



CENTRAL ELECTRICITY BOARD

CEB CARBON NEUTRAL INDUSTRIAL SECTOR (CNIS) RENEWABLE ENERGY (RE) SCHEME

INTERCONNECTION AGREEMENT

for Solar PV Generator of Capacity not exceeding 10 MWac Connection at 22 KV

Between

CENTRAL ELECTRICITY BOARD

and

[Insert the Name of the Facility Owner¹ as per the Certificate of Incorporation]

for the grid interconnection of a _____ **MW**

[Insert solar PV capacity as mentioned in the CEB Letter of Intent]

Solar PV Farm

at _____

[Insert site address]

Date: _____

¹ If the name of the Facility Owner, **who should be the Industrial Customer applying for the setting up of the Facility**, in the CNIS RE Scheme Project Proposal Document is different to the one recorded in the CEB Information System (refer to Industrial Customer existing electricity bill), contact a CEB Customer Services Office for making all necessary amendments prior to filling this Interconnection Agreement.

[Insert the name of the Facility Owner as per the Certification of Incorporation]

_____ MW Solar Photovoltaic System

[Insert solar PV capacity as mentioned in the CEB Letter of Intent]

Interconnection Agreement

This Interconnection Agreement (the **“Agreement”**) is made on _____ *[leave blank]*
at the Central Electricity Board, Corporate Office, Rue Du Savoir, Cybercity, Ebène, Republic of Mauritius.

BETWEEN

The **CENTRAL ELECTRICITY BOARD (“CEB”)**, duly established under the Central Electricity Board Act and represented by **Mr.** _____ (National Identity Card No.: _____), its _____

AND

The _____ *[Insert Facility Owner as per the Certification of Incorporation]*, duly represented by **Mr./Mrs./Miss/Ms.** _____ (National Identity Card No.: _____), its _____ *[Insert full name, NIC number and designation of Facility Owner (Industrial Customer) designated representative]*

(Each a **“Party”** and collectively the **“Parties”**)

(i) WHEREAS CEB is the owner and operator of the 22 kilovolts (kV) distribution system (the **“Distribution System”**).

(ii) WHEREAS _____ *[Insert Facility Owner (Industrial Customer) name]* owns and will operate a Solar PV Farm (the **“Facility”**) as shown in the schematic diagram given in the **Annex 1**. The Facility, registered by CEB with the reference number **LSIPP/CNIS/**_____ *[Leave blank]*, has been installed on _____’s *[Insert Facility Owner (Industrial Customer) name]* premises at _____ *[Insert site address]*, Republic of Mauritius.

(iii) WHEREAS _____ *[Insert Facility Owner (Industrial Customer) Name]* has connected or wishes to connect its Facility to the Distribution System and CEB has connected or has agreed to connect the Facility to the Distribution System; both, in accordance with the **Specific Terms and Conditions of**

the CEB Carbon Neutral Industrial Sector (CNIS) Renewable Energy (RE) Scheme set out in the **Annex 2** of this Agreement.

- (iv) WHEREAS CEB has previously reviewed and accepted _____'s [*Insert Facility Owner (Industrial Customer) Name*] application for the grid interconnection of the Facility under the **CEB Carbon Neutral Industrial Sector (CNIS) Renewable Energy (RE) Scheme**, launched in January 2023, based on related materials that were submitted to CEB and in accordance with the provisions of the **Technical Schedules** given in the **Annex 6**).
- (v) And WHEREAS in accordance with the Electricity Act, the **Technical Schedules (Annex 6)**, and the terms & conditions set out in this Agreement, CEB has agreed to offer through its Distribution System, and _____ [*Insert Facility Owner (Industrial Customer) Name*] has agreed to avail itself of the distribution service in relation to the Facility.

NOW THEREFORE in consideration of the foregoing, and of the mutual covenants, agreements, terms and conditions herein contained, the Parties, intending to be legally bound, hereby agree as follows:

1. Definitions

- 1.1. Words and phrases contained in this Agreement (whether capitalized or not) that are not defined in this Agreement have the meanings given to them in the Electricity Act, the Central Electricity Board Act, the Utility Regulatory Authority Act, the Interpretation and General Clauses Act, Electricity Regulations, the **Technical Schedules (Annex 6)**, and relevant regulations including subsequent amendments.
- 1.2. "**Facility Owner**" is the CEB Industrial Customer who has applied for the setting up of the Facility and whose designated representative is signing this Agreement.
- 1.3. "**Grid Integration**" refers to the continuous management by the CEB of the influence of the Facility on the grid.
- 1.4. "**Gross metering**", for the purpose of this Agreement, is the process of measuring and recording the total energy exported from the Facility to the CEB grid; thereafter, the total quantity of energy exported, which would be valued at the allocated unbundled time-of-use tariff, shall be credited to the Prosumer(s)' electricity contract account(s) in the order of priority and percentage share(s) as provided in the **Annex 4** of this Agreement.
- 1.5. "**Facility**" means a solar PV power generation facility having an installed capacity of _____ MW_p [*Insert nameplate DC capacity of the solar PV farm*] and comprised of the solar PV panels, inverters, the access tracks and internal access platforms and fire-fighting facilities, the mechanical and electrical ancillary equipment, the step-up transformers, the administrative buildings, the workshops, the Facility Owner Interconnection Facilities and any equipment and auxiliary facilities necessary to operate the solar farm, as more generally described in the **Technical Schedules (Annex 6)**.

- 1.6. “**Prosumer**” is as defined in the General Notice 114 of 2016 and in this Agreement, a Customer whose electricity contract account has been provided by the Project Owner and is listed in **Annex 4** to this Agreement is a Prosumer.
- 1.7. “**RE**” stands for Renewable Energy.
- 1.8. “**COD**”, which means commercial operation date, is the Business Day after the issuance of the Completion Certificate and the grant of a Permanent Generation Licence.
- 1.9. “**CEB Interconnection Facilities**” means the facilities required to interconnect the Facility to the CEB Distribution System located on the CEB side of the Point of Delivery.
- 1.10. “**Facility Owner Interconnection Facilities**” means all the facilities installed by Facility Owner to supply the Contract Energy from the Facility to the Point of Delivery, including transformers, and associated equipment, relay and switching equipment, protective devices and safety equipment and distribution lines.
- 1.11. “**Construction Start**” means the date notified by the Facility Owner to CEB, with supporting documentary evidence, when the Facility Owner shall have issued a full notice to proceed under the EPC Contract to its Contractor.
- 1.12. “**Technical Schedules**” means all the schedules set forth in **Annex 6** of this Agreement.

2. Management and Control of the Facility

- 2.1. The Parties have agreed that as from the commissioning date of the Facility, the Facility Owner shall be the sole entity responsible for the operation of the Facility.
- 2.2. Prior to signing this Agreement, the Facility Owner shall make all necessary arrangements to take over all responsibilities from any third party in respect of the operation of the Facility, if applicable.

3. Description of the Facility

- 3.1. The Facility is a Solar PV Farm of _____ [*Insert solar PV capacity as mentioned in CEB Letter of Intent*] **Megawatt (MW) AC** installed capacity and is registered initially under the electricity Contract Account bearing number _____ [*Insert Contract Account Number of Facility Owner as on its electricity bill*] and now under the Contract Account bearing number _____ [*Leave blank*]. The Facility comprises, among others, the following:

Equipment	Make/Model	Rating (MW)	Quantity
Solar Photovoltaic Modules			
*Inverter			

[Fill in the above table for solar PV modules and inverters]

* The output power of the Solar PV Farm has a total rated capacity of _____ MW and will be capped at _____ MW *[Leave blank]*, and same shall not be altered under any circumstances.

3.2. More details on the Facility are given in the **Annex 1** of this Agreement.

4. Standards of the Facility

4.1. The Facility Owner shall ensure that the Facility meets all applicable requirements of the Electricity Act, the Technical Schedules, the CEB Act and the prevailing Electricity Regulations.

4.2. The Facility Owner shall ensure that the Facility is installed, constructed, operated and maintained in conformity with this Agreement, the CEB's offer to connect and the Certificate of Compliance, and meets the technical and operating requirements described in the Technical Schedules.

5. Incorporation of the Technical Schedules and Application of Conditions of Service and Other Contracts

5.1. The Technical Schedules are hereby incorporated in its entirety by reference to, and forms part of, this Agreement. Unless the context otherwise requires, all references to this Agreement include a reference to the Technical Schedules.

5.2. CEB hereby agrees to be bound by and at all times to comply with the Technical Schedules, and the Facility Owner acknowledges and agrees that CEB is bound at all times to comply with the Technical Schedules in addition to complying with the provisions of this Agreement.

5.3. The Facility Owner hereby agrees to be bound by and at all times to comply with the Technical Schedules, and CEB acknowledges and agrees that the Facility Owner is bound at all times to comply with the Technical Schedules in addition to complying with the provisions of this Agreement.

5.4. In addition to this Agreement, whenever applicable, the relationship between CEB and the Facility Owner will be governed by the Technical Schedules, CEB's Conditions of Service, Electricity Act, Electricity Regulations, and relevant regulations that have been and shall be decreed.

5.5. In the event of a conflict or an inconsistency between a provision of this Agreement and a provision of the CEB's Conditions of Service, the provision of this Agreement shall govern.

5.6. The **Specific Terms and Conditions of the CEB Carbon Neutral Industrial Sector (CNIS) Renewable Energy (RE) Scheme**, detailed in the **Annex 2** of this Agreement, forms part of this Agreement.

6. Tariff, Charges, Billing and Settlement

- 6.1** Both Parties agree that the CNIS RE Scheme operates under the principle of off-setting of energy imported from the CEB grid against energy exported by the Facility with the mandatory application of the unbundled time-of-use tariff² applicable under the Scheme.
- 6.2** Pursuant to the Specific Terms and Conditions of the CNIS RE Scheme, given in the **Annex 2**, the unbundled time-of-use electricity tariff, which may be amended/restructured under relevant legislation(s), as and when required, applicable on a monthly basis to the electricity contract account(s), as provided by the Facility Owner, linked to the Facility, shall be as defined in the Unbundled Time-of-Use Electricity Tariff Schedule given in the **Annex 3**.
- 6.3** The Facility Owner hereby confirms that all necessary actions / measures were taken and accordingly agreement of the Customer(s) whose electricity contract account is (are) listed in the **Annex 4** has (have) been received for the change of the existing electricity tariff of the electricity contract account(s) to the unbundled time-of-use tariff whose structure has been defined in the Schedule given in the **Annex 3** and also that the provided electricity contract account(s) shall not be used for the purpose of energy offsetting, net-metering and/or gross-metering in other SSDG/MSDG application(s), unless CEB's prior approval has been obtained.
- 6.4** **The Facility Owner hereby commits to give to the CEB a true copy of the written agreement(s), in the standard format given in the Annex 5, of the Industrial Customer(s), whose electricity contract account is (are) listed in the Annex 4, prior to this Agreement. Otherwise, the value of the energy exported will not be credited to the relevant electricity contract account(s).**
- 6.5** Under the terms and conditions of this Agreement, as from the COD, all energy (kWh) generated, after adjusting for energy losses, from the Facility shall be considered as exported to the CEB grid for offsetting energy (kWh) imported from the CEB by the Customer(s) whose electricity contract account(s) has (have) been listed in the **Annex 4**. The energy exported shall be apportioned in the percentage share(s) mentioned in the **Annex 4** and the equivalent calculated monetary value, denominated in Mauritian rupees, shall be credited to the listed electricity contract account(s).
- 6.5.1** Where applicable, for the purpose of calculating the monthly bill, the total monthly electricity (kWh) consumption of the Customers of the electricity contract accounts listed in the **Annex 4** shall be calculated by the formula below: -

$$C = P + I - E$$

² The unbundled time-of-use tariff is subject to the approval of the Utility Regulatory Authority (URA) after its filing by the CEB to the URA. The procedure to seek the approval of the URA for the said unbundled time-of-use tariff will be undertaken in due course.

Where,

C is the total monthly electricity (kWh) consumption;

P is the total energy (kWh) production by the RE facility;

I is the total energy (kWh) imported from CEB; and

E is the total energy (kWh) exported to CEB.

- 6.6** Incidental excess energy exported (energy remained after offsetting) shall be processed pursuant to the terms and conditions of the Scheme.
- 6.6.1** The rate for the purchase of incidental excess energy (if any), which shall be valid during the initial four years of operation of the RE facility, shall be Rs 1.86 per kWh. After the initial four years, excess energy generated will be banked and rolled over to successive billing periods. However, the counter of the banked energy shall be reset to zero on 1st January every year thereafter.
- 6.7** Any energy exported to the CEB grid prior to the COD shall be considered as free energy.
- 6.8** Credit balance (Rs), if any, in the Prosumer(s) electricity contract account(s) linked to the Facility, shall be carried forward for next and successive billing periods, as the case will warrant, and be used to net off charges raised by CEB for its electricity services to the Prosumer(s)' premises.
- 6.9** The credit balance (Rs), if any, in the Prosumer(s)' electricity contract account(s), may be encashed once per year, after the cycle of twelve billing periods has been completed, or upon the permanent closing of the electricity contract account(s) or in exceptional cases upon mutual agreement.
- 6.10** All related charges, which include rental of meters, telecommunication, connection and disconnection of electricity supply and the Facility, as determined by the CEB, shall be at the cost of the Prosumer(s).
- 6.11** Other electricity services related charges, as defined in the Schedule in the **Annex 3**, shall be applied to the Prosumer(s) electricity contract account(s). Demand Charge, Minimum Charge, Security Deposit, TV licence, etc., as would be applicable to the Prosumer(s)' electricity contract account(s), shall be billed in accordance with the CEB prevailing billing principles, which may be changed, as and when required, and communicated thereof.
- 6.12** Billing and settlement activities, unless otherwise specified, shall be in accordance with the procedures set out in the Electricity Act and/or relevant Electricity Regulations, including as per future amendments.
- 6.13** Payments of all payable charges shall be made within given due dates to avoid disconnection of the Facility, including the electricity supply to the premises, from the grid.

- 6.14** In case of default, failing to remedy after a period of cure of not more than 30 days, which is subject to change, as and when required, the relevant electricity contract account will be permanently closed entailing either the cancellation of the present Interconnection Agreement or the share of the energy exported to the CEB grid be considered as free energy.
- 6.15** Any settlement of payment, if applicable, will be made within a period of 30 days as from the date of receipt of a signed VAT invoice, if applicable, except for situation of dispute or force majeure.
- 6.16** The Prosumer(s) shall implement energy efficiency (EE) measures identified following the completion of an energy audit exercise in line with prevailing regulations. Evidence(s) in relation to the implementation of EE measure(s) should be produced prior to the commissioning of the Facility.

7. Metering

- 7.1** For the purpose of the Gross-metering principle, under which the Facility will be managed in the CEB grid, the Facility shall be equipped with production and import-export meters, as applicable and in accordance with Technical Schedules.
- 7.2** The meters will be supplied by CEB who will keep full administrative and technical control on and of the meters and their associated metering equipment.
- 7.3** The meters, which will be programmed and installed by CEB, shall be used for registering, monitoring and billing, as applicable, of the power generation output, electricity import and electricity export by and from the Facility.
- 7.4** The power generation output of the Facility shall be measured by the production meter and also via the Inverters.
- 7.5** The Prosumer(s), including the Facility Owner, shall at all times ensure that the meters are fully accessible to CEB and/or its associates and are properly secured on its premises.
- 7.6** All related costs for metering shall be borne by the Facility Owner and/or the Prosumer(s).

8. Access to Information

- 8.1** All information recorded by the Inverter, including the power generation output of the Facility, shall be read through the internet using a web link that the Facility Owner (Facility Owner) has agreed to provide to CEB upon the commissioning of the Facility.

- 8.2 The Facility Owner also commits to provide CEB a free copy of the operating software and application(s) for the data downloading from the Facility.
- 8.3 If required, CEB may validate the power generation output recorded by the Inverter of the Facility with the meter readings of the CEB's production meter.
- 8.4 Where necessary, as and when required, the Facility Owner shall give full access to the CEB for downloading data series directly from the Inverter of the Facility.
- 8.5 If required by CEB, the Facility Owner shall also unconditionally provide CEB access to related web tools, webpages and databases of the Facility.
- 8.6 The Facility Owner undertakes to provide CEB with all necessary information, which would include, among others, facts, figures and readings of the Facility.
- 8.7 The Parties agree that no third party shall hold access to the web tools, webpages and databases of the Facility.

9. Representations and Warranties

- 9.1. The Facility Owner represents and warrants to CEB as follows and acknowledges that the CEB is relying on the following representations and warranties without independent inquiry in entering into this Agreement:-
 - (a) the Facility is as described in the **Section 3** above;
 - (b) it has read and taken full cognizance of all information relating to the Scheme and all information submitted by the Facility Owner is true and correct;
 - (c) the Facility is in compliance with all applicable technical requirements and laws, including safety rules as provided in CEB's safety manual;
 - (d) that the Facility Owner associates, employees and/or contractors, as and when applicable, at all times have complied and shall comply with CEB prevailing safety procedures (including in relation to clearing, switching, isolation, testing, earthing and work permits) applicable to CEB's system, substations, premises, facilities and other equipment as may be notified to the Facility Owner by CEB from time to time;
 - (e) The Facility Owner has been given warranty information and operation manuals for the Facility, as applicable;
 - (f) The Facility Owner responsible technical personnel has been adequately instructed in the operation and maintenance of the Facility and the Facility Owner has developed and implemented an operation and maintenance plan based on those instructions;
 - (g) The Facility Owner resources including but not limited to, its personnel, agents, partners, representatives and subcontractors, as may be deployed from time to time for the fulfilment of its obligations in terms of the present Agreement, possess the relevant professional adequacy, know-how and expertise;

- (h) The Facility Owner delegated officer has all necessary power, authority and capacity to enter into this Agreement and to perform the former's obligations under this Agreement;
- (i) The Facility Owner is acting on its own account, and its decision to enter into this Agreement is based on its own judgement, not in reliance upon the advice or recommendations of the other Party and it is capable of assessing its merits and understanding, and understands and accepts the terms, conditions and risks of this Agreement;
- (j) The Facility Owner has not relied on any promises, representations, statements or information of any kind that are not contained in this Agreement in deciding to enter into this Agreement;
- (k) this Agreement is legally binding on and enforceable against the Facility Owner and/or its associates in accordance with its terms;
- (l) The Facility Owner holds all permits, licences, agreements, consents, and other authorizations that may be necessary to enable it to engage in the construction of the Facility;
- (m) during the term of this Agreement, as may be from time to time extended, the Facility Owner shall not dispose of the whole or any part of its rights over the Facility, whether proprietary or otherwise, in any manner whatsoever, without the prior consent in writing of CEB; and
- (n) any individual signing this Agreement on behalf of the Facility Owner has been duly authorized by the latter to sign this Agreement and has the full power and authority to bind the Facility Owner.

9.2. CEB represents and warrants to the Facility Owner as follows and acknowledges that the latter is relying on the following representations and warranties without independent inquiry in entering into this Agreement:-

- (a) CEB's resources including but not limited to, its personnel, agents, partners, representatives and subcontractors, as may be deployed from time to time for the fulfilment of CEB's obligations in terms of the present Agreement, possess the relevant professional adequacy, know-how and expertise;
- (b) CEB is duly incorporated under the laws of the Republic of Mauritius;
- (c) CEB has all necessary power, authority and capacity to enter into this Agreement and to perform its obligations under this Agreement;
- (d) this Agreement is legally binding on and enforceable against CEB in accordance with its terms; and
- (e) any individual signing this Agreement on behalf of CEB has been duly authorized by CEB to sign this Agreement and has the full power and authority to bind CEB.

10. Construction, Operation, Maintenance and Monitoring of the Facility

- 10.1.** The CEB shall appoint an Independent Engineer construction of the Facility. The appointment, duties and functions of the Independent Engineer shall be in accordance with the Technical Schedules.
- 10.2.** The Facility shall be constructed, commissioned, operated and maintained in compliance with the Technical Schedules.
- 10.3.** The Facility Owner shall, as from the Commercial Operation Date, operate of the Facility in accordance with the procedures provided by the Installer and the Operating Procedures of the Technical Schedules. The Procedures of the Installer and/or CEB should be mandatorily affixed on the Facility Owner's side of the Distribution System.
- 10.4.** The Operating Procedures shall be as follows: -
 - 10.4.1.** Facility Owner shall procure, at all times during the Operation Period, that the Facility be operated in accordance with the operating procedures set forth in **Schedule G ("Operating Procedures")** as may be amended or supplemented by **Sections 10.4.2** and Error! Reference source not found..
 - 10.4.2.** No later than 30 (thirty) days prior to the scheduled Commercial Operation Date, the Facility Owner shall, in consultation with the Independent Engineer, review the Operating Procedures and shall carry out the necessary modifications in the Operating Procedures as may be reasonable in the circumstances.
 - 10.4.3.** The Operating Procedures shall be revised and updated as and when required and the provisions of this **Section 10.4** shall apply, mutatis mutandis, to such revision.
- 10.5.** The Facility shall be accessible at all times, located for ease of access to CEB's personnel, and shall be capable of being locked in the open position, as defined in the Technical Schedules.
- 10.6.** CEB shall be free to disconnect the Facility from the Distribution System should the Facility affect the operation of the Distribution System.
- 10.7.** The Facility Owner shall follow the CEB's procedures for switching, clearance, tagging, and locking of the Facility.
- 10.8.** The Facility Owner shall delegate a representative who shall provide assistance to CEB in respect of the Facility whenever requested by CEB. The Facility Owner shall communicate officially the name and provide the contact details of its delegated representative prior to the signing of the Agreement. The Facility Owner shall promptly inform CEB of change of representative, if any.

10.9. The Facility Owner delegated representative shall also be responsible to report promptly security issues to CEB and to the former regarding the Facility. All security issues shall be recorded into a logbook.

10.10. The Maintenance Programme shall be as follows: -

10.10.1. On or before the COD and no later than 45 (forty-five) days prior to the beginning of each Contract Year during the Operation Period, as the case may be, the Facility Owner shall provide to CEB, its proposed annual programme of preventive and other scheduled maintenance ("**Maintenance Programme**") complying with the Guaranteed Operating Characteristics, Operating Procedures and Safety Requirements.

10.10.2. Within 15 (fifteen) days of receipt of the Maintenance Programme, CEB shall review the same and convey its comments to the Facility Owner with particular reference to its conformity with the Guaranteed Operating Characteristics, Operating Procedures and Safety Requirements.

10.10.3. The Facility Owner may modify, as may be reasonable in the circumstances, the agreed Maintenance Programme pursuant to **Section** Error! Reference source not found., subject to and the approval of the CEB upon submission by Facility Owner of a prior notice of at least 30 (thirty) days. The procedures specified in **Sections 10.10.1**Error! Reference source not found. **and** Error! Reference source not found. shall apply *mutatis mutandis* to such modifications.

10.11. The Facility Owner shall effect and maintain at its own cost such insurances for such maximum sums as may be required under the financing agreements and the applicable laws, and such insurances set forth in the Technical Schedules.

11. Modification to the Facility

11.1 The Facility Owner shall not make, without CEB's prior consent, any modification or addition to the Facility, which includes modification of connection assets, except where the modification will not increase the maximum electrical output of the Facility. In such case, the Facility Owner shall give the CEB no less than 15 working days' prior notice before the modification will be made.

11.2 Where the modification will increase the maximum electrical output of the Facility, the Facility Owner shall submit a new application for connection. CEB reserves the right to accept or reject the application.

11.3 If the application is admissible, CEB shall process the application for connection in accordance with **Section 5** of this Agreement, the prevailing or other relevant

Schemes, if any, and other conditions that will be in force at the time of the new application.

- 11.4** The Facility Owner shall not commence any modification until all necessary procedures have been duly completed.
- 11.5** In the event the Facility Owner applies for relocation of the Facility to another location during the lifetime of this Agreement, the request may be entertained subject to a network impact assessment or survey in the area where the Facility will be relocated.
- 11.6** In respect of the relocation of the Facility, the Facility Owner shall fulfil all required procedures and shall sign an addendum to the Interconnection Agreement, which will last only for the remaining number of years.

12. Indemnity

- 12.1** In relation to the Facility, the Facility Owner shall indemnify CEB for damages claimed by third parties where the cause of the loss or damage is due to acts and/or omissions of the Facility Owner or its representative or any of its associates.
- 12.2** In relation to the Facility, CEB shall indemnify the Facility Owner for damages claimed by third parties where the cause of the loss or damage is due to proven acts and/or omissions of CEB or its representative or any of its associates.

13. Liability

- 13.1** Each Party shall have a duty to mitigate any losses relating to any claim for indemnification from the other Party that may be made in relation to that other Party. Nothing in this section shall require the mitigating Party to mitigate or alleviate the effects of any strike, lockout, restrictive work practice or other labour dispute.
- 13.2** Each Party shall give prompt notice to the other Party of any claim with respect to which indemnification is being or may be sought under this Agreement.
- 13.3** Neither Party shall be liable to each other for any damage caused during cyclonic/surge/lightning or any other adverse conditions beyond its control which may prevail during the installation and operation of the Facility.
- 13.4** Provided it has been proven, the Facility Owner shall not be held liable in case of tampering of any of the meters including associated equipment.
- 13.5** Where tampering is detected, all CEB's obligations, under this Agreement, would be suspended, except for accepting energy injection to its network at zero cost.

The party responsible for any tampering shall bear all liabilities, as shall be determined by CEB, thereof and promptly initiate and execute remedial action(s).

14. Access to the Facility

- 14.1.** Each Party shall ensure that its respective facilities are secured at all times.
- 14.2.** The Facility Owner shall permit and, if the place on which the Facility is located is not owned by the latter, cause such landlord/owner/management agent to permit the CEB's employees and agents to enter the site on which the Facility is located at any reasonable time.
- 14.3.** Such access shall be provided for the purposes of inspecting and/or testing the Facility as and when permitted by this Agreement, the Technical Schedules or the CEB's Conditions of Service or as required to ensure the continued safe and satisfactory operation of the Facility, to ensure the accuracy of the CEB's meters, to establish work protection, or to perform work.
- 14.4.** CEB shall have access to and be at liberty to remove, test, inspect and replace its meter(s) at all reasonable times. In case of damage to the meter(s), the Facility Owner shall be held liable to refund the cost of damaged meter(s) and pays the full cost of new meter(s) including the installation cost.
- 14.5.** Any inspecting and/or testing referred to in **Subsection 14.2** shall not relieve the Facility Owner from its obligation to operate and maintain the Facility and any related equipment owned by the Facility Owner in a safe and satisfactory operating condition and in accordance with this Agreement.
- 14.6.** Any access and intervention by CEB, its personnel and/or respective representatives in terms of the present Agreement shall be proceeded with all due diligence and care and as expeditiously as possible. CEB shall not, in proceeding as aforesaid, unduly or unreasonably interfere with the conduct of any activities and business lawfully carried on the Facility Owner's premises.

15. Disconnection of the Facility to Permit Maintenance and Repairs

- 15.1.** To the extent possible and practicable, CEB will inform the Facility Owner of any planned power outage in the Distribution System which may impact the Facility or its connection.
- 15.2.** CEB will make reasonable efforts to ensure that the outages referred to in **Subsection 15.1** will be of minimal duration and cause minimal inconvenience.
- 15.3.** In connection with any planned power outage, either Party shall be free to disconnect or isolate, or require the disconnection or isolation of the Facility or

system to allow its employees, contractors or agents to construct, maintain, repair, replace, remove, investigate or inspect the Facility in accordance with the terms of this Agreement and good utility practices.

15.4. Where practical, prior to temporarily isolating or disconnecting the Facility from the Distribution System, the Facility Owner shall give CEB a prior notification.

16. Dispute Resolution

16.1. If any dispute of whatever nature in relation to this Agreement arises between the Parties and so notified in writing by either Party to the other party, shall, in the first instance, be attempted for an amicable resolution.

16.2. If a dispute cannot be resolved pursuant to **Subsection 16.1**, either Party may require such dispute to be referred to an expert, having competence in the dispute field, agreed by both Parties for amicable settlement.

16.3. Any dispute which is not resolved amicably shall be finally decided by reference to arbitration in accordance with the International Arbitration Act 2008 of the Republic of Mauritius.

16.4. This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending the award in the arbitration proceedings.

16.5. The Parties agree that this Agreement shall be governed by the laws of Mauritius and that any dispute, controversy or claim arising in respect thereof shall be resolved amicably between the authorised representatives of both Parties within a mutually agreed period of time.

16.6. At all times, the Parties agree to use their best efforts for resolving all disputes arising in respect of this agreement promptly, equitably and in good faith, and further agree to provide each other to with reasonable access during normal business hours to non-privileged record, information and data pertaining to any such disputes.

17. Data Protection

17.1. All personal data contained in the Agreement shall be processed in accordance with the Data Protection Act 2017 on the protection of individuals with regard to the processing of personal data. Such data shall be processed solely in connection with the implementation and follow-up of the Agreement by the CEB, without prejudice to the possibility of passing the data to the bodies responsible for inspection and audit in accordance with Data Protection Act 2017. The Prosumer may, on written request, gain access to his/her personal data and correct any information that is inaccurate or incomplete. He/she should address any questions regarding the processing of his/her personal data to the CEB.

18. Amendments

- 18.1.** The Parties may by mutual agreement amend this Agreement to reflect changes that may occur during the term of this Agreement.
- 18.2.** Any amendment to this Agreement shall be made in writing and duly executed by both Parties.
- 18.3.** In the event the Facility Owner wishes to transfer the Facility to another party during the lifetime of this Agreement, the other party shall undertake the necessary procedures to transfer the electricity contract account and the Facility onto his/her/its name.
- 18.4.** Pursuant to the **Subsection 18.3**, the other party of the Facility shall fulfil all required procedures and shall sign an addendum to the Interconnection Agreement, which will last only for the remaining number of years.
- 18.5.** In the event the Facility Owner intends to sell the Facility, along with his/her/its premises to another party, during the lifetime of this Agreement, he/she/it shall seek the prior written consent of the CEB.
- 18.6.** The new owner of the Facility, after having completed all necessary procedures and opened a new electricity contract account in his/her name, shall sign the addendum to the Interconnection Agreement, which will include the terms and conditions of the most appropriate scheme available at that point in time. The new Interconnection Agreement will have a duration not exceeding the remaining number of years of the initial Interconnection Agreement.

19. Terms of Agreement and Termination

- 19.1.** This Agreement shall become null and void if all terms and conditions, as required by the CEB's Conditions of Service, **Annex 2** of this Agreement, Technical Schedules, Electricity Act, Electricity Regulations and **Section 21**, are not duly met.
- 19.2.** This Agreement shall become null and void provided the construction of the Facility has been started no later than 11 (eleven) months from the date of execution of this Agreement except if CEB has agreed otherwise.
- 19.3.** This Agreement shall become effective as from the Commercial Operation Date ("**COD**") subject to the fulfilment of the **Section 21** of this Agreement and shall

continue in effect for a period of **20 (twenty) years** as from the date of the COD, unless terminated in accordance with **Subsections 19.5 or 19.6**.

19.4. This Agreement may be extended for a period to be mutually agreed by the Parties provided a notice of extension by either Party is issued before the expiry of the Agreement or, by mutual covenant, any other times deemed appropriate.

19.5. CEB may terminate this Agreement upon any material breach of this Agreement by the Facility Owner (the "**Default**"); if the latter fails to remedy the Default within the applicable cure period referred to in **Subsection 19.7** after receipt of a written notice of the Default and the intended termination from CEB.

19.5.1. The Parties to this Agreement acknowledge and agree that any breach of the representations and warranties, as sets out at **Subsection 9.1** of this Agreement, by the Facility Owner shall render this Agreement null and void to all intents and purposes.

19.6. The Facility Owner may terminate this Agreement upon any material breach of this Agreement by CEB (a "**CEB Default**"); if CEB fails to remedy the CEB Default within the applicable cure period referred to in **Subsection 19.7** after receipt of a written notice of the CEB Default and intended termination from the Prosumer.

19.6.1. The Parties to this Agreement acknowledge and agree that any breach of the representations and warranties, as sets out at **Subsection 9.2** of this Agreement, by the CEB shall render this Agreement null and void to all intents and purposes.

19.7. The relevant Party shall cure a default within a reasonable period of time, which shall not be longer than 90 (ninety) working days, except for force majeure.

19.8. Termination of this Agreement for any reason shall not affect the liabilities of either Party that were incurred or arose under this Agreement prior to the time of termination or that expressly applies in relation to the disconnection of the Facility following termination of this Agreement.

19.9. Subject to **Section 16** above, termination of this Agreement for any reason shall be without prejudice to the right of the terminating Party to pursue all legal and equitable remedies that may be available to it, including injunctive relief.

19.10. The rights and remedies set out in this Agreement are not intended to be exclusive but rather are cumulative and are in addition to any other right or remedy otherwise available to a Party at law or in equity.

19.11. **Subsections 19.7 to 19.9** shall survive termination of this Agreement.

20. Entire Agreement

20.1. Except as expressly provided herein, this Agreement constitutes the entire agreement between the Parties with respect to the subject-matter hereof and supersedes all prior oral or written representations and agreements of any kind whatsoever with respect to the subject-matter hereof.

21. Conditions Precedent for Effectiveness of the Agreement

21.1. As may be required by laws and regulations, the Facility Owner has obtained all relevant and related licence(s), permits, and authorization(s) for the Facility. The Conditions Precedent required to be satisfied by the Facility Owner shall be deemed to have been fulfilled when Facility Owner shall have:

- (a)** procured all the Applicable Permits including an EIA License, a Building Land Use Permit and a Generation Licence (if applicable) unconditionally or if subject to conditions, then all such conditions required to be fulfilled by the date specified therein shall have been satisfied in full and such Applicable Permits are in full force and effect, and delivered to CEB true copies of all the Applicable Permits in hard as well as electronic forms including the EIA report prepared for the purpose of procuring the EIA License;
- (b)** provide a project implementation plan with relevant dates and duration from date of signature till Effective Date;
- (c)** procured the Site, obtain all relevant easements or rights in real estate reasonably necessary for construction, operation and maintenance of the Facility. The Facility Owner shall provide documentary evidence of the clear title and possession of the Site in the name of Facility Owner;
- (d)** procure the right of way for the 22kV Interconnection Line in the name of CEB;
- (e)** executed the Financing Agreements and delivered to CEB the true copies thereof, duly attested by a Director of the Facility Owner; and
- (f)** achieved Financial Close and delivered to CEB true copies of the Financial Package and the Financial Model, duly attested by the Lead Lender(s) and a Director of the Facility Owner, along with soft copies of the Financial Model in MS Excel Version acceptable to CEB.

21.2. The Facility Owner shall make all reasonable endeavours to satisfy the Conditions Precedent within the time stipulated and CEB shall provide the Facility Owner with such reasonable cooperation as may be required to assist the Facility Owner in satisfying the Conditions Precedent.

21.3. The Facility Owner shall notify CEB in writing at least once in a month on the progress made in satisfying the Conditions Precedent. The Facility Owner shall, within 3 (three) Business Day, inform CEB when any Condition Precedent for which it is responsible has been satisfied.

- 21.4. The Facility Owner has submitted the true copy of the relevant agreement(s), in the format given in the **Annex 5**, of the Customer(s) whose electricity contract account(s) has (have) been listed in the **Annex 4** to this Agreement prior to the commissioning of the Facility.
- 21.5. The Facility Owner has executed all recommendations of the Network Survey and/or Network Impact Assessment carried out by CEB and has made all payments requested by CEB in relation to the grid interconnection of the Facility.
- 21.6. The Facility Owner has submitted the duly signed proof of order and implementation schedule prior to the start of the construction of the Facility.
- 21.7. The Independent Engineer has issued the Certificate of Installation and the Facility Owner has achieved the Commercial Operation Date.
- 21.8. The Facility Owner has fulfilled any other relevant conditions, including those required under this Agreement to the satisfaction of CEB.

22. Notices

22.1. Any notice or other communication to be given by any Party to the other Party under or in connection with the matters contemplated under this Agreement shall be in writing and shall:

- (a) in the case of the Facility Owner, be given by facsimile or electronic mail and by letter delivered to the address given below and marked for the attention of the persons set out below or to such other person(s) as the Prosumer may from time to time designate by notice to CEB;

Republic of Mauritius	Republic of Mauritius
Mobile: _____	Mobile: _____
Email : _____	Email : _____

[Fill in the above with designation of contact persons, name of the Facility Owner, office/postal address, mobile phone number and email address of contact persons]

- (b) in the case of CEB, be given by facsimile or electronic mail and by letter delivered to the address given below and marked for attention of the persons set out below or to such other person(s) as CEB may from time to time designate by notice to the Prosumer.

General Manager

Central Electricity Board
CEB Corporate Office
Rue Du Savoir, Cybercity, Ebène
Republic of Mauritius
Phone: (230) 404 2000
Fax: (230) 454 7630 / 7632
e-mail: ceb@ceb.mu

Renewable Energy and Strategic Project (RESP) Manager

Central Electricity Board
CEB Corporate Office
Rue Du Savoir, Cybercity, Ebène
Republic of Mauritius
Phone: (230) 404 2000
Fax: (230) 454 7630 / 7632
e-mail: ceb@ceb.mu

22.2. Any notice or communication by a Party to the other Party, given in accordance herewith, shall be deemed to have been and shall be deemed properly given upon date of receipt if delivered by hand or sent by courier, if mailed by registered or certified mail at the time of posting, if sent by fax when dispatched (provided if the sender's transmission report shows the entire fax to have been received by the recipient and only if the transmission was received in legible form).

22.3. The Prosumer shall notify CEB of the identities and contact details of its responsible officers, who shall be responsible for general communications and contract management.

23. Commissioning Tests and Commercial Operation**23.1. Commissioning Tests**

23.1.1. At least 30 (thirty) days prior to the likely date of commissioning of the Facility, the Facility Owner shall notify the Independent Engineer and CEB of its intent to subject the Facility to Commissioning Tests. The date and time of each of the tests shall be determined by the Independent Engineer in consultation with the Facility Owner and notified to CEB who may designate its representative(s) to witness the Commissioning Tests. The Facility Owner shall provide such assistance as the Independent Engineer may reasonably require for witnessing the Tests. In the event that the Facility Owner and the Independent Engineer fail to mutually agree on the dates for conducting the tests, the Facility Owner shall fix the dates by not less than 10 (ten) days' written notice to the Independent Engineer and CEB.

23.1.2. All Commissioning Tests shall be conducted in accordance with the testing procedures specified in the Technical Schedules. The Independent Engineer shall observe, monitor and review the results of the tests to determine compliance of the Facility with this Agreement, and if it is reasonably anticipated or determined by the Independent Engineer during the course of any test that the performance of the Facility or any part thereof does not meet the provisions of this Agreement, it shall have the

right to suspend or delay such test and require the Facility Owner to remedy and rectify the defects or deficiencies. Upon completion of each test, the Independent Engineer shall provide to the Facility Owner and CEB copies of all test data including detailed test results. For the avoidance of doubt, it is expressly agreed that the Independent Engineer may, at the cost of the Facility Owner, require the Facility Owner to carry out or cause to be carried out additional tests, in accordance with Good Industry Practice, for determining the compliance of the Facility with the Specifications and Standards and the Guaranteed Operating Characteristics as detailed in the Technical Schedules.

23.2. Completion Certificate

Upon successful completion of the Commissioning Tests and submission of the test reports thereof by the Facility Owner, the Independent Engineer shall forthwith issue to CEB and the Facility Owner a certificate stating that the Facility has been successfully commissioned and tested in accordance with this Agreement and certifying that the Facility is fit to commence Commercial Operation (“Completion Certificate”).

23.3. Commercial Operation Date

CEB shall issue a Commercial Operation Certificate to Facility Owner stating the date of the commercial operation of the Project (“**Commercial Operation Date**” or “**COD**”), which shall be the Business Day after the issuance of the Completion Certificate and the grant of a Permanent Generation Licence.

23.4. Rescheduling of Tests

If the Independent Engineer certifies to CEB and the Facility Owner that it is unable to issue the Completion Certificate, as the case may be, because of events or circumstances on account of which the tests could not be held or had to be suspended, the Facility Owner shall be entitled to re-schedule the tests and hold the same as soon as reasonably practicable.

24. Forecasting

24.1. During the Operation Period, The Facility Owner shall have the capability to produce and submit to CEB a forecast in MW, at every interval of 30 minutes, for the following week of the Facility (“One Week Ahead Production Forecast”). The One Week Ahead Production Forecast shall be submitted by 16.00 Hours each Monday for the period from 00.00 Hours on the next following Tuesday to 24.00 Hours on the immediately following Monday. The Facility Owner shall submit the One Week Ahead Production Forecast in writing and e-mail to the CEB.

24.2. Notwithstanding the provisions of Clause 24.10, The Facility Owner shall also have the capability to produce and submit to the System Control Centre a forecast in MW, at every interval of 30 minutes, for the following day of the Facility (“One Day Ahead Production Forecast”). The One Day Ahead Production Forecast shall be submitted by 17:00 hours on the previous day. The One Day Ahead Production Forecast shall be submitted by means of an electronic interface and in a format reasonably acceptable to CEB.

24.3. In addition to the One Day Ahead Production Forecast, The Facility Owner shall also submit to CEB at every interval of 30 minutes, a revised forecast for the next half hour from the Facility (“Revised Forecast”).

24.4. The Facility Owner shall submit the One Day Ahead Production Forecast and the Revised Forecast through a communication system to be approved by CEB no later than 3 (three) months prior to the Scheduled Commercial Operation Date. The Facility Owner shall successfully commission the communication system no later than 1 (one) month prior to the Scheduled Commercial Operation Date.

24.5. Forecasting Penalties

In the event that the electrical power generated by the Facility and metered by the CEB Meter at the Point of Delivery is not within the Forecast Tolerance of the Revised Forecast, The Facility Owner shall be liable for penalties calculated in accordance with Clause 24.5.

24.5.1. The following data shall be used for the assessment of forecasting penalties:

- (a) average power at 30 (thirty) minutes interval as recorded by the metering procedures set forth under Section 7; and
- (b) Revised Forecast submitted by The Facility Owner in accordance with Clause 24.3.

24.5.2. The penalty for forecasting error shall be determined as follows:

$$P_A = 0.15 \times FEH \times P_{Err}$$

where:

- P_A = applicable penalty for each event of forecasting error;
- FEH = duration of each event of Forecasting Error in Hours; and
- P_{Err} = difference between the metered power output of the Facility in accordance with Section 7 and the Forecast Tolerance expressed in kW as a positive number.

For the avoidance of doubt and by way of example only, Forecasting Penalties shall be calculated as per the examples set forth under the Technical Schedules of this Agreement.

The monthly applicable penalty for forecasting error, if any, shall be set off against monthly energy produced.

24.5.3. In the event that The Facility Owner does not submit the Revised Forecast, the One Day Ahead Production Forecast shall be used for the calculation of penalties in accordance with this **Section** Error! Reference source not found..

24.5.4. In the event that The Facility Owner does neither submit the Revised Forecast nor the One Day Ahead Production Forecast, the One Week Ahead Production Forecast shall be used for the calculation of penalties in accordance with this **Section** Error! Reference source not found.. For avoidance of doubt, the Revised Forecast for the purpose of calculating the Forecasting Penalty shall be 0MW in the event no forecast is submitted by The Facility Owner.

IN WITNESS WHEREOF THE PARTIES HERETO, INTENDING TO BE LEGALLY BOUND, HAVE CAUSED THIS AGREEMENT TO BE EXECUTED IN TWO ORIGINALS BY THEIR DULY AUTHORISED REPRESENTATIVES, AND ONE ORIGINAL DELIVERED TO EACH PARTY, AS OF THE DAY, MONTH AND YEAR AS WRITTEN HEREUNDER.

[Insert Name of the Facility Owner, official registered address and contact details]

By: _____

Witnessed by: _____

its Chief Executive Officer

its _____

Date:

Date:

CENTRAL ELECTRICITY BOARD

By: _____

Witnessed by: _____

its Chief Executive Officer

its _____

Date:

Date:

Annex 1: Detailed Description of the Facility

Part 1: Description of the Facility

- 1.1. The Facility shall consist of _____ [NUMBER OF INVERTER UNITS] Inverter Units, each of capacity of _____ [CAPACITY in kVA], of make _____ [MAKE]. The Maximum Installed Capacity of the Facility shall be _____ [INSTALLED CAPACITY IN MW_p].
- 1.2. The main components forming part of the Facility and their expected characteristics are as follows:

1.2.1. Foundation (mounting structure)

[As provided in the Project Proposal Document]

1.2.2. Modules

Quantity:	pieces
Producer:	
Type:	
Output Power under STC:	

1.2.3. Strings

Quantity per inverter:	pieces
Quantity in summary:	pieces
Output Power per String:	kW _{DC}
Output Power per inverter:	kW _{DC}
Output Power in summary:	MW _{DC}

1.2.4. Arrays

Quantity per inverter:	pieces
Quantity in summary:	pieces
Producer:	
Type:	
Lightning protection:	
Fuse:	

1.2.5. Inverter

Quantity:	pieces
Producer:	
Type:	
Output Power:	
Power factor at rated power:	
Adjustable shift factor:	
Lightning protection:	

1.2.6. Transformer

Quantity:	pieces
Producer:	
Type:	
MVA Rating:	
Connected Inverter:	
Primary Voltage:	
Secondary Voltage:	
Short-circuit impedance:	

1.2.7. Facility Owner Distribution Assets

1.2.7.1. Medium Voltage System

[As provided in the Project Proposal Document]

Secondary side XX kV

[As provided in the Project Proposal Document]

Primary side 22 kV

[As provided in the Project Proposal Document]

1.2.7.2. Substation

[As provided in the Project Proposal Document]

1.3. 22 kV Interconnection Line

The length of the 22 kV Interconnection line shall be of approximately [.....]
[Please insert distance in km] km from the Facility to [.....] *[Please insert name of CEB Substation]* CEB Substation.

1.4. Instrumentation and Control

Sensors shall be used in the Facility for the purpose of measurement, control, and electric safety *[As provided in the Project Proposal Document]*.

1.5. Environmental Standards

The Facility shall be designed, produced, constructed, tested, commissioned, operated and maintained as per the Environment Protection (Amendment) Act 2008, the National Development Strategy & Planning Policy Guidance 2004 (as amended from time to time) and the Occupational Safety and Health Act 2005 as be amended and updated from time to time by the Government of the Republic of Mauritius.

1.6. Internal Communication System

[As provided in the Project Proposal Document]

1.7. Data Collection

The Facility shall include inter-alia the following Sensors:

- CT's in the array box for each string
- 2 Meteo Station included the follow measurement
 - Pyranometer
 - Air temperature
 - Air pressure
 - Relative air humidity
- All imported measured data of the Inverter (e.g. power, failure, operation mode, voltage, current)

1.8. Lightning and Surge Protection

The lightning protection on the Facility shall be designed according to IEC 60634-7-712 and EN 62305-3. The lightning protection shall consist of the following:

- Interior lightning protection
- Equipotential bonding system
- Earthing system

1.9. Forecasting

[As provided in the Project Proposal Document]

Information on the characteristics of the main components of the Facility is as follows: -

Part 2: Facility Site

1. The Location of the Site, the Location of the Facility on the Site and physical lay-out of the Facility shall be as illustrated in **Annexure A.1 and A.2.**
2. The single-line diagram of the Facility shall be as illustrated of **Annexure A.3.**
3. The Prosumer Interconnection Facilities shall be as illustrated in **Annexure A.4.**

Part 3: Point of Delivery

The Point of Delivery shall be as identified in **Schedule D (Annex D.1)**

ANNEXURE A.1: The Location of the Site and the Facility

[FACILITY OWNER TO SUBMIT]

ANNEXURE A.2: The Physical Layout of the Facility

[FACILITY OWNER TO SUBMIT]

ANNEXURE A.3: Single Line Diagram of the Facility

[FACILITY OWNER TO SUBMIT]

ANNEXURE A.4: RE Generator Interconnection Facilities

[FACILITY OWNER TO SUBMIT]

Annex 2: Specific Terms and Conditions of the CEB Carbon Neutral Industrial Sector (CNIS) Renewable Energy (RE) Scheme

The following are specific terms and conditions, amongst others, of the **CEB Carbon Neutral Industrial Sector (CNIS) Renewable Energy (RE) Scheme**: -

- (1) The CNIS RE Scheme is opened to all Industrial Customers involved in economic activities other than the sugar production and energy generation.
- (2) The RE project of a party who is in litigation with the CEB will be kept into abeyance, until the litigation is effectively settled.
- (3) An eligible Industrial Customer holding an Agreement under another RE Scheme for the same electricity Contract Account Number will have to either open a new electricity contract account or request to cancel the existing Agreement and thereafter submit an application under the new CNIS RE Scheme.
- (4) Only duly filled Application Form for RE projects of capacity up to 2 MW or Project Proposal Document for RE projects of capacity above 2 MW accompanied with all required documentation for an intended RE projects (solar or wind) will be processed.
- (5) For safety and quality reasons, it is advisable that Industrial Customer (the ultimate Project Owner) seek the support of a qualified person in the field of RE technology to assist the former in the preparation of the application.
- (6) Payment of the applicable non-refundable processing fee is mandatory. Payment of the processing fee does not guarantee registration into the Scheme.
- (7) The Customer(s) premises', whose electricity contract account(s) has (have) been listed in the **Annex 4**, electrical load should be effectively declared to CEB. If required, CEB will perform a site survey to ascertain the accuracy of the declared load. For this purpose, the Customer(s) would authorize and provide CEB's personnel necessary permission and access to carry out the detailed load survey.
- (8) The declared or assessed electrical load of the Customer(s)' premises, whose electricity contract account(s) has (have) been listed in the **Annex 4**, shall be updated in the CEB's Information System for managing the electricity services and for billing purposes.
- (9) Upon request from the Industrial Customer, future electrical load may be considered in the sizing of a solar PV system only if there is remaining capacity (MW) in the Scheme.
- (10) The capacity of Facility is to be determined based on the most recent annual electricity (kWh) consumption of the Customers whose electricity contract account(s) has (have) been listed in the **Annex 4**. In general, the most recent twelve normal billing periods will be considered for the calculation. Where available data is insufficient, extrapolation will be applied.
- (11) The final capacity (size) of the Facility shall be determined after the network impact assessment and/or network survey has/have been carried out by CEB and the declared electrical load of the active electricity contract account(s) listed in the **Annex 4** has been effectively updated in the CEB Information System.

- (12)** In any case, the maximum capacity of an RE facility under this Scheme should not exceed fifteen (15) megawatts (MW) AC. For RE facility of capacity above 2 MW, the CEB will provide the grid interconnection and network expansion requirements.
- (13)** The RE facility can be located on-site and/or off-site to generate up to 150 percent of the annual electricity requirements, based on latest monthly consumption. Each RE facility will be identified by a unique electricity contract account number assigned by CEB.
- (14)** The rate for the purchase of incidental excess energy (if any), which shall be valid during the four initial years of the RE facility, shall be Rs 1.86 per kWh. After the initial four years, excess energy generated will be banked and rolled over to successive billing periods. However, the counter of the banked energy shall be reset to zero on 1st January every year thereafter.
- (15)** For RE facility of capacity up to 2 MW, the Industrial Customer (IC) shall complete the construction of the facility within a period of 12 months as from the date of the signing of the Connection Agreement (CA), except if CEB agreed otherwise.
- (16)** For RE facility of capacity above 2 MW, the IC (Project Developer) shall complete the construction of the facility within a period of 17 months as from the date of the signing of the Interconnection Agreement (IA), except if CEB agreed otherwise.
- (17)** Only RE facilities (projects) initiated before the end of June 2023 will benefit from the advantages of the Scheme. A Letter of Commitment (LOC) as proof of the RE Project's implementation shall be provided two weeks after the issue of the Letter of Intent (LOI).
- (18)** The Facility shall at all times comply with all requirements of the relevant applicable Grid Codes and Technical Schedules including its subsequent amendments.
- (19)** The Facility Owner shall provide CEB with the web-link access, free of charge, for the downloading of the power output of the Facility.
- (20)** Where necessary, as and when required, the Facility Owner shall give full free access to CEB for downloading data series directly from the inverter and/or energy management system of the Facility. For the on-site and/or off-site data downloading, the Facility Owner shall provide CEB a free copy of the required operating software and application(s).
- (21)** Whenever required, following a notice from CEB, the Facility Owner shall give full and free access to CEB personnel and/or its associate(s) to the RE facility.
- (22)** The Facility Owner shall pay all relevant charges and costs, including the connection fee, for the setting up of the RE system.
- (23)** Until properly remedied, RE facility not complying with the applicable Grid Code/ Technical Schedules and not satisfying all terms and conditions of this Scheme and other regulatory requirements, will not be considered for the grid interconnection.

- (24) The Project Owner shall obtain all necessary applicable authorizations, licences, agreements, consents, permits, etc. prior to the commissioning of the RE facility.
- (25) Where applicable, the total monthly electricity (kWh) consumption of the concerned Prosumer shall be calculated by the formula below.

$$C = P + I - E$$

Where,

C is the total monthly electricity (kWh) consumption;
P is the total energy (kWh) production by the RE facility;
I is the total energy (kWh) imported from CEB; and
E is the total energy (kWh) exported to CEB.

Note: Where an electricity contract account linked to a Prosumer is in a third-party name, prior to the signing of the Interconnection Agreement, the concerned Prosumer shall obtain the written acceptance of the third party for the above formula and for reclassifying the account in a specific CEB Customer Category for the purpose of billing and invoicing of the monthly electricity consumption of the account.

- (26) Further to the network impact assessment and/or network survey, whichever would be warranted, the Facility Owner and any of its associates would have no objection to the addition of other necessary terms and/or conditions for the grid interconnection of the RE facility.
- (27) As notified by CEB, the Industrial Customer (Facility Owner) shall implement all recommendations of the network impact assessment and/or network survey, whichever would be applicable, and settle all payments thereof in time.
- (28) The Facility Owner should submit the Certificate of Installation confirming compliance to the applicable Grid Codes, Technical Schedules, CEB's network impact assessment's and/or network survey's recommendations and terms & conditions of the Scheme for the RE facility. The Certificate of Installation shall be certified by an independent qualified technical officer for RE capacity not involving installation of HT switchgear or an independent registered engineer for RE system involving installation of HT switchgear, whichever would be applicable, after the latter has performed all technical and non-technical verifications.
- (29) The Facility Owner shall sign the legally binding CA for RE facility up to 2 MW or the relevant IA for capacity above 2 MW as per given deadline.
- (30) By submitting an application under the Scheme, the Industrial Customer and its associates (the parties) unreservedly authorize CEB and/or its associates, suppliers, contractors, etc. to share the submitted information given in the application. In addition, any of the parties would have no objection that any of the mentioned CEB's parties contacting it for administrative or non-administrative matters in respect of the setting up of the RE facility.
- (31) The application of an Industrial Customer who is in litigation with CEB - unless the litigation is effectively settled - will not be considered.

- (32)** The application of an Industrial Customer who is already operating an SSDG or MSDG for the same electricity contract account(s) under another Scheme - unless the existing agreement is terminated - will not be considered.
- (33)** To avoid delays in the implementation of the RE facility, the Industrial Customer applying for the Scheme should submit all required documentation as instructed.
- (34)** Securing a Connection Agreement (CA) or Interconnection Agreement (IA), whichever would be applicable, for the grid interconnection of an intended RE facility is mandatory. Make sure that the CA or IA has been agreed and signed prior to the setting up of the facility. It is strongly advised that payment(s) for equipment of the RE facility be initiated only after all agreements, licenses and permits, as applicable, have been properly secured.
- (35)** The Facility Owner should ensure full compliance, at all times, with the applicable Grid Codes, Technical Schedules and its amendments and with the provisions of the CA or IA.
- (36)** Modification of the setup of RE Facility, without prior CEB's authorization, will result in an automatic disconnection of the RE facility from CEB's network and the suspension of the CA or IA and thereof all CEB's therein obligations.
- (37)** The location of the meters and metering equipment within the electrical setup of each concerned RE facility will be determined during the mandatory network impact assessment and/or mandatory network survey, whichever would be warranted. On a case-to-case basis, special consideration will be given to ensure the optimal solution for the metering of the RE facility to ensure best practices.
- (38)** In accordance with the gross-metering principle, applicable under this Scheme, all energy produced by the RE facility shall be injected or shall be considered as injected into the grid.
- (39)** Consideration will be given to eligible Industrial Customers willing to transfer their applications from other CEB RE Scheme operating under the gross-metering principle, especially the MSDG Scheme, to this Scheme subject to payment of a new processing fee.
- (40)** Eligible Industrial Customers applying for this Scheme will have to implement energy efficiency (EE) measures identified following the completion of an energy audit exercise. Evidence(s) in relation to the implementation of EE measure(s) will have to be produced prior to the commissioning of the RE facility.
- (41)** In order to maximizing the benefits expected under the Scheme, the Industrial Customers undertake to engage actively and invest continuously in energy savings, energy management, demand management and response activities, load management actions to avoid peak-hours energy usage and smart technologies.
- (42)** Not complying with the terms and conditions of the CA or IA, whichever would be applicable, would entail automatic rejection of the RE project under the Scheme.

Annex 3: The Unbundled Time-of-Use Electricity Tariff³ Schedule

- (a) The general structure, charges for the different electricity services and associated rates of the mandatory applicable unbundled time-of-use electricity tariff, which may be amended, as and when required, unless are restructured, redefined and /or reviewed in the future, applicable on a monthly basis to the Prosumer(s)' electricity contract account(s) listed in the **Annex 4** and linked to the renewable energy (RE) Facility pursuant to the terms and conditions of the CEB Carbon Neutral Industrial Sector (CNIS) Renewable Energy (RE) Scheme, shall be as defined in the table hereunder.

Running (Energy) Charge	Import Tariff		Export Tariff
	Identifier	Rate (Rs per kWh)	Rate (Rs per kWh)
Day period (06.00 to 18.00 hours)	[A]	Maximum revised Running Charge rate of existing Tariff as per General Notice No. 1804 of 2022	Same as [A]
Evening (Peak) period (18.00 to 21.00 hours)	[B]	48.2 percent higher than [A]	Same as [A]
Night period (21.00 to 06.00 hours)	[C]	35.4 percent lower than [B]	Same as [C]
Other Charges⁴			
System Operator Service		Rs 0.040 per kWh consumed	-
Transmission Service		Rs 0.400 per kWh consumed	-
Single Buyer Service		Rs 0.015 per kWh consumed	-
Demand Charge		Rs 242 per kVA (apparent power supplied) subject to a minimum of 20 kVA	-
Service Charge		Rs 427.00 per month	-

- (b) For the purpose of calculating the monthly bill, the total monthly electricity (kWh) consumption of the concerned Prosumer shall be calculated by the formula below: -

$$C = P + I - E$$

Where,

- C is the total monthly electricity (kWh) consumption;
- P is the total energy (kWh) production by the RE facility;
- I is the total energy (kWh) imported from CEB; and
- E is the total energy (kWh) exported to CEB.

- (c) The payable Minimum Charge, Power Factor Clause, Security Deposits and Meter Rentals, where and as applicable, associated to the unbundled time-of-use electricity tariff assigned to the relevant electricity contract account(s), listed in the **Annex 4**, unless are restructured, redefined and /or reviewed in the future shall be applied and

³ The unbundled time-of-use tariff is subject to the approval of the Utility Regulatory Authority (URA) after its filing by the CEB to the URA. The procedure to seek the approval of the URA for the said unbundled time-of-use tariff will be undertaken in due course.

⁴ The Other Charges will be lumped into and appear as a single-line item on the electricity bill.

billed in accordance with the General Notice No. 1804 of 2022. The Minimum Charge is payable also in the case of net export of energy.

- (d) Until further notice, the rates (Rs per kWh) of the Running (Energy) Charge, mentioned above, for the different time of the day shall have the differentials whereby the evening (peak) rate shall be 48.2% higher than the day rate and the night rate shall be 35.4% below the evening (peak) rate.
- (e) For the present, the relative rates of the Running (Energy) Charge of the unbundled time-of-use tariff for mapped existing tariffs applicable to Industrial Customer Subcategories are given in the table below.

Existing Industrial Tariffs	Mapped Equivalent Running (Energy) Charge Rates (Rs per kWh)		
	Day 06.00 to 18.00 hours	Peak 18.00 to 21.00 hours	Night 21.00 to 06.00 hours
313	5.95	8.82	5.70
315	6.44	9.54	6.17
317	6.47	9.59	6.19
320	6.05	8.97	5.79
323	5.61	8.31	5.37
325	5.98	8.86	5.73
330	5.63	8.34	5.39
340	6.31	9.35	6.04
350	5.88	8.71	5.63

- (f) The structure / rates of the unbundled time-of-use (ToU) tariff shall be subject to future revision, as and when necessary. Nonetheless, as far as possible, consideration will be given to ensure that the Running Charge (energy import) rates for the different time of the day shall have the differentials whereby the evening (peak) rate shall be 48.2% higher than the day rate and the night rate shall be 35.4% below the evening (peak) rate.
- (g) The rate for the purchase of incidental excess energy (if any), which shall be valid during the four initial years of the RE facility, shall be Rs 1.86 per kWh. After the initial four years, excess energy generated will be banked and rolled over to successive billing periods. However, the counter of the banked energy shall be reset to zero on 1st January every year thereafter.

Annex 4: List of approved Electricity Contract Account(s) to be supplied with the renewable energy exported from the Facility

The energy exported from the RE facility can be apportioned to multiple electricity contract accounts, provided the accounts are registered in CEB Industrial Customer Category and belong to the group of companies of the Facility Owner, to off-set energy (kWh) imported from the CEB pursuant to the terms and conditions of the CEB Carbon Neutral Industrial Sector (CNIS) Renewable Energy (RE) Scheme.

Under the present Interconnection Agreement, the Facility Owner has provided the list of electricity contract account(s) for apportioning the net energy exported in the apportionment order of priority and percentage share(s) mentioned in the table below. The list of electricity contract account(s), apportionment order of priority and respective percentage shares should not be changed, except with the prior approval of CEB.

List of Electricity Contract Account(s) for Allocation of Net Energy Exported		
Apportionment Order of Priority	Electricity Contract Account Number	Percentage Shares of Net Energy Exported for offsetting Energy Imported
1 st		
2 nd		
3 rd		
4 th		
5 th		
6 th		
7 th		
8 th		
9 th		
10 th		
...
n ^{th-1}		
n th		
<p>I, Mr./Mrs./Ms. _____, designated representative of the Facility Owner, has been officially authorized to provide the above list of electricity contract account(s) for offsetting the net energy exported by the Facility pursuant to the terms and conditions of the CNIS RE Scheme in the apportionment order of priority and percentage shares mentioned thereat.</p>		
Signature:		Date:

Company seal required

Annex 5: Standard Format of Electricity Contract Account Holder's Agreement

Name of the Organization as per Certificate of Incorporation <i>(Attach a copy of the Certificate of Incorporation)</i>		
Name on Electricity Contract Account <i>(Attach a copy of the latest electricity bill)</i>		
Electricity Contract Account Number		
Authorized Representative Full Name and Designation <i>(Provide official letter of authorization and a copy National Identity Card)</i>		
	Mobile Number:	Email Address:

I, **Mr./Mrs./Ms.** _____ *[Insert full Name]*, _____ *[Insert Designation (should not be below the rank of Managing Director)]* of the above-mentioned Organization, hereby confirm that we have agreed to the following: -

1. Our participation in the development of the Facility under the CEB Carbon Neutral Industrial Sector (CNIS) Renewable Energy (RE) Scheme launched in January 2023.
2. Provide our electricity contract account listed in the **Annex 4** of the Interconnection Agreement which will be signed between the CEB and the Facility Owner _____ *[Insert Name of the Facility Owner]*.
3. Change of the existing electricity tariff, assigned to our above-mentioned Electricity Contract Account, to the unbundled time-of-use electricity tariff defined under the CNIS RE Scheme pursuant to the terms and conditions of the Scheme.
4. In the event of any change, the Facility Owner shall inform the CEB for appropriate action(s). In any situation, the CEB shall not carry any liability towards us.
5. The Percentage Share of Net Energy Exported for offsetting Energy Imported, mentioned in the **Annex 4** of the aforementioned Interconnection Agreement, which shall be used to offset, to the extent possible, the energy (kWh) consumed under our above-mentioned Electricity Contract Account Number.

Signature of Authorized Representative:
(Should not be below the rank of Managing Director)

Company seal required

Date: _____

Annex 6: Technical Schedules

Schedule A: Independent Engineer (applicable for projects of capacity of 4MW and above)

1.1. Appointment of Independent Engineer

- (a)** CEB shall seek and evaluate offers from the firms or bodies corporate in line with its internal procedures.
- (b)** CEB shall identify and rank the firms and/or bodies corporate. The highest ranked substantially responsive firm or body corporate shall be appointed by the CEB as the independent consultant under this Agreement (“Independent Engineer”).
- (c)** The appointment shall be made no later than 9 (nine) months from the date of this Agreement and shall be valid till the Independent Engineer discharges all of his functions under this Agreement.

1.2. Duties and functions

- 1.2.1.** The Independent Engineer shall discharge its duties and functions substantially in accordance with the terms of reference set forth in the Technical Schedules.
- 1.2.2.** The Independent Engineer shall submit regular periodic reports (at least once every month) to CEB and The Facility Owner in respect of its duties and functions set forth in Technical Schedules.

1.3. Remuneration

- 1.3.1.** The remuneration, cost and expenses of the Independent Engineer, appointed pursuant to Clause 1**Error! Reference source not found.** of this Schedule shall be borne by CEB.
- 1.3.2.** In the event that any Project Milestones during the Construction Period is delayed other than due to any reason solely attributable to CEB, The Facility Owner shall bear the additional remuneration, cost and expenses of the Independent Engineer.

1.4. Termination of appointment

If the CEB has reason to believe that the Independent Engineer is not discharging its duties and functions in a fair, efficient and diligent manner, it may seek termination of the appointment of the Independent Engineer. In case of such termination, CEB shall appoint another Independent Engineer from the list established under Clause 1.1(b) within 10 (ten) Business Days from the date termination of the appointment.

TERMS OF REFERENCE FOR INDEPENDENT ENGINEER

1. Scope

1.1. These Terms of Reference for the Independent Engineer (“**TOR**”) are being specified pursuant to Clause **Error! Reference source not found.** (Annex 6: Schedule A) to this Interconnection Agreement dated [.....] [*Insert date of Agreement*] (“**Agreement**”), which has been entered into between CEB and [.....] [*Please insert name of The facility owner*] (“**facility owner**”) for development of a solar farm having an Installed Capacity of [.....] MW_p (Please *insert Installed Capacity*), located at [.....] [*Insert address of Facility*] and to be interconnected at [.....] [*Insert name of Substation*] and the facility owner Interconnection Facilities.

1.2. This TOR shall apply to construction, testing and commissioning of the Facility.

2. Definitions and Interpretation

2.1. The words and expressions beginning with or in capital letters used in this TOR and not defined herein but defined in the Agreement shall have, unless repugnant to the context, the meaning respectively assigned to them in the Agreement.

2.2. References to Articles, Sections, Clauses and Schedules in this TOR shall, except where the context otherwise requires, be deemed to be references to the Articles, Sections, Clauses and Schedules of the Agreement, and references to Paragraphs shall be deemed to be references to Paragraphs of this TOR.

3. Role and functions of the Independent Engineer

3.1. The role and functions of the Independent Engineer shall include the following:

- i. review of the Drawings and the documents as set forth in Paragraph 4 of this Schedule;
- ii. review, inspection and monitoring of Construction Works as set forth in Paragraph 4 of this Schedule;
- iii. propose and finalise appropriate testing procedures as per IEC norms and other relevant standards with CEB and facility owner at least 3 (three) months prior the Scheduled Commercial Operation Date of the Facility in addition to the procedures in Schedule H;
- iv. ensure all tests are conducted with respect to the Facility, including independent tests on completion of Construction Works and tests mentioned in Schedule H and Paragraph 3.1 (iii) of this Schedule;
- v. issue the certificate of installation and the Completion Certificate;

- vi. determine, as required under the Agreement, the costs of any works or services and/or their reasonableness;
- vii. determine, as required under the Agreement, the period or any extension thereof, for performing any duty or obligation;
- viii. approve the design of the Facility as per Schedules A, C, D and E of this Agreement;
- ix. certify that the civil and structural designs of the Facility are cyclone resistant;
- x. review and approve the Operating Procedures of this Agreement;
- xi. certify, pursuant to Schedule D, that the behaviour shown by the DigSILENT Powerfactory dynamic model of the Facility under simulated conditions, is representative of the behaviour of the Facility; and
- xii. undertaking all other duties and functions in accordance with the Agreement;

3.2. The Independent Engineer shall discharge its duties in a fair, impartial and efficient manner, consistent with the highest standards of professional integrity and Good Industry Practice.

4. Construction Period

4.1. The Independent Engineer shall review the monthly progress report furnished by facility owner and send its comments thereon to CEB and facility owner within 7 (seven) days of receipt of such report.

4.2. The Independent Engineer shall inspect the construction of the Facility once every month, preferably after receipt of the monthly progress report from facility owner and prepare a report of such inspection ("**Inspection Report**") setting forth an overview of the status, progress, quality and safety of construction, including the work methodology adopted, the materials used and their sources. In a separate section of the Inspection Report, the Independent Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in the construction of the Facility. The Independent Engineer shall send a copy of its Inspection Report to CEB and facility owner within 7 (seven) days of the inspection.

4.3. In the event that facility owner carries out any remedial works for removal or rectification of any defects or deficiencies as identified in the Inspection Report, the Independent Engineer shall inspect same and provide his report in an additional Inspection Report.

4.4. In the event that facility owner fails to achieve any of the Project Milestones during the Construction Period, the Independent Engineer shall undertake a review of the progress of construction and identify potential delays, if any. If the Independent Engineer determine that completion of the Facility is not feasible within the time specified in the

Agreement, it shall require facility owner to indicate within 15 (fifteen) days, the steps proposed to be taken to expedite progress, and the period within which the completion shall be achieved. Upon receipt of a report from facility owner, the Independent Engineer shall review same and send its comments to CEB and Facility Owner forthwith. The Independent Engineer shall propose any extension of time, required to complete the Facility during the Construction Period.

- 4.5.** If at any time during the construction, the Independent Engineer determines that Facility Owner has not made adequate arrangements for the safety of workers in the zone of construction or that any work is being carried out in a manner that threatens the safety of the workers, Facility Owner shall suspend whole or part of the construction for ensuring safety in respect thereof.
- 4.6.** In the event that Facility Owner carries out any remedial measures to secure the safety of the workers, it may, by notice in writing, require the Independent Engineer to inspect such measures, and within 3 (three) days of receiving such notice, the Independent Engineer shall inspect the works and make a report to CEB forthwith, recommending whether or not such suspension may be revoked by Facility Owner. CEB shall communicate the findings of the Independent Engineer in respect of such disconnection to Facility Owner.
- 4.7.** If suspension of construction is for reasons not attributable to Facility Owner, the Independent Engineer shall determine the extension of Scheduled Commercial Operation Date to which the Facility Owner is reasonably entitled and shall notify CEB and Facility Owner of the same.
- 4.8.** The Independent Engineer shall witness the successful completion of all the Commissioning Tests and issue a Completion Certificate for the Facility. For carrying out its functions under this Paragraph 4.8 and all matters incidental thereto, the Independent Engineer shall act under and in accordance with the provisions of this Agreement.

5. Other duties and functions

- 5.1.** The Independent Engineer shall perform all other duties and functions specified in the Agreement.

6. Miscellaneous

- 6.1.** The Independent Engineer shall notify its programme of inspection to CEB and to Facility Owner, who shall depute their respective representatives to be present during the inspection.

- 6.2.** A copy of all communications, comments, instructions, drawings or documents sent by the Independent Engineer to CEB pursuant to this TOR, and a copy of all the test results with comments of the Independent Engineer thereon shall be furnished by the Independent Engineer to Facility Owner through CEB forthwith.
- 6.3.** The CEB shall obtain, and Facility Owner shall furnish in 2 (two) copies thereof, all communications and reports required to be submitted by it under this Agreement to the Independent Engineer, whereupon the Independent Engineer shall send one of the copies to Facility Owner through CEB along with its comments thereon.
- 6.4.** The Independent Engineer shall retain at least 1 (one) copy each of all drawings and documents received by it, including as-built Drawings, and keep them in its safe custody.
- 6.5.** Upon completion of its assignment hereunder, the Independent Engineer shall duly classify and list all drawings, documents, results of tests and other relevant records, and hand them over to CEB or such other person as CEB may specify and obtain written receipt thereof.

Schedule B: Construction of the Project

1.1. Obligations prior to commencement of construction

1.1.1. Prior to commencement of the Construction Works and in any event not later than 15 (fifteen) Business Days after the Construction Start, the Facility Owner shall:

- (a) appoint and notify its representative duly authorised to deal with CEB in respect of all matters under or arising out of or relating to this Agreement;
- (b) undertake, do and perform all such acts, deeds and things as may be necessary or required before commencement of construction under and in accordance with this Agreement, the Applicable Laws and Applicable Permits; and
- (c) submit to CEB and the Independent Engineer its detailed design, construction methodology, quality assurance procedures, and the procurement, engineering and construction time schedule for completion of the Facility in accordance with the Project Completion Schedule set forth in Schedule F.

1.2. Drawings

In respect of the Facility Owner's obligations relating to the Drawings of the Project, the following shall apply:

- (a) Facility Owner shall prepare and submit, with reasonable promptness and in such sequence as is consistent with the Project Completion Schedule set forth in Schedule F, 3 (three) copies each of all Drawings to the Independent Engineer for review;
- (b) By submitting the Drawings for review to the Independent Engineer, Facility Owner shall be deemed to have represented that it has determined and verified that the design and engineering, including field construction criteria related thereto, are in conformity with the Scope of the Project and the Specifications and Standards;
- (c) Within 15 (fifteen) days of the receipt of the Drawings, the Independent Engineer shall review the same and convey its observations to Facility Owner with particular reference to their conformity or otherwise with the Scope of the Project and the Specifications and Standards. Facility Owner shall not be obliged to await the observations of the Independent Engineer on the Drawings submitted pursuant hereto beyond the said 15 (fifteen) days period and may begin Construction Works at its own discretion and risk;
- (d) If the aforesaid observations of the Independent Engineer indicate that the Drawings are not in conformity with the Scope of the Project and the Specifications and Standards, such Drawings shall be revised by Facility Owner and resubmitted to the Independent Engineer for review. The Independent Engineer shall give its observations, if any, within 7 (seven) days of receipt of the revised Drawings; and

(e) No review and/or observation of the Independent Engineer and/or its failure to review and/or convey its observations on any Drawings shall relieve Facility Owner of its obligations and liabilities under this Agreement in any manner nor shall the Independent Engineer or CEB be liable for the same in any manner.

1.3. Construction of the Project

1.3.1. The Facility Owner shall enter into an EPC Contract on or before the Construction Start Longstop Date set forth below and notify the CEB of same.

1.3.2. Facility Owner shall ensure that the Construction Start is achieved no later than 11 (eleven) months from the date of execution of this Agreement (“**Construction Start Longstop Date**”).

1.3.3. The Facility Owner shall undertake the construction of the Facility in conformity with the Specifications and Standards set forth in Schedule C and in accordance with the Project Completion Schedule set forth in Schedule F. The Facility Owner undertakes to complete the Project within eight (8) months from the Effective Date (“**Scheduled Commercial Operation Date**” or “**SCOD**”). The Facility Owner shall achieve the Commercial Operation of the Project on or before the SCOD.

1.4. Monthly Progress Reports

During the Construction Period, the Facility Owner shall, no later than 7 (seven) days after the close of each month, furnish to CEB and the Independent Engineer a monthly report on the progress of the Construction Works and shall promptly furnish such other relevant information as may be required by CEB.

1.5. Inspection

During the Construction Period, the Independent Engineer shall inspect the Facility at least once in a month and make a report of such inspection (“**Inspection Report**”) stating in reasonable detail the defects or deficiencies, if any, with particular reference to the Scope of the Project and Specifications and Standards. It shall send a copy of the Inspection Report to CEB and the Facility Owner within 7 (Seven) days of such inspection and upon receipt thereof, the Facility Owner shall rectify and remedy the defects or deficiencies, if any, stated in the Inspection Report. Such inspection or submission of Inspection Report by the Independent Engineer shall not relieve or absolve the Facility Owner of its obligations and liabilities hereunder in any manner whatsoever.

1.6. Tests

1.6.1. The Facility Owner shall provide to CEB, certificates of the Factory Tests in relation to the equipment specified in Schedule A duly certified by an Independent Third-Party Classification Society. For certifying the certificates of the Factory Tests, the Independent Third-Party Classification Society shall require the Facility Owner to carry out or cause to be carried out tests, at such time and frequency and in such manner as

may be specified by the Independent Third-Party Classification Society from time to time, in accordance with Good Industry Practice for quality assurance. For the avoidance of doubt, the costs incurred on such tests and the costs to be incurred on any test which is undertaken for determining the rectification of any defect or deficiency shall be borne solely by the Facility Owner.

1.6.2. CEB and the Independent Engineer will be allowed such access rights as are necessary for it to be able to ascertain any inspections during the Construction Period, provided that it minimizes any interference with work being undertaken and complies with the health and safety rules of the Facility Owner, the EPC Contractor, the supplier or any subcontractor of either of them. Such inspection by CEB and the Independent Engineer shall not reduce Facility Owner's obligations under this Agreement or relieve Facility Owner of any liabilities or obligations under this Agreement.

1.6.3. CEB may inspect and/or cause the Independent Engineer to inspect the construction and testing of the Facility during the Construction Period and notify the Facility Owner in writing of any deficiencies, discrepancies or non-conformity with the Specification and Standards and testing requirements specified in Schedules C, D, E and H. Facility Owner shall comply with all reasonable requests of CEB and shall ensure uninterrupted access to CEB for such purpose. The Facility Owner shall ensure access to the Facility during their construction and commissioning to the Independent Engineer for such inspection. Such inspection by CEB or the Independent Engineer shall not relieve or absolve the Facility Owner of its obligations and liabilities under this Agreement in any manner whatsoever.

1.6.4. The Facility Owner provide to CEB and the Independent Engineer with a copy of the manufacturer's testing and commissioning procedures of the equipment installed in the Facility not later than 3 (three) months prior to the Scheduled Commercial Operation Date of the Facility and to commencement of the Pre-commissioning Test and Commissioning Test specified under Schedule H, whichever is earlier.

1.7. Notice for Initial Energisation of the Interconnection Line

After the submission of the certificate of installation in respect of the Facility and the Facility Owner's Interconnection Facilities from the Independent Engineer certifying that the Facility and, the Facility Owner Interconnection Facilities has been built in accordance with Schedule A and Schedule D of this Agreement, the Facility Owner shall give CEB not less than 5 (five) Business Days' notice of the time it wishes to first energise the 22 kV interconnection line from CEB to the Facility.

1.8. Notice for Initial Synchronisation

The Facility Owner shall give CEB not less than 7 (seven) Days' notice of the time it wishes first to synchronise the Facility to the CEB System following successful completion of the Pre-commissioning tests under Schedule H, as certified and notified by the Independent Engineer.

Schedule C: Specifications and Standards

Facility Owner shall develop, design, construct, commission, test, operate, and maintain the Facility in accordance with the Specifications and Standards mentioned in the table below.

PV Modules	
IEC TS 62804-1	Photovoltaic (PV) modules – Test methods for the detection of potential-induced degradation – Part 1: Crystalline Silicon
EN 50380	Datasheet and nameplate information of photovoltaic module.
IEC 61215 -1	Terrestrial photovoltaic (PV) modules - Design qualification and type approval- part 1: Tests Requirements
IEC 61215 -2	Terrestrial photovoltaic (PV) modules - Design qualification and type approval- part 2: Tests procedures
IEC 61701	Salt mist corrosion testing of photovoltaic (PV) modules
IEC 61730-1/2	Photovoltaic (PV) module safety qualification Part 1: Requirements for construction Part 2: Requirements for testing
IEC 61853-1	Photovoltaic (PV) module performance testing and energy testing – Part 1: Irradiance and temperature performance measurements and power rating
IEC 62790	Junction Boxes for photovoltaic modules-Safety requirements and tests
IEC 62994	Photovoltaic PV modules through the life cycle- Environmental health and safety (EH&S) risk assessment- General principles and nomenclature
IEC TS 62915	Photovoltaic (PV) modules - Type approval, design and safety qualification - Retesting
IEC TS 62941	Terrestrial photovoltaic (PV) modules - Guideline for increased confidence in PV module design qualification and type approval
IEC TS 62782	Photovoltaic (PV) modules - Cyclic (dynamic) mechanical load testing
IEC 62979	Photovoltaic modules - Bypass diode - Thermal runaway test
PV INVERTERS	
IEC 62894	Data sheet and name plate for photovoltaic inverters
IEC 61683	Photovoltaic Systems – Power conditioners – Procedure for measuring efficiency
IEC 62109-1	Safety of power converters for use in photovoltaic power systems Part 1: General Requirements
IEC 62109-2	Safety of power converters for use in photovoltaic power systems-Part 2: Particular Requirements for inverters
IEC 62109-3	Safety of power converters for use in photovoltaic power systems-Part 3: Particular Requirements for Electronic Devices in Combination with Photovoltaic Elements
IEC 62891	Maximum Power Point Tracking Efficiency of Grid Connected Photovoltaic Inverters

IEC TS 62910	Test Procedure of Low Voltage Ride-Through (LVRT) Measurement for Utility interconnected PV Inverter
IEC 62920	EMC Requirements and Test methods for Grid Connected Power Converters applying to Photovoltaic Power Generating units
IEC 62116	Test Procedure for islanding prevention measures for Utility connected photovoltaic inverters

GRID-CONNECTED PV SYSTEM	
IEC 60947	Connectors for photovoltaic systems - Safety.
IEC 61727	Photovoltaic (PV) systems - Characteristics of the utility interface
IEC 61836	Solar photovoltaic energy systems - Terms, definitions and symbols
IEC 62093	Balance-of-system components for photovoltaic systems
IEC 62446-1	Photovoltaic (PV) systems - Requirements for testing, documentation, and maintenance – Part 1: Grid-connected systems – Documentation, commissioning tests and inspection
IEC 61724 (all parts)	Photovoltaic System Performance Monitoring
IEC TS 63049	Terrestrial photovoltaic (PV) systems – Guidelines for effective quality assurance in PV systems installation, operation and maintenance
IEEE P1547	Series of Standards for Interconnection, May, 2003, NREL/CP-560-34003
GENERAL ENGINEERING STANDARDS	
BS 7354	Code of Practice for Design of high voltage open terminal stations
BS 7430	Code of Practice for Protective Earthing of electrical installations
EN 50521	Connectors for photovoltaic systems - Safety.
IEC 60068-2	Environmental testing of specimen to withstand specific severities of repetitive and non- repetitive nature
IEC 60076	Power transformers - ALL PARTS
IEC 60228	Conductors of Insulated Cables
IEC 60364-1	Electrical installations of buildings - Part 1: Scope, object and fundamental principles
IEC 60364-5-54	Electrical installations of buildings. Part 5: Selection and erection of electrical equipment. Chapter 54: Earthing arrangements and protective conductors
IEC 60364-5-55	Electrical installations of buildings
IEC 60502-1	Power Cables with extruded insulation and their accessories for rated voltages from 1 kV (Um – 1.2 kV) up to 30 kV (Um = 36 kV) Part 1 - Cables for rated voltages for 1 kV (Um=1.2 kV) and 3 kV (Um=3.6 kV)
IEC 60664-1	Insulation coordination for equipment within low-voltage systems –Part 1: Principles, requirements and tests
IEC 60909-1	Short circuit calculation in three-phase ac systems.

IEC 62208	General requirements for empty enclosures for low voltage switchgear and control gear assemblies
IEC 62305-3	Protection against lightning, part 3 physical damage and life hazards in structures
IEEE C37.90	IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus
IEC 60529	Degree of protection provided by enclosures
Power Quality	
IEC 61000-3-2	Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase)
IEC 61000-3-3	Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection
IEC 61000-3-7	Assessment of emission limits for the connection of the connection of fluctuating installations to MV, HV and EHV power systems
IEC 61000-3-11	Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection.
IEC 61000-6-1	Generic standard -EMC - Susceptibility - Residential, Commercial and Light industry
IEC 61000-6-3	Generic standard - EMC - Emissions - Residential, Commercial and Light industry
IEC 61000-6-5:	Electromagnetic compatibility (EMC) - Generic standards - Immunity for power station and substation environments
IEC TR 61000-3-6	Assessment of emission limits for the connection of distorting installations to MV, HV and EHV power systems
IEEE519	IEEE Recommended practice and requirements for harmonic control of electric power systems, Institute of Electrical and Electronic Engineers.

Schedule D: Interconnection and Metering

1. Interconnection Facilities

1.1. Introduction

(a) Description of Interconnection Facilities

The Interconnection Facilities shall consist of:

- (1) the “**CEB Interconnection Facilities**” which shall be the facilities required to interconnect the Facility to the CEB System located on the CEB side of the Interconnection Boundary as shown in **Annexure D.1** to this Schedule, as described in detail in Paragraph 2.
- (2) the “**Facility Owner Interconnection Facilities**” which shall be the facilities required to interconnect the Facility to the CEB System located on the Facility Owner side of the Interconnection Boundary as shown in **Annexure D.1** of this Schedule, as described in detail in Paragraph 3.

(b) Responsibility and Cost of Installation of CEB Interconnection Facilities

(b.1) For installation connected to 22kV Busbar at CEB substation (from 4MW to 10MW)

- (1) CEB shall be responsible for the procurement, installation, testing and commissioning of the 22kV switchboard at the CEB substation and the 22kV interconnection line forming part of the CEB Interconnection Facilities.
- (2) Facility Owner shall contribute 50% of the cost for the procurement, installation, testing and commissioning of the 22kV switchboard at the CEB substation forming part of the CEB Interconnection Facilities.
- (3) The cost of procurement, installation, testing and commissioning of the CEB 22kV switchboard at the CEB substation to which Facility Owner is to contribute pursuant to Paragraph 1.1(b.1) (2) is estimated to be:
 - (i) **MUR 2.2Million** exclusive of all taxes (applicable for installation to be connected to indoor metalclad 22kV Switchgear panels in existing CEB substation)

- (ii) **MUR 3.7Million**, exclusive of all taxes (applicable for installation to be connected to indoor 22kV Gas Insulated Switchgear (GIS) CEB Substation).
- (4) CEB shall, at the cost and expense of Facility Owner, be responsible for the procurement, construction, installation, testing and commissioning of the 22kV Interconnection Line forming part of the CEB Interconnection Facilities as per Annexure D.2.1 or D.2.2 (as applicable).
- (5) All costs incurred by the CEB for the construction of the 22 kV Interconnection line shall be borne and paid by Facility Owner. Facility Owner shall provide funds to CEB for undertaking the construction of the 22 kV Interconnection line in such manner as may be prescribed by CEB.
- (6) Facility Owner shall be responsible for the acquisition of the right of way for CEB with regard to the interconnection 22kV Interconnection Line forming part of CEB Interconnection Facility on or before the Longstop Date.
- (7) Pursuant to the finalization of the rights of way under Paragraph 1.1 (b.1) (6) of this Schedule, CEB shall provide to Facility Owner with the cost for the procurement, construction, installation, testing and commissioning of the 22 kV Interconnection Line.
- (8) Facility Owner shall be responsible for the procurement, construction, installation, testing and commissioning of the complete 22kV switchboard to be located at the Facility as per Annexure D.1, D.2 and D.3 of this Schedule.
- (9) CEB shall operate its side of the Interconnection Boundary at the Facility as from the Commercial Operation Date and shall take ownership of its side of the Interconnection Boundary at the Facility, after the warranty period from the manufacturer which shall be no less than 2 (two) years after the Commercial Operation Date.
- (10) CEB shall own and be responsible for the operation, maintenance and repair of the 22kV Interconnection Line after the Commercial Operation Date.
- (b.2) *For Installation Connected to CEB 22kV Feeders (2MW to 4MW)*

- (1) CEB shall be responsible, at the cost and expense of the Facility Owner, for the procurement, construction, installation, testing and commissioning of the 22kV Interconnection Line forming part of the CEB Interconnection Facilities as shown in Annexure D.3.
- (2) All costs incurred by the CEB for the construction of the 22 kV Interconnection Line and any modification at CEB's Substation, including installation of new relay where required, shall be borne and paid by Facility Owner. Facility Owner shall provide funds to CEB for undertaking the construction of the 22 kV Interconnection line in such manner as may be prescribed by CEB.
- (3) Facility Owner shall be responsible for the acquisition of the right of way for CEB with regard to the construction of the 22kV Interconnection Line forming part of CEB Interconnection Facility on or before the Longstop Date.
- (4) Pursuant to the finalization of the rights of way under Paragraph 1.1 (b.2) (3) of this Schedule, CEB shall provide to the Facility Owner with the cost for the procurement, construction, installation, testing and commissioning of the 22 kV Interconnection Line.
- (5) Facility Owner shall be responsible for the procurement, construction, installation, testing and commissioning of the complete 22kV switchboard at the Facility as per Annexure D.1, D.2 and D.3 of this schedule.
- (6) CEB shall operate its side of the Interconnection Boundary at the Facility as from the Commercial Operation Date and shall take ownership of its side of the Interconnection Boundary at the Facility, after the warranty period from the manufacturer which shall be no less than 2 (two) years after the Commercial Operation Date.
- (7) CEB shall own and be responsible for the operation, maintenance and repair of the CEB Interconnection Facilities.

(c) Responsibility and Cost of Installation of Facility Owner Interconnection Facilities

- (1) Facility Owner shall within 2 (two) Months after the date of this Agreement provide to CEB a schedule showing the date of

commencement and completion of both the Facility Owner and CEB Interconnection Facilities.

- (2) Facility Owner shall own and be responsible for the operation, maintenance and repair of Facility Owner Interconnection Facilities.

2. CEB Interconnection Facilities

2.1. Scope of the CEB Interconnection Facilities

Without limiting Paragraph 1.1(a) (1), the CEB Interconnection Facilities shall include the equipment described in this Paragraph 2.1.

(a) System Parameter

Nominal Voltage of Network	:	22kV
Voltage Variation (normal)	:	± 6%
Voltage Variation (Emergency)	:	± 10%
Highest voltage of Equipment	:	24kV
Rated Insulation Level		
1 minute -50Hz	:	50kV rms
Impulse 1.2 /50 micro sec	:	125kV peak
Rated Short Circuit capacity of Substation	:	25kA, 1s

(b) CEB Substation Equipment

All electrical equipment shown on the single line diagram at Annexure D.2 at the CEB Substation shall be installed by CEB. This equipment shall include the followings:

- (1) 22kV Feeder Panel

The 22 kV feeder panel shall consist of the followings:

- *Circuit Breaker (IEC 60056)*

The circuit breaker unit shall ensure isolation between busbars and circuits when withdrawn. The operating mechanism shall operate the 3 poles simultaneously via a motor driven spring charging mechanism. The breaker units shall be hermetically sealed and filled with SF6 gas or Vacuum.

- *22kV Current Transformers (IEC 6044-1)*

The 22kV current transformers shall be used for measurement and protection purposes.

- Potential Transformer (IEC 60044-2)

The existing 22kV busbar potential transformer at the CEB Substation shall be used for the purpose of protection and measurement.

- Protection Relay

The protection equipment provided shall be suitable to protect the electrical system in the event of the occurrence of faults such as phase faults, earth faults, busbar faults, feeder faults, etc.

The relay shall be a modern numerical, self-monitoring instrument utilizing programmable scheme logic to provide multiple, independent three-phase and earth fault protection curves. It shall offer a user-friendly interface, a display of measured steady state and fault quantities, isolated serial communication, remote setting and full interrogation by the substation control system, time tagged event and disturbance recording, plant control capability and start contacts.

- Directional Over-current elements shall conform to the following:

- (i) The relays shall contain three independent over-current stages for both phase elements ($I>$, $I>>$, $I>>>$) and for earth fault elements ($I_{o>}$, $I_{o>>}$, $I_{o>>>}$).

- (ii) The $I>/I_{o>}$ elements shall operate when the power frequency component of the current exceeds the set threshold. The time/current characteristic associated with these elements must provide a selection of inverse definite minimum time (IDMT – NI, VI, EI, and SI) curves, or be

settable to a fixed (definite) time delay.

- (iii) The I_{>>/I_{o>>} and I_{>>>/I_{o>>>} elements shall provide instantaneous functions that are not affected by offset waveforms, such as those occurring with power transformer inrush currents. These over-current stages shall also have selectable definite time settings.}}

- The inter-tripping shall be designed for the protection of transformer/feeder and be such that tripping of any 22 kV circuit breaker (sending or receiving) results in inter-tripping of the corresponding 22 kV circuit breaker at the remote end of the feeder. In the case of manual opening of the 22 kV circuit breaker at the CEB Substation, inter-tripping of the corresponding breakers at the Facility should result. However manual opening of the 22 kV circuit breakers at the Facility should not trip the corresponding breakers at the CEB Substation.

Notwithstanding the above, it must be ascertained that each line trip must be followed by a pre-determined synchronizing sequence at the Facility.

(c) 22kV Interconnection Line

The 22 kV Interconnection lines shall be designed for the evacuation of power generated from the Facility to the CEB Substation.

(d) Communication Facility

A fibre-optic cable shall be installed, at the expense of Facility Owner, connecting the Facility to the CEB Substation for protection, data transmission and communication purposes. The fibre-optic cable shall be maintained by Facility Owner.

Wireless communication shall be required for Facility connected directly to CEB's 22kV feeder. The wireless communication shall be from the Facility to the CEB's Substation (to which the 22kV Feeder is connected) or CEB's System Control Centre. The final design of the wireless

communication system shall be agreed between both Parties prior to ordering.

The communication equipment installed at both end of the fibre optic cable shall be procured, installed, tested, commissioned and maintained by Facility Owner. The relay on CEB side of the Interconnection Boundary shall not form part of the communication system. The final design of the communication system shall be approved by the CEB prior to implementation.

For the communication equipment located at the Facility, it shall be located on the Facility Owner side of the Point of Delivery, unless otherwise instructed by the CEB. The electricity consumption of the Facility Owner's Communication equipment located in CEB's Substation will be charged to Facility Owner at an applicable tariff.

(e) 22kV Switchboard at the Facility

The 22 kV cubicles forming part of the CEB and Facility Owner Interconnection Facilities as shown in Annexure D.1 and D.2.1 or D.2.2 (as applicable) shall form a single switchboard installed within a concrete building. The complete switchboard shall be approved by the CEB prior to ordering.

The specification of the panels is as given in Annexure D.4 of this Schedule.

(f) Communication Requirements

- (1) One-way communication from the CEB Substation to the Facility:
 - (i) 22 kV breaker status at the CEB Substation (open/close);
 - (ii) Active-Power Control (Signal for Curtailment).

- (2) One-way communication from the Facility to the CEB Substation as per Paragraph 3.1(e) of this Schedule.

- (3) From the CEB side of the Interconnection Boundary at the Facility to the System Control Centre the following:
 - (i) Remote control facilities shall be provided:
 - 22 kV Circuit breaker open; and
 - 22 kV Circuit breaker close;

(ii) The following information shall be made available:

22 kV breakers' status, MW, MVAR, frequency, and information as per Paragraph 3.1(e) of this Schedule

(4) Electronic Messaging System

This system, if required, shall be implemented through PC to PC communication using a frame relay service to be secured through telecom services ("**Electronic Messaging System**"). All messages between CEB and the Facility shall be transmitted through the Electronic Messaging System. Messages will be recorded for eventual use to help monitor/implement contractual conditions.

CEB shall acquire the despatch/messaging software for the Electronic Messaging System. However, each Party shall acquire its own PCs, bear the cost of the communication charges and pay the software user licence fee, (if any) in relation to its use of the Electronic Messaging System.

(5) Commissioning, Protection Settings and Training.

Facility Owner shall take full responsibility for the protection settings, testing and commissioning of the interconnection between the Facility and the CEB System and any changes to settings for CEB equipment affected by the protection settings of Facility Owner's protection equipment shall be agreed by the Parties. The protection scheme to be implemented shall include but not limited to the requirements set forth in Annexure D.3. Any change in the scheme shall be approved by CEB prior to implementation.

Facility Owner shall provide training/assistance to up to 5 (five) CEB personnel who shall familiarize themselves with "**overall system protection and operation**", i.e. the Facility and the interconnection with the CEB System including setting, testing and commissioning of relays on CEB side of the Interconnection Boundary.

Facility Owner shall submit a comprehensive protection study of the Facility at least 90 (ninety) Business Days prior to the SCOD including but not limited to:

- (i) All protection calculations complete with graphs (the graphs shall demonstrate discrimination for faults at both the MV and LV level taking into consideration the fault level at each level of the Facility); and
- (ii) Grading of the interconnection protection with CEB substation protection

CEB shall provide the relevant network information to Facility Owner for the purpose of the protection study.

(6) Radio Communication

CEB may install a fixed, private radio operating on CEB's own network, to be used in case of emergencies.

(g) *Metering*

Refer to Schedule K: Metering for details.

CEB Meters will have an accuracy class of 0.2 and shall measure the electrical energy delivered to CEB by Facility Owner as well as Energy imported by Facility Owner from the CEB System. A cubicle shall be ordered by CEB to house the CEB Meters.

The CEB metering circuits shall be totally separate from Facility Owner's metering circuits. This is to be achieved through cabling directly from the metering CTs and VTs.

CEB shall be fully responsible for the commissioning of the metering circuits associated with CEB Meters, i.e. all pre-commissioning and final commissioning involving cabling and other circuit verification, CT and VT checks and certification, functional testing, as well as meter testing, secondary injection and final documentation. The CTs and VTs shall be approved by CEB prior to ordering by Facility Owner and same shall be sent to the CEB's Meter lab Section for testing prior to installation.

The cost of the metering panel is to be shared equally between both parties if the CEB Meters and the Facility Owner Back-up Meter are located in the same panel.

3. Facility Owner Interconnection Facilities

3.1. Scope of the Facility Owner Interconnection Facilities

Without limiting Paragraph 1.1(a) (2) of this Schedule, the Facility Owner Interconnection Facilities shall include the equipment described in this Paragraph 3.1.

(a) 22kV switchboard

All electrical equipment shown on the single line diagram in Annexures D.1, D.2.1 or D.2.2 (as applicable), D.3 and D.4 of this Schedule on Facility Owner side of the Point of Delivery (A) shall be procured, installed, tested and commissioned by Facility Owner in accordance with Paragraph 2.1(a) of this Schedule.

The specification of the complete 22kV switchgear shall be as shown in Annexure D.4 of this Schedule.

(b) Protection and System Quality

Facility Owner shall, at its own cost and expense, install, maintain, and operate system protection facilities on the Facility Owner side of the Interconnection Boundary, including such protective and regulating devices, or as otherwise necessary, to protect personnel and equipment and to minimize deleterious effects to CEB's electric service operation arising from the Facility. Any such protective or regulating devices that may be required to be installed on the CEB's Interconnection Facilities in connection with the operation of the Facility shall require the prior approval of CEB before installation by Facility Owner.

(c) Requirements for Protection

Facility Owner shall provide, install, own, and maintain relays, circuit breakers, and all other devices necessary to remove promptly any fault or contribution of the Facility to any short circuit occurring on the CEB System not otherwise isolated by CEB equipment. Facility Owner shall be responsible for protection of the Facility and Facility Owner's other equipment from such conditions as loss of main, over- or under-frequency, sudden load rejection, neutral voltage displacement and over-voltage or under-voltage etc. Facility Owner shall be solely responsible for the provision of equipment to disconnect the Facility and Facility Owner's other equipment when any of the above-described disturbances occur on the CEB System.

(d) System Quality

Facility Owner's facilities and equipment shall not cause excessive voltage excursions nor cause the voltage to drop below or rise above the range maintained by CEB. Facility Owner's facilities and equipment shall not introduce excessive distortion to the sinusoidal voltage or current waves and be in accordance with IEC TR 61000-3-7, IEC 60868, Schedule C any other relevant standards.

(e) Communications Equipment

Facility Owner shall comply with the relevant requirements in Paragraph 2.1(f) of this Schedule.

The following information shall be made available at the CEB Substation via the fibre-optic link for interconnection to CEB's Substation 22kV busbar:

(e.1) Telesignals (Status)

- (1) Open/close position of the 22 kV circuit breakers at the Facility;
- (2) Open/Close position of the Low Voltage Circuit Breakers;
- (3) UPS Supply Faulty;
- (4) Communication equipment faulty;
- (5) Alarms – which shall be determined with CEB at design stage of the Facility; and
- (6) Any additional signals that may be required by the CEB

(e.2) Telemeasurements / Teleprotection

- (1) Protection systems health status;
- (2) Inter-trip send and receive;
- (3) Energy, MW, MVar, power factor and voltage level at the sending end terminals; and
- (4) Generated Energy at LV and MV

(e.3) MW Curtailment Data

Facility Owner shall make available the following signals to the System Control Centre:

- (1) Curtailment facility status indication (ON/OFF). This controllable point is set ON or OFF by the CEB;
- (2) Curtailment in progress digital feedback; and
- (3) Facility MW curtailment set-point value (MW Feedback).

(e.4) Meteorological Data

Facility Owner shall make available to CEB, if required, the following data with a sampling rate of 60 seconds

- (1) Solar Irradiance
- (2) Temperature

(f) Uninterruptible Power Supply

An online uninterruptible power supply (UPS) shall be required and it shall have adequate capacity to ensure that the protection, measurement and control operate without interruption for a minimum duration of at least 3 hours after loss of power supply. Facility Owner shall submit the calculations in the determination of the sizing of the UPS.

In the event of loss of the secured auxiliary supply, all the Facility Owner's 22 kV Circuit Breakers shall be tripped until remedial actions are taken. The UPS system shall be installed on the Facility Owner side of the Interconnection Boundary and be maintained accordingly by Facility Owner. The UPS shall be equipped with a bypass switch/system that shall allow continuous operation during maintenance on the UPS.

A separate UPS, than the one stated in the previous paragraph, shall be installed for all equipment used for the transmission of signals and commands (PLC, modem, router, etc.) between the Facility and the CEB's Substation. All associated requirements mentioned in the previous paragraph of this section shall be applicable to this separate UPS.

4. Joint Use Facilities

4.1. Scope of Joint Use Facilities

- (a) CEB and Facility Owner shall operate and maintain their respective communication system with all associated interface equipment to facilitate the following:

Two-way communication modes:

- (i) inter-trip send and receive; and
 - (ii) single dedicated telephone circuit between the Facility's and the CEB's System Control Centre / Substation.
- (b) In accordance with mutually-agreed procedures, CEB and Facility Owner shall jointly operate the items shown in **Annexure D.3** (together, the "**Joint Use Facilities**") in accordance with Good Utility Practice, including:
 - (i) closing breakers to accomplish interconnection, but not synchronization, of the Facility to the CEB System;

- (ii) opening breakers to remove the Facility from service;
- (iii) opening disconnectors if applicable;
- (iv) in-service relay testing; and
- (v) battery system or UPS testing and maintenance

5. Modelling requirements

Facility Owner shall provide CEB with a detailed model complete with dynamic model of the Facility in DlgSILENT Powerfactory format suitable for electrical studies and calculations. Details of the software version shall be provided by CEB.

CEB may request that the models be updated, during the Operation Period of this Agreement, to be compatible with changes in the CEB's computing environment. Upon such request, Facility Owner shall update and submit such models to CEB without undue delay and shall submit the updated models to CEB.

5.1. Requirement to Provide Dynamic Models

Facility Owner shall provide CEB with validated dynamic models of the Facility. Appropriate data and parameter values shall be provided by Facility Owner.

The models shall be able to calculate how quantities such as active Power output, reactive Power output, primary resource (e.g. irradiance etc.) vary as factors such as the voltage at the Interconnection Boundary measured at the Point of Delivery change. The models shall take account of the inherent dynamic characteristics of the inverters and the actions of their control and protection systems, including the Low Voltage Ride Through (LVRT) capability.

5.2. Features to be Represented in the Dynamic Model

The dynamic model shall represent the features and phenomena likely to be relevant to angular, frequency and voltage stability. These features include but may not be limited to:

- (a) The electrical characteristics of the PV modules and Inverters representing the total capacity of the Facility;
- (b) Variation of electrical power output with the primary resource;
- (c) Active and Reactive Power controls and limiters;
- (d) Power plant controller;
- (e) Reactive Power compensation Equipment;
- (f) Protection relays;
- (g) Saturation curves of power transformers and CTs;
- (h) Damage curves of power transformers;
- (i) Harmonic current injections;
- (j) Ramp Rate Limits;

- (k) Frequency Response of the Inverters; and
- (l) Any features required by CEB

5.3. Model Documentation

The Facility dynamic model shall be fully documented. The documentation shall describe in detail the model structure, inputs, outputs and how to set up and use the model in the simulation software environment that can be used by CEB to simulate the dynamic performance of the Facility, specifically voltage control, load ramping and frequency support within the design operating range of the Facility.

The document shall at least contain the following:

- (a) the operating parameters on which the model is based;
- (b) a model for the dynamic response of the Facility in block diagram form including Laplace transfer functions.
- (c) a detailed list of gains, constants and parameters, with explanations of the derivations for each of the modelled functions; and
- (d) Plant test data from which the model was derived.

CEB may, when necessary to ensure the proper running of its complete system representation or to facilitate its understanding of the results of a dynamic simulation, request additional information concerning the model, including the source code of one or more routines in the model. Facility Owner shall comply with any such request without undue delay. In the event that the information is confidential on the basis that it incorporates trade secrets, CEB shall not disclose the information so designated to any third party.

5.4. Model Validation

All models provided to CEB for use in dynamic simulations shall be validated against site measurements. The Independent Engineer shall certify that the behaviour shown by the model under simulated conditions is representative of the behaviour of the Facility under equivalent conditions.

For validation purposes, Facility Owner shall ensure that appropriate tests are performed and measurements are taken to assess the validity of the dynamic model. Facility Owner shall provide all available information showing how the predicted behaviour of the dynamic model to be verified with the actual observed behaviour of a prototype or similar PV modules/Inverter under laboratory conditions and / or actual observed behaviour of the real Facility as installed and connected to the CEB System.

If the on-site measurements or other information provided indicate that the dynamic model is not valid in one or more respects, Facility Owner shall provide a

revised model whose behaviour corresponds to the observed on-site behaviour as soon as reasonably practicable.

The conditions validated should as far as possible be similar to those of interest, e.g. low short circuit level at Interconnection Boundary, large frequency and voltage excursions, primary resource variations.

5.5 Parameters Monitoring

In order to maintain the accuracy of the model, Facility Owner shall periodically submit to CEB the operating parameters to determine if there is any decay which should be modelled.

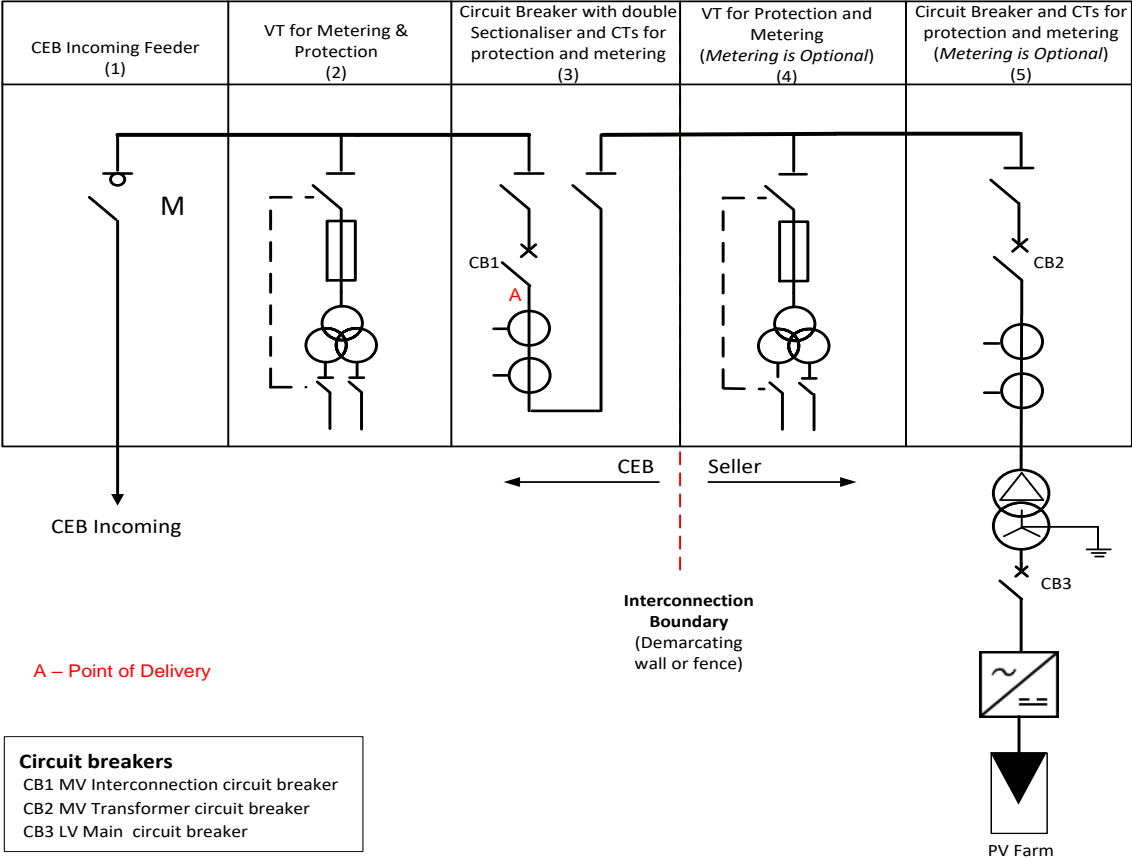
Facility Owner shall carry out routine and prototype response tests on voltage and power-frequency controls for the Facility at which major refurbishment or upgrades have taken place. Routine review shall be required at least once every 5 (five) years.

6. Weather Data

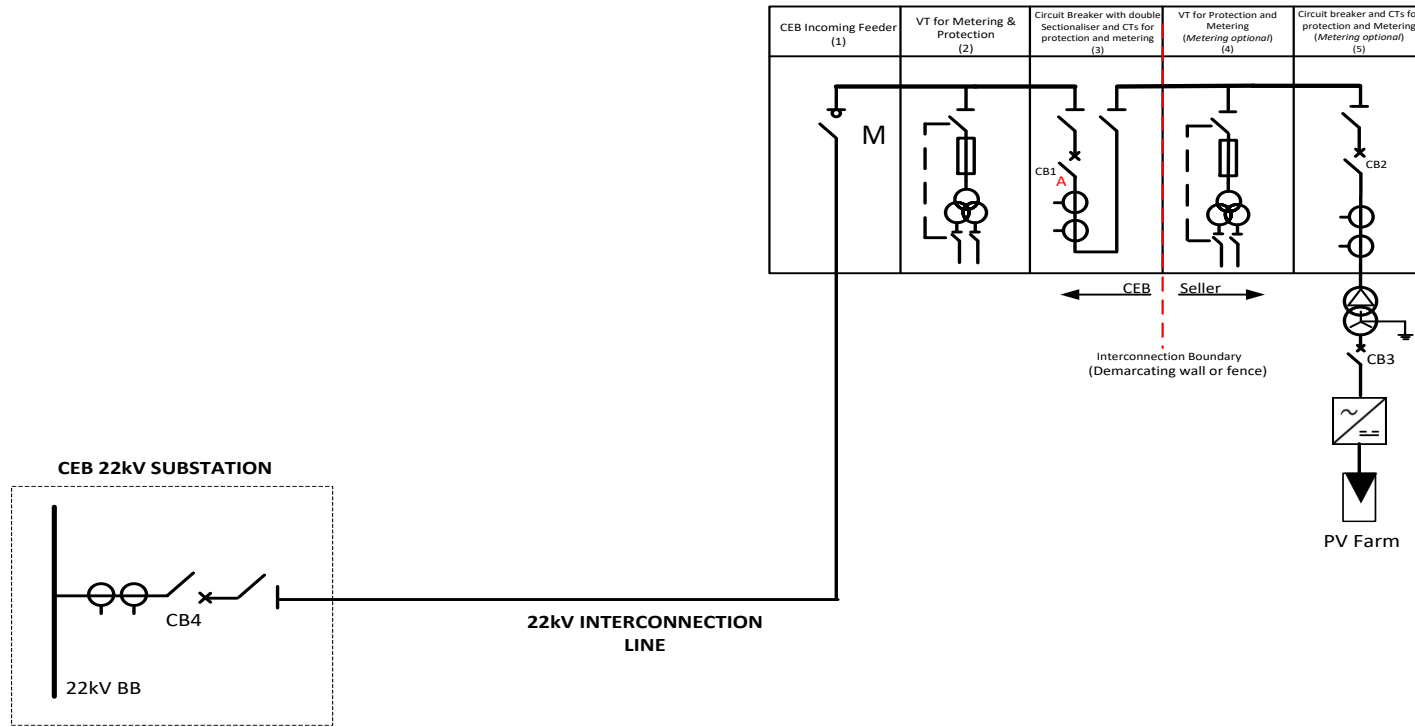
The weather data as measured by sensors as defined in Schedule A of this Agreement shall to be made available to CEB upon request.

The sampling rate of the data to be of 60 seconds, unless otherwise agreed with the CEB.

Annexure D.1: Single Line Diagram



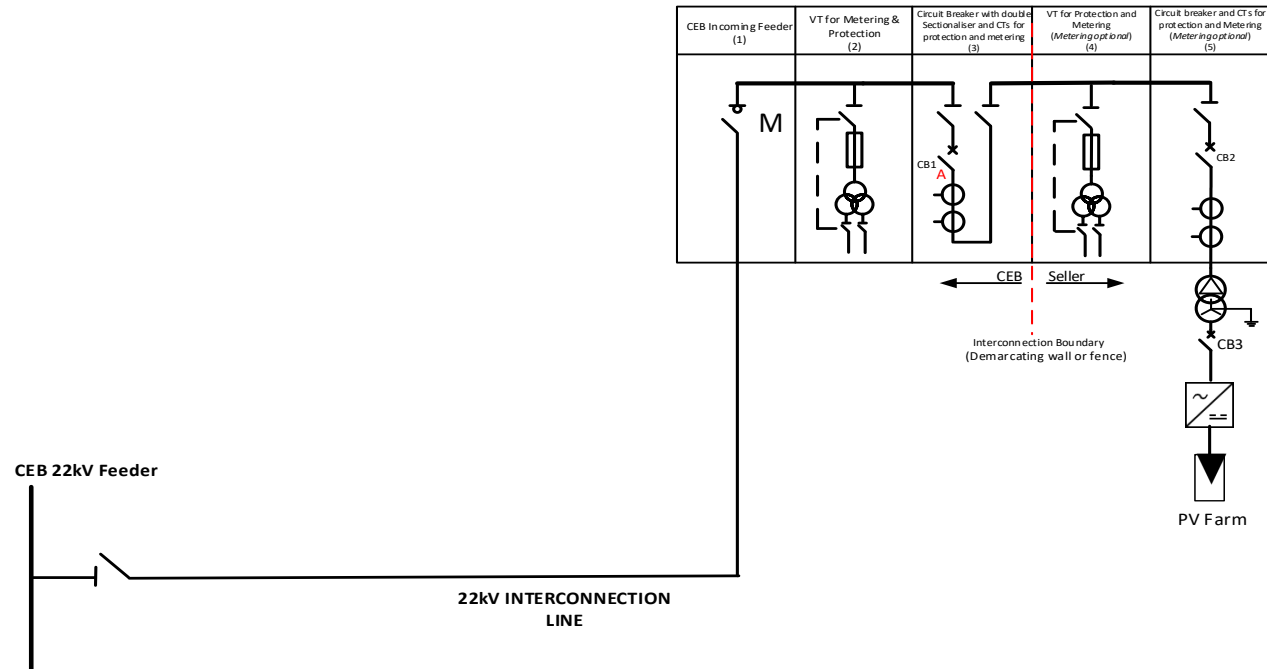
ANNEXURE D.2.1: Single Line Diagram for interconnection to CEB 22kV Substation Busbar



- Circuit breakers**
 CB1 MV Interconnection circuit breaker
 CB2 MV Transformer circuit breaker
 CB3 LV Main circuit breaker
 CB4 22kV circuit breaker at CEB Substation

A – Point of Delivery

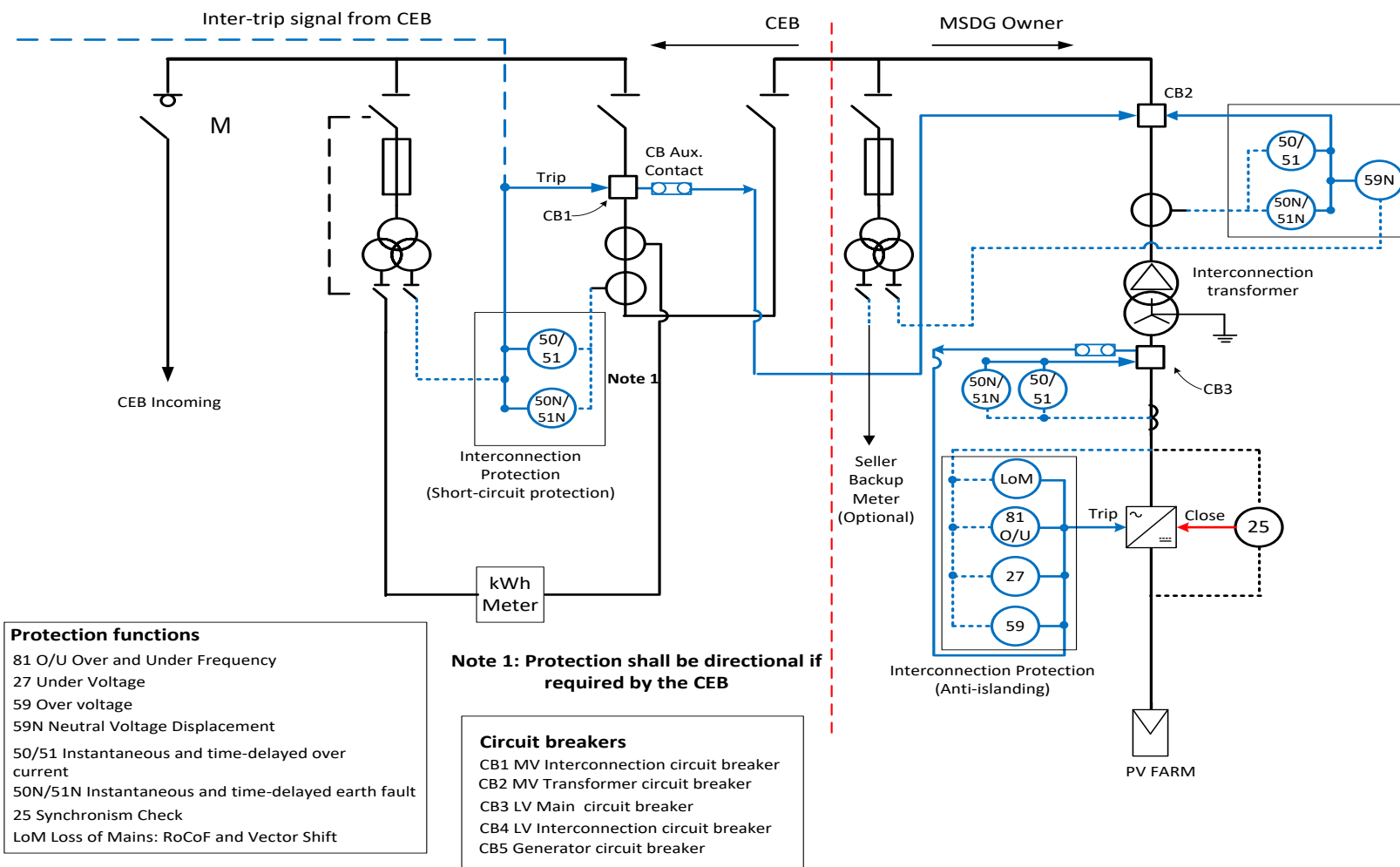
ANNEXURE D.2.2: Single Line Diagram for interconnection to CEB 22kV Feeder



- Circuit breakers**
- CB1 MV Interconnection circuit breaker
 - CB2 MV Transformer circuit breaker
 - CB3 LV Main circuit breaker

A – Point of Delivery

ANNEXURE D.3 PROTECTION SCHEME



ANNEXURE D.4: Switchgear Specification

D.4.1 Arrangement of Cubicles under CEB's responsibility

The cubicles shall form one single switchboard. However, CEB's liability shall stop at the Interconnection Boundary. The switchgear room shall be equipped with air conditioning (A/C) units.

A metallic demarcation barrier between the CEB Circuit Breaker panel and Facility Owner incoming panel shall be installed by Facility Owner. These demarcation barriers shall be installed at the front and back of the switchgear panels. The height of the demarcation barrier shall be from floor to roof level. The fixation points shall only be accessible from the CEB side of the building. In addition, the switchgear room and the meter cabin shall be equipped with fool-proof padlocking facilities (refer to Annexure D.4.2). More detailed specifications will be provided at time of implementation.

The switchboard and associated equipment shall be approved by CEB prior to ordering by Facility Owner. The installation, testing and commissioning of the complete switchboard shall be witnessed and approved by Facility Owner's appointed Registered Professional relevant to the Field with the Council of Registered Professional Engineer of Mauritius.

CEB and the Independent Engineer shall be provided with all test certificates/documents before commissioning the 22 kV switchgear panels.

a) CEB Interconnection Cubicles 1

The 22kV Incoming Feeder Cubicle shall comprise the following basic equipment:

- 1- Three-phase 630A busbar
- 1- Motorised load break switch disconnecter of rating 630A and housed in SF6 or Vacuum filled enclosure having padlocking facilities.
- 1- Motor operated spring charged operating mechanism for quick closing and opening independent of the operator.
- 1- Manual spring charged operating mechanism for quick closing and opening independent of the operator
- 1- Earthing switch located in such a position to allow its contacts to be seen easily through the cubicle window
- 1- Mechanical interlocking system between disconnecter and earthing switch
- 1- Neon lamp for live cable indication
- 1- Cable compartment with cable terminations for the reception of 3-core aluminium 240mm² or copper 300mm² XLPE cable to IEC60502-2. The cable entry is to be at the front of the panel
- 1- Bottom plate with cable gland
- 1- Built-in padlocking device of the cubicle door

The front facia shall be equipped with appropriate padlocking facilities that shall allow the operator to lock the disconnecter switch and earth-switch in close/open position independently.

The incoming 3-Core power cable shall be centered below the Panel Base / Bottom Plate and cable terminations (Indoor) shall be mounted inside the MV compartment of the incomer switchgear panel (refer to Annexure D.4.2). Rubber Bushings shall be provided for sleeve protection for cable of size ranging from 65mm to 100mm.

The load break switch disconnecter shall have both local and remote modes of operation via a key selector switch which should be mounted on the front facia. The key shall be released in local mode only.

b) Voltage Transformer Cubicle 2

The 22 kV Voltage Transformer Cubicle shall comprise the following basic equipment:-

- 1- Three-phase 630 A busbar
- 1- Triple pole isolator
- 1- Manual operating mechanism
- 3- HRC fuses to DIN specifications rated to suit VT's rating (*Note: Access to the fuses shall only be possible with the switch in the "Earth" position in such a way that both sides of the fuse are effectively earthed*)
- 1- Auxiliary switch connected to the VT secondaries and opening with the 22 kV isolator to prevent feedback from the LV side
- 1- Secondary windings. Each PT shall be equipped with 2 windings: one winding to be used for metering and the second winding for protection
- 3- Single phase voltage transformers:-

Metering core

Ratio	:	$\frac{22\ 000}{\sqrt{3}}$:	$\frac{110}{\sqrt{3}}$
Rated burden	:	minimum of 10 VA		
Accuracy Class	:	CL 0.2		

Protection core

Ratio	:	$\frac{22\ 000}{\sqrt{3}}$:	$\frac{110}{\sqrt{3}}$
Rated burden	:	minimum of 10 VA		
Accuracy Class	:	3P		

- 1 - LV fuse box containing 3 LV fuses of appropriate rating + 3 neutral links
- 1 - Built-in padlocking facility on the cubicle door

The system shall be designed and implemented to prevent or damp any ferroresonance effect in the PTs.

The burden for the PTs (metering) shall be a minimum of 10VA. However, Facility Owner shall provide burden calculations for the instrumentation transformers so as to ensure that the proposed PTs are rated correctly, and they are operating within the optimum range (i.e. between 0% and 100% of the rated burden). It can be assumed that the maximum burden for the meter is 3VA per phase and secondly, the supervisory cable used is 1.5 mm² Copper cable.

The front facia should be equipped with appropriate padlocking facilities that shall allow the operator to lock the disconnect switch and earth switch in close/open position independently.

c) Interconnection Circuit breaker Cubicles No.3

The circuit breaker shall be of double isolation and comprise the following basic equipment:

- 1- Three-phase 630 A busbar
- 2- Triple pole isolator
- 1- SF6 Gas or Vacuum Circuit Breaker
- 1- Motor operated spring charging mechanism for quick closing and opening both locally by push button and remotely.
- 1- Tripping coil 230 Vac for emergency tripping.
- 1- Trip release device to work in conjunction with the relay mentioned below
- 3 - Current transformers with dual primaries e.g. 100/200 or 200/400 rated amp with secondaries of 5A, Class 5P20, 10 VA burden for protection and 5A Class 0.2, 10 VA burden for metering. The minimum primary current shall be 100A to prevent any saturation of the CT during fault condition.
- 1- Voltage test terminal box
- 1- Current test terminal block
- 2- Tripping test terminal block
- 1- Mechanical interlocking between earthing switch and triple pole isolator
- 1- Earthing switch located in a position to allow its contacts or position to be seen easily preferably through the cubicle window
- 1- Bottom plate with cable gland
- 1- Neon lamp for live cable indication
- 1- Built-in padlocking device for the cubicle door

The burden for the CTs for metering shall be minimum 10VA. However, Facility Owner shall provide the burden calculation for the instrumentation transformers so as to ensure that the proposed CTs are rated correctly, and these are operating

within the optimum range (i.e. between 25% and 100% of the rated burden). It can be assumed that the burden for the meter is 0.1VA per phase and the supervisory cable used is 2.5 mm² Copper cable.

The Circuit Breaker shall have both local and remote modes of operation via a key selector switch which should be mounted on the front facia. The key shall be released in local mode only.

The front facia shall be equipped with appropriate padlocking facilities that shall allow the operator to lock the disconnect switch and earth switch in close/open position independently. A key interlocking system shall be provided for the safe operation of the 22kV switchgears.

In addition to the above an interlocking system shall be provided to ensure that closing of the interconnection circuit breaker, CB1, is **ONLY** allowed if all Facility Owner's 22kV circuit breakers are in the open position. The opening of the interconnection circuit breaker, CB1, shall intertrip all 22kV circuit breakers on Facility Owner Side of the Interconnection Boundary.

Note:

- 1. Toroidal CTs SHALL NOT BE ACCEPTED for metering purposes.*
- 2. CT ratio shall depend on installed load and shall have to be specified at the time of order.*
- 3. The metering CT shall be mounted so that P1 is located on CEB side direction and P2 on Facility Owner side direction.*
- 4. In addition, an interlocking system shall be provided to ensure that closing of the CEB 22kV Circuit Breaker shall ONLY be allowed if ALL Facility Owner's 22 kV Circuit Breakers are in the open position. The opening of the CEB 22kV Circuit Breaker shall inter trip ALL Facility Owner's 22 kV Circuit Breakers.*
- 5. The current and voltage transformers shall be removed and sent to the CEB Meter Lab Section for necessary tests before commissioning.*
- 6. Facility Owner shall also provide a 2-pole circuit breaker on the secured AC auxiliary supply for the spring charging mechanism inside the LV upper compartment of Cubicle 3.*

d) Degree of Protection

IP 3X.

e) Safety equipment for switching operations

Facility Owner shall provide the following safety equipment which shall be always be readily available in the switchgear room:-

On Facility Owner side of the Interconnection Boundary

- i) 22 kV insulating mat from wall to demarcation fencing
- ii) One pair of 22 kV insulating gloves
- iii) Appropriate Line tester with both visual and audible features
- iv) Rescue Rod

Facility Owner shall ensure that the above items are maintained on a regular basis.

On CEB side of the Interconnection Boundary at the Facility

(h) 22kV insulating mat **is** required from wall to demarcation fencing.

Facility Owner shall ensure that all fire extinguishers shall be in good working condition. For fire extinguisher on the CEB side of the Interconnection Boundary, Facility Owner shall inform CEB with one week notice for maintenance/inspection of the fire extinguisher.

f) Spares

Facility Owner shall provide the following spares for the cubicles that shall be under CEB's responsibility (CEB side of the Interconnection Boundary):-

- 1 set Voltage Transformer as specified in item (b).
- 1 set Current Transformers as specified in item (c).
- 1 set HRC fuses as specified in item (b)
- 1 charging motor for item (a)
- 1 charging motor for item (c)
- 1 Relay located on CEB side of the Interconnection Boundary

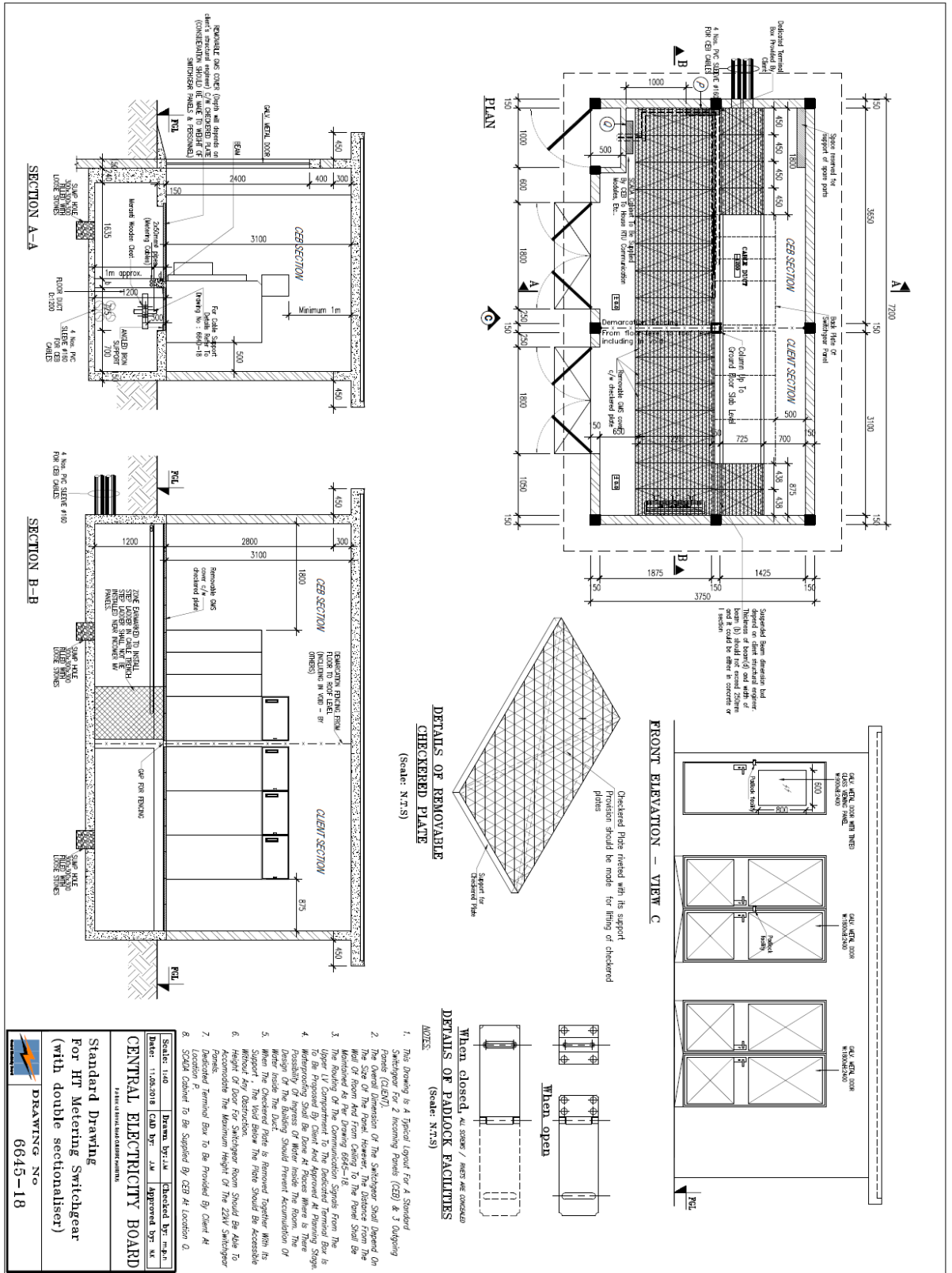
g) Standards

The switchboard shall conform to the following standards or the relevant parts thereof: -

- (i) IEC 62271-102:2001 : AC Disconnectors (Isolators) and Earthing Switches
- (ii) IEC 62271-103:2001 : HV Switches
- (iii) IEC 62271-200 : HV Metal-Enclosed Switchgear and Control Gear Internal Arc Classification (A-FLR)
- (iv) IEC 60282 : High Voltage Fuses
- (v) IEC 62271-105:2012 : HV AC Fuse Switch combination and Fuse Circuit Breaker Combinations
- (vi) IEC 61869 : Instrument transformers

Note: All specifications shall be according to the latest edition of the standards mentioned above.

D.4.2 22kV Switchgear Room at Facility



D.4.3 Interconnection Transformer Specifications

(a) Characteristics of the Interconnection Transformer

No. of phases	3
Voltage Ratio	22000/415 V
Frequency	50 Hz
Type	Oil immersed, hermetically sealed, non-gas cushion *
Cooling	Natural
Construction	Core type double wound or shell type
Vector Group	Dyn 11
Winding	Enamelled Copper Wire
Standard	IEC 60076

* In the event that Facility Owner intends to purchase cast resin transformers (for indoor use), Facility Owner shall submit to CEB and the Independent Engineer all detailed characteristics of the proposed units including Type Test Report from an independent and recognised institution.

(b) Other Requirements

The transformer shall be:-

1. Supplied with oil – Mineral Insulating Oil for Transformers and Switchgear.

The insulating oil shall be for use in transformers and shall comply to IEC 60296 and 60156 or equivalent.

The oil shall be free of PCB and be of such quality that it shall not require any user precautionary labelling as defined by the EEC Dangerous Substances Directive 67/548/EEC.

CEB prefers that the oil be of Uninhibited Type.

The polycyclic aromatic content by IP 346 shall be maintained below 3%.

2. Fitted with:-

- (a) Oil level indicator
- (b) Oil filling hole with plug
- (c) Lifting lugs

(d) Earthing terminal for tank

(e) Drain plug with sampler cock

(f) Diagram and rating plate

(g) Terminal marking plate

(h) Off-circuit tap changer with $\pm 2 \frac{1}{2}\%$ and $\pm 5\%$ taps as per IEC60076

3. Supplied with detachable top yoke to allow removal of windings for repairs.

4. Externally hot dip galvanised to BS EN ISO 1461.

5. Designed for ground mounting with rollers.

6. Designed with a bolted cover.

7. Designed with the following terminations:-

(a) HT side - 3 plug-in type bushings rated 200A, 24kV suitable for the reception of elbow plug-in connector

(b) LT side - 4 bushings and associated copper cable terminals having the following characteristics:-

- i. be of vertical type.
- ii. bottom part to be threaded onto the bushing rod and tightened by two side bolts.
- iii. have a top palm, undrilled, and of dimensions (width x height):-

60 mm x 70 mm for 500 kVA

60 mm x 130 mm for 1000 kVA

(c) Standards

The transformer shall conform to the following standards:-

- i) IEC 60076 - Power Transformers
- ii) BS EN ISO 1461 - Hot dip galvanised coatings on fabricated iron and steel articles (specifications and test methods)

Note: All specifications shall be according to the latest edition of the standards mentioned above.

Facility Owner shall submit all relevant data to CEB and the Independent Engineer for approval prior to ordering. CEB and the Independent Engineer shall be provided

with the test certificates/ documents before energisation of the interconnection transformer.

D.4.4 Multifunctional Programmable Numerical Protection Relays

The Programmable Protection Relays shall include at least Over Current, Earth Fault and Neutral Voltage Displacement (NVD) protections and shall operate with the secured auxiliary supply, with independent time settings for each type of protection as detailed hereunder:-

The numerical relay shall comprise of two or more low set stages and one high set stage for both overcurrent and earth fault protection. It shall also have directional functionalities.

Low set overcurrent and earth fault elements must consist of both Inverse Definite Minimum Time (IDMT) and Definite Time Stages. Relay must also provide both delayed and instantaneous overcurrent and earth fault high set elements.

- (a) The primary range of overcurrent protection should be as follows:
 - 1. Low Set (I>):
At Inverse time: 15 Amp to 400 Amp with time multiplier range: 0.05 to 1.5
 - 2. High set (I>>):
At definite time or instantaneous stage: 200Amp to 2000 Amp with time range of 0s to 20s DT.
- (b) The primary ranges for the earth fault elements should be as follows:
 - 1. Low Set (I>):
At Inverse time: 10 Amp to 100 Amp with time multiplier range: 0.05 to 1.5
 - 2. High set (I>>):
At definite time: 50 Amp to 1500 Amp with time range of 0s to 20s.

The typical range of overcurrent is based on an installation capacity of 500kVA to 10MVA. In case, the capacity is outside the above range the overcurrent setting might be inappropriate. It is also assumed that the minimum primary setting of the CT is set on 100A to prevent saturation of the CT during a fault.

Facility Owner shall select the appropriate protective relay based on the above primary ranges.

Prior to relay testing, the proposed protection settings on CEB side of the Interconnection Boundary shall be verified and approved by CEB. Facility Owner shall ensure that the protection settings on its side of the Interconnection Boundary are graded properly with the protection settings on the CEB side of the Interconnection Boundary. Relay test certificates shall be provided by Facility Owner.

Any relay settings' changes (if required) is to be carried out by Facility Owner and tested accordingly by Facility Owner. However, these protection settings shall be vetted by CEB prior to implementation.

Facility Owner shall provide CEB with a PC-to-relay communication cable and the updated relay software for the relay located on the CEB side of the Interconnection Boundary.

Note:

- (i) The circuit breaker's main function is for protecting CEB's system from Facility Owner's system against faults on Facility Owner's side and not for transformer protection. Facility Owner shall therefore provide for a transformer protection panel for each transformer.*
- (ii) Facility Owner shall make provision for training of CEB personnel on the configuration and operation of the relays.*
- (iii) All protection relays shall have test blocks for current, voltage and tripping. Facility Owner shall provide CEB with pre-wired plugs for each test block.*
- (iv) Facility Owner shall submit a hard copy as well as a soft copy of the relay configuration, settings and manuals (if required by CEB) before commissioning.*

D.4.5 Safety Procedures regarding the operation of High Voltage Switchgear

In order to ensure the safety of personnel while operating or working on High Voltage Switchgear, the following requirements and procedures shall be adhered to:-

1. to comply with Section 7(2) of the Occupational Safety & Health Act 2005 (OSHA 2005) which states "Where the total power used or generated by machinery installed at any place of work exceeds 750 kilowatts, the employer shall employ a Registered Professional Engineer to be in general charge of all such machinery".
2. Facility Owner shall appoint and train competent person/s who shall be responsible for the operation of the High Voltage Switchgear. He/they shall be fully conversant with the electrical set-up, including that of the Switchgear on the CEB's side of the Interconnection Boundary. The contact details of the competent person(s) shall be affixed within the CEB side of the switchgear room. CEB shall be immediately notified of any change in the contact details.
3. an up-to-date schematic diagram of the switchgear set-up shall be displayed in the switchgear room.
4. all switchgear panels shall be clearly numbered and labelled.

5. before any work can be performed on either the CEB side or Facility Owner side of the switchgear panel, appropriate switching operations shall be carried out by the respective competent person in the presence of his respective counterpart. The competent person performing the operations shall certify the operations carried out on the approved "Certificat de Consignation" form and shall remit the original to his counterpart, who may then proceed with the work in accordance with the Safety Rules.

Note:

The person receiving the above information shall ensure that the switchgear involved shall not be inadvertently operated by securing them by means of personal padlocks and by affixing proper warning signs.

D.4.6 Pre-Commissioning Test Notes on the 22kV Switchgear

The tests described in this section shall be performed in the presence of the CEB and the Independent Engineer, subject to fulfilling ALL pre-requisites to enable the switchgear energisation and commissioning. However, the CEB reserves the right to request additional tests on the switchgear based on the observations of the results of the tests or to ascertain other requirements of the switchgear installation.

The Facility Owner shall ensure that only calibrated equipment shall be used during these pre-commissioning tests. The Facility Owner shall provide authentic calibration certificates prior to the conduct of the pre-commissioning tests.

1. Power-frequency Withstand Voltage Test

The power-frequency withstand voltage tests shall be performed between phase-to-phase and phase-to-earth. The applicable test voltage shall be as follows:

- Phase-to Phase: A.C. voltage of 30 kV (r.m.s.) for 1 minute
- Phase-to-earth: A.C. voltage of 18 kV (r.m.s.) for 1 minute

Preference is given for application of a true sinusoidal test voltage at power frequency of 50Hz instead of VLF (very low frequency).

2. Primary Current Injection and relay tests

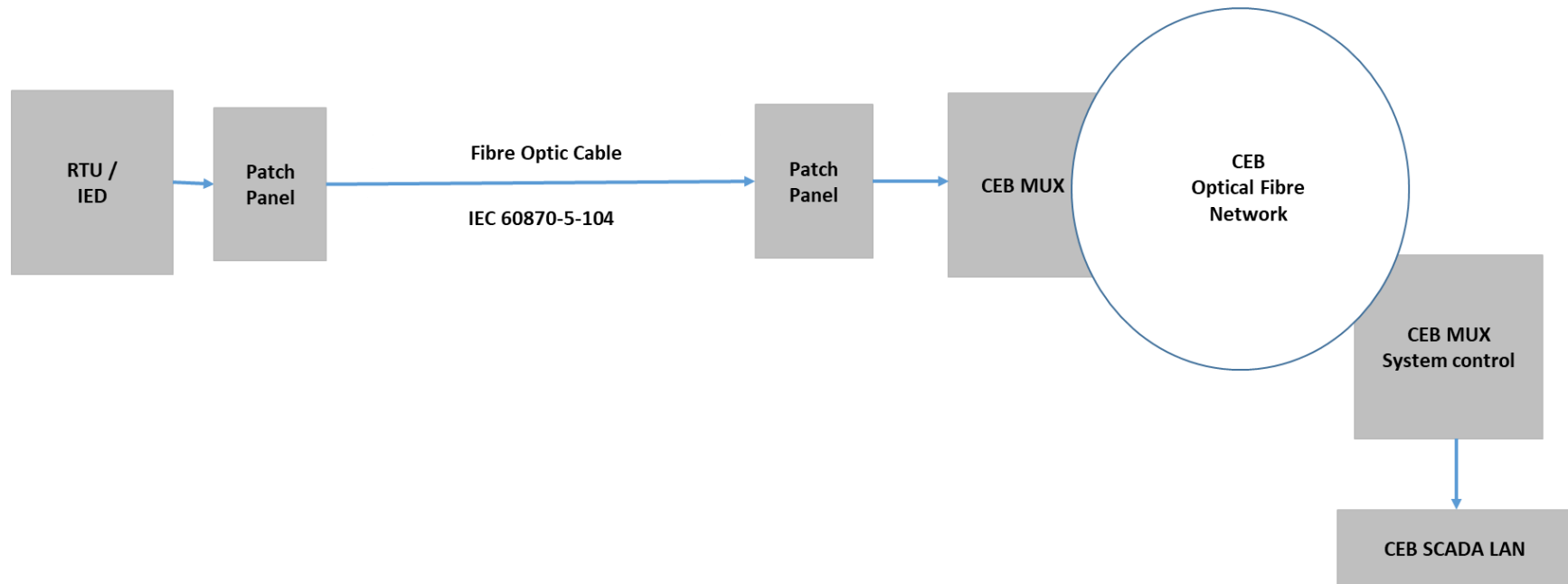
Facility Owner shall undertake to verify the relay settings on the CEB side, as approved by CEB, by performing primary current injection at specific values and under actual relay settings.

3. Registered Professional Engineer

The conduct of the pre-commissioning tests, as specified in this Annexure, shall be carried out in the presence of a Registered Professional Electrical Engineer, as designated/appointed by Facility Owner, and who shall have adequate knowledge and competence directly related to the type or nature of the tests being carried out.

Upon satisfactory completion of all tests, the test results shall be summarised in a test report, duly signed and certified by the Facility Owner's Registered Professional Electrical Engineer and duly signed as witness by the CEB Registered Professional Electrical Engineer and the Independent Engineer. This test report shall then be submitted to the CEB and the Independent Engineer prior to energisation of the switchgear.

ANNEXURE D.5: Communication System (Joint Use Facility)



Note: For wireless communication system (connection to 22kV Feeder), the technology to be used shall be discussed and agreed by CEB and Facility Owner prior to ordering.

Schedule E: Guaranteed Operating Characteristics

Part 1: Guaranteed Operating Characteristics

1. The Maximum Capacity of the Facility shall be [...] MW_{ac} at the Point of Delivery.
2. Upon synchronization with the Grid and during operation, the maximum Ramp Rate of the Facility at the Point of Delivery shall be equal to the Maximum Capacity of the Facility at the Point of Delivery divided by five (5) for 1-minute ramp under normal conditions. The limit of positive ramps only applies during start up and for negative ramps only apply during shut down of the Facility.

The ramp rate settings shall be approved by CEB prior to testing and commissioning of the Facility on the network. For any subsequent change, a minimum of two weeks' notice shall be given. Implementation by the Facility Owner shall be done within two weeks of formal request and approved by CEB.

3. Surge Withstand Capability

The interconnection system shall have a surge withstand capability, both oscillatory and fast transient, in accordance with IEC 62305-3. The design of control systems shall meet or exceed the surge withstand capability requirements of IEEE C37.90.

Part 2: Tolerance to frequency variations

1. The Facility shall remain connected to the CEB System at System Frequencies within the range 47 Hz to 52.0 Hz.
2. The Facility shall remain connected to the CEB System during a rate of change of system frequency of values up to and including 2.5 Hz per second measured as a rolling average over 500 ms.
3. No additional inverters shall be synchronized while the CEB System frequency is 50.5 Hz or above.

Part 3: Tolerance to voltage requirements

1. The Facility shall remain continuously connected to the CEB System at their maximum available active power or curtailed active power output for normal system disturbance conditions when voltage is within prescribed range (for example: 22 kV -10% to + 10%).

- Each Inverter of the Facility shall avoid introducing undue resonance leading to over voltage at grid connection point.

Part 4: Re-Connection time

Following a protection initiated disconnection, the Facility shall remain disconnected from the network until the voltage and frequency at the supply terminals has remained within the nominal limits for at least 3 minutes. The final setting shall be provided by Facility Owner, at least 90 (ninety) Business Days prior to the SCOD.

Automatic reconnection shall only be allowed when disconnection was due to operating parameters being outside the normal operating range, not if disconnection was caused by malfunctioning of any devices within the Facility.

Part 5: Fault Ride Through Requirements

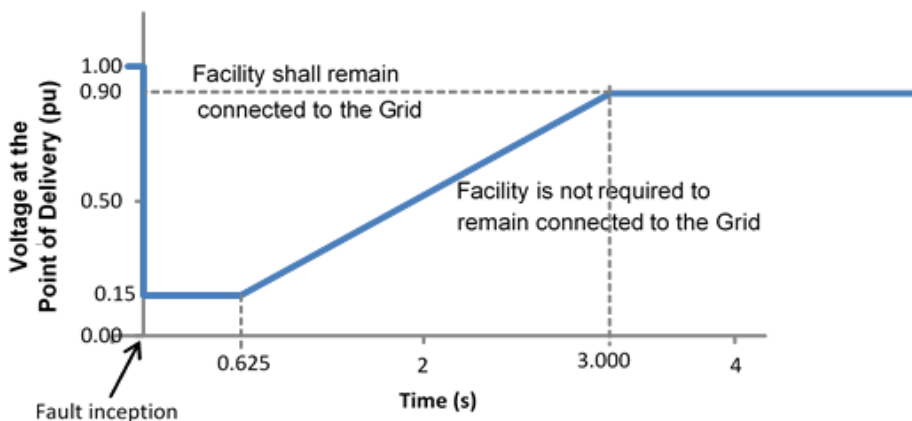


Figure 1. Low Voltage Ride Through Capability

In addition to remaining connected to the CEB System, the Facility shall have the technical capability to provide the following:

- During the CEB System voltage dip each inverter of the Facility shall provide active power in proportion to retained voltage and maximise reactive current to the CEB System without exceeding the inverter Limit. The maximisation of reactive current shall continue until the CEB System voltage recovers to within the normal operational range of the CEB System.
- The above Fault Ride Through curve shall be coordinated with the under-voltage protection settings scheme of the Facility to ensure grid support during fault conditions

- c) A different LVRT curve may be required by the CEB, to ensure the CEB System reliability and security. In such case, Facility Owner shall implement the new LVRT within two weeks from an official request made by the CEB.

Part 6: Frequency Requirements

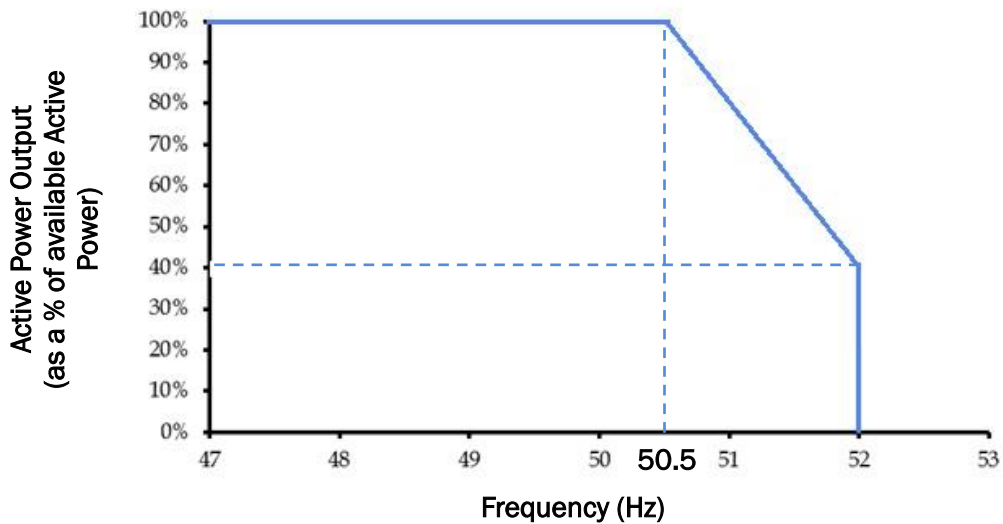


Figure 2. Frequency Response requirements

Each Inverter of the Facility shall be able to provide frequency response as displayed in the above figure. Under normal system frequency ranges, the Facility shall be operated with an active power output as set in the above figure.

The Facility shall be able to reduce the power output above a system frequency of 50.5 Hz. The power shall have to be reduced with a gradient of 40% per Hz of the instantaneously available power. The output power shall only be allowed to increase again as soon as the frequency is only 50.05 Hz.

The Facility shall be disconnected within 0.5 seconds from the network in case the system’s frequency is above 52Hz.

The Facility shall be disconnected from the network in case the system’s frequency is below 47 Hz for longer than 0.5 seconds.

Part 7.0: Power Quality

The Facility when connected to the grid shall maintain the voltage waveform quality at the grid connection point. The Facility shall comply with the standards specification as set forth in Schedule C.

7.1 Voltage Flicker

Facility Owner shall take the responsibility for limiting voltage flicker caused by the Facility to remain within the maximum values at the Point of Delivery as specified in the IEC TR 61000-3-7.

7.2 Harmonics

7.2.1 Harmonic Current Distortion

The total harmonic distortion shall depend on the injected harmonic current and the system impedance at the Point of Delivery.

The Facility output shall have low current-distortion levels to ensure that no adverse effects are caused to other equipment connected to the CEB System. The electrical output at the Point of Delivery shall comply with IEEE Std. 519 and shall be used to define the acceptable distortion levels with the Facility connected to the CEB System. The key requirements are summarized in the following:

- (a) total harmonic current distortion (Total demand distortion, TDD) shall be less than 5% of the fundamental frequency current at rated current output.
- (b) each individual harmonic shall be limited to the percentages listed in table below. The limits in table below are a percentage of the fundamental frequency current at rated current output.
- (c) even harmonics in these ranges shall be <25% of the odd harmonic limits listed.

Table 1: Distortion limits as recommended in IEEE Std. 519

Odd Harmonic	Maximum Harmonic Current Distortion
3 rd -9 th	4.0%
11 th -15 th	2.0%
17 th -21 st	1.5%
23 rd -33 rd	0.6%
Above the 33 rd	0.3%

7.2.2 Harmonic Voltage Distortion

The Facility shall limit line-to-neutral voltage harmonics below 3% for individual Harmonic and 5% Total distortion (THD) as recommended in the IEEE Standard 519 at the Interconnection Boundary.

7.3 Voltage Fluctuation

The process of starting a Facility can sometimes cause step changes in voltage levels in the distribution network. These step changes are caused by inrush currents, which may occur when transformers or induction generators are energised from the network. Step voltage changes will also occur whenever a loaded generator is suddenly disconnected from the network due to faults or other occurrences.

Step voltage changes caused by the connection and disconnection of the Facility shall not exceed +/- 3% for infrequent planned switching events or outages and +/-6% of the nominal voltage of 22kV for unplanned outages such as faults.

7.4 Unbalanced currents and voltages

The weekly 95 percentile of Phase (Voltage) Unbalance, calculated in accordance with IEC61000-4-30 and IEC61000-3-13, shall be less than or equal to 1.3% unless abnormal conditions prevail.

7.5 Limitation of DC Injection

The Facility should not inject on CEB System a DC current greater than 0.25 % of the rated AC output current per phase.

Part 8.0: Reactive power capability

The Facility shall be designed to supply power (MW_{AC}) for power factors ranging between 0.9 lagging and 0.9 leading, measured at the Point of Delivery. The resulting Reactive Power requirement shall be available from 20% of the Maximum Capacity of the Facility at the Point of Delivery.

Part 9.0 Reactive Power and Voltage Control Functions

The Facility shall be equipped with reactive power control functions capable of controlling the reactive power supplied by the Facility at the Point of Delivery as well as voltage control function capable of controlling the voltage at the Point of Delivery via orders using set points and gradients.

The reactive power and voltage control functions shall be mutually exclusive, which means that only one of the 3 (three) functions mentioned below can be activated at a time:

- a) Voltage Control;
- b) Power Factor Control; and
- c) Reactive Power Control

The actual operating modes, as listed above, as well as the operating point shall be determined by CEB. The functional mode and set-point of the Facility shall not be changed unless instructed by CEB.

Part 10: Active Power Constraint Functions (Curtailment)

For system security reasons it may be necessary for the CEB to curtail the Facility Active Power output. The Facility shall thus be capable of:

1. operating at a reduced level if active power has been curtailed by CEB for system security reasons; and
2. receiving a telemetered MW curtailment set-point sent from CEB.

The Facility shall be equipped with constraint functions, i.e. supplementary active power control functions. Activation of the Active Power Constraint Functions shall be agreed with CEB.

The required constraint functions are as follows:

(a) Absolute production constraint

An Absolute Production Constraint is used to constrain the output active power from the Facility to a predefined power MW limit at the Interconnection Boundary measured at the Point of Delivery.

If the set point for the Absolute Production Constraint is to be changed, the Facility shall commence such change within two seconds and the change shall be completed no later than 30 seconds after receipt of an order to change the set point unless otherwise agreed with CEB.

The accuracy of the control performed and of the set point shall not deviate by more than $\pm 2\%$ of the set point value or by $\pm 0.5\%$ of the Maximum Capacity at the Point of Delivery, whichever yields the highest tolerance.

(b) Power gradient constraint.

The Facility control system shall be capable of controlling the ramp rate of its Active Power output with a maximum MW per minute ramp rate of [*Maximum capacity at the Point of Delivery*/ 5] MW.

These ramp rate settings shall be applicable for all ranges of operation including positive ramp rate during start up, positive ramp rate only during normal operation and negative ramp rate during controlled shut down. They shall not apply to frequency regulation.

Schedule F: Project Completion Schedule

1. Project Completion Schedule

1.1. Facility Owner shall comply with the requirements set forth in this Schedule F for each of the Project Milestones. Within 15 (fifteen) days of the date of each Project Milestone, Facility Owner shall notify CEB of such compliance along with necessary particulars thereof.

2. Project Milestone I

2.1. Facility Owner shall fulfill the Conditions Precedent specified in Clause 21.1 on or before 9 (nine) months from the date of execution of this Agreement.

3. Project Milestone II

3.1. Facility Owner shall achieve the Construction Start no later than 11 (eleven) months from the date of execution of this Agreement.

4. Project Milestone III

4.1. Facility Owner shall achieve Commercial Operation Date on or before 17 (seventeen) months from the date of execution of this Agreement.

Schedule G: Operating Procedures

Part 1: Key Personnel List

- 1.1** Facility Owner shall notify CEB of:
- 1.1.1** the identities of and contact details for the Plant Manager, who shall be responsible for general communications and contract management and the technical officer, who shall be responsible for technical and dispatching instructions and the maintenance of the Facility (“**Facility Owner Operator**”) at least 30 (thirty) days prior to the SCOD.
 - 1.1.2** any changes from time to time in the identities of and contact details for such persons.

Part 2: Communications

2.1 Day-to-Day Communication with Facility Owner

- 2.1.1.** Facility Owner must notify CEB the identity (name, telephone number, e-mail and fax number) of the Facility Owner Operator on duty at the Facility.
- 2.1.2.** Facility Owner may obtain the identity of the CEB technical officer on duty who shall be responsible for issuing dispatching instructions at the System Control Centre to Facility Owner (“**CEB Operator**”).
- 2.1.3.** Notifications of the identity of each Operator shall be made through the Electronic Messaging System (EMS) referred to in Paragraph 2.1 of Part 2 of this Schedule or, if the Electronic Messaging System is unavailable, by telephone or radio.
- 2.1.4.** If the Facility Owner Operator changes, Facility Owner shall notify CEB accordingly in accordance with Paragraph 1.1 and 2.1 of this Schedule. Any instruction or communication issued by an operator to the other operator shall identify the Operator issuing the communication.
- 2.1.5.** The daily communication shall be done through the EMS software. However, under any emergency conditions requiring an immediate action or response from either the Facility Owner Operator or the CEB Operator, then communication can be carried out through telephone. In cases the Electronic Messaging System is not operational; the communications shall be undertaken through telephone and mail.
- 2.1.6.** Notwithstanding the above and pursuant to Clause 2.1.5, any notice or other communication in connection with the operational matters

contemplated by this Agreement shall be in writing and shall also be given to:

Principal Engineer System Control

P.O. Box 40,

Royal Road

Curepipe, Mauritius

Phone: 601 1100

Fax: 675 7958

e-mail: [_____]

2.2 Operational Communications

- 2.2.1** Facility Owner shall install and maintain the Electronic Messaging System and other telephony and communication equipment as is specified in Paragraphs 2.1(d), 2.1 (f) and 3.1(e) of Schedule D which shall be used for all operational communications between Facility Owner and CEB.
- 2.2.2** Facility Owner shall provide standard voice, e-mail and facsimile communications through use of the public telecommunications system. Facility Owner shall promptly inform CEB by facsimile or e-mail if the standard voice, e-mail and facsimile communications is not operating at any time.
- 2.2.3** CEB shall maintain the telemetry equipment and the circuits from the Point of Delivery to the System Control Centre, as set out in Schedule D, which shall be used for all operational communications between CEB and Facility Owner.
- 2.2.4** All information exchange and instructions pursuant to the dispatch procedures and all other operational information exchange for instance relating to system coupling or decoupling and scheduled and unscheduled shutdowns shall be made using the telephony and communication equipment as per Section 2.1(f) of Schedule D. All communications by way of the telephony and communication equipment shall take place between the Facility and the System Control Centre in accordance with the provisions of Schedule D and this Schedule G.

2.2.5 All instructions and communications by way of the Electronic Messaging System or e-mail or facsimile shall be in English. If given by telephone or radio, instructions and communications shall be in English or French.

2.2.6 The costs of maintaining and operating the telephony and communication equipment and the Electronic Messaging System required to be obtained by Facility Owner pursuant to Paragraph 2.1 of this Schedule in the Facility shall be borne by Facility Owner.

Part 3: Dispatch Procedures

3.1 Introduction

The objective of these procedures is to:

3.1.1 enable CEB to issue Dispatch Instructions to Facility Owner to ensure (as far as possible) the reliability and integrity of the CEB System and the security and quality of supply to consumers; and

3.1.2 provide Facility Owner with sufficient certainty to enable Facility Owner to comply with its obligations under Section 10.4 in relation to Dispatch Instructions from CEB in accordance with the Guaranteed Operating Characteristics.

3.2 Facility Owner Weekly, Daily and half hourly forecast

3.2.1 Facility Owner shall submit in writing by facsimile or e-mail to CEB in respect of the Facility by 16:00 hours each Monday, the One Week Ahead Production Forecast in MW which will run from 00:00 hours on the next following Tuesday to 24:00 Hours on the following Monday. This schedule shall describe the availability of each Inverter installed in the Facility during the period specified and the production forecast at every interval of 30 minutes.

3.2.2 Facility Owner shall at 17:00 hours on the previous day, submit to CEB the One Day Ahead Production Forecast in MW of the Facility the following day for every interval of 30 minutes.

3.2.3 Facility Owner shall at every interval of 30 minutes, submit to CEB the Revised Forecast in MW of the Facility.

1.1 Dispatch

1.1.1 Dispatch Instructions

Dispatch Instructions:

- (a) shall be issued in respect of the Facility;
- (b) will be issued directly to the Facility Owner Operator in accordance with Paragraph 3.3.2 of this Part 3; and
- (c) subject to Paragraph 3.3.1(a) above of this Part 3, must be consistent with Facility Owner's Revised Forecast or the One Day Ahead Production Forecast or the One Week Ahead Production Forecast for the Facility and the Guaranteed Operating Characteristics.

1.1.2 Scope of Instructions

Dispatch Instructions may include:

- a) the power factor which will be maintained by the Facility at a set point given by CEB in accordance with the Guaranteed Operating Characteristics. Facility Owner may take such action as is reasonably necessary to maintain the integrity of the Facility or to avoid injury to personnel or damage to plant;
- b) a reference to any implications for future dispatch requirements and the security of the CEB System;
- c) an instruction to switch into or out of service the Facility or an Inverter Unit(s) installed in the Facility; and
- d) notice and changes in notice to synchronise the Facility to the CEB System;

1.1.3 Implementation of Dispatch Instructions by Facility Owner

- a) Subject to Paragraph 3.3.3 (b) of this Part 3, Facility Owner shall comply with each Dispatch Instruction properly given by CEB in accordance with the Dispatch Instruction.
- b) Subject to the exception set out below in this Paragraph 3.3.3(b) and in Paragraph 3.3.5 of this Part 3, Facility Owner shall only couple or decouple the Facility pursuant to a Dispatch Instruction of CEB, for a Planned Outage or where it occurs automatically as a result of inter-trip schemes or low frequency relay operations.

Decoupling may take place without CEB's prior agreement if it is done purely on safety grounds (relating to personnel or plant or apparatus), provided that Facility Owner notifies CEB as soon as reasonably practicable thereafter that such decoupling has taken place by the Electronic Messaging System (or, if the Electronic Messaging System is unavailable, by telephone or radio, such notification to be confirmed by facsimile as soon as reasonably practicable)

1.1.4 *Facility Changes*

- a) Facility Owner shall, without delay, notify CEB through the Electronic Messaging System (or, if the Electronic Messaging System is unavailable, by telephone or radio, such notification to be confirmed by facsimile or e-mail as soon as reasonably practicable) of any change or loss (temporary or otherwise) to the operational capability, including any changes to the Guaranteed Operating Characteristics, of the Facility, indicating the magnitude and the duration of the change.

1.1.5 *Actions required by Facility Owner in Response to Changes in Frequency*

- a) If the CEB System frequency falls below 47.0 Hz, the inverters shall be disconnected from the CEB System after 0.5 sec.
- b) If the CEB System frequency is above 52.0 Hz the inverters shall be disconnected from the CEB System after 0.5 sec.
- c) In the event of occurrence of circumstances specified in Paragraph 3.3.5 (b) of this Part 3, Facility Owner may take such action as is reasonably necessary to maintain the integrity of the Facility or to avoid injury to personnel or damage to plant.

1.2 **Start and Stop Criteria**

- a) During the PV farm start-up, the Facility Owner Operator shall ensure that the reactive drawl shall not affect the grid performance as per Paragraph 2.1(a) of Schedule D.
- b) Facility Owner Operator and/or Facility automatic system shall ensure that the start-up and stopping of the inverters comply with the voltage quality requirements.
- c) During startup and shutdown, the Facility shall comply with the ramp rate at the Point of Delivery set forth in Schedule E.

- d) The Facility Start up and disconnection procedures shall need to be described in a separate document to be prepared by the Independent Engineer, after consultation from both CEB and Facility Owner.

1.3 Reactive Power and Voltage Control

- a) The Reactive Power and Voltage Control of the Facility shall be in accordance with Schedule E.
- b) In line with Schedule E, the Facility shall be designed to supply power (MW) for power factors ranging between 0.9 lagging and 0.9 leading, available as from 20% form rated power, measured at the Point of Delivery. The Facility shall be equipped with reactive power control functions capable of controlling the reactive power supplied by the Facility at the POD as well as voltage control function capable of controlling the voltage at the POD via orders using set points and gradients. The reactive power and voltage control functions shall be mutually exclusive, which means that only one of the three functions mentioned below shall be activated at a time:

- (i) Voltage Control
- (ii) Power Factor Control
- (iii) Reactive Power Control

Initially the Facility shall operate the Reactive Power function in reactive power control mode with a set-point of 2MVar. Facility Owner shall not change the functional mode and set-point of the Facility unless instructed by CEB.

Part 4: Outage Scheduling

4. Required Disconnection

4.1 Requirements on Facility Owner to Effect Disconnection

- 4.1.1** Facility Owner shall open any electrical connection which it owns and operates between the Facility and the Interconnection Boundary if and when requested by CEB for any of the following reasons:
 - a) to facilitate maintenance or repair of any of CEB's plant, apparatus or assets to the extent such maintenance or repairs and the requested interruptions are necessary as determined by CEB in the exercise of its reasonable

engineering judgement provided that CEB diligently proceeds with the said repairs or maintenance;

- b) an Emergency exists on the CEB System which requires such open connection as determined solely by CEB in the exercise of its engineering judgement, and CEB diligently proceeds to correct or remedy the Emergency to such extent as is reasonable;
- c) inspection or testing of Facility Owner's generating equipment and/or plant and/or protective equipment reveals a hazardous condition, which requires the immediate opening of a connection as reasonably determined by CEB in the exercise of its engineering judgement;
- d) Facility Owner's plant, apparatus or assets are operating in a hazardous manner or operating such that they are materially interfering with the operation of the CEB System or are affecting CEB System integrity or security to the extent that the immediate opening of the connection is required, as determined by CEB in the reasonable exercise of its engineering judgement, to restore or maintain CEB System integrity or security;
- e) the Facility interfering with the operation of the CEB System or affecting CEB System integrity or security, as determined by CEB in its reasonable exercise of its engineering judgement and operating outside the Guaranteed Operating Characteristics set forth in Schedule E; or
- f) upon termination of this Agreement by either Party in accordance with Article 19, as the case may be.

4.1.2 In the circumstances specified in Paragraphs 4.1.1(c), 4.1.1(d) and 4.1.1 (e) of this Part 4, and provided that the conditions referred to therein are not caused by circumstances attributable to CEB or the CEB System, the Facility shall not be available for the purposes of this Agreement and Facility Owner shall declare the Reported Availability accordingly by issuing a Notice of Revised Availability. In the circumstances specified in Paragraphs 4.1.1(a) and 4.1.1(b) of this Part 4, Facility Owner shall declare the Reported Availability without regard to such circumstances by issuing a Notice of Revised Availability, provided that for the purposes of Paragraph 4.1.1(c) of this Part 4 and Clause **Error! Reference source not found.** only, Facility Owner's Reported Availability and the Facility Forecast shall be deemed to be 0 MW.

4.2 Notice of Disconnection to be given by CEB

While reasonable efforts will be made to provide as much prior notice as is practicable, CEB reserves the right to require opening of the electrical connection or to open the connection itself without prior notice for any reason specified in Paragraphs 4.1.1(b) to 4.1.1(e) of this Part 4 provided that CEB subsequently shows that it was reasonable to require or make such opening of the connection without prior notice. Where prior notice is not given, CEB will promptly notify Facility Owner of all openings of the electrical connections. All openings of electrical connections shall (unless otherwise required in emergency circumstances) be made in accordance with the Guaranteed Operating Characteristics of the Facility. CEB's compliance with or breach of the provisions of this Paragraph 4.2 shall be determined by reference to the circumstances known or which should reasonably have been known to CEB's dispatchers or other operating personnel in the System Control Centre acting in accordance with practices commonly adopted by CEB for private generators at the time an immediate disconnection was ordered.

4.3 Notice of Unscheduled Disconnections and Outages

Facility Owner shall likewise exercise all reasonable efforts to provide prior notice to CEB of all unscheduled openings of the interconnection with the CEB System and all unscheduled complete or partial outages of the Facility and, where prior notice is not given, shall promptly notify CEB of all such openings of the interconnection and all such partial or complete outages of the Facility. Once the cause requiring the opening of the electrical interconnection has been removed, then the Parties will co-operate promptly to close the electrical interconnection between the Facility and the Interconnection Boundary.

4.4 Requirements on CEB to Effect Disconnection

4.4.1 CEB shall open any electrical interconnection which it owns and operates between the CEB System and the Interconnection Boundary if and when requested by Facility Owner for any of the following reasons:

- a) to facilitate maintenance or repair of any of Facility Owner's plant, apparatus or assets to the extent such maintenance or repairs and the requested interruptions are necessary as determined by Facility Owner in the exercise of its reasonable

engineering judgement provided that Facility Owner diligently proceeds with the said repairs or maintenance; or

- b) an emergency exists at the Facility which requires such open interconnection as determined solely by Facility Owner in the exercise of its engineering judgement, and Facility Owner diligently proceeds to correct or remedy the emergency to such extent as is reasonable; or
- c) inspection or testing of the CEB System reveals a hazardous condition, which requires the immediate opening of an interconnection as reasonably determined by Facility Owner in the exercise of its engineering judgement;
- d) the Facility interfering with the operation of the CEB System or affecting CEB System integrity or security, as determined by CEB in the reasonable exercise of its engineering judgement and operating outside the Guaranteed Operating Characteristics set forth in Schedule E; or
- e) conditions on the CEB System are such that they are interfering with the operation of the Facility or are affecting system integrity or security to the extent that the immediate opening of the connection is required, as determined by Facility Owner in the reasonable exercise of its engineering judgement. Facility Owner's right to disconnect under the present sub-article is only allowed for situations where conditions at the POD are outside the Guaranteed Operating Characteristics.

4.4.2 In the circumstances specified in Paragraphs 4.4.1(a) and 4.4.1(b) of this Part 4, and provided that the conditions referred to therein are not caused by circumstances attributable to CEB or the CEB System, the Facility shall not be available for the purposes of this Agreement and Facility Owner shall declare the Reported Availability of the Facility accordingly by issuing a Notice of Revised Availability. In the circumstances specified in Paragraphs 4.4.1(c) to 4.4.1(e) of this Part 4, Facility Owner shall declare the Reported Availability without regard to such circumstances provided that for the purposes of Paragraph 4.4.1(b) of this Part 4 and Clause 24 only, Facility Owner's Reported Availability and the Facility Forecast shall be deemed to be 0 MW.

4.5 Notice of Disconnection to be Given by Facility Owner

While reasonable efforts will be made to provide as much prior notice as is practicable, Facility Owner reserves the right to require opening of any electrical interconnection or to open the interconnection itself without prior notice for any reason specified in Paragraphs 4.4.1(b) to 4.4.1(e) of this Part 4 provided that Facility Owner subsequently

shows that it was reasonable to require or make such opening of the interconnection without prior notice. Where prior notice is not given, Facility Owner shall promptly notify CEB of all openings of the electrical interconnections. Facility Owner's compliance with or breach of the provisions of this Paragraph 4.5 shall be determined by reference to the circumstances and operating records that led to disconnection.

Part 5: Clearing and Switching Procedures

Facility Owner shall ensure that its employees and contractors comply with the prevailing safety procedures (including in relation to clearing, switching, isolation, testing, earthing and work permits) of CEB, applicable to the CEB System and CEB's substations, premises, facilities and other equipment as may be notified to Facility Owner by CEB from time to time.

Part 6: Measurement and Reporting

6. Operating Records

6.1 Each Party shall keep complete and accurate Operating Records and all other data necessary for the purposes of the proper administration of this Agreement, including such records as may be required by local or public sector entities or national regulatory authorities.

6.2 Facility Owner shall maintain:

6.2.1 an accurate and up-to-date operating log, in electronic format, at the Facility with records of real and reactive power production for 15 (fifteen) minutes interval of each unit; and total Energy generated and exported by the Facility for every 15 (fifteen) minutes interval; change in operating status and any unusual conditions found during inspections;

6.2.2 Accurate and up-to-date logs of dispatched and scheduled energy; and

6.2.3 Hourly metering information.

6.3 Commencing on each Month following the Month in which Commercial Operation Date occurs, by the 10th Day of each Month, Facility Owner shall submit to CEB, in electronic format, a copy of the Operating Records for the previous Month.

6.4 All Operating Records shall be maintained by Facility Owner with back-up copies made in accordance with Good Utility Practice.

Part 7: Operation in Emergencies

1. CEB may issue a Dispatch Instruction during an Emergency. Each Dispatch Instruction shall state that an Emergency is anticipated or subsists at the time of its issue.
2. Except in case of immediate danger for its Facility or its Personnel, Facility Owner shall comply with any Dispatch Instruction issued during an Emergency.
3. As far as possible, Facility Owner shall inform CEB prior to emergency disconnection.

Part 8: Curtail Instruction

Curtail instructions shall be issued by CEB to Facility Owner, in accordance with the Guaranteed Operating Characteristics set forth in Schedule E, to ensure security of the CEB System and shall include the following instructions:

1. The CEB Operator shall send a formal request through the Electronic Messaging System to the Facility Owner Operator for a curtailment instruction. The curtailment instruction shall include the reason why curtailment is being requested, the duration of the curtailment period and the set points of the active and reactive power (or power factor) to be kept during the period of curtailment.
2. The Facility Owner Operator shall forthwith acknowledge the formal request of CEB and confirm the curtailment instructions.
3. In the event that Facility Owner does not comply with the Curtailment Instruction within 30 (thirty) seconds of the issued of such instruction, the CEB Operator shall disconnect the operation of the Facility at the Point of Delivery.
4. When the Curtailment Instruction shall have cease, the CEB Operator shall send a message through the EMS to the Facility and specify the stop of the curtailment instruction. The Facility Owner Operator shall acknowledge the stop of the Curtailment Instruction on the EMS. The Facility Owner Operator shall then take necessary actions to remove the curtailment from the Facility.

Part 9: Modifications

This Schedule may be amended or supplemented according to Clause 10.4 of this Agreement.

Part 10: Data Storage

Facility Owner shall keep records of the operating records as specified in Clause 6 of this Agreement.

Schedule H: Testing and Commissioning of Facility

Part 1: Introduction

Upon submission of a copy of the manufacturer's testing and commissioning procedures, the Independent Engineer shall propose and finalize appropriate testing and pre-commissioning procedures and plans as per applicable standards for the Facility with CEB and Facility Owner at least 3 (three) months prior to the Scheduled Commercial Operation Date of the Facility .

All tests of the Facility shall be performed by Facility Owner under the supervision of an Independent Engineer and CEB. The Independent Engineer, as the case may be, shall certify the test and results and confirm that the installation is compliant to the requirements of this ESPA.

Part 2: Pre-commissioning Tests

The Pre-commissioning Tests shall include, inter alia, the following:

1. Earthing continuity of array frame to earth and connection to main earthing terminal;
2. Polarity of each module string;
3. PV string Open-circuit voltage (V_{oc}) Test;
4. PV Short-circuit current (I_{sc}) Test;
5. PV array insulation Test;
6. Operational Test-PV string current;
7. Functional Test;
8. Insulation resistance testing; and
9. Performance verifications

Part 3: Commissioning Tests

Commissioning Tests are required in order to demonstrate that the electrical system is safe and ready for operation. The Commissioning Tests shall be performed based on the manufacturer's standard commissioning procedures, as mentioned in the manufacturer's commission checklist of the Facility. The Commissioning Tests for the electrical system shall include the following:

- (i) Demonstration of satisfactory operation of power and weather measurement equipment;
- (ii) Function tests of the relay protection and verification of settings;
- (iii) Demonstration of satisfactory operation of control equipment;
- (iv) Demonstration of satisfactory operation of 22 kV the internal electrical network of the Facility;
- (v) Demonstration of satisfactory operation of the Step-Up Transformer and its associated protections
- (vi) 24 hours voltage test on the cables;

- (vii) Reactive Power Capability;
- (viii) Power Quality Test as per IEC 61400-21;
- (ix) Anti-islanding Protection test;
- (x) Ramp Rate (Start-up and Shut-down) test
- (xi) Demonstration of satisfactory operation of power limiters for ensuring maximum export capacity of XX MW_{ac} at POD and
- (xii) any other test found deemed necessary by the Independent Engineer.

Part 4: Power Quality

Facility Owner shall perform Power Quality Test to confirm compliance of the requirements and recommendations contained in the standards specified in Schedules C, D and E and in any other applicable international standards. The tests and results of power quality shall be certified by the Independent Engineer or accredited testing institute.

Part 5: Interconnection Facility

An Electrical Engineer, registered with the Council of Registered Professional Engineer of Mauritius, shall be appointed by Facility Owner for witnessing and approving the installation, testing and commissioning of the Interconnection Facility, at the Facility.

Schedule I: Insurance Coverage

Part 1: Construction Insurance

Type of Insurance	Minimum Limits of Coverage
Contractors All Risks	<p>Cover: The contract works executed and in the course of execution, materials and temporary works while on the Site, against physical loss or damage.</p> <p>Sum Insured: [.....] MUR</p> <p>Insured: Facility Owner, CEB Representatives, The Finance Parties and Facility Owner's Contractors</p>
Third Party Liability	<p>Cover: Against legal liability to third parties for bodily injury or damage arising from construction, testing and commissioning of the Facility.</p> <p>Sum Insured: For any one occurrence and any one period of occurrence [.....] MUR</p> <p>Insured: Facility Owner, CEB Representatives, The Finance Parties and Facility Owner's Contractors</p>
Miscellaneous	Other Insurance required to comply with the Laws including Third Party Motor Insurances, Employer's Liability (cover to include any liability under civil law)

Part 2: Operational Insurance

Type of Insurance	Minimum Limits of Coverage
Fire & Allied Perils	<p>Cover: All buildings, contents, machinery, equipment, stock, fixtures, fittings and all other personal property forming part of the Project against “all risks” of physical loss or damage.</p> <p>Sum Insured: [.....] MUR</p> <p>Insured: Facility Owner, CEB Representatives and Facility Owner’s Contractors</p>
Public Liability	<p>Cover: Against legal liability to third parties for bodily injury/property damage arising from ownership, maintenance and operation of the Facility.</p> <p>Sum Insured: [.....] MUR</p> <p>Insured: Facility Owner, CEB Representatives and Facility Owner’s Contractors</p>
Machinery Breakdown	<p>Cover: All machinery, plant, and ancillary equipment forming part of the Project against sudden and unforeseen physical loss or damage arising from mechanical and electrical breakdown or derangement, explosion or collapse of pressure vessels.</p> <p>Sum Insured: [.....] MUR</p> <p>Insured: Facility Owner, CEB Representatives and Facility Owner’s Contractors</p>
Miscellaneous	<p>Other Insurance required to comply with the Laws including Third Party Motor Insurances, Employer’s Liability (cover to include any liability under civil law)</p>

Schedule J: Examples of Calculation of Forecasting Penalties

Example 1

Revised Forecast for 11 hrs	10.0	MW _{ac}
Metered output for 11 hrs	9.5	MW _{ac}
Forecast Tolerance	10 +/- 10%	MW _{ac}
	9.0 – 11.0	MW _{ac}

Since the metered output of the Facility is within the Forecast Tolerance, no penalty shall be applicable.

Example 2

Revised Forecast for 09 hrs	8.0	MW _{ac}
Metered output for 09 hrs	6.0	MW _{ac}
Forecast Tolerance	8 +/- 10%	MW _{ac}
	7.2 – 8.8	MW _{ac}

Since the metered output of the Facility is outside the Forecast Tolerance, the Forecasting Penalty shall be calculated as follows:

$$P_A = 0.15 \times \left(\frac{30}{60}\right) \times [(7.2 - 6.0)] \times 1000]$$

Example 3

Revised Forecast for 14hrs	5.0	MW _{ac}
Metered output for 14hrs	6.2	MW _{ac}
Forecast Tolerance	5 +/- 10%	MW _{ac}
	4.5-5.5	MW _{ac}

Since the metered output of the Facility is outside the Forecast Tolerance, the Forecasting Penalty shall be calculated as follows:

$$P_A = 0.15 \times \left(\frac{30}{60}\right) \times [(6.2 - 5.5)] \times 1000]$$

Schedule K: Metering

1.1. Metering

1.1.1. CEB shall install a main electric metering device (“**CEB Main Meter**”) and a back-up electric metering device (“**CEB Back-up Meter**”) and the **Production Meter** (as applicable).

1.1.2. The CEB Meters shall be:

- (a) installed at the Point of Delivery on or before the Scheduled Commercial Operation Date, owned, operated and maintained by CEB;
- (b) used to measure the electrical energy delivered to CEB by Facility Owner and Import Energy made available to Facility Owner by CEB at the Point of Delivery;
- (c) secured in a locked enclosure; and
- (d) sealed and only CEB shall break the seal when such CEB Meter is to be inspected and tested or adjusted in accordance with Clauses 1.1.4 and 1.2.

1.1.3. Facility Owner may install on or before the Scheduled Commercial Operation Date, own and maintain, at its own expense, backup electric metering device (“**Facility Owner Back-Up Meter**”) in addition to the CEB Meters, which installation and maintenance shall be performed in a manner reasonably acceptable to CEB. The Facility Owner Back-Up Meter, if installed, shall be capable of recording both the export of electrical energy from the Facility and the import of electrical energy by the Point of Delivery. Facility Owner’s metering system shall be totally separate from the CEB Meters.

1.1.4. CEB, at its own expense, shall check the correctness of each CEB Meter by performing a load test not later than the earlier of the following:

- (a) 30 (thirty) Days after the CEB Meters are installed by CEB; or
- (b) the Day before the date of first delivery at the Point of Delivery of any Net Energy from the Facility.

CEB, at its own expense, shall inspect each the CEB Meter upon installation and at least once every year thereafter. CEB shall check the certification of the CEB Meters through an accuracy test at least once every 4 (four) years thereafter or at any time the readings of Net Energy from the CEB Meter and the Facility Owner Back-up Meter (if applicable) differ by an amount greater than 0.5% (one-half of one per cent) in accordance with the procedures mutually agreed by the Parties thereafter. CEB shall provide to Facility Owner with reasonable advance notice of, and permit representatives of Facility Owner to witness and verify, such inspections and tests,

provided, however, that Facility Owner shall not unreasonably interfere with or disrupt the activities of CEB and shall comply with all of CEB's safety standards.

1.1.5. Facility Owner, at its own expense, shall inspect the Facility Owner Back-Up Meter (if applicable) upon installation and at least once every year thereafter. Facility Owner shall check the certification of the Facility Owner Back-up Meter (if applicable) through an accuracy test at least once every 4 (four) years, or at any time the readings of Net Energy from the Facility Owner Back-up Meter (if applicable) and the CEB Meters differ by an amount greater than 0.5% (one half of one percent) in accordance with the procedures mutually agreed by the Parties. The Facility Owner Back-up Meter (if applicable) shall be sealed in the presence of CEB and Facility Owner and only CEB shall break the seal when the Facility Owner Back-up Meter (if applicable) is to be inspected, tested or calibrated or recalibrated in accordance with this Clause 1.1.5 and Clause 1.2.1.

1.2. Inspection and Calibration

1.2.1. If a CEB Meter or the Facility Owner Back-up Meter (if applicable) is found to be defective or inaccurate, it shall be promptly adjusted, repaired, replaced, and/or recalibrated as near as practicable to a condition of zero error by CEB or Facility Owner, respectively, at its own expense. If the Facility Owner believes that either the CEB Meter is inaccurate it shall inform CEB accordingly, requesting that the relevant CEB Meter's accuracy be tested, and CEB shall test the relevant CEB Meter within a reasonable time in the presence of Facility Owner's representative. Facility Owner shall bear the cost of such test requested if the relevant CEB Meter is not found to be defective on testing.

1.2.2. If a CEB Main Meter fails to register or if the measurement made by a CEB Main Meter is found upon testing to be inaccurate by more than 0.5% (one half of one per cent), an adjustment shall be made correcting all measurements by the inaccurate or defective CEB Main Meter for both the amount of the inaccuracy and the period of the inaccuracy, in the manner set forth in Clauses 1.3 and 1.4.

1.3. Procedure in the Event of Defective Meter

1.3.1. In the event that the CEB Main Meter is found to be defective or inaccurate by more than 0.5% (one half of one percent) with respect to the Facility Owner Back-up Meter (if applicable) the Parties shall use the CEB Back-Up Meter for the purpose of the Agreement as from the later of:

- (a) the date on which the Parties accepted the meter readings; and
- (b) the date on which the Party were informed of the inaccuracy in writing,

up to the point when the CEB Main Meter has been removed, tested, replaced (if found to be inaccurate), reinstalled and functioning properly at the Point of Delivery provided that the CEB Back-up Meter has been tested or maintained in accordance with the provisions of Clause 1 of this Schedule, failing which resort shall be made to Clause 1.3.2 or Clause 1.3.3, as the case may be.

1.3.2. In the event that the CEB Main Meter and the CEB Back-up Meter are both found to be defective or inaccurate by more than 0.5% (one half of one per cent) with respect to the Facility Owner Back-Up Meter (if applicable), the Parties shall use the Facility Owner Back-Up Meter (if applicable) for the purpose of this Agreement as from the later of:

(a) the date on which the Parties accepted the meter readings; and

(b) the date on which the Party were informed of the inaccuracy in writing,

up to the point when the CEB Main Meter and CEB Back-up Meter have been removed, tested, replaced (if found to be inaccurate), reinstalled and functioning properly at the Point of Delivery, provided that the Facility Owner Back-up Meter (if applicable) has been tested or maintained in accordance with the provisions of Clause 1 of this Schedule, failing which resort shall be made to Clause 1.3.3.

1.3.3. In the event that the CEB Main Meter, the CEB Back-up Meter and the Facility Owner Back-Up Meter (if applicable) are found to be defective or inaccurate by more than 0.5%(one half of one per cent), or have not been tested or maintained in accordance with Clause 1, CEB shall install a temporary CEB Meter at the Point of Delivery for the purpose of this Agreement. The temporary CEB Meter shall be used for the purpose of this Agreement as from the later of:

(a) the date on which the Parties accepted the meter readings; and

(b) the date on which the Party were informed of the inaccuracy in writing,

up to the point when the CEB Main Meter, the CEB Back-up Meter and the Facility Owner Back Meter (if applicable) have been removed, tested, replaced (if found to be inaccurate), reinstalled and functioning properly at the Point of Delivery.

1.4. In the event that the Parties cannot agree pursuant to Clause 1.3 on the actual period during which the inaccurate measurements were made, the period during which the measurements are to be adjusted shall be the shorter of:

(a) the previous date on which CEB and Facility Owner accepted the meter readings to the test that found the CEB Meters and the Facility Owner Back-up Meter (if applicable) to be defective or inaccurate;

(b) the last half of the period from the last previous test of the CEB Main Meter to the test that found the CEB Main Meter to be defective or inaccurate; and

(c) the 90 (ninety)-Day period immediately preceding the test that found the CEB Main

Meter to be defective or inaccurate.

1.5. To the extent that the adjustment period covers a period of deliveries, CEB shall use the corrected measurements as determined in accordance with Clause 1.3 to re-compute the amount due for the period of the inaccuracy and CEB shall subtract this difference from previous months pertaining for this period from such recomputed amount. If the difference between the recomputed value and the value agreed previously is a:

- (a) positive number, the difference shall be paid by CEB to Facility Owner; and
- (b) negative number, the difference shall be paid by Facility Owner to CEB (ignoring the negative value).

1.6. The Parties acknowledge that the CEB Meters and the Facility Owner Back-up Meter (if applicable) shall be configured to measure output at 5 (five) minute intervals at the Point of Delivery, by reference to the average output of the Facility over the preceding 30 (thirty) minutes. The CEB Meters and the Facility Owner Back-up Meter (if applicable) internal clocks shall be synchronised with the GPS clock at least once every month or at any time the readings of the clock of each Meter differ by an amount greater than 1 (one) minute with the GPS time.