বাংলাদেশ পল্লী বিদ্যুতায়ন বোর্ড
BANGLADEASH RURAL ELECTRIFICATION BOARD

ISO 9001,ISO 14001
& ISO 45001
Certified

Office of the Project Director
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Training Academy Building (6th Floor)
Nikunja-2, Khilkhet, Dhaka-1229.
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E-mail:pdmcepdmd@gmail.com

Memo No. 27.12.0000.224.11.031.24. 662

Date: 14 .06.2026

ADDENDA-II
TO THE TENDER DOCUMENT

Ref. Memo No: 27.12.0000.224.11.031.24.573; Date: 19.04.2026
Tender Package No.: MCEP/BREB/ DMD-W-392 under "Modernization and Capacity Enhancement of BREB Network (Dhaka- Mymensingh Division) (1st Revised)" Project.

<table>
<tr><th>SL No</th><th>Tender Document Reference</th><th>Existing Entries</th><th>Amendment - 2</th></tr>
<tr><td>01</td><td>Section 2. TDS: ITT 57. Price Comparison (Page 60)</td><td>(Amendment – 1)
Here,
<table><tr><th>Symbol</th><th>Definition</th></tr><tr><td>C_{capex}</td><td>Total EPC turnkey price</td></tr><tr><td>OM_toffered by the bidder</td><td>Annual operation & maintenance cost in year t; Provided by the bidder</td></tr><tr><td>R_t</td><td>Replacement cost in year t = 0</td></tr><tr><td>E_t</td><td>Usable energy delivered in year t= Nominal MWh × availability × efficiency × retention(t) × cycles × DoD; as per the manufacturer's values with 3rd party verification; Table Provided by the bidder</td></tr><tr><td>N</td><td>Evaluation lifetime; 15 years</td></tr><tr><td>r</td><td>Discount rate for evaluation; 10 %</td></tr></table>Bidders are to fill the table below as per the manufacturer's values with 3rd party verification:</td><td>Here,<table><tr><th>Symbol</th><th>Definition</th></tr><tr><td>C_{capex}</td><td>Total EPC turnkey price</td></tr><tr><td>OM_toffered by the bidder</td><td>Annual operation & maintenance cost in year t; Provided by the bidder</td></tr><tr><td>R_t</td><td>Replacement cost in year t; = 0</td></tr><tr><td>E_t</td><td>Usable energy delivered in year t= Nominal MWh × availability × efficiency × retention(t) × cycles × DoD; as per the manufacturer's values with 3rd party verification; Table Provided by the bidder</td></tr><tr><td>N</td><td>Evaluation lifetime; 12 years</td></tr><tr><td>r</td><td>Discount rate for evaluation; 10 %</td></tr></table>Bidders are to fill the table below as per the manufacturer's values with 3rd party verification:</td></tr>
</table>

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<tr><td></td><td></td><td>
<table>
<tr><td>Year</td><td>E_t: Usable Energy Delivered per year (kWh) considering 1 cycle per day</td><td colspan="2">Total price (USD)</td></tr>
<tr><td>0</td><td>0</td><td>CAPEX as per schedule 5 total price</td><td></td></tr>
<tr><td>1</td><td>Energy year 1</td><td></td><td></td></tr>
<tr><td>2</td><td>Energy year 2</td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td>.....</td><td></td><td></td><td></td></tr>
<tr><td>12</td><td>Energy year 12</td><td></td><td></td></tr>
</table>
</td><td>
<table>
<tr><td>Year</td><td>E_t: Usable Energy Delivered per year (kWh) considering 1 cycle per day</td><td colspan="2">Total price (USD)</td></tr>
<tr><td>0</td><td>0</td><td>CAPEX as per schedule 5 total price</td><td></td></tr>
<tr><td>1</td><td>Energy year 1 (≥10 MWh)</td><td></td><td></td></tr>
<tr><td>2</td><td>Energy year 2 (≥10 MWh)</td><td></td><td></td></tr>
<tr><td>3</td><td>Energy year 3 (≥10 MWh)</td><td></td><td></td></tr>
<tr><td>4</td><td>Energy year 4 (≥10 MWh)</td><td></td><td></td></tr>
<tr><td>5</td><td>Energy year 5 (≥10 MWh)</td><td></td><td></td></tr>
<tr><td>6</td><td>Energy year 6</td><td></td><td></td></tr>
<tr><td>7</td><td>Energy year 7</td><td></td><td></td></tr>
<tr><td>8</td><td>Energy year 8</td><td></td><td></td></tr>
<tr><td>9</td><td>Energy year 9</td><td></td><td></td></tr>
<tr><td>10</td><td>Energy year 10</td><td></td><td></td></tr>
<tr><td>11</td><td>Energy year 11</td><td></td><td></td></tr>
<tr><td>12</td><td>Energy year 12</td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>02</td><td>Section 4. Particular Conditions of Contract.
GCC Clause: GCC 68.1

(Page 134)</td><td>(Amendment – 1)

Applicable rate for Liquidated Damages and Limitation of Liability (LD):

The amount of liquidated damages or in other words Delay due to Damages for the uncompleted works or any part thereof is 0.075 of one (1%) percent of its contract price per day of delay.

The above rate applies to the price of the part of the Facilities, as quoted in the Price Schedule, for that part for which the Contractor fails to achieve Completion within the particular Time for Completion.

-The maximum deduction for Liquidated Damages: 10% (ten percent) of the final Contract Price of the whole of the Works.</td><td>Applicable rate for Liquidated Damages and Limitation of Liability (LD):

The amount of liquidated damages or in other words Delay due to Damages for the uncompleted works or any part thereof is 0.075 of one (1%) percent of its contract price per day of delay.

The above rate applies to the price of the part of the Facilities, as quoted in the Price Schedule, for that part for which the Contractor fails to achieve Completion within the particular Time for Completion.

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<table>
<tr><th>SL No</th><th>Tender Document Reference</th><th>Existing Entries</th><th>Amendment - 2</th></tr>
<tr><td></td><td></td><td><u>Performance Liquidated Damages:</u>
For energy/efficiency shortfall: LD = (Shortfall % /100) × Contract Price × 0.5 (per % shortfall)
For availability shortfall: LD = 0.1% of Contract Price per 0.1% availability shortfall.</td><td><u>Performance Liquidated Damages:</u>
For energy/efficiency shortfall: LD = (Shortfall % /100) × Contract Price × 0.5 (per % shortfall)
For availability shortfall: LD = 0.1% of Contract Price per 0.1% availability shortfall.
<u>Liquidated Damages for Functional Guarantees</u>
The following Liquidated Damages shall apply for failure to meet the functional guarantees
LD Calculation:
<table>
<tr><th>Parameter</th><th>Shortfall</th><th>Liquidated Damages</th></tr>
<tr><td>Active Power Capacity (MW)</td><td>Below 5 MW.</td><td>For each 0.1 MW below, pay BREB tariff /kWh x 100 kW x 365 days x 12 years or the number of years from which the active capacity falls below 5 MW based on the datasheets of the BESS</td></tr>
<tr><td>Usable Energy Capacity (MWh)</td><td>Below the energy capacity indicated in the product datasheet of the manufacture (≥10 MWh during DLP/warranty period).</td><td>For each 0.1 MWh below, pay BREB tariff /kWh x 100 kWh x 12 years or the number of years from which the active capacity falls below 10 MWh based on the datasheets of the BESS</td></tr>
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Bangladesh Rural Electrification Board ★ MCEP (DMD) Project ★

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<tr><td></td><td></td><td></td><td colspan="3">
<table>
<tr><td>State of Health (SOH)</td><td>The baseline of Commercial operation Date (COD) shall be defined at 96%</td><td>For each 0.1% below, pay BREB tariff /kWh x 10 kWh x 12 years or the number of years from which the active capacity falls below the minimum level based on the datasheets of the BESS.
N.B. “Bidders will provide SOH Matrix & Curve from the manufacturer (1-12 years)”</td></tr>
<tr><td>Round Trip Efficiency (RTE)</td><td>Below 82%</td><td>For each 0.1% below, pay BREB tariff /kWh x 10 kWh x 12 years or the number of years from which the active capacity falls below the minimum level based on the datasheets of the BESS</td></tr>
<tr><td>System Availability (Annual)</td><td>Below 98%</td><td>This is covered by the performance security and GCC 63.</td></tr>
</table>
Overall Cap:
The total cumulative Liquidated Damages payable by the Contractor for failure to meet the functional guarantees at End of Life shall not exceed 10% (ten percent) of the total contract price.
</td></tr>
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Bangladesh ★ MCEP (DMD) Project ★ Rural Electrification Board

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<tr><td>03</td><td>Section 4.
Particular Conditions of Contract.
Appendices
Appendix 8
Functional Guarantees

(Page 150)</td><td>(Amendment –1)
4.3 Minimum Levels
Notwithstanding the provisions of this paragraph, if as a result of the guarantee test(s), the following minimum levels of performance guarantees (and consumption guarantees) are not attained by the Contractor, the Contractor shall at its own cost make good any deficiencies until the Facilities reach any of such minimum performance levels, pursuant to GCC Sub-Clause 46.2:

(a) production capacity of the Facilities attained in the guarantee test: ninety-five percent (95%) of the guaranteed production capacity
and/or
average total cost of consumption of all the raw materials and utilities of the Facilities: one hundred and five percent (105%) of the guaranteed figures.</td><td>4.3 Minimum Levels
Notwithstanding the provisions of this paragraph, if as a result of the guarantee test(s), the following minimum levels of performance guarantees (and consumption guarantees) are not attained by the Contractor, the Contractor shall at its own cost make good any deficiencies until the Facilities reach any of such minimum performance levels, pursuant to GCC Sub-Clause 46.2:

(a) production capacity of the Facilities attained in the guarantee test: ninety-five percent (95%) of the guaranteed production capacity
and/or
average total cost of consumption of all the raw materials and utilities of the Facilities: one hundred and five percent (105%) of the guaranteed figures.
(b) <u>Liquidated Damages for Functional Guarantees</u>
<u>The following Liquidated Damages shall apply for failure to meet the functional guarantees</u>
LD Calculation:
<table>
<tr><th>Parameter</th><th>Shortfall</th><th>Liquidated Damages</th></tr>
<tr><td>Active Power Capacity (MW)</td><td>Below 5 MW.</td><td>For each 0,1 MW below, pay BREB tariff /kWh x 100 kW x 365 days x 12 years or the number of years from which the active capacity falls below 5 MW based on the datasheets of the BESS</td></tr>
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<tr><td></td><td></td><td></td><td colspan="3">
<table>
<tr><td>State of Health (SOH)</td><td>The baseline of COD shall be defined at 96%</td><td>For each 0.1% below, pay BREB tariff /kWh x 10 kWh x 12 years or the number of years from which the active capacity falls below the minimum level based on the datasheets of the BESS.

N.B. “Bidders will provide SOH Matrix & Curve from the manufacturer (1-12 years)”</td></tr>
<tr><td>Round Trip Efficiency (RTE)</td><td>Below 82%</td><td>For each 0.1% below, pay BREB tariff /kWh x 10 kWh x 12 years or the number of years from which the active capacity falls below the minimum level based on the datasheets of the BESS</td></tr>
<tr><td>System Availability (Annual)</td><td>Below 98%</td><td>This is covered by the performance security and GCC 63.</td></tr>
</table>
Overall Cap:
The total cumulative Liquidated Damages payable by the Contractor for failure to meet the functional guarantees at End of Life shall not exceed 10% (ten percent) of the total contract price.
</td></tr>
<tr><td>04</td><td>6.2.9 Detailed Technical Specifications
Clause 1.19 Cycle Time
(Page 286)
Also refer:
6.2.13 Technical Requirement and Guarantee Schedule
Clause 1.19 Cycle Time (Page 327)</td><td>(Ammendment-1)

1.19 Cycle Time
The Battery System shall guarantee ≥70% capacity retention after 12 years of operation OR ≥8760 equivalent full cycles at 80% DoD (1 cycle per day for 12 years), whichever comes first.</td><td colspan="3">1.19 Cycle Time
The Battery System shall guarantee ≥70% capacity retention after 12 years of operation, measured against the initial commissioned capacity (in MWh at the time of commissioning) OR ≥8760 equivalent full cycles at 80% DoD (1 cycle per day for 12 years), whichever comes first.
The functional guarantee should be maintained in the DLP period as per mentioned in the Tender Document.</td></tr>
</table>

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SL No	Tender Document Reference	Existing Entries	Amendment - 2
05	6.2.9 Detailed Technical Specifications Clause 1.8 Working Voltage Range (per Cell) (Page 285) and Clause 1.17 (Page 286) Also refer: 6.2.13 Technical Requirement and Guarantee Schedule Clause 1.8 (Page 326) and Clause 1.17 (Page 327)	1.8 Working Voltage Range (per Cell) Operating range: 3 – 3.65 V (per OEM confirmation). Absolute cut-off: 2.0 – 3.65 V.	1.8 Working Voltage Range (per Cell) Operating range: 2.5 – 3.65 V (per OEM confirmation). Absolute cut-off: 2.0 – 3.65 V. **Note:** This amendment supersedes Clause 1.8 (Page 287/328) and aligns with Clause 1.17 (Page 287/329). The discrepancy between the two entries is hereby resolved. The revised Working Voltage Range (2.5 – 3.65 V) shall apply uniformly in both the Technical Specifications (Section 6.2.9) and the Technical Requirement and Guarantee Schedule (Section 6.2.13).
06	6.2.9 Detailed Technical Specifications Clause 1.11 Total No. of Cell (Page 285) Also refer: 6.2.13 Technical Requirement and Guarantee Schedule Clause 1.11 Total No. of Cell (Page 327)	1.11 Total No. of Cell **≥11,520**	1.11 Total No. of Cell **To be mentioned**
07	6.2.13 Technical Requirement and Guarantee Schedule Battery Container Clause 4.2 Rated Capacity (Page 331)	4.2 Rated Capacity 2x5 MWh **(End of life** must be ≥2x5 MWh)	4.2 Rated Capacity **2x5 MWh**

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<tr><th>SL No</th><th>Tender Document Reference</th><th>Existing Entries</th><th>Amendment - 2</th></tr>
<tr><td>08</td><td>6.2.13 Technical Requirement and Guarantee Schedule: Battery Container Clause 4.3 Rated Power(Page 331)</td><td>4.3 Rated Power
2x2.5 MW (End of life must be ≥2x2.5 MW)</td><td>4.3 Rated Power
2x2.5 MW</td></tr>
<tr><td>09</td><td>6.2.13 Technical Requirement and Guarantee Schedule
Battery Container Clause 4.7 Outdoor Rated (IP Degree) (Page 331)</td><td>4.7 Outdoor Rated (IP Degree)
IP65 or better</td><td>4.7 Outdoor Rated (IP Degree)
The IP class for the Battery Container shall be minimum of IP55 or above.

N.B For inside components, IP Class shall be of IP65 rating as per 4.6(Page No.331)</td></tr>
<tr><td>10</td><td>6.2.9 Detailed Technical Specifications
Clause 1.7 End-of-Discharge Voltage / Cut-off Discharge Voltage
(Page 285)</td><td>1.7 End-of-Discharge Voltage / Cut-off Discharge Voltage
≥3.0 V</td><td>1.7 End-of-Discharge Voltage / Cut-off Discharge Voltage
≥2.5 V</td></tr>
<tr><td>11</td><td>Schedule of Rates and Prices (Schedule -1 (Page 173)& Schedule -2(Page 181)
2. Power Conversion System (PCS) Container, integrated with Medium Voltage (11kV) System</td><td><table><tr><td>2.2</td><td>Supply of Power Conversion System (PCS)-Bidirectional Power Conversion System. Grid-forming mode.</td><td>set</td><td>1x4</td></tr></table></td><td><table><tr><td>2.2</td><td>Supply of Power Conversion System (PCS)-Bidirectional Power Conversion System. Grid-forming mode. Types of BESS to be centralized or String PCS, details Engineering design to be provided by Tenderer.</td><td>set</td><td>1x4</td></tr></table></td></tr>
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SL No	Tender Document Reference	Existing Entries	Amendment - 2
12	6.2 Technical Specification 6.2.1.5 PCS (Page – 259) 6.2.2 Energy Management System (EMS) (Page – 263)	6.2.1.5 PCS The PCS shall be capable of fast response, including: • Quick switching between charging and discharging modes (<50 ms), • Black start operation to supply power during mains failure, • Maintaining stable voltage and frequency in off-grid operation via VF mode. 6.2.2 Energy Management System Performance: • Data sampling rate ≥ 1 Hz. • Control response time < 50 ms. • Event logging accuracy ≤ 2 ms (SOE). • System uptime ≥ 99.99%. • Data retention ≥ 5 years, with local and cloud backup.	6.2.1.5 PCS The PCS shall be capable of fast response, including: • Quick switching between charging and discharging modes (<200 ms), • Black start operation to supply power during mains failure, • Maintaining stable voltage and frequency in off-grid operation via VF mode. 6.2.2 Energy Management System Performance: • Data sampling rate ≥ 1 Hz. • Control response time < 200 ms. • Event logging accuracy ≤ 2 ms (SOE). • System uptime ≥ 99.99%. • Data retention ≥ 5 years, with local and cloud backup.

All other terms and conditions remain unchanged as stipulated in tender document. This addendum will be integral part of the tender document.

Bangladesh Rural Electrification Board ★ MCEP (DWD) Project ★

14/04/2026

(Mohammad Ali)
Project Director

Copy for kind information to:
1. Chief Engineer (Project), BREB, Dhaka.
2. PS to Chairman, BREB, Dhaka.
3. PS to Member (Distribution and Operation), BREB, Dhaka.
4. M/s .....