

**POWER PURCHASE AGREEMENT**

**BY AND BETWEEN**

**BANGLADESH POWER DEVELOPMENT BOARD (BPDB)**

**AND**

**SPONSOR COMPANY**

---

**- RELATING TO-**

**"DHOROLA 30 MW<sub>p</sub> SOLAR PARK" ON BOO BASIS**

**AT**

**DHOROLA RIVER SIDE, KURIGRAM, BANGLADESH**

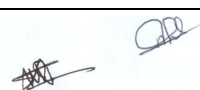
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**NOVEMBER, 2013**

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**POWER PURCHASE AGREEMENT**

**THIS POWER PURCHASE AGREEMENT** (this “Agreement”) is entered into as of this -- -----, 2013 by and between BPDB, with its registered office located at -----, Bangladesh, and Sponsor Company with registered office located at -----, Bangladesh (Entity and the Company, each of which reference includes their respective successors and permitted assigns, are sometimes hereinafter referred to individually as a “Party” and, collectively, as the “Parties”).

**RECITALS**

**WHEREAS**, Entity is a Government owned distribution utility engaged in the distribution, and sale of electric energy in the People's Republic of Bangladesh ("Bangladesh");

**WHEREAS**, 'Sponsor Company.' has submitted a proposal for setting up Dhorola 30 MWp Solar Park on BOO basis for 20 years;

**WHEREAS**, a Letter of Intent vide memo no. -----, issued by Entity. following the approval received from the Government of the People's Republic of Bangladesh, vide memo no. ----- dated: -----

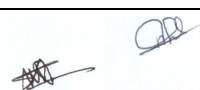
**WHEREAS**, Entity has agreed to purchase the Net Energy Output of the Project from the Company in accordance with the terms and conditions set forth in this Agreement.

**WHEREAS**, Sponsor Company is a Company registered in the Joint Stock Companies, Bangladesh prior to signing the Contract;

**WHEREAS**, the Company is responsible to finance, build, own, and operate the grid tied solar park on BOO basis at -----, Bangladesh.

**WHEREAS**, Company desires to sale electricity of the Project to Entity on no electricity no payment basis in accordance with the terms and conditions set forth in this Contract;

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the Parties agree as follows:



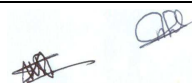
## ARTICLE 1

### DEFINITIONS AND INTERPRETATIONS

The following capitalized terms shall have the meaning set forth below unless a different meaning is expressly attributed to them in the Contract. All units of measurement used in this Contract shall conform to the International System of Units (SI).

- 1) **“Abandonment”** bears the meaning ascribed thereto in Section 1 of the Implementation Agreement;
- 2) **“Annual Allowable Outage Time Energy”** means the energy likely to be generated during the annual allowable outage time.
- 3) **“Back-up Metering System”** means any meters and metering devices installed, owned and maintained by the Company for back-up purpose.
- 4) **“Bank”** means the Sonali Bank or any other scheduled bank in Bangladesh.
- 5) **“Commercial Operation Period”** means for the Project, the period of time between its 1st day of 1st contract year and the last day of the Term.
- 6) **“Commercial Operation Date”** means Day following the Day upon which the Project is commissioned to operate.
- 7) **“Commercial Operation Tests”** means those tests pursuant to Article 7 designed to demonstrate that the minimum performance criteria to achieve the Commercial Operation Date, as the case may be, have been met.
- 8) **“Commissioned”** means a notification by Entity, that the tests for the Project have been completed in accordance with Schedule 2 and that the Project meets the pertinent characteristics stated in Schedules 1 and 4.
- 9) **“Commissioning”** means the process by which the Project is commissioned.
- 10) **“Company”** has the meaning set forth in the caption.
- 11) **“Company Event of Default”** has the meaning set forth in Article 4.2.
- 12) **“Consents”** means all such approvals, consents, authorizations, notifications, concessions, acknowledgements, Contracts, licenses, permits, decisions or similar item required to be obtained from any Government Authority by the Company for the construction, financing, ownership, operation, and maintenance of the Project.
- 13) **“Construction Period”** means the period of time between Project Effective Date and the Commercial Operation Date.
- 14) **“Contractors”** means any contractor(s) to the Company in their respective capacities as such and the legal and permitted successors and assigns of any of the foregoing.
- 15) **“Contract”** means this Contract, including its schedules, any amendment, supplement or modification thereof in accordance with the terms and conditions herein.
- 16) **“Contract Year”** means a period of three hundred sixty five (365) consecutive Days commencing on each consecutive anniversary of the Commercial Operations Date and ending as of the end of the Day preceding the next anniversary of the Commercial Operations Date, except for the first Contract Year which shall commence on the Commercial Operations Date.

- 17) **“Contracted Capacity”** - means the net electric power generating capacity of the Project measured at Delivery Point under 1000 W/m<sup>2</sup> global solar irradiance at panel tilt angle that the Company has proposed to build, own and operate, which is 30 MWp.
- 18) **“Day”** means the 24-hour period beginning and ending at 12:00 midnight Bangladesh time.
- 19) **“Delivery Point”** means the location at the 33kV at which the Net Energy Output is measured and transferred from the Company to Entity.
- 20) **“Dispute”** means any dispute or disagreement of any kind whatsoever between Entity and the Company in connection with or arising out of this Contract.
- 21) **“Dispatch Limitation”** means the situation under instruction to the Company by the local/national grid control center not to deliver any power to the grid.
- 22) **“Effective Date”** bearing the same meaning as Execution Date or Project Effective Date.
- 23) **“Energy Payment”** has the meaning set forth in Article 13.
- 24) **“Entity”** means Bangladesh Power Development Board.
- 25) **“Environmental Guideline”** means the environmental guidelines and occupational health and safety standards of Bangladesh.
- 26) **“Equivalent Dependable Capacity”** - means calculated capacity of the plant based on global solar irradiance (1000 W/m<sup>2</sup>) at panel tilt angle in terms of test capacity.
- 27) **“Event of Default”** means the Company Event of Default or an Entity Event of Default.
- 28) **“Execution Date or Project Effective Date”**- means the date of execution of this Contract.
- 29) **“Export Meter”** means that meter which measures the exported energy from the SPV plant to the Entity’s grid.
- 30) **“Project”**- means the Dhorola 30 MWp Solar Park to be constructed at Dhorola River Side, Kurigram, Bangladesh,
- 31) **“Force Majeure Event”** bears the meaning ascribed thereto in Article 16.1 of this Contract.
- 32) **“Government (GOB)”** means the Government of the People’s Republic of Bangladesh.
- 33) **“Government Authority”** means the GOB and any local governmental authority with jurisdiction over the Company, the Project or any part thereof, and any department, authority, instrumentality, agency or judicial body of the GOB, or any such local governmental authority, including, with limitation, the Bangladesh Bank, but excluding Entity.
- 34) **“Government Authorizations”** means all formal and informal permits, licenses, authorizations, consents, decrees, waivers, privileges, approvals and fillings required





to be obtained from or provided by any Government Authority for the execution, delivery and performance of this Contract including without limitation the construction, ownership, and operation of the Project as contemplated by this Contract.

- 35) **“Grid System”** means the transmission and distribution facilities through which the Net Electricity may be distributed to users.
- 36) **“Grid Outage Time”** means the time period within Solar Radiation Hours while Export Energy Meter shows zero Export Power and 33 kV Grid shutdown/ Dispatch Limitation existing.
- 37) **“GTI”**- means Grid Tied Inverter.
- 38) **“Hour”** means each period of sixty (60) minutes beginning at 12:00 midnight Bangladesh time or any sixty (60) minutes interval thereafter.
- 39) **“Implementation Period”** The period between the execution of this Contract and the Commercial Operations Date.
- 40) **“Import Meter”** means that meter which measures the imported energy by the Company from the Entity’s grid.
- 41) **“Interconnection Facility or Interconnection Facilities (IF)”** - bears the meaning ascribed thereto in Article 11.
- 42) **“Investor”** means a shareholder/partner/proprietor of the Company.
- 43) **“Invoice Dispute Notice”** bears the meaning ascribed thereto in Article 13.2 .
- 44) **“Issuing Bank”** bears the meaning ascribed thereto in Article 13.2 .
- 45) **“Joint Coordinating Committee”** means, the committee established by the Company and Entity pursuant to Article 10.
- 46) **“kW”** means kilowatts.
- 47) **“kWh”** means kilowatt-hours.
- 48) **“Laws of Bangladesh”** means, the laws of Bangladesh and all orders, rules, regulations, decrees, judgments and notifications made pursuant thereto, as such laws, rules, regulations, decrees, judgments and notifications may be amended from time to time.
- 49) **“Liquidated Damages Due Date”** has the meaning set forth in Article 8.3.
- 50) **“Liquidated Damages Notice”** has the meaning set forth in Article 8.3.
- 51) **“Loss”** means any loss, damage, liability, payment, claim, action, cost, penalty or obligation (excluding any profit or any indirect or consequential loss, damage,

liability, payment, obligation, claim, action, cost or penalty), and all expenses (including without limitation reasonable legal fees) related thereto.

- 52) **“Metering System”** means all meters and metering devices (including current transformers and potential transformers) installed by the Company and uses to measure Electricity and delivery by the Company and receipt by the Entity of Net Energy Output. The Metering System shall be owned and maintained by the Company.
- 53) **“Minimum Energy Requirement”** means the minimum energy that should be exported to the grid provided that the plant, grid and minimum level of irradiance are available.
- 54) **“Month”** means a calendar month according to the Gregorian calendar.
- 55) **“Net Energy Output”** means the Net Electrical Energy delivered by the Project during a given period of time measured in kWh at the Delivery Point.
- 56) **“Notice of Intent to Terminate”** has the meaning set forth in Article 4.4 (a).
- 57) **“Operating Procedures”** shall bear the meaning ascribed in Article 6.3 of this Contract.
- 58) **“Operations Security Deposit”** has the meaning set forth in Article 8.2 (b).
- 59) **“Other Force Majeure Event”** bears the meaning ascribed thereto in Article 16.1 (c).
- 60) **“Party or Parties”** means Entity and the Company, either individually or collectively.
- 61) **“Performance Security Deposit”** has the meaning set forth in Article 8.2 (a).
- 62) **“Period of Testing and Startup”** means the period from initial synchronization to the First Initial Operation Date during which testing occurs and net power is produced.
- 63) **“Plant Outage Time”** means the time period within Solar Radiation Hours while Export Energy Meter shows zero Export Power, no 33 kV Grid shutdown/ Dispatch Limitation existing.
- 64) **“Project”** means the development, design, financing, insurance, construction and completion, ownership, operation and maintenance of the Dhorola 30 MWp Solar Park and all activities incidental thereto.
- 65) **“Project Agreements”** means collectively the Power Purchase Agreement, Implementation Agreement and Land Lease Agreement.
- 66) **“Proposal Security” or “Bid Security”** – means the unconditional bank guarantee in the amount at the rate of USD 50,000 (fifty thousand) or equivalent BDT issued by a scheduled bank in Bangladesh delivered to BPDB to secure (a) the obligations of the Bidder to maintain its Proposal in effect until the issue of the Letter of Intent and (b) thereafter, the obligations of the Company to furnish Performance Security Deposit and execute and deliver

the Project Agreements within thirty (30) Days or any other day notified by the Entity after the issuance of the Letter of Intent.

- 67) **“Project Director”** means officer designated by Entity, responsible for monitoring the progress of the Project and perform Entity's obligation pursuant to this Contract including but not limited to under Article 5.2, 6.3, 11, 21 and 23.
- 68) **“Project Effective Date”** means the date on which the last of Project Agreements is executed and none of the agreements so executed have terminated or been terminated by a party thereto;
- 69) **“Prudent Electrical Practices”** means the use of equipment, practices or methods, as required to comply with applicable industry codes, standards, and regulations in Bangladesh:
- (a) to protect Entity’s system, employees, agents, and customers from malfunctions occurring at the Project; and
  - (b) to protect the Project and the Company’s employees and agents at the Project, from malfunctions occurring on the Grid System
- 70) **“Prudent Utility Practices”** means those practices, methods, techniques and standards, as changed from time to time, that are generally accepted internationally for use in electric utility industries (taking into account conditions in Bangladesh), and commonly used in prudent electric engineering and operation to design, engineer, construct, test, operate and maintain equipment lawfully, safely and economically as applicable to power stations of the size, service, and type of this Project.
- 71) **“Required Commercial Operations Date”** means the date that is 12 months following the Project Effective Date; provided, that such date shall be extended: (a) in accordance with the terms of this Agreement as a result of a Force Majeure Event(s).
- 72) **“Scheduled Commercial Operation Date”** means the date advised to Entity by the Company at Project Effective Date, which date shall initially be the same date as the Required Commercial Operations Date, as such Scheduled Commercial Operations Date may be revised from time to time based on the Company’s scheduled construction program for the completion of Commissioning of the Complex.
- 73) **“Site”** means Project site at Dhorola River Side, Kurigram, Bangladesh to be provided by BPDB on as is condition on which the Project will be located.
- 74) **“Solar Radiation Hours”** means the time period from 06:00 AM up to 06:00 PM (06:00-18:00) for months from March to October and time period from 07:00 AM up to 05:00 PM (07:00-17:00) for months from November to February.
- 75) **“SPV”** means Solar Photo Voltaic.
- 76) **“Taka”** means the lawful currency of Bangladesh.
- 77) **“Tariff”** means the price of electricity charged by the Company to Entity in accordance with Schedule 3.

- 78) **“Technical Limits”** means the limits and constraints described in Schedule 2 relating to the operation and maintenance of the Project.
- 79) **“Term”** has the meaning set forth in Article 4.
- 80) **“Terminal Point”** has the meaning set forth in Article 2.4, Annex B of RFP.
- 81) **“Termination Notice”** means a written notice issued by Entity or the Company, as the case may be, terminating this Contract, under Article 4.4(b) (ii) of this Contract.
- 82) **“USD”** means the United States Dollar;
- 83) **“Year”** means each twelve (12) Month period commencing on 12:00 midnight on December 31 and ending on 12:00 midnight the following December 31 during the Term.
- 84) **“Week”** means each period of seven (7) consecutive Days beginning at 12:00 midnight Bangladesh time falling between a Friday and a Saturday.
- 85) **“Week Ahead Notification”** has the meaning ascribed in Article 16.2 of this Contract.

## ARTICLE 2

## SCOPE OF THE CONTRACT

The purpose of this Contract is the supply by the Company to Entity of electric energy, under the terms and conditions provided herein on BOO basis. For this purpose, the Company will build, own & operate and maintain the Project, all at its own expense and responsibility in accordance with the provision of this Contract and within the technical limits and each of the Schedules that are part of this Contract.

## ARTICLE 3

### PURCHASE OF ENERGY

#### 3.1 Energy

Subject to and in accordance with the terms and conditions of this Contract, the Company agrees to maintain and make available and deliver exclusively to Entity, and Entity agrees to accept and purchase from the Company, for the consideration described in Article 13 and Schedule 4, Net Energy Output of the Project from the Commercial Operation Date.

#### 3.2 No Sales to Third Parties

The Parties agree that the Company shall not, without the prior written consent of Entity, sell or deliver electric energy produced by the Project to any other Entity than Entity.

## ARTICLE 4

### TERM, DEFAULTS, AND REMEDIES

#### 4.1 Term of Contract

This Contract shall become effective upon execution and delivery by the Parties hereto and shall terminate at the end of the 20<sup>th</sup> Contract Year, unless extended by mutual agreement or earlier terminated pursuant to the provisions of this Contract. The termination of this Contract shall be without prejudice to all rights and obligations of the Parties accrued under this Contract prior to such termination.

#### 4.2 The Company Events of Default-Termination by Entity

Entity may give a notice of default under this Contract (a "Entity Notice of Default") upon the occurrence of any of the following events ("the Company Event of Default") unless such Event of Default (i) results from a breach of this Contract by Entity; or (ii) occurs as a result of or during a Force Majeure Event pursuant to Article 16:

- (a) The failure of the Company to achieve the Commercial Operation Date of the Project by the Required Commercial Operation Date;
- (b) After signing of this Contract, but prior to the achievement of the Commercial Operation Date, the abandonment of the Project by the Company or the failure of the Company to put the Project on trial in a diligent manner for a period of thirty (30) consecutive Days without the prior written notice to, and prior written consent of, Entity; provided, however, that after the commencement of on-site construction of the Project, the Company shall not be deemed to have abandoned its construction of the Project (and therefore its trial of the Project) so long as it is using all reasonable efforts to regain control of the Project or reinstate such construction;
- (e) The failure of the Company to submit, maintain and replenish the Performance Security Deposit pursuant to Article 8.2.
- (f) The failure of the Company to submit the Operations Security Deposit within fifteen (15) Business Days after the Commercial Operation Date, in accordance with Article 8.2;
- (g) the abandonment by the Company of the operation of the Project after the Commercial Operation Date for a consecutive period of ten (10) Days without prior notice to, and the prior written consent of Entity; provided, however that The Company shall not be deemed to have abandoned its operation of the Project so long as it is using its best efforts to regain control of the Project or reinstate such operation;
- (h) The Company's failure to operate, maintain, modify, or repair the Project in accordance with Prudent Utility Practices, such that safety of persons and property, the Project or Entity's service to its customers is adversely affected;
- (i) The occurrence of any of the following events:

- (i) the assignment or transfer of The Company's rights or obligations in the assets of the Project without the prior consent of Entity;
  - (ii) the transfer, conveyance, loss or relinquishment to any person or Entity of The Company's right to own and/or operate the Project or any material part thereof or to occupy the Site to any person without the prior written approval of Entity;
- (j) except for the purpose of amalgamation or reconstruction (provided, that such amalgamation or reconstruction does not affect the ability of the amalgamated or reconstructed Entity, as the case may be, to perform its obligations under this Contract), the occurrence of any of the following events:
- (i) the passing of a resolution by the shareholders/partners [as appropriate] of The Company for the winding up/dissolution of The Company;
  - (ii) the voluntary filing by The Company, [ if it is a company] of a petition of bankruptcy, moratorium, or other similar relief;
  - (iii) the appointment of a liquidator in a proceeding for the winding up of The Company [ if it is a company] after notice to The Company and the hearing, which appointment has not been set aside or stayed within thirty (30) days of such appointment; or
  - (iv) the making by a court with jurisdiction over The Company of an order winding up/dissolution of [as appropriate] The Company which is not stayed or reversed by a court of competent authority within thirty (30) Days.
- (k) any statement, representation, or warranty by The Company in this Contract proving to have been incorrect, in any material respect, when made or when deemed to have been made and such failure or incorrect statement, representation, or warranty having a material and adverse effect on The Company's ability to perform its obligations under this Contract;
- (l) unless such breach is cause solely by a breach of this Contract by Entity, any material breach by the Company of this Contract that is not remedied within thirty (30) Days after notice from Entity stating that a material breach of the Contract has occurred that could result in the termination of this Contract, identifying the material breach in question in reasonable detail and demanding remedy thereof; or
- (m) the occurrence of a the Company Event of Default under the Contract which is not remedied within the applicable cure period provided therein.
- (n) Except for payments in respect of which security has been provided for pursuant to Article 8.5, any default or defaults by the Company in making of any undisputed payment or payments required to be made by it hereunder within fifteen (15) Days of the due date therefore;



#### 4.3 BPDB's Events of Default –Termination by The Company

The Company may give a notice of default under this Contract (“The Company Notice of Default”) upon the occurrence of any of the following events (“Entity Event of Default”) unless such Event of Default (i) results from a breach by the Company of this Contract or (ii) if it occurs as a result of or during a Force Majeure pursuant to Article 16.4:

- a. any default or defaults by Entity in the making of any payment or payments required to be made by it within sixty (60) Days of the due date.
- b. any material breach by Entity of this Contract, which is not remedied within ninety (90) Days after notice from The Company to Entity stating that a material breach of the Contract has occurred that could result in the termination of the Contract, identifying the material breach in reasonable detail and demanding remedy thereof;
- c. Failure by Entity to establish and maintain the Entity Standby Letter of Credit.
- d. Failure of Entity to permit commissioning or testing or operation of the Project.

#### 4.4 Rights and Remedies upon an Event of Default

##### (a) Notice of Intent to Terminate

- (i) Upon the occurrence of a Entity Event of Default or a The Company Event of Default, as the case may be, that is not cured within the applicable period (if any) for cure, the non-defaulting party may, at its option, initiate termination of this Contract by delivering a notice (a “Notice of Intent to Terminate”) of its intent to terminate this Contract to the defaulting Party.
- (ii) The Notice of Intent to Terminate shall specify in reasonable detail The Company Event of Default or the Entity Event of Default, as the case may be, giving rise to such Notice.

##### (b) Consultation

- (i) Following the delivery of a Notice of Intent to Terminate, the Parties shall consult for a period of :
  - (A) up to seven (07) Days in case of a failure by either party to make payments when due; and
  - (B) up to fifteen (15) days, with respect to any other Event of Default (or such longer period as the parties may mutually agree);

as to what steps shall be taken with a view to mitigating the consequences of the relevant Event of Default taking into account all the circumstances.

- (ii) During the consultation period following the delivery of the "Notice of Intent to Terminate", the Party in default may continue to undertake efforts to cure the default, and if the default is not cured within 30 days, after issuance of "Notice of Intent to Terminate" then the non-defaulting party shall terminate this Contract by delivering Termination Notice.

#### 4.5 Obligations upon Termination

Upon the expiration or earlier termination of this Contract, the Parties shall have no further obligations hereunder except for obligations that arose prior to or arise upon such expiration or termination and obligations that expressly survive such expiration or termination pursuant to this Contract.

#### 4.6 Other Remedies

The exercise of the right of a Party to terminate this Contract, as provided herein, does not preclude such Party from exercising other remedies that are provided herein or are available at law. Remedies are cumulative, and the exercise of, or failure to exercise, one or more of them by a Party shall not limit or preclude the exercise of, or constitute a waiver of, other remedies by such Party.

## ARTICLE 5

### COVENANTS, REPRESENTATIONS AND WARRANTIES

#### 5.1 The Company Covenants

The Company hereby covenants to and agrees with BPDB to:

- (a) Until Construction Start Date, The Company shall obtain all necessary financing in an amount sufficient for the construction, completion, operation and maintenance of the Project in the manner contemplated by this Contract.
- (b) Until Construction Start Date, use all reasonable efforts to negotiate and execute the contracts with the Contractor(s) that will perform the Project's engineering, procurement and construction and the Financing Documents;
- (c) Work with and cooperate in good faith with BPDB with respect to all of Entity's obligations and rights hereunder;
- (d) Design, engineer, construct, complete, own and operate the Project in accordance with
  - (i) the plans and specifications prepared in accordance with this Contract,
  - (ii) the Contracted Operating Characteristics set forth in Schedule 2.
  - (iii) all Laws of Bangladesh,
- (e) Design, construct and complete the Project in a manner which is suitable for the intended purpose, only with materials and equipment that are new or old and of international utility-grade quality, in such a manner as to provide a reasonable likelihood, with proper maintenance and Operation, that the useful life of the Project will be at least equal to the Term;
- (f) Provide the electrical Interconnection Project between the Project and Entity's 33 kV distribution system as per Entity's instruction.
- (g) Provide at its own risk and expense the necessary facilities and services for the safety, comfort and protection of its personnel;
- (h) After Commercial Operation Date, operate and maintain the Project, in accordance with:
  - (i) Prudent Utility Practices,
  - (ii) the operating procedures developed pursuant to Article 6.4 and the Dispatch Instructions, and
  - (iii) the Technical Limits set forth in Schedule 2.
- (i) Be responsible at its own risk and expense for ensuring that the construction and operation of the Project complies with all environmental and safety regulations mandated by The Laws of Bangladesh, and to be responsible for the disposal and treatment of waste in connection with the Project.

## 5.2 BPDB Covenants

Entity hereby covenants to and agrees with The Company to:

- (a) Cooperate, upon the request of the Company, with the Company to obtain electrical energy for construction, Commissioning and Start-up, in accordance with Article 6.3.
- (b) Cooperate in good faith with The Company to facilitate the Electrical Interconnection in time.
- (c) Cooperate in good faith with the Company to facilitate obtaining all permits, licenses and approvals required by all Government Authority and commissions.

## 5.3 The Company Representations and Warranties

The Company hereby represents and warrants that:

- (a) The Company is a company/partnership/proprietorship concern [as appropriate] validly existing and in good standing under the Laws of Bangladesh, and The Company has all requisite corporate power and authority to conduct its business, to own its properties, and to execute, deliver, and perform its obligations under this Contract.
- (b) The execution, delivery and performance by The Company of this Contract have been duly authorized by all necessary corporate action, and do not and will not:
  - (i) require any consent or approval of The Company's Board of Directors, shareholders or partners other than those which have been obtained (evidence of which shall be, if it has not heretofore been, delivered to Entity upon its request),
  - (ii) violate any provisions of The Company's corporate charter or bylaws or other organic documents any material indenture, contract, or agreement to which it is a party or by which it or its properties may be bound, or any material law, rule, regulation, order, writ, judgment, injunction, decree, determination, or award presently in effect having applicability to The Company,
  - (iii) result in a breach or constitute a default under The Company's corporate charter or bylaws, or other organic documents or other material indentures, contracts, or agreement, and The Company is not in default under its cooperate charter or bylaws or other organic documents or other material indentures, contracts, or agreements to which it is a party or by which it or its property may be bound.
- (c) To the best of The Company's knowledge, no authorization or approval by any other Government Authority which has not been obtained is necessary for the due execution and delivery by The Company of this Contract.
- (d) This Contract will be a valid and binding obligation of The Company from the Execution Date.
- (e) There is no pending or, to the best of The Company's knowledge, threatened action or proceeding against The Company before any court, Government Authority, or arbitrator that could reasonably to be expected to affect the financial condition or Operation of The Company or the ability of The Company to perform its obligations

hereunder, or which could reasonably be expected to affect the legality, validity or enforceability of this Contract (as in effect on the date hereof).

#### 5.4 BPDB Representations and Warranties

Entity hereby represents and warrants that

- (a) Entity is a Govt. Owned utility duly established under the Laws of Bangladesh and
  - (i) has all requisite corporate power and authority
  - (ii) has complied with all requirements under the Laws of Bangladesh; and
  - (iii) has all permits, licenses and approvals required by any Government Authority; to conduct its business, to own its properties, and to execute, deliver, and perform its obligations under this Contract,
- (b) The execution, delivery and performance by Entity of this Contract have been duly authorized by all necessary corporate or Government action, and do not and will not
  - (i) require any consent or approval of Entity's Board of Directors, officers or officials other than those which have been obtained (evidence of which shall be, if it has not heretofore been, delivered to The Company upon its request),
  - (ii) violate any provisions of Entity's corporate charter or bylaws or other organic documents any material indenture, contract, or Contract to which it is a party or by which it or its properties may be bound, or any material law, rule, regulation, order, writ, judgment, injunction, decree, determination, or award presently in effect having applicability to Entity,
  - (iii) result in a breach or constitute a default under Entity corporate charter or bylaws, or other organic documents or other material indentures, contracts, or Contract, and Entity is not in default under its cooperate charter or bylaws or other organic documents or other material indentures, contracts, or Contracts.
- (c) This Contract shall be a valid and binding obligation of Entity from the Execution Date.
- (d) To the best of Entity's knowledge, there is no pending or threatened action or proceeding against Entity before any court, Government Authority, or arbitrator that could reasonably be expected to affect materially and adversely the financial condition or operation of Entity or the ability of Entity to perform its obligations hereunder, or which could reasonably be expected to affect the legality, validity or enforceability of this Contract (as in effect on the date hereof).

## ARTICLE 6

### PRE-OPERATIONAL PERIOD

#### 6.1 Permits, Licenses and Approvals

The Company, at its sole cost and expense, shall use its best efforts to acquire and maintain all permits, licenses and approvals required by all Government Authority, agencies, commissions and authorities with jurisdiction over The Company, the Project and the Interconnection Project to enable it to perform its obligations under this Contract.

BPDB, at its sole cost and expense, shall use its best efforts to acquire and maintain in effect all permits, licenses and approvals required by all local agencies, commissions and authorities with jurisdiction over BPDB in order to enable it to perform its obligations under this Contract.

#### 6.2 Documents to be Submitted by The Company

The Company shall provide the following documents to Entity.

(a) **Permits and Licenses**

As soon as available, copies of all permits, licenses, approvals and other Government approvals that have been issued to The Company for the design, financing, construction, operation and maintenance of the Project.

(b) **Start-up and Test Schedules**

At least fifteen (15) Days before the scheduled commencement of testing and commissioning of the Project, intended start up and test schedule for such Unit(s).

(c) **Test Results**

Not later than fifteen (15) Days after, the Commercial Operation Date, copies of all test results, certified by the Engineer, for tests performed on such Unit.

(d) **Plans and Drawings**

As soon as available, plans and specifications and as-built drawings for the Project including the civil and architectural works.

#### 6.3 Operating Procedures

(a) Not later than 30 Days before the Required Commercial Operation Date, The Company shall provide Entity with a draft operating procedure dealing with all operation interfaces between Entity and The Company including, but not limited to:

- (i) method of day-to-day communication,
- (ii) key personnel lists,
- (iii) clearances and switching practices,
- (iv) energy reporting, and
- (v) operating log;

which shall be consistent with this Contract, the designs of the Project, the Metering System, the Technical Limits and Prudent Utility Practices (the "Operating Procedures")

(b) Within thirty (30) Days after Entity receipt of the draft operating procedure, Entity shall notify The Company of any requested deletions, amendments or additions.

## **ARTICLE 7**

### **TESTING & CAPACITY RATING**

#### **7.1 Commercial Operation Test**

After performing the tests prior to synchronization as provided in Schedule-1 and satisfactorily synchronizing the Project with the system, Commercial Operations Test will be conducted by the Company at its own cost.

#### **7.2 Notification for test under Schedule-2**

Not less than fifteen (15) Days prior to the commencement of testing of the Project pursuant to Schedule-2, the Company will deliver to BPDB in writing the final program for such test including the expected duration of the testing program for conducting all relevant tests required by Schedule 2.

#### **7.3 Notice of and Compliance with Testing Procedures**

The Company shall carry out Commissioning of the Project, testing the Project prior to achieve the Commercial Operation Date, respectively, and testing of Constructed Capacity of the Project thereafter in accordance with Articles 7.1 and 7.2. Entity shall use reasonable efforts to comply the reasonable requests by the Company for carrying out such testing and Commissioning procedure and shall be entitled to be present and observe any such testing and Commissioning.

#### **7.4 Copies of Test Results**

The Company shall provide BPDB with copies of the test results of all tests performed pursuant to Schedule 2. BPDB shall not use or disclose such results other than in connection with the administration and enforcement of this Contract.

## ARTICLE 8

### LIQUIDATED DAMAGES (LD) PAYABLE BY THE COMPANY

#### 8.1 LD for Delay in Commissioning

(a) If the Commercial Operation Date of the Project has not occurred by the Required Commercial Operation Date and such date has not been extended in accordance with this Contract by the Parties or as a consequence of a Force Majeure Event and the delay is attributable to the Company, The Company shall pay BPDB as liquidated damages for delays in Commissioning a sum equal to USD 300 (three hundred) per day or fraction thereof.

(b) Notwithstanding the foregoing, in no event shall the total amount of liquidated damages payable by the Company under Section 8.1(a) exceed an amount equal to three hundred and sixty-five (365) Days of liquidated damages payable under Section 8.1(b), above.

#### 8.2 Security Deposits

##### (a) Performance Security Deposit (PSD)

(i) Before execution of the Contract, the Company shall provide to Entity a security deposit (the "Performance Security Deposit") of USD 0.2 million to ensure The Company's obligations hereunder including its obligations to pay liquidated damages pursuant to Article 8. The Company shall maintain the PSD at the designated level at all times; provided that The Company may have fifteen (15) Days to replenish the PSD so as to return it to the required level, in the event that Entity retains or collects funds from the PSD. Performance Security Deposit shall be forfeited in case of termination of the Contract due to The Company event of default.

(ii) The performance Security Deposit shall terminate thirty (30) Days after the Commercial Operations Date and any un-drawn portion of the performance Security Deposit shall be released and returned to the Company by no later than thirty (30) Days after the Commercial Operations Date.

The Performance Security Deposit shall be an irrevocable and unconditional Bank Guarantee from a Schedule Bank in Bangladesh or by a foreign Bank endorsed and authenticated by a schedule Bank in Bangladesh as provided in Schedule 6 of this Contract;

##### (b) Operations Security Deposit

(i) Not later than thirty (30) Days after the Commercial Operations Date, the Company shall provide to BPDB a security deposit (the "Operations Security Deposit") in an amount equal to 1 (one) Month of tariff payment at a monthly 3605 MWh Energy rate to ensure the proper operation and maintenance of the Project.

(ii) Upon and following the delivery of the Operations Security Deposit, the Company shall maintain the Operations Security Deposit at the designated level at all times during the Term; provided that the Company may have fifteen (15) Days to replenish the Operations Security Deposit so as to return it to the



required level in the event that Entity retains or collects funds from the Operations Security Deposit.

- (iii) The Operations Security Deposit shall consist of an unconditional irrevocable bank guarantee issued by a scheduled bank in Bangladesh or by a foreign bank which has been authenticated by a scheduled bank in Bangladesh and shall by its terms be encashable at a bank in Dhaka, Bangladesh.
- (iv) The Operations Security Deposit shall be applied to:
  - (A) the payment of liquidated damages (penalty) in case of section 8.3; and
  - (B) the payment of other damages, interest or other amounts that the Company shall be required to pay to Entity under the Land Lease Agreement,

less (in either case) any amount disputed by the Company; provided that in the case of the amounts described in sub-paragraph (A) and (B) above, if there are insufficient payments due to The Company against which BPDB can offset such amounts and if the Operations Security Deposit is insufficient to satisfy such amounts, then The Company shall pay to BPDB on demand the unsatisfied amounts within 15 (fifteen) Days, otherwise this amount shall be deducted from the Company's monthly invoice.

**(c) Termination of the Contract**

Upon termination of this Contract:

- (i) BPDB shall be entitled to retain or collect, as the case may be, from the Performance Security Deposit or the Operations Security Deposit, any damages or monies then due or reasonably expected to be due to Entity by The Company.
- (ii) the balances in such account shall be paid out only after the Dispute has been settled in accordance with Article 19 of this Contract and shall be applied in accordance with the decision therein.
- (iii) The remainder of the Performance Security Deposit or the Operations Security Deposit, if any, after making the drawings in (i) and (ii) above, shall be paid or returned to The Company without further draws or deductions within ten (10) Business Days following such termination of this Contract.

**(d) Procedural Provisions of the Performance and Operations Security Deposits**

- (i) Not less than thirty (30) Days prior to the expiration of relevant Security Deposit, the Company shall provide a replacement Security Deposit or extend the validity of existing Security Deposit which shall have a term of twelve (12) months from the expiration of the immediately precedent Security Deposit provided that in the case of the Performance Security Deposit, such term shall not extend beyond thirty (30) Days after the Commercial Operations Date.
- (ii) if at any time there remains less than twenty (20) Days to the effective term of the existing Security Deposit and the Company has not provided a replacement or extended the validity of existing Security Deposit, Entity may en-cash the then-existing Security Deposit in full provided that:
  - (A) if the Company subsequently provides a replacement or alternative Security Deposit, an amount equal to the amount of such replacement

Security Deposit shall promptly be returned to the Company by Entity.

### 8.3 Payments of Liquidated Damages

#### (A) Computation and Payments

(a) Within seven (07) days after the end of each fifteen (15) days, in the case of Article 8.1 (a), BPDB shall compute and deduct from the Performance Security Deposit, the Liquidated Damage amount applicable for the preceding month pursuant to this Contract and notify the Company thereby.

(b) Within thirty (30) days after the completion of each contract year the Entity shall compute penalty/compensation and deduct penalty from the Operation Security Deposit or pay compensation to the Company whatever applicable and notify the Company thereby.

(B) The minimum energy requirement per day in "n"th contract year is given by,

$$E_{MER} = 26700 * I_{tr} * \{1 - 0.01 * (n - 1)\}$$

Where,

$I_{tr}$  = Solar Irradiation at panel tilt angle in that day (kWh/m<sup>2</sup>/day)

$E_{MER}$  = Minimum Energy Requirement (kWh)

n = Number of contract year

The actual energy generation will be verified from the PV plant export meter reading and the difference between actual generation and minimum energy requirement will be considered as shortfall of energy. Monthly billing shall be done on the basis of net metering. Net unit for billing shall be calculated as follows:

$$\text{Net unit} = \text{Exported unit} - \text{Imported unit}$$

Both the Company and the Entity will get total (15 \* 12) = 180 Solar Radiation Hours outage time annually without demanding compensation or penalty as the case may be. The annual outage time energy is calculated as below:

$$E_E = 1802250 * \{1 - 0.01 * (n - 1)\} \text{ kWh}$$

n = Number of contract year

Compensation/Penalty shall be claimable only in case of annual net shortfall of energy generation and on the basis of shortfall responsibility. The Entity will impose penalty on the Company or the Company will claim compensation from the Entity on the basis of net shortfall of energy and shortfall responsibility. The required calculations are described in SCHEDULE 9. Solar Radiation Hours shall be accounted only in case of compensation/penalty calculation.

## ARTICLE 9

### CONTROL AND OPERATION OF THE PROJECT

#### 9.1 Operating Procedures

- (a) The Parties shall comply with the operating procedure established pursuant to this Article 9 and the plan for the operation and maintenance of the Project presented by The Company pursuant to Article 6.2(c).
- (b) The Project shall be operated and maintained in accordance with guidelines which comply with: the Grid System operating practices, Dispatch Instructions, and Prudent Utility Practices and the plan presented by The Company. The Joint Coordinating Committee will be responsible for monitoring and coordinating the compliance with these guidelines and settling disputes that may arise from the operation of the Project.

#### 9.2 Annual Report

The Company shall deliver to Entity annual report for each Contract Year, within one (1) Month following the expiration of each Contract Year. Such annual report must include the operation and maintenance report for the prior year and the anticipated operation and maintenance plan and emergency plan for the upcoming year.

## ARTICLE 10

### JOINT COORDINATING COMMITTEE

#### 10.1 Membership

Within thirty (30) Days after the Construction Start Date the Parties shall establish a Joint Coordinating Committee of 4 members, with The Company and BPDB each appointing 2 members.

## ARTICLE 11

### ELECTRICAL INTERCONNECTION

#### 11.1 Electrical Interconnection

The Company shall be responsible for the design, construction, installation and commissioning of the interconnection facility (U/G or O/H lines) at 33 kV including circuit breaker, CT, PT, LA, metering and all other necessary equipment/accessories/protection equipments and required modification. The Delivery Point is the 33 kV bus of the SPV plant from where BPDB will take the power to the nearest 33/11 kV substation of Kurigram Electric Supply, BPDB which is almost 6 km away from the project site. Switching and design standards should be as per Functional Specification.

The Company will be responsible for operation and maintenance of their substation equipments.

## ARTICLE 12

### METERING

#### 12.1 Metering

- (a) The Metering System used to measure Net Electricity pursuant to this Contract, and to monitor and coordinate operation of the Plant, shall be purchased, installed and maintained by the Company at its own expense.
- (b) The Company shall inspect, test, and calibrate the Metering System upon installation. The Company shall provide BPDB with reasonable advance notice of, and allow representatives of BPDB to witness and verify, such inspections, tests, and calibrations. Thereafter, BPDB shall test the Metering System at intervals of not less than 180 Days.
- (c) The Company shall install and maintain, at its own expense, a Back-Up Metering System at the Delivery Point identical to that installed by Company.
- (d) The Metering System and the Back-Up Metering System shall be designed and constructed based on Prudent Utility Practices providing a measured accuracy of  $\pm 0.1\%$ . Individual components, where applicable, shall have an accuracy of  $\pm 0.1\%$ . The tariff meter shall have facilities for recording and downing the net import & export of energy, KW, power factor, frequency, voltage etc for at least 60 Days.

#### 12.2 Reading of Meters

- (a) The Metering System shall continuously read the Net Electricity of the Plant. Measurements of the Net Electricity (active & reactive), kW, frequency, voltage etc. shall be electronically recorded on half hourly basis and shall be used for preparing monthly invoice (unless otherwise mutually agreed upon). In the event the Metering System is not in service due to repair, testing or maintenance by Company, then the electronic record of the Net Electricity from the Back-Up Metering System shall be used and the Company shall deliver a copy of the Back-Up Metering System record to BPDB with the relevant Monthly invoice(s).
- (b) Verifications and true-up of the Metering System and the Back-Up Metering System records for verifying the electronically obtained readings shall be carried out on the 1<sup>st</sup> day of each month at 1200 hrs (or any other day and time mutually agreed upon) by joint recording of the reading of the Metering System and the Back-Up Metering System by BPDB & Company (Joint Meter Reading & Verification Committee).

#### 12.3 Sealing of Metering System

The Metering System and the Back- Up Metering System shall comply with the specifications in Schedule 5 and shall be jointly sealed. During testing or any other reasons, the seal can be broken jointly (if required).

#### 12.4 Repair, Replacement or Recalibration of Metering System

When any component of the Metering System is found to be outside acceptable limits of accuracy or otherwise not functioning properly, Company shall forthwith repair, recalibrate or replace such component of the Metering System or the Back Up Metering System, as the case may be, at its expense. Upon the completion of any examination, maintenance, repair or recalibration of, or replacement of any component in, the Metering System or the Back-Up Metering System, the metering system shall be jointly sealed.

## ARTICLE 13

### TARIFF, BILLING AND PAYMENT

#### 13.1 (i) Tariff Payment (TP)

From and after the Commercial Operations Date, BPDB shall pay to the Sponsor, for each Month, Tariff Payment on no electricity no payment basis.

$$TP_m = TR \times NEO_m \times CEM$$

WHERE,

TR = Tariff Rate, USD/kWh

TP<sub>m</sub> = Tariff Payment in Taka during the Month “m”.

NEO<sub>m</sub> = Net Energy Output measured in kWh during Month “m”.

CEM = The rate at which Sonali Bank sells one US Dollar in exchange for Taka, as published in the Exchange Rates Bulletin or any latest official letter or circular to the “Authorised Dealers” (as that expression is used by Sonali Bank) or defined in any publication of Sonali Bank) in Bangladesh, on the first Day of the Month immediately following the Month “m”.

#### (ii) Right to Review

Either Party may at any time seek to verify the computation or application of any index and may require the other Party, where appropriate, to provide to it copies of its calculations, with reasonable supporting detail to enable that Party to verify the result of either computing an indexation factor or applying an indexation factor to a component of the Reference Tariff or any additional charges.

#### 13.2 Billing and Payments

##### (a) Invoices and Payments

- (i) Invoices shall be on a Monthly basis and shall be prepared by the Company and submitted to BPDB no sooner than seven (7) Days after the end of the Month for which such invoice is applicable and shall show the due date of the invoice to be thirty (30) Business Days after date of issuance of the relevant invoice.
- (ii) BPDB has the right to review an invoice or statement prepared by the Company and, if it disagrees with the amount payable under such invoice, may request clarification and substantiation of such invoice.

##### (b) Payment Disputes

- (i) At any time prior to one hundred eighty (180) Days after BPDB receives an invoice, BPDB may serve notice (an “Invoice Dispute Notice”) to the Company that the amount or any portion of such amount shown in such invoice is in dispute. Each Invoice Dispute Notice shall specify the invoice concerned, the amount of the Dispute and the basis therefore. If any amount or any portion of such amount or any item shown in an invoice is disputed by the paying Party, such Party shall pay the undisputed amount of the invoice in accordance with Article 1.2 (a) of this Contract.

- (ii) In the event of a Dispute, either Party may seek resolution of the Dispute in accordance with Article 19 of the contract.
- (iii) Upon the resolution of the Dispute, any amount determined to be owing which has not been paid or are determined to have been improperly paid and are to be repaid, as the case may be, shall be paid by the owing Party to the other Party within fifteen (15) Business Days of the resolution of the Dispute.

**(c) BPDB Security**

**(i) BPDB Letter of Credit**

- (A) Within twenty five (25) Business Day after the Commercial Operations Date, BPDB shall cause Sonali Bank or any other scheduled bank (the "Issuing Bank") to issue and provide to the Company the BPDB Letter of Credit, which shall have an initial term which is not less than one (1) year and shall provide for annual renewal by the Issuing Bank immediately prior to each relevant expiry date for further period(s) of one year each until the last Day of the Term. Immediately upon each such renewal, the Issuing Bank shall confirm to BPDB that such renewal has occurred.
- (B) The amount of the BPDB Letter of Credit shall be equal to 1 (one) month Tariff Payment at a monthly 3605 MWh energy rate.
- (C) The BPDB Letter of Credit shall permit presentation at a bank located in Dhaka, Bangladesh.
- (D) The BPDB Letter of Credit shall provide for draws by the Company for the purposes of Section 13.2(a) in immediately available funds for any amounts due to the Company under this Agreement less any amounts disputed by BPDB, upon presentation of a certificate of an authorised officer of the Company stating that:
  - (1) amounts shown in the invoice accompanying the certificate are due and payable by BPDB to the Company under this Agreement; and
  - (2) an invoice for such amount has been delivered to BPDB in accordance with this Agreement and either:
    - (a) no amount shown in the invoice has been disputed by BPDB; or
    - (b) a portion of the amount shown in the invoice has been disputed by BPDB, identifying such disputed amount.

The certificate shall be accompanied by the relevant invoice delivered to BPDB and any Invoice Dispute Notice delivered to the Company by BPDB.



(E) The BPDB Letter of Credit shall be reinstated to the BPDB Letter of Credit Amount (as at the most recent BPDB Letter of Credit Adjustment Day or, prior to the first BPDB Letter of Credit Adjustment Day, as at the Commercial Operations Date) within fifteen (15) Business Days of any draw thereon by the Company.

**(ii) Improper Drawings**

Without prejudice to BPDB's other rights under this Agreement or otherwise, in the event that the Company draws against the BPDB Letter of Credit and it is subsequently determined that the Company was not entitled to do so, then the Company shall repay such amount to BPDB, together with all costs and expenses incurred by such other Party in connection with such drawing, plus interest thereon from the date of the draw through the date of repayment at the Bank Rate plus four (4) percent per annum, compounded semi-annually.

**(iii) Termination of Agreement**

Within ten (10) Business Days following any termination of this Agreement, the Company shall deliver to BPDB any then-outstanding BPDB Letter of Credit, without further draws thereon or encashment thereof except for any amounts that may be due and payable to the Company at the time of such termination

## ARTICLE 14

### INSURANCE

- 14.1** The Company shall secure and maintain throughout the term insurance of such types and in such amounts as may be necessary to build, operate and maintain the plant shall be undertaken by the Company. Failure to maintain such coverage shall not relieve the Company of any contractual responsibility or obligations for loss or damage incidental to manufacture or acquisition, transportation, storage, delivery, operation and maintenance of the plant.

## ARTICLE 15

### LIABILITY AND INDEMNIFICATION

#### 15.1 Limitation of Liability

Except as required by Article 15.2, neither Party shall be liable to the other Party in contract, tort, warranty, strict liability or any other legal theory for any indirect, consequential, incidental, punitive or exemplary damages. Neither Party shall have any liability to the other Party except pursuant to, or for breach of, this Contract; provided, however, that this provision is not intended to constitute a waiver of any rights of one Party against the other with regard to matters unrelated to this Contract or to any activity contemplated by this Contract.

#### 15.2 Indemnification

- (a) BPDB shall bear responsibility for loss of or damage to property, death or injury to person (or any claim against The Company or its Contractors in respect thereof) and all expenses relating thereto (including without limitation reasonable legal fees) suffered by The Company or its Contractors in connection with the Facility resulting from any negligent act or omission of BPDB, without recourse to The Company or its Contractors. BPDB will hold The Company or its Contractors fully indemnified in respect thereof. The indemnity shall not extend to any loss, damage, death or injury (or any claim in respect thereof) or any expenses relating thereto to the extent that it was caused by any act or omission of The Company or its Contractors or the failure of The Company or its Contractors to take reasonable steps in mitigation thereof. Notwithstanding anything to the contrary contained in the preceding sentence, nothing in this Article 15.2(a) shall apply to any loss, damage, cost or expense in respect of which, and to the extent that, The Company or its Contractors are compensated pursuant to the terms of any policy of insurance, Contract or through any other means.
- (b) The Company shall bear responsibility for loss of or damage to property, death or injury to person (or any claim against BPDB in respect thereof) and all expenses relating thereto (including without limitation reasonable legal fees) suffered by BPDB in connection with the Project resulting from any negligent act or omission of The Company or its Contractors, without recourse to BPDB. The Company will hold BPDB fully indemnified in respect thereof. The indemnity shall not extend to any loss, damage, death or injury (or any claim in respect thereof) or any expenses relating thereto to the extent that it was caused by any act or omission of BPDB or the failure of BPDB to take reasonable steps in mitigation thereof. Notwithstanding anything to the contrary contained in the preceding sentence, nothing in this Article 15.2(b) shall apply to any loss, damage, cost or expense in respect of which, and to the extent that, BPDB is compensated pursuant to the terms of any policy of insurance, Contract or through any other means.
- (c) In the event such injury or damage results from the joint or concurrent negligent or intentional acts of the Parties each shall be liable under this indemnification in proportion to its relative degree of fault.
- (d) The provisions of this Article 15.2 shall survive for a period upto the termination or expiration of the term of this Contract.

### 15.3 Defense of Claims

- (a) Each Party shall promptly notify the other Party of any loss of, or damage to property, death or injury to person (or any claim or proceeding in respect thereof) in respect of which it is or may be entitled to indemnification under Article 15.2. Such notice shall be given as soon as reasonably practicable after the relevant Party becomes aware of the loss, damage, death or injury (or any claim or proceeding in respect thereof).
- (b) The indemnified Party shall have the right, but not the obligation, to contest, defend, and litigate any claim, action, suit or proceeding by any third Party alleged or asserted against such party in respect of, resulting from related to or arising out of any matter for which it is entitled to be indemnified hereunder, and the reasonable costs and expenses thereof shall be subject to the indemnification obligations of the indemnifying party hereunder;

Provided, however, that if the indemnifying party acknowledges in writing its obligations to indemnify the indemnified party in respect of loss to the full extent provided by Article 15.2, the indemnifying Party shall be entitled, at its option, to assume and control the defense of such claim, action, suit or proceeding at its expense and through counsel of its choice if it gives prompt notice of its intention to do so to the indemnified Party and reimburses the indemnified party for the reasonable costs and expenses incurred by the indemnified Party prior to the assumption by the indemnifying party of such defense.

- (c) Neither Party shall settle or compromise any such claim, action, suit or proceeding without the prior written consent of the other Party, which consent shall not be unreasonably withheld or delayed.

Provided, that after agreeing in writing to indemnify the Indemnified party, the Indemnifying Party may settle or compromise any claim without the prior approval of the Indemnified Party.

- (d) Notwithstanding the foregoing, the indemnified party shall have the right to employ its own counsel and such counsel may participate in such action, but the fees and expenses of such counsel shall be at the expense of such indemnified Party, when and as incurred unless :
  - (i) the employment of counsel by such indemnified Party has been authorized in writing by the Indemnifying Party;  
the Indemnified Party shall have reasonably concluded that there may be a conflict of interest between the indemnifying party and the indemnified Party in the conduct of the defense of such action;
  - (ii) the indemnifying Party shall not in fact have employed independent counsel reasonably satisfactory to the indemnified Party to assume the defense of such action and shall have been so notified by the indemnified party; or
  - (iii) the indemnified Party shall have reasonably concluded and specifically notified the indemnifying Party either that there may be specific defenses available to it which are different from or additional to those available to the indemnifying party or that such claim, action, suit or proceeding involves or could have a material adverse effect upon it beyond the scope of this Contract.
- (e) If paragraph (ii), (iii) or (iv) of subparagraph (d) above shall be applicable, then counsel for the indemnified Party shall have the right to direct the defense of such claim, action, suit or proceeding on behalf of the indemnified party and the reasonable fees and disbursements of such counsel shall constitute legal or other expenses hereunder.

## ARTICLE 16

### FORCE MAJEURE

#### 16.1 Definition of Force Majeure

In this Contract, "Force Majeure" shall mean any event or circumstance or combination of events or circumstances (including the effects of such events and circumstances or combination of events or circumstances) referred to in this Article that materially and adversely affects the performance by a party of its obligations under this Contract, but only if and to the extent that such events and circumstances are not within the reasonable control, of the affected Party.

Provided, that an event or circumstance or combination of events or circumstances (including the effects of such events and circumstances or combination of events or circumstances) shall not be construed as a Force Majeure Event unless such material and adverse effect could not have been prevented, overcome, or remedied in whole or in part by the affected Party through the exercise of diligence and reasonable care, it being understood and agreed that reasonable care includes acts or activities to protect the Parties facilities from a casualty event, which are reasonable in light of the likelihood of such event, the probable effect of such event if it should occur, and the likely efficacy of the protection measures.

Force Majeure includes the following events and circumstances to the extent they, or their consequences, satisfy the above requirements:

- (a) political events that occur inside or directly involve Bangladesh ("Political Force Majeure Events"), including, but not limited to:
  - (i) any act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, civil commotion, political act,
  - (ii) strikes that are widespread nationwide;
  - (iii) radioactive contamination or ionizing radiation originating from a source inside Bangladesh or resulting from another Political Force Majeure, Event;
- (b) Change in Law
- (c) Other events beyond the reasonable control of the affected Party ("Other Force Majeure Events"), including, but not limited to :

Uncontrollable events, including, but not limited to :

- (A) Lightning, earthquake, tsunami, solar irradiance below 80 W/m<sup>2</sup>;
- (B) epidemic or plague;
- (C) prior to the Commercial Operation Date, a delay beyond the thirtieth (30<sup>th</sup>) Day after the scheduled receipt date at the Party's construction site of a major piece of equipment that has been timely ordered and must be manufactured expressly for such Party, where such delay is caused solely by an accident in transportation or a strike.

## 16.2 Notification Obligations

- (a) If by reason of a Force Majeure Event a Party is wholly or partially unable to carry out its obligations under this Contract, the affected Party shall :
- (i) give the other Party notice of the Force Majeure Event (s) as soon as practicable, but in any event, not later than only forty eight (48) hours after the occurrence of the Force Majeure Event (s) or six (6) hours after the resumption of any means of providing notice between the Company and the BPDB, which ever is later; and
  - (ii) give the other Party a second notice, describing the Force Majeure Event (s) in reasonable detail and, to the extent that can be reasonably determined at the time of the second notice, providing a preliminary evaluation of the obligations affected, a preliminary estimate of the period of time that the affected Party will be unable to perform the obligations, and other relevant matters as soon as practicable, but in any event, not later than seven (7) Days after the initial notice of the occurrence of the Force Majeure Event (s) is given by the affected Party;

AND when appropriate or when reasonably requested to do so by the other Party, the affected Party shall provide:

- (a) further notices to the other Party more fully describing the Force Majeure Event (s) and its cause (s) and providing or updating information relating to the efforts of the affected Party to avoid and/ or to mitigate the effect (s) thereof; and
  - (b) estimates, to the extent practicable, of the time that the affected Party reasonably expects it will be unable to carry out any of its affected obligations due to the Force Majeure Event(s).
- (b) The affected Party shall also provide notice the other Party of :
- (i) with respect to an ongoing Force Majeure Event, the cessation of the Force Majeure Event; and
  - (ii) its ability to recommence performance of its obligations under this Contract;
- as soon as possible, but in the event, not later than seven (7) Days after the occurrence of each of (i) and (ii) above.
- (c) Failure by the affected Party to give notice of a Force Majeure Event to the other Party within the forty eight (48) hour period or six (6) hour period required by Article 16.2 (a) shall not prevent the affected Party from giving such notice at a later time :

Provided, that :

- (i) in such case, the affected Party shall not be excused pursuant to Article 16.4 for any failure or delay in complying with its obligations under or pursuant to this Contract until the notice required by Article 16.2 (a) (i) has been giving; and

- (ii) if such notice is given within the forty eight (48) hour period or six (6) hour period as required by Article 16.2 (a) (i), the affected Party shall be excused for such failure or delay pursuant to Article 16.4 from the date of commencement of the relevant Force Majeure Event.
  
- (d) If an event of Force Majeure continues beyond a period of 14 days, the Parties shall meet in good faith with a view to determining mutually acceptable terms for continuing this Contract notwithstanding the effect of the event of Force Majeure, provided that, if at the end of 28 days no solution is found, either Party shall be entitled to terminate this Contract by giving notice of not less than 7 days to the other Party.

### **16.3 Duty to Mitigate**

The affected Party shall use all reasonable efforts to mitigate the effects of a Force Majeure Event.

### **16.4 Delay Caused by Force Majeure**

- (a) So long as the affected Party has at all times since the occurrence of the Force Majeure Event complied with the obligations of Article 16.3 and continues to so comply, then :
  - (i) the affected Party shall not be liable for any failure or delay in performing its obligations (other than an obligation to make a payment) under or pursuant to this Contract during the existence of a Force Majeure Event; and
  - (ii) any performance deadline that the affected Party is obligated to meet under this Contract shall be extended :

Provided, that :

- (A) no relief, including without limitation, the extension of performance deadlines, shall be granted to the affected Party pursuant to this Article 16.4 to the extent that such failure or delay would have nevertheless been experienced by the affected Party, as a result of a breach by the affected Party of this Contract, had the Force Majeure Event not occurred; and
- (b) Without prejudice to amounts payable pursuant to Article 13.2, Article 7, Article 8, Article 11, or this Article 16, the unaffected Party shall not bear any liability for any loss or expense suffered by the affected Party as a result of a Force Majeure Event.

## ARTICLE 17

### TAXES AND CLAIMS

- 17.1 (a) Except as otherwise provided herein or in the Private sector Power Generation Policy of Bangladesh the Company shall be responsible for payment of all taxes, VAT, AIT, contributions, rates, charges, and fees payable to any Government Authority (whether payable in Bangladesh or otherwise) arising in connection with the construction, ownership, operation, and maintenance of the Project.
- (b) The company shall be liable to deduct tax from any payment to sub-contractor, supplier, professional or technical service provided in accordance with the provision of Income Tax Ordinance, 1984.
- (c) All present and future lawful taxes, duties, levies, or other impositions applicable to BPDB arising from or in connection with its rights and obligations under this Agreement shall be paid by BPDB in due time.



## ARTICLE 18

### ENVIRONMENTAL REGULATIONS

- 18.1** The construction and operation of the Project must comply with the applicable standards and guidelines of World Bank (WB) or Department of Environment (DoE), Bangladesh. Site environmental clearance from DoE shall have to be obtained by the Company. The Noise level shall be as per Standard of Department of Environment (DoE), Bangladesh. Emissions for Solar Thermal plant shall be as per the requirement of Department of Environment (DoE). The Company shall be responsible for mitigating environmental impact (if any) as per requirement of DoE.

## ARTICLE 19

### CHOICE OF LAW AND RESOLUTION OF DISPUTES

#### 19.1 Governing Law

This Contract and the rights and obligations hereunder shall be interpreted, construed and governed by the Laws of Bangladesh.

#### 19.2 Resolution of Disputes

- (a) BPDB and the Company shall use their best efforts to settle amicably all disputes arising out of or in connection with this contract or its interpretation.
- (b) If the Parties are unable to reach a settlement as per Article 19.2(a) within 28 days of the first written correspondence on the matter of disagreement, then either party may give notice to the other party of its intention to commence arbitration in accordance with Article 19.2 (c).
- (c) The arbitration shall be conducted in accordance with the Arbitration Act (Act No. 1 of 2001) of Bangladesh as at present in force. The place of arbitration shall be in Dhaka, Bangladesh.

## ARTICLE 20

### NO LIABILITY FOR REVIEW

- 20.1** No review and approval by BPDB of any agreement, document instrument, drawing, specifications or design proposed by the Company shall relieve the Company from any liability that it would otherwise have had for its negligence in the preparation of such agreement, document, Instrument, drawing, specification or design or failure to comply with the applicable Laws of Bangladesh with respect thereto, or to satisfy the Company's obligations under this Contract and the other documents comprising the Security Package.



## ARTICLE 22

### SITE FOR THE PROJECT

#### 22.1 Site

The Project will be constructed at Dhorola River Side, Kurigram, Bangladesh on a 110 acre land to be leased from BPDB on "as is" condition. The geo-coordinates of the project site are 25°49' N and 89°40' E.



#### 22.2 Preparation of Site

During the Term the Company shall carry out, at its own cost and expense, all work required to develop the Site for the Project. Any and all required leveling, filling to the final elevation, soil compaction, and river bank protection (if applicable) will be performed by the Company of its own cost. Necessary information regarding the maximum flood level at that area need to be collected by the Company itself from the local concerned offices.

## ARTICLE 23

### MISCELLANEOUS PROVISIONS

#### 23.1 Amendment

This Contract cannot be amended except prior written agreement between the Parties.

#### 23.2 Headings

The headings contained in this Contract are used solely for convenience and do not constitute a part of this Contract nor shall such headings be used in any manner to aid in the construction of this Contract.

#### 23.3 Third Parties

This Contract is intended solely for the benefit of the Parties hereto. Nothing in this Contract shall be construed to create any duty or any liability to or any right of suit or action whatsoever, to any person not a Party to this Contract.

#### 23.4 No Waiver

- (a) The failure or delay of either Party to enforce at any time any of the provisions of this Contract, or to require at any time performance by the other Party of any provision hereof, shall neither be construed to be a waiver of such provisions nor affect the validity of this Contract or any part hereof or the right of such Party thereafter to enforce each and every such provision.
- (b) No waiver by either Party of any default or defaults by the other Party in the performance of any of the provisions of this Contract :
  - (i) shall operate or be construed as a waiver of any other or further default or defaults whether of a like or different character; or
  - (ii) shall be effective unless in writing duly executed by a duly authorized representative of such party.

#### 23.5 Relationship of the Parties

This Contract shall not be interpreted or construed to create an association, joint venture, partnership or agency between the Parties or to impose any partnership obligation or liability upon either Party. Neither Party shall have any right, power or authority to enter into any Contract or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party. The Company shall be solely responsible for the payment of salaries, wages and mandatory and fringe benefits of its employees, which will not have any labor relationship with BPDB

#### 23.6 Rights of Inspection

The Company shall promptly furnish to BPDB such information as The Company may from time to time reasonably reuse and permit Project representatives of BPDB on reasonable notice to visit the Project and any of the other premises where the business of The Company is conducted and to have access to its books of accounts and records.

### **23.7 Survival**

Cancellation, expiration, termination of this Contract or arbitration of disputes shall not relieve the Parties of obligations that by their nature should survive such cancellation, expiration or termination, including, without limitation, warranties, remedies, promises of indemnity and confidentiality.

### **23.8 Language**

The language of this Contract shall be English. All documents, notices, waivers and all other communication written or otherwise between the Parties in connection with this Contract shall be in English.

### **23.9 Entirety**

This Contract and the Schedules attached hereto are intended by the Parties as the final expression of their agreement and are intended also as a complete and exclusive statement of the terms of their agreement. All prior written or oral understandings, offers or other communications of every kind pertaining to the sale or purchase of capacity and energy hereunder to BPDB by The Company or to The Company by BPDB are hereby abrogated and withdrawn.

### **23.10 Assignment**

This Contract may not be assigned by either Party other than by mutual Contract between the Parties in writing.

### **23.11 Successors and Assigns**

This Contract shall be binding upon, and inure to the benefit of, the Parties hereto and their respective legal and permitted successors and assigns.

### **23.12 Confidentiality**

(a) Each of the Parties and their contractors, consultants and agents shall hold in confidence the Contracts relating to the Project and all documents and other information, whether technical or commercial, which is of a confidential nature supplied to it by or on behalf of the other Party relating to the design, construction, insurance, operation, maintenance, management and financing of the Project and shall not save as required by law or appropriate regulatory authorities, prospective Lenders or investors in the Company and their professional advisers, to publish, disclose or use the same for its own purposes other than as may be required to perform its obligations under this Contract.

Notwithstanding the above, nothing herein contained shall preclude the use of provisions similar to those contained in this Contract and the other Contracts referred to herein and in Contracts prepared and issued in connection with other projects.

(b) The provisions of paragraph 23.12 (a) shall not apply to :

- (i) any information in the public domain otherwise than by breach of this Contract;
- (ii) information in the Possession of the receiving Party thereof before divulgence as aforesaid, and which was not obtained under any obligation of confidentiality; and

- (iii) information obtained from a third party who is free to divulge the same, and which is not obtained under any obligation of confidentiality.

**23.13 Double Jeopardy**

A final, non-appeal able order issued in a proceeding initiated by the Government and based on a claim of breach of the Contract shall be with prejudice to any proceedings against The Company that BPDB could otherwise bring for breach by The Company of substantially the same obligations under this Contract. Nothing in this Article shall prevent BPDB and the Government from separately initiating proceedings to terminate this Contract, pursuant to Article 4 of this Contract.

**23.14 Approval not to be Unreasonably Withheld or Delayed**

- (a) Unless otherwise provided herein with respect to a particular provision, whenever the acceptance, consent or approval of a Party is required herein, such acceptance, consent or approval shall not be unreasonably withheld or delayed by such Party.
- (b) If any matter under this Contract requires the approval or consent of a Party, the other Party shall notify the requesting party of its decision to give or withhold such approval or consent within thirty (30) Days of a request in writing therefore, accompanied by all information reasonable necessary to make such decision (unless any earlier or later period is specified herein), failing which such approval or consent shall be deemed not to be required.

**23.15 Counterparts**

This Contract is executed in English in counterparts and all so executed counterparts shall constitute one Contract binding on both Parties hereto.

IN WITNESS WHEREOF, the Parties have executed and delivered this Contract as of the date first written above.

<b>BPDB</b>	<b>Sponsor Company</b>
By : _____	By : _____
Name :	Name :
Title :	Title :
[ SEAL ]	[ SEAL ]
WITNESS	WITNESS
_____	_____



## SCHEDULE 1

### FUNCTIONAL SPECIFICATIONS

#### Technical Specifications of the Plant

Sl. No.	Description of Items	Submitted by the Bidder
1	Contracted Capacity (MW <sub>p</sub> )	
2	Type of Plant/Technology	
3	<b>Solar PV Module</b>	Manufacturer
		Model No.
		Country of Origin
		Year of Manufacture
		Number of PV Module
		Output of each PV Module
4	<b>Grid Tied Inverter (GTI)</b>	Manufacturer
		Model No.
		Country of Origin
		Year of Manufacture
		Number of GTI
		Capacity of each GTI
		Operating voltage range
		Frequency range
		Total Harmonic Distortion
5	<b>Power Transformer</b>	Manufacturer
		Model No.
		Vector Group
		Country of Origin
		Year of Manufacture
		Number of Power Transformer
		Voltage Rating of each Transformer
		Capacity of each Transformer
6	<b>Solar Irradiation Measurement Device</b>	Manufacturer
		Model No.
		Type
		Country of Origin
		Year of Manufacture
		Spectral Range
		Sensitivity
		Direction Error
		Field of View
		Response Time
7	<b>33 kV Switchgear</b>	
8	Minimum level of irradiance at which the plant is capable of operation (W/m <sup>2</sup> )	

## SCHEDULE 2

### COMMISSIONING AND TESTING

#### Commissioning and Testing

“Commercial Operations Test” means the tests referred to in clause 2.1, clause 2.2 and clause 2.3

#### 2.1 Testing Requirements

Minimum solar irradiance shall have to be 400 W/m<sup>2</sup> for the commissioning test referred to in clause 3.3; If the irradiance is less than 400 W/m<sup>2</sup> then the test shall be rescheduled depending on the availability of required minimum irradiance.

#### 2.2 Tests Prior To Synchronization

The Company, or its Contractors, shall carry out the following tests:

(a) Control and operation of protective devices that interface with the System. These tests should include, but not be limited to: revision of connections and phasing; trip and close sequences; protective devices response and tripping characteristics and settings; interlocking; inter-tripping; alarms and data logging; circuit breaker operation; auxiliary and ancillary systems; batteries, chargers, uninterrupted power supplies (UPS), solar panel: short circuit current test, open circuit voltage test, maximum power test; grid tied inverter test: sine wave output test, synchronization test, anti-islanding test, power transformer test: ratio test, vector group test etc. Included is the revision of the devices' assigned nomenclature and drawings, diagrams and connection lists.

(b) Metering system: Energy meter, irradiation meter operation and accuracy test.

#### 2.3 Commissioning Test

##### (i) Equivalent Dependable Capacity Test

During the test period the Equivalent Dependable Capacity of the plant shall be calculated based on global solar irradiance (1000 W/m<sup>2</sup>) at panel tilt angle. The Equivalent Dependable Capacity shall be calculated as follows:

P<sub>EDC</sub> = Equivalent Dependable Capacity (MW)

P<sub>x</sub> = Power Output during test period (MW)

I<sub>x</sub> = Irradiance at panel tilt angle during test period (W/m<sup>2</sup>)

E<sub>E</sub> = Exported Energy (kWh)

$$P_{EDC} = \left( \frac{P_x}{I_x} \right) * (1000 \text{ W/m}^2)$$

The Commercial Operation Test will continue for 4 consecutive hours in between 8:00 AM to 04:00 PM in the test running day. Measured value of P<sub>x</sub> and I<sub>x</sub> shall be recorded for 30 minutes interval during the test hours and individual value of P<sub>EDC</sub> shall be calculated from the table given below:

### Equivalent Dependable Capacity Calculation

<b>Time (Minutes)</b>	<b>E<sub>E</sub> (kWh)</b>	<b>P<sub>x</sub> (MW)</b>	<b>I<sub>x</sub> (W/m<sup>2</sup>)</b>	<b>P<sub>EDC</sub> (MW)</b>	<b>Remarks</b>
	From Export Energy Meter	From Export Energy Meter	From Irradiation Measurement Device		
0					
30					
60					
90					
120					
150					
180					
210					
240					
<b>Total</b>					
<b>Average</b>					

To determine the Equivalent Dependable Capacity of the Project, above 9 readings of P<sub>EDC</sub> shall be averaged. Commercial Operation Test will be satisfactorily completed only if averaged P<sub>EDC</sub> ≥ 30 MW unless otherwise Commercial Operation Date will not be achieved.

#### (ii) Reliability Run Test

As a minimum requirement to demonstrate the reliability of the facility the Company shall carry out a reliability run for a period of thirty six (36) Solar Radiation Hours during which time the facility shall operate continuously (without interruption) for eight (8) continuous Solar Radiation Hours. This test shall have been satisfactorily completed if the reliability run continues without interruption for not less than thirty six (36) Solar Radiation Hours.

**SCHEDULE 3**

**TARIFF**

**Proposed Tariff**

<b>Contract Year</b>	<b>Tariff Rate (USD/kWh)</b>
1	[...]
2	[...]
3	[...]
4	[...]
5	[...]
6	[...]
7	[...]
8	[...]
9	[...]
10	[...]
11	[...]
12	[...]
13	[...]
14	[...]
15	[...]
16	[...]
17	[...]
18	[...]
19	[...]
20	[...]

## SCHEDULE 4

### METERING SYSTEM

#### 4.1 Purpose

The metering system shall be capable of obtaining and interpreting readings and performing the adjustments, if required, to comply with the pertinent information concerning Project performance required in Articles 7, 12, and 13. The system may be part of the Project's control and measurement installations, provided it complies with the criteria specified below.

#### 4.2 Accuracy

The main components of the measurement system shall provide readings that are within the accuracies or repeatability tolerances shown in Table 6.1.

**Maximum Allowable Errors**

Measured Parameter	Maximum Error
Ambient Temperature	$\pm 1^{\circ}\text{C}$
Ambient Relative Humidity	$\pm 3\%$
Water Temperature (when applicable)	$\pm 1^{\circ}\text{C}$
Net Electricity (kWh) meters	$\pm 0.1\%$
Capacity (kW) meters	$\pm 0.1\%$
Instrument transformers	$\pm 0.1\%$
Time Reference	0.01 seconds per week-maximum

#### 4.3 Technical Specifications of Programmable Tariff Meter (to be compatible with BPDB automated meter reading system)

The Project's Delivery Point shall have 33 kV CT/PT metering system which need to be BPDB AMR (Automated Meter Reading) compatible. The meter will measure and record total exported energy, imported energy against specific date and time.

Voltage rating:  $U_n = 3 \times 110: \sqrt{3}/110 \text{ V}$  or  $3 \times 110 \text{ V}$

Measuring range: 80-115% of  $U_n$

The Tariff Meters should have the following features

##### i) Power Polarity

Meters shall be full quadrant (four quadrant) type for measuring power flow in any direction without variation of accuracy.

##### ii) Measurement Options

Provisions for measuring two-directional active and reactive energy, voltage and current,

active and reactive power, frequency, power factor etc.

**iii) Data Storage**

Should be capable of storing all critical data, including calibration, configuration and time of use etc. in battery backed up RAM and in non-volatile Flash RAM, which should retain the data indefinitely even when no auxiliary supply is available.

**iv) Internal Clock**

Should be fitted with real time clock/calendar chip used for all relevant meter readings round the clock with back up power facilities in case of power failure.

**v) Alarms**

Auto-diagnostic alarm facilities for loss of memory, problems with batteries, including PT failure/tolerance, unbalanced power and advanced tampering etc.

**vi) Security**

Provisions for highest security in communications, storing the data measured, overall operation of the meter, preventing unauthorized configuration, saving the data in non-volatile memory in the event of power failure and extended alarm function with self diagnostic features.

**vii) Liquid Crystal (Back lit) Display**

Meter shall have liquid crystal display facilities.

**viii) Configuration Software**

The tariff meters shall be configured and calibrated via the optical port using a PC. Configuration software of relevant tariff meters shall have to be provided.

**ix) Memory Storage**

Load profile interval (kWh & kVarh received and delivered, phase voltage, phase current, power factor with 30 minutes interval)

**x) Number of Digit**

Minimum 5 Integra with 3 decimals (programmable)

**Communication Options**

a) Meter should be fitted with an optical port that is hardware compatible with IEC1107 FLAG™.

**b) RS-232/ RS-485 External Modems**

Provisions for RS232/485 modem interface port which can serve as a modem interface connecting to a standard data modem, which allows remote access to the units via the GPRS or other communications networks including GSM modems. The connection between the meter and the modem will be via a fully isolated RS232/485 port.

**c) SCADA**

Provisions for a SCADA port that enables connection with a SCADA system and a second simultaneous connection with PC or modem.

#### 4.4 Security and Redundancy

- (a) Full redundancy shall be provided for the central processing units (CPU) and for the communication links between them and the transducers, instruments, sensors, and other devices which detect measure and transmit the parameters used by the measurement system to apply correction factors to the capacities listed in Schedule 2.
- (b) The Company shall not be able to gain access to any software application or programs that may be used to operate or calibrate the CPUs and the transducers, instruments, sensors, and other devices which detect, measure and transmit the parameters used by the measurement system unless BPDB's personnel input a restricted security code every time that this access is required.

4.5 The meter must be capable to display & record meter ID, Program, CT Ratio, PT Ratio, Total kWh, kVarh, kVAh, kW, kVar, kVA, PF, per phase (voltage, current, phase angle), load profile having minimum 16 channel storage data for minimum 90 days, Event log, power failure etc.



## SCHEDULE 5

### FORM OF PERFORMANCE SECURITY DEPOSIT BANK GUARANTEE

Date:

Secretary	Bank Guarantee No.
BPDB	Issuing Date:
Address:	Amount:
FAX	Expiry Date:
Tel. No.	Issued on Request of: [Name and Address of Bidder]
E-mail	

Considering that our client [insert name of Company] (hereinafter referred to as the “Company”, which expression shall mean and include its successors, executors, assigns, administrators and legal representatives whether jointly or severally) has undertaken, in pursuance of the Power Purchase Agreement (hereinafter called the “PPA”) to Net Energy Output to BPDB (hereinafter referred to as “BPDB”) from the Project (as defined in the PPA) located at [insert Site];

AND WHEREAS it has been stipulated in the said PPA that the Company shall furnish you with an irrevocable and unconditional bank guarantee by a schedule Bank in Bangladesh or by a foreign Bank endorsed and authenticated by a schedule Bank in Bangladesh for the sum specified herein as security for compliance with the Company’s performance obligations in accordance with the PPA;

On the request of the Company, we, the undersigned, responsible delegates and representative of the bank \_\_\_\_\_ in Bangladesh (hereinafter referred to as the “Bank” and the “Guarantor”, which expression shall mean and include its successors, executors, assigns, administrators and legal representatives whether jointly or severally), authorized to sign and make decisions in its name, declare by the present letter, that the Guarantor will guarantee, up to an amount of [insert Amount] taka on the date of claim as a bank guarantee of execution (hereinafter referred to as the “Performance Security Deposit”) towards BPDB for the proper execution of the Company’s commitments, in conformity to the requirements of the Power Purchase Agreement for the development of the power project at [insert Site].

We unconditionally commit ourselves to immediately pay the BPDB, upon first written request, any amount up to the above indicated amount without there being need for legal or administrative procedures and without need to prove Company’s default.

Any payments made to BPDB on its request shall be net and free of and without any present or future deductions such as for the payment of any taxes, executions, duties, expenses, fees, deductions or retentions regardless of the nature thereof or the authority levying the same.

The undertakings in this Performance Security Deposit constitute direct, unconditional and irrevocable obligations of the Guarantor. The Guarantor hereby binds itself unconditionally and irrevocably and undertakes and guarantees to pay on first written demand of BPDB, without protest or demur and without reference, notice or recourse to the Company or any other person, without requiring BPDB to prove or to show grounds or reasons for such demand and hereby expressly waive all rights to deny its obligations to BPDB irrespective of any dispute, difference or disagreement between the Company and BPDB or contestation by any other party/person.





This Performance Security Deposit sets forth in full the terms of Guarantor's undertaking and this undertaking shall not be modified, amended, or amplified in any way by reference to any document, instrument or agreement referred to therein, and any such reference shall not be deemed to incorporate by reference any document, instrument or agreement.

This Performance Security Deposit shall remain valid and effective until [insert date]. The validity of this Performance Security Deposit shall be extended upon request from BPDB through the Company for an additional period until such time as the Operations Security Deposit has been delivered to BPDB by the Company. Upon a written request from BPDB to do so on or before the date of expiration of this Performance Security Deposit or any subsequent extension thereof pursuant to the stipulation to extend this Performance Security Deposit, the Guarantor shall immediately extend the validity period of this Performance Security Deposit up to the date requested by BPDB.

If following such request by BPDB, the Company does not comply with the necessary formalities to ensure the extension of the validity of the present Performance Security Deposit before date of expiry of its validity, or if for any reason the Company is refused such extension of validity by the Bank, the Bank shall pay the amount indicated above, immediately on demand of the BPDB, without further notice to or action by the Company, to BPDB's bank account as notified to the Guarantor by BPDB in writing.

[Name of Bank], as Guarantor

---

Signature and bank seal

Handwritten signatures and initials in blue ink, including a signature that appears to be 'GAD' and another signature that is partially obscured.

**SCHEDULE 6**  
**PROGRAMME OF WORKS**

<b>SL No.</b>	<b>Description of Works</b>	<b>Within days from the Execution Date</b>
1.	Completion of design & engineering	
2.	All generating units shall be at Site	
3.	All civil works shall be completed	
4.	All installation/erection works including Interconnection Facilities etc shall be completed.	
5.	Testing & Commissioning	
6.	COD	

**SCHEDULE 7**

**FORM OF BPDB STANDBY LETTER OF CREDIT**

[ISSUED ON ISSUING BANK LETTERHEAD SHOWING FULL NAME AND ADDRESS]

Date and Place of Issue:

**Applicant**

Name:

Address:

**Advising and Negotiating Bank**

Name:

Address:

**Beneficiary**

Name:

Address:

Attention:

We hereby issue our documentary credit as follows:

**Type of Credit:**

Irrevocable, Divisible, Transferable and Revolving Letter of Credit.

**Letter of Credit Number:** .....

**Date and Place of Expiration:**

One year from the date of issue but renewed as per the terms herein.

**L/C Amount**

Such amount (the "L/C Amount") as the Applicant shall notify to the [Issuing Bank and the Advising and Negotiating Bank] from time to time as being the BPDB Letter of Credit Amount as defined in and calculated (and recalculated from time to time) in accordance with the provisions of the Contract dated ..... between the Company and Applicant.

Credit Available with: [Advising and Negotiating Bank], by negotiation against presentation of the documents detailed herein and of your draft(s) at sight drawn on issuing Bank accompanied by a certificate signed on your behalf by Person describing himself therein as your duly authorized officer stating that:

"(1) This drawing in the amount of [ Currency and amount] is being made under this Letter of Credit No.[ ] pursuant to the Contract between the Company and BPDB as a result of BPDB's failure to perform in accordance with Article 13 of the Contract;



(2) Amounts shown in the invoice accompanying the certificate are due and payable by BPDB, Less any amount disputed by BPDB, to Company under the Contract; and

(3) An invoice for amount has been delivered to BPDB in accordance with the Contract and either:

(a) no amount shown in the invoice has been disputed by BPDB; or

(b) a portion of the amount shown in the invoice has been disputed by BPDB, identifying such disputed amount".

Presentation of either of the above certificates and all communication in writing with respect to this Letter of Credit shall be address to us at [issuing Bank name and address] referencing Letter of Credit No. \_\_\_\_\_, Attention: \_\_\_\_\_, or at [Advising and Negotiating Bank name and Address] referencing Letter of Credit No. \_\_\_\_\_, Attention: \_\_\_\_\_.

This Letter of Credit shall be automatically and immediately reinstated to the full L/C amount on any draw thereon and shall be renewed annually by the Issuing Bank immediately prior to the relevant expiry date for further periods of one (1) year each until the last day of the Term under the Contract. Upon such renewal, the Issuing Bank shall confirm to the Applicant that such renewal has occurred.

This Letter of Credit sets forth in full the terms of our undertaking and this undertaking shall not in any way be modified, amended, limited, or amplified by reference to any document, instrument, or agreement referred to herein, expected only the certificate s and draft referred to herein; and any such reference shall not be deemed to incorporate herein by reference any document, instrument, or agreement expect for such certificates.

This Letter of Credit is transferable. Transfer may be effected only by issuing Bank upon our receipt of an acceptable applicant for transfer accompanied by the original Letter of Credit and payment of our transfer commission in effect at time of transfer.

Partial drawings are allowed.

Tested telex reimbursement is allowed.

Draft drawn under this Letter of Credit must bear the clause:

Drawn under [Issuing Bank] Letter of Credit No. []. Dated []"

We hereby engage with you that drafts drawn strictly in compliance with the terms of this credit and amendments shall meet with due honor upon presentation. This credit is subject to "Uniform Customs and Practice for Documentary Credits" (2007 Revision), International Chamber of Commerce, Publication No 600.

Authorized (Signature) on behalf of Bank

## SCHEDULE 8



## IRRADIATION MEASUREMENT SYSTEM

### 8.1 Purpose

The plant shall have at least two sets of digital solar irradiation measurement device (Pyranometer and Data Logger based) installed at two different positions, tilted as same as the PV panels to measure and display each day global solar irradiation (kWh/m<sup>2</sup>) and instantaneous global solar irradiance (W/m<sup>2</sup>) at panel tilt angle and store the data against specific date and time. The format for storing data is mentioned in the table below:

Date	Time	Irradiance (W/m <sup>2</sup> )	Irradiation (kWh/m <sup>2</sup> )
1	.....		
	06:00		
	06:30		
	.....		
	.....		
	18:00		
2	.....		
	06:00		
	06:30		
	.....		
	.....		
	18:00		
.....			
30	.....		
	06:00		
	06:30		
	.....		
	.....		
	18:00		
	.....		

The device should be fitted with real time clock/calendar chip used for all relevant readings round the clock with backup power facilities in case of power failure. It also should be capable of storing data in non-volatile Flash RAM which should retain the data indefinitely even when no auxiliary supply is available. The device must have a storage capacity for at least 2 years of data and shall have provisions for USB connectivity and RS232/485 modem interface port which can serve as a modem interface connecting to a standard data modem for remote access to the units via the GPRS modems.

### 8.2 Technical Specification of Irradiation Measurement Device

<b>Pyranometer</b>	
Spectral Range	285 to 2800 nm
Sensitivity	7 to 14 $\mu\text{V}/\text{W}/\text{m}^2$
Response Time	< 5 s
Zero Offset A	< 7 $\text{W}/\text{m}^2$
Zero Offset B	< 2 $\text{W}/\text{m}^2$
Direction Error (up to 80° with 1 Sun irradiance)	< 10 $\text{W}/\text{m}^2$
Operating Temperature Range	-40° C to +80° C
Temperature Dependence of Sensitivity (-40° C to +80° C )	< 1%
Maximum Solar Irradiance	4000 $\text{W}/\text{m}^2$
Field of View	180 °
<b>Data Logger</b>	
Local Communication	USB 2/ Optical Port
Remote Access	RS232/485 modem interface port
Display	Alphanumeric LCD

**SCHEDULE 9**  
**Compensation/Penalty Calculation for “n”th year**

**Table 9.1 Shortfall of Energy Calculation for (Name of the Month)**

Date	Irradiation (kWh/m <sup>2</sup> )	Minimum Energy Requirement (kWh)	Actual Output Energy (kWh)	Energy Difference (kWh)	Shortfall of Energy (kWh)	Plant Outage Time (h)	Grid Outage Time (h)	Shortfall of Energy due to Plant failure (kWh)	Shortfall of Energy due to Grid failure (kWh)
	From Irradiation Measurement Device	(1)*26700 * {1-0.01*(n-1)}	From Export Energy Meter	(3) – (2)	(4) Applicable only if value of column 4 is negative	From Export Energy Meter & 33 kV Operation Log Book	From Export Energy Meter & 33 kV Operation Log Book	{(5) * (6)}/ {(6)+(7)}	{(5) * (7)}/ {(6)+(7)}
*	1	2	3	4	5	6	7	8	9
1									
2									
3									
4									
5									
.....									
.....									
.....									
28									
29									
30									
<b>Total</b>									

**Table 9.2 Shortfall of Energy Calculation for “n”th year**

Month	Shortfall of Energy due to Plant failure (kWh)	Shortfall of Energy due to Grid failure (kWh)
	From Table 9.1	From Table 9.1
*	<b>1</b>	<b>2</b>
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
<b>Total</b>		



**Table 9.3 Compensation / Penalty Claimable Energy Calculation for “n”th year**

<b>Total Shortfall of Energy due to Plant failure (kWh)</b>	<b>Annual Allowable Outage Time Energy (kWh)</b>	<b>Net Shortfall of Energy due to Plant failure (kWh)</b>	<b>Penalty Imposable Energy (kWh)</b>		<b>Total Shortfall of Energy due to Grid failure (kWh)</b>	<b>Annual Allowable Outage Time Energy (kWh)</b>	<b>Net Shortfall of Energy due to Grid failure (kWh)</b>	<b>Compensation Claimable Energy (kWh)</b>
From Table 9.2	$1802250 * \{1-0.01*(n-1)\}$	(1) + (2)	(3) Applicable only if value of column 3 is negative		From Table 9.2	$1802250 * \{1-0.01*(n-1)\}$	(5) + (6)	(7) Applicable only if value of column 7 is negative
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>		<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>

**Table 9.4 Compensation / Penalty Calculation for “n”th year**

<b>Total Penalty Imposable Energy (kWh)</b>	<b>Tariff Rate (USD/ kWh)</b>	<b>Imposed Penalty Amount (USD)</b>	<b>Total Compensation Claimable Energy (kWh)</b>	<b>Tariff Rate (USD/ kWh)</b>	<b>Compensation Claimed Amount (USD)</b>
From Table 9.2		(1) * (2)	From Table 9.2		(4) * (5)
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

**N.B.**

(1), (2), (3), (4), (5), (6), (7) means data from corresponding column

**Shortfall of Energy due to Grid failure** = (Shortfall of energy \* Grid Outage Time) / (Plant Outage Time + Grid Outage Time)  
(It's sign is negative)

**Shortfall of Energy due to Plant failure** = (Shortfall of energy \* Plant Outage Time) / (Plant Outage Time + Grid Outage Time)  
(It's sign is negative)

**Net Shortfall of Energy due to Plant failure** = Shortfall of Energy due to Plant failure + Annual Allowable Outage Time Energy

**Net Shortfall of Energy due to Grid failure** = Shortfall of Energy due to Grid failure + Annual Allowable Outage Time Energy

*[Handwritten marks]*

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~~187~~ 188