesaler) in three distinct contracts (including Contract for Difference (CfD), Spot Power Purchase Agreement (Spot PPA) and Retailing Power Purchase Agreement (Retailing PPA)). EVN facilitates the purchase from the generator and sale to the consumer through the national grid. Disparities in spot prices and contract prices are adjusted and settled between the generator and customer per the CfD.

#### Project Financing

- 16. The PDP8 calls for financing mechanism development to mobilize funding, including green loans, climate loans, and bonds from domestic and international sources. Decision 262 estimated the private capital demand to be VND3,223 trillion (equivalent to US\$134.7 billion). This includes investments in power sources, expected to be around VND2,866.5 trillion (equivalent to US\$119.8 billion), and investments in transmission grids, anticipated to be about VND356.5 trillion (equivalent to US\$14.9 billion). These amounts are way too large to the current banking system credit growth, consider the substantial financial needs for long-term life span of renewable energy projects. Furthermore, there is a cap on the receivable credit loan for each customer, limited to 15% of a commercial bank's owner equity, with an aggregate limit of 25% for a customer and its relevant subsidiaries. This limitation is set to mitigate risk exposure and maintain the stability of the banking system; conversely, it could hinder banks' ability to offer the significant funding required for large-scale renewable energy projects.
- 17. On other hand, an alternative is commonly practised is to leverage capital investment via debt financing. This approach may seem a more sustainable funding option than relying solely on local banks. However, it can also pose challenges when it comes to securing the necessary collateral for offshore financing or legitimating corporate bond. Currently, it is not allowed by Vietnam laws to use the land use rights and assets tied to land as collateral to foreign entities. In terms of corporate bond, FiinRatings estimates that as of 4 May 2023, 10.96% of current outstanding energy bonds have defaulted, mainly including large-scale renewables developers.
- 18. On the same wavelength, the success of renewable energy projects largely depends on their bankability, which is the ability to secure financial support from equity and debt providers. The risk-return ratio plays an important role in determining the level of interest from the private investor. Given the mismatch between asset and funding duration, there is a concern that project developers may need help to secure long-term financing on favourable terms. This "financing gap" was addressed in our publication titled <a href="The Bankability of Renewable Energy-Projects Upon PDP8">The Bankability of Renewable Energy-Projects Upon PDP8</a>.

Available at: <a href="https://moit.gov.vn/tin-tuc/phat-trien-nang-luong/bo-cong-thuong-no-luc-hoan-thanh-co-che-mua-ban-dien-truc-tiep.html">https://moit.gov.vn/tin-tuc/phat-trien-nang-luong/bo-cong-thuong-no-luc-hoan-thanh-co-che-mua-ban-dien-truc-tiep.html</a> accessed 6 May 2024.

<sup>39</sup> Article 136, Law on Credit Institutions 2024.

- 19. In Vietnam, key barriers facing by investor to project financing for renewable energy investment may constitute the following:
  - (a) The green finance market in Vietnam is in its early stages but possesses potential for expansion. Thus, there is a substantial amount of effort required in terms of increasing market awareness, facilitating the market, and establishing a robust verification system to prevent greenwashing practices.
  - (b) Concerns arise from the low credit rating of EVN and the absence of a government guarantee for EVN's off-taking obligation.
  - (c) Lack of transparency and certainty in FiT pricing for solar and wind power projects, with the current mechanism only applicable to Transitional Projects, creates uncertainty for future projects.
  - (d) The time-consuming of key licensing procedures, such as land acquisition, investment procedures, the inclusion of power project in the provincial/national power development plan, likely impact project forecast for financing and implementation.

# Approaches for On-site Consumers

- 20. As opposed to professional investors, on-site consumers opt for more straightforward approaches to accessing renewable sources. These approaches predominantly apply to solar power, particularly the RTS system installed in industrial zones, office buildings, and residential areas. Three primary models, including the DPPA mechanism currently under development, are:
  - (a) Self-Ownership / Self-Consumption Model: In this model, the consumer, also acts as the project owner, will finance and install the RTS system on its premises at its own cost. Electricity generated from such systems will only be used as selfconsumption, not selling to any third parties. To further facilitate the implementation of this model, the MOIT has recently announced a draft Decree on the development of RTS systems emphasising the importance of self-generation and self-consumption and discouraging the sale of electricity to any off-takers, including EVN.
  - (b) **Third-party Ownership Model:** Under this model, a third-party developer will finance, install and own the RTS system at the consumer's premise. Consumers utilize the generated electricity by paying a predetermined price to the developer.
  - (c) **DPPA Mechanism (the DPPA):** Similar to the third-party ownership model, the DPPA is designed for larger consumers with high electricity demand, where the third-party acts as a developer and electricity generator.

Currently, the Self-Ownership and Third-party Ownership models are predominantly preferred by on-site consumers due to their easier access to renewable sources

without reliance on the national transmission grid. However, EVN no longer purchases electricity generated from RTS systems, including excess electricity. The DPPA mechanism, which aims to remove EVN's role as the sole electricity purchaser, is still in the drafting phase and awaiting official approval by the PM.

# Contact Us

For more information or assistance, please contact us:



Dang The Duc

Managing Partner

E duc.dang@indochinecounsel.com



Phan Anh Vu
Partner | Co-Head of Corporate and
M&A, Projects & Infrastructure
E vu.phan@indochinecounsel.com



Tran Trang Nhung
Counsel
E nhung.tran@indochinecounsel.com



Pham Dac Hoang
Junior Associate
E hoang.pham@indochinecounsel.com

#### **Ho Chi Minh City**

Unit 305, 3rd Floor, Centec Tower 72-74 Nguyen Thi Minh Khai, District 3 Ho Chi Minh City, Vietnam

T +84 28 3823 9640

F +84 28 3823 9641

E info@indochinecounsel.com

#### Hanoi

Unit 705, 7th Floor, CMC Tower Duy Tan Street, Cau Giay District Hanoi, Vietnam

T +84 24 3795 5261

F +84 24 3795 5262

E hanoi@indochinecounsel.com

#### www.indochinecounsel.com

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act upon such information without appropriate professional advice after a thorough examination of the particular situation.

The content of this Renewable Energy Guide is current as at May 2024.

© 2024 Indochine Counsel | All Rights Reserved.