



**Biomass Energy Project
Development Guidelines for Viet Nam**

Unit 042A, 4th Floor, Coco Building, 14 Thuy Khue Street
Tay Ho District, Hanoi, Viet Nam

T +84 (0) 24 3941 2605
F +84 (0) 24 3941 2606

E office.energy@giz.de
W www.giz.de | www.gizenergy.org.vn

Biomass Energy Project Development Guidelines for Viet Nam

GIZ/Climate Protection through Sustainable Bioenergy Markets in Viet Nam (BEM) Project



Copyright of:

GIZ/Climate Protection through Sustainable Bioenergy
Markets in Viet Nam (BEM) Project

Citation:

GIZ/Biomass Energy Project Development Guidelines for
Viet Nam

As of:

October 2021

Photos by:

GIZ Energy Support Programme

Contact:

GIZ Energy Support Programme
Climate Protection through Sustainable Bioenergy
Markets in Viet Nam (BEM) Project

giz Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH
Unit P042A, Coco Building,
Thuy Khue, Tay Ho District
Ha Noi, Viet Nam

T +84 (0) 24 3941 2605

F +84 (0) 24 3941 2606

E thoa.le@giz.de

I gizenergy.org.vn

GIZ is responsible for the content of this publication.

On behalf of the

German Federal Ministry for the Environment, Nature
Conservation and Nuclear Safety (BMU)

Disclaimer

While the author has attempted to provide legally correct information to the maximum possible extent GIZ, MOIT or the author cannot be held legally responsible for its content. This report is for information purposes regarding the biomass project development process only. Additionally, the users appreciate that regulations, legislations or procedures do change, and may be subject to interpretation, and differing application.

The user of the **Biomass Energy Project Development Guidelines for Viet Nam** is recommended to not rely completely on the information in the report as an alternative to legal, technical, financial, taxation and/or accountancy advice.

The author and publisher, therefore, will not be held liable regarding any business losses, including without limitation loss of or damage to profits, income, revenue, production, anticipated savings, contracts, commercial opportunities or goodwill.

Anybody using the **Biomass Energy Project Development Guidelines for Viet Nam** is highly encouraged to provide feedback to GIZ on any legal or regulatory changes they may be aware of, as well as the application and interpretation of them. Feedback on the general usefulness of this document would be much appreciated as well, in order to further improve future versions.

Foreword of the Electricity and Renewable Energy Authority (EREA)/Ministry of Industry and Trade (MOIT)

Ensuring sufficiency and high reliability of energy supply in general and electric power supply in particular for socio-economic development has been facing numerous problems and challenges, namely the reasonable and efficient use of primary energy sources and the impact of climate change on the national energy security. Therefore, synchronous development and diversification of energy resources, prioritizing full and efficient exploitation and utilization of potential renewable energy sources, including biomass, in Viet Nam are one of the solutions to sustainable development, environmental protection in relation to agricultural and rural development.

As a developing agricultural economy, Viet Nam has a great and diverse potential of biomass energy resources. Main types of biomass include post-harvest residues/byproducts generated from various types of plants, sawdust, woodchips. Biomass resources can be converted into energy, including electricity, through different energy conversion technologies, which depend on each type of biomass and the size of each project.

In an attempt to resolve the challenges to energy demand, energy security and climate change, the Communist Party and the Government of Viet Nam have issued directive instructions and development targets for strengthening the development of renewable energy, reduction of greenhouse gas emissions and fossil fuel

consumption through the Politburo's Resolution No. 55-NQ/TW dated 11 February 2020 on orientations of Viet Nam's National Energy Development Strategy and Decision No. 2068/QĐ-TTg issued by the Prime Minister on 25 November 2015 on Viet Nam's Development Strategy of Renewable Energy by 2030 with a vision to 2050. The targets for biomass development supplying energy to electricity and heat generation are specified as follows:

- *Total biomass energy supply for electricity generation to reach about 9.0 million tonnes of oil equivalent (TOE) by 2030 and about 20 million TOE by 2050. The power generated from biomass to reach around 37 billion kWh by 2030 and 85 billion kWh by 2050;*
- *Total biomass energy supply for heat generation to reach about 16.8 million TOE by 2030 and about 23 million TOE by 2050.*

To support the achievement of biomass energy development targets, the Prime Minister and the Ministry of Industry and Trade promulgated a series of incentive mechanisms and guidelines for the development of biomass power projects in Viet Nam through the Prime Minister's Decision No. 24/2014/QĐ-TTg dated 24 March 2014, the Circular No. 44/2015/TT-BCT dated 9 December 2015 of the Ministry of Industry and Trade. A number of articles in Decision No.

24/2014/QĐ-TTg and Circular No. 44/2015/TT-BCT have been amended and supplemented by the Decision No. 08/2020/QĐ-TTg dated 5 March 2020 of the Prime Minister; Circular No. 16/2020/TT-BCT dated 7 July 2020 of the Ministry of Industry and Trade. Following the amendment and supplementation of prevailing policy and mechanism, the current feed-in tariff for biomass has been increased for attracting investors of biomass projects, which proves the major efforts of the Vietnamese Government and ministries.

For the purpose of supporting biomass power project investors in obtaining information of biomass power project investment, **the Electricity and Renewable Energy Authority, Ministry of Industry and Trade** hereby presents the **"Biomass Energy Project Development Guidelines for Viet Nam" – an updated version** as a reference. The finalization of the Guidelines is supported by the GIZ Energy Support Programme in Viet Nam. The objective of the Guidelines is to mitigate the investment barriers regarding licensing, agreements, approval, etc. by providing specific information about the investment procedures required in the development of grid-connected biomass-based power projects in Viet Nam.

Sincerely,



Mr. Pham Nguyen Hung

Deputy Director General of the Electricity and Renewable Energy Authority
Ministry of Industry and Trade



Foreword of GIZ

Over the past years, the Government of Viet Nam has introduced a number of policies and mechanisms for promoting the utilisation of biomass energy for heat and power generation. The upward revision of electricity price for biomass power projects by 1.14 – 1.21 times (dependent on types of technology), which is specified by the Decision No. 08/2020/QĐ-TTg dated March 5th, 2020, has proved the Government's attention to the sector.

As a forerunner on exploitation and use of renewable energy sources, the German Government has set ambitious goals for energy production from all potential renewable sources in Germany and strengthened its development cooperation with partner countries in combating global climate change. In Viet Nam, on behalf of the German Government, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has been cooperating with the Electricity and Renewable Energy Authority (EREA) of the Ministry of Industry and Trade (MOIT) since 2008 via the GIZ Energy Support Programme (ESP) to develop a sustainable market for renewable energy and energy efficiency.

The **Biomass Energy Project Development Guidelines for Viet Nam** was updated and finalised by the "Climate Protection through Sustainable Bioenergy Markets in Viet Nam" (BEM) project under the GIZ Energy Support Programme in partnership with EREA/MOIT. By providing information of the licensing and investment procedures used for the development of grid-connected biomass power projects, the Guidelines aim to promote private investments in renewable energy market in the country. The Guidelines illustrate in detail the investment steps covering the entire project development phases from the development, implementation, operation and maintenance to project decommissioning. The development of the Guidelines adopted various methods for collecting, consolidating and verifying information and data through desk review, expert interviews, consultation workshops, and combined the information of legal and regulatory framework and hands-on experience in project implementation.

GIZ believes that the Guidelines will make the development of the renewable energy market in Viet Nam more efficient and effective and consequently contribute to the climate change goals of the country.

Sincerely,



Mr. Tobias Cossen
Programme Director
GIZ Energy Support Programme



Table of contents

DISCLAIMER	5	OVERVIEW OF THE ENTIRE BIOMASS ENERGY PROJECT DEVELOPMENT PROCESS	28
FOREWORD OF THE ELECTRICITY AND RENEWABLE ENERGY AUTHORITY (EREA), MINISTRY OF INDUSTRY AND TRADE (MOIT)	6	3.1. Development phase	30
FOREWORD OF GIZ	8	3.2. Implementation phase	31
TABLE OF CONTENTS	10	3.3. Operation and maintenance phase	32
ABBREVIATIONS	12	3.4. Decommissioning phase	32
INTRODUCTION	15	DETAILED DESCRIPTION OF THE ENTIRE BIOMASS ENERGY PROJECT DEVELOPMENT PHASES	34
1.1. Country overview	16	4.1. Phase A: Project development	38
1.2. Power sector overview	16	4.2. Phase B: Project implementation	117
1.3. Biomass to energy sector overview	18	4.3. Phase C: Operation and maintenance	155
THE BIOMASS ENERGY PROJECT DEVELOPMENT GUIDELINES FOR VIET NAM	22	4.4. Phase D: Decommissioning	166
2.1. Objectives	24	APPENDIXES	168
2.2. Scope	25	5.1. Appendix 5.1. Summarized procedures	169
2.3. How to use the Biomass Energy Project Development Guidelines	26	5.2. Appendix 5.2. Forms	178
		5.3. Appendix 5.3. List of legal documents	196
		5.4. Appendix 5.4. Contact list	200



Abbreviations

BCC	Business Cooperation Contract
BDP	Biomass Development and Utilization Plan
CIT	Corporate Income Tax
CHP	Combined Heat and Power
COD	Commercial Operation Date
CT	Current transformer
DOIT	Department of Industry and Trade
DARD	Department of Agriculture and Rural Development
DOC	Department of Construction
DONRE	Department of Natural Resources and Environment
DPC	District People’s Committee
DPI	Department of Planning and Investment
EPTC	Electricity Power Trading Corporation
ERAV	Electricity Regulatory Authority of Viet Nam
EREA	Electricity and Renewable Energy Authority
EUR	Euro
EVN	Electricity of Viet Nam
FIT	Feed-in tariff
FS	Feasibility Study
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
KFW	Kreditanstalt für Wiederaufbau
MOF	Ministry of Finance
MOIT	Ministry of Industry and Trade
MONRE	Ministry of Natural Resources and Environment



MPI	Ministry of Planning and Investment
NLDC	National Load Dispatch Center (A0)
NPT	National Power Transmission Corporation
NA	National Assembly
NPDP	National Power Development Planning
ODA	Official Development Assistance
PRE FS	Pre-Feasibility Study
PIT	Personal Income Tax
PPA	Power Purchase Agreement
PC	Power Corporation/Provincial Power Company
PDP	Power Development Plan
PPC	Provincial People’s Committee
PPDP	Provincial Power Development Planning
RE	Renewable Energy
RLDC	Regional Load Dispatch Center
RPCO	Regional Power Corporation
SCADA/DMS	Supervisory Control and Data Acquisition/Distribution Management System
SCADA/EMS	Supervisory Control and Data Acquisition/Energy Management System
SPV	Special Purpose Vehicle
USD	US Dollar
VAT	Value Added Tax
VND	Vietnamese Dong
VT	Voltage transformer

Units

TWH	terawatt hour, 1 TWh = 1,000 GWh
GW	gigawatt
GWH	gigawatt hour, 1 GWh = 1,000 MWh
MW	megawatt
MWH	megawatt hour, 1 MWh = 1,000 kWh
MVA	megavolt ampere
KW	kilowatt
KWH	kilowatt hour
KM	kilometer
KV	kilovolt
M	meter
S	second

1

INTRODUCTION

1.1. Country overview

Viet Nam is the third largest ASEAN country by population. Since 1986, the economy of Viet Nam has been under going a reform – modernization and integration into the global economy. A large number of Vietnamese work in agriculture, forestry and fisheries sectors, which accounts for 13.96% of the country’s GDP. Industries and construction contribute around 34.49% to the GDP⁽¹⁾.

Population (2019)
96,483,981
Nominal GDP (2019)
VND 6,037,300 billion
Nominal GDP per capita (2019)
USD 2,715
Capital
Hanoi
Currency
Vietnamese Dong (VND) (exchange rate: USD 1 = VND 23,160 - as of 29th January 2021, Note number 29/TB-NHNN from the State Bank of Viet Nam)

⁽¹⁾ Statistical summary book of Viet Nam 2020

1.2. Power sector overview

The power demand in Viet Nam has been constantly growing over the years to sustain economic and population growth of the nation. Over the past ten years, the average power growth rate was 10.5% per year.

According to the National Power Development Plan for the period of 2011-2020 with the vision to 2030 (the Revised Power Development Plan VII) issued by the Prime Minister in 18 March 2016 via the Decision No. 428/QĐ-TTg, the combination of electricity generation and import is projected to be around 400 - 431 TWh in 2025, and around 572 - 632 TWh in 2030.

By end of 2019, a total of 55,367 MW generation capacity (excluding the volume imported from China and Laos) was installed, of which hydro power accounted for 30.63%, coal for 36.61%, gas-fired power for 13.45%, and the remainder was constituted by oil and renewable energy.

The industry and construction sector is the largest power consumer (53.77% share by end of 2019, equivalent to 103,697 GWh). The state management and residential sector is the second largest consumer (33.0% equivalent to 63,629 GWh). The remaining 13.23% share of electricity demand is shared among sectors of commercial sector and hospitality industry, agriculture and aquaculture, and others sectors

(equivalent to 10,822 GWh; 6,000 GWh and 8,687 GWh respectively)⁽²⁾.

The average electricity retail price continuously increased in the last few years and reached an average of VND 1,864.44 /kWh in 2019⁽³⁾excluding VAT, which is equivalent to 8.05 US cents/kWh.

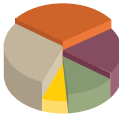
The power market is still dominated by the state-owned-enterprises and supervised by the Commission for the Management of State Capital at Enterprises (CMSC). In the generation market, EVN is a single-buyer; and power transmission and distribution systems are exclusively operated by subsidiary companies of the utility.

In order to improve the economic efficiency of power supply and demand in the country, the government has planned to establish a competitive electricity market. The reform is expected to undergo three stages:

- **Competitive power generation market (2005 -2014)** – private-owned power plants can sell electricity to EVN (single buyer)
- **Competitive wholesale market (2015-2022)** - wholesale companies can compete in buying electricity before selling it to power distributors
- **Competitive retail market (from 2022)** - consumers can freely choose their power suppliers.



Generation and import
240.1 GWh



Installed Capacity
55.367 MW



Transmission
8,479 km (500 kV)
18,165 km (220 kV)
23,816 km (110 kV)



Transformer
34,050 MVA (500 kV)
62,236 MVA (220 kV)
75,614 MVA (110 kV)



Consumption
192,834 GWh

⁽²⁾ EVNNLDC 2020

⁽³⁾ Decision No. 648/QĐ-BCT dated 20 March 2019



1.3. Biomass to energy sector overview

The Government of Viet Nam has prioritized the utilization of renewables for energy production. According to the revised National Power Development Plan VII, the share of RE-based power in the total power production is expected to be 7% in 2020 and 10% in 2030 (excluding large- and medium-scale and pumped-storage hydropower). Different support mechanisms and incentives for renewable energy have been provided, and the others are being reviewed for approval to promote investment in the sector.

As a developing agricultural country, Viet Nam has a huge potential for biomass resources which can be exploited for producing energy, especially electricity.

The available biomass resources in Viet Nam include post-harvesting and post-processing agro-forest residues and waste such as straw, rice husks, bagasse, coffee husk, coir, wood/wood residues and other agricultural/industrial by-products.

According to a recent research finding (2017), the total amount of agricultural residues was estimated at 78.75 million tons (44.97 million tons of rice straw, 8.99 million tons of rice husks, 5.96 million tons of bagasse and 18.83 million tons of other types of agricultural residues). For energy wood, the total output was approximately 7.05, 7.45, 9.01 and 3.71 million tons

from natural forests, planted forests, scattered trees and other planted trees respectively. In addition, the wood residues from wood-processing (sawmilling and furniture-making) plants were estimated at 5.35 million tons, of which 4.46 and 0.89 million tons are wood waste and sawdust respectively⁽⁴⁾.

The development targets for biomass to energy in the revised PDP VII are 1% in 2020 and 2.1% in 2030.

In relation to the support policy and mechanism for biomass energy development, in 2014 the Prime Minister issued the Decision No. 24/2014/QD-TTg regulating on support mechanisms for the development of biomass power projects in Viet Nam. To facilitate the investments in grid-connected biomass power project development, in March 2020 the Prime Minister issued the Decision No. 08/2020/QD-TTg on amending and supplementing a number of articles in the Decision No. 24/2014/QD-TTg. The adjustment of mechanisms and feed-in tariff (FIT) is stipulated by this new Decision as follows:

- For combined heat and power cogeneration projects: the FIT increases from 5.8 US cents/kWh to 7.03 US cents/kWh

- For other biomass power projects: the Avoided Cost Tariff (around 7.36 US cents/kWh on average in 2019) is replaced by FIT at 8.47 US cents/kWh

Though the Government and ministries have issued the aforementioned incentive policies and mechanisms, until now, of the development of biomass energy market in Viet Nam is still very limited. By end of the crop year 2018-2019, around 377.6MW⁽⁵⁾ of installed capacity was produced by bagasse-fired combined heat and power plants in 35 sugar mills and the surplus power (about 347 GWh) was sold to the national power grid. However, until now, there is no plant that is invested in, constructed and operated with the purpose of using biomass only for power generation for feeding the national grid.

⁽⁴⁾ Draft National Biomass Planning, General Department of Energy (GDE), 2017

⁽⁵⁾ The Consultant's survey, 2020

Biomass Potential



Rice husk

Theoretical potential
8.99 million tons



Rice straw

Theoretical potential
44.97 million tons



Bagasse

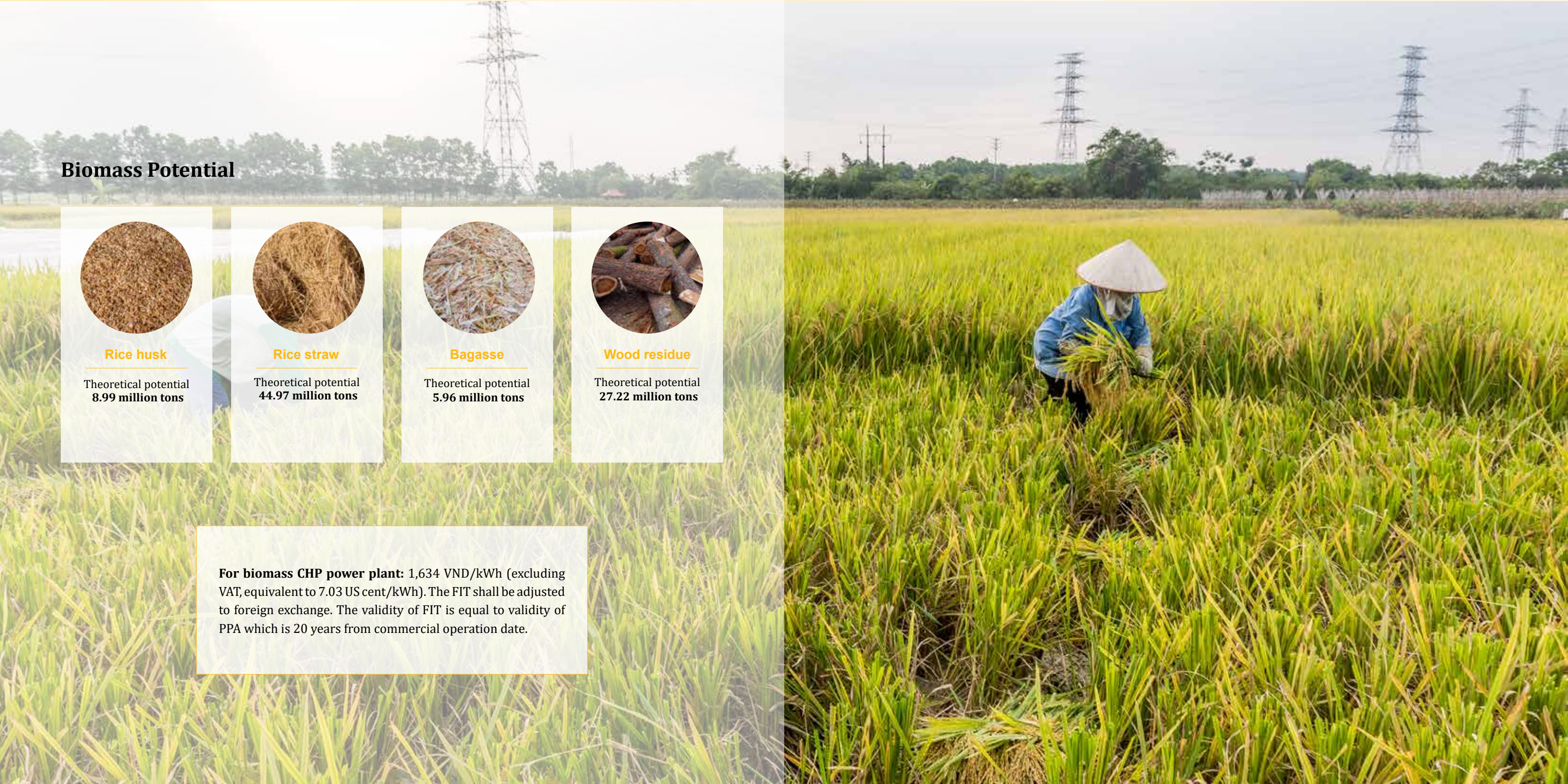
Theoretical potential
5.96 million tons



Wood residue

Theoretical potential
27.22 million tons

For biomass CHP power plant: 1,634 VND/kWh (excluding VAT, equivalent to 7.03 US cent/kWh). The FIT shall be adjusted to foreign exchange. The validity of FIT is equal to validity of PPA which is 20 years from commercial operation date.



2.

THE BIOMASS ENERGY PROJECT DEVELOPMENT GUIDELINES

The **Biomass Energy Project Development Guidelines for Viet Nam** is developed by the Climate Protection through Sustainable Bioenergy Markets in Viet Nam (BEM) project under the GIZ Energy Support Programme. It was developed by a local consultant, based on in-depth research, stakeholder interviews and expert views collected at a thematic workshop.

The first version of the Guidelines was published by MOIT and GIZ in February 2017. However, since the publication of that version, relevant legal documents, including a number of laws, decrees, circulars and the Prime Minister's decisions in direct or indirect connection with the procedures applied to the investment in grid-connected biomass power project development, have been amended, supplemented and enacted.

Due to the need for full reflection of legal changes, MOIT and GIZ updated and revised the guidelines published in February 2017.



2.1. Objectives

When making an investment into the biomass energy sector in Viet Nam, investors will have to deal with many authorized government institutions for different permits and licenses according to numerous legal requirements and regulations under the existing legal documents. Legal regulations related to the permitting and licensing process, appraisal and approval, specialized agreements for biomass energy investment projects are normally scattered in different legal documents, which somehow makes it difficult for investors in searching, referencing and summarizing information. If these investment procedures can be clearly and systematically summarized and listed it will be more convenient for the investors and related consulting firms to invest in and develop the projects.

Therefore, the Guidelines were designed as an easy to access, reader friendly and regular updated tool to:

- Highlight comprehensive procedures required for project investors on biomass project development cycle in Viet Nam.
- List key required legal documents to be referred to, dossiers to be submitted, relevant government authorities/entities to contact, necessary procedures to complete for each step and permit/license/agreement/appraisal document to be obtained.
- Bring practical experiences which can help to fasten and to smooth the whole process beside theoretical information.

2.2. Scope

The Guidelines describe the whole project development of grid-connected biomass projects in Viet Nam meaning the utilization of biomass residues from agriculture and agro-industries, energy wood and wood waste for energy generation. The industrial and municipal solid waste as feedstocks for energy plants are not part of these Guidelines.

In addition, the Guidelines apply only to grid-connected biomass energy plants including 1) plants using biomass feedstocks to generate power only and sell it to the grid; and 2) plants using biomass feedstocks (steam and electricity) to sell surplus power only to the grid after their self-consumption. The development of the off-grid power plants is different in many aspects and not covered by the guidelines.

Furthermore, the Guidelines cover the overall development procedures of biomass power plants in Viet Nam from the selection of suitable sites until operation, the maintenance and decommissioning of the power plants with all permits, licenses, specialized

agreements, appraisal and approval documents required. The Guidelines cover information neither on specific technical aspects of the project such as technology selection and fuel mix instruction and other EPC selection and supervision nor on economic aspects of cost of investment and operation, cost of biomass as a feedstock or return of investment. The land of the site selected by the Investor for the project development within the Guidelines belong to the government. Land of the site owned by individuals is not included in the scope of the Guidelines. The Guidelines only provide guidance on the projects that mobilise other sources of capital.

The Guidelines are intended for use by biomass investors who act as independent power producer (**IPP**), local and international individual investors or organization and for projects which do not use ODA fund or state budget and do not fall into the special investment type such as Public Private Partnership (**PPP**) or Build and Transfer (**BT**).



2.3. How to use the Biomass Energy Project Development Guidelines for Viet Nam

All the procedures for developing a grid-connected biomass energy project in Viet Nam are illustrated by a flow chart following the chronological project development phase/cycle. Steps/activities of a certain phase that need to take place in parallel are also highlighted in order to facilitate an overall schematic and practical understanding of the process.

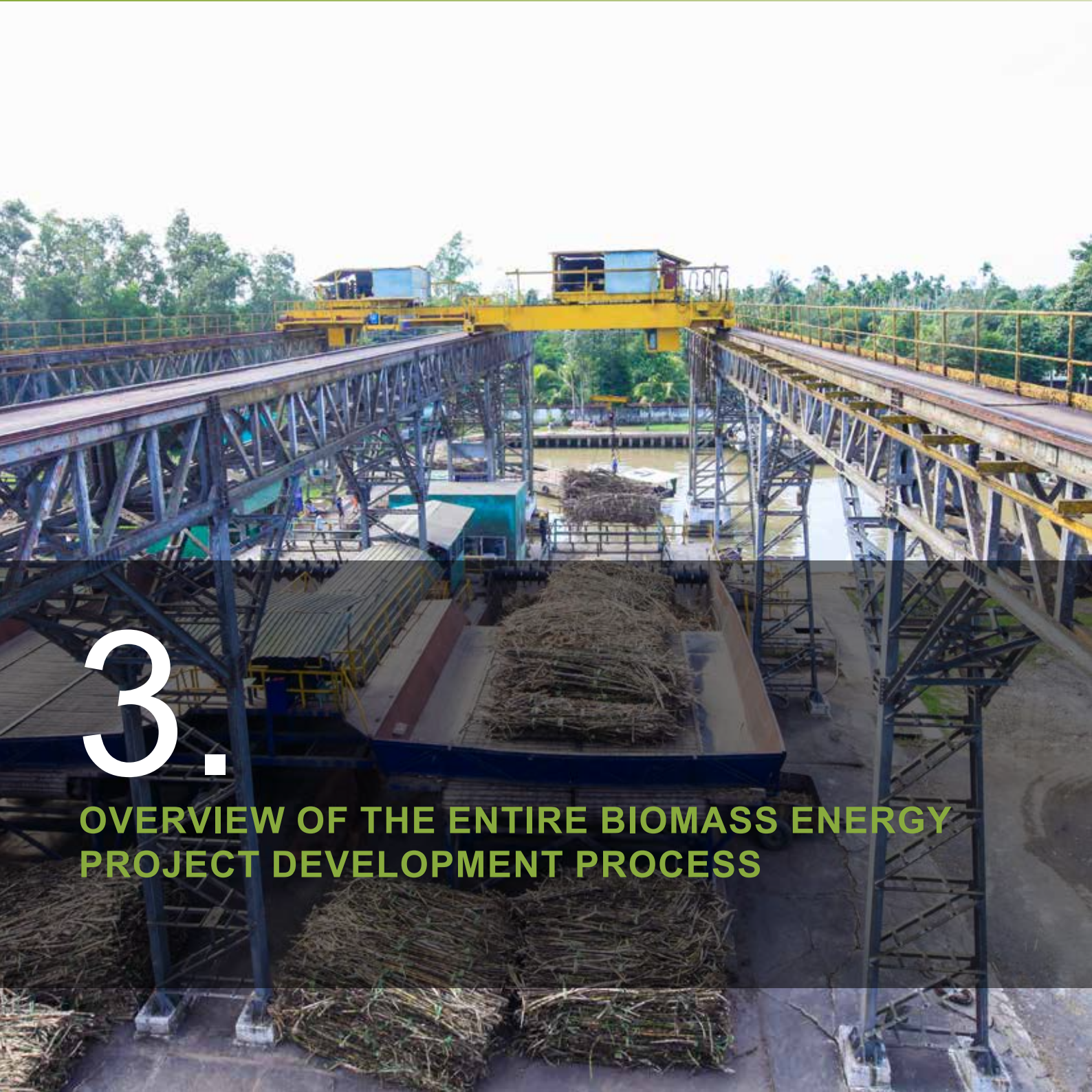
The development process of a biomass project includes four major development phases. Key steps of each phase are presented via a specific color in order to help the reader to navigate easily into the guidelines. All the licenses/permits/agreements as the results of the individual step are indicated by light blue. There are two levels of information for the Guidelines – an overview of the processes and a detailed description of each step within a certain phase. The overview describes major steps of each development phase, its timeline, and the agreement/license as its result. The detailed description goes a step further to display all sub-steps of each phase including a description of the sub-step, reference legal documents, responsible person, involved and relevant local authority, dossiers to be prepared and submitted, applied procedures and the timeframe.

It also provides citations of the legal documents that are the basis of the different process steps. These are referred to and annexed, where possible.

The Guidelines are developed to provide general information over the lifespan of a biomass project: from the initial idea and the first steps of development and planning all the way down to implementation, operation and finally dismantling at the end of a plant lifetime.

If certain legal licenses/permits have already been obtained, one can skip some steps and/or sub-steps described in the Guidelines. Take the combined heat and power (**CHP**) project of sugar mills as an example. In this case, the investor is legally eligible to do business in Viet Nam; one has already an available space for project implementation. Therefore, the investor of this project can skip the steps of **Business registration**, **Site selection** and even possibly **Escrow account** and **Land clearance**. Other remaining steps mentioned in the Guidelines are still applicable and can be a useful reference for the investor for developing the project.

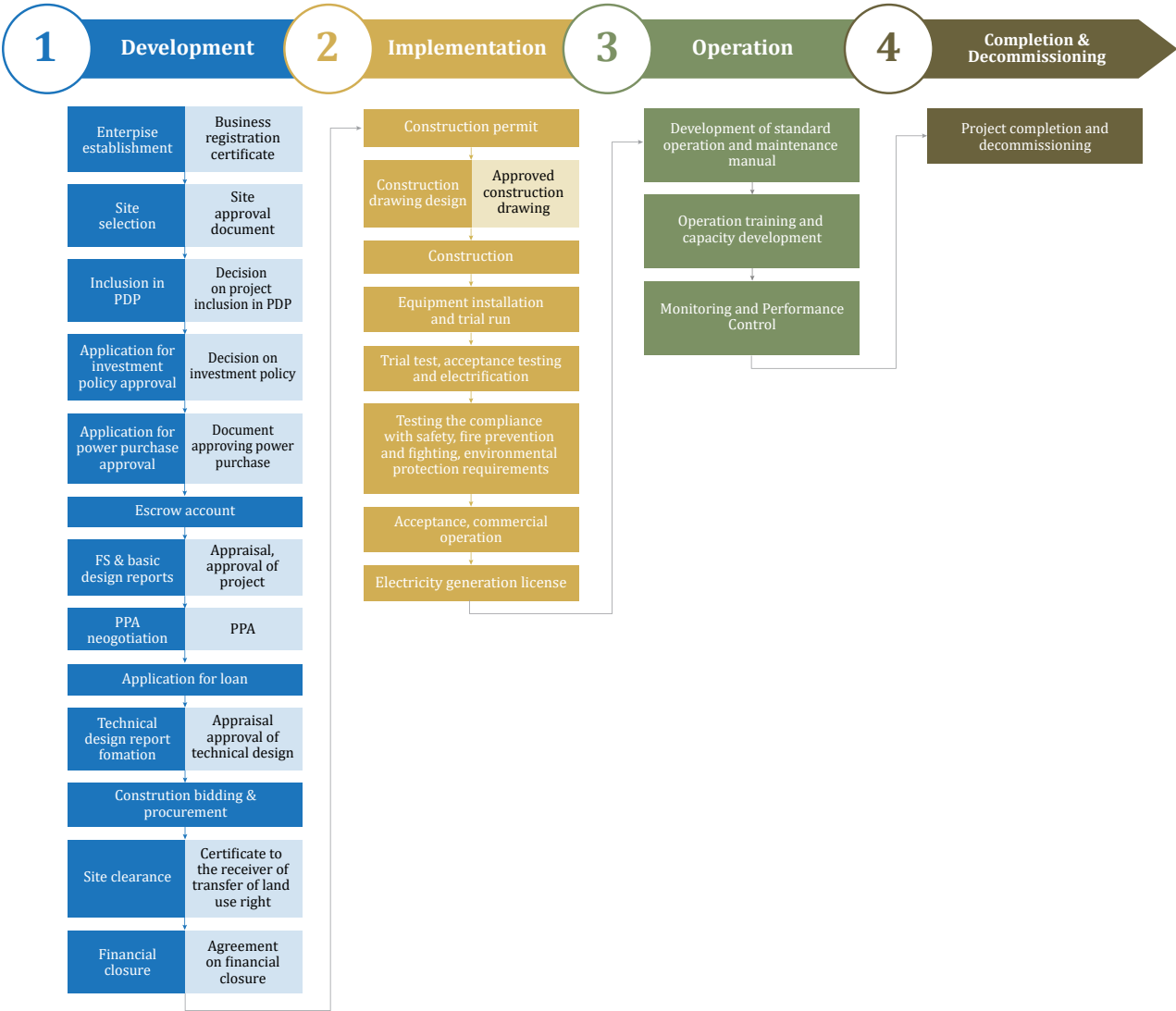




3.

OVERVIEW OF THE ENTIRE BIOMASS ENERGY PROJECT DEVELOPMENT PROCESS

The entire development of a biomass energy plant is divided into four phases: (1) Development phase (2) Implementation phase, (3) Operation and maintenance phase, and (4) Decommissioning phase.



3.1. Development Phase

This phase involves preparation activities before the physical construction of the energy plant begins. There are thirteen (13) steps under the development phase.

- **Step 1.** Business registration
- **Step 2.** Site selection
- **Step 3.** Inclusion of the project into the power development planning
- **Step 4.** Application for investment policy decision
- **Step 5.** Application for power purchase approval
- **Step 6.** Escrow account
- **Step 7.** Development of feasibility study and basic design reports
- **Step 8.** Power purchase agreement (PPA)
- **Step 9.** Application for a loan
- **Step 10.** Formation of technical design report
- **Step 11.** Bidding of construction and power plant equipment procurement
- **Step 12.** Land clearance
- **Step 13.** Financial closure

Within these steps, there are eight (08) main licenses/decisions the project investor must obtain after this phase. They are **1) Business registration** to ensure that the investor is legally authorized to operate business in the electricity production and purchase in Viet Nam; **2) Decisions** from state institutions on inclusion of the

project into the power development planning (in case the Project is not yet included in power development planning); **3) Decision on investment policy** from the Provincial people committee to allow the investor to further develop and construct its energy plant; **4) Investment certificate** only applicable to foreign investor; **5) Document on approving basic design** issued by a competent construction authority; **6) Power purchase agreement** signed with EVN which regulates the FIT; **7) Document on approving technical design** issued by a competent construction authority (for the projects applying 3-step design); **8) Land use right certificate** issued by Provincial People Committee after finishing land clearance.

Besides, the investor also needs to get other important agreements/licenses from local authority and relevant state agencies such as Site agreement; agreements on specialized reports required for the Feasibility study such as Grid connection agreement, SCADA/EMS (DMS) agreement, electricity metering agreement, firefighting, environmental impact assessment/environmental protection plan. At this phase, the investor also has to make a decision on the investment of the project given the appraisal report from the authority on the basic design from authority before he applies for a loan for the project.

3.2. Implementation Phase

This phase involves the physical construction of the energy plant as well as the activation of the procurement contract or EPC contract for all equipment of the power plant such as boiler, turbine, generator, power systems and auxiliary systems. During and after implementation the individual equipment as well as the energy plant must be inspected and tested before the commercial operation can begin. This phase consists of eight (08) steps.

- **Step 1.** Construction permit
- **Step 2.** Preparation of a construction drawing design
- **Step 3.** Construction
- **Step 4.** Equipment installation and testing
- **Step 5.** Trial test, acceptance testing and electrification

- **Step 6.** Testing the compliance with safety, fire prevention and fighting, environmental protection requirements
- **Step 7.** Acceptance, handover and operation
- **Step 8.** Electricity Generation License

Three (03) primary documents must be achieved after finishing this phase, including: **1) The construction permit** as a prerequisite to enable investors to carry out the construction of the biomass power plant; **2) The approved construction drawing design** (by the investor) as the basis for construction of a power plant; and the written notice of the outcome of construction drawing design appraisal; **3) The Electricity generation license** required for the commercial operation of the biomass power plant.



3.3. Operation and Maintenance Phase

This is the most important phase in terms of energy generation and revenues for the initial investment. The energy plant must be properly operated and maintained to ensure reliable and continuous operation. There are three (03) steps under this phase.

- **Step 1.** Standard operation and maintenance manual
- **Step 2.** Operator training and capacity building
- **Step 3.** Monitoring and Performance Control

In order to ensure the effective, safe and reliable operation during commercial operation process, the investor will require the equipment manufacturer

and supplier to provide operation and maintenance documents as well as training courses for staffs. Depending on the scope and demands, the training courses can be organized under different methods including theoretical training and on-the-job training. Besides, capacity needs assessment should be conducted before and after the power plant comes into operation by a professional training institute. It is recommended to have the key operational personnel on site when the construction begins to understand every detail of the plant.



3.4. Decommissioning Phase

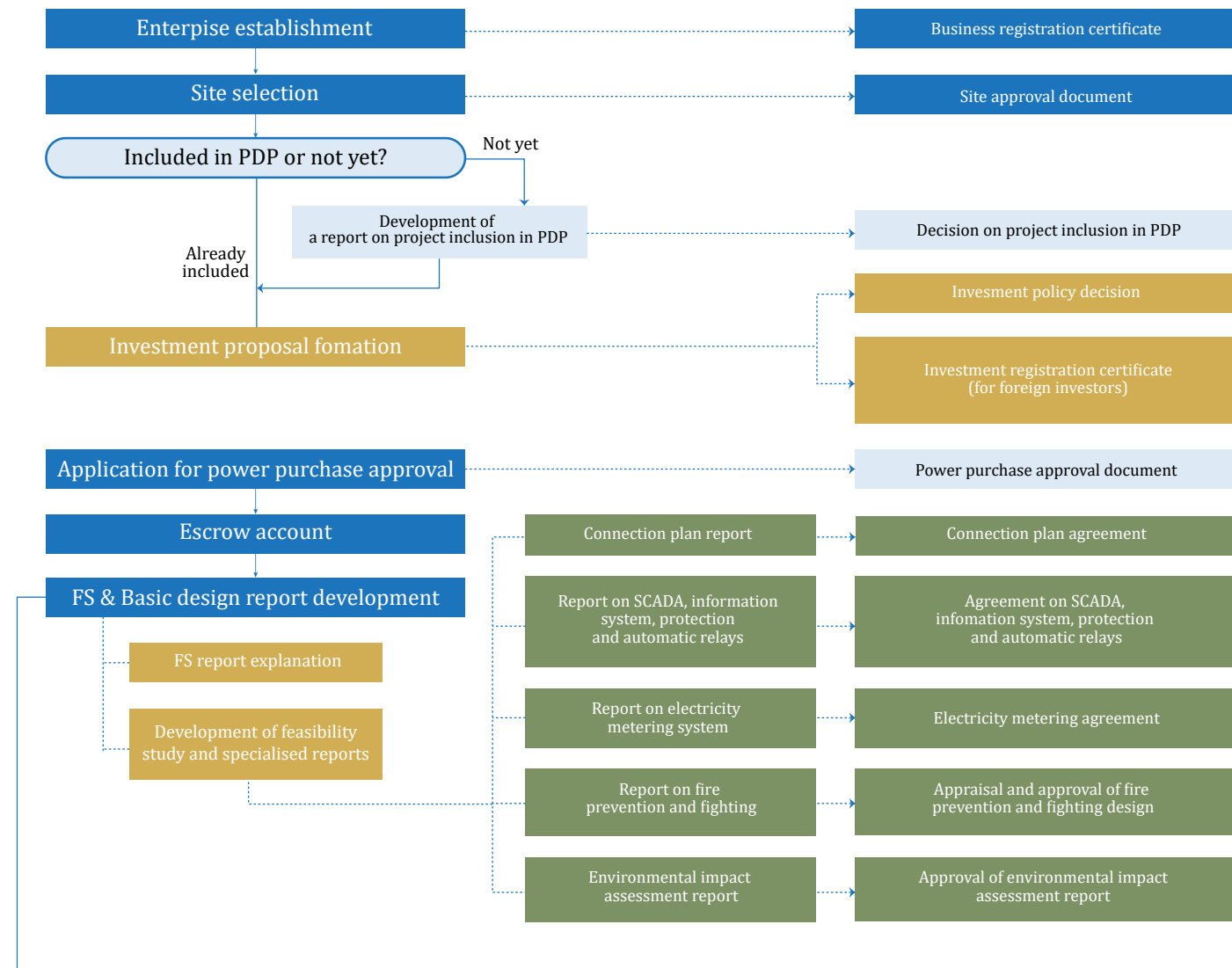
Depending on the circumstances, the power plant will be upgraded, repaired or removed from operation and use. In case it is removed from operation and use, the land use status on the project location must be restored to the primitive state.



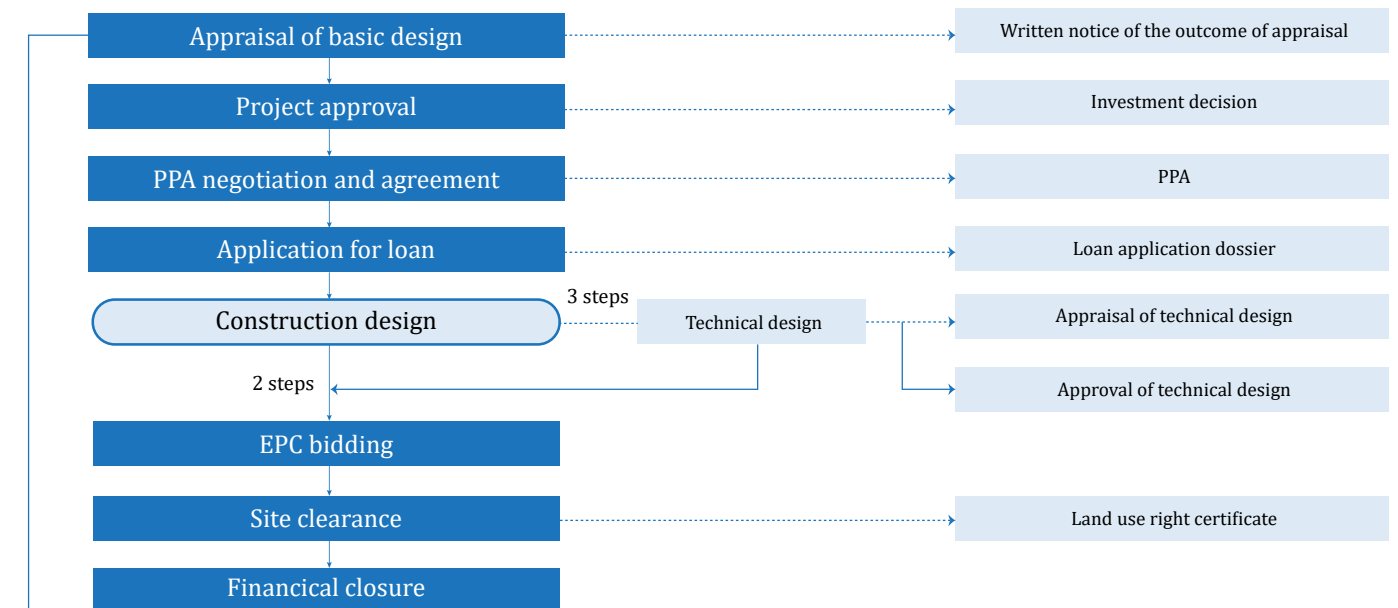


4.

DETAILED DESCRIPTION OF THE ENTIRE BIOMASS
ENERGY PROJECT DEVELOPMENT PHASES



Detailed description of the entire biomass energy project development phases



4.1. Phase A: Project Development

A.1	Business Registration/Business Registration Revision
Description	The Investor needs to ensure its legal status for the operation of a business in the power generation sector. If their companies have not yet been registered in the power generation sector, the Investor shall be required to do so in accordance with the Viet Nam's Enterprise Law. Depending on the type of the business that the Investor wishes to establish (e.g. private enterprises, partnerships, limited liability companies, joint-stock companies), the preparation of the business registration application will follow specific requirements as stipulated by the current Enterprise Law. In case their companies are eligible for business operations in Viet Nam, but the power production has not yet been included in its current business registration certificate, the Investor needs to prepare the necessary documents to include its new activities into the current business registration to ensure their legal eligibility for the next steps of power project investment.
Conditions for application	All national and foreign organizations/individuals are entitled to establish companies operating in the field of power generation from grid-connected biomass sources, except for the exemptions as prescribed in Clause 2, Article 18 of the Enterprise Law.
Related legal documents	- Enterprise Law No. 59/2020/QH14 dated 17 June 2020; - Decree No. 01/2021/ND-CP dated 4 January 2021 of the Government on business registration; - Decree No. 96/2015/ND-CP dated 19 October 2015 by the Government detailing guidelines for the implementation of several articles of the Enterprise Law; - Circular No. 20/2015/TT-BKHDT dated 1 December 2015 of the Ministry of Planning and Investment guiding business registration; Circular No. 02/2019/TT-BKHDT dated 8 January 2019 by the Ministry of Planning and Investment on the amendment and supplementation of the Circular No. 20/2015/TT-BKHDT.

Responsible persons/ Authority	- The Investor. - Business Registration Unit of the Provincial Department of Planning and Investment (DPI).
Documents to be submitted	In case of establishment of a new company: Details of the application for the business registration are specifically stipulated for each type of business in Articles 19, 20, 21, 22 of the Enterprise Law. In case of a need to include new activities into the existing business registration: The Company will send a written notification to the Business Registration Unit where it is registered. Details of this notification will include: - Company name/code, tax code or number of the business registration certificate (if the company has not granted with corporate code/tax code); - Activities to be added or changed; - Full name and signature of the company's legal representative, the Decision and a valid copy of the meeting minutes of the Board in case of a limited liability company with two members or more, the Decision and a valid copy of the meeting minutes of the Shareholder Assembly in case of a joint stock company and the Decision and a valid copy of the meeting minutes of partner members in case of a partnership company; the decision of the company's owner on the addition/changes of business activities for an one-member limited liability company. The decisions/meeting minutes must specify the contents to be changed in the Company's Charter.
Applied procedures	The person who establishes a company or the company itself or the authorized representative will submit the application for business registration/changes of activities to the Business Registration Unit where the enterprise's main office is located;

4.1. Phase A: Project Development

A.1	Business Registration/Business Registration Revision
Applied procedures	2. Once the application is received, the relevant Business Registration Unit will grant the person who submits the application with a Written Receipt; 3. Once the Written Receipt is granted, the relevant Business Registration Unit will input the submitted information in complete and accurate manner, check the validity of the application and import all relevant documents into the national information system for business registration after they are digitized; 4. The relevant Business Registration Unit will then grant the Business Registration Certificate or Written Confirmation on the Revised Business Registration.
Estimated time	Three (03) working days from the receipt of valid application by the relevant Business Registration Unit.
Costs	Fees and charges for business registration/changes of business registration will follow the current regulations: Circular No. 47/2019/TT-BCT promulgating the fee rates and regime for collection, payment, management and use of fees for providing information about enterprises and business registration.



4.1. Phase A: Project Development

A.2	Site Selection
Description	In this sub-step, the Investor will carry out several activities such as the desk study and potential site surveys. The Investor will first collect data related to the biomass power sources for high potential areas of biomass feedstock (from the Provincial Department of Agriculture and Rural Development (DARD)) and to the national/provincial power development plan (PDP) (from the Provincial Department of Industry and Trade (DOIT)) as well as to the land use (from the Provincial Department of Natural Resources and Environment (DONRE)) and provincial socio-economic development plan (from the DPI) to ensure the harmony and compatibility of the deployment of the biomass power plant and the development plan at provincial level. Then, the Investor will conduct field surveys to assess the infrastructure conditions such as water sources, road access, available power grids, surrounding population and potential biomass sources. By the end of this sub-step, the Investor should obtain principal contract(s) with biomass supplier(s). Besides, the Investor should obtain the following information: • Ownership structure and rights of land and access roads; rights of land to build transmission lines; • Zoning of land, commercial/forest/natural reserve forest; • Water access for cooling tower purposes; • Telecommunication availability; • Condition of soil to carry plant; • For CHP retrofit: sufficient space for plant construction; • Road access and conditions; maximum bridge loads; • Grid access and conditions; grid capacity and impact study should be initiated; • Power and water for construction and operation on site.

Conditions for application	• All grid-connected biomass power projects.
Related legal documents	• National and provincial PDPs. • Provincial, regional and national biomass power development plans (if any). • Provincial land use plan. • Provincial socio-economic development plan.
Responsible persons/ Authority	The Investor.
Documents to be submitted	Not applicable.
Applied Procedures	Not applicable.
Estimated Time	Depending on each specific project.
Costs	Not applicable.
Note	A site survey of applicable site should be conducted by the Investors to assure suitability of the site for the project development. The site survey allows the Investor to thoroughly investigate several aspects, e.g. road access, grid condition, sampling of biomass feedstock etc. The Investor should involve the local authorities on district/commune levels during the site survey to have their support for the implementation of this activity.

4.1. Phase A: Project Development

A.2.1	Feed Stock Resource Assessment and Memorandum with the Biomass Suppliers
Description	The Investor needs to collect data on the local biomass feedstock potential for the most potential and reliable sites for project development. This activity is of high importance because the supply of biomass is the most crucial factor for biomass energy projects and the achievement of bankability in order to ensure the sufficient supply for the entire project lifetime. During this step, the biomass type, the feedstock capacity and finally the quality of the biomass sources need to be thoroughly assessed. For biomass quality assessment, it is advised to take samples and conduct analysis through a certified laboratory testing. At the end of this sub-step, the Investor should be able to enter into to a Framework Contract/Memorandum with potential biomass feedstock suppliers. 1. A comprehensive list of potential biomass suppliers/competing biomass power projects in the area should be prepared; gross biomass potential/competition analysis must consider alternative cattle and industrial use; 2. Biomass cost scenarios for base/best/worst case are following differentiated parameters, most of all the low heating value (LHV); 3. Seasonal availability of biomass because biomass properties may change over seasons, storages (in the fields/next to the plant) to be considered; 4. The ash should be cycled back to the fields for fertilizing purposes to avoid long term impact to soil nutrition properties, fertilizers and humus layers; 5. Ash as by-product of energy plants, potential off-takers and market value; 6. Negotiation of a memorandum with biomass feedstock suppliers to ensure the quantity and quality and costs of biomass supply over the whole project lifetime; 7. Feedstock supply memorandum should link payments against energy content and net tonnage (moisture, ash, stones etc. must be excluded).

Conditions for application	All grid-connected biomass energy projects.
Related legal documents	Not applicable.
Responsible persons/ Authority	The Investor.
Documents to be submitted	Not applicable.
Applied procedures	Not applicable.
Estimated time	Depending on each specific project.
Costs	Not applicable.
Note	Consultations with local authorities such as the Department of Agriculture and Rural Development (DARD), local communities, the provincial Department of Industry and Trade (DOIT) are also strongly recommended to ensure the accuracy and reliability of the data collected. The Investor should manage to approach farmers and enterprises who can supply biomass feed stocks (surplus biomass like sugar bagasse, rice husk, rice straw, and residues from wood and agricultural product processing factories, rice mills, etc).

4.1. Phase A: Project Development

A.2.2	Logistics and Transportation of the Feedstock
Description	In parallel with sub-step A.2.1, the Investor will analyze means of transportation to the potential selected biomass project site, road access and transportation cost and decentralized storage facilities for the biomass feedstocks. For selecting an optimal logistics and transportation plan, the Investor should consult the local government authorities such as the Provincial People’s Committee, the Department of Agriculture and Rural Development, Department of Industry and Trade, Department of Transport , Department of Natural Resources and Environment, district-level and commune-level Boards of Natural Resources and Environment, and local community to ensure the project’s compatibility with the province’s infrastructure development strategy, particularly in terms of logistics and transportation. Information regarding means/alternatives of transportation as well as its associated cost must be included in the investment report and basic design report. Biomass transportation impact assessment/study: • Catchment area, radius and related biomass density; • Lorry/boat logistics, load, traffic; • Costs of biomass transportation in VND per ton biomass (with/without moisture), in energy amount resp. low heating value (LHV) (VND/ MJ) and electricity (VND/kWh) to be produced; • Transportation costs development scenario base/best/worst case; • Potential decentralized storage facilities; • Road conditions in rainy season.
Conditions for application	All grid-connected biomass energy projects.

Related legal documents	Not applicable.
Responsible persons/ Authority	Investor.
Documents to be submitted	Not applicable.
Applied procedures	Not applicable.
Estimated time	Depending on each specific project.
Costs	Not applicable.
Note	It is also recommended that the Investor should consult with local authorities such as the provincial People’s Committee, Department of Agriculture and Rural Development (DARD), local communities, the provincial Department of Industry and Trade (DOIT), the Department of Transport, the Department of Natural Resources and Environment (DONRE), the Divisions of Natural Resources and Environment in districts/communes to ensure the compatibility of the project development with the provincial strategy on infrastructure development, especially transportation, to select the best transportation alternative.

4.1. Phase A: Project Development

A.2.3	Acceptance Letter on Project Site
Description	For the site already selected by the Investor, the Investor needs an Acceptance Letter on Project Site signed by the competent authority before proceeding to the next steps such as detailed construction planning and preparation of environmental protection documentation and application for investment registration certificate, etc. This Letter will form the basis for the Investor to prepare the investment project in accordance with the provisions of the Investment Law, Enterprise Law, Land Law, Construction Law and other relevant regulations.
Conditions for application	All grid-connected biomass energy projects.
Related legal documents	- Integrated Document No. 21/VBHN-VPQH dated 10 December 2018 integrating the Land Law No. 45/2013/QH13 and Law No. 35/2018/QH14 on amending and supplementing the Land Law; - Decree No 43/2014/ND-CP dated 15 May 2014 on detailed stipulation for the implementation of a number of articles of the Land Law No. 45/2013/QH13; Decree 01/2017/ND-CP amending Decree 43/2014/ND-CP on guiding the implementation of the Land Law; - Procedures of investment site survey permission for investment project development: in accordance with specific regulations of each province.
Responsible persons/ Authority	- Investor. - Provincial People’s Committee (PPC). - DONRE.
Documents to be submitted	- Official letter requesting for project site. - Preliminary assessment report on the project site, which should incorporate the following details:

-
- General information about the biomass energy project such as the Investor, project capacity, etc;
 - Assessment criteria for site selection: biomass resources; electricity supply; water source and wastewater discharge point(s);
 - Current status of biomass resources in the area: volume and quantity; actual yield; supply capacity; transportation and logistics plan;
 - Information on the short list of selected project sites For each of the selected project site in the shortlist, the following information will be required: site description; biomass supply plan; plan for the establishment of power station to the power source, water source and waste discharge point(s)
 - Assessment of pros and cons of each site (SWOT analysis)
 - Conclusions and recommendations on site selection
 - Principal Contracts with biomass supplier(s) as prepared in sub-step A.2.1.



4.1. Phase A: Project Development

A.2.3	Acceptance Letter on Project Site
Applied procedures	According to the Land Law No. 45/2013/QH13 and Decree No. 43/2014/ND-CP, the PPC is the competent authority who decides on the land allocation. The DONRE is the authority who receives applications and informs the applicants on the results of the administrative procedure for land allocation. 1. The Investor submits the application for land allocation for investment project development. The application for land allocation must prove the financial ability of the Investor to ensure that the land use will comply with the project schedule as prescribed in Decree No.43/2014/ND-CP; 2. Based on the Investor’s application, the DONRE will employ various measures for application verification and consult with relevant Ministries/agencies before submitting its written opinions to the PPC for final decision on land allocation for the Investor’s project investment; 3. Once the land allocation for project investment development is accepted in writing by the PPC, the Investor may proceed, subject to specific regulations of each province, to the next steps of site survey/site plan preparation and coordinate with local authorities to deal with compensation, support and resettlement. The announcement of land acquisition, compensation, support and resettlement will be done via mass media, , local electronic portal and public notices at the People’s Committee office of the commune where the site is located, and at the public place of the local resident community who is related to land acquisition.
Estimated time	No longer than twenty (20) days from the receipt of complete and valid application to the date of land allocation decision. If further opinions and verification are needed, this duration will not be longer than thirty (30) days.
Costs	Administrative fees: subject to provincial regulations.

4.1. Phase A: Project Development

A.3	Proposal for Inclusion of the Project into the Power Development Plan
Description	The development of biomass power projects complies with the power development plan. The formation, appraisal and approval of the inclusion of biomass power projects in the power development comply with the existing legal regulations on planning. The proposal for inclusion of the project into the PDP includes the following main contents: 1. Legal basis and the rationale for inclusion of the project into the Plan; 2. Scale, progress and main specifications of the project need to be included in the Plan; 3. Evaluation of the potential impacts of the project on the provincial/ regional power grid; 4. Comprehensive solutions to power source/regional power grid to be adjusted to ensure power supply; 5. Evaluation of socio-economic benefits of the project; 6. Conclusions and recommendations.
Conditions for application	Grid-connected biomass energy projects that are not included in the PDP.
Related legal documents	• Law on Planning No. 21/2017/QH14 dated 24 November 2017; • Resolution No. 751/2019/UBTVQH14 dated 16 August 2019 of the Standing Committee of the National Assembly on giving explanation for a number of articles in the Law on Planning; • Resolution No. 110/NQ-CP dated 2 December 2019 of the Government on promulgating a list of plans integrated in the national plan, regional plans and provincial plans in accordance with the provision under point c, clause 1, Article 59 of the Law on Planning;

4.1. Phase A: Project Development

A.3	Proposal for Inclusion of the Project into the Power Development Plan
Related legal documents	- Construction Law No. 50/2014/QH13 dated 18 June 2014, of which a number of article are amended and supplemented according to Law No. 03/2016/QH14, Law No. 35/2018/QH14, Law No. 40/2019/QH14 and Law No. 62/2020/QH14; - Decree No. 15/2021/ND-CP dated 3 March 2021 of the Government, detailing the content of investment project management; - Circular No. 43/2013/TT-BCT dated 31 December 2013 stipulating the content, sequence, procedure, appraisal, approval and revision of the PDP; - Decision No. 24/2014/QD-TTg dated 24 March 2014 of the Prime Minister on the support mechanism for the development of biomass power projects in Viet Nam; Decision No. 08/2020/QD-TTg of the Prime Minister on amending and supplementing a number of articles in Decision No. 24/2014/QD-TTg; Integrated Document No. 51/VBHN-BCT dated 5 May 2020 of the Ministry of Industry and Trade on the support mechanism for the development of biomass power projects in Viet Nam, integrating Decision No. 24/2014/QD-TTg and Decision No. 08/2020/QD-TTg; - Circular No. 44/2015/TT-BCT dated 9 December 2015 of the Ministry of Industry and Trade stipulating project development, avoided cost tariff and standardized power purchase agreement applicable to biomass power projects; Circular No. 16/2020/TT-BCT dated 7 July 2020 of the Ministry of Industry and Trade on amending and supplementing a number of articles in Circular No. 44/2015/TT-BCT.

Responsible persons/ Authority	Investor/Consultant.
Documents to be submitted	Not applicable.
Applied procedures	Not applicable.
Estimated time	From forty-five (45) to sixty (60) days.
Costs	Subject to the Contract between the Investor and Consultant.



4.1. Phase A: Project Development

A.3.1	Acceptance for Inclusion of the Project into the Power Development Plan
Description	On the basis of the request for inclusion of the project into the PDP by the Investor, the MOIT shall appraise the inclusion of the grid-connected biomass power project in PDP. The project inclusion shall be approved by a decentralized/authorized entity.
Conditions for application	Grid-connected biomass energy projects that are not included in the PDP.
Related legal documents	- Circular No. 43/2013/TT-BCT dated 31 December 2013 stipulating the content, sequence, procedure, appraisal, approval and revision of the PDP; - Integrated Document No. 51/VBHN-BCT dated 5 May 2020 of the Ministry of Industry and Trade on the support mechanism for the development of biomass power projects in Viet Nam, integrating Decision No. 24/2014/QĐ-TTg dated 24 March 2014 of the Prime Minister on the support mechanism for the development of biomass power projects in Viet Nam and Decision No. 08/2020/QĐ-TTg of the Prime Minister on amending and supplementing a number of articles in Decision No. 24/2014/QĐ-TTg.
Responsible persons/ Authority	- The MOIT shall appraise the inclusion of the grid-connected biomass power project in PDP. - The project inclusion shall be approved by a decentralized/authorized entity.
Documents to be submitted	The dossier requesting for inclusion of the project into the national PDP consists of: - Letter by the Investor on the rationale for project inclusion into the plan; - Five (05) sets of the proposal for project inclusion into the plan (as prepared in sub-step A.3);

	- PPC's written agreement on the location of the grid-connected biomass power plant which is proposed to be included in the PDP; - Proven documents on the Investor's financial capacity and technical experience, and other related documents (if necessary).
Applied procedures	Procedures for accepting the inclusion of the project into the national PDP - The application form for inclusion of the project into the plan and attached dossier shall be submitted to EREA/MOIT; - Within five (05) working days from the receipt of the application form and attached dossier, EREA/MOIT will issue a written request for additional information if the dossier is not complete and/or valid; - EREA/MOIT will be responsible for appraising the dossier within ninety (90) working days from the receipt of the complete set of valid documentation; - Within fifteen (15) working days from the completed project inclusion into the plan, EREA shall draft the submission letter and reporting to the Minister of Industry and Trade for consideration. The inclusion of the project into PDP shall be approved by a decentralized entity or submitted to the Prime Minister for approval.
Estimated time	Based on the dossier.
Costs	Not applicable.

4.1. Phase A: Project Development

A.4	Preparation of the application dossier for investment policy decision (if any)
Description	Once the inclusion of the project in PDP is approved by a competent authority, the Investor shall prepare and submit the application dossier for investment policy decision to the provincial people’s committee for its decision. The application dossier includes the following main elements: investor or investor selection method, objective of investment, scale of investment, investment capital and capital mobilization plan, location, duration, implementation schedule, information of land use status at the project location and a proposal on land use demand (if any), human resource demand, a proposal on investment preferential policies, socio-economic impacts and effectiveness of the project, preliminary environmental impact assessment (if any) in accordance with the law on environmental protection.
Conditions for application	Grid-connected biomass energy projects.
Related legal documents	- Investment Law No. 61/2020/QH14, Article 33; - Decree No. 31/2021/ND-CP dated 26 March 2021 detailing and guiding the implementation of a number of articles in the Investment Law.
Related legal documents	Investor/Consultant.
Documents to be submitted	The application dossier for investment policy decision shall consist of: a. A letter of application for investment policy; b. A document certifying the investor’s legal status; c. A document certifying the investor’s financial capacity; d. Investment project proposal. In case a feasibility study report is required by the law on construction, the investor shall submit their feasibility study report instead of the investment project proposal;

	e. In case the investment project does not require the state’s land handover, land lease, permit for transfer of land use rights, the investor shall submit copies of the land use right certificate or other documents certifying the right to use the selected location for the investment project; f. Explanation for the technologies used in the investment project, of which the technologies are required to be appraised and approved in accordance with the legal regulation on technology transfer; g. The Business cooperation contract (BCC) for an investment project in the form of a BCC contract; h. h) Other documents related to the investment project, requirements for the investor’s conditions and capacity in accordance with prevailing regulations (if applicable).
Estimated time	Approx. from thirty (30) to forty-five (45) days.
Costs	Subject to the Contract between the Investor and Consulting Firm.



4.1. Phase A: Project Development

A.4.1	Decision on Investment Policy (if any)
Description	Once the application dossier for investment policy decision has met all requirements, the PPC will grant the Investor with the Decision on Investment policy. The approval of investment policy means a competent state authority approves the objective, location, scale, schedule and duration of a project; the investor or investor selection method as well as special policies and mechanisms (if any) supporting the implementation of an investment project.
Conditions for application	All grid-connected biomass energy projects.
Related legal documents	- Investment Law No. 61/2020/QH14, Article 36; - Decree No. 31/2021/ND-CP dated 26 March 2021 detailing guidelines and instructions for implementing several articles of the Investment Law.
Responsible persons/ Authority	- DPI. - PPC.
Documents to be submitted	The dossier for obtaining the Decision on Investment policy is specified by clause 1, Article 33 of the Investment Law No. 61.
Applied procedures	1. The application dossier for investment policy decision is submitted to the Investment Registration Office. Within thirty-five (35) working days from the receipt of the application dossier, the Investment Registration Office will notify the processing result to the Investor;

	- Within three (03) working days from the receipt of the full dossier, the Investment Registration Office will submit a dossier requesting for related state entities' appraisal in accordance with Article 33 of the Investment Law; - Within fifteen (15) working days from the receipt of the dossier, the consulted state entities, on the basis of their competence, will send their appraisal results to the Investment Registration Office; - Within twenty-five (25) working days from the receipt of the dossier, the Investment Registration Office will prepare and submit the Appraisal Report to the provincial people's committee according to Article 33 of the Investment Law; - Within seven (07) working days from the receipt of the dossier and the Appraisal Report, the provincial people's committee will approve the investment policy. A written notice and reasons attached will be provided in case of rejection; - The provincial people's committee will consider approving the investment policy in accordance with the provision under clause 1, Article 3 of the Investment Law.
Costs	Not applicable.



4.1. Phase A: Project Development

A.4.2	Investment Certificate
Description	The Investment Certificate is a paper-/electronic-based document that records the Investor’s registered information on the investment project. This Certificate will be issued by the Investment Registration Office after the project is granted with the Decision on Investment policy. Details of the Investment Certificate consist of: 1. Project title; 2. The Investor; 3. Project code; 4. Project location; land area to be used; 5. Objective and scale of the project; 6. Project investment capital (including the Investor’s and mobilized capital); 7. Project duration; 8. Project implementation schedule; 9. Incentives, investment support and justifications, and conditions for application (if any); 10. Conditions for the Project Investor (if any). When the revision of the Investment Certificate is needed, the Investor will follow the procedures for revising the Investment Certificate in accordance with the Article 41, Investment Law No. 61 and Article 35 and 36 of the Decree No. 31/2021/ND-CP dated 26 March 2021.
Conditions for application	• Biomass energy projects of foreign investors. • Biomass energy projects of foreign-invested economic organizations with 51% or more of the institutional capital or shares held by foreign investor(s).

Related legal documents	• Investment Law No. 61/2020/QH14, Section 3; • Decree No. 31/2021/ND-CP dated 26 March 2021 detailing guidelines and instructions for implementing several articles of the Investment Law.
Responsible persons/ Authority	• Management units of industrial, export processing, high-tech and economic parks: for biomass energy investment projects carried out within industrial, export processing, high-tech and economic parks. • DPI: for other projects.
Documents to be submitted	Not applicable.
Applied procedures	Once the Investor receives the PPC’s Decision on Investment Guidelines, the Investment Registration Office will issue the Investment certificate.
Estimated time	Five (5) working days from the receipt of the PPC’s Decision on Investment policy.
Costs	Not applicable.



4.1. Phase A: Project Development

A.5	Written Application for a Preliminary Power Purchase Agreement
Description	The Investor is encouraged to prepare documents to obtain a written agreement on the electricity purchase from Electricity of Viet Nam (EVN). This document is an important legal basis for the Investor to proceed to the next phases of the project. The written application for the preliminary power purchase agreement consists of the following contents: 1. Preliminary agreement of EVN/PC on electricity purchase; 2. Issues to be notified to the Investor when implementing the project; 3. The period of validity of the written application for power purchase agreement from the date of signing until the completion of Power Purchase Agreement (PPA) signed with EVN/PC by the Investor, except the case when EVN/PC has another concept to ensure the conformity of the project with their approved planning.
Conditions for application	• All grid-connected biomass energy projects obtained the Decision on investment policy and / or investment registration certificate.
Related legal documents	• Decision No. 373/QD-EVN dated 27 March 2014 by EVN on promulgating on the process of negotiation, signing and implementation of PPAs for electricity projects in EVN.
Responsible persons/ Authority	• The Investor. • EVN
Documents to be submitted	A written Application for a Preliminary power purchase agreement consists of: 1. Written offer of Investor on selling electricity to EVN/PC; Project preliminary information: construction sites; project objectives; main capacity specifications, investment capital, time of operation, planned progression; contents related to local and electrical planning;

	2. Copies of all approval decisions by competent authorities related to the project such as documents related to power plant planning and its related power projects.
Applied procedures	• The Investor submits the application for preliminary power purchase agreement to EVN. • EVN is responsible for consideration and request for clarification of the Investor’s application for power purchase agreement and has a written reply on whether EVN agrees on the power purchase.
Estimated time	Within seven (07) working days from the date of receipt of a valid application.
Costs	Not applicable.



4.1. Phase A: Project Development

A.6	Escrow Account
Description	Pursuant to the Law on Investment, the Investor must create an escrow account to ensure the implementation of the project, which is eligible to the State land allocation, land lease, permit to change the purpose of land use, immediately after receiving Decision on investment policy. The Decision on investment policy takes effect only after the Investor has created this escrow account. The escrow account was created on the basis of a written agreement between the Investment registration office and the Investor after investment policy decision is granted but before the time of land allocation, land lease, permit to change the purpose of land use. The amount of deposit is calculated on the percentage of investment capital (excluding land use fees, land rent and construction costs of public works under clause 4 of the Decree 118/2015/ND-CP) of investment projects on the progressive principle as follows: a. Deposit rate of 3% for the capital up to VND 300 billion; b. Deposit rate of 2% for the capital from over VND 300 billion to VND 1,000 billion; c. Deposit rate of 1% for the capital over VND 1,000 billion. The biomass energy projects are of special investment preference, therefore eligible to a reduction of 50% of the deposit. The deposit is refunded to the Investor in accordance with Article 25, Decree No. 31/2021/ND-CP.
Conditions for application	All grid-connected biomass energy projects approved by Decision on investment policy.
Related legal documents	• Law on Investment No. 61/2020/QH14, Article 43; • Decree No. 31/2021/ND-CP dated 26 March 2021 detailing guidelines and instructions for implementing several articles of the Investment Law;

Related legal documents	• Regulations on deposit pay to ensure the implementation of investment projects in the provincial area; • And other Decrees and Circulars (if any) guiding the implementation of the Investment Law No. 61/2020/QH14 (after their effective dates).
Responsible persons/ Authority	• The Investor. • Department of Planning and Investment (DPI).
Documents to be submitted	Not applicable.



4.1. Phase A: Project Development

A.6	Escrow Account
Applied procedures	Procedures to be performed to ensure the implementation of investment projects 1. The Investor implements procedures to ensure the implementation of investment projects with the DPI. (in Deposit Agreement Form); 2. Based on a written deposit agreement ensuring the implementation of investment projects between Investor and the DPI, the Investor makes a deposit to the account of the DPI opened at a commercial bank; 3. After paying a deposit to the account of the DPI at a commercial bank (with Commercial bank confirmation statement), the Investor notifies the DPI of the payment; 4. The DPI informs the Department of Natural Resources and Environment of the Investor’s deposit for confirmation as a basis for implementing the procedures of land allocation, land lease and change of land use purposes.
Estimated time	Not applicable.
Costs	Not applicable.
Notes	Procedures of making deposits may vary as prescribed by different provinces.



4.1. Phase A: Project Development

A.7	Development of the Construction Investment Feasibility Study
Description	The construction investment feasibility study (FS) is a document presenting the necessity, feasibility and effectiveness of the construction project in accordance with the approved basic designs. The report also serves as a basis for consideration and decision to initiate construction. The development of the construction investment FS must comply with the provisions of the Law on Construction and other provisions of relevant legislations. The content of the construction investment feasibility report shall be used to apply for a specific license/agreement and certificate needed to develop the project. Contents of the construction investment FS are regulated under Article 54, Law on Construction No. 50/2014/QH13 revised in 2020. Typically, these contents are presented under the following reports: 1. Description of Feasibility study; 2. Basic design; 2.1. Description of basic design 2.2. Basic design drawings 3. Specialized reports; 3.1. Grid connection report 3.2. Report on SCADA, information system, protective and automatic relay 3.3. Report on electricity metering system 3.4. Report on Fire prevention and fighting 3.5. Report on environmental impact assessment 3.6. Report on residential relocation, compensation and resettlement And a number of other specialized reports (e.g. report on geology, report on meteorology...)

Conditions for application	All grid-connected biomass energy projects approved by Decision on investment policy.
Related legal documents	• Law on Construction No. 50/2014/QH13 dated 18/06/2014: Article 52, 54; of which a number of articles are amended and supplemented by Law No. 03/2016/QH14, Law No. 35/2018/QH14, Law No. 40/2019/QH14 and Law No. 62/2020/QH14; • Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management.
Responsible persons/ Authority	• The Investor. • Consultant.
Documents to be submitted	Not applicable.
Applied procedures	Not applicable.
Estimated time	From ninety (90) to a hundred and twenty (120) days tentative to specific projects.
Costs	Under the consultancy contract of FS development between the Investor and consultant. Cost norms for the consultancy of RFCI development can be found at Circular No. 16/2019/TT-BXD dated 26 December 2019 of the Ministry of Construction.

4.1. Phase A: Project Development

A.7.1	Report Development and Grid Connection Plan Agreement
Description	The Grid connection agreement is an agreement between the Investor and the power transmission unit or power distribution unit on connecting the power plant to the transmission or the distribution grid according to the provisions under Circular No. 25/2016/TT-BCT or Circular No. 39/2019/TT-BCT.
Conditions for application	All grid-connected biomass energy projects are to be approved by Decision on investment policy.
Related legal documents	- Decision No. 373/QĐ-EVN dated 27 March 2019 of the EVN on promulgating the process of the negotiation, signing and implementation of PPAs for electricity projects in EVN; - Circular No. 42/2015/TT-BCT dated 1 December 2015 of the Ministry of Industry and Trade on requirements of electricity measurements in Power system; - For the biomass energy projects connected to the transmission grid (over 110 kV voltage): ✓ Circular No. 25/2016/TT-BCT dated 30 November 2016 by the Ministry of Industry and Trade on power transmission system; Circular No. 30/2019/TT-BCT dated 18 November 2019 of the Ministry of Industry and Trade on amending and supplementing a number of articles in Circular No. 25/2016/TT-BCT and Circular No. 39/2015/TT-BCT. - For the biomass energy projects connected to the distribution grid (up to 110 kV voltage): ✓ Circular No. 39/2015/TT-BCT dated 18 November 2015 by MOIT on Regulation of power distribution system; Circular No. 30/2019/TT-BCT dated 18 November 2019 of the Ministry of Industry and Trade on amending and supplementing a number of articles in Circular No. 25/2016/TT-BCT and Circular No. 39/2015/TT-BCT.

Responsible persons/ Authority	- Power transmission units: for the biomass energy projects connected to the transmission grid. - Power distribution units: for the biomass energy projects connected to the distribution grid.
Documents to be submitted	- For the biomass energy projects connected to the power transmission grid, the Investor sends documents to the Power transmission unit, which includes: - A written request for connection enclosed by documents in the forms prescribed in the Appendix 1A, 1B, issued as attachments to Circular No. 25/2016/TT-BCT; - Technical documents of the equipment to be connected or tentative changes to the existing connection point; - The estimated time to complete the project, the economic-technical data of the new power connection project or changes to the existing connection point. - For the biomass energy projects connected to the power distribution grid, the Investor sends documents to the power distribution unit, which includes: - Grid connection registration information relevant to the need for connection as specified in the Annex 2B, 2C, 2D, issued with Circular No. 39/2015/TT-BCT; - Diagram of operations of major electric devices after connection point; - Technical documents on the equipment intended to connect or changes expected to occur at the current connection points, estimated time to complete the project, the technical data of the new connected project or the changed/modified connected one.

4.1. Phase A: Project Development

A.7.1	Report Development and Grid Connection Plan Agreement
Applied procedures	- For biomass energy projects connected to the power transmission grid (Article 40 of Circular No. 25/2016/TT-BCT and Section 2 of Decision No. 373/QĐ-EVN): - The Investor sends a dossier including the grid connection plan agreement to the power transmission unit which includes four (04) hard copies and soft copies; - The power transmission unit chairs and coordinates with relevant agencies to consider, evaluate the documents and makes a draft plan for grid connection agreement; - For the biomass energy projects connected to the power distribution grid (Article 44 of Circular No. 39/2015/TT-BCT and section 2 of Decision No. 373/QĐ-EVN): - The Investors sends the documents to the Distribution unit; - The power distribution unit is responsible for verification and notification in writing of the completeness and validity of the documents; - The power distribution unit chairs and coordinates with relevant agencies to consider, evaluate the documents and draft the grid connection agreement.
Estimated time	- For the biomass energy projects connected to the power transmission grid: within fifty (50) working days from the receipt of full and valid dossier (Article 44 of Circular No. 25/2016/TT-BCT and section 2 of Decision No. 373/QĐ-EVN). - For the biomass energy projects connected to the power distribution grid: not more than twenty-five (25) working days (Article 45 of Circular No. 39/2015/TT-BCT).



4.1. Phase A: Project Development

A.7.2	Report Development and Agreement on SCADA/EMS (SCADA/DMS) Systems, Load Dispatch Information System, Protective and Automatic Relay
Description	The agreement on SCADA/EMS (SCADA/EMS), Load Dispatch Information System, Protective and Automatic Relay is an agreement between the Investor and the power load dispatch unit on the technical design of the SCADA/EMS (SCADA/EMS), Load Dispatch Information System, Protective and Automatic Relay according to the provisions under Circular No. 39/2015/TT-BCT or Circular No. 25/2016/TT-BCT. This agreement is an integral part of the Power purchase agreement (PPA) and is one of the main points in the negotiation, signing of PPA. The Investor is responsible for investing on equipment within the power plant’s power stations; telecommunications equipment, establishment of the transmitting channels from SCADA/EMS (SCADA/DMS) of A0/PC to power plants, power stations in compliance with the agreed design; management and operation of devices and channels connecting information and data to the above - mentioned systems of the A0/PC.
Conditions for application	• All biomass energy projects with installed capacity of 10 MW or higher. • All biomass energy projects with installed capacity of less than 10 MW which is connected to the 110 kV voltage grid.
Related legal documents	• Decision No. 373/QĐ-EVN dated 27 March 2019 by EVN on promulgating the process of the negotiation, signing and implementation of PPAs for electricity projects in EVN; • Circular No. 25/2016/TT-BCT dated 30 November 2016 by Ministry of Industry and Trade on power transmission system; • Circular No. 39/2015/TT-BCT dated 18 November 2015 by Ministry of Industry and Trade on Regulation of power distribution system; • Circular No. 30/2019/TT-BCT dated 18 November 2019 of the Ministry of Industry and Trade on amending and supplementing a number of articles in Circular No. 25/2016/TT-BCT and Circular No. 39/2015/TT-BCT; • Circular No. 42/2015/TT-BCT dated 1 December 2015 by the Ministry of Industry and Trade on requirements of electricity measurements in power system.

Responsible persons/ Authority	• EVN NLDC (National Load Dispatch Center) (A0). • Power Corporation (PC).
Documents to be submitted	Written requests for SCADA/EMS (or SCADA/DMS) agreement, Load dispatch information system, protective and automatic relay include: 1. A written request for agreement SCADA/EMS (or SCADA/DMS), Information systems regulation, protective and automatic relay in the Investor’s project; 2. A preliminary design of control systems of power plants, protective and automatic relay of power plants and power stations; 3. The plans for connecting the control system of power plants to the Load Dispatch Center.
Applied procedures	• The Investor sends a written request for Agreement to A0/PC. • A0/PC conducts the evaluation process and issues an agreement with the Investor on SCADA/EMS (SCADA/DMS), moderating information system, protective and automatic relay.
Estimated time	• Within thirty (30) working days from the receipt of a valid application.



4.1. Phase A: Project Development

A.7.3	Report Development and Agreement on Power Metering
Description	The power metering agreement is an agreement between the Investor of biomass energy projects and the power purchasing unit on the technical design of power measuring system transmitting and receiving, and measuring system of environmental parameters used in the payment of electricity bill (if any). The power metering agreement is an integral part of the PPA and also one of the main contents of the negotiation, signing of the PPA.
Conditions for application	All grid-connected biomass energy projects obtained the Decision on investment policy.
Related legal documents	- Circular No. 42/2015/TT-BCT dated 1 December 2015 by MOIT on electricity metering regulations in power systems; - Decision No. 373/QĐ-EVN dated 27 March 2019 by EVN on promulgating the process of the negotiation, signing and implementation of PPAs for electricity projects in EVN; - Circular No. 27/2009/TT-BCT dated 25 September 2009 by MOIT on Power metering regulations in competitive electricity generation market.
Responsible authorities/ persons	- Electricity Power Trading Company (EPTC). - EVN PC.
Documents to be submitted	The dossiers for power metering agreement includes: The Investor’s presentation of the metering system: a general introduction to the plant and the plant’s main parameters, description of the metering location, choice of power metering parameters and its suitability , plans for metering circuit connection, plans for data collection and transmission from remote power meters, lead-sealed system ... and technologies related to the payment of electricity bill (such as ambient temperature, circulating water temperature, fuel parameters ...) according to Circular 42 and related regulations;

	- Related drawings: include diagram of principle operation of measuring system for a single line diagram of a power plant or substation – location of the measuring system, the floor plan of power plants or substations showing the layout device for schematic diagram connection in the junction box CT, VT, wire mesh cable tray, marshalling kiosk, test block devices, the meter kiosk, locked and seal –lead positions, etc; - Documents: The Investor’s written request for metering agreement, written agreement on connection by NPT/PC.
Applied procedures	- The Investor sends written request for power metering agreement to EPTC/PC. - EPTC/PC evaluates the design plan for power metering system and makes a written metering agreement with the Investor.
Estimated time	Within twenty (20) working days from the date of receipt of a valid application.
Costs	Not applicable.



4.1. Phase A: Project Development

A.7.4	Report Development and Evaluation and Approval of Fire Prevention and Fighting Plans
Description	Biomass energy projects are liable to comply with the technical regulations and standards of firefighting and prevention. The project planning, design of firefighting and prevention facilities must be made by competent and eligible designing consultancy units. The project report, design of fire prevention and fighting facilities must be assessed and approved by fire prevention and fighting police. The evaluation and the approval of design plans for fire prevention and fighting are to check, compare rescuing measures and contents of the design of projects and works that have special requirements for fire safety and compliance with technical regulations, standards, provisions of Viet Nam’s and international laws (applicable in Viet Nam) on fire prevention and fighting. The evaluation and approval results of fire prevention and fighting present one of the foundations for approving the project and granting the construction permit.
Conditions for application	All grid-connected biomass energy projects obtained the Decision on investment policy.



Related legal documents

- Law on Fire Prevention and Fighting No. 27/2001/QH10 dated 12 July 2001;
- Law on amendment and provision of some articles of Law on Fire Prevention and Fighting No. 40/2013/QH13 dated 22 November 2013;
- Decree No. 136/2020/ND-CP dated 24 November 2020 of the Prime Minister detailing a number of articles and measures to implement the Law on Fire Prevention and Fighting and the Law Amending and Supplementing a Number of Articles of the Law on Fire Prevention and Fighting;
- Circular No. 149/2020/TT-BCA dated 31 December 2014 of the Ministry of Public Security detailing a number of articles and the implementation of the Law on fire prevention and fighting and the Law amending and supplementing a number of articles in the Law on fire prevention and fighting; and Decree No. 136/2020/ND-CP dated 24 November 2020 of the Government on detailing a number of articles and the implementation of the Law on fire prevention and fighting and the Law amending and supplementing a number of articles in the Law on fire prevention and fighting;
- Circular No. 150/2014/TT-BTC of the Ministry of Finance dated 10 October 2014 regulating the rate, mode of collection, management and use of charges from the approval of design for fire prevention and fighting.



4.1. Phase A: Project Development

A.7.4	Report Development and Evaluation and Approval of Fire Prevention and Fighting Plans
Responsible authorities/ persons	- The Police Department of fire prevention and fighting and rescue evaluates and approves the design of fire prevention and fighting plans which apply to: - Key national projects and constructions, construction projects under group A (except construction investment projects using state budget with provincial level being investor); - Projects, constructions with their height from 100m above; - Construction projects requested by Provincial police for fire prevention and fighting, Police department of fire prevention and fighting and rescue, Provincial public security or the investor. - The Provincial Police for fire prevention and fighting, the Police department of fire prevention and fighting and rescue, the Provincial public security shall evaluate and approve design plans for fire prevention and fighting which apply to: - Construction projects not under the authority of the Police Department of fire prevention and fighting and rescue in the local areas; - Cases authorized by Police Department of fire prevention and fighting and rescue.
Documents to be submitted	The application for approval of design for fire prevention and fighting consists of two (02) sets, certified by the Investor. Documents in a foreign language must be accompanied with their Vietnamese translation: For preliminary design, the dossier consists of: - A written request by the Investor for evaluation of measures for fire prevention and fighting (authorization document to be attached if applied); - Copy of investment license by competent authorities;

	- Estimated total amount of investment in projects and works; - Drawings and descriptions of the preliminary designs which indicate requirements for fire prevention and fighting provided in Clauses 1, 2, 3, 4, 5 and 6, Article 13, Decree No. 136/2020/ND-CP.
Applied procedures	- The Police for Fire prevention and fighting evaluates and approves the plans for fire prevention and fighting applied to technical designs or construction drawings documents of the project; - For the basic design of the project, the Police for fire prevention and fighting has the responsibility for a written reply to fire prevention and fighting plans.
Estimated time	Time for evaluation and approval of plans for fire prevention and fighting after receiving valid application is as follows: - Basic design: No more than ten (10) working days for group A projects; no more than five (05) working days for projects of groups B and C. - Technical designs or construction drawings: no more than fifteen (15) working days for projects, works of group A; no more than ten (10) working days for projects, works of groups B and C.
Costs	Pursuant to Circular No. 258/2016/TT-BTC dated 11 November 2016 of the Ministry of Finance regulating the rate, mode of collection, management and use of charges from evaluation and approval of plans for fire prevention and fighting; Circular No. 52/2019/TT-BTC dated 16 August 2019 of the Ministry of Finance on amending Circular 258/2016/TT-BTC (integrated by the Integrated Document No. 52/VBHN-BTC dated 15 October 2019 integrating the Circular on regulating the rate, mode of collection, management and use of charges from evaluation and approval of plans for fire prevention and fighting.

4.1. Phase A: Project Development

A.7.5	Development, Appraisal and Approval of Environmental Impact Assessment Report or Environmental Protection Plan
Description	The environmental impact assessment is an analysis and forecast of the environmental impact exerted by specific projects so as to take necessary measures for the environmental protection when such projects are underway. The environmental protection plan is a legal document representing a business owner's commitment to state agencies on environmental protection. The completion of an environmental impact assessment report or the registration for an environmental protection plan shall depend on the scale of each project in accordance with the provision under Appendix II, Decree 11/VBHN-BTNMT. The applicable subjects are specified in column 5, Appendix II, Section I of Decree 11/VBHN-BTNMT. The Investor if capable and certified by competent authorities shall deliver an environmental impact assessment/ an environmental protection plan himself or through a consulting firm, and shall bear the responsibility to the law for the outcome of the environmental impact assessment. The outcome of the environmental impact assessment report/environmental protection plan appraisal and approval provides the basis for project approval, land allocation and construction permit.
Conditions for application	All grid-connected biomass energy projects approved by Decision on investment policy.
Related legal documents	• Law on Environmental Protection No. 55/2014/QH13 dated 23 June 2014, of which a number of articles are amended, supplemented by Law No. 35/2018/QH14 and Law No. 39/2019/QH14 and Law No. 61/2020/QH14 (invalid since the effective date if the Law on Environmental Protection No. 72/2020/QH14); • Law on Environmental Protection No. 72/2020/QH14 dated 17 November 2020, effective since 1 January 2022;

Related legal documents

- Decree No. 19/2015/ND-CP dated 14 February 2015 of the Government detailing the implementation of a number of articles in the Law on Environmental Protection, which are amended and supplemented by Decree No. 136/2018/ND-CP dated 5 October 2018 of the Government on amending a number of articles under the Decrees related to conditions for business investment in the field of natural resources and environment; Decree No. 40/2019/ND-CP dated 13 May 2019 of the Government on amending, supplementing a number of articles under the Decrees detailing and guiding the implementation of the Law on Environmental Protection. Integrated Document No. 08/VBHN-BTNMT dated 25 October 2019 of MONRE on integrating the Decree guiding the Law on Environmental Protection;
- Decree No. 18/2015/ND-CP dated 14 February 2015 stipulating environmental protection planning, strategic environmental assessment, environmental impact assessment and environmental protection plans, which is amended and supplemented by Decree No. 136/2018/ND-CP and Decree No. 40/2019/ND-CP. Integrated Document No. 11/VBHN-BTNMT dated 25 October 2019 of MONRE on integrating the Decree stipulating environmental protection planning, strategic environmental assessment, environmental impact assessment and environmental protection plan;
- Circular 25/2019/TT-BTNMT dated 31 December 2019 of MONRE detailing the implementation of a number of articles in Decree No. 40/2019/ND-CP;
- Circular 56/2018/TT-BTC dated 25 June 2018 of the Ministry of Finance providing rates and modes of collection, payment, and management and use of charges from approval of reports on environmental impact appraised by competent central entities.

Responsible authorities/ persons

- The Investor.
- Department of Natural Resources and Environment.
- District-level People's Committee.
- Provincial People's Committee.

4.1. Phase A: Project Development

A.7.5	Development, Appraisal and Approval of Environmental Impact Assessment Report or Environmental Protection Plan
Documents to be submitted	1. The dossier for appraisal of the Environmental Impact Assessment Report consists of: - One (01) written request for appraisal of the environmental impact assessment report in Form 05 prescribed in Appendix VI, Section I issued as an attachment to Circular 11/VBHN-BTNMT; - One (01) copy of feasibility study report or economic – technical report of the investment project or equivalent documents; - Seven (07) copies of the environmental impact assessment report. The dossier for approval of the Environmental Impact Assessment Report consists of: - One (01) written request for approval of the environmental impact assessment report, giving clear presentation of the revised contents as concluded by the assessment council, except where there is no modifications or revisions; - The environmental impact assessment report is bound in hard back. Project owner signs at the bottom of each page of the report, including appendices in sufficient number to be sent to recipients specified in clause 14, Article 14 of Circular 11/VBHN-BTNMT. One (01) CD containing one (01) electronic text file, format “.doc” on the contents of the report and one (01) electronic document file, format in “.pdf” on scanned contents of the entire report (including appendices) shall be enclosed with the report. 2. The dossier for environmental protection plan registration consists of: - One (01) written request for environmental protection plan registration in Form 01, Appendix VII, Section I issued as an attachment to Decree 11/VBHN-BTNMT; - Three (03) copies of the environmental protection plan (with one electronic copy attached) of the project in Form 02, Appendix VII, Section I issued as an attachment to Decree 11/VBHN-BTNMT;

	c. One (01) feasibility study report or economic – technical report of the investment project (with one electronic copy attached).
Applied procedures	- The Investor sends the application for approval to the Provincial People's Committee/Department of Natural Resources and Environment; - The evaluation is made by the appraising council; - After the reports on environmental impact assessment are approved with/without edition or revision, the project owner makes necessary changes and sends them to the responsible agency for approval; - After receiving the application for approval of reports on environmental impact assessment from the project owner, the head of the appraising council issues a decision approving the environmental impact assessment; - In case the approval is not yet made, or no approval will be made, the appraising council must state the reasons in writing; - The appraising council issues a decision of approval after confirming with the project owner and relevant agencies.
Estimated time	- Time for appraising the dossier: no more than thirty (30) working days from the date of receipt of complete and valid application. - Time for issuing a decision of approval of reports on environmental impact assessment: twenty (20) working days from the receipt of the complete application for approval of reports on environmental impact assessment.
Costs	Pursuant to Circular 56/2018/TT-BTC dated 25 June 2018 of the Ministry of Finance providing rates and modes of collection, payment, and management and use of charges from approval of reports on environmental impact appraised by competent central entities.

4.1. Phase A: Project Development

A.7.6	Appraisal on Construction Investment Feasibility Study Report
Description	Biomass energy projects must be appraised by competent state agencies prior to the investment decision. The appraisal of the construction investment consists of the appraisal of basic design and other contents of construction investment FS. The appraisal of basic design includes: 1. The compatibility of the basic design with detailed construction planning; total approved premises or a part of selected projects applied to route-based construction; 2. The compatibility of basic design with construction site, the ability to connect with the local infrastructure; 3. The compatibility of technological plans, line of technology selected for projects that require design technology; 4. The compatibility of measures taken to ensure the construction safety, environmental protection, prevention of fire and explosion; 5. The compliance with technical standards and regulations in the design; 6. The statement of construction capacity of the organization and professional capacity of individuals practicing design consultancy; 7. The compatibility of organization of project implementation in phases, construction categories with the requirements of the basic design. Other contents of the construction investment FS consists of: 1. Assessing the necessity for construction investment which includes the compliance with the decision on investment policy, the ability to meet the increasing demand in size, capacity, utilization, thereby meeting the needs for socio - economic development, ensuring national defense and security in each period;

	2. Assessing factors that ensure the feasibility of the project, including the compatibility of sector development planning, construction planning; ability to meet the needs of land use, construction site clearance; the need to use resources (if any), guaranty the project's input and output products; organization of implementation; investor's experience in project management; solutions for environmental protection; fire prevention and fighting; maintenance of national defense, security and other factors; 3. Assessing factors that ensure the effectiveness of the project including the total investment, project implementation progression; utilization and operation costs; ability of scheduled capital mobilization, risk analysis, financial performance and socio - economic efficiency of projects.
Conditions for application	• All grid-connected biomass energy projects which have reached agreement and been approved in sub-steps A.8.1, A.8.2, A.8.3, A.8.4, A.8.5
Related legal documents	• Law on Construction No. 50/2014/QH13 dated 18 June 2014, of which a number of articles are amended by law No. 03/2016/QH14, Law No. 35/2018/QH14, Law No. 40/2019/QH14 and Law No. 62/2020/QH14. The Integrated Document No. 10/VBHN-VPQH dated 4 July 2019 of the National Assembly Office on integrating the Law on Construction; • Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management; • Circular No. 18/2016/TT-BXD dated 30 June 2016 of the Ministry of Construction detailing and guiding several contents in the evaluation and approval of projects, designs, estimated construction cost. This Circular takes effect from the date of 15 August 2016;

4.1. Phase A: Project Development

A.7.6	Appraisal on Construction Investment Feasibility Study Report
Related legal documents	Circular No. 03/2016/TT-BXD dated 10 March 2016 of the Ministry of Construction on classification of construction works and guidance on construction management; Circular No. 07/2019/TT-BXD dated 7 November 2019 amending, supplementing, replacing a number of provisions in Circular No. 03/2016/TT-BXD. The Integrated Document No. 10/VBHN-BXD dated 30 December 2019 of the Ministry of Construction on integrating the Circular stipulating the classification of construction works and guidance on construction management.
Responsible authorities/ persons	- The MOIT is in charge of the basic design appraisal (excluding technology design) of level-1 biomass energy projects (capacity > 30 MW); - The DOIT is in charge of the basic design appraisal (excluding technology design) of biomass power projects from level II and lower (capacity ≤ 30 MW); - Specialized units under the Investor are in charge of the technology design appraisal and other contents of the construction investment FS.
Documents to be submitted	The application for the appraisal of construction investment projects includes: - Statement of evaluation of investor's projects (in the form prescribed in Annex II, Decree 59/2015/ND-CP); - The construction investment FS (step 5.1); - Related materials and documents.
Applied Procedures	The Investor sends the dossier of basic design of the project to construction specialized agencies: MOIT (if the project capacity > 30 MW) or to Department of Industry and Trade (if the project capacity ≤ 30 MW) for appraisal;

	- Within five (05) working days from the receipt of the project dossier, construction specialized agencies have responsibility for sending document in writing enclosed with the dossier to relevant organizations for comments within the time limit. If the time limit is not met and there is no written reply, contents of basic design shall be considered to have been approved and concerned agencies and organizations shall bear their own responsibility for the issue; - Where construction specialized agencies requires the Investor to directly choose a consulting unit for verification, within five (05) working days after the submission of a valid dossier, construction specialized bodies issue a written notice to the investor of the contents to be verified so that investor can select and sign contract with consultants for verification. The Investor is responsible for sending the results of verification to construction specialized agencies and the decision maker as a basis for project evaluation and basic design; - The chairing agency for project appraisal, basic design shall organize the appraisal under the inter-linkage one-stop shop to ensure the right content and time stipulated by the Law on Construction and the Decree 59.
Estimated time	The project appraisal period is from the date of receipt of valid dossier by agencies, organizations, specifically as follows: - The project appraisal period shall not exceed ninety (90) days for national key projects; - The project appraisal period shall not exceed forty (40) days for Group A projects; - The period for project appraisal shall not exceed thirty (30) days for Group B projects; - The project appraisal period shall not exceed twenty (20) days for Group C projects and projects that simply require economic technical reports on construction investment.



4.1. Phase A: Project Development

A.7.6	Appraisal on Construction Investment Feasibility Study Report
Estimated time	In case it is necessary to extend the appraisal period, the evaluating agencies, organizations must report to higher-level authorities for review and decision on extension; extension period shall not exceed the corresponding appraisal period specified in paragraphs 1, 2, 3 and 4 above. Basic design appraisal period: 1. No more than sixty (60) days for national key projects; 2. No more than thirty (30) days for Group A projects; 3. No more than twenty (20) days for Group B projects; 4. No more than fifteen (15) days for group C projects.
Costs	Pursuant to Circular 209/2016/TT-BTC dated 10 November 2016 of the Ministry of Finance prescribing the rates and the collection, remittance, management and use of appraisal charges for construction investment projects and basic designs.



4.1. Phase A: Project Development

A.7.7	Project Approval, Decision on Construction Investment
Description	After receiving the written notification of the results from approving agencies, the Investor, on the analysis of the technical solutions, economic and financial efficiency of the project presented in the construction investment FS, makes a decision on whether to invest in the construction project. A decision on construction investment serves as an important legal basis to implement the next phases of the project such as site clearance, capital loan, negotiation and signing of the PPA. Main contents of the construction investment decision include: 1. Name of the project; 2. Information on the Investor; 3. Information on the consulting organization sets up projects, surveys (if any), forms the basic design; 4. Objectives and scale of construction investment, schedule of the project implementation; 5. Key construction works, construction works, and project-level construction works; 6. Construction site and land use area; 7. Basic design, technological design (if any), selected technical regulations, standards; 8. Resource requirements, resource exploitation (if any), operation and use of the work; compensation plans, site clearance, environmental protection plans (if any), and plans for fire fight and prevention; 9. Total investment and expected capital allocation used according to the schedule; 10. Modes of project organization and management.

Conditions for application	• All grid-connected biomass energy projects in the Power Development Plan whose basic design is appraised and approved by competent authorities.
Related legal documents	• Law on Construction No. 50/2014 / QH13, dated 06/18/2014: Article 60, of which a number of articles are amended by Law No. 03/2016/QH14, Law No. 35/2018/ QH14, Law No. 40/2019/QH14 and Law No. 62/2020/QH14; • Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management.
Responsible authorities/ persons	The Investor.
Documents to be submitted	Not applicable.
Applied procedures	Not applicable.
Estimated time	Not applicable.
Costs	Not applicable.

4.1. Phase A: Project Development

A.8	Negotiation and Signing of Power Purchase Agreement (PPA)
Description	For grid-connected biomass energy projects, the electricity purchase between the seller and the buyer is done via the Standardized Power Purchase Agreement applicable to grid-connected biomass power projects. Contents of PPA for grid - connected biomass power projects are specified in Appendix III issued with Circular 16/2020/TT-BCT. The electricity seller and buyer are allowed to supplement the PPA contents to clarify the rights and responsibilities of each party but not allowed to change the fundamental contents of the PPA. The validity of PPA for grid - connected biomass power projects is twenty (20) years from the commercial operation date. After 20 years, the two parties can renew the contract or sign a new contract under the provisions of current laws.
Conditions for application	All grid-connected biomass energy projects whose basic design is appraised, and approved by the Investor.
Related legal documents	- Decision No. 373/QD-EVN dated 27 March 2019 by EVN on promulgating the process of the negotiation, signing and implementation of PPAs for electricity projects in EVN; - Integrated Document No. 51/VBHN-BCT dated 5 May 2020 of the Ministry of Industry and Trade on the support mechanism for the development of biomass power projects in Viet Nam, integrating Decision No. 24/2014/QD-TTg dated 24 March 2014 of the Prime Minister on the support mechanism for the development of biomass power projects in Viet Nam and Decision No. 08/2020/QD-TTg of the Prime Minister on amending and supplementing a number of articles in Decision No. 24/2014/QD-TTg;

	Circular No. 44/2015/TT-BCT dated 9 December 2015 of MOIT providing regulations on project development, avoided cost tariff and SPPA applied to biomass power projects; Circular No. 16/2020/TT-BCT dated 7 July 2020 of the Ministry of Industry and Trade amending and supplementing a number of articles in Circular No. 44/2015/TT-BCT.
Responsible authorities/ persons	- Electricity and Renewable Energy Authority, MOIT. - Viet Nam Electricity (EVN). - Electricity Regulatory Authority of Viet Nam (ERAV). - The Investor.
Documents to be submitted	Documents for approval to be submitted: - A written request for approval of PPA; - Certified copies of written approvals by relevant authorities on the project development (e.g. Plans for power source and grid: if the plant is approved by Provincial People's Committee, a written approval by MOIT shall be enclosed; Certificate of investment registration, related licenses, etc.); - Basic information of the Investor to prove legal status, business registration, competence and experience in project development, financial capabilities, etc; - Agreement on grid connection; - Agreement on power metering; - Agreement on SCADA/EMS (or SCADA/DMS); - Agreement on protective relay system; - Written agreement of power purchase between EVN and Investor.

4.1. Phase A: Project Development

A.8	Negotiation and Signing of Power Purchase Agreement (PPA)
Applied procedures	The contents of negotiations and signing of the PPA of power plant projects include: 1. Agreement of power purchase between EVN and the Investor; 2. Agreement on grid connection between NPT/PC and the Investor; 3. Agreement on SCADA/EMS (or SCADA/DMS), Load dispatch information system, protective and automatic relay; 4. Agreement on power metering between EPTC/PC and the Investor; 5. Negotiation and initialed PPA between EPTC/PC and the Investor; 6. Official signing of PPA between EVN/PC and the Investor. The signature by the Investor and EVN for each of the above-listed agreements from 1 to 5 can be done either consecutively or simultaneously. The official signing of the PPA can be done only once all the 1 to 5 agreements are signed.
Estimated time	Within six (06) months after the investor has sent a written request for selling electricity, the buyer shall proceed to sign PPA with the seller as regulated.



4.1. Phase A: Project Development

A.9	Application for a Loan
Description	The Investor shall prepare and submit a written application to banks for necessary funding to develop the project. Requirements of the project loan application can vary among banks due to their different requirements. A typical project appraisal application includes 'Documents to be submitted' prescribed below. In case of access to ordinary commercial loans, the Investor can contact commercial joint stock banks in Viet Nam that have lending experience to renewable energy projects. However, conditions required for the loan and interest rates of credit will vary among banks.
Conditions for application	All grid-connected biomass energy projects signed PPA.
Related legal documents	• Decree 56/2020/ND-CP dated 25 May 2020 on management and use of official development assistance (ODA) and concessional loans of foreign donors.
Responsible authorities/ persons	• The Investor. • Related banks.

4.1. Phase A: Project Development

A.9	Application for a Loan
Documents to be submitted	1. Forms to be submitted to the bank - The application form for project credit; - Borrower information form; - Statement of financial relationships with other banks and financial institutions. 2. Investor Profile 2.1. Legal records - Registration certificate of business/investment, other documents required by the license; - Applicant’s enterprise charter; - General manager appointment decision, chief accountant appointment decision (the legal representative of the applicant). 2.2. Financial records - Financial statements (balance sheet, business production statement, cash flow statement); - Documents related to investments and contributions of the shareholders. 2.3. Collateral valuation dossier - Copies of certificate of land use rights, ownership certificate of other assets; - Agreement of the co - owner to use the property as a bank guarantee.

3. Project investment dossier

- Investment certificate;
- Approval of plans for power project construction or construction license;

	- Project investment report; - A copy of the certificate of ownership or land lease contract of the project; - Report on environmental impact assessment; - Approval by State agencies of firefighting and protection solutions; - Insurance Commitments; - Power Purchase Agreement; - Other related documents (if any).
Applied Procedures	1. The Investor shall file an application for capital loan to propose to the bank/financial institution a necessary amount to finance the project development; 2. Financial institutions will assess the project’s legal status and feasibility and the Investor’s capability for project development; 3. If the bank/financial institution agrees to fund the project, the bank/financial institution will transfer the original dossier of loan application to corresponding creditors for approval. Loan or credit agreement will be provided to the Investor.
Estimated Time	Not applicable.
Costs	Administrative fee as prescribed.



4.1. Phase A: Project Development

A.10	Report Development of Technical Design
Description	The technical design is the second step in construction design for projects that requires a 3-step design. For projects with one or two-step design, it is not necessary to make this report. The technical design has to be relevant with major contents, parameters of basic design. The technical design is developed on the basis of the approved basic design, fully demonstrating relevant parameters and materials in accordance with the applied standards and regulations. The technical design is the basis for the development of a construction drawing design. Major contents of technical design include: 1. Architectural measures; 2. Technological measures (if any); 3. Usable performance; 4. Usable time and process of work operation and maintenance; 5. Structuring measures, major materials; 6. Technical instruction; 7. Fire and explosion prevention measures; 8. Economical and efficient measures of energy use; 9. Measures for environment protection and climate change response; 10. Construction estimate relevant to construction design steps;
Conditions for application	• For projects requiring 3-step design (Basic Design, Technical Design, Construction Drawing).

Related legal documents	• Law on Construction No. 50/2014/QH13 dated 18 June 2014, of which a number of articles are amended and supplemented by Law No. 03/2016/QH14, Law No. 35/2018/QH14; Law No. 40/2019/QH14, and Law No. 62/2020/QH14; • Decree No 59/2015/ND-CP dated 18/6/2015 of the Government on Construction project management; Decree No. 42/2017/ND-CP dated 5 April 2017 on amending, supplementing a number of articles in Decree No. 59/2015/ND-CP, Decree No. 100/2018/ND-CP dated 16 July 2018 on amending, supplementing, replacing and abolishing a number of articles in Decree No. 59/2015/ND-CP and a number of clauses under Article 1 of Decree No. 42/2017/ND-CP; • And other Decrees, Circulars (if any) guiding the implementation of Law No. 62/2020/QH14 (after issuance date).
Responsible authorities/ persons	• Investor/Consultant.
Documents to be submitted	Not applicable.
Applied procedures	Not applicable.
Estimated time	• From ninety (90) to one hundred and twenty (120) days, subject to the scale and nature of each project.
Costs	Pursuant to consulting contract for technical design report between Investors and Consultants. Cost norm for Technical Design reporting consultation is in accordance with Circular No. 16/2019/TT-BXD dated 26 December 2019 of the Ministry of Construction.

4.1. Phase A: Project Development

A.10.1	Appraisal of Technical Design
Description	The competent authority organizes the technical design appraisal for projects with 3-step design. The contents of technical design appraisal include: 1. The relevance of technical design compared with basic design; 2. The sensibility of construction design solutions; 3. The conformity of applicable standards, technical norms, legal regulations on using construction materials for work; 4. The assessment of the relevance of construction design solutions with work's usable performance, safety level and the safety insurance of neighboring works; 5. The sensibility in choosing chain and technological equipment for works with technological requirements; 6. The conformity of regulations on environment protection and fire, explosion prevention; 7. The relevance between major estimated volume with real volume; the sensibility of the application of construction norms and unit price; the defined value of work estimate; 8. The capability of organizations, individuals in charge of construction evaluation and design.
Conditions for application	• For projects requiring 3-step design (Basic Design, Technical Design, Construction Drawing).
Related legal documents	• Law on Construction No. 50/2014/QH13 issued on 18 June 2014, of which a number of articles are amended and supplemented by Law No. 03/2016/QH14, Law No. 35/2018/QH14; Law No. 40/2019/QH14, and Law No. 62/2020/QH14. The Integrated Document No. 10/VBHN-VPQH dated 4 July 2019 of the National Assembly Office on integrating the Law on Construction;

- Decree No. 113/2020/ND-CP dated 18 September 2020 of the Government on detailing point d, clause 3 of the Law on amending and supplementing a number of articles in the Law on Construction, which stipulate the appraisal of the construction drawing design following the technical design and construction permit exemption;
- Decree No. 59/2015/ND-CP dated 18 June 2015 of the Government on the management of construction projects; Decree No. 42/2017/ND-CP dated 5 April 2017 on amending and supplementing a number of articles in Decree No. 59/2015/ND-CP, Decree No. 100/2018/ND-CP dated 16 July 2018 on amending, supplementing, replacing and abolishing a number of articles in Decree No. 59/2015/ND-CP and a number of clauses under Article 1 of Decree No. 42/2017/ND-CP;
- Circular No. 03/2016/TT-BXD dated 10 March 2016 of the Ministry of Construction on classification of construction works and guidance on construction management; Circular No. 07/2019/TT-BXD dated 7 November 2019 amending, supplementing, replacing a number of provisions in Circular No. 03/2016/TT-BXD. The Integrated Document No. 10/VBHN-BXD dated 30 December 2019 of the Ministry of Construction on integrating the Circular stipulating the classification of construction works and guidance on construction management;
- Circular No. 18/2016/TT-BXD issued on 30 June 2016 by Ministry of Construction regulating in detail some contents on project evaluation and approval as well as work construction design and estimate;
- And other Decrees, Circulars (if any) guiding the implementation of Law No. 62/2020/QH14 (after issuance date).

4.1. Phase A: Project Development

A.10.1	Appraisal of Technical Design
Responsible authorities/ persons	- The MOIT organizes the technical design evaluation for level-1 biomass power projects (capacity > 30 MW). - The DOIT organizes the technical design evaluation for biomass power projects from level II or lower (if the project capacity ≤ 30 MW).
Documents to be submitted	The Investor sends the dossier of technical design of the project to specialized agencies and MOIT (if the project capacity > 30 MW) or to DOIT (if the project capacity ≤ 30 MW) for evaluation, including: - The design evaluation report in conformity with Sample 06 prescribed in Decree No. 15/2021/ND-CP; - Legal documents - The decision approving the investment project - The approved basic design - The approved list of international standards (if applicable) - The document appraising and approving fire prevention and fighting work, and the environmental impact assessment report issued by a competent authority (if applicable) - The investor’s consolidated report - Other related documents - Documentation of construction design and survey - Technical design documentation, including construction drawings, a description of the design, and calculation appendices - Construction survey documentation - Bidders’ profiles - The information of the bidders’ capacity - Foreign bidders license (if applicable)

Applied procedures	- Upon the receipt of dossier, MOIT/DOIT organizes the appraisal of technical design; - The MOIT/DOIT shall be responsible for the appraisal of contents of technical design. In the appraisal, the responsible agency has full rights to invite organizations, individuals with relevant specialization and experience to join in the appraisal of construction design, technological design, work construction estimate to support its own appraisal; - In the appraisal process of technical design, the MOIT/DOIT shall require relevant competent state management authorities to appraise content on fire, explosion prevention and other contents as stipulated in laws. (The written notice of the appraisal outcome by a competent state agency on environmental, fire and explosion prevention and fighting, and other aspects shall be issued before a regulated data, but should not excess the design appraisal duration. If a written notice is not issued on time by relevant organizations/agencies, the technical design shall be considered as being approved and the relevant organizations/agencies shall be responsible for any contents and aspects under their management).
Estimated time	Time for technical design appraisal, from the day of receiving adequate dossier is as below: - No more than forty (40) days for projects level I, special level; - No more than thirty (30) days for projects level II and III; - No more than twenty (20) days for the rest.
Costs	In accordance with Circular No. 210/2016/TT-BTC dated 10 November 2016 of the Ministry of Finance on the regulations of the collection rates and the regime on collection, submission, management and use of charges from evaluation of technical designs, charges from evaluation of construction cost estimation.

4.1. Phase A: Project Development

A.10.2	Approval of Technical Design
Description	Based on the evaluation results of relevant agencies, the Investor shall approve the technical design of the project. The contents of technical design approval include: 1. General information on construction work: Name, construction work’s items (type and level of work); investor, work construction and design contractor; construction site, area of land use; 2. Capacity, technology, major technical parameters and economic requirements of the work; 3. National technical norms and major applicable standards; 4. Major design measures of work’s items and the whole work; 5. Work construction estimate; 6. Requirements of finalizing design dossier and other contents (if any).
Conditions for application	• For projects requiring 3-step design (Basic Design, Technical Design, Construction Drawing).
Related legal documents	• Law on Construction No. 50/2014/QH13 issued on 18 June 2014, of which a number of articles are amended and supplemented by Law No. 03/2016/QH14, Law No. 35/2018/QH14; Law No. 40/2019/QH14, and Law No. 62/2020/QH14; • Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management; • And other Decrees, Circulars (if any) guiding the implementation of Law No. 62/2020/QH14 (after issuance date).
Responsible authorities/ persons	• Investor/Consultant.

Documents to be submitted	Not applicable.
Applied procedures	Not applicable.
Estimated time	Not applicable.
Costs	Not applicable.



4.1. Phase A: Project Development

A.11	Bidding of Construction and Power Plant Equipment Procurement
Description	After the Investor made the final decision to invest, and basic design, technical design (for projects with 3-step design) have been approved by competent authorities, the Investor shall organize a tender for the construction and equipment procurement. There are some contractor selection methods of construction and equipment procurement for applicable biomass power project, including open bidding, restricted bidding, direct procurement. To begin the construction of the power plant, the Investor can divide the project into one or many bidding packages, including: • Engineering and Procurement of Goods (EP); • Engineering and Construction (EC); • Procurement of Goods and Construction (PC); • Engineering, Procurement of Good and Construction (EPC); • Project embarkation, Engineering, Procurement of Good and Construction (Turnkey solution).
Conditions for application	• All grid-connected biomass energy projects with decision on investment and basic design, technical design (for projects with 3-step design) approved by competent authority.
Related legal documents	• Law on bidding No. 43/2013/QH13 dated 26 November 2013; • Decree No. 63/2014/ND-CP dated 26 June 2014 of the Government on detailed Regulations of implementing some articles about contractor choice of law on bidding.
Responsible authorities/ persons	• The Investor.

Documents to be submitted	Not applicable.
Applied procedures	• The bidding steps include bidding preparation, bidding organization, bidding document evaluation, bidding result approval, bidding result announcement, negotiation, contract finalization and signing.
Estimated time	Not applicable.



4.1. Phase A: Project Development

A.12	Land Clearance
Description	Based on the estimated land area as specified in the investment policy decision and/or registration certificate of the investment, the Investor together with public service organizations being responsible for land area will inspect the land area to be used for the plant and related areas such as operating lines, substations ... to set up plans for resettlement and compensation. In principle, the process of land acquisition, investigation, survey, geodesy, land inventory include the followings: 1. The area of each type of land to be used; 2. The number of persons to use land in the area concerned; 3. Estimated cost of compensation for each type of land and its location; 4. Resettlement plan (estimated number of households, location and form of resettlement); 5. Estimated total cost of compensation and resettlement, and funding; 6. Major stages in the land clearance. The survey report will be confirmed by land users and Communal People's Committee. Once site clearance is completed, a land use right certificate shall be granted to the investor by the provincial People's Committee. This certificate is a legal document certifying the investor's legal land use right.
Conditions for application	• All grid-connected biomass energy projects signed PPA.
Related legal documents	• The Integrated Document No. 21/VBHN-VPQH dated 10 December 2018 on integrating the Land Law No. 45/2013/QH13 and Law No. 35/2018/QH14 amending, supplementing the Land Law;

	• Decree 47/2014/ND-CP dated 15 May 2014 of the Government providing regulations on compensation, support, resettlement in the event of the State land acquisition; Decree No. 01/2017/ND-CP dated 6 January 2017 amending, supplementing a number of article in Decree No. 47/2014/ND-CP; • Decree 148/2020/ND-CP dated 18 December 2020 of the Government amending, supplementing a number of articles in the Decree on detailing the implementation of the Land Law; • Circular 37/2014/TT-BTNMT dated 30 June 2014 of MONRE giving detailed provisions on compensation, support and resettlement in the event of the State land acquisition; Circular No. 33/2017/TT-BTNMT dated 29 September 2017 of MONRE amending, supplementing a number of articles in Circular No. 37/2014/TT-BTNMT.
Responsible authorities/ persons	• The Investor. • Land users. • Communal People's Committee, DONRE, PPC.
Documents to be submitted	• Agreement on land use at the communal level. • Resettlement plan.
Applied procedures	1. The Investor shall submit the documents (including an agreement on land use at the communal level) to the Department of Natural Resources and Environment for appraisal; 2. The Department of Natural Resources and Environment reviews and submits the documents to the Provincial People's Committee for appraisal; 3. Based on the appraised documents, the investor pays land use fees to Provincial People's Committee. In the event of resettlement, the Provincial People's Committee will allocate land to the local people involved and cleared land to the Investor.

4.1. Phase A: Project Development

A.12	Land Clearance
Estimated time	Estimated time for land clearance is specified in the current regulations. In fact, site clearance can be time-consuming, resulting in unexpected costs.
Costs	Not applicable.



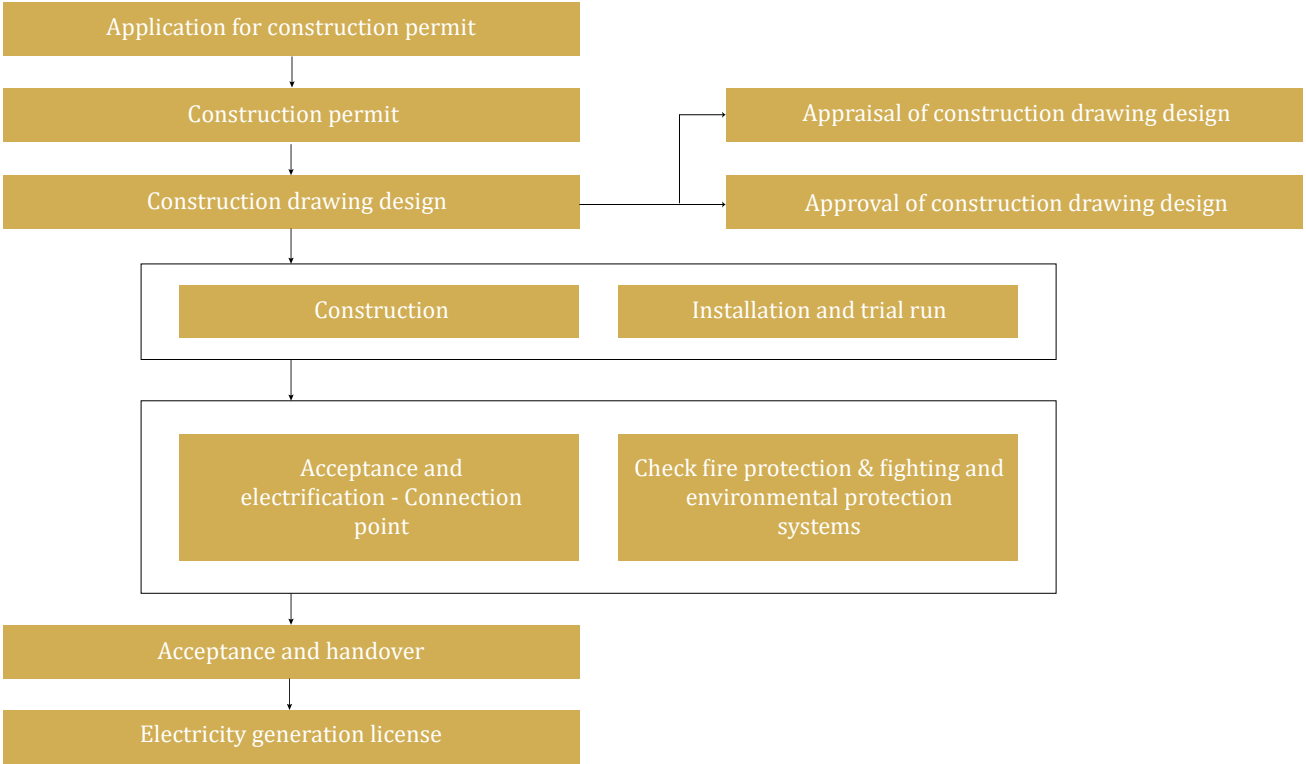
4.1. Phase A: Project Development

A.13	Financial Closure
Description	The financial closure can be done after the Investor and the bank sign a loan agreement and all legal conditions are made (e.g. obtaining necessary licenses). The financial closure allows the Investor to initiate the construction of biomass power plants.
Conditions for application	For all grid-connected biomass energy projects signed PPA.
Related legal documents	Not applicable.
Responsible authorities/ persons	- The Investor. - Related banks.
Documents to be submitted	The Bank will notify the project owner of the necessary documents to support the negotiation process.
Applied procedures	- The banks/financial institutions after assessing/evaluating loan application and credit application for the project will inform the approval/acceptance to the Investor; - Banks/financial Institutions and the Investor will negotiate and sign a credit/loan agreement. Along with the credit/loan agreement, a loan guarantee agreement will be signed.
Estimated time	Not applicable.
Costs	Not applicable.





4.2. Phase B: Project Implementation



4.2. Phase B: Project Implementation

B.1	Construction Permit
Description	Prior to commencing work, the investor must receive a construction permit granted by competent state authorities in accordance with the Law on Construction. The construction permit includes: 1. Name of all construction works that are parts of the project; 2. Name and address of the investor; 3. Location and position of the construction work; the construction line, for works built in lines; 4. Type and grade of the work as per the grading and classification of construction works; 5. Work construction level; 6. Red-line and construction boundaries; 7. Construction density (if any); 8. Land use coefficient (if any); 9. Contents on total construction area, maximum height of the whole work.
Conditions for application	Grid-connected biomass energy projects: • Respecting the dispositions concerning the location and total surface of the project approved previously in written form by relevant competent authority; • Ensuring the safety for construction work and neighboring ones as well as meeting the requirements of environment protection, fire and explosion prevention; ensuring the safety for technical infrastructure, corridors for irrigation works, dyke embankments, energy, traffic, cultural or historical heritage sites; ensuring a safe distance from works which are harmful and prone to fire and explosion, and important ones related to national defense and security; • The construction design has been evaluated and approved.

Related legal documents	• Law on Construction No. 50/2014/QH13 dated 18 June 2014; of which a number of articles are amended and supplemented by Law No. 03/2016/QH14, Law No. 35/2018/QH14; Law No. 40/2019/QH14, and Law No. 62/2020/QH14. The Integrated Document No. 10/VBHN-VPQH dated 4 July 2019 of the National Assembly Office on integrating the Law on Construction; • Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management; • Decree No. 113/2020/ND-CP dated 18 September 2020 of the Government on detailing point d, clause 3 of the Law on amending and supplementing a number of articles in the Law on Construction, which stipulate the appraisal of the construction drawing design following the technical design and construction permit exemption; • Circular No. 15/2016/TT-BXD of the Ministry of Construction on guiding issuance of construction permit; • And other Decrees, Circulars (if any) guiding the implementation of Law No. 62/2020/QH14 (after issuance date).
Responsible persons/persons	• The Investor. • Provincial People’s Committee/Department of Construction authorized.
Documents to be submitted	Dossier of application for construction permit includes: 1. A request for a construction permit according to the form provided in Appendix 1 of Circular no. 15/2016/TT-BXD; 2. A hard copy or soft copy of snapshots in image formats certifying land use rights in accordance with the law on land;

4.2. Phase B: Project Implementation

B.1	Construction Permit
Documents to be submitted	3. A hard copy or soft copy of snapshots in image formats of approved technical design and construction drawing in accordance with current regulations on construction. Each dossier consists of: a. Master plan drawing of project or master plan of each phases, scale 1/100 – 1/500; b. Drawings of each construction items in the area of project, scale 1/100 – 1/500, attached location of the project; c. Elevation and section drawings of each items, scale 1/50 – 1/200; d. Drawings of base footing plan, scale 1/100 – 1/200 and base footing section, scale 1/50 of each items attached drainage system, waste water treatment, water supply, electricity supply and communication connection drawings, scale 1/50 -1/200. In case the construction design of the construction work has been appraised by the specialized agency on construction, all the drawing designs mentioned above are copies of all construction drawing designs which had been appraised by the specialized agency on construction 4. Copy of the Decision on approving the Construction Investment project.
Applied procedures	In conformity with Law on Construction No. 50/2014/QH13, Article 102, summarized as below: 1. The Investor submits two (02) sets of dossier of application for construction permit to Department of Construction or Provincial People’s Committee; 2. The Department of Construction or Provincial People’s Committee carries out dossier evaluation and field examination;

	3. Based on size, characteristics, type and location of the construction work mentioned in the dossier of application for construction permit, the Department of Construction/Provincial People’s Committee shall compare them with the requirements of Law on Construction to consult state management agencies in written form about contents related to construction works in accordance with the Law; 4. Within twelve (12) days, questioned State management agencies shall answer in written form to issues that they have control over. After this period, if there is no response from them, it means that they agree on and take responsibility for contents they have control over; Department of Construction/Provincial People’s committee shall make a decision on granting construction permit based on existing regulations.
Estimated time	• Within thirty (30) working days from the day of receipt of adequate and valid applications.
Costs	Not applicable.



4.2. Phase B: Project Implementation

B.2	Construction Drawing Design
Description	The construction drawing design should have adequate technical parameters, usable materials and structuring details, which are relevant to applied technical standards and norms and ensure enough conditions for work construction. The construction drawing design shall be in accordance with the contents and major parameters of either the technical design (for projects with 3-step design) or the basic design (for projects with 2-step design). Capable construction contractor is allowed to design construction drawing in case of projects with 3-step design. Major contents of construction drawing design include: 1. Architectural measures; 2. Technological measures (if any); 3. Usable performance; 4. Usable time and process of work operation and maintenance; 5. Structuring measures, major materials; 6. Technical instructions; 7. Fire and explosion prevention measures; 8. Measures for economical and efficient use of energy; 9. Measures for environment protection and climate change response; 10. Construction estimate compatible with construction design steps;
Conditions for application	• All grid-connected biomass energy projects with investment decision.

Related legal documents	• Law on Construction No. 50/2014/QH13 dated 18 June 2014, of which a number of articles are amended and supplemented by Law No. 03/2016/QH14, Law No. 35/2018/QH14; Law No. 40/2019/QH14, and Law No. 62/2020/QH14; • Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management; • And other decrees, circulars (if any) guiding the implementation of Law No. 62/2020/QH14 (after issuance date).
Responsible persons/ persons	• The Investor/Consultant.
Documents to be submitted	Not applicable.
Applied procedures	Not applicable.
Estimated time	Not applicable.
Costs	Not applicable.

4.2. Phase B: Project Implementation

B.2.1	Appraisal on Construction Drawing Design
Description	The competent authorities appraise the construction drawing design for projects with 2-step design. The construction drawing design appraisal includes: 1. The conformity of technical design compared with basic design; 2. The rationality of construction design solutions; 3. The conformity of applicable standards, technical norms, legal regulations on using construction materials for work; 4. Assessment of the relevance of construction design solutions with work’s usable performance, safety level and the safety insurance of neighboring works; 5. The rationality in choosing chain and technological equipment for works with technological requirements; 6. The conformity of regulations on environment protection and fire, explosion prevention; 7. The relevance between major estimated volume with real volume; the sensibility of the application of construction norms and unit price; the defined value of work estimate; 8. The capability of organizations, individuals in charge of construction evaluation and design.
Conditions for application	• For projects requiring 2-step design (Basic Design, Construction Drawing).
Related legal documents	• Law on Construction No. 50/2014/QH13 dated 18 June 2014, of which a number of articles are amended and supplemented by Law No. 03/2016/QH14, Law No. 35/2018/QH14; Law No. 40/2019/QH14, and Law No. 62/2020/QH14. The Integrated Document No. 10/VBHN-VPQH dated 4 July 2019 of the National Assembly Office on integrating the Law on Construction;

	• Decree No. 113/2020/ND-CP dated 18 September 2020 of the Government on detailing point d, clause 3 of the Law on amending and supplementing a number of articles in the Law on Construction, which stipulate the appraisal of the construction drawing design following the technical design and construction permit exemption; • Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management; • Circular No. 03/2016/TT-BXD dated 10 March 2016 of the Ministry of Construction on classification of construction works and guidance on construction management; Circular No. 07/2019/TT-BXD dated 7 November 2019 amending, supplementing, replacing a number of provisions in Circular No. 03/2016/TT-BXD. The Integrated Document No. 10/VBHN-BXD dated 30 December 2019 of the Ministry of Construction on integrating the Circular stipulating the classification of construction works and guidance on construction management; • Circular No. 18/2016/TT-BXD dated 30 June 2016 of the Ministry of Construction which regulates in detail some contents on project evaluation and approval as well as work construction design and estimate. This Circular has been valid since 15 August 2016; • And other decrees, circulars (if any) guiding the implementation of Law No. 62/2020/QH14 (after issuance date).
Responsible persons/ persons	• The MOIT is responsible for evaluating the technical design for biomass power projects at special level, level I (capacity > 30 MW). • The DOIT is responsible for evaluating the technical design for biomass power projects from level II or lower (if the project capacity ≤ 30 MW).

4.2. Phase B: Project Implementation

B.2.1	Appraisal on Construction Drawing Design
Documents to be submitted	The Investor sends the drawing the construction design of the project to specialized agencies and MOIT (if the project capacity > 30 MW) or to Department of Industry and Trade (if the project capacity ≤ 30 MW) for appraisal, including: 1. Design evaluation report in conformity with the Sample prescribed in the annex attached to Decree No. 15/2021/ND-CP; 2. Descriptions and drawings of design, related construction evaluation dossier; 3. The copy of decision on approval of construction investment project attached with approved basic design dossier or work construction investment policy approval; 4. The copy of dossier on capability of organizations hosting evaluation, work construction design, fire prevention and fighting assessment document, report on environmental impact assessment (if any); 5. The comprehensive report of investor on the relevance of design dossier compared to the regulations of contract.
Applied procedures	1. Upon the receipt of dossier, MOIT/DOIT appraises the technical design; 2. The MOIT/DOIT shall organize the appraisal of contents of technical design. In the appraisal, the responsible agency has full rights to invite organizations, individuals with relevant specialization and experience to join in the appraisal of construction design, technological design, work construction estimate to support its own appraisal process; 3. In the appraisal of technical design, the MOIT/DOIT shall require relevant state management authorities that are responsible for fire, explosion prevention and other contents as stipulated in laws.

Estimated time	Time for technical design appraisal from the day of receiving adequate dossier as below: • No more than forty (40) days for level-1 and special-level projects; • No more than thirty (30) days for level-2 and level-3 projects; • No more than twenty (20) days for the rest.
Costs	In accordance with Circular No. 210/2016/TT-BTC dated 10 November 2016 of the Ministry of Finance on the regulations of the collection rates and the regime on collection, submission, management and use of charges from evaluation of technical designs, charges from evaluation of construction cost estimation.



4.2. PhaseB:ProjectImplementation

B.2.2	Construction Drawing Design Approval
Description	Based on the evaluation results, the Investor shall approve the construction drawing design. This is the basis for the contractor of construction to build the power plant. The construction drawing design approval includes: 1. General information on work: Name, work's items (type and level of work); investor, work construction and design contractor; construction site, area of land use; 2. Scale, technology, major technical parameters and economic requirements of the work; 3. National technical norms and major applicable standards; 4. Major design measures of work's items and the whole work; 5. Work construction estimate; 6. Requirements of finalizing design dossier and other contents (if any).
Conditions for application	• For projects requiring 2-step design (Basic Design, Construction Drawing)
Related legal documents	• Law on Construction No. 50/2014/QH13 issued on 18/06/2014, of which a number of articles are amended and supplemented by Law No. 03/2016/QH14, Law No. 35/2018/QH14; Law No. 40/2019/QH14, and Law No. 62/2020/QH14. The Integrated Document No. 10/VBHN-VPQH dated 4 July 2019 of the National Assembly Office on integrating the Law on Construction; • Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management; • And other Decrees, Circulars (if any) guiding the implementation of Law No. 62/2020/QH14 (after issuance date).

Responsible persons/persons	• The Investor/Consultant.
Documents to be submitted	Not applicable.
Applied procedures	Not applicable.
Estimated time	Not applicable.
Costs	Not applicable.



4.2. Phase B: Project Implementation

B.3	Construction
Description	The Investor carries out the construction of biomass power project based on its construction drawing design. The Investor selects one or more companies with the capacity to carry out construction of one or more work items or the whole project. The Investor can also hire contractor for supervision and consultancy to complete one or all tasks of the project. On the completion of construction phase, the Investor completes the as-built documents of the project after executing the commissioning.
Conditions for application	The commencement of construction of a grid-connected biomass power plant shall satisfy the following conditions: 1. The construction sites for handover in whole or in part matching the construction progress are available; 2. The construction permit is obtained (according to prevailing regulations); 3. The construction drawing designs of items or works to be constructed have been approved and the drawings have been checked and certified by the investor; 4. The construction contracts between the investor and contractor has been signed; 5. Adequate funds according to the work construction progress is ensured; 6. Measures to ensure safety and environment protection are developed.
Related legal documents	• Law on Construction No. 50/2014/QH13 dated 18 June 2014, of which a number of articles are amended and supplemented by Law No. 03/2016/QH14, Law No. 35/2018/QH14; Law No. 40/2019/QH14, and Law No. 62/2020/QH14. The Integrated Document No. 10/VBHN-VPQH dated 4 July 2019 of the National Assembly Office on integrating the Law on Construction;

	• Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management; • Decree No. 46/2015/ND-CP of the Government dated 12 May 2015 on quality management and maintenance of construction works; • And other Decrees, Circulars (if any) guiding the implementation of Law No. 62/2020/QH14 (after issuance date); • Bidding dossier; • The procedure of contractor approved by the Investor/Consulting Firm.
Responsible persons/ persons	• Construction contractor. • Investor.
Documents to be submitted	Not applicable.
Applied procedures	Not applicable.
Estimated time	In accordance with the progress stipulated in bidding dossier and proposed by construction contractor.
Costs	In accordance with construction contract.

4.2. Phase B: Project Implementation

B.4	Equipment Installation and Trial Run
Description	The Investor, respectively the contractor in charge for the installation of the plant, installs and tests the whole equipment system. At the end of this installation phase trial runs of components of the plant must ensure if functions and technical characteristics meet the requirements. The installation and equipment to execute the trail runs and tests are carried out by the contractor of equipment fabrication/procurement in accordance with both international standards and the standards of the manufacturer. It is recommended that an experienced third party supervises the installation of testing equipment and the execution of the tests and trail runs. The third party works on behalf of the Investor or his representative. Upon this step, the plant supplier carries out tests and trail runs for the whole equipment system of the plant before commercial operation starts.
Conditions for application	All grid-connected biomass energy projects that have obtained the construction permit and have completed the construction of work.
Related legal documents	- Law on Construction No. 50/2014/QH13, dated 18/06/2014, of which a number of articles are amended and supplemented by Law No. 03/2016/QH14, Law No. 35/2018/QH14; Law No. 40/2019/QH14, and Law No. 62/2020/QH14. The Integrated Document No. 10/VBHN-VPQH dated 4 July 2019 of the National Assembly Office on integrating the Law on Construction; - Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management; - Decree No. 46/2015/ND-CP of the Government dated 12 May 2015 on quality management and maintenance of construction works; - And other Decrees, Circulars (if any) guiding the implementation of Law No. 62/2020/QH14 (after issuance date); - Bidding dossier; - Procedure of contractor is approved by Investor/Consulting firm.

Responsible persons/persons	- Contractor of equipment procurement . - The Investor.
Documents to be submitted	The contractor submits procedure of installation and testing to the Investor/consultancy unit for approval.



4.2. Phase B: Project Implementation

B.4	Equipment Installation and Trial Run
Applied procedures	1. The installation and acceptance are carried out in accordance with procedures and technical requirements mentioned in the equipment procurement contract and bidding dossier and by organizations with full capacity representing for the Investor; 2. When the installation and acceptance of equipment are completed, they are trialed. Before that, the contractor of equipment fabrication/procurement has to submit to the Investor procedure, time as well as the cooperation among sides to finalize the trial; 3. The Investor shall examine and approve documents submitted by the contractor of equipment fabrication/procurement. Moreover, the Investor makes some preparations for the trial such as providing power, water, and fuel based on proposals of the contractor; 4. The contractor of equipment fabrication/procurement can carry out the trial individually or hire one or more experts with full capacity to handle this work under the supervision of the Investor or his representative; 5. During the trial, some tasks necessarily supervised by verification experts include: pipe pressure test; lifting equipment test; protective relay system test; 6. Upon the trial, the contractor of equipment fabrication/procurement has to submit comprehensive assessment report and result of the trial to the Investor as the basis for next steps of the project.
Estimated time	In accordance with the progress stipulated in bidding dossier and proposed by the contractor.
Costs	In accordance with the contract.



4.2. Phase B: Project Implementation

B.5	Test, Experiment, Acceptance and Power Connection
Description	The investor shall employ a functional agency who will execute the acceptance testing of the electrical systems and synchronizing the plant to the national grid system. To prepare the acceptance testing of the grid connection, the entire power plant’s equipment must be tested for acceptance throughout the installation and from idling until full operation, ready for continuous operation in accordance with the provisions in the agreements on connection, SCADA, information system, protective and automatic relay and PPA.
Conditions for application	All grid connection biomass energy projects of which the construction has been completed and all plant’s equipment system has to be installed, accepted and finished full trial operation.
Related legal documents	• Circular No. 25/2016/TT-BCT dated 30 November 2016 by Ministry of Industry and Trade on power transmission system; and Circular No. 30/2019/TT-BCT dated 18 November 2019 of the Ministry of Industry and Trade on amending and supplementing a number of articles in Circular No. 25/2016/TT-BCT on power transmission system; • Circular No. 39/2015/TT-BCT dated 18/11/2015 by Ministry of Industry and Trade on Regulation of power distribution system and Circular No. 30/2019/TT-BCT dated 18 November 2019 of the Ministry of Industry and Trade on amending and supplementing a number of articles in Circular No. 39/2015/TT-BCT on power distribution system. Circular No. 12/2010/TT-BCT dated 15/4/2010 providing for the transmission electricity system; • Circular No. 42/2015/TT-BCT of the Ministry of Industry and Trade dated 01/12/2015 on power metering in power system.
Responsible authorities/ persons	• Power Transmission Unit/Power Distribution Unit. • NLDC. • Power Trading Company. • ERAV.

Documents to be submitted:

1. **Dossier applying for checking of testing conditions for energizing the connection point - transmission grid;**

Before the expected date when the connection point is energized, the Investor must provide the power transmission unit with one (01) dossier and the power system and market operation unit with one (01) dossier applying for checking the conditions of energizing at connection points. These dossiers include:
 - a. Dossier to be provided to the power transmission unit:
 - The technical design documents that has been approved and amended and supplemented from the original design (if any), including general justification, the main electrical connection diagram, the layout of electrical equipment, working diagram of the protection and control system, other relevant diagrams and technical parameters of the main electrical equipment;



4.2. Phase B: Project Implementation

B.5	Test, Experiment, Acceptance and Power Connection
Documents to be submitted:	• Manufacturer's manual for the equipment operation and management; • The minutes of in-part or in-full acceptance of the power plant's equipment that connects the plant, lines and substations to the transmission grid; • Expected schedule for trial operation and official operation. b. Dossier to be provided to power system operation unit and power market: • Main power connection diagram, a single line diagram, the layout of electrical equipment; principle diagram of operation, design of protection and control system in which breakers, current transformers, voltage transformers, lightning arresters, disconnectors, logic circuit for interlock operation according breaker status, other relevant diagrams and specifications of the installed equipment are presented in detail; • The adjusted values of protective relays from the connection point on the client side; • Expected schedule for trial operation, energizing and official operation. 2. Dossier for checking the conditions for energizing connection points - power distribution grid Before the expected date when the connection points are energized, the Investor must provide the power distribution unit one (01) dossier and the Administrator with control power with one (01) dossier that will serve the overall test for conditions of energizing the connection points, including: a. Minutes of test result for acceptance in-part and in-full of the power plant's equipment, lines and substations that are connected to the distribution grid; b. Documented technical design that has been approved, amended, supplemented (if any) compared to the original version, including the following documents: notes of general justification, the layout of electrical equipment; main electrical connection diagram, a single line diagram, principle diagram, the design of protection and control system;

- c. Documented technical parameters and operation administration instruction include:
 - Technical parameters of the installed equipment including the parameters of the connected lines;
 - Technical manual of the magnetic activation system, speed regulator of the generator cluster;
 - User manual for manipulation of protection and automatic relay, specialized software for communication and manipulate relays, angular values in manipulating protective relay from the connecting points to the customers side;
 - The manufacturer's user operational manuals.
- d. Tentative schedule for trial run, energizing and operation.



4.2. Phase B: Project Implementation

B.5	Test, Experiment, Acceptance and Power Connection
Applied procedures	1. Acceptance testing of connectors before energizing the connecting points after receiving official invitation from the Investor; 2. EVNNPT authorizes its subordinate units who are managing transmission / distribution grid works relating to connection to implement activities related to testing, acceptance and energizing; 3. Steps for checking, acceptance testing and energizing the transmission grid are conducted as prescribed in Chapter 5, Part 4 of Circular 12/2010/TT-BCT; (Circular No. 25/2016/TT-BCT dated 30 November 2016 by the Ministry of Industry and Trade on power transmission system; and Circular No. 30/2019/TT-BCT dated 18 November 2019 of the Ministry of Industry and Trade on amending and supplementing a number of articles in Circular No. 25/2016/TT-BCT on power transmission system and Circular No. 39/2015/TT-BCT dated 18/11/2015 by Ministry of Industry and Trade on Regulation of power distribution system and Circular No. 30/2019/TT-BCT dated 18 November 2019 of the Ministry of Industry and Trade on amending and supplementing a number of articles in Circular No. 39/2015/TT-BCT on power distribution system).
Estimated time	For the biomass energy plant being connected to the transmission grid: follow the provisions defined in Circular 25/2016/TT-BCT. For the biomass energy plant being connected to the distribution grid: follow the provisions defined in Circular 39/2015/TT-BCT.
Costs	Not applicable.



4.2. Phase B: Project Implementation

B.6	Check the Plant Compliance for Safety, Fire and Explosion Prevention and Environmental Standards
Description	The Investor shall conduct the inspection systems in the plant that relates to the surrounding environment such as exhaust systems, fire protection systems. Tests like the exhaust systems/environments, fire protection system require the witness and supervision of agencies mandated with testing such as the Department of Natural Resources and Environment and the Department of Fire Fighting and Prevention. Completing this sub-step, the Investor finalizes the acceptance and having the test protocols to put the plant into commercial operation.
Conditions for application	All grid-connected biomass energy projects.
Related legal documents	- Construction Law No. 50/2014/QH13 dated 18 June 2014, of which a number of articles are amended and supplemented by Law No. 03/2016/QH14, Law No. 35/2018/QH14; Law No. 40/2019/QH14, and Law No. 62/2020/QH14. The Integrated Document No. 10/VBHN-VPQH dated 4 July 2019 of the National Assembly Office on integrating the Law on Construction; - Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management; - Decree No. 46/2015/ND-CP of the Government dated 12/05/2015 on quality management and maintenance of construction works; - Circular No. 26/2016/TT-BXD dated 26 October 2016 of the Ministry of Construction on elaboration of a number of aspects of construction quality control and maintenance; Circular No. 04/2019/TT-BXD dated 6 August 2019 of the Ministry of Construction amending and supplementing a number of articles in Circular No. 26/2016/TT-BXD;

	- Law on Environmental Protection No. 55/2014/QH13 dated 26 March 2014; Law on Environmental Protection No. 72/2020/QH14 dates 17 November 2020 effective since 1 January 2022. (A number of articles in the Law on Environmental Protection No. 55/2014/QH13 have been amended and supplemented by Law No. 35/2018/QH14 and Law No. 39/2019/QH14 and Law No. 61/2020/QH14 invalid since the effective date of the law hereof); - Law on Fire Prevention and Fighting No. 27/2001/QH10 dated 19 June 2001; the Law on amending, supplementing a number of articles in the Law on Fire Prevention and Fighting, issued on 22 November 2013; - Decree No. 136/2020/ND-CP dated 24 November 2020 detailing a number of articles and the implementation of the Law on Fire Prevention and Fighting; and the Law on amending, supplementing a number of articles in the Law on Fire Prevention and Fighting; - Decree No. 79/2014/ND-CP dated 1 July 2014 regulating detailed implementation of some articles under the Fire fighting and prevention Law and the revised and supplemented Fire fighting and prevention Law: Article 17, Point 2; - Circular 66/2014/TT-BCA dated 16 December 2014 of the Ministry of Public Security detailing the implementation of some articles under Decree No. 79/2014/ND-CP: Article 8; - Bidding Documents; - The implementation process of the contractors that has been Owner/Consulting firm approved.
Responsible persons/persons	- Viet Nam Fire and Rescue Police Department/ Ministry of Public Security, Fire and Rescue Department/Department of Public Security. - DONRES.

4.2. Phase B: Project Implementation

B.6	Check the Plant Compliance for Safety, Fire and Explosion Prevention and Environmental Standards
Documents to be submitted	A dossier of application for testing how the system ensures environmental standards: 1. A brief report on the project and data showing how the system ensures environmental standards; 2. Tentative plans, processes and real-time for environment related experiments; 3. Minutes on acceptance of the overall installation between the Employer and the Contractors who produce/supply equipment for items related to the environment such as water treatment systems; flue gas treatment system, exhaust system; ash disposal system, solid waste (if applicable) ...; 4. The other legal documents related to the project; 5. The dossiers of application for testing how the fire protection systems ensure fire protection standards; 6. The detailed design of the plant's fire protection system; 7. Tentative plan, processes and time schedule for conducting experiments involving the environment; 8. Minutes on acceptance of the overall installation of fire fighting and prevention system between the investor and contractor who produce/supply fire protection equipment; 9. The other legal documents related to the project.
Applied Procedures	For the environment related experiments, the investor needs to conduct these steps: 1. Send a letter with the relevant annexes to the provincial DONRE requesting its participation and permit for conducting experiments on parameters related to environment;

	2. Investors will operate the project's equipment system and DONRE's representatives will experiment with environment related devices, such as experimenting with samples of wastewater, solid waste, measuring exhaust fume, gas concentrations, measuring noise in accordance with environmental protection standards; 3. After the successful environmental experiment, the provincial DONRE will have written confirmation on how the plant equipment ensures the environmental conditions and allows the plant to be put in commercial operation; For the experiments relating to fire fighting and protection systems, investors need to conduct these steps: 1. Send a letter with relevant annexes to the Viet Nam Fire and Rescue Police Department/Ministry of Public Security, Fire and Rescue Department/ Department of Public Security for approval on the project's fire fighting and prevention system; 2. The Viet Nam Fire and Rescue Police Department/Fire and Rescue Department will review and approve the design of the plant fire fighting and prevention system. After obtaining written approval of the design, the Viet Nam Fire and Rescue Police Department/Fire and Rescue Department will together with the investor conduct experiments with fire fighting and prevention equipment installed in the project in accordance with the sector's regulations; 3. After successful experiments, the Viet Nam Fire and Rescue Police Department/ Fire and Rescue Department will issue a written approval of the fire protection system and the project's fire protection system can be put into operation.
Estimated Time	Not applicable.
Costs	Not applicable.

4.2. Phase B: Project Implementation

B.7	Acceptance, Transfer of Ownership and Commercial Start of Operation
Description	The biomass plant will be put into operation after it has been completed according to the approved design and fully meets the quality requirements for acceptance. The acceptance of construction works includes: • Acceptance of (part) construction works during construction period and acceptance of construction transition phases when necessary; • Acceptance of completed work items, when the construction works are completed and put into operation for commercial use. The handing over of construction works/power plant must comply with the following provisions: • Acceptance of construction has been done in accordance with the law of construction; • Safety assurance in the operation and exploitation of the work when being put into commercial use. Depending on the specific conditions of each project during the construction process, the handing over can be proceeded partially, work items completed under the project or project component for exploitation under the request of the investor. Acceptance records for partial handover of works, work items, the whole completed work are the legal documents for investors to put the work into utilization and settle payment to the construction company.
Conditions for application	• All grid-connected biomass energy projects that have been completely constructed as the approved design, meet technical requirements and quality requiremetns for acceptance.
Related legal documents	• Law on Construction No. 50/2014/QH13 dated 18 June 2014, of which a number of articles are amended by law No. 03/2016/QH14, Law No. 35/2018/QH14, Law No. 40/2019/QH14 and Law No. 62/2020/QH14. The Integrated Document No. 10/VBHN-VPQH dated 4 July 2019 of the National Assembly Office on integrating the Law on Construction;

	• Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management; • Decree No. 46/2015/ND-CP of the Government dated 12 May 2015 on quality management and maintenance of construction works; • Circular No. 26/2016/TT-BXD dated 26 October 2016 of the Ministry of Construction on elaboration of a number of aspects of construction quality control and maintenance; Circular No. 04/2019/TT-BXD dated 6 August 2019 of the Ministry of Construction amending and supplementing a number of articles in Circular No. 26/2016/TT-BXD; • And other Decrees and Circulars (if any) guiding the implementation of the Investment Law No. 61/2020/QH14 (after their effective dates).
Responsible persons/ persons	• Contractors. • Investor.
Documents to be submitted	Handover documents include: a certificate of construction completion; operational guidelines; regulations on maintenance and a list of pending works.
Applied procedures	Not applicable.
Estimated time	Not applicable.
Costs	Not applicable.

4.2. Phase B: Project Implementation

B.8	Electricity Generation License
Description	In order to officially come into commercial operation the Electricity Generation License should be granted to Investor of a biomass energy project, after the construction phase has been completed, the grid connection agreement has been signed between the power plant and the power grid management agency, the PPA has been signed with electricity buyer, the conditions for the plant operation are handed over and the trial run for acceptance (with confirmation minutes) has been successfully passed. The Electricity Generation License is a power operation permit granted to companies empowering them to generate electricity. In this step, the investor will carry out application procedures for electricity generation license to competent authorities. The validity of the electricity generation license is: - Up to twenty (20) years: for large power plants that have particular importance in terms of socioeconomics, defense and security issues and that are included on a list approved by the Prime Minister; - Up to ten (10) years: for power plants that are not on the list of large power plants of particular importance in terms of socioeconomics, national defense, security issues approved by the Prime Minister.
Conditions for application	All grid connected biomass energy projects that have completed the construction phase and have met all required conditions for the plant operation and have finished the trial run for acceptance (with confirmation minutes).
Related legal documents	- Law on Electricity No. 28/2004/QH11 dated 3 December 2004; Law No. 24/2013/QH13 amending and supplementing a number of articles under the Law on Electricity; - Decree No. 137/2013/ND-CP of the Government dated 21 October 2013 detailing the implementation of some articles in the Law on Power and the Law on revision and supplementation some articles of the Law on Power;

	- Circular No. 21/2020/TT-BCT dated 9 September 2020 of the Ministry of Industry and Trade on procedures for issuance of electricity operating licenses; - Circular No. 167/2016/TT-BTC dated 26 October 2016 of the Ministry of Finance on electricity operating licenses assessment fees, collection, transfer, management and use thereof.
Responsible persons/persons	- The MOIT: for large power plant, of particular importance in terms of socioeconomics, national defense and security issues in the list approved by the Prime Minister; - The ERAV, for the power plant with installed capacity of three (03) MW or more but not including power plants licensed by the Ministry of Industry and Trade; - The Provincial People’s Committee or the authorized DOIT: for power plants with installed capacity of less than three (03) MW.
Documents to be submitted	Dossiers applying for electricity generation license include: - A written request for electricity generation license using the form prescribed in Appendix 01 issued as an attachment to the Circular 21/2020/TT-BCT; - A copy of the Certificate of registered business or the Decision on business establishment, the Certificate of business establishment (for those with no Certificate of registered business) of the organization who applies for the license; - A list of staff who are directly responsible for technical management, heads of shifting teams working in the power plant based on Form 3b provided in the Appendix attached to the Circular 21/2020/TT-BCT; copies of diplomas and the labor contract signed with the Investor or management unit of the person directly responsible for technical operation management, heads of shifting teams of power plant; documentation of completion of training on safety certificate and operation license granted by competent dispatch levels in accordance with the Procedure for national power system dispatch issued by the MOIT of the heads of shifting teams of power plant;

4.2. Phase B: Project Implementation

B.8	Electricity Generation License
Documents to be submitted	4. A copy of the decision approving the investment policy of the power plant, investment project. The decision is issued by a competent authority; 5. A copy of the decision approving the environmental impact assessment report or the document certifying the environmental protection plan, power plant investment project. The decision is issued by a competent authority in accordance with the law on environmental protection; 6. A copy of the minutes of acceptance test for the completion of power generating unit installation; a copy of the document certifying the power plant's main specifications (specifications of turbine, generator and main transformer); 7. A copy of the minutes of acceptance for the completed installation of infrastructure of IT and telecommunication systems; a copy of the minutes of acceptance for the SCADA system controlling the power system and market operation (for the power plants joining the power market).
Applied procedures	1. The organization implementing electricity generation activity shall submit full dossier requesting issuance of electricity generation license fifteen (15) working days before the tentative commercial operation date; 2. The organization/person requesting the issuance, amendment, supplementation of electricity generation license shall submit 01 set of dossier to the electricity activity licensing agency according to the prevailing regulations and be responsible for the accuracy and truthfulness of the request dossier; 3. Application procedures: a. For the dossiers under the authority of the Ministry of Industry and Trade and the Electricity Regulatory Authority: the applications shall be submitted via the Online Public Services on https://dichvucong.moit.gov.vn. In case a digital dossier has big size, or the attached documents are not allowed to be processed online according to legal regulations, the applications can be submitted directly or by post.

	b. For the dossiers under the authority of the provincial people's committees of provinces/centrally administered cities: the applications shall be submitted directly, by post or via the portal of the electricity activity licensing agency (if any). 4. Order and procedures for online electricity activity licensing, amendment, supplementation: a. Online applications shall follow the guidance on the Online Public Services of the Ministry of Industry and Trade: - The organization/person requesting the issuance of electricity generation license shall sign up for an account on the Online Public Services of the MOIT; and use the registered account for online submission; - Within sixty (60) working days from the receipt of the request for amendment, supplementation of relevant data, figures and information from the electricity generation licensing agency shall amend, supplement relevant data, figures and information on the Online Public Services of the MOIT. Beyond this deadline, if the organization/person does not amend, supplement its dossier as requested, the electricity generation licensing agency can return its dossier requesting for electricity generation licensing; - Within fifteen (15) working days from the receipt of the full dossier on the Online Public Services, the electricity activity licensing agency shall appraise the dossier and issue the electricity generation license; - In case of amendment, supplementation of the electricity generation license, within seven (07) working days from the receipt of the full dossier on the Online Public Services of the MOIT in accordance with Article 10 of this Circular, the electricity generation licensing shall appraise the dossier and issue the electricity generation license. b. The provincial people's committees of provinces/centrally administered cities shall provide guidance about online licensing under their authority (if applicable) in accordance with the prevailing regulations in this Circular.
--	--

4.2. Phase B: Project Implementation

B.8	Electricity Generation License
Applied procedures	5. Order and procedures for offline electricity activity licensing, amendment, supplementation: a. Within three (03) working days from the receipt of the dossier requesting electricity activity licensing, amendment, supplementation, the electricity activity licensing agency shall issue a written notice indicating the invalidity and incompleteness of the submitted dossier. The written notice shall clearly present the reason and the request for amendment, supplementation of relevant data, figures, information for the completion of the dossier; b. Within sixty (60) working days from the receipt of the request for amendment, supplementation of relevant data, figures, information from the electricity activity licensing agency, the requesting organization/person shall amend, supplement the relevant data, figures, information and submit a written reply to the electricity activity licensing agency. Beyond this deadline, if the organization/person does not amend, supplement its dossier as requested, the electricity generation licensing agency can return its dossier requesting for electricity generation licensing; c. Within fifteen (15) working days from the receipt of the full dossier on the Online Public Services, the electricity activity licensing agency shall appraise the dossier and issue the electricity generation license (except for the case specified by point d of this clause); d. In case of amendment, supplementation of the electricity generation license, within seven (07) working days from the receipt of the full dossier in accordance with Article 10 of Circular 21/2020/TT-BCT, the electricity activity licensing agency shall appraise the dossier and issue the electricity generation license. 6. The issued license is made in three (03) original copies: one (01) copy is given to the licensed entity, two (02) copies are filed at the licensing agency.
Estimated time	Not applicable.

Costs

Circular No. 167/2016/TT-BTC dated 26 October 2016 of the Ministry of Finance on electricity operating licenses assessment fees, collection, transfer, management and use.





4.3. Phase C: Operation and Maintenance

Development of standard operation and maintenance manual



Plant operator training and capacity development



Monitoring and Performance control

4.3. Phase C: Operation and Maintenance

C.1	Standard Operation and Maintenance Manual for Biomass Power plant
Description	The investor will develop the manual of operational procedures and maintenance for biomass energy plants. This manual is a combination of operation and maintenance documents provided by the equipment manufacturers/suppliers together with their sub suppliers and the regulations in the operation of the biomass energy plant as defined by the investor. - To develop the manual for operation and maintenance of biomass energy plants, the investor must divide all the systems and equipment in the plant into the main system and auxiliary systems, as below: - The main equipment system such as boiler and heat generation system, high, mid and low pressure steam system and back-pressure, extraction or condensing turbine system, power generation systems, electrical systems; - The auxiliary equipment system such as input fuel systems, fuel systems, make-up water supply systems, wastewater treatment systems, exhaust gases, emissions, ash and other solid waste, auxiliary systems and other subsystems in the plant. - Within each system, the investor can divide into smaller systems such as motors, pumps, fans. cutters, pipes and valves and more to set up procedures for each operation and specific maintenance; - In each operating procedures, the following major contents must be mentioned: - Description of specification of the system or device; - Features and duty of the systems and equipment; - The conditions to ensure the operation, such as input parameters, technical conditions, ... - The order of operation gradually from idle state until full operation; - The order of operation gradually from operational status to idle; - The common warning and resolution; - The incident occurred and resolution.

	4. Each maintenance procedures must mention the following major contents: - Description of specification of the system or device; - Custody conditions of systems and devices; - Recommendations and schedule of maintenance; - The content and procedure for routine maintenance; - Requirements for spare parts and features.
Conditions for application	All on-grid biomass energy project in commercial operation.
Related legal documents	- Decree No. 46/2015/ND-CP of the Government dated 12 May 2015 on quality management and maintenance of construction works; - Circular No. 26/2016/TT-BXD dated 26 October 2016 of the Ministry of Construction on elaboration of a number of aspects of construction quality control and maintenance; Circular No. 04/2019/TT-BXD dated 6 August 2019 of the Ministry of Construction amending and supplementing a number of articles in Circular No. 26/2016/TT-BXD.





4.3. Phase C: Operation and Maintenance

C.1	Standard Operation and Maintenance Manual for Biomass Power plant
Responsible persons/persons	• Equipment suppliers/manufacturers. • The Investor.
Documents to be submitted	Not applicable.
Applied procedures	Not applicable.
Estimated time	Not applicable.
Costs	Not applicable.

4.3. Phase C: Operation and Maintenance

C.2	Operator Training and Capacity Development
Description	The Investor shall select, train and carry out capacity development activities for operators and technicians in order to ensure their capability of undertaking reliable and safe operation of the biomass power plant. This activity can start at the stage of project construction. - As for the main equipment in the plant, the Investor shall require the contractors for equipment manufacturers/suppliers of the project to organize training course for the staffs at the manufacturers' facilities; - As for the auxiliary equipment in the plant, depending on the actual capacity and demand, the Investor probably request equipment manufacturers/suppliers to organize training course or sign contract with local organization to provide equivalent training course for their staff. To improve capacity for operators and technician staff, at the construction stage, the Investor can organize on-job training course on the construction sites, having their staffs directly monitor the project implementation thereby their technicians and operators can follow up, get accustomed with the technology, equipment, operational procedures of the plant's whole equipment system. The Investor should plan for capacity development and training. This activity will be very important in case local community operates the plant. The capacity development can be conducted even before the plant has been put into operation. The capacity development activities need to be conducted again after the plant comes into operation for a certain time. The Investor can contract a professional training institution for design and implementation of capacity development activities based on actual needs.
Conditions for application	All grid connected biomass energy projects in commercial operation.
Related legal documents	Not applicable.

Responsible persons/persons	- Equipment suppliers/manufacturers. - The Investor.
Documents to be submitted	Not applicable.
Applied procedures	Not applicable.
Estimated time	Not applicable.
Costs	Not applicable.



4.3. Phase C: Operation and Maintenance

C.3	Monitoring and Performance Control
Description	The Investor shall develop a procedure for effective monitoring and performance control of plant operation in order to ensure the most safe, reliable and effective operation during the commercial operation process. The Investor must closely monitor the overall plant’s operation. For example, the level of emission must be monitored on a regular basis to ensure the compliance with Vietnamese laws and regulations. Residual substances in the plant’s waste released from the plant’s operation such as ash, fly-ash etc. must be properly treated. The operation efficiency needs to be checked regularly. Apart from the plant’s activities, the environment preservation is also one important aspect. The Investor also needs to ensure high standards with regards to health and safety for workers.
Conditions for application	All the grid connected biomass energy project in commercial operation.
Related legal documents	Not applicable.
Responsible persons/persons	- Equipment suppliers/manufacturers. - The Investor.
Documents to be submitted	Not applicable.
Applied procedures	- Sources of input material sources are controlled in both volume and quality since this is an important factor for operating mode of the plant; - The volume of raw materials for the plant operation is always put under strictly control. In addition to the plant stockpile containing materials for the plant’s operation, the investor will have to make a provision plan with its material supply on an annual basis in order to ensure the input for the plant;

	- The quality of raw materials is well controlled to ensure its compliance with specifications. The investor will have a laboratory in the plant where the quality control of raw materials, collection of data as a basis for regular monitoring of the plant operation is constantly conducted; - The moisture of the feedstock as a fuel for the biomass power plant must be closely control with the individual supplier to manage heating value related compensation for the fuel supplier. - Sources of auxiliary material (if any), such as oil, coal, limestone are controlled. A procedure for purchasing, quality control of such sources is designed; - The feed water supply and wastewater releasing to the environment are controlled. The investor shall conduct experiments and inventory in order to control the quality according to the plant’s operational requirements and those of the environment, recognizing and handling the incidents occurred during the course operation; - Through the system of measurement and control in the factory, the investor will record all the operating parameters such as temperature, pressure, flow, power quality to make available a database serving for the plant’s operation with ensured features, technical specifications and measures to overcome any incident occurred therein.
Estimated time	Not applicable.
Costs	Not applicable.



4.4. Phase D: Decommissioning

D.1	Project Completion and Decommissioning
Description	After the end of operation, the power plant will be upgraded, repaired or removed from exploitation and use. In case it is removed from exploitation and use, the land use status on the project location must be restored to the primitive state. Being removed from use and exploitation means the system of main equipment, office and any works on the land must be removed, the transportation roads and ground is filled up and corrected so as to return the site to its primitive state. Depending on the land use master planning at the project areas, some works that still function such as electricity wire route, and other conventional electricity works can remain on site.
Conditions for application	All grid connected biomass energy project with overdue term of commercial operation.
Related legal documents	- Decree 46/2015/ND-CP, of the Government on quality control and maintenance for construction work, Article 45; - Circular No. 26/2016/TT-BXD dated 26 October 2016 of the Ministry of Construction on elaboration of a number of aspects of construction quality control and maintenance; Circular No. 04/2019/TT-BXD dated 6 August 2019 of the Ministry of Construction amending and supplementing a number of articles in Circular No. 26/2016/TT-BXD.
Responsible persons/persons	The Investor.
Documents to be submitted	Not applicable.
Applied procedures	The Investor shall have to design in advance the procedure for removing the plant from exploitation and use and restoring the site to its primitive state.

	When the plant operational term is finished, the plant owners must implement the following activities: - Organize the check, verification, assessment of the current quality of the work; - Report the findings from the check, quality verification, assessment to the provincial people committee; - Organization of dismount and, if necessary, dismount all kinds of electricity cables, ground, and crane cushions; - Transportation and recycling waste/discarded stuff; - Restoration of the primate state (landscape and planting).
Estimated time	Not applicable.
Costs	Not applicable.





5.

APPENDIXES

5.1. Summarized procedures

WBS	Administrative procedures	Submitted documents	Receiving/ appraising agency	Approving agency	Legal basis
A	Phase A: Project development				
A.1	Business Registration Certificate	Business registration dossier	DPI	DPI	Law on Enterprise No. 59/2020/QH14 and related documents
A.2	Approval of the investor's research and survey for the project development	A written request for the approval of research and survey for the project development	A specialized department authorized by the PPC	PPC	Land Law No. 45/2013/QH13 and Law No. 35/2018/QH14 amending, supplementing the Land Law and related documents
A.3	Decision on approving the project inclusion in PDP	A report on project inclusion in PDP	MOIT	Prime Minister	Law on Planning No. 21/2017/QH14; Law on Electricity; Circular 43/2013/TT-BCT and related documents
A.4	Investment policy decision	A dossier requesting the approval of investment policy	DPI/Industrial Park Management Unit	PPC	Law on Investment No. 61/2020/QH14 and related documents

5.1. Summarized procedures

WBS	Administrative procedures	Submitted documents	Receiving/ appraising agency	Approving agency	Legal basis
A	Phase A: Project development				
A.5	Investment Registration Certificate	Application for the approval of investment policy	Management Unit of industrial parks, export processing zones, high-tech zones and economic zones: for biomass energy projects located in industrial parks, export processing zones, high-tech zones and economic zones	DPI/ Industrial Park Management Unit	Law on Investment No. 61/2020/QH14 and related documents
A.6	Approval of power purchase	A dossier requesting the approval of power purchase	Viet Nam Electricity (EVN)	EVN	The Electricity Law Decision 373/QD-EVN dated March 2019 of the EVN on on promulgating the process of the negotiation, signing and implementation of PPAs for electricity projects in EVN

A.7	Connection agreement	Connection report and agreement	National Power Transmission Corporation (EVNNPT): transmission level Regional Power Corporations (regional PCs): distribution level	EVNNPT: transmission level Regional PCs: distribution level	• Circular 25/2016/TT-BCT • Circular 39/2015/TT-BCT • Decision 373/QD-EVN
A.8	Agreement on SCADA and dispatch information system	Reports and Agreements on SCADA/EMS (SCADA/DMS) and dispatch information level	National Load Dispatch Center (A0)	A0	• Circular 25/2016/TT-BCT • Circular 39/2015/TT-BCT • Decision 373/QD-EVN
A.9	Agreement on protection and automatic relays	Report on protection and automatic relays	A0	A0	• Circular 25/2016/TT-BCT • Circular 39/2015/TT-BCT • Decision 373/QD-EVN
A.10	Agreement on electricity metering system	Report and Agreement on electricity metering	Electric Power Trading Company (EVNEPTC)	EVNEPTC	• Circular 25/2016/TT-BCT • Circular 39/2015/TT-BCT • Decision 373/QD-EVN

5.1. Summarized procedures

WBS	Administrative procedures	Submitted documents	Receiving/ appraising agency	Approving agency	Legal basis
A	Phase A: Project development				
A.11	Agreement on total construction area	Application for agreement on total construction area	DOC	PPC	• Land Law and related legal document
A.12	Agreement on the vertical height clearance	Application for agreement on the vertical height clearance	Department of Operations, The General Staff, Ministry of Defense	Department of Operations, The General Staff, Ministry of Defense	Decree 32/2016/ND-CP dated 6 May 2016 of the Government on management of obstacle height control, airspace control and air defense system in Viet Nam
A.13	Written feedback on the basic design of the fire protection and fighting system	Diagram for fire prevention and fighting system	• Viet Nam Fire and Rescue Police Department: Group A projects • Fire and Rescue Department: the projects not under the authority of Viet Nam Fire and Rescue Police Department or its authorized agencies	• Viet Nam Fire and Rescue Police Department • Fire and Rescue Department	Law on Fire Prevention and Fighting No. 27/2001/QH10; Law No. 40/2013/QH13 on amending, supplementing a number of articles in the Law on Fire Prevention and Fighting

A.14	Approval of the environmental impact assessment report/ Registration for environmental protection plan	Environmental impact assessment report or environmental protection plan	• DONRE • DPC delegated	• PPC • DPC	Law No. 55/2014/QH13; Law No. 35/2018/QH14; and Law No. 72/2020/QH14 (effective from 1 January 2022) and related documents
A.15	A written notice of the outcome of basic design appraisal	Feasibility study report and Basic design	EREA/MOIT: capacity > 30 MW DOIT: capacity ≤ 30 MW	EREA/MOIT: capacity > 30 MW DOIT: capacity ≤ 30 MW	Construction Law No. 50/2014/QH13 dated 18 June 2014, of which a number of article are amended and supplemented according to Law No. 03/2016/QH14, Law No. 35/2018/QH14, Law No. 40/2019/QH14 and Law No. 62/2020/QH14. The Integrated Document No. 10/VBHN-VPQH dated 4 July 2019 of the National Assembly Office on integrating the Law on Construction; And related documents.

5.1. Summarized procedures

WBS	Administrative procedures	Submitted documents	Receiving/ appraising agency	Approving agency	Legal basis
A	Phase A: Project development				
A.16	Approval of the project, Decision on construction investment	Feasibility study report and Basic design report	The Investor	The Investor	Construction Law No. 50/2014/QH13 dated 18 June 2014, of which a number of article are amended and supplemented according to Law No. 03/2016/QH14, Law No. 35/2018/QH14, Law No. 40/2019/QH14 and Law No. 62/2020/QH14. The Integrated Document No. 10/VBHN-VPQH dated 4 July 2019 of the National Assembly Office on integrating the Law on Construction; And related documents.
A.17	Power purchase agreement	Power purchase negotiation and agreement	Power Market Department, EVN	EVN/ EPTC is the authorized entity	Electricity Law Decision 373/QD-EVN

A.18	Fire protection and fighting appraisal (following the basic design)	Technical design of fire prevention and fighting system	- Viet Nam Fire and Rescue Police Department: Group A projects - Fire and Rescue Department: the projects not under the authority of Viet Nam Fire and Rescue Police Department or its authorized agencies	- Viet Nam Fire and Rescue Police Department - Fire and Rescue Department	Law on Fire Prevention and Fighting No. 27/2001/QH10; Law No. 40/2013/QH13 on amending, supplementing a number of articles in the Law on Fire Prevention and Fighting
A.19	A written notice of the outcome of technical design appraisal	Technical design documentation	EREA/MOIT: capacity > 30 MW DOIT: capacity ≤ 30 MW	EREA/MOIT: capacity > 30 MW DOIT: capacity ≤ 30 MW	For three-step design Law on Construction and related legal documents
A.20	Approval of the technical design	Technical design report	The Investor	The Investor	For three-step design Law on Construction and related legal documents
A.21	Land handover report	Site Clearance Board	Site clearance council	PPC	Land Law and related legal documents and related legal documents



5.1. Summarized procedures

WBS	Administrative procedures	Submitted documents	Receiving/appraising agency	Approving agency	Legal basis
B	Phase B: Project implementation				
B.1	A written notice of the outcome of construction drawing design appraisal	Construction drawing design documentation	• EREA/MOIT: capacity > 30 MW • DOIT: capacity ≤ 30 MW	• EREA/MOIT: capacity > 30 MW • DOIT: capacity ≤ 30 MW	For two-step design Law on Construction and related legal documents
B.2	Approval of the construction drawing design	Construction drawing design documentation	The Investor	The Investor	For two-step design Law on Construction and related legal documents
B.3	Construction permit	Construction drawing design documentation	DOC	DOC	Law on Construction and related legal documents
B.4	Electricity generation license	Application for electricity generation license	• ERAV: capacity ≥ 3MW • DOIT: capacity < 3MW	• ERAV: capacity ≥ 3MW • DOIT: capacity < 3MW	Electricity Law and related legal documents

5.2. Forms

STATEMENT FORM FOR

CONSTRUCTION PROJECT AND BASIC DESIGN APPRAISAL

(romulgated with the Government’s Decree No. 59/2015 / ND-CP dated 18 June 2015)

ORGANIZATION NAME

SOCIALIST REPUBLIC OF VIET NAM

Independence - Freedom – Happiness

No.:.....

....., date month year

STATEMENT

Construction project and basic design appraisal

To: (Appraising leading authority)

Pursuant to the Law on Construction dated 18 June 2014;

Pursuant to other related legal documents.....

(Name of organization) submits to (Appraising authority) to appraise construction project (Name of the project) with the following main points:

I. GENERAL INFORMATION ABOUT THE PROJECT

- 1. Project’s name:
- 2. Project’s group:
- 3. Constructions works’ types and grades:
- 4. Investment decision maker:
- 5. Investor’s name (if any) and contact information (address, telephone, etc.):
- 6. Construction location:
- 7. Total investment value:
- 8. Investment source:
- 9. Construction period:.....
- 10. Applied regulations and standards:
- 11. Feasibility study contractor:
- 12. Other information (if any):.....

II. LIST OF ATTACHED DOCUMENTS

- 1. Legal documents:
 - Decision on investment policy (for projects funded by public investment capital) or document approving construction investment policy or certificate of business registration (for projects funded by other sources of capital);
 - Decision on selecting architecture design plan through competitive examination or required recruitment and attached selected architecture design plan (if any);
 - Decision on selecting project planning contractor;
 - Detailed planning with the scale of 1/500 (1/2000 for industrial parks with areas larger than 20 ha) approved by competent authority or project planning license);
 - Appraisal or commenting report on fire prevention and firefighting solutions, environmental impact assessment from competent authority (if any);
 - Agreement on the vertical height clearance (if any);
 - Information of and data about urban technical infrastructure;
 - Other related legal documents (if any).
 - 2. Documents on construction survey, design and total investment (estimated):
 - Construction survey dossier for project planning;
 - Description of feasibility study (including total investment or estimated budget);
 - Basic design including drawings and description.
 - 3. Contractor’s capability profile:
 - Capacity information about surveying contractor, project planning contractor and basic design contractor;
 - Operation licenses and capability profile of construction survey leader, project planning leader, and head of construction design contractor.
- (Name of the organization) submits to (Appraising authority) to appraise construction project (Name of the project) with the before-mentioned contents./.

Recipients:

- As listed above;
- Archive.

ORGANISATION’S REPRESENTATIVE

(Sign, Full name, Title, and Seal)

Name of representative

5.2. Forms

ORGANIZATION NAME

No.:.....

SOCIALIST REPUBLIC OF VIET NAM

Independence - Freedom – Happiness

....., *date* *month* *year*

STATEMENT

Appraisal of economic-technical construction investment reports

To: (Appraising authority)

Pursuant to the Law on Construction dated 18 June 2014;
Pursuant to other related legal documents.
(Name of investor) submits (Appraising authority) to appraise design (technical/ construction design) and construction estimate

I. GENERAL INFORMATION ABOUT THE PROJECT

1. Project’s name:

2. Construction’s types and grade:

3. Investor’s name and contact information (address, telephone, etc.):

4. Construction location:

5. Estimated budget:

6. Investment source:

7. Construction design and budget estimate contractor:

8. Applied regulations and standards:

9. Other related information:

II. LIST OF ATTACHED DOCUMENTS

1. Legal documents:

- Decision on construction investment policy (for projects funded by public investment capital);

- Document approving list of foreign standards (if any);

- Appraisal document on fire prevention and firefighting solutions, environmental impact assessment from competent authority (if any);

- A synthesis report by the investor;

- Other related documents.

2. Documents of construction survey, design and estimate:

- Construction survey documents;

- Construction drawing design documents including drawings and prescription;

- Construction estimate for projects funded by governmental budget capital and by capital derived from loans, bonds, funds, etc.

3. Contractors’ capacity profiles:

- Capacity information about surveying contractor, construction design contractor;

- Construction operating license for foreign contractor (if any);

- Operation licenses of construction survey leader, project planning leader, and contractor head of construction design (certified copies);

(Name of the organization) submits to (Appraising authority) to appraise construction design and estimate with the before-mentioned contents./.

Recipients:

- As listed above;

- Archive.

ORGANISATION’S REPRESENTATIVE

(Sign, Full name, Title, and Seal)

Name of representative

5.2. Forms

APPENDIX 1A
INFORMATION OF GRID CONNECTION REGISTRATION
APPLICABLE TO CLIENTS WITH THE NEED OF GRID CONNECTION

(Promulgated with the Industry and Trade Minister’s Circular No. 25/2016/TT-BCT dated 30 November 2016)

Information of grid connection registration, applicable to new connection points or repaired current connection points, includes:

Name of client with the need of grid connection:

Title:

Name of organization:

Registered address:

Address:

Telephone:

Fax:

Email:

1. Project description

- a) Project’s name;
- b) Business area;
- c) Estimated output/ production capacity;
- d) Estimated date of construction commencement;
- e) Estimated date of operation;
- f) Current connection point (if any);
- g) Recommended connection point;
- h) Level of voltage and proposed number of switch;
- i) Estimated date of grid connection.

2. Map, diagram and plan

- a) 1:50000 geographic map marking client’s location with the need of grid connection, related electricity transmission grid of transmission network operator and connection point;
- b) Either 1:200 or 1:500 site map describing locations of generating sets, transformers, buildings, connection points;
- c) Provide construction plan of recommended works for surrounding area of substation, generating units, generating sets, construction works and connection points with a scale of 1:200 or 1:500.

3. Legal documents

Documents on legal status (copies of Investment license or investment decision, Company registration, Certificate of establishment, Business registration certificate, electricity operation license and other licenses stipulated by current regulation).

APPENDIX 1B
INFORMATION OF THE POWER PLANT AND POWER GENERATING UNITS
APPLICABLE TO CLIENTS WITH THE NEED OF GRID CONNECTION

(Promulgated with the Industry and Trade Minister’s Circular No. 25/2016/TT-BCT dated 30 November 2016)

Information of the power plant, power generating units and power stations applicable to clients with the need of grid connection shall consist of:

1. Description of the power plant

- a) Name of the power plant;
- b) Construction location;
- c) Type and applied technology (hydropower, coal-fired thermal power, gas-fired power, renewable energy-based, etc.);
- d) Number of power generating units, rated power;
- e) Projected power output;
- f) Projected capacity fed in the national grid;
- g) Tentative operation date;
- h) Proposed voltage level at connection point:

2. Diagram of the power system

- a) General arrangements of equipment;
- b) Wiring diagram:
 - Busbar arrangement;
 - Circuits (overhear power lines, underground cables, transformers, etc.);
 - Power generating units;
 - Phase arrangement;
 - Earthing arrangement;
 - Switching devices;
 - Operating voltage;
 - Protection methods;

- Location of the connection point;
- Reactive power compensator arrangement.

This wiring diagram only applies to the substation connected to the connection point and other devices of a client with the need of grid connection and possible impacts on the power transmission system. Tentative expansion or changes (if any) in the future should be specified.

3. Specifications of power generating units

The following information shall be provided for each type of power generating units:

- Code of the power generating unit;
- Rated active power generated (MW);
- Rated apparent power generated (MVA);
- Active power of a self-consumption load (MW);
- Reactive power of a self-consumption load (MVar);
- Input voltage (kV);
- Active power range (MW-MW);
- Maximum reactive power generated at the rated active power (MVar);
- Maximum reactive power received at the rated active power (MVar);
- Short circuit ratio;
- Rated stator current (A);
- Rated stator current at the rated output current (rated active power, rated load-carrying capacity, rated input voltage) and rated rotor speed (A);
- Rated rotor voltage (kV);

5.2. Forms

APPENDIX 1B

INFORMATION OF THE POWER PLANT AND POWER GENERATING UNITS

APPLICABLE TO CLIENTS WITH THE NEED OF GRID CONNECTION

(Promulgated with the Industry and Trade Minister's Circular No. 25/2016/TT-BCT dated 30 November 2016)

- Operating range of the generating unit, including thermal limit and excitation;
- Open-circuited magnetization curve;
- Short-circuit condition;
- No-load curve;
- Voltage profile;
- Generator synchronization period from warm state (hours);
- Generator synchronization period from cold state (hours);
- Minimum operating time;
- Minimum stop time;
- Rated ramp-up rate (MW/minute);
- Rated ramp-down rate (MW/minute);
- Type of fuel for starting the generator;
- On-load fuel variation possibility;
- Ready mode;
- Time for change to load mode;
- Control range for operation of the secondary frequency regulating system (MW);
- Other related operating characteristics;
- Detailed information of backup capacity of a power generating unit in different operation modes.

In addition to the parameters required above, a thermal power plant shall provide a diagram of functional blocks of the key components in the plan, the boiler, the alternator generator, heat or steam supply.

4. Technical description of each generator assembly

The following specifications and values:

- Direct-axis synchronous reactance X_d
- Direct axis transient reactance X'_d
- Direct axis sub-transient reactance X''_d ;
- Quadrature axis synchronous reactance X_q ;
- Quadrature axis synchronous reactance X'_q ;
- Quadrature axis sub-transient reactance X''_q ;
- Saturation parameters of the reactance X_d , X'_d , X''_d , X_q , X'_q , X''_q ;
- Negative sequence reactance (X_2);
- Zero sequence reactance (X_0);
- Stator resistance R_a ;
- Stator leakage reactance (X_L);
- Point resistance X_p ;
- Electric machine time constant symbol and value;
- d-axis open-circuit transient time constant T_{do}' (s);
- d-axis open-circuit sub-transient time constant T_{do}'' (s);
- q-axis open-circuit transient time constant T_{qo}' (s);
- q-axis open-circuit sub-transient time constant T_{qo}'' (s);
- d-axis short-circuit transient time constant T_d' (s);
- d-axis short-circuit sub-transient time constant T_d'' (s);
- q-axis short-circuit transient time constant T_q' (s);
- q-axis short-circuit sub-transient time constant T_q'' (s);
- Inertia constant of a generator-turbine unit for the entire

rotating mass (MWsec/MVA);

5. Excitation system

Expected type of excitation system and power system stabilizer (PPS), Laplace Block Diagram according to IEEE standards (or applicable equivalent standards) and the attached specifications and transfer function.

6. Velocity regulating and stabilizing system

Expected type of velocity regulation, Laplace Block Diagram according to IEEE standards (or applicable equivalent standards) and the attached specifications and transfer function.

7. Protection and control systems

- To provide information about the power generating unit's protection relays.
- To provide information about the power plant's automatic control system and a plan for connection with SCADA systems, RTUs of the power plant and substation.

8. Black start

To provide information about the black start system.

9. Environmental impact

Required information of greenhouse gas emissions:

a) Thermal power plants

- CO₂:
- + Tonnes of CO₂/tonnes of fuel;
- + CO₂ emission performance.
- SO₂:
- + Tonnes of SO₂/tonnes of fuel;
- + SO₂ emission performance.
- NO_x:
- + Tonnes of NO_x/power curve MWh.

b) Pumped-storage hydropower plants

- Standby power (MWh pump);
- Maximum pump power (MW);
- Minimum pump power (MW);
- Maximum generation power (MW);
- Minimum generation power (MW);
- Efficiency (output/pump in %).

c) Wind power plants

- Type of turbine (fixed-speed or variable-speed);
- Manufacturer's details of technical and operational characteristics;
- Mode of seasonal operation of generator: seasonal or continuous;
- List of expected maximum output level generated to the distribution grid of the electricity distributor for each month of operation (MW);
- Power generation graph on typical day of a month;
- Expected details of frequent or rapid output variation, including magnitude, maximum rate of variation, frequency and duration;
- Historical wind measurements.

10. Availability forecast

- Expected maintenance requirements: ...weeks/year;
- Availability (taken from expected requirements for scheduled maintenance);
- Availability of seasonally generated capacity rate (MW);
- Absolute availability;
- Partial availability;
- Forced outage probability.
- Generation capacity limit:
- + Daily power generation (GWh);
- + Weekly power generation (GWh);

5.2. Forms

APPENDIX 1B

INFORMATION OF THE POWER PLANT AND POWER GENERATING UNITS
APPLICABLE TO CLIENTS WITH THE NEED OF GRID CONNECTION

(Promulgated with the Industry and Trade Minister’s Circular No. 25/2016/TT-BCT dated 30 November 2016)

- + Monthly power generation (GWh);
- + Annual power generation (GWh).
- 11. Technical data on electrical equipment at connection point**
- a) Switching devices: circuit switcher and isolator in electric circuits related to connection points.**
- Rated operating voltage (kV);
- Rated current (A);
- Rated 3-phase short-circuit breaking current (kA);
- + Rated 01-phase short-circuit breaking current (kA);
- + Rated 03-phase load cut current (kA);
- + Rated 01-phase load cut current (kA);
- + Rated heaviest 03-phase short-circuit current (kA);
- + Rated heaviest 01-phase short-circuit current (kA);
- Basic insulation level-BIL (kV).
- b) Transformer**
- Rated voltage and coil layout;
- Rated capacity MVA of each coil;
- Voltage division coil, pressurization type (underload or no-load), voltage division area (number of outputs and size of voltage division pitch);
- Pressurization period cycle;
- Grounding layout (Direct grounding, no grounding and grounding through reactor);
- Saturation curve;
- Positive sequence electric resistance and reactance of

- transformer at nominal, minimum, maximum (voltage division step $R+jX$ per rated capacity percentage MVA of transformer).
C For 03-coil transformer, with 03 externally connected coils, electric resistance and reactance between each pair of coil must be calculated with the 3rd coil being an open circuit;
- Zero sequence electric resistance and reactance of transformer at nominal, minimum, maximum voltage division step (Ω);
 - Basic insulation level (kV).
 - c) Reactive power complementers (T_u/induction coil)**
 - Type of capacitance equipment (fixed or variable) and/or inductance rate or operating area MVar;
 - Electric resistance and reactance, charge/discharge current;
 - For controllable capacitor/induction coil, details of the control principle, control data such as voltage, load, switch or automation, operating time and other settings must be provided.
 - d) Voltage transformer (TU)/Current transformer (TI)**
 - Transformation ratio;
 - Certificate of compliance with technical requirements in accordance with law on measurement.
 - e) Protection and control system**
 - Protection system configuration;
 - Recommended installation value;
 - Time to eliminate incidents of main and backup protection systems;
 - Automatic closing cycle (if any);

- Control management and data communication.
- f) Overhead lines and power cables related to connection points**
- Electric resistance/reactance/capacitance;
- Rated load current and maximum load current.

12. Hydropower plants

Hydropower plants shall provide data of generation capacity and projected power production for each month of a year, and information of hydrology and hydropower as follows:

- a) Primary energy - hydropower**
- Reservoir parameters and regulation:
- + Usable capacity (billion m3);
- + Total storage capacity (billion m3);
- + Flood control capacity (billion m3);
- + Normal water rising level (m);
- + Dead water level (m);
- + Reinforced water level (m);
- + Capacity for reservoir regulation for many years (if any) (billion m3);
- + Reservoir area (km2);
- + Length of the reservoir at normal water rising level (km);
- + Average width of the reservoir (km);
- + Average depth of the reservoir (m);
- + Reservoir characteristics curves $V = f(h)$;
- + Regulation methods (yearly, multiple years, mixed);
- + Simple procedures for regulating reservoirs (a doc file);
- + Complete procedures for regulating reservoirs (a doc file);
- + Reservoir regulation chart (by month or week).
- Main dam parameters::
- + Types of dams (rock, concrete, etc.);

- + Flood discharge methods (natural discharge, discharge outlet);
- + Dam peak altitude (m);
- + Dam surface height (m);
- + Dam surface length (m);
- + Dam bottom length (m);
- + Upper altitude of flood discharge stop plank (m);
- + Dam structure diagram (image file).
- Hydroelectric dam parameters:
- + Types of dams (rock, concrete, etc.);
- + Dam peak altitude (m);
- + Dam surface height (m);
- + Dam surface length (m);
- + Dam bottom length (m);
- + Upper altitude of intake gate (m);
- + Lower altitude of intake gate (image file).
- Upstream parameters:
- + Normal rising water level (m);
- + Dead water level (m);
- + Reinforced water level (m);
- + The water level regulated for numerous years (if any) (m).
- Downstream parameters:
- + Water level when the entire plant stops operating (m);
- + Water level corresponding to the plant’s minimum capacity (m);
- + Water level corresponding to the plant’s rated capacity (m);
- + Water level when the discharging capacity is 0.01% (m).
- Key data of the weather and hydrology:
- + Climate and weather characteristics;
- + River basin area (km2);

5.2. Forms

APPENDIX 1B

INFORMATION OF THE POWER PLANT AND POWER GENERATING UNITS
APPLICABLE TO CLIENTS WITH THE NEED OF GRID CONNECTION

(Promulgated with the Industry and Trade Minister’s Circular No. 25/2016/TT-BCT dated 30 November 2016)

- + Average water flow of numerous years (m3);
- + Average annual return water flow (m3/s);
- + Monthly average return water flow;
- + Average annual rainfall (mm);
- + Flood discharge.

b) Design water flow frequency and energy

- Key data of water flow frequency:

Frequency	Peak flood (m3/s)	Average day and night flow (m3/s)
10.00%		
1.00%		
0.10%		
0.01%		

- Key data of design water flow frequency and energy:

Frequency	Flow	Energy
25%		
50%		
65%		
75%		
90%		
Average for numerous years		

c) Hydraulic machinery

- Types of stop planks (valves) used for the project:

- + Water intake system (doc file);
- + Water discharge system (doc file).

- Specifications of a water turbine:

- + Type of turbine;
- + Country of manufacture;
- + Code;
- + Design capacity (MW);
- + Available capacity range in connection with the design head (from ...MW to ...MW);
- + Design head (m);
- + Maximum head (m);
- + Minimum head (m);
- + Water flow through turbine at rated load (m3/s);
- + Rated rotational speed (rpm);
- + Interleaving rotation speed (rpm);
- + Suction height (HS) (m);
- + Water consumption at rated head (m3/kWh).
- Water turbine structure (doc file):
- + Stator;
- + Bearing segment;
- + Direction socket;
- + Volute chamber;
- + Impeller;

- + Turbine shaft;
- + Guide vane;
- + Servomotor;
- + Turbine speed regulator.
- Water turbine operation:
- + Starting procedure;
- + Normal operation;
- + Normal stop of turbine;
- + Fault stop;
- + Compensating switch;
- + Turbine characteristic $P=f(\Delta h)$;
- + Specific consumption characteristics by head.
- d) Attached ancillary systems and equipment
- + High pressure and low pressure pneumatic system;
- + Oil system;
- + Fire hydrant system;
- + Cooling water system.
- e) Special notes

5.2. Forms

(Promulgated with the Industry and Trade Minister’s Circular No. 39/2015/TT-BCT dated 18 November 2015 on power distribution system)

SOCIALIST REPUBLIC OF VIET NAM
Independence - Freedom - Happiness

GRID CONNECTION AGREEMENT

BETWEEN (ELECTRICITY DISTRIBUTION UNIT) AND (NAME OF CLIENT WITH THE NEED OF GRID CONNECTION)

No.:.....

Pursuant to Circular No. /.../TT-BCT dated month year of the Industry and Trade Minister on power distribution system;
Pursuant to the grid connection request dated month year by [name of client with the need of grid connection] sent to [electricity distribution company];
Pursuant to grid connection documents by [name of client with the need of grid connection] sent to [electricity distribution unit] dated month year;
Pursuant to working minutes and preliminary agreement on grid connection plan;
Pursuant to request and electricity distribution capacity,
Today, date monthyearin we are:

Party A: [Distributor]

Representative:
Title:
Address:
Telephone:; Fax:
Bank Account Number:
Tax code:

Party B: [Name of client with the need of grid connection]]

Representative:
Title:

Address:
Telephone:; Fax:
Bank Account Number: ...
Tax code:

Two parties agree to sign the Grid Connection Agreement with the following contents:

Article 1. *[Distributor] agrees with the grid connection plan, connecting power plant [Name of plant] of [Name of client with the need of grid connection] into the distribution grid, with details as follows:*

1. Size of works

- a)Starting point:
- b)Endling point:
- c)Line:
 - Connecting voltage level:
 - Wire:
 - Number of switch:
 - Length of line:
 - Structure:
 - Operation mode:
- d) Substation:
 - Type of substation:
 - Capacity of substation:

2. Metering

(Complying with Electricity metering rules, issued by the Ministry of Industry and Trade)

3. Investment boundary

4. Technical solution requirements

5. Attached documents

Attachment 1:
Attachment 2:

5.2. Forms

Attachment 3:

Attachment 4:

Attachment 5:

(Attachments are part of grid connection agreement, two parties shall negotiate and agree in details on how and when to deliver attachments).

Article 2. Responsibilities

1. Party A's responsibilities

[Name of distributor] is responsible of investing and building distribution grid to connect with [Name of client with the need of grid connection] according to investment boundary as stipulated at Section 3 Article 1 of this agreement..

2. Party B's responsibilities

a) [Name of client with the need of grid connection] is responsible of investing and building its own grid to connect with the grid of [Name of distributor] according to investment boundary as stipulated at Section 3 Article 1 of this agreement.

b) [Name of client with the need of grid connection] is committed to manage, operate its own electricity system/ power plant according to Circular No. .../.../TT-BCT dated ... month ... 2015 by the Industry and Trade Minister stipulating electricity distribution system and other related regulations.

Article 3. Date of grid connection

Expected date of grid connection is ... (date, month, year).

Artical 4. Examination and additional experiment costs

Examination and additional experiment costs are stipulated in Section ... Article ... Circular No. .../ .../ TT-BCT dated .. month ... 2015 by the Minister of Industry and Trade stipulating electricity distribution system and are agreed by two parties as follows:

Article 5. Other agreements

Whenever there is a change or repair of connection point or connection device, party which changes must inform the other party in writing and send related technical documents; prepare Appendix to the Grid Connection Agreement on which two parties can sign.

Article 6. Grid split

1. Party B has the right to ask for voluntary grid split in specific situations as stipulated in attached appendix No. 5 and must

comply with relevant regulations on electricity distribution system issued by the Ministry of Industry and Trade.

2. Party A has the right to stop connection grid compulsory in specific situations as stipulated in Section 2 and 6 of Article 53 Circular No. /2015/TT-BCT dated month 2015, issued by the Ministry of Industry and Trade stipulating electricity distribution system.

3. Other situations:(negotiated by two parties).

Article 7. Effect

1. This grid connection agreement takes effect from the date of signing.

2. Validity period of this grid connection agreement:

3. This grid connection agreement is made into 05 copies with the same value, each party holds 02 copies and 01 copy is sent to related authority./.

PARTY B’S REPRESENTATIVE

PARTY A'S REPRESENTATIVE

(Name, title)

(Name, title)

5.2. Forms

PROPOSAL FORM

TO APPRAISE ENVIRONMENTAL IMPACT ASSESSMENT REPORT

(Based on Form 05, Appendix VI, Section I of the Annex attached to Decree 40/2019/ND-CP)

(1)

SOCIALIST REPUBLIC OF VIET NAM
Independence - Freedom – Happiness

No.:

....., date month year

Re. the appraisal of the project (2) environmental
impact assessment report

To: ⁽³⁾

We are: (1), project owner of (2), in section No. ..., column 3, Appendix II, Section I of Annex III attached to the Government’s Decree No. .../2019/ND-CP dated ... 2015 on amending, supplementing a number of articles under the Decrees detailing and guiding the implementation of the Law on environmental protection planning.

(2) is approved by

- Project (2)’s location:
- Contact address of (1):
- Telephone: Fax:; E-mail:

We submit following documents to (3):

- One (1) feasibility study report or economic – technical report or equivalent documents of (2).
- Seven (07) project environmental impact assessment reports of (2).

We commit to guarantee the truthfulness and accuracy of information in the above-mentioned documents. If there is anything wrong, we are fully responsible before the law of Viet Nam.

Please appraise the project (2)’s environmental impact assessment report.

Recipients:

- As listed above;
- ...;
- Archive

(4)
(Sign, Full name, Title, Seal)

Notes: (1) Project owner; (2) Full and complete project name; (3) Competent authority to appraise the project environmental impact assessment report; (4) Competent representative of project owner.

A document requesting for the electricity generation license issuance, amendment, supplementation

Form 01

NAME OF REQUESTING ORGANIZATION

SOCIALIST REPUBLIC OF VIET NAM
Independence - Freedom – Happiness

No. .../...

....., date month year

PROPOSAL

Issuance, amendment, supplementation, re-issuance of electricity activities license

To: ¹

Name of proposing organisation:.....

Belongs to (if any):

Address of the main office: Telephone: Fax:; Email:

Address of branch (if any): Telephone: Fax:; Email:

Established under the Investment License/Establishment Decision No. : .. date .. month.. year..

Certificate of business registration issued by ... enterprise code, registration No. ... date ... month ... year ...

Electricity activities license No. issued by dated (if any).

Current business lines:

Proposes to issue electricity activities license for the following area, scope and duration:

-

-

Attached documents:

-

-

Proposes ²..., to issue electricity activities license for ... (name of proposing organisation).

(Name of proposing organisation) commits to work in the field and scope of the license, and complies with the provisions in the electricity activities license./.

HEAD OF ORGANIZATION
(Sign and seal)

¹ Sent to agencies which receive and carry out appraisal procedures or competent agencies which issue permits: Department of Industry and Trade, Electricity Regulatory Authority, Provincial People’s Committee, Ministry of Industry and Trade.

² Sent to competent agencies which issue permits: Department of Industry and Trade, Electricity Regulatory Authority, Provincial People’s Committee, Ministry of Industry and Trade.

5.3. List of legal documents

Legal documents related to power system

- Law on Planning No. 21/2017/QH14 dated 24 November 2017;
- Resolution No. 751/2019/UBTVQH14 dated 16 August 2019 of the National Assembly's Standing Committee on explaining a number of articles in the Law on Planning;
- Resolution No. 110/NQ-CP dated 2 December 2019 of the Government on promulgating a portfolio of plans integrated into the national, regional and provincial plans in accordance with Point c, Clause 1 in Article 59 of the Law on Planning;

Legal documents related to power system

- Law No. 28/2004/QH11 dated 14 December 2004 of the National Assembly on electricity
- Law No. 24/2012/QH13 dated 20 November 2012 of the National Assembly amending and supplementing a number of articles of the Electricity Law
- Decree No. 137/2013/ND-CP dated 21 October 2013 on detailing a number of articles of the Electricity Law and the Law amending and supplementing a number of Articles of the Electricity Law
- Decision No. 428/QD-TTg dated 18 March 2016 of the Prime Minister approving the Revised national master plan for power development in the 2011-2020 period, with considerations to 2030
- Circular No. 43/2013/TT-BCT dated 31 December 2013 of the MOIT entitled regulations on content, sequence, procedures for formulation, assessment, approval and adjustment to electricity development planning
- Circular No. 25/2016/TT-BCT dated 30 November 2016 of the MOIT on "Regulations on transmission power system"
- Circular No. 39/2015/TT-BCT dated 18 November 2015 of the MOIT on regulations on distribution power

system; Circular No. 30/2019/TT-BCT dated November 18, 2019 of MOIT on amending, supplementing a number of articles in Circular No. 25/2016/TT-BCT and Circular No. 39/2015/TT-BCT

- Circular No. 27/2009/TT-BCT dated 25 September 2009 of the MOIT on the electricity measurement in the competitive electricity market
- Circular No. 42/2015/TT-BCT dated 1 December 2015 of the MOIT on requirements of electricity measurements in power system
- Decision No. 373/QD-EVN dated 27 March 2019 of the EVN on promulgating the process of the negotiation, signing and implementation of PPAs for electricity projects in EVN
- Circular No. 21/2020/TT-BCT dated 9 September 2020 of the MOIT on procedures for issuance of electricity operating licenses;

Legal documents related to biomass power

- Decision No. 24/2014/QD-TTg dated 24 March 2014 of the Prime Minister on support mechanism for biomass power project's development in Viet Nam; Decision No. 08/2020/QD-TTg of the Prime Minister on amending and supplementing a number of articles in Decision No. 24/2014/QD-TTg; Integrated Document No. 51/VBHN-BCT dated 5 May 2020 of the MOIT on the support mechanism for the development of biomass power projects in Viet Nam, integrating Decision No. 24/2014/QD-TTg and Decision No. 08/2020/QD-TTg;
- Circular 44/2015/TT-BCT dated 9 December 2015 of the MOIT on providing for development of avoided cost tariff and sample of power purchase agreement applicable to biomass power projects; Circular No. 16/2020/TT-BCT dated 7 July 2020 of the MOIT on amending and supplementing a number of articles in Circular No. 44/2015/TT-BCT

Legal documents related to investment in Viet Nam

- Law No. 61/2020/QH14 on Investment
- Decree No. 31/2021/ND-CP dated 26 March 2021 detailing and guiding the implementation of a number of articles in the Investment Law
- Law No. 59/2020/QH14 on Enterprises
- Decree No. 01/2021/ND-CP dated 4 January 2021 of the Government on business registration
- Decree No. 96/2015/ND-CP dated 19 October 2015 on detailing a number of articles of the Law on Enterprises
- Circular No. 20/2015/TT-BKHDT dated 1 December 2015 of the Ministry of Planning and Investment providing guidance for business registration
- Circular No. 02/2019/TT-BKHDT on amending and supplementing the Circular 20/2015/TT-BKHDT
- Law No. 43/2013/QH13 dated 26 November 2013 of the National Assembly on bidding
- Decree No. 63/2014/ND-CP dated 26 June 2014 on detailing the implementation of several provisions of the law on bidding regarding the selection of contractors
- Decree No. 56/2020/ND-CP dated 25 May 2020 on management and use of official development assistance (ODA) and concessional loans of foreign donors.

Legal documents related to construction and environmental aspects

- Law No. 50/2014/QH13 dated 18 June 2014 of the National Assembly on Construction, of which a number of articles are amended, supplemented by the Law No. 03/2016/QH14, Law No. 35/2018/QH14, Law No. 40/2019/QH14 and Law No. 62/2020/QH14
- Decree No. 15/2021/ND-CP dated 3 March 2021 detailing some content of investment project management

- Circular No. 18/2016/TT-BXD dated 30 June 2016 on detailing and guiding some contents of project appraisal and approval and design and estimate of works construction. This Circular has been effective since 15 August 2016.
- Law No. 45/2013/QH13 dated 29 November 2013 of the National Assembly on Land
- Decree No. 43/2014/ND-CP dated 15 May 2014 on detailing a number of articles of the Land Law; Law No. 35/2018/QH14 amending, supplementing the Land Law; The Integrated Document No. 21/VBHN-VQH dated 10 December 2018 on integrating the Land Law No. 45/2013/QH13 and Law No. 35/2018/QH14 amending, supplementing the Land Law
- Law No. 27/2001/QH10 dated on 29 June 2001 of the National Assembly on fire prevention and fighting
- Law No. 40/2013/QH13 dated on amending and adding a number of articles of the Law on Fire prevention and fighting
- Decree No. 136/2020/ND-CP dated 24 November 2020 detailing a number of articles and the implementation of the Law on Fire Prevention and Fighting; and the Law on amending, supplementing a number of articles in the Law on Fire Prevention and Fighting
- Circular No. 149/2020/TT-BCA dated 31 December 2014 of the Ministry of Public Security detailing a number of articles and the implementation of the Law on fire prevention and fighting and the Law amending and supplementing a number of articles in the Law on fire prevention and fighting; and Decree No. 136/2020/ND-CP dated 24 November 2020 of the Government on detailing a number of articles and the implementation of the Law on fire prevention and fighting and the Law amending and supplementing a number of articles in the Law on fire prevention and fighting.

- Law No. 55/2014/QH13 dated 23 June 2014 of the National Assembly on environmental protection, of which a number of articles are amended, supplemented by Law No. 35/2018/QH14 and Law No. 39/2019/QH14 and Law No. 61/2020/QH14 (invalid since the effective date if the Law on Environmental Protection No. 72/2020/QH14)
- Law on Environmental Protection No. 72/2020/QH14 dated 17 November 2020, effective since 1 January 2022
- Decree No. 19/2015/ND-CP dated 14 February 2015 of the Government detailing the implementation of a number of articles in the Law on Environmental Protection, which are amended and supplemented by Decree No. 136/2018/ND-CP dated 5 October 2018 of the Government on amending a number of articles under the Decrees related to conditions for business investment in the field of natural resources and environment; Decree No. 40/2019/ND-CP dated 13 May 2019 of the Government on amending, supplementing a number of articles under the Decrees detailing and guiding the implementation of the Law on Environmental Protection. Integrated Document No. 08/VBHN-BTNMT dated 25 October 2019 of MONRE on integrating the Decree guiding the Law on Environmental Protection
- Decree No. 18/2015/ND-CP dated 14 February 2015 stipulating environmental protection planning, strategic environmental assessment, environmental impact assessment and environmental protection plans, which is amended and supplemented by Decree No. 136/2018/ND-CP and Decree No. 40/2019/ND-CP. Integrated Document No. 11/VBHN-BTNMT dated 25 October 2019 of MONRE on integrating the Decree stipulating environmental protection planning, strategic environmental assessment, environmental impact assessment and environmental protection plan.
- Circular 25/2019/TT-BTNMT dated 31 December 2019 of MONRE detailing the implementation of a number of articles in Decree No. 40/2019/ND-CP; Circular No. 150/2014/TT-BTC dated 10 October 2014 of the Ministry of Finance on the rates, collection, payment, management and use of fees for appraisal of firefighting design
- Circular 56/2018/TT-BTC dated 25 June 2018 of the Ministry of Finance providing rates and modes of collection, payment, and management and use of charges from approval of reports on environmental impact appraised by competent central entities
- Decree No. 47/2014/ND-CP dated 15 May 2014 of Government on regulations on compensation, support and resettlement on land expropriation by government; Decree No. 01/2017/ND-CP dated 6 January 2017 amending, supplementing a number of articles in Decree No. 47/2014/ND-CP
- Circular No. 37/2014/TT-BTNMT dated 30 June 2014 of MONRE on compensation, support and resettlement on land expropriation by government; Circular No. 33/2017/TT-BTNMT dated 29 September 2017 of MONRE amending, supplementing a number of articles in Circular No. 37/2014/TT-BTNMT
- Circular No. 209/2016/TT-BTC dated 10 November 2016 of the Ministry of Finance prescribing the rates and the collection, remittance, management and use of appraisal charges for construction investment projects and basic designs projects
- Decree No. 15/2016/ND-CP dated 30 June 2016 of the Government on quality management of construction works

Legal documents related to completion & operation

- Decree No. 46/2015/ND-CP dated 12 May 2015 of the Government on quality control and maintenance construction works
- Circular No. 167/2016/TT-BTC dated 26 October 2016 of the Ministry of Finance on electricity operating licenses assessment fees, collection, transfer, management and use thereof



5.4. Contact list

Institution	Contact Address	Webpage
Ministry of Industry and Trade (MOIT)	54 Hai Ba Trung, Ha Noi Phone: (84-4) 22 202 222	http://www.moit.gov.vn
Ministry of Planning & Investment (MPI)	6B Hoang Dieu, Ha Noi Phone: (84-4) 38 455 298	http://www.mpi.gov.vn
Ministry of Construction (MoC)	37 Le Dai Hanh - Ha Noi Phone: (84-4) 3821 5137	http://www.moc.gov.vn/
Ministry of Natural Resources and Environment (MONRE)	10 Ton That Thuyet, Cau Giay, Ha Noi Phone: (043) 7956868	http://www.monre.gov.vn
General Directorate of Energy (GDE)	23 Ngo Quyen – Ha Noi Phone: (84-4) 62 786 184	http://www.tcnl.gov.vn
Electricity Regulatory Authority of Viet Nam (ERAV)	D10 Khuat Duy Tien - Ha Noi Phone: (84-4) 22 147 474	http://www.erav.vn
Viet Nam Electricity (EVN)	11 Cửa Bắc -Hà Nội Phone: (84-4) 66 946 720	http://www.evn.com.vn
National Power Transmission Corporation (NPT)	18 Tran Nguyen Han – Ha Noi Phone: (84-4) 22 204 444	http://www.npt.evn.vn

National Load Dispatch Center (NLDC) Departments: Power System Analysis and Planning Power System Market Operation Power System Operation	11 Floor, EVN building, 11 Cua Bac– Ha Noi Phone: (84-4) 39 276 180	http://www.nldc.evn.vn
Northern Regional Load Dispatch Center (NRLDC) Departments: Power System Analysis and Planning Power System Operation	7 Floor, EVN building, 11 Cua Bac – Ha Noi Phone: (84-4) 3927 6151	http://www.nrldc.evn.vn
Central Regional Load Dispatch Center (CRLDC) Departments: Power System Analysis and Planning Power System Operation	No. 80 Duy Tan Street, Hai Chau District, Da Nang city Phone: (84-5) 11363 0331	http://www.crldc.evn.vn
Southern Regional Load Dispatch Center (SRLDC) Departments: Power System Analysis and Planning Power System Operation	No. 5 Su Thien Chieu Street, District No. 3, Ho Chi Minh city Phone: (84-8) 2221 0207	http://www.srldc.evn.vn
Electric Power Trading Company (EPTC)	12 Floor, EVN building, 11 Cua Bac – Ha Noi Phone: (84-4) 22 218 219	http://www.eptc.vn
Department of Fire Prevention & Fighting	2A Dinh Le - Ha Noi Phone: (84-4) 06 940 159	http://www.canhsatpccc.gov.vn

