CIRCULAR


Pursuant to the Electricity Law No. 28/2004/QH11 dated 03/12/2014; Law on amendment, supplementation of some articles of the Electricity Law dated 20/11/2012;

Pursuant to the Government's Decree No. 95/2012/ND-CP dated 12/11/2012 stipulating the functions, duties, rights and organizational structure of the Ministry of Industry and Trade;

Pursuant to Decision No.11/2017/QD-TTg by the Prime Minister dated 11/04/2017 on supporting mechanism for the development of solar power projects in Vietnam;

On the proposal of the Power and Renewable Energy agency;

The Minister of Industry and Trade (MOIT) hereby issues the Circular regulating solar power project development and Standardized Power Purchase Agreement for solar power projects.

CHAPTER I

GENERAL PROVISIONS

Article 1. Scope of regulation

This Circular regulates the development of grid-connected solar power project, rooftop solar project and promulgates the Standardized Power Purchase Agreement for grid-connected solar power projects and the Standardized Power Purchase Agreement for rooftop solar project in Vietnam (hereby shortly named as Standardized Power Purchase Agreement).

Article 2. Applicable entities

This Circular applies to organisations and individuals participating in the development of solar power projects in Vietnam and other relevant organisations and individuals.

Article 3. Interpretations of Terms

In this Circular, the following terms shall be construed as follows:

1. 1. Electricity Purchaser is the Electricity Corporation of Vietnam (EVN) or its authorized subsidiaries.

2. Electricity Sellers are organization, individual who obtain electricity operation license with regards to electricity generation from grid-connected solar PV plants; organization, individual who own rooftop solar projects and would like to sell surplus generated electricity to the Electricity Buyer.
3. Commercial Operation Date (COD) is the date when part or whole of the grid-connected solar PV plant is ready to sell electricity to the Buyer and fulfills the following requirements: (i) the power plant has completed basic experiments for part or the whole of the grid-connected solar PV plant and grid connection equipment; (ii) the solar PV plant was granted electricity operation license with regards to electricity generation; (iii) the Electricity Seller and Buyer agreed on record of meter reading to start payment.

4. Wp, KWp, MWp are DC power measurement unit of PV panels manufactured at standard conditions and published by the manufacturer.

5. Theoretical solar power potential is the solar power potential determined on the basis of theoretical solar irradiation.

6. Technical solar power potential is the solar power potential that could be exploited for the commissioning and operation of solar power project given the current conditions of engineering and technology.

7. Commercial solar power potential is the solar power potential that could be exploited effectively and bring proper economic profits to the project investors.

CHAPTER II
PLANNING AND DEVELOPING SOLAR POWER PROJECTS

Article 4. National solar power development plan

The national solar power development plan will be developed only once, the update, revision and supplementation of this Master plan in the future will be done in accordance with the development, revision and supplementation of the national power development plan. Formulation, approval and issuance of the national solar development plan are regulated at Article 5 of the Decision number 11/2017/QD-TTg dated April 11th, 2017 by the Prime Minister approving the support mechanism for grid-connected solar PV projects in Vietnam (in short Decision 11).

Article 5. Provincial solar power development plan

Solar power development plan of province and central cities (hereinafter called as Provincial solar power development plan): will be developed for provinces which have big potential of solar PV and at only one time, the update, revision and supplementation of this Master plan in the future will be done in accordance with the development, revision and supplementation of the provincial power development plan. Provincial solar power development plan is a planning project to identify total theoretical, technical and commercial solar power potential, distribution of these solar power potential in the whole provincial areas, in each planning phase until 2020 with vision to 2030. The Provincial solar power development plan is developed at once and will be supplemented and revised in accordance with the Provincial power development plan.


Outline of the provincial solar power development plan (hereinafter called as Master plan) is regulated at Annex 1 issued with this Circular.
Article 7. Processes and procedures on formulation, submission and appraisal of a Provincial Solar power Development Plan

1. Development of a detailed outline and selection of consultants

a) On the basis of the budget allocated for the planning work, the Department of Industry and Trade (DOIT) shall prepare the detailed outline and budget estimation to submit to the provincial or state-city People’s Committee (hereby referred to as the provincial People’s Committee) for approval.

b) The DOIT shall select qualified consulting firms to develop the plan following the approved detailed outline and budget estimation for submission to the DOIT for approval.

2. Develop and submit the provincial solar power development plan

a) The selected consulting firm formulates and proposes the plan in accordance with the approved outline and assigned time frame.

b) During the formulation process, the consulting firm shall provide intermediate reports for commenting by related public authorities in order to finalize the proposed plan.

c) The DOIT is responsible for collecting opinions from related agencies, the provincial power companies and regional power corporations. Within fifteen (15) working days from the date of receiving request for commenting, relevant agencies and organizations shall study and provide written feedbacks to the DOIT and the consulting firm.

d) DOIT submits the Master Plan to Provincial People Committee for approval to be submitted to MOIT for final approval;

d) Dossier of a provincial solar power development plan to submit to the MOIT for approval shall comprise of:
   - Submission from the provincial People’s Committee requesting approval.
   - Ten (10) sets of the complete proposed plan and one (01) CD/DVD/USB containing the proposed plan and related documents (explanation, Appendices, data, figures, feedbacks from relevant agencies and other relevant documents).
   - Ten (10) sets of the proposed plan’s executive summary report.
   - Written comments from relevant agencies and local authorities
   - Explanations, further opinions received from other agencies of concern.

Article 8. Appraisal, approval and issuance of the provincial solar power development plan.


a) The Power and Renewable energy Agency is in charge of appraising the Master plan. If necessary, the Power and renewable energy Agency may engage consultants for investigating, defending for appraisal work.

b) Within five (05) working days from the date of receiving complete and eligible dossiers, the Power and renewable energy Agency shall send official request to relevant agencies and local authorities for their opinions on the contents of the Master plan (if needed);
c) Within fifteen (15) working days from the date of receiving aforementioned request, relevant agencies and local authorities shall provide their opinions in writings to the MOIT’s competent unit assigned.

d) Within ten (10) working days from the date of receiving written feedbacks from relevant agencies and local authorities, the Power and renewable energy Agency shall complete and submit the appraisal report to the Minister of Industry and Trade for consideration and approval.

d) In case of needs for supplementation and revision of the proposed Master plan (if any), within five (05) working days, the Power and renewable energy Agency shall send an official request to the Provincial People Committee asking the selected consulting firm to revise and supplement this master plan accordingly;

e) Within fifteen (15) working days from the date of receiving the complete Master plan, the Power and Renewable energy Agency shall finalize the appraisal report and submit to the Minister of Industry and Trade for approval;

2. The Provincial People Committee is in charge of issuing and publishing the Provincial solar power development plan on the Provincial electronic platform.

3. Budget for the appraisal and publication of the provincial solar power development plan shall be allocated in accordance with current regulations.

Article 9. Supplement and inclusion of solar power projects into the solar power development plan.

1. For solar power project which has not been included in one of these approved Mater plans: provincial solar power development plan; national solar power development plan; provincial power development plan; national power development plan, the MOIT will consider, approve the supplement and inclusion of the solar power project which has the installed capacity less than or equal to 50MW; submit the dossier of the solar power plant which has the installed capacity greater than 50MW to the Prime Minister for approval.

2. Process and procedures for supplement and inclusion of solar power project into the provincial or national solar power development plan is similar to the process and procedures of supplement and inclusion of power project into the provincial or national power development plan.

3. Beside content regulated for supplement and inclusion into the provincial or national power development plan, dossier of solar power project for supplement and inclusion into the provincial or national solar power development plan shall comprise of the followings:
   a) Solar radiation potential at the project site;
   b) Project description: location, scale and total construction areas, construction works belonging to the project; content of sectoral planning and provincial construction planning;
   c) Necessity for project investment and construction, advantageous and disadvantageous conditions;
   d) Preliminary implementation plan including: technical and technological plan and capacity; technical infrastructure connection; equipment installation plan; implementation workplan and project management type; general plan on compensation and rehabilitation and technical infrastructure construction support plan (if any);
d) Total investment capital of the project: capital arrangement plan, capital source and disbursement plan; economic and financial analysis, social impact of the project;

e) Basic information of the investor: legal status document; business registration, key human resource, project implementation plan, financial and technical capabilities including list of relevant implemented projects (consisting of industrial and power projects), if any.

**Article 10. Grid-connected solar power project**

1. Investors are eligible to develop solar power projects which have been included in the approved provincial/national solar power development plans and provincial/national power development plans.

2. The contents of a solar power investment project must comply with the current regulations on management of investment in construction works and the following requirements

   a) Assessment of the impact of the grid connection plan of the project on the local power system;

   b) Providing equipment connected to the SCADA or dispatching system in order to provide forecast information on generated electricity by hour to the Load Dispatch Center in charge of system dispatching;

3. Equity ownership ratio of grid-connected solar power project can not be lower than 20% of the total investment capital

4. Long-term land use area must not exceed 1.2 ha/01 MWp

**Article 11. Investment in solar rooftop projects.**

1. For rooftop solar projects with capacity < 1 MWp

   The investors register the connection with the provincial/ municipal power company the main information such as: planned capacity, technical specifications of the PV panels, the inverters. To ensure the safety of the power grid, the inverters must have anti-islanding function and fulfill technical requirements of voltage and frequency as current regulations.

2. For rooftop solar projects with capacity ≥ 1 MWp, the investors shall implement the application procedure to have the projects included into the solar power development plan and power development plan in accordance with Article 9 of this Circular.

3. The provincial power company coordinate with the investor for the installation of the two-way meter and recording the monthly consumed and generated solar PV electricity. Cost of the two-way meter will be born by the Provincial power company

4. The solar rooftop projects shall apply the Standard Power Purchase Agreement as stipulated in the Annex 3 issued with this Circular.

**Article 12. Revision of Point 1 Article 41 of Circular 39/2015/TT-BCT as below**

1. Capacity connection

   a) Total installed capacity of the solar power systems into the low voltage line of the low voltage transformers can not exceed the installed capacity of that transformer
b) Solar power system which has capacity below 03 kVA can connect to the one (01) phase or three (03) phases low voltage grid;

c) Solar power system which has capacity from equal to and above 03 kVA can connect to the three (03) phases low voltage grid

**Article 13. Requirement on the electricity operation license**

Grid-connected solar power projects, rooftop solar projects which has capacity equal to or above one (01) MW must be granted with the electricity operation license and comply with regulations of Circular 12/2017/TT-BCT dated July 31st, 2017 of the MOIT

**Article 14. Requirements on construction safety and environmental protection**

1. Investment in development of a solar power project must comply with current regulations and technical specifications on safety of construction works and environmental protection.

2. Electricity seller is responsible for dismantling of the construction work of the solar power project, returning the land after the completion of the project in accordance with current regulation and norms of construction work safety and environmental protection.

**CHAPTER III**

**ELECTRICITY TARIFF FOR SOLAR POWER PROJECTS**

**Article 15. For grid connected solar power projects**

1. The Electricity Purchaser shall be responsible for purchasing the entire electricity generated from grid-connected solar power projects with purchasing tariff at the point of delivery (excluding VAT) as regulated at Clause 1 Article 12 of Decision 11

2. The purchasing tariff stipulated as in Clause 1 is only applicable for solar power projects with commercially operational date before 30 June 2019 and within 20 years from the commercial operation date.

3. Solar power projects applying purchasing tariff regulated at clause 1 of this Article shall not be entitled to other price support mechanisms for electricity output of the projects as prescribed in other regulations.

4. The costs of purchasing power from solar power projects prescribed in clause 1 of this Article shall be fully calculated in input parimeters of EVN's annual plan on power selling tariffs.

**Article 16. For rooftop solar power projects**

1. The rooftop solar power projects shall benefit net-metering mechanism by using bi-directional power meters. In a billing cycle, if the generated electricity is larger than consumption, it must be transferred to next cycle. At the end of the year or when the PPA is terminated, excessive generated electricity shall be sold to the Electricity Purchaser at tariff regulated at clause 2 of this article.

2. Purchasing tariff at the electricity delivery point (excluding VAT) is 2,086 VND/kWh (equivalent to 9.35 US cents/kWh according to the VND/USD central exchange rate published by the State Bank of Vietnam on April 10th 2017 being 22,316 VND/USD).
3. The purchasing tariff for next year will be adjusted in accordance with the VND/USD central exchange rate published by the State Bank of Vietnam of the last working day of the previous year.

4. The purchasing tariff stipulated as in Clause 2 and 3 is only applicable for rooftop solar power projects with commercially operational date before 30 June 2019 and within 20 years from the commercial operation date.

5. Solar power projects applying purchasing tariff regulated at clause 1 of this Article shall not be entitled to other price support mechanisms for electricity output of the projects as prescribed in other regulations.

6. The costs of purchasing power from solar power projects prescribed in clause 1 of this Article shall be fully calculated in input parameters of EVN's annual plan on power selling tariffs.

7. Regulations on tax and fees of rooftop solar power projects applying net-metering scheme is in accordance with guidance and instruction from the Ministry of Finance.

CHAPTER IV

STANDARDIZED POWER PURCHASE AGREEMENT FOR SOLAR POWER PROJECTS

Article 17. Standardized Power Purchase Agreement (SPPA) for grid-connected solar power projects.

It is compulsory for grid-connected and rooftop solar power projects to apply the SPPA for power purchase between the electricity purchaser and seller.

Article 18. Contents of the Standardized Power Purchase Agreement for solar power projects

1. Contents of the Standardized Power Purchase Agreement for grid-connected solar power projects are stipulated in Appendix 2 issued with this Circular.

2. Contents of the Standardized Power Purchase Agreement for rooftop solar power projects are stipulated in Appendix 3 issued with this Circular. Standardized Power Purchase Agreement under Annex 3.1 is applicable to rooftop solar power project investors who are electricity consumers as household customers or non-household customer but using singe tariff meter; Standardized Power Purchase Agreement under Annex 3.2 is applicable to rooftop solar power project investors who are electricity consumers as commercial or manufacturing customers applying electricity tariff in accordance with daily consuming time and three-tariff meter.

3. Electricity sellers and purchasers are permitted to supplement the contents of the SPPA to clarify each party’s responsibilities and rights without changing the basic contents of the SPPA issued with this Circular.
CHAPTER V
ORGANIZATION OF IMPLEMENTATION

Article 19. Responsibilities of the State administrative agencies:

1. The Power and Renewable energy Agency is responsible for:

   a) Assisting the power Sellers and the Purchasers in dispute resolutions in regards to the Standardized Power Purchase Agreement upon request by either party.

   b) Dissemination, guidance and inspection of the implementation of this Circular.

2. The PPC is responsible for monitoring, supervising the investment of solar power projects in accordance with the approved provincial/national solar power development plan and in compliance with the provisions prescribed in this Circular.

Article 20. Responsibilities of relevant organizations and individuals

1. Vietnam Electricity Corporation (EVN) is responsible for:

   a) To sufficiently calculate purchasing costs of electricity from solar power projects and integrate these costs as input parameters for EVN's annual plan on power selling tariffs to submit to competent authority for approval.

   b) To issue administrative procedures on registering and receiving dossiers requesting for installation of rooftop solar power project; on accepting, signing of SPPA applicable to rooftop solar power projects;

   c) To negotiate, sign and implement contract with the Electricity seller in accordance with the SPPA regulated at Article 18 and purchasing tariff applicable to rooftop solar power projects regulated at Clause 15, 16 of this Circular;

2. The Electricity seller’s responsibilities:

   a) To negotiate, enter into and implement a contract with the Electricity purchaser in accordance with the SPPA and electricity purchasing tariffs as prescribed in article 15, 16 of this Circular;

   b) To install power reading meters which comply with current regulations for electricity billing purpose;

   c) To comply with regulations issued by MOIT on operating and dispatching the power systems, the power transmission systems and the power distribution systems.

Article 21. Transitional provision

1. For solar power projects which have been put into commercial operation before June 1st, 2017, Electricity seller and purchaser are responsible for negotiating and signing the revised Annex in accordance with regulations of this Circular, which come into effect on June 1st, 2017.

2. In case the commercial operation dates (COD) of solar power projects are between June 1st, 2017 and the effective date of this Circular, these projects are entitled to sign the SPPA at the commencement date of the projects’ COD.
Article 21. Enforcement effect

1. This Circular takes effect from 26/10/2017

2. In case of difficulties emerged during the implementation, the Power and Renewable energy Agency shall coordinate with relevant agencies and report to the MOIT for consideration, amendment and supplementation of this Circular./.

Recipients:
- Prime Minister, Deputy Prime Ministers;
- Office of Party Secretary General;
- Ministries, Ministerial-level agencies, Government agencies;
- People’s Committees of provinces and state cities;
- Official Gazette;
- Website of the Government
- Website of the Department of Industry and Trade, Power and Renewable energy Agency
- Ministry of Justice (Department of Examination of Legal Normative Document)
- Departments of Industry and Trade of provinces and State cities;
- Vietnam Electricity
- Power corporations
- Archives: Secretariat, General Directorate of Energy, Legislation

THE MINISTER
(signed)

Trần Tuấn Anh
APPENDIX 1

CONTENTS OF THE PROVINCIAL SOLAR POWER DEVELOPMENT PLAN

(Issued with Circular No. 16/2017/TT-BCT

dated 12 September 2017 of the Ministry of Industry and Trade)

A. Description

Chapter 1. Overview on the development of solar power in Vietnam and in the province

1.1. Technology and development trend of solar power
1.2. Regional and national policies related to solar power development
1.3. Reality of solar power development in Vietnam and researches on potentials of solar power in Vietnam
1.4. Plan formulation method
1.5. Supporting mechanism for solar power development

Chapter 2. Natural and socio-economic features of the province

2.1. Natural features

2.1.1. Geographical location
2.1.2. Topographical features
2.1.3. River features
2.1.4. Meteorological conditions

2.2. Socio-economic features

2.2.1. Current socio-economic situation
2.2.2. Orientations for socio-economic development

2.3. Current situation and land-use plan

Chapter 3. Current situation and development orientations of provincial power source and electricity grid

3.1. Current situation of provincial power source and electricity grid
3.2. Provincial load demand
3.3. Provincial power development plan

Chapter 4. Identification of theoretical, technical and commercial potential of solar power and exploitation possibility of solar power in the province

4.1. Input data.
4.2. Data processing methodology.
4.3. Primary results.
4.4. Features of regional solar radiation.
4.5. Solar atlas according to typical height points
4.6. Identification of potential zones for solar power development
4.7. Assessment on theoretical potential of solar power
4.8. Identification of theoretical, technical and commercial capacity of solar power in each region
Chapter 5. Planning on solar power development areas and List of solar power projects until 2020, with a vision to 2030: Area and border of solar power development region; scale and capacity of solar power projects.

5.1. Selection criteria
5.2. Primary rating
5.3. Identification and classification of potential regions for solar power development
5.4. List of solar power projects (Area and border of solar power development region; scale and capacity of each solar power project)

Chapter 6. Orientation for national electricity system connection
6.1. Connection voltage level according to region
6.2. Connection capacity into the grid at connection points

Chapter 7. Capital needs and financial efficiency of the project
7.1. Economic – technical criteria of the grid-connected solar power project
7.2. Total estimated investment.
7.3. Phased investment.
7.4. Estimated project investment unit according to region.
7.5. Analysis of financial efficiency of each project.

Chapter 8. Environmental impact assessment in solar energy
8.1. Impact assessment of land use.
8.2. Resettlement
8.3. Environmental impact assessment.
8.4. Conclusion

Chapter 9. Solutions and policies.
9.1. Main solutions
9.2. Supporting policies
9.3. Implementation.

Chapter 10. Conclusions and proposals.

B. Appendixes, drawing and maps
ANNEX 2
STANDARDIZED POWER PURCHASE AGREEMENT
APPLICABLE TO GRID-CONNECTED SOLAR POWER PROJECTS

(Issued with Circular No. 16/2017/TT-BCT dated 12 September 2017 of Ministry of Industry and Trade)

CONTENTS

Article 1. Interpretation of terms
Article 2. Power delivery, purchase/sale and operation
Article 3. Connection, metering and operation of power plants
Article 4. Billing and payment
Article 5. Coordination process in case of force majeure
Article 6. Duration of Agreement
Article 7. Breaches, damage compensation and suspension of Agreement
performance
Article 8. Dispute resolution
Article 9. Authorization, transfer and restructuring
Article 10. Other agreements
Article 11. Implementation commitment
Appendix A: System Connection Agreement
Appendix B: Technical specifications of power plants
Appendix C: Requirements prior the commercial operation date (COD)
Appendix D: Other requirements
STANDARD POWER PURCHASE AGREEMENT FOR GRID CONNECTED SOLAR POWER PROJECT

For

SOLAR POWER PROJECT (specify name)

Between

[ELECTRICITY SELLER]
As “Electricity Selling party”

And

[ELECTRICITY PURCHASER]
As “Electricity Purchasing party”

(Issued with Circular No 16/2017/TT-BCT dated 12 September 2017
By the Ministry of Industry and Trade)
## CONTENTS

Article 1. Interpretation of terms ................................................................. 5
Article 2. Power delivery, purchase/sale and operation .......................... 7
Article 3. Connection, metering and operation of power plants .......... 10
Article 4. Billing and payment ................................................................. 13
Article 5. Coordination process in case of *force majeure* ...................... 15
Article 6. Duration of Agreement ............................................................. 16
Article 7. Breaches, damage compensation and suspension of Agreement performance ................................................................. 16
Article 8. Dispute resolution ................................................................. 18
Article 9. Authorization, transfer and restructuring ............................... 19
Article 10. Other agreements ................................................................. 20
Article 11. Implementation commitment .................................................. 22
Appendix A ............................................................................................. 1
Appendix B ............................................................................................. 2
Appendix C ............................................................................................. 3
Appendix D ............................................................................................. 4
POWER PURCHASE AGREEMENT

Pursuant to the Electricity Law dated December 03, 2004; the law on Amendment of and Supplement of some Articles of the Electricity Law dated 20 November 2012;

Pursuant to the Commerce Law dated June 14, 2005;

Pursuant to the Decision No. 11/2017/QD-TTg dated 11 April 2017 by the Prime Minister promulgating the Decision on supporting mechanism for solar power project development in Vietnam

Pursuant to the Circular No.16/2017/TT-BCT dated 12/09/2017 by the Minister of the Ministry of Industry and Trade and the standard power purchase agreement applicable to solar power projects;

Based on demand of power purchase purchase/sale of the two parties,

Today, the day ...... month ....... year....... , at ............... 

We are:

Electricity Selling Party: _________________________________

Address: ____________________________________________

Tel: _______________

Fax: ___________________________

Tax code: ____________________________________________

Account: ___________________________ at the Bank ___________________________

Representative: ____________________________

Position: ____________________________ (to be authorized by _______

___________________________ Under the Power of Attorney

No. ______________________, date _____ month _____ year ______)

(Hereafter called “Electricity Selling Party”); and
Electricity Purchasing Party: ________________________________

Address: ________________________________________________

Tel: __________________ Fax: ________________________

Tax code: ______________________________________________

Bank account: __________________ at the Bank ________________

Representative: __________________________________________

Position: __________________ (authorized by ___)

____________________________________________________ under the Power of Attorney

No. ______________________, date ____ month ____ year_____

(Hereafter called “Electricity Purchasing Party”).

Together agree to sign the Power Purchase Agreement for selling and purchasing electricity generated from the solar power project [Project name], with total installed capacity of [Project capacity] invested, constructed and operated by the Electricity seller at [Project location] with terms and conditions as follows:

Article 1. Interpretation of terms

In this Agreement, the terms below are construed as follows:

1. **Party or parties** means the Electricity Seller, Purchaser or both parties, or any entity that take on rights and obligations of one party or both parties in this Agreement.

2. **Connection point** means the location where the line of the Electricity Seller connects to the Electricity Purchaser power system of the power as agreed at Appendix A of this Agreement.

3. **Power delivery and receipt point** means the point at which the metering devices are installed to determine the Seller’s power output sold by.

4. **Electric power purchased/sold** means the energy calculated in kWh and generated by the power plant subtracted by the electric power self-consumption and the losses and accepted to be sold and delivered to the Electricity Purchaser by the Electricity Seller on annual basis, as defined in Appendix B of this Agreement.
5. **The Agreement** means this document and Appendices herewith.

6. **Average inter-bank interest rate** means the average inter-bank interest rate with 01-month term announced by the State Bank of Vietnam at the time of payment.

7. **Agreement year** means the calendar year of 12 months from the day of 1 January and ended on the last day of December of that year, except for the first Agreement year, it starts on the commercial operation date and ends on the last day of December of that year. The last agreement year is ended on the last day of the agreement duration.

8. **Maturity date** means a period of fifteen (15) days after the date on which the Electricity Purchaser receives electricity-payment bill from the Seller.

9. **Commercial operation date** is the date when part or whole of the grid-connected solar PV plant is ready to sell electricity to the Buyer and fulfills the following requirements: (i) the power plant has completed basic experiments for part or the whole of the grid-connected solar PV plant and grid connection equipment; (ii) the solar PV plant was granted electricity operation license with regards to electricity generation; (iii) the Electricity Seller and Buyer agreed on record of meter reading to start payment.

10. **A power plant includes** all power-generating equipment, protective facilities, connection equipment and all relevant auxiliary tools; land use for power plant and supporting works of the Electricity Seller to produce electricity as specified in this Agreement.

11. **Standards, technical regulations of power industry** mean the regulations, standards and common practices applied in the power industry and issued by the authorized organizations of Vietnam or the regulations, standards of the international organizations, the countries in Region in accordance with provisions of law, and recommendations of the equipment manufacturers which take into account the approved conditions on materials, sources, fuel and technique for the Vietnamese power industry at a certain time.

12. **Regulations on operation of the national power system** are legal legislations and Regulations stipulating standards for operation of the power system, conditions and procedures for grid connection, for load dispatch and system operation and for power metering within the power transmission and distribution system.

13. **Emergency cases** mean the situations that may interrupt the power supply services to customers of the Electricity Purchaser, including cases that
can cause major damage to the national power system which may threaten life or assets or affect the technical capacity of the power plant.

**Article 2. Power delivery, purchase/sale and operation**

1. **Power delivery**

   a) From the date of commercial operation, the Electricity Seller agrees to deliver and sell power to the Electricity Purchaser; the Electricity Purchaser agrees to purchase the power from the Electricity Seller under the provisions of this Agreement.

   b) The Electricity Purchaser must purchase the entire power output transmitted to the grid in accordance with the purchase tariff specified in Clause 2 of this Article.

   c) The Electricity Seller shall be entitled to the benefits related to the environment in accordance with the provisions of law and international treaties.

2. **Power purchase/selling tariff**

   a) The Electricity Purchaser shall be responsible for purchasing the entire electricity generated from grid-connected solar power projects with purchasing tariff at the point of delivery (excluding VAT) as regulated at Clause 1 Article 12 of Decision 11.

   b) The purchasing tariff stipulated at Clause a) is only applicable for solar power projects with commercially operational date before 30 June 2019 and within 20 years from the commercial operation date.

   c) Solar power projects applying purchasing tariff regulated at clause a) shall not be entitled to other price support mechanisms for electricity output of the projects as prescribed in other regulations.

3. **Power purchase/sale**

   The Electricity Seller shall agree to operate the power plant with available capacity and in accordance with standards, technical regulations of power industry. The Electricity Seller shall not be legally liable for direct loss and damages to the Electricity Purchaser if the Electricity Seller does not provide enough power due to default which is not caused by the Seller. In case of without the written consent from the Electricity Purchaser, the Electricity Seller is not entitled to sell electricity to a third party, or to keep for other purposes except for the purpose of electricity production for selling to the Electricity Purchaser.
4. **Operational Plan**

a) Prior to or on the date of commencement of this Agreement, the Electricity Seller shall provide the Electricity Purchaser with the chart of annual average estimated energy yield at the plant on a monthly basis in accordance with the basic design of the power plant.

b) Before November 30th annually, the Electricity Seller shall provide the Electricity Purchaser with the annual power production plan, including:
- The operational plan in months per year (power output and available capacity);
- Schedule for maintenance, repair of the plant in months per year (if any).

c) The Electricity Seller shall provide with information on the maintenance and repair plans as well as the plans to mobilize the generators to the dispatching unit (by the level of competent operation) in accordance with the regulations on operation of the national power grid.

5. **Outrage of the plant**

The Electricity Seller shall inform the Electricity Purchaser the schedule of outage for planned and unplanned repairs in accordance with provisions on operation of the national power grid.

6. **Grid operation**

a) The Electricity Seller is responsible for the management, operation and maintenance of the power and grid equipment and facilities within its assets management determined in the Connection Agreement with the grid operator to ensure compliance with the provisions of operation of the national power system; standards, technical regulations of the power industry; and the power trade in accordance with the Power Purchase Agreement.

b) The Electricity Seller must discuss and get agreement with the national grid operator (at the level of competent operation) on the power mobilization plans and solutions to reduce the impacts on the regional transmission grid as result of commitments to the regional load and grid.

7. **Interruption of power receipt and purchase**

The Electricity Purchaser is not obliged to purchase or receive power in the following cases:

a) The Electricity Seller's power plant does not operate and is not maintained in compliance with the regulations on national grid operation as well as with the standards, technical regulations of power sector;
b) During the time that the Electricity Purchaser installs equipment, repairs, replaces, inspects or examines the grid which directly connected to the Electricity Seller’s power plant;

c) When the transmission grid and the distribution grid connected to the Electricity Purchaser’s grid breaks down or grid devices directly connected to the transmission grid, the distribution grid of the Electricity Purchaser breaks down;

d) When the Electricity Purchaser’s grid needs support to recover after the incident/ break down in accordance with the provisions on operation of the national power system and the industrial standards, technical regulations.

8. **Interruption of power delivery and sale**

The Electricity Seller may suspend or reduce the amount of power to be sold and delivered to the Electricity Purchaser in case of equipment installation, repair, replacement, inspection, examination or in case of conducting repairs of the power plant, that directly affects the delivery of power to the Electricity Purchaser.

At least ten (10) days prior to suspending or reducing the amount of power to be sold and delivered, the Electricity Seller must provide an advance notice to the Electricity Purchaser specifying the reason of interruption and the proposed time for recommencement.

9. **Coordination**

The Electricity Purchaser is responsible for minimizing the duration time of reduction or suspension of power receipt in the cases of Clause 7 of this Article. Except in an emergency case, on temporary reduction or suspension of power receipt, the Electricity Purchaser must provide the Electricity Seller with at least ten (10) day’s advance notice specifying the reasons and duration of interruption and the proposed time of recommencement. In needed, the Electricity Purchaser must send to the Electricity Seller any dispatch instruction on plant operation from the grid operator and the Seller must comply with the commands, unless otherwise the commands change the plant's required characteristics of mobilization of the plant.

10. **Capacity factor**

The Electricity Seller agrees to operate the power plant synchronously with the Electricity Purchaser’s grid to deliver power at the point of delivery, at the voltage level and capacity factor from 0.85 (equivalent to the reactive power
generation mode) to 0.90 (equivalent to the level of receipt of reactive power) as prescribed at Appendix A.

Unless the Electricity Purchaser has other requirements, the Electricity Seller’s power plant shall operate at the capacity factor as defined in the regulations on distribution grid at the delivery point to the Electricity Purchaser.

11. **Synchronous operation**

The Electricity Seller shall notify the Electricity Purchaser in writing at least thirty (30) days prior to the initial synchronization of the Seller’s power plant with the Electricity Purchaser's grid. The Electricity Seller must coordinate with the Electricity Purchaser for the first synchronization and for the following synchronous operations.

12. **Standards**

The Electricity Seller and the Electricity Purchaser must comply with the provisions related to the delivery and receipt of power as prescribed by Regulations on the distribution grids, Regulations on metering power and the legal documents related to the electric industry.

13. **Change of the commercial operation date**

Within six (06) months to twelve (12) months prior to the date of commercial operation stated in Appendix A, the Electricity Seller must confirm officially the change of the date of commercial operation. The parties must have the cooperation on changes of commercial operation date and the Electricity Purchaser shall not be allowed to refuse these changes without legitimate reasons.

**Article 3. Connection, metering and operation of power plants**

1. **Responsibility at the point of power delivery**

The Electricity Seller is responsible for investment and installation of equipment for transmission and delivery of power to the Electricity Purchaser at the point of power delivery. The Electricity Purchaser is responsible for coordinating with the Electricity Seller in the implementation of this installation.

2. **Connection**

a) The Electricity Seller is responsible for the investment, construction, operation and maintenance of the connection equipment to connect the plant with the transmission grid, distribution grid in accordance with the regulations on transmission grid, distribution grid and other relevant regulations.
The Electricity Seller must incur the cost to install the measurement system at the substations in accordance with provisions in Appendix A of this Agreement.

b) The Electricity Purchaser may consider design, examine the adequacy of the protection devices. The Electricity Purchaser must notify the Electricity Seller the appraisal results in writing within thirty (30) days from the date of receipt of all technical records related to design. The Electricity Purchaser must notify in writing all design errors detected. The Electricity Seller must make the amendments, additions proposed by the Electricity Purchaser in accordance with the provisions of law for the operation of the national electricity system and standards, technical regulations of the electric industry.

3. **Connection standards**

The equipment of the Electricity Seller and the Electricity Purchaser must be installed, operated and connected in accordance with the law provisions on the distribution grid.

4. **Examination of the compliance of the standards of connection**

Upon the receipt of advance notification as prescribed, either Party has the right to inspect the connection devices of the other party to make sure implementation in accordance with the law provisions on the national electricity system operation. This examination does not affect the operation of the examined Party. In case the devices of the examined Party do not meet the conditions of operation and maintenance, the examining Party must notify the examined Party the points need to be calibrated. The examined Party shall take the necessary remedies upon the request of reasonable calibration from the examining Party.

5. **Metering**

a) Obligations of the Electricity Seller:
- To install and maintain the main metering equipment and backup metering equipment used for power metering and billing;
- To provide a location for metering equipment installation if the connection point is at the power plant.

b) Requirements for metering equipment:
- Be in compliance with the regulations on metering and other related regulations;
- Be able to store and record active and reactive electric power, in both directions;
- Be able to transmit the data to the locations as requested by the Electricity Purchaser;

- Be lead-sealed off, capable of recording and storing large data.

6. **Recording of meter readings**

Every month (or on the periodical basis agreed by the two parties), the Electricity Purchaser and the Electricity Seller shall jointly read and record the meter readings.

After providing notices as regulated, the Electricity Purchaser shall be allowed to enter the power plant or the place where metering equipment is installed to record the meter readings, examine the meters and perform other activities related to the fulfillment of the obligations in this Agreement. Entry of the Electricity Purchaser into the power plant must not affect the normal operation of the Seller. Staff or power inspectors appointed by the Electricity Purchaser when entering into the power plant must comply with the safety regulations and the rules of the power plant.

7. **Inspection of metering equipment**

a) The inspection and testing of metering equipment or the confirmation of the metering equipment’s accuracy must comply with regulations on electricity metering and must be performed by a competent or authorized organization. The testing should be conducted before the first use of metering equipment to record the purchased and sold electricity power of the plant. All metering equipment must be lead-sealed and locked after the inspection and the Electricity Purchaser has the right to witness this process.

b) All metering equipment for electricity trading of the power plant must be tested annually in accordance with the regulations on electricity metering. Inspection costs shall be paid by the Electricity Seller. Where necessary, a Party may propose to verify the accuracy of any metering equipment, the costs of testing shall be paid by the proposed Party. The inspection results of metering equipment must be sent to the other Party upon request. In case the metering equipment has error greater than the level allowed in the regulations on electricity metering, the Electricity Seller is responsible for correction or replacement and returning the excess amount of payment to the Electricity Purchaser together with the interest of this amount - calculated at the basic interest rate - plus the cost of testing the metering equipment. Either party shall be notified in advance by other Party and has the right to appoint personnel to participate in the process of seal removal, inspection, testing and lead-sealing of the meter. In case one party assumes that the meter is broken or does not
function properly, that Party shall promptly notify the other Party, the meter must be checked and repaired by its owner.

8. **Transfer of power ownership**

The ownership of power is transferred from the Electricity Seller to the Electricity Purchaser at the power delivery point. At this point, the Electricity Purchaser has the right to own, control and take responsibility for the amount of electricity received. Electricity is transmitted by the three (03) phase alternating current at fifty hertz (50 Hz) frequency under the voltage level as specified in the Appendix A of this Agreement.

9. **Operation of the power plant**

The Electricity Seller must operate the power plant in accordance with the Regulation on the power transmission, distribution grid; Technical standards and norms of electricity industry and other relevant legal provisions.

**Article 4. Billing and payment**

1. **Billing**

Every month (or on the periodical basis agreed by the two parties), the Electricity Purchaser and Electricity Seller shall jointly read the meters on the agreed date to determine the amount of electricity delivered during the month. The Electricity Seller shall record the meter readings on the stipulated standard form to be certified by the representative of the Electricity Purchaser and send the result of meter reading together with invoices in written documents (either send by fax or send a copy by email and original document by post later) to the Electricity Purchaser within ten (10) working days after the meter readings.

2. **Payment**

   a) The Electricity Purchaser shall make payment to the Electricity Seller for the entire amount of the electricity delivered no later than the payment due date under the provisions of Clause 9 of Article 1 of this Agreement and at the electricity tariff as regulated at the Clause 2 of Article 2 of this Agreement.

   b) In case the Electricity Purchaser fails to pay within the period specified above, the Electricity Purchaser is responsible to pay the late payment interest on the entire amount of late payment. Late payment interest shall be calculated at the average inter-bank interest rate for loans for one (01) month period counting from the date after the payment due date.

   c) In case the Electricity Purchaser fails to jointly read the meters together with the Electricity Seller as specified in Clause 1 of this Article, the Electricity
Purchaser remains liable to discharge its payment obligation to the Electricity Seller for the amount of electricity delivered as regulated.

d) The Electricity Seller shall pay the Purchaser the power distribution price as prescribed in the Agreement (if any).

3. **Estimating the amount of electricity sold**

In case where there is insufficient essential data to determine the amount of electricity or the payment amount, which the Electricity Purchaser owes to the Electricity Seller, except for the cases prescribed in Clause 4 of this Article, the Electricity Seller must estimate these data and adjust the payment in accordance with the reality in the following payments.

4. **Order for application and replacement of meter readings**

In order to determine the amount of electricity the Electricity Purchaser has received and consented to within a payment period, the record of electricity output, billing and payment must be based on the estimated data in the following order:

a) The main meter’s readings of the power plant during the payment period, which have the level of accuracy complying with the provisions of Clause 8 of Article 3 of this Agreement;

b) The backup meter’s readings of the power plant. When it is used to measure the amount of delivered electricity, the backup meter has to have a level of accuracy in accordance with the provisions of Clause 8 of Article 3 of this Agreement;

c) When all meters do not record exactly the amount of delivered electricity, this amount must be estimated based on the average monthly data (if any) of the power plant within the same payment period of the year previous to the Agreement year. Such estimation must be adjusted appropriately for the specific billing period with the corresponding available data which have impacts on the generation of the power plant such as unit efficiency, the number of operating hours, and operating duration of generators and amount of self-consumed electricity (generally referred to as the "Operational Parameters") for the period during which meters are broken.

In the absence of reliable data, the delivered amount of electricity must be estimated by the power plant’s average monthly electricity output during the 06 (six) previous payment periods before the damage of meters (could be less if the plant power has not yet been operated for six months) and these figures must be
adjusted according to the outage duration of generators or according to the Operational Parameters.

5. **Bill disputes**

   a) In case one party does not agree with all or part of the bill for the power output or the amount of payment, such Party shall be entitled to send a written notice to the other Party prior to the date of payment. If after receipt of notice, the parties are unable to resolve the dispute, then the maximum time limit within which one or both Parties may institute a dispute is one (01) year as from the date that the Electricity Purchaser received a valid invoice.

   b) In case the dispute resolution is made under Clause 1 and 2 of Article 8 of this Agreement and as a result, the Seller wins is correct, then the Electricity Purchaser must pay the to the Electricity Seller the disputed amount plus interest calculated at the average inter-bank interest rate, combining monthly interest from the payment due date to the date of payment for the disputed amount. If the Electricity Purchaser wins, then the Electricity Seller shall refund the disputed amount, which the Electricity Seller received before plus interest calculated at the average inter-bank interest rate, combining monthly interest from the date of receipt of the payment to the date of refund for the disputed amount. All payments in this section must be made within 15 (fifteen) days from the date of the final decision for dispute settlement as stipulated in Article 8 of this Agreement.

**Article 5. Coordination process in case of force majeure**

1. **Force majeure**

   Force majeure events are any unforeseeable and objective event, which is non-remediable despite all necessary measures and available resources. Force majeure events include:

   a) Natural disasters, fires, explosions, floods, tsunamis, epidemics or earthquakes;

   b) Violence, riots, war, resistance, sabotage, embargo, siege, blockade, any act of war or community hostilities whether war is declared or not;

2. **Dealing with an event of force majeure**

   In the event of force majeure, the party claiming force majeure shall:

   a) Quickly send a written notice to the other Party about the force majeure event, stating clearly the reason, providing complete evidence to prove it as a force majeure event and estimate the time and duration as well as the
influence of the force majeure event on the ability to perform this Party’s obligations;

b) Endeavour to the utmost to perform its obligations under the Agreement;

c) Quickly take the necessary actions to remedy the force majeure event and provide complete evidence to demonstrate reasonable efforts have been made to overcome the force majeure event;

d) Take necessary measures to minimize negative effects on the Parties to the Agreement;

e) Quickly notify the Parties of the termination of the force majeure event.

3. **Consequence of a force majeure event**

In case where all measures as prescribed in Clause 2 of this Article are fulfilled, the breaching Party will be exempted from liability related to the failure to perform the obligations under the Agreement caused by the force majeure event.

4. **Duration of the force majeure event**

If as a result of a force majeure event, a Party fails to perform its obligations under this Agreement within one (01) year, the other Party has the right to unilaterally terminate the Agreement after sixty (60) days from the date of sending written notice, unless the obligations are performed within these sixty (60) days.

**Article 6. Duration of Agreement**

Unless of amendment or early termination before the expiration date of this Agreement in accordance with its provisions, this Agreement shall take effect from the official signing date by all authorized representatives of two parties and shall be terminated after twenty (20) years from the date of commercial operation. After the Agreement is terminated, the contents of this Agreement shall be continued to have effect for a period of time necessary for the parties to perform the last billing, billing adjustment, make payments, take the rights and discharge the obligations in this Agreement.

**Article 7. Breach, damage compensation and suspension of Agreement performance**

1. *For the Electricity Seller*
a) The Electricity Seller fails to perform the date of commercial operation as defined in Appendix A for a period of three (03) months, except in a case of the force majeure event;

b) The Electricity Seller fails to perform or comply with the contents of the Agreement within sixty (60) days after receiving the written notice from the Electricity Purchaser.

If the Electricity Seller has attempted to remedy the breach within sixty (60) days as mentioned above but is unable to complete the remedy within that period, the Electricity Seller is permitted to extend the remedy time-limit to a maximum period of one (01) year as from the receipt of written notice of violation committed by the Electricity Seller. The Electricity Seller must continue to complete the remedy for violations in the shortest time, except in the cases specified in Article 5 of this Agreement;

c) The Electricity Seller negates the validity of a part or whole of the Agreement;

d) Serious violations of the Electricity Seller’s commitments as set out in Article 10 of this Agreement.

2. For the Electricity Purchaser

a) The Electricity Purchaser fails to perform or comply with the contents of the Agreement within sixty (60) days after receiving the written notice from the Seller.

If the Electricity Purchaser has reasonable attempt to remedy the breach within sixty (60) days but is unable to complete the remedy within that period, the Electricity Purchaser is allowed to extend the remedy time-limit to a maximum period of (01) year as from the receipt of written notice of violations of the Electricity Purchaser. The Electricity Purchaser must continue to complete the remedy for violations in the shortest time, except in the cases specified in Article 5 of this Agreement;

b) The Electricity Purchaser fails to pay for the undisputed amount under the Agreement when it is due and this non-payment continues for more than ninety (90) days without a legitimate reason;

c) The Electricity Purchaser negates the validity of a part or whole of the Agreement;

d) Serious violations of the Electricity Purchaser's commitments as set out in Article 10 of this Agreement.
3. Process of remedying and resolving breaches of Agreement

In case of a breach of the Agreement, the affected Party must send a written notice to the breaching party. The Party in breach must cooperate with the affected Party to resolve the breach of Agreement;

4. Compensation for losses and damages

a) The Party who breaches the Agreement is obliged to pay the compensation for losses and damages caused by such breach to the affected Party. The compensation value includes the value of the direct actual losses borne by the affected Party due to the breach of the breaching party and the direct benefits which the affected party is entitled to if there are no such violations.

b) The affected Party must demonstrate the damages, and the level of losses caused by the breach and the direct benefit, which the affected Party would be entitled to if there are no such violations.

5. Suspension of performance of Agreement

If a breach of the Agreement is unable to be resolved in accordance with Clause 4 of this Article, the affected Party may continue to require the breaching Party to remedy the breach or may suspend the performance of the Agreement by sending a written notice to the breaching party. After the affected Party decides to suspend the Agreement performance under the terms and conditions of this Agreement, the Parties do not have to perform Agreement obligations, except for the cases referred to in Clause 1 of this Article and then the affected Party has the right to require the breaching Party to pay compensation for losses and damages.

If the Electricity Seller is the affected Party and selects the suspension of performance of the Agreement, the compensation value is calculated by the value of the actual power output of the Electricity Seller within the previous one (1) year period counted up to the time of suspension of the Agreement performance.

Article 8. Dispute resolution

1. Dispute resolution by negotiation

In case dispute arises between the parties to this Agreement, the Party who raises the dispute must notify in written form to the other Party of the matter in dispute and of its claims within the regulated time limit. The parties shall negotiate resolution of the dispute within sixty (60) days as from the date of receiving notice of the Party who raises the dispute. The dispute resolution
relating to the payment of electricity bills is made within fifteen (15) days from the date of receiving notice of the requiring Party.

In case the Parties are unable to reach agreement as prescribed above, the Parties have the right to submit to the Power and Renewable energy Agency a written request for support the Parties in handling the dispute.

This dispute resolution mechanism does not apply to disputes not arising directly from the Agreement between either Party to the Agreement with a third party.

2. Dispute resolution in the electricity market in accordance with provisions of law

If a dispute is unable to be resolved by means of negotiation as prescribed in Clause 1 of this Article or one of the Parties does not comply with the results of negotiation, either Party may request for dispute resolution in accordance with provisions of the Circular No.40/2010/TT-BCT dated December 13, 2010 of the Ministry of Industry and Trade regulating the sequence and procedures for dispute resolution in the electricity market, or may request another agency which is agreed and selected by both Parties to resolve the dispute in accordance with relevant provisions of law.

Article 9. Authorization, transfer and restructuring

1. Authorization and transfer

In the event this Agreement is authorized or transferred for implementation, regulations on the rights and obligations in this Agreement shall continue to be effective and applicable to the legal representatives or authorized representatives of the Parties.

If the Electricity Seller transfers or delegates the implementation of the Agreement, it must be approved in written form by the Electricity Purchaser. If the entrusted part by the Electricity Seller has a value that approximately equals the value of operational equipment, such entrustment is valid under this Agreement.

The entrusting or transferring Party must notify immediately in written form to the other Party about such entrustment or transfer.

2. Restructuring

If a restructuring of the power industry affects the rights or obligations of the Electricity Seller or the Purchaser in this Agreement, the performance of the Agreement will be passed to the assigned recipient units. The Electricity
Purchaser is responsible to provide written documents to confirm and assure that the recipient units shall perform the obligation to purchase or distribute electricity and implement other rights and obligations under this Agreement.

3. Selection to participate in the electricity market

The Electricity Seller has the right to select the participation in the electricity market in accordance with the provisions of the competitive electricity market. In this case, the Electricity Seller must notify in written form to the Electricity Purchaser, the Electricity Regulatory Authority of Vietnam for a period of one hundred and twenty (120) days in advance and is allowed to unilaterally terminate the Agreement after the fulfilment of obligations to provide notice as prescribed.

Article 10. Other agreements

1. Amendments to the Agreement

Amendments and additions to this Agreement shall comply with the provisions of the Circular No 16/2017/TB-BCT dated 12 September 2017 by the Minister of Industry and Trade, regulating project development and the Standardized Power Purchase Agreement applicable to solar power projects and shall be implemented in writing as agreed by the two parties.

2. Responsibility to cooperate

The Electricity Seller is obliged to conduct legal procedures relating to the power plant. The Electricity Purchaser is responsible for cooperating with the Electricity Seller to obtain necessary licenses, consents, permission and approval from the competent State agencies relevant to the power plant’s location, fuel, control of natural resources, investment, transmission or sale of electric energy, ownership and operation of the power plants, including the provision of additional documents or data currently in archives as well as performs other necessary activities to carry out the agreements between the Parties.

3. Applicable law

The interpretation and implementation of this Agreement shall comply with the provisions of Vietnamese law.

4. Failure to exercise rights

Failure to exercise rights to this Agreement at any time shall not affect the enforcement of such rights under the Agreement afterward. The Parties agree that the statement of non-exercise of rights by a Party regarding any
commitment or condition of this Agreement, or regarding any breach of the Agreement, shall not be considered as this Party giving up such rights afterward.

5. Severability

If any of the contents in this Agreement are not in accordance with the provisions of law or are invalid pursuant to a court's decision, then the residual contents of the Agreement shall remain effective, if such residual contents fully express the Agreement without the invalid contents.

6. Notice

Any notice, invoices or other information exchange required during the performance of this Agreement must specify clearly its date of preparation and its relevance to the Agreement. All notices, invoices or information exchange must be prepared in written form and sent via the prepaid postal service or fax. In case of sending by fax, the original must be sent later by post. All notices, invoices or other information exchange should be sent to the following addresses:

a) Electricity Seller: General Director, ____________,
______________, ________________, Viet Nam;

b) Electricity Purchaser: ____________, ____________,
______________, ________________, Viet Nam

c) In any notice, the Parties may include the addresses of other senders or recipients following the format prescribed in this Clause.

d) Any notice, invoice or other information exchange sent by mail, delivered and communicated by the above-mentioned methods shall be considered as have been sent and received at the time of delivery to the recipient or at the time it was refused by the recipient at the above address.

7. Confidentiality

The Electricity Purchaser agrees to the keep secret the information of the plant in the Appendix to this Agreement, except where such information has been announced previously by the Electricity Seller or by the Power and Renewable energy Agency.

8. Completed agreement
This contract is considered final completed agreement between participating parties and replaces previously discussed agreement, exchanged information and correspondence before signing all related content of this contract

9. **Land cleaning and returning**

The Electricity Seller is responsible for dismantling, cleaning the solar power plant and returning land after the completion of the project in accordance with existing regulation and norms on construction work safety and environmental protection

**Article 11. Implementation commitment**

Both Parties commit to undertake this Agreement as follows:

1. Each party is legally established to do business in Vietnam;

2. The signing and performance of this Agreement of each Party is complied with the conditions and content of the Power Operations License issued by the competent authority and in accordance with the other relevant provisions of law;

3. The Parties have not and shall not take any legal or administrative action to prevent or affect the other Party to perform this Agreement;

4. The signing and performance of either Party in this Agreement does not breach any provision of another Agreement or any part of another Agreement to which such Party is a participant.

This Agreement t is prepared in ten (10) copies of equal validity, attached with four (4) Appendixes as an in separated part of the Agreement. Each Party keeps four (04) copies, the Electricity Seller is responsible to send a (01) copy to the Power and Renewable energy Agency and a (01) copy to the Electricity Regulatory Authority of Vietnam.

**ELECTRICITY SELLER’S REPRESENTATIVE**

*(Title)*

*(Stamp and signature)*

*(Full name)*

**ELECTRICITY PURCHASER’S REPRESENTATIVE**

*(Title)*

*(Stamp and signature)*

*(Full name)*
APPENDIX A
SYSTEM CONNECTION AGREEMENT
(To be separately applied to individual project according to the technical specifications of the project, including one-line diagram of connection devices, list of the characteristics of the metering system, voltage)
APPENDIX B
TECHNICAL SPECIFICATIONS OF THE POWER PLANT

Part A. General Specifications

1. Name of the power plant: ________________________________

2. Location of the power plant: ______________________________

3. Rated power: ______________________________________kW

4. Power sold to the Purchaser: minimum __kW; minimum ____kW

5. The power plant’s self-consumption: minimum __kW; minimum _kW

6. Expected annual electric output: __________________kWh

7. Completion date of the power plant construction: __________

8. Expected commercial operation date of the power plant: __________

9. Voltage generated to the distribution grid: _________________V

10. Connection point to the distribution grid: __________________

11. Location to metering equipment: _________________________

Part B. Operating parameters of specific technology

1. Type of solar panels: .................................................................

2. Power generation technology: ..................................................

3. Characteristics of designed operation: ......................................
APPENDIX C
REQUIREMENTS PRIOR TO THE COMMERCIAL OPERATION DATE

(Commitment to the operating date, agreement on commission and testing procedures, and putting the power plant into commercial operation...)

3
APPENDIX 3
STANDARD POWER PURCHASE AGREEMENT FOR ROOF – MOUNTED SOLAR POWER PROJECT
(Attached with the Circular No. /2017/TT-BCT dated... 2017 of Ministry of Industry and Trade )

APPENDIX 3.1
STANDARD POWER PURCHASE AGREEMENT FOR ROOF – MOUNTED SOLAR POWER PROJECT
(Attached with the Power purchase agreement No... date... month... year... between Power company.....and.... for household purpose, for non household purpose with the use of one-price meters)

Pursuant to the Decision No. 11/2017/QD-TTg dated 11 April 2017 by the Prime Minister promulgating the supporting mechanism for solar power project development in Vietnam;

Based on demand of power purchase/sale of the two parties,

Today, the day ....... month ....... year....... , at ...............

We are:

Part A (Power company):

Address: __________________________________________
ID No./ Passport No. ............Issued on........at........;
Email:...
Telephone: __________________ Fax: __________________
Tax code: __________________________________________
Account: __________________ At the Bank: __________________
Representative: __________________________________________
Position: __________________(to be authorized by _____________ Under the Power of Attorney No. __________________, date _____ month _____ year ______)

Part B (Owner of the Roof-mounted solar power project): ____________
Address: ______________________________________________________
ID No./ Passport No. ...........Issued on ........at .........;
Email:....
Telephone: __________________ Fax: __________________________
Tax code: __________________________________________________
Account: ___________________ At the Bank: ______________________

Representative: _______________________________________________

Position: ___________________ (to be authorized by _______ Under
the Power of Attorney No. _______________________, date ___ month
____ year ________)

Together agree to sign the Power Purchase Agreement for the roof-
mounted solar power purchase and sale based on net-metering mechanism by
using bi-directional electricity meters as followings:

**Article 1. Net-metering mechanism**

1. Electricity output calculated in period of recording the t-meter readings:

a) In the period of recording the meter readings, if the amount of electricity
produced by the solar power project installed on the roof of Party B plus the
outstanding amount of electricity from the previous period (t-1) is smaller than
the electricity consumed by Party B, the electricity output to pay Party B’s
electricity bill is determined by the following formula:

\[
SL_t = SL_{TTt} - SL_{MTt} - \Delta SL_{t-1}
\]

In which:

- \(SL_{TTt}\) : Electricity consumption in period t of Party B (kWh);
- \(SL_{MTt}\) : Electricity production by Party B connected to the grid in period t
  (kWh);
- \(\Delta SL_{t-1}\) : Outstanding electricity produced in period t-1;
- t: period of meter readings.

b) In the period of recording the meter readings, if the amount of electricity
produced by the solar power project installed on the roof of Party B plus the
outstanding amount of electricity from the previous period (t-1) is larger than the
electricity consumed by Party B, the outstanding electricity output in the period
of recording the t-meter readings of Party B is determined by the following formula:
$$\Delta S_{Lt} = S_{MT_t} + \Delta S_{Lt-1} - S_{TT_t}$$

2. Electricity payment (excluding value added tax) $T_D_t$ in period of recording the $t$-meter readings is calculated by using electricity output calculated for payment in that period according to Clause 1 with the respective selling tariff as following:

$$T_D_t = S_{Lt} \times g$$

In which:

$g$ : Retail electricity tariff prescribed by competent state agencies (VND/kWh);

3. Periodically, within 03 working days after the end of meter reading cycle, the two parties shall record and unify the amount of electricity consumed in the period, the amount of electricity connected to grid and outstanding of Party B’s electricity output in the period as follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Party B’s outstanding amount of electricity from the previous period (t-1) ($\Delta S_{k_{t-1}}$)</th>
<th>Party B’s electricity consumption in period t ($S_{TT_{k,t}}$)</th>
<th>Party B’s amount of electricity connected to the grid in period t ($S_{MT_{k,t}}$)</th>
<th>Party B’s outstanding amount of electricity in period t ($\Delta S_{k,t}$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. At the end of the period for recording the last meter readings of the year or the termination of the power purchase agreement, the excess power shall be paid at the tariff specified in Clause 1, Article 12 of Decision No. 11/2017 / QD-TTg.

**Article 2. Rights and obligations of Party A**

- Be responsible for the installation of bi-directional meters readings (delivered and received) to calculate electricity consumption and electricity connected to the grid by party B (unless otherwise agreed).

- Together with party B, be responsible for recording and unifying the amount of electricity consumed in the period, the amount of electricity connected to grid, the amount of outstanding electricity and the revenue of electricity generated by Party B.

- At the end of the period for recording the last meter readings of the year or the termination of the power purchase agreement, Party A shall pay Party B the excess power at the tariff specified in Clause 1, Article 12 of Decision No. 11/2017/QD-TTg. Within 5 working days from the date when the two parties reached agreement and signed to certify electricity consumed in the period,
electricity connected to grid in the period and electricity outstanding under Item 3, Article 1.

**Article 3. Rights and obligations of Party B**

- To ensure technical norms on solar power; to ensure the quality of produced electricity as stipulated in Clause 1, Article 15 of Decree No. 137/2013/ND-CP; Articles 40 and 41 of Circular No. 39/2015/TB-BCT or amendments, supplements or replacements, unless otherwise agreed.

- Together with party A be responsible for recording and unifying the amount of electricity consumed, the amount of electricity connected to grid, the amount of electricity outstanding and the revenue of electricity generated by Party B.

**Article 4. Other agreements**

...............................................................

...............................................................

**Article 5. Implementation clause**

1. Apart from the above contents, other contents under the Power purchase agreement for household purpose signed on date...month..... in the year 20 ... between the Power Company ... .. and .............. remain unchanged.

2. This Appendix is effective from the date of ... month ... year ... and is an inseparable part of the Power purchase agreement for household purpose signed on date ......month....year ... between the Power Company ... .. and ..............

3. During the implementation period, should one of the two parties request to terminate, amend or supplement the contents of this signed Addendum, other party must be notified 15 days in advance for mutual resolve./.

**Party B**

(Sign and full name)

**Party A**

(Sign and full name and seal)
Appendix A

REQUIREMENTS ON INSTALLED CAPACITY AND TECHNICAL STANDARD OF METER FOR RECORDING AND PURCHASING ELECTRICITY OF ROOF – MOUNTED SOLAR POWER PROJECT

(Attached with Power purchase agreement for household, administrative and non-business activities, production and business activities using one-price meters)

1. Total installed capacity ……….. MW

In case total installed capacity is less than 01 MW, the owner of the roof-mounted solar project shall renew Appendix A of this agreement with the Power Company.

In case total installed capacity is equal or more than 01 MW, the owner of the roof-mounted solar project shall carry administrative procedure and process to change project capacity in accordance with clause 2 of Article 11 of the Circular and concurrently renew Appendix A of this agreement with the Power Company.

2. Technical requirements for meter readings.
APPENDIX B
TABLE FOR DETERMINING THE AMOUNT OF ELECTRICITY DELIVERED VIA METER OF ROOF MOUNTED SOLAR PROJECT

*Unit: kWh*

<table>
<thead>
<tr>
<th>No</th>
<th>Party B’s outstanding amount of electricity from the previous period (t-1) ($\Delta SL_{k,t-1}$)</th>
<th>Party B’s electricity consumption in period t ($SL_{TTk,t}$)</th>
<th>Party B’s amount of electricity connected to grid in period t ($SL_{MTk,t}$)</th>
<th>Party B’s outstanding amount of electricity in period t ($\Delta SL_{k,t}$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5) = (4) + (2) - (3); (5) &gt; 0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Period 1</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
<td></td>
<td></td>
<td></td>
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<td>...</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Period n</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Party B

*(Sign and full name)*

Party A

*(Sign and full name and seal)*
APPENDIX 3.2
STANDARD POWER PURCHASE AGREEMENT FOR
ROOF – MOUNTED SOLAR POWER PROJECT
(Attached with the Power purchase agreement no... date... month... year...
between Power company.....and.... for production or service purpose applying
daily hour consumption tariff using three-price meter readings)

Pursuant to the Decision No. 11/2017/QD-TTg dated 11 April 2017 by the Prime Minister promulgating supporting mechanism for solar power project development in Vietnam;

Based on demand of power purchase/sale of the two parties,

Today, the day ...... month ...... year....... , at ...............

We are:
Part A (Power company):______________________________
Address: ____________________________________________
ID No./ Passport No. ..........Issued on........at..........;
Email:...
Telephone: _______________ Fax: _______________________
Tax code: ____________________________________________
Account: __________________ At the Bank: __________________
Representative: ______________________________________
Position: __________________________(to be authorized by
Under the Power of Attorney No. ___________________, date _____ month _____ year ________)

Part B (Owner of Roof-mounted solar power project):___________
Address: ____________________________________________
ID No./ Passport No. ..........Issued on........at..........;
Email:...
Telephone: _______________ Fax: _______________________
Tax code: ____________________________________________
Account: ___________________ At the Bank: ______________________ 

Representative: ________________________________________________

Position: ____________________________ (to be authorized by ______ Under 
the Power of Attorney No. ______________________, date _____ month 
______ year _______)

Together agree to sign the Power Purchase Agreement for the roof-
mounted solar power purchase and sale based on net-metering mechanism by 
using bi-directional electricity meters as followings:

**Article 1. Net-metering mechanism**

1. Electricity output calculated in the period of recording the t-meter 
readings:

   a) In the period of recording the meter readings, if the amount of electricity 
produced by the solar power project installed on the rooftop of Party B plus the 
outstanding amount of electricity from the previous period (t-1) is smaller than 
the electricity consumed by Party B, the electricity output of Party B for payment 
is determined by the following formula:

   \[ \Delta SL_{k,t} = SL_{TTk,t} - SL_{MTk,t} - \Delta SL_{k,t-1} \]

   In which:

   - \( SL_{TTk,t} \): Electricity consumption in k hour in period t of Party B (kWh);
   - \( SL_{MTk,t} \): Electricity production by party B connected to the grid in k hour in 
   period t (kWh);
   - \( \Delta SL_{k,t-1} \): Outstanding electricity produced in period t-1;
   - t: period of meter readings recording;
   - k: normal hour, peak hour and off peak hour.

   b) In the period of recording the meter readings, if the amount of electricity 
produced by the solar power project installed on the rooftop of Party B plus the 
outstanding amount of electricity from the previous period (t-1) during normal 
hour, peak hour and off peak hour is larger than the electricity consumed by 
Party B during normal hour, peak hour and off peak hour, the electricity 
outstanding of Party B during normal, peak and off peak hour in the period of 
recording the t-meter readings is determined as followings:

   \[ \Delta SL_{k,t} = SL_{MTk,t} + \Delta SL_{k,t-1} - SL_{TTk,t} \]

   During the period of recording the meter readings, if the amount of 
electricity produced from roof-mounted solar power project during peak hours is 
larger than that of Party B's peak-hour power consumption, outstanding amount 
of electricity will be counter balanced in normal hour. If the amount of
electricity produced from roof-mounted solar power project during normal hours and the excess amount of electricity during peak hours which has not yet been counter balanced is larger than Party B’s power consumption of normal hours, the outstanding amount of electricity will be counter balanced in off peak hour. If the amount of electricity produced from roof-mounted solar power project during off peak hours and the excess amount of electricity which has not yet been counter balanced during the normal hours is larger than Party B’s power consumption during off peak hour, the outstanding amount of electricity will be counter balanced in next period’s normal hour.

2. Electricity payment (excluding value added tax ) $TD_t$ in period of recording the t-meter readings is calculated by using electricity output in that period according to Clause 1 with the selling electricity tariff by the following formula:

$$TD_t = \sum_k (SL_{k,t} \times g_k)$$

In which:

$g_k$: Retail electricity price during normal hour, peak hour and off peak hour prescribed by competent state agencies (VND/kWh);

3. Periodically, after the end of meter readings recording period, the two parties shall record and unify the amount of electricity consumed, the amount of electricity connected to grid and the balance of Party B’s electricity output in the period as following table:

<table>
<thead>
<tr>
<th>No</th>
<th>Party B’s outstanding amount of electricity from the previous period (t-1) ($\Delta SL_{k,t-1}$)</th>
<th>Party B’s electricity consumption in period t ($SL_{TTk,t}$)</th>
<th>Party B’s amount of electricity connected to grid in period t ($SL_{MTk,t}$)</th>
<th>Party B’s outstanding amount of electricity in period t ($\Delta SL_{k,t}$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. At the end of the period for recording the last meter readings of the year or the termination of the power purchase agreement, the excess power shall be paid at the tariff specified in Clause 1, Article 12 of Decision No. 11/2017/QD-TTg.

**Article 2. Rights and obligations of Party A**
- Be responsible for the installation of three-price bi-directional meter readings (delivered and received) to calculate electricity consumed and connected to grid by party B (unless otherwise agreed).

- Together with party B, be responsible for recording and unifying the amount of electricity consumed and connected to grid, the amount of electricity outstanding and the revenue of electricity generated by Party B during various hours including normal, peak and off peak hour.

- At the end of the period for recording the last meter readings of the year or the termination of the power purchase agreement, Party A shall be responsible for the calculation and payment to Party B the excess power at the tariff specified in Clause 1, Article 12 of Decision No. 11/2017 / QD-TTg.

**Article 3. Rights and obligations of Party B**

- To ensure technical norms on solar power; to ensure the quality of generated electricity as stipulated in Clause 1, Article 15 of Decree No. 137/2013/ND-CP; Articles 40 and 41 of Circular No. 39/2015/TT-BCT or amendments, supplements or replacements, unless otherwise agreed.

- Together with party A, be responsible for recording and unifying the amount of electricity consumed, the amount of electricity connected to grid, the amount of electricity outstanding and the revenue of electricity generated by Party B during peak hour, normal hour and off peak hour.

**Article 4. Other agreements**

…………………………………………………………………………………………………………………………

**Article 5. Implementation commitment**

1. Apart from the above contents, other contents in the Power purchase agreement for.......signed on date...month..... in the year 20 ... between the Power Company .... and ............... remain unchanged.

2. This Appendix is effective from the date of ... month ... year ... and is an inseparable part of the Power purchase agreement for ........ signed on date ......month....year ... between the Power Company .... .. and ..............

3. During the implementation period, should one of the two parties request to terminate, amend or supplement the contents of this Addendum, other party must be notified 15 days in advance for mutual resolve./.

Party B
(Sign and full name)

Party A
(Sign and full name and seal)

Appendix A
1. Total installed capacity .......... MW

In case total installed capacity is less than 01 MW, the owner of the roof-mounted solar project shall renew Appendix A of this agreement with the Power Company.

In case total installed capacity is equal or more than 01 MW, the owner of the roof-mounted solar project shall carry administrative procedure and process to change project capacity in accordance with clause 2 of Article 11 of the Circular and concurrently renew Appendix A of this contract with the Electricity Company.

2. Technical requirements for meter readings.
APPENDIX B

TABLE FOR DETERMINING THE AMOUNT OF ELECTRICITY DELIVERED VIA METER OF ROOF-MOUNTED SOLAR PROJECT

Unit: kWh

<table>
<thead>
<tr>
<th>No</th>
<th>Party B’s outstanding amount of electricity from the previous period (t-1) ($\Delta S_{L,k,t-1}$)</th>
<th>Party B’s electricity consumption in period t ($S_{LT,k,t}$)</th>
<th>Party B’s amount of electricity connected to grid in period t ($S_{LT,k,t}$)</th>
<th>Party B’s outstanding amount of electricity in period t ($\Delta S_{L,k,t}$)</th>
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<tr>
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<td>(3)</td>
<td>(4)</td>
<td>(5)=(4)+(2)-(3); (5) &gt; 0</td>
</tr>
</tbody>
</table>

**Period 1**
- Peak hour
- Normal hour
- Off-peak hour

... ... ... ...

**Period**
- Peak hour
- Normal hour
- Off-peak hour

**Total by year end**
- Peak hour
- Normal hour
- Off-peak hour

Party B
*(Sign and full name)*

Party A
*(Sign and full name and seal)*