

No.: 32/2015/TT-BCT

Hanoi, 8 October 2015

CIRCULAR

on

**project development and Standardized Power Purchase Agreement for
power generation projects using solid wastes**

Pursuant to the Electricity Law No. 28/2004/QH11 dated 03 December 2004 and the Law on Amendment of and Supplement to some Articles of Electricity Law dated 20 November 2012;

Pursuant to the Government's Decree No. 95/2012/NĐ-CP dated 12 November 2012 prescribing the functions, tasks, powers and organizational structure of the Ministry of Industry and Trade (MoIT);

Pursuant to the Prime Minister's Decision No. 31/2014/QĐ-TTg dated 5 May 2014 on the support mechanism for development of power generation projects using solid wastes in Vietnam;

In response to the request made by the General Director of the General Directorate of Energy (GDE)

The Minister of Industry and Trade hereby promulgates the Circular on project development and Standardized Power Purchase Agreement for power generation projects using solid wastes in Vietnam.

**CHAPTER 1
GENERAL PROVISIONS**

Article 1. Scope of Regulation

This Circular stipulates the development of grid-connected power generation projects using solid wastes and promulgation of Standardized Power Purchase Agreement for grid-connected power generation projects using solid wastes in Vietnam (hereinafter referred to as the SPPA).

Article 2. Subjects of Application

This Circular shall be applicable to the following subjects:

1. Investors of grid-connected power generation projects using solid wastes;
2. Units that manage and operate grid-connected power generation facilities using solid wastes
3. Power purchaser;
4. Organizations that develop power generation projects using solid wastes for the purpose of power purchase/sale;
5. Other relevant organizations and individuals.

Chapter II DEVELOPMENT OF POWER GENERATION PROJECTS USING SOLID WASTES

Article 3. Incorporation of power generation projects using solid wastes into the national development plan for power sources using solid wastes

1. The solid waste power project investor shall, in accordance with legal regulations on works construction investment, prepare the project proposal and send it to the People's Committee of the province or centrally-run city (hereinafter referred to as PPC) where the project is located. On the basis of the project proposal, the PPC shall prepare the dossier requesting for project incorporation into the national development plan for power sources using solid wastes (hereinafter referred to as the dossier requesting for project incorporation into the national plan) in accordance with provisions as prescribed in Article 4 of this Circular and then send to MoIT.

2. Within 05 (five) working days from the receipt of the dossier, the MoIT (GDE) shall be required to issue the written request for additional information if the dossier requesting for project incorporation into the national plan is not complete and/or valid.

3. The GDE shall be responsible for appraising the dossier requesting for project incorporation into the national plan within 30 (thirty) working days from the receipt of the complete set of valid documentation. If required, the GDE shall be allowed to engage appraisal/review consultant(s) for appraisal purposes. On the basis of the appraisal results, the GDE shall report to the Minister of Industry and Trade for consideration/approval or for submission for the Prime Minister's approval.

Article 4. Dossier requesting for project incorporation into the national development plan for power sources using solid wastes

1. Submission letter by the PPC Chairperson requesting for project incorporation into the national development plan for power sources using solid wastes.

2. Basic information on the investor: legal status documentation, business registration, key personnel, project implementation experience and financial/technical capabilities, including a list of completed (industrial and power) projects if any;

3. Information on the proposed power generation project using solid waste:

- a) Type of solid waste(s) to be used and potential supply;
- b) Necessity of project investment, advantages and constraints, and option(s) for solid waste exploitation and utilization (if any);
- c) Project description: location, scale and project construction area, and project's works categories; items of industry-based, landfill and local construction planning;
- d) Preliminary implementation solutions, including: technical plans, technology and capacity; technical infrastructure connection option(s); equipment installation option(s); implementation progress and project management method; general option(s) for resettlement compensation and technical infrastructure support plan, if any; cost plan(s) and option(s);
- dd) Environmental impact assessment;
- e) Fire prevention and firefighting solutions, and requirements for security and national defense;
- g) Total project investment volume; potential capital mobilization, capital sources and progress-based financing capacity; analysis and assessment of the project's financial-economic and social efficiencies.

4. Opinions of the regional Electric Power Corporation or power transmission unit (if connected to the power transmission system) on the dossier requesting for project incorporation into the national plan.

Article 5. Power generation investment projects using solid wastes

1. The investor shall only be allowed to prepare a solid waste power generation investment project which is incorporated in the approved national development plan for power sources using solid wastes. Contents of this solid waste power investment project shall be in accordance with the current regulations on the management of construction works investment and provisions

as prescribed in Clause 3 of this Article.

2. For a solid waste power generation project that is divided into different investment phases with different total capacity and date of operation for each phase, the investor shall be required to prepare a separate investment project for each phase. If the difference between the expected date of project operation and the date prescribed in the national development plan for power sources using solid wastes is longer than 6 (six) months, the investor shall be responsible for reporting to the PPC and GDE-MoIT.

3. Contents of a solid waste power investment project shall be in accordance with the legal regulations on the management of construction works investment, with the following additional items:

a) Impact assessment of option(s) for the connection of a power generation project using solid wastes to the regional power system;

b) Cost/technical plan(s) and option(s) for dismantlement and management of solid waste power plant equipment upon the project completion.

Article 6. Requirements for works safety and environmental protection

The investment and development activities of a power generation project using solid waste must comply with the current regulations and standards for works safety and environmental protection.

Chapter III

ELECTRICITY PRICE APPLICABLE TO POWER GENERATION PROJECTS USING SOLID WASTES

Article 7. Calculation of electricity purchase price

No later than 30 October each year, the GDE shall calculate, on the basis of the system's electricity cost and price, the capacity of power sources using solid wastes and send to ERAV for ERAV's calculation of the following year's electricity price applicable to power generation projects using solid wastes and submission to the Minister of Industry and Trade for subsequent reporting for the Prime Minister's consideration and final decision.

Article 8. Electricity purchase and selling price applicable to grid-connected power generation projects using solid wastes

1. The Purchaser shall be responsible for purchasing all electric power produced by grid-connected power generation projects using solid wastes with the electricity purchase price (VAT exclusive) at the delivery point as follows:

a) For power generation projects using solid wastes that are directly incinerated, it shall be VND 2,114/kWh (10.05 US cents/kWh equivalent).

b) For power generation projects using combusted gas collected from solid waste landfills, it shall be VND 1,532/kWh (7.28 US cents/kWh equivalent).

2. Power generation projects using solid wastes, which apply the electricity purchase price as prescribed in Clause 1 of this Article, shall not be allowed for any price support mechanisms for project power output as stipulated in other current regulations; the electricity purchase price shall be subject to VND/USD exchange rate fluctuations.

3. The electricity purchase cost for power generation projects using solid wastes shall be calculated and fully incorporated into input parameters in the EVN's scenario of annual electricity selling price, which shall be approved by competent state agency(ies).

Chapter IV

STANDARDIZED POWER PURCHASE AGREEMENT FOR GRID-CONNECTED POWER GENERATION PROJECTS USING SOLID WASTES

Article 9. Application of Standardized Power Purchase Agreement (SPPA) to power generation projects using solid wastes

1. The use of SPPA for power generation projects using solid wastes shall be mandatory in the power purchase/sale between the grid-connected power generation projects using solid wastes and the Purchaser.

2. Power generation projects using solid wastes shall have all electric power produced from solid waste sources.

Article 10. Contents of SPPA applicable to power generation projects using solid wastes

1. The contents of SPPA applicable to power generation projects using solid wastes are prescribed in the Appendix to this Circular.

2. The Seller and the Purchaser may include additional items into the SPPA in order to clarify responsibilities and powers of the parties, but no changes to the fundamental content of the SPPA shall be allowed.

Chapter V

IMPLEMENTATION ARRANGEMENTS

Article 11. Responsibilities of state management agencies

1. GDE shall be responsible for:
 - a) Calculating, on yearly basis, the capacity of power sources using solid wastes and send to ERAV.
 - b) Providing the Purchaser and Seller with support to address possible SPPA-related problems that may arise;
 - c) Disseminating, guiding and inspecting the implementation of this Circular.
2. ERAV shall be responsible for calculating the following year's electricity price on the basis of the GDE-estimated capacity of power sources using solid and submitting to the Minister of Industry and Trade for subsequent reporting for the Prime Minister's consideration and final decision.
3. The PPC shall be responsible for monitoring, supervising and inspecting the development of local power generation projects using solid wastes in accordance with the approved national development plan for power sources using solid wastes and provisions as prescribed in this Circular.

Article 12. Responsibilities of related organizations/individuals

1. EVN shall be responsible for fully calculating electricity purchase cost for power generation projects using solid wastes and incorporating input parameters into the EVN's scenario of annual electricity selling price, which shall be approved by competent state agency(ies).
2. The Seller shall be responsible for:
 - a) Negotiating and signing PPA with the Purchaser in accordance with the SPPA and electricity purchase/selling price applicable to power generation projects using solid wastes as prescribed in Article 8 of this Circular;
 - b) Installing the 3-rate power meter in compliance with current regulations in order to measure the power quantity used for payment purpose;
 - c) Sending 01 (one) copy of the signed PPA to GDE no later than 30 days from the signature date.
 - d) Complying with MoIT-promulgated regulations on power system operation, power transmission and power distribution.
3. The Purchaser shall be responsible for:
 - a) Negotiating and signing PPA with the Seller in accordance with the SPPA and electricity purchase/selling price applicable to power generation projects using solid wastes as prescribed in Article 8 of this Circular;
 - b) Complying with MoIT-promulgated regulations on power system operation, power transmission and power distribution.

Article 13. Provision for transition

For PPAs that have been signed before the effective date of this Circular,

both parties shall be responsible for reaching agreement and signing on the amendment Appendix in accordance with provisions as stipulated in this Circular.

Article 14. Enforcement

1. This Circular shall take effect from 7 December 2015.

2. Any difficulties/constraints that may arise during the implementation process shall be reported by the GDE, in coordination with relevant agencies/units, to the MoIT for its consideration, possible amendment and addition of this Circular./.

Recipients:

- Prime Minister, Deputy Prime Ministers;
- Office of Party's General Secretary;
- Ministries, Ministerial-level agencies and Government-dependent agencies;
- People's Committees of provinces and centrally-run cities;
- Official Gazette;
- Government's website;
- MoIT's website; GDE's website;
- Ministry of Justice (Department for Checking Legal Normative Document);
- DoITs;
- EVN;
- Electric Power Corporations;
- For filing: Clerical section, GDE, Legal section.

**ON BEHALF OF
MINISTER
VICE-MINISTER**



Hoàng Quốc Vượng

APPENDIX
**STANDARDIZED POWER PURCHASE AGREEMENT FOR GRID-
CONNECTED POWER GENERATION PLANTS USING SOLID
WASTES**

*(Issued together with Circular No 32/2015/TT-BCT dated 8 October 2015 by the
Minister of Industry and Trade)*

TABLE OF CONTENT

Article 1. Interpretation of terms

Article 2. Delivery and electricity power purchase and sale

Article 3. Connection, metering and operation of the power plant

Article 4. Billing and payment

Article 5. Coordination in case of force majeure

Article 6. Duration of Agreement

Article 7. Breaches, damage compensations and suspension of Agreement
performance

Article 8. Settlement of disputes

Article 9. Entrustment, transfer and restructuring

Article 10. Other agreements

Article 11. Implementation commitment

Appendix A: System connection agreement

Appendix B: Technical specifications of the power plant

Appendix C: Requirements prior to the date of commercial operation

Appendix D: Other agreements

**STANDARDIZED POWER PURCHASE AGREEMENT
FOR GRID- CONNECTED POWER GENERATION PLANTS USING
SOLID WASTES**

BETWEEN

SELLER
(Name)

AND

PURCHASER
(Name)

*(Issued together with Circular No.32/2015/TT-BCT dated 8 October 2015 by the
Minister of Industry and Trade)*

Unofficial GLZ Translation for Reference Only

TABLE OF CONTENT

Article 1. Interpretation of terms	5
Article 2. Delivery, power purchase/sale and operation	7
Article 3. Connection, metering and operation of the power plant.....	10
Article 4. Billing and payment	13
Article 5. Force majeure.....	15
Article 6. Duration of agreement	16
Article 7. Breaches, damage compensations and suspension of Agreement performance.....	16
Article 8. Settlement of disputes	18
Article 9. Entrustment, transfer and restructuring.....	19
Article 10. Other agreements	19
Article 11. Implementation commitment	21
Appendix A: System connection agreement	
Appendix B: Technical specifications of the power plant	
Appendix C: Requirements prior to the date of commercial operation	
Appendix D: Other agreements	

SOCIALIST REPUBLIC OF VIETNAM
Independence- Freedom- Happiness

POWER PURCHASE AGREEMENT

Pursuant to the Electricity Law No. 28/2004/QH11 dated 03 December 2004 and the Law on Amendment of and Supplement to some Articles of Electricity Law dated 20 November 2012;

Pursuant to Commerce Law dated 14 June 2005;

Pursuant to the Prime Minister's Decision No. 31/2014/QĐ-TTg dated 5 May 2014 on the support mechanism for development of power generation projects using solid wastes in Vietnam;

Pursuant to Circular No.32/2015/TT-BCT dated 8 October 2015 by the MoIT on the project development and Standardized Power Purchase Agreement for power generation projects using solid wastes;

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

Today, DD.....MM.....YY, at.....

We are:

Seller: _____

Address: _____

Phone: _____ Fax: _____

Tax Code: _____

Account No.: _____ at Bank _____

Represented by: _____

Title: _____ (To be authorized by _____

_____ in accordance with

Authorization document No. _____, DD _____ MM _____ YY
_____)

Purchaser: _____

Address: _____

Phone: _____ Fax: _____

Tax Code: _____

Account No.: _____ at Bank _____

Represented by: _____

Title: _____ (To be authorized by _____

_____ in accordance with

Authorization document No. _____, DD _____ MM _____ YY
_____)

The parties hereto agree to sign the Power Purchase Agreement for the power purchase and sale as follows:

Article 1. Interpretation of terms

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

1. Lender means an organization/individual that grants the Seller or Purchaser loan(s) to effectuate this Agreement. The list of Lender(s) shall be notified to each other by parties in compliance with Article 6 of this Agreement.

2. Party or parties means the Seller, Purchaser or both or unit(s) that shall take on rights and obligations of a party or the parties of this Agreement.

3. Connection point is where the electric line of the Seller is connected to the electric system of the Purchaser as agreed in Appendix A of this Agreement.

4. Electricity delivery point is where the metering equipment is installed in order to determine the Seller's power output sold.

5. Electric power purchased/sold is the amount of electric power calculated in kWh and generated by the power plant at its highest capacity,

subtracted by the electric power self-consumed and lost by the power plant, and accepted to be sold and delivered to the Purchaser by the Seller as prescribed in Appendix B of this Agreement.

6. *The Agreement* includes this text and Appendices herewith.

7. *Inter-bank average interest rate* is the inter-bank average interest rate within 01 (one)-month term as announced by the State Bank of Vietnam at the time of payment.

8. *Agreement year* is a calendar year of 12 (twelve) months counting from the first day of January to the last day of December of that year, except for the first agreement year which shall start on the date of commercial operation and end on the last day of December of that first agreement year. The last agreement year shall end on the last day of the agreement duration.

9. *Due date* refers to a 15 (fifteen)-day term from the date on which the Purchaser receives electricity-payment bill as issued by the Seller.

10. *Date of commercial operation* is the date on which the Seller informs the Purchaser of possible power delivery in accordance with all provisions of this Agreement or the date on which the Seller starts to deliver the electric power to the Purchaser in accordance with all provisions of this Agreement, and the Purchaser must pay for the electric power delivered according to the Appendix C of this Agreement.

11. *A power plant* consists of the Seller's power generation equipment, protective equipment, connection equipment and related auxiliary equipment; and land to be used for electricity and auxiliary facilities for the purpose of electricity production under this Agreement.

12. *Standards and technical regulations of the electricity industry* are regulations, standards and practices applied in the electricity industry and issued by competent organizations of Vietnam, or regulations/standards of international organizations or of nations in the regions in accordance with legal stipulations and recommendations of equipment manufacturers, taking into account resources, materials, fuel and technical conditions acceptable to the Vietnamese electricity industry at a given point of time.

13. *Regulations on the operation of national electricity system* mean Circulars/Processes prescribing the standards for operation of the electricity system, conditions and procedures for grid connection, load dispatch of the

electricity system, and metering in the electricity transmission and distribution system.

14. *Emergency situations* are situations that may disrupt electric power supply services to the Buyer's customers, including cases that may cause substantial damages to the national electricity system, threatening the human lives and properties or affecting the technical capacity of the power plant.

Article 2. Delivery, power purchase/sale and operation

1. *Power delivery*

a) From the date of commercial operation, the Seller agrees to deliver and sell electric power to the Purchaser and the Purchaser accepts to buy electric power from the Seller in compliance with the provisions of this Agreement.

b) The Purchaser shall be responsible for purchasing all electric power generated to the grid by the Seller at the electricity purchase price as stipulated in Clause 2 of this Article.

c) The Seller shall be entitled to the environment-related benefits in compliance with legal stipulations and international treaties.

2. *Electricity purchase/selling price*

The electricity purchase/selling price in this Agreement shall apply the provisions as stipulated in Article 14 of the Prime Minister's Decision No. 31/2014/QĐ-TTg dated 5 May 2014 on the support mechanism for development of power generation projects using solid wastes in Vietnam and Circular No.32/2015/TT-BCT dated 8 October 2015 by the MoIT on the project development and Standardized Power Purchase Agreement for power generation projects using solid wastes as follows:

a) For power generation projects using solid wastes that are directly incinerated, it shall be VND 2,114/kWh (10.05 US cents/kWh equivalent).

b) For power generation projects using combusted gas collected from solid waste landfills, it shall be VND 1,532/kWh (7.28 US cents/kWh equivalent).

3. *Electricity purchase/sale*

The Seller shall agree to operate the power plant within the available capacity of equipment and in accordance with standards and technical regulations of the electricity industry. The Seller shall not be liable for direct damages to the Purchaser as caused by Seller's provision of insufficient electric power, which is not the Seller's fault. If no Purchaser's written consent is

reached when the Seller reduces the electric power sold for the purpose of electricity sale to the third party(ies) or for other purposes, the Seller shall not be exempt from his/her liability.

4. Operation plan

a) Prior to or on the effective date of this Agreement, the Seller shall provide the Purchaser with the chart(s) on annual average electric power generation at the power plant's bus bar on a monthly basis in compliance with the basic design of the power plant and the chart(s) on electric power generation using solid waste data of the previous years;

b) The Seller shall provide the Purchaser with annual electricity production plan(s), comprising of:

- Monthly operation plan(s) of the year (electricity output and available capacity);
- Generator maintenance/repair plan(s) for different months of the year (if any).

c) The Seller must provide information on maintenance/repair and generator mobilization plan(s) for the load dispatch entity (which has control authority) in compliance with legal stipulations on the operation of the national electricity system.

5. Outage

The Seller shall inform the Purchaser of the scheduled outage and expected duration for planned and unplanned repairs in consistent with regulations on the operation of the national electricity system.

6. Electricity grid operation

a) The Seller shall be responsible for the management, operation and maintenance of electricity grid equipment within the scope of properties management as prescribed in the Connection Agreement(s) with power grid management entities, ensuring the compliance with stipulations on the operation of the national electricity system; standards and technical regulations of the electricity industry; and the power purchase/sale as prescribed in the PPA.

b) The Seller shall be required to discuss and reach its consensus with the national operation entity (which has control authority) on power source mobilization plan and solutions to mitigate the impacts on regional electricity grid transmission as caused by constraints related to regional load and electricity grids.

7. Interruptions during the receipt and purchase of electricity

The Purchaser shall not be liable for obligations of purchasing or receiving electricity when:

a) The Seller's power plant does not guarantee its operation and maintenance in compliance with the regulations on the operation of the national electricity system and standards and technical regulations of the electricity industry;

b) The Purchaser installs equipment, and repairs, replaces, inspects or checks the electricity grid, and all of these activities are directly related to the connection to the Seller's power plant;

c) The transmission and distribution grid, which is connected to the Purchaser's grid, or the Purchaser's electricity grid equipment, which is directly connected to transmission and distribution grid, encounters incidents;

d) The Purchaser's grid requires post-incident recovery solutions in accordance with provisions on the operation of the national electricity system and standards and technical regulations of the electricity industry.

8. Interruptions during the electricity delivery and sale

The Seller may terminate or curtail the amount of electricity sold and delivered to the Purchaser in the event of equipment installation, repairs, replacement, inspection, testing or repairs of the power plant, which directly affects the delivery of electric power to the Purchaser.

Before terminating or curtailing the amount of electricity delivered to the Purchaser, the Seller must notify the Purchaser thereof for at least 10 (ten) days in advance, clearly stating the reasons for interruptions, expected starting date and duration.

9. Coordination

The Purchaser shall be responsible for minimizing the curtailment or outage duration in circumstances as described Clause 7 of this Article. Except for emergency cases, the Purchaser shall be required to inform the Seller for at least 10 (ten) days in advance, clearly stating the reasons for curtailment or outage, expected starting date and duration. When necessary, the Purchaser must transfer load dispatch commands related to the operation of the power plant as received from the load dispatch entity and the Seller must comply with those commands, except for the cases in which those commands would change the plant's mobilization characteristics.

10. Power factor

The Seller agrees to operate the power plant in synchronized manner with the Purchaser's grid for the purpose of electricity delivery at the delivery point and voltage level/power factor from 0.85 (corresponding to outgoing reactive power) to 0.90 (corresponding to incoming reactive power) as prescribed in Appendix A. Except when the Purchaser otherwise requests, the Seller's power plant must serve the Purchaser at the power factor as determined in accordance with the Regulations on distribution grid at the delivery point.

11. Synchronized operation

The Seller shall be responsible for providing the Purchaser with written notification at least 30 (thirty) days before the first-time synchronization of power generators at the Seller's power plant into the Purchaser's electricity grid. The Seller must coordinate with the Purchaser during the first-time and subsequent synchronizations.

12. Standards

The Seller and the Purchaser must comply with regulations relating to the delivery and receipt of electricity in accordance with the Regulations on distribution grid, Regulations on metering and legal normative documents related to the electricity industry.

13. Change of commercial operation date

Within 06 (six) to 12 (twelve) months prior to the commercial operation date as stipulated in Appendix A, the Seller must give official confirmation on the change of commercial operation date. The parties shall be liable for cooperation; the Purchaser shall not be allowed to decline without valid justifications.

Article 3. Connection, metering and operation of the power plant

1. Responsibilities at electricity delivery point

The Seller shall be responsible for the investment in/installation of equipment for the electricity transmission and delivery to the Buyer at the electricity delivery point. The Purchaser shall be responsible for cooperation with the Seller in performing this installation.

2. Connection

a) The Seller shall be responsible for the investment, construction, operation and maintenance of connection equipment, which is for connecting the power plant to the electricity transmission/distribution grid in accordance with Regulations on transmission/distribution grid and other related regulations. The Seller shall bear the costs for upgrading the metering system at the transformer station in order to measure/count 02 (two)-way active and reactive power in the distribution line linking with the power plant in accordance with the provisions as stipulated in Appendix A of this Agreement.

b) The Purchaser shall reserve the right to review the technical design and adequacy of protective devices. The Purchaser must provide the Seller, within 30 (thirty) days from the receipt of a complete set of design-related technical documentation, with the written notification on appraisal results. The Purchaser must notify in writing all design errors that are detected. The Seller must perform additional modifications as recommended by the Purchaser in accordance with legal regulations on national electricity system operation and standards/technical regulations of electric power industry.

3. Connection standards

The Seller's and Purchaser's equipment must be installed, operated and connected in compliance with Regulations on distribution grid.

4. Inspecting the implementation of connection standards

Upon the receipt of in-advance notification as regulated, one party shall reserve the right to inspect the other party's connection equipment to ensure the compliance with legal regulations on the operation of the national electricity system. The inspection should not affect the operation of the inspected party. If the inspected party's equipment fails to meet the conditions for operation and maintenance, the inspecting party must notify the inspected party all required calibrations. The inspected party shall be responsible for applying necessary remedies upon the receipt of justified request for calibrations from the inspecting party.

5. Excited generator

If the Seller's power plant has excited generator(s), the Seller must install a separate capacitor for each generator for the purpose of calibrating the power factor. Those capacitors must be connected or disconnected concurrently with each excited generator. The KVAR of capacitors must ensure the highest standard value, but not exceed KVAR no-load thresholds of generators. The Seller must pay the Purchaser for electricity consumption for operating excited generator(s) at electricity retail price of the corresponding voltage level if the

consumed electricity is taken from the Purchaser's electricity grid. This payment shall be made in accordance with the provisions as prescribed in Article 4 of this Agreement.

6. Metering

a) The Seller's responsibilities:

- Install and maintain the main and backup metering equipment for the purpose of power metering and billing;
- Make available the space for installing the metering equipment if the connection point is within the power plant.

b) Requirements of metering equipment:

- Comply with metering and other related regulations;
- Be capable of storing and recording bi-dimensional active and reactive power;
- Be capable of transferring data to locations as requested by the Purchaser;
- Be leaded/sealed and capable of recording/storing large quantity of data.

7. Meter readings

Every month (or otherwise agreed by the two parties), the Purchaser and the Seller shall together perform the meter readings.

After giving notification as prescribed, the Purchaser shall be allowed to enter the power plant or metering equipment place for meter readings and other activities related to the performance of this Agreement. The Purchaser's activities at the power plant must not affect the Seller's normal operations. The Purchaser-appointed employees or inspectors must obey safety regulations and the power plant's rules.

8. Inspection of metering equipment

a) The checks/inspection of metering equipment and confirmation of metering equipment accuracy must comply with power-metering regulations and be performed by competent or authorized organization(s). Inspection(s) should be done before the first-time operation of metering equipment. All metering equipment must be sealed, leaded and locked after being inspected, and the Purchaser shall reserve the right to witness this process.

b) All the power plant's metering equipment must be inspected on a yearly basis in accordance with power-metering regulations, and the inspection cost shall be paid by the Seller. If required, a party may propose to inspect the accuracy of any metering equipment, and the inspection cost shall be borne by the proposing party. The inspection results must be notified to the other party upon request. If the metering equipment shows errors, which are greater than the acceptable level as prescribed in metering regulations, the Seller shall be

responsible for calibrating or replacing and returning the Purchaser the relevant paid amount plus the interest rate of relevant paid amount (based on the prescribed basic interest rate) and inspection expense(s). Each party shall be notified in advance and reserve the right to appoint person(s) to participate in sealing-off, checking, inspecting and leading/sealing the power meter. If one party finds that the power meter is broken or not working, such party must promptly notify the other party for subsequent checks and repairs by the one who owns the equipment.

9. Transfer of electricity ownership

At the electricity delivery point, the electricity ownership shall be transferred from the Seller to the Purchaser. At this point, the Purchaser shall have the right for ownership/control and take responsibility for the electric power received. The electric power shall be transmitted by three (3)-phase AC, fifty hertz frequency (50Hz) with the voltage as specified in Appendix A of this Agreement.

10. Operation of the power plant

The Seller must operate the power plant in accordance with Regulations on electricity distribution grid; Standards of the electricity industry and other relevant legal provisions.

Article 4. Billing and payment

1. Billing

Every month (or otherwise agreed by the two parties), the Purchaser and the Seller shall together performing the meter readings on the agreed date to determine the amount of electricity delivered in the given month. The Seller shall record, using the template format, the meter readings that shall be confirmed the Purchaser representative(s), and send meter-reading results together with printed invoice (or by fax with an official letter later or by mail) to the Purchaser no later than 10 (ten) working days from the completion of meter readings.

2. Payment

a) The Purchaser shall pay the Seller for the entire electric power delivered no later than the due date of payment as prescribed in Clause 9 Article 1 and electricity purchase price as specified in Clause 2 Article 2 of this Agreement.

b) If the Purchaser fails to pay within the period as specified above, the Purchaser shall be liable to pay the interest for the late payment. The late payment interest shall be equal to the inter-bank average interest rate applicable to one (01)-month term, counting from the date after the due date.

c) If the Purchaser does not participate in the meter readings as prescribed in Clause 1 of this Article, the Purchaser shall be required to pay the Seller the amount of electric power delivered.

d) The Seller shall be required to pay the Purchaser according to the electricity distribution price as prescribed in the Agreement (if any).

3. Estimation of electricity sold

If there is insufficient data necessary to determine the amount of electricity or payment that the Purchaser owes the Seller (except for cases as specified in Clause 4 of this Article), the Seller shall be required to estimate those figures and make adjustment to the payment amount to reflect the actual situation for the purpose of subsequent payments.

4. Sequence of applying and replacing meter figures

In order to determine the electricity amount received and accepted by the Purchaser within a given payment period, the meter readings, billing and payment must be based on data estimates of the following sequence:

a) Power plant's main meter figures for the given payment period, which show a degree of accuracy in accordance with the provisions of Clause 8, Article 3 of this Agreement;

b) Power plant's backup meter figures (if the backup meter is used to meter the electricity delivered), which show a degree of accuracy in accordance with the provisions of Clause 8, Article 3 of this Agreement;

c) When all meters fail to accurately record the electricity amount delivered, the estimation of electricity delivered must be done on the basis of the power plant's monthly average data (if any) for the same payment period of the preceding year of the agreement year, and must be reasonably adjusted for the given billing period based on the corresponding available data that affect the power plant's electricity generation, e.g. biomass parameters, generator efficiency, number of operating hours, operation duration of generator(s) and self-consumed electricity (generally referred to as "operation parameters") while the meters are not working.

In the absence of reliable data, the estimation of electricity delivered must be done on the basis of the power plant's monthly average electricity data collected for 06 (six) payment periods (or less if the power plant has been operating for less than six months) just preceding the date when meters stop working and must be adjusted according to the outage duration or operation parameters.

5. Bill disputes

a) If one party does not agree with all or part(s) of the bill in terms of electricity output delivered or payment amount, such party shall reserve the right, prior to the due date of payment, to send a written notification to the other party. If the parties fail to reach agreement, the duration for dispute settlement for one party or all parties shall be 01 (one) year from the date when the Purchaser receives the valid invoice.

b) If the Seller wins in dispute settlement as stipulated in Clauses 1 and 2, Article 8 of this Agreement, the Purchaser must pay the Seller all the disputed amount plus the interest calculated on the basis of inter-bank average interest rate and the monthly interest to be covered from the due date to the payment date of disputed amount. If the Purchaser wins, the Seller shall be required to refund the disputed amount that the Seller already received, plus the interest calculated on the basis of inter-bank average interest rate and the monthly interest to be covered from the date of payment receipt to the payment date of disputed amount. All payments referred herein must be done within 15 (fifteen) days from the issuance date of final decision on dispute settlement in accordance with Article 8 of this Agreement.

Article 5. Force majeure

1. Force majeure

Force majeure events mean unforeseeable events that are irreparable despite all available remedies and resources. Force majeure events include:

a) Decision(s) by competent authorities, affecting a Party's fulfillment of obligations;

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

c) Violence, riots, war, resistance, sabotage, embargo, besiegement, blockade, or any act of war or hostilities against the community whether the war is declared or not;

d) Nationalization, expropriation or confiscated properties of the Seller under decision(s) by competent State agencies;

e) Other causes, which are beyond the control and not the faults of the party citing for force majeure events.

2. Settlement of a force majeure event

In case of force majeure, the party citing for force majeure event(s) shall:

- a) Promptly send a written notice on force majeure event(s) to the other party, clearly stating reasons, sufficient supporting evidence for such force majeure event, anticipated time/duration and possible impacts on its fulfillment of obligations;
- b) Make all efforts within its capacity to perform its obligations as stipulated in the Agreement;
- c) Promptly take necessary actions and provide evidence for its reasonable efforts to address such force majeure event;
- d) Take necessary measures to mitigate damages to the parties of the Agreement;
- d) Promptly inform the parties of the termination of such force majeure event.

3. Consequences of a force majeure event

As long as all remedies/actions as prescribed in Clause 2 of this Article are taken, the violating party shall be exempt from liabilities related to the failure to perform obligations under the Agreement as caused by such force majeure event.

4. Duration of a force majeure event

If a force majeure event prevents a party from fulfilling this Agreement's obligations for a period of 01 (one) year, the other party shall reserve the rights to unilaterally terminate the Agreement after 60 (sixty) days from the date of written notification, unless such obligations are to be performed within 60 (sixty) days.

Article 6. Duration of agreement

This Agreement shall take effect from DD...MM...YY and terminate after 20 (twenty) years from the date of commercial operation. Upon the completion of the Agreement, the contents of this Agreement shall continue to take effect for a certain period of time necessary for the concerned parties to prepare the final invoice(s), adjust invoice(s), make payments and perform all rights/obligations in this Agreement.

Article 7. Breaches, damage compensations and suspension of Agreement performance

1. The Seller's breaches

- a) The Seller fails, within 03 (three) months, to meet the commercial operation date as prescribed in Appendix A, except for force majeure event(s);

b) The Seller fails, within 60 (sixty) days from the receipt of the Purchaser's written notice, to perform or comply with the contents of the Agreement.

If the Seller or the Seller's lending party has tried to address the breaches within the said 60 (sixty) days but its remedial actions could not be completed within such period, the Seller or the Seller's lending party shall be allowed to continue its remedial actions for a maximum of 01 (one) year from the receipt date of written notice on the Seller's breaches. The Seller shall be required to continue its remedial actions in a shortest duration of time, except for cases as prescribed in Article 5 of this Agreement;

c) The Seller denies the validity of a part or the whole of this Agreement;

d) It violates the Seller's commitments as stipulated in Article 10 of this Agreement.

3. The Purchaser's breaches

a) The Purchaser fails, within 60 (sixty) days from the receipt of the Seller's written notice, to perform or comply with the contents of the Agreement

If the Purchaser or the Purchaser's lending party has tried to address the breaches within the said 60 (sixty) days but its remedial actions could not be completed within such period, the Purchaser or the Purchaser's lending party shall be allowed to continue its remedial actions for a maximum of 01 (one) year from the receipt date of written notice on the Purchaser's breaches. The Purchaser shall be required to continue its remedial actions in a shortest duration of time, except for cases as prescribed in Article 5 of this Agreement;

b) The Purchaser fails to pay the non-dispute amount on the due date under this Agreement, this failure continues for more than 90 (ninety) days without valid justifications;

c) The Purchaser denies the validity of a part or the whole of this Agreement;

d) It violates the Purchaser's commitments as stipulated in Article 10 of this Agreement.

4. Remedial procedures and settlement of agreement breaches

a) If a breach of the Agreement is found, the affected party must send written notice to the violating party. The violating party must be cooperative to address such breach.

b) The lending party of the violating party shall reserve the right to, as a remedy, appoint a third party or replace the violating party provided that a written notice must be sent to the violating party. In this case, such replacement should not increase the financial burden on the affected party. The affected party must accept such replacement or ask the third party as appointed by the lending party to remedy the agreement breaches. The lending party of the violating party shall provide the affected party with a written notice on anticipated remedies on the violating party's behalf, and reach a consensus with the affected party on a

reasonable period from the receipt date of written notice on the fulfillment of Agreement's obligations on the violating party's behalf.

5. Compensation for damages

a) The violating party shall be obliged to pay compensation for damages caused by its breaches to the affected party. The compensation shall cover the values of actual/direct damages to the affected party as caused by the violating party as well as potential direct benefits for the affected party in case of no breaches.

b) The affected party must provide proven evidence on damages/level of damages caused by such breaches and potential direct benefits for the affected party in case of no breaches.

6. Suspension of Agreement performance

If the breaches of the Agreement are not settled in accordance with Clause 4 of this Article, the affected party may continue to ask the violating party to take remedial actions or to suspend the Agreement performance by providing written notice to the violating party. If the affected party chooses to suspend the Agreement performance under the provisions of this Agreement, the Agreement parties shall not be required to perform contractual obligations, except for cases as prescribed in Clause 1 of this Article, and the affected party shall reserve the right to request for damage compensation from the violating party.

If the Seller is the affected party that chooses to suspend the Agreement performance, the compensation shall be calculated as the value of the Seller's actual electricity generated in the preceding year as of the suspension date of Agreement performance.

Article 8. Settlement of disputes

1. Settlement of disputes via negotiations

In case of disputes between parties of this Agreement, the requesting party must provide the other party with a written notice on the disputes and subsequent requirements within a certain valid period. The parties shall negotiate the possible settlement of disputes within 60 (sixty) days from the receipt date of written notice from the requesting party. The settlement of disputes, which are related to electricity payment, shall be done within 15 (fifteen) days from the receipt date of written notice from the requesting party.

If the consensus cannot be reached as prescribed above, the parties may submit a written request to the General Directorate of Energy for assistance.

This mechanism for dispute settlement shall not apply to disputes, which are not directly arisen from this Agreement between one party of the Agreement and the third party.

3. Settlement of disputes in the electricity market in compliance with legal regulations

If the settlement of disputes via negotiations as described in Clause 1 of this Article is not possible or one of the parties does not comply with the negotiation results, a party or parties may request for dispute settlement in accordance with the provisions of the MoIT's Circular No.40/2010/TT-BCT dated 13 December 2010 prescribing the sequence and procedures for settling disputes on the electricity markets, or choose a body, as agreed by the two parties, in order to settle disputes in accordance with the provisions of relevant laws.

Article 9. Entrustment, transfer and restructuring

1. Entrustment and transfer

If this Agreement is entrusted or transferred for performance purpose, the provisions on rights and obligations as prescribed in the Agreement shall continue to take effect to the parties' legal/authorized representatives.

If the Seller entrusts or transfers the performance of this Agreement, the Purchaser's written consensus shall be required, except for cases that the Seller partly or wholly authorizes its lending party in order to borrow and purchase equipment or construct the power plant. If the Seller's entrusted amount is close to the value of good-performing equipment, it is regarded as a valid entrustment under this Agreement.

The party that entrusts or transfers shall be required to send a written notice on entrustment or transfer to the other party.

2. Restructuring

If the restructuring of the electricity industry affects the Seller's or Purchaser's rights or obligations under this Agreement, the performance of the Agreement shall be transferred to take-over unit(s). The Purchaser must be responsible for written confirmation and guarantee that take-over units shall fulfill their obligations to purchase or distribute electricity and other rights/obligations under this Agreement.

3. Choosing to participate in the electricity market

The Seller may choose to participate in electricity market in accordance with the regulations on competitive electricity market. In this case, the Seller must send the Purchaser and ERAV a written notification for 120 (one hundred and twenty) days in advance, and shall reserve the right to unilaterally terminate this Agreement upon fulfillment of notified obligations in accordance with legal regulations.

Article 10. Other agreements

1. Amendment of the Agreement

The amendment of and supplement to this Agreement shall be done in accordance with stipulations of Circular No. 32/2015/TT-BCT dated 8 October 2015 by the Minister of Industry and Trade on project development and Standardized Power Purchase Agreement for power generation projects using solid wastes, and shall be performed in writing on the basis of both parties' consensus.

2. Obligations for cooperation

The Seller shall be obliged to perform legal procedures related to the power plant. The Purchaser shall be responsible for cooperating with the Seller to obtain its license and necessary approval/permission from competent State agencies related to the plant location, fuel, resources management, investment, transmission and sale of electric power, ownership and operation of the power plant, including the provision of supplementary or archived documents and carrying out other necessary and reasonable activities for the purpose of agreement performance by the parties.

3. Applicable law

The interpretation and performance of this Agreement shall be done in consistent with provisions of Vietnamese laws.

4. Non-fulfillment of rights

The non-fulfillment of rights at any time under this Agreement shall not affect the enforcement of rights under the subsequent Agreements. The parties agree that a party's statement on non-fulfillment of rights to any commitments or conditions under the Agreement, or any breaches of the Agreement shall not be considered as an abandonment of such party's similar rights in the future.

5. Independence of Agreement contents

In case any part of this Agreement is considered as inconsistent with the legal regulations or invalid under the court's ruling, other parts of the Agreement shall still take effect if these parts can be comprehensively interpreted without necessary reference to the invalid text.

6. Notification

Any notifications, invoices or other necessary communications during the performance of this Agreement must clearly state the date and reference to the Agreement. Notifications, invoices or communications must be made in writing and delivered by mail or fax. If being sent by fax, the original must be sent later by mail with prepaid postage. Notifications, invoices or communications must be sent to the following addresses

a) The Seller: Director General, _____,
_____, _____, Việt Nam

b) The Purchaser: _____,
_____, _____, Việt Nam

c) The parties should specify, in their notifications including those related to the lending party, the another sender's or recipient's address in a format as prescribed in this Clause.

d) For the said methods of delivery, each notification, invoice or communication sent by mail shall be considered as being delivered and received by the time it reaches the recipient's address or by the time it is refused by the recipient at such address.

7. Confidentiality

The Purchaser agrees to keep confidential the power plant's information as stipulated in the Agreement's Appendices, except for the information previously announced by the Seller or the General Directorate of Energy.

Article 11. Implementation commitment

The two parties shall be committed to perform this Agreement as follows:

1. Each party is legally established to engage in business operations in Vietnam;
2. Each party's signature and performance of this Agreement is in accordance with the conditions and contents of the Power Operations License as issued by the competent authority and relevant legal provisions;
3. A party shall have no legal or administrative acts preventing or affecting the other party from performing this Agreement;
4. A party's signature and performance of this Agreement shall not violate any provisions of other Agreements or not be part of another Agreement in which such party is a beneficiary.

The Agreement is made in 10 (ten) copies of equal validity with 4 Appendices, which are integral to this Agreement. Each party keeps 04 (four) copies, and the Seller shall be deemed to send 01 (one) copy of PPA to the General Directorate of Energy and 01 (one) copy to the ERAV.

SELLER'S REPRESENTATIVE

(Title)

(Sealed and Signed)

(Full Name)

PURCHASER'S
REPRESENTATIVE

(Title)

(Sealed and Signed)

(Full Name)

Unofficial GLZ Translation for Reference Only

APPENDIX A

SYSTEM CONNECTION AGREEMENT

(To be separately applied to individual projects according to technical specifications of the projects, including one-line diagram of connection devices, list of metering system characteristics, voltage and requirements for connection)

Unofficial GLZ Translation for Reference Only

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:
4. Power sold to the Purchaser: minimumkW; maximum
5. The power plant's self-consumption: minimum.....kW; maximum.....
6. Expected annual electric output:kW
7. Completion date of plant construction:
8. Expected date of the plant's commercial operation:
9. Voltage generated to distribution grid:V
10. Connection point to distribution grid:
11. Location of metering equipment:

Part B. Operational parameters of specific technology

1. Type of fuel:
2. Generation technology:
3. Characteristics of designed operation:
4. Fuel quantity/month:
5. Volume of fuel tank:
6. No-fuel duration:

APPENDIX C

REQUIREMENTS PRIOR TO THE DATE OF COMMERCIAL OPERATION

(Commitment to commercial operation date, agreements on testing procedures, acceptance and putting the plant into commercial operation....)

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APPENDIX D
OTHER AGREEMENTS

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