U.P. RAJYA VIDYUT UTPADAN NIGAM LTD. (UPRVUNL)

EXPRESSION OF INTEREST (EOI) • 3200 MWh BESS TECHNOLOGY SELECTION

UPRVUNL invites EOI from Cell/Battery Manufacturers for Technology Selection of **3200 MWh Battery Energy Storage System (BESS)** at Jawaharpur Thermal Power Station, District Etah, Uttar Pradesh.

KEY SCOPE OF ASSESSMENT:

- Technical, safety & performance data of grid-scale battery technologies
- Life, degradation curves, warranty & long-term service models
- Supply chain, delivery lead time & Indian manufacturing roadmap
- Indicative budgetary information (strictly no commercial price bid)

ELIGIBILITY: Cell/Battery Manufacturers & OEMs of containerised battery systems only (Indian or foreign). Developers, EPC contractors, integrators & traders are NOT eligible.

SCAN FOR COMPLETE EOI

https://drive.google.com/drive/folders/16hx0NVZDf6c7SfhmTxyouJAsshXHBH0g?usp=drive_link

SUBMISSION DEADLINE: On or before 04.12.2026 • Send documents via Post & Email to:

Office of the Chief Engineer, Commercial Unit, 14th Floor, Shakti Bhawan, 14 Ashok Marg, Lucknow – 226001

Contact No.: 9415900856 | Email ID: gm.commercial@uprvunl.org

Note: This EOI is for technology assessment only & does not commit UPRVUNL to procure or place any order. No EOI fee or security is payable. UPRVUNL reserves the right to accept or reject any or all responses without assigning any reason.

UP Rajya Vidyut Utpadan Nigam Ltd.
Expression of Interest (EOI)

UPRVUNL invites EOI from **Cell/Battery Manufacturers** for **Technology Selection for 3200 MWh Battery Energy Storage System (BESS)** at Jawaharpur Thermal Power Station, District Etah, Uttar Pradesh.

Scope:

1. Technical, safety and performance data of grid-scale battery technologies
1. Life, degradation, warranty and long-term service models
2. Supply chain, delivery lead time and Indian manufacturing
3. Indicative budgetary information (no price bid)

Eligibility: Battery cell manufacturers and OEMs of containerised battery systems only, Indian or foreign. Developers, EPC contractors, integrators and traders are not eligible.

Web link for complete EOI:
https://drive.google.com/drive/folders/16hx0NVZDf6c7SfhmTxyouJAsshXHBH0g?usp=drive_link or scan QR code

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Kindly send all the related documents to the following postal address and email ID on or before **04.12.2026.**

Office of the Chief Engineer
Commercial Unit,
14th floor, Shakti Bhawan
14 Ashok Marg Lucknow, 226001
Contact No. 9415900856
Email id: gm.commercial@uprvunl.org

Expression of Interest

Technology Selection for 3200 MWh Battery Energy Storage System at Jawaharpur Thermal Power Station

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Notice Inviting Expression of Interest

U.P. Rajya Vidyut Utpadan Nigam Limited (UPRVUNL), a Government of Uttar Pradesh undertaking, invites Expressions of Interest from manufacturers of battery energy storage systems for technology selection and familiarisation for a proposed 3200 MWh BESS at Jawaharpur Thermal Power Station, District Etah, Uttar Pradesh. This EoI is for information gathering and technology assessment only. It does not commit UPRVUNL to procure, place any order or enter into any contract. No price quotation is sought at this stage.

Particular	Details
EoI reference number	UPRVUNL/CE(Comml)/BESS-JTPS/EoI//2026
Issuing authority	Chief Engineer (Commercial), UPRVUNL
Subject	Technology selection and familiarisation for 3200 MWh BESS at Jawaharpur TPS
Eligibility	Cell/Battery manufacturers and containerised battery system OEMs only; no developers, integrators or traders
Date of publication	20.11.2026
Last date for queries	27.11.2026
Site visit	25.11.2026-27.11.2026, Jawaharpur TPS
Replies & Corrigendum, if any	30.11.2026
Last date and time for submission	03.12.2026 15:00 hrs IST
Opening of responses	04.12.2026, 15:30 hrs IST
Technical presentations by respondents, if called	To be informed later
Mode of submission	Email in PDF, plus two hard copies by post or in person
Cost of EoI document	Nil
EoI security or fee	Nil
Address	Chief Engineer (Commercial), 14th Floor, Shakti Bhawan, 14 Ashok Marg, Lucknow 226001
Email	gm.commercial@uprvunl.org
Telephone	+91 94159 00856
Website	www.uprvunl.org

Interested manufacturers are advised to visit the UPRVUNL website regularly for amendments or corrigenda.

1. Introduction

1.1 UPRVUNL is the state thermal power generation utility of Uttar Pradesh, with an installed capacity of about 9,120 MW across its thermal power stations at Anpara, Harduaganj, Jawaharpur, Obra, Panki and Parichha.

1.2 UPRVUNL intends to procure the BESS through open competitive tendering, with the battery technology and the technical specification settled in advance through structured consultation with manufacturers.

1.3 Before tendering, UPRVUNL wishes to understand the available battery technologies, their performance, safety, life, service models and supply chain, and to freeze a technical specification that is open to competition. This EoI is the first step in that process.

1.4 The first site is Jawaharpur Thermal Power Station (2 x 660 MW), District Etah, Uttar Pradesh, where a BESS of about 3200 MWh is proposed.

2. Objective and Scope of the EoI

2.1 The objectives of this EoI are to:

- Identify battery technologies and manufacturers capable of supplying grid-scale containerised BESS of about 3200 MWh.
- Obtain technical, safety, performance and life data for each technology offered.
- Understand manufacturers' service, warranty, augmentation and end-of-life models.
- Assess supply chain, delivery lead time, Indian manufacturing content and after-sales presence in India.
- Obtain indicative budgetary information, without price commitment, for internal estimation only.
- Enable UPRVUNL to freeze a technology-neutral specification and realistic qualifying requirements for the subsequent tender.

2.2 This EoI covers battery cells, modules, racks, containers, battery management system, thermal management, fire detection and suppression within the container, power conversion system, and the manufacturer's supervision, warranty and long-term service.

2.3 Civil works, switchyard, transformers, cabling and other works outside the battery and power conversion system are not covered by this EoI.

2.4 This EoI is not a tender, request for proposal or invitation to bid. No contract, letter of intent or purchase order will result from it. Participation in this EoI is not a condition for participation in any subsequent tender, and non-participation will not disqualify any manufacturer from such tender.

2.5 Responses will be used by UPRVUNL for internal evaluation, technology familiarisation and preparation of the DPR and tender documents.

3. Project Outline

3.1 The indicative parameters below are for the purpose of this EoI only.

Parameter	Indicative value
Location	Jawaharpur Thermal Power Station, District Etah, Uttar Pradesh
Nearest rail head	Etah / Kasganj;

Parameter	Indicative value
Energy capacity	About 3200 MWh usable at point of interconnection, at end of first year
Power capacity	About 800 MW for 4 hours; respondents may propose alternatives
Phasing	May be built in 2 to 4 blocks; respondents to state minimum block size
Interconnection	Existing 400 kV switchyard of Jawaharpur TPS; 220 kV option under study
Land	About ~ 90 acres within the plant boundary; flat, owned by UPRVUNL
Duty cycle	Up to 1 full cycles per day; energy shifting, peak support, ramping, frequency support
Design life	15 years minimum at site, with augmentation if needed
Ambient conditions	Maximum 48 degrees C, minimum 2 degrees C; relative humidity up to 95 per cent; seismic zone III
Grid compliance	CEA Technical Standards for Connectivity, CEA Grid Standards, CERC and UPERC regulations, Indian Electricity Grid Code and UP Electricity Grid Code as applicable
Battery nameplate	To be at least 15 per cent above AC discharge capacity at metering point

3.2 Respondents may propose a different power-to-energy ratio, container size or block size, with reasons, if it gives better value for the stated duty cycle.

4. Eligibility of Respondents

4.1 This EoI is open only to:

- Manufacturers of lithium-ion or other grid-scale battery cells who also manufacture or assemble containerised battery systems.
- Original equipment manufacturers of containerised battery energy storage systems who source cells from a named cell manufacturer under a supply agreement.
- Indian subsidiaries or authorised Indian arms of such manufacturers, with a letter of authorisation from the parent.

4.2 The following are not eligible to respond in their own name: project developers, EPC contractors, system integrators who do not manufacture battery containers, traders, agents and consultants. Such entities may attend the pre-EoI meeting as observers.

4.3 Indicative track record expected from respondents. These are not disqualifying criteria at EoI stage, but respondents are asked to state their position against each:

Criterion	Indicative level
Cumulative supply of grid-scale BESS	1000 MWh or more, commissioned in the last 5 years

Criterion	Indicative level
Single project reference	At least one project of 200 MWh or more in operation for 1 year or more
Annual manufacturing capacity	2 GWh or more of containerised BESS
Safety certification	UL 9540A test report at cell, module and unit level; IEC 62619; IEC 62933-5-2 or equivalent
Quality system	ISO 9001, ISO 14001, ISO 45001
Indian presence	Service office or partner in India;

4.4 Manufacturers who do not meet the indicative levels may still respond. UPRVUNL will use the responses to fix realistic qualifying requirements for the tender, so that adequate competition is available.

4.5 A respondent may submit one response for each distinct technology it offers. Joint responses by two or more manufacturers are permitted if the roles of each are clearly stated.

4.6 Respondents from countries sharing a land border with India must comply with Order No. F.7/10/2021-PPD(1) dated 23.02.2023 of the Department of Expenditure, Ministry of Finance, Government of India, and any amendments, regarding registration with the Competent Authority.

5. Information to be Furnished

5.1 Respondents shall furnish the information below in the formats at Annexures A to G. Where a data item is not applicable, state so with reasons. Where a value is a guarantee the respondent would offer in a tender, mark it as such; otherwise mark it as typical.

5.2 Part I: Company information (Annexure A)

- Legal name, registered office, year of establishment, ownership and group structure.
- Manufacturing plants for cells, modules and containers, with location and annual capacity of each.
- Audited turnover and net worth for the last 3 financial years, in INR or USD.
- Indian entity details, if any, and India service set-up.
- Contact person for this EoI.

5.3 Part II: Experience (Annexure B)

- List of grid-scale BESS projects of 50 MWh and above supplied in the last 5 years: client, country, MW and MWh, chemistry, commissioning date, operating status.
- Projects of 200 MWh and above, with client reference contact.
- Projects in India, if any.
- Projects under execution.

5.4 Part III: Technology and technical data (Annexure C)

Area	Data required
Cell	Chemistry (LFP, NMC, sodium-ion, flow or other); form factor; nominal capacity in Ah; nominal voltage; energy density; cell manufacturer and plant; cell datasheet
Module and rack	Configuration; module energy; rack energy and voltage; BMS architecture and functions
Container	Nominal energy in MWh per container (DC and usable AC); dimensions and weight; IP rating; thermal management type (liquid or air); auxiliary consumption in kW; footprint per MWh
Power conversion system	Make and model; rating in MW; grid-forming capability; black start capability; efficiency curve; reactive power capability; harmonic performance; compliance with CEA standards
Performance	Round-trip efficiency at PCS AC terminals and at point of interconnection, at 25 degrees C and at 45 degrees C; C-rate for 2 hour and 4 hour duty; response time; ramp rate
Life and degradation	Cycle life at 90 per cent and 100 per cent depth of discharge; calendar life; guaranteed usable capacity at end of year 1, 5, 10 and 15 for 2 cycles per day; degradation curve; augmentation philosophy and typical augmentation years
Safety	UL 9540A results at cell, module and unit level; thermal runaway propagation behaviour; gas detection; in-container fire detection and suppression; explosion venting; compliance with NFPA 855 and IEC 62933-5-2; any field incident history
Environmental	Operating temperature range without derating; performance at 48 degrees C ambient; dust and humidity tolerance; seismic design
Control and communication	EMS functions; SCADA protocol (IEC 61850, Modbus, DNP3); cyber security compliance with CEA Cyber Security Regulations; remote monitoring
Standards	List of all standards complied with, with certificates

5.5 Part IV: Supply chain and delivery (Annexure D)

- Manufacturing location for cells, modules, containers and PCS proposed for this project.
- Present and planned Indian manufacturing, with percentage of Indian value addition.
- Delivery lead time from order to delivery at Indian port and at site, for 800 MWh, 1600 MWh and 3200 MWh.

- Minimum and maximum block size per delivery.
- Transport constraints: container dimensions, weight, road and rail suitability for Jawaharpur.
- Spares philosophy and availability of spares in India.

5.6 Part V: Service, warranty and life-cycle (Annexure E)

- Standard warranty period and coverage for cells, containers, BMS and PCS.
- Performance guarantee model: capacity, efficiency, availability; liquidated damages approach.
- Long-term service agreement: scope, duration offered (15 years preferred), staffing in India, response time, remote diagnostics.
- Augmentation approach: in-container, add-on containers, or replacement.
- Training of owner's staff.
- End-of-life: take-back, recycling and compliance with Battery Waste Management Rules 2022.

5.7 Part VI: Indicative budgetary information (Annexure F)

- Indicative range of capital cost per kWh for battery containers with BMS, and separately for PCS, delivered at Indian port and at site, for the stated capacity. A range is acceptable.
- Indicative annual LTSA cost per MWh.
- Indicative augmentation cost.
- Typical payment milestones.

This information is for UPRVUNL's internal cost estimation only. It is not a quotation, will not be treated as a binding offer, and will not be used to rank respondents.

5.8 Part VII: Suggestions on specification and contracting (Annexure G)

- Respondent's views on power-to-energy ratio, block size and interconnection voltage.
- Preferred scope boundary of the manufacturer's supply, and interfaces with other works at site.
- Suggested qualifying requirements for the tender.
- Any clause in recent Indian BESS tenders the respondent considers difficult to accept, with reasons.
- Any other technology or commercial option UPRVUNL should consider.

6. Evaluation Approach and Technology Freeze

6.1 Responses will be examined by a Directors level Committee constituted by UPRVUNL.

6.2 UPRVUNL may seek clarifications in writing, invite respondents for technical presentations, and visit manufacturing plants or reference projects at its own cost.

7. Terms and Conditions

7.1 No financial commitment

- This EoI does not constitute an offer, tender or invitation to bid. UPRVUNL is under no obligation to procure any goods or services as a result of it.
- No contract, purchase order, letter of intent or letter of award will be issued on the basis of this EoI.
- No payment of any kind will be made to any respondent for preparing or submitting a response, attending meetings, making presentations, hosting visits or providing clarifications.
- Indicative budgetary information furnished under Part VI will not be treated as an offer and will not bind either party.
- Any subsequent procurement will be through a separate competitive tender, published in accordance with the procurement rules of UPRVUNL and the Government of Uttar Pradesh.

7.2 Rights of UPRVUNL

- UPRVUNL reserves the right to accept or reject any or all responses, in whole or in part, without assigning any reason.
- UPRVUNL may amend, extend, suspend or cancel this EoI at any stage, through a corrigendum on its website, without liability.
- UPRVUNL may use the information received to prepare its DPR, specification and tender documents, without acknowledgement to any respondent.
- UPRVUNL may share responses with its Owner's Engineer, consultant and committee members, who will be bound by confidentiality.

7.3 Confidentiality

- Respondents may mark commercially sensitive pages as confidential. UPRVUNL will not disclose such pages to third parties except as required by law, by audit, or by order of a court or regulator.
- Respondents shall not publicise their participation in this EoI, or any discussion with UPRVUNL, without written consent.

7.4 Accuracy and responsibility

- Information in this EoI is indicative and has been prepared in good faith. UPRVUNL does not warrant its completeness or accuracy. Respondents shall make their own assessment.
- Respondents are responsible for the accuracy of the information they furnish. Material misstatement may be considered in any subsequent tender.

7.5 Intellectual property

- Proprietary information remains the property of the respondent. UPRVUNL will use it only for the purposes stated in this EoI.

- The frozen specification prepared by UPRVUNL will be the property of UPRVUNL.

7.6 Fairness and conduct

- Respondents shall not approach any officer of UPRVUNL other than the contact named in this document, or attempt to influence the process in any way. Such conduct may lead to exclusion from the subsequent tender.
- Respondents shall declare any relationship with any consultant or Owner's Engineer engaged by UPRVUNL.

7.7 Governing law and jurisdiction

- This EoI and all matters arising from it shall be governed by the laws of India. Courts at Lucknow shall have exclusive jurisdiction.

7.8 Language and currency

- Responses shall be in English. Supporting documents in other languages shall be accompanied by English translation.
- Indicative values may be given in INR or USD.

8. Submission Procedure and Schedule

8.1 Responses shall be submitted as follows:

- One soft copy in PDF, by email to gm.commercial@uprvunl.org, with the subject line "EoI – BESS Technology Selection – Jawaharpur TPS – [Respondent name]". Total size not to exceed 25 MB per email; larger submissions may be split or shared through a download link.
- Two hard copies, in a sealed envelope superscribed with the EoI reference and the respondent's name, addressed to Chief Engineer (Commercial), 14th Floor, Shakti Bhawan, 14 Ashok Marg, Lucknow 226001, by post, courier or in person.
- The email submission by the deadline will be treated as the submission date. Hard copies may follow within 3 days.

8.2 The response shall contain:

1. Covering letter on the respondent's letterhead, signed by an authorised signatory, in the format at Annexure A.
2. Annexures A to G, duly filled.
3. Datasheets, test reports and certificates referred to in Annexure C, as attachments.
4. Authorisation letter from parent company, where the respondent is an Indian arm.
5. Any additional material the respondent considers useful, as a separate attachment.

8.3 Responses shall be in English, on A4 pages, with page numbers. Each annexure shall be a separate section.

8.4 Schedule:

Activity	Date	Time (IST)
Date of publication	20.11.2026	
Last date for queries	27.11.2026	17:00
Jawaharpur TPS Site visit	25.11.2026-27.11.2026	
Replies & Corrigendum, if any	30.11.2026	
Last date and time for submission	03.12.2026	15:00 hrs IST
Opening of responses	04.12.2026,	15:30 hrs IST
Technical presentations by respondents, if called	To be informed later	

8.6 Responses received after the deadline may be considered at UPRVUNL's discretion, since this is an information-gathering exercise, but respondents are urged to adhere to the timeline.

8.7 Queries shall be sent by email only, to gm.commercial@uprvunl.org, quoting the EoI reference. Replies will be posted on the UPRVUNL website without naming the respondent.

9. Site Visit

9.1 A site visit to Jawaharpur Thermal Power Station will be arranged on the date shown in the schedule. Respondents wishing to attend shall confirm by email at least 2 working days in advance, giving names, designations and identity document details of attendees, not exceeding 3 persons per respondent. Entry is subject to plant security clearance.

9.2 Respondents shall bear their own travel and other costs for the meeting and the site visit.

9.5 One-to-one technical interactions may be arranged after submission, at UPRVUNL's request, in Lucknow.

Annexures

Annexure A: Covering letter and company profile

To be submitted on the respondent's letterhead.

To: Chief Engineer (Commercial), UPRVUNL, 14th Floor, Shakti Bhawan, 14 Ashok Marg, Lucknow 226001

Subject: Response to EoI No. UPRVUNL/CE(Comml)/BESS-JTPS/EoI/[__]/2026 for Technology Selection for 3200 MWh BESS at Jawaharpur TPS

Sir,

1. We, [name of respondent], hereby submit our response to the above EoI.
2. We confirm that we are a manufacturer of [battery cells / containerised battery systems], and that we are eligible under Clause 4 of the EoI.
3. We have read and understood the EoI, including Clause 7. We understand that this EoI creates no commitment on UPRVUNL to procure, that no payment will be made for this response, and that any indicative budgetary information we furnish is not an offer.
4. We confirm that the information furnished is true and correct to the best of our knowledge.
5. We declare that we have no relationship with any consultant or Owner's Engineer engaged by UPRVUNL for this project, except as stated here: [state, or write None].

Company information	Response
Legal name and registered address	
Year of establishment	
Ownership and ultimate parent	
Country of incorporation	
Cell manufacturing plants: location and annual capacity (GWh)	
Module and container plants: location and annual capacity (GWh)	
PCS: own manufacture or partner, with name	
Turnover, last 3 financial years	
Net worth, last financial year	
Indian entity: name, address, nature (subsidiary, branch, partner)	
India service centres and staff strength	
Contact person: name, designation, email, telephone	

Signature, name, designation, company seal, date.

Annexure B: Experience

Table B-1: Grid-scale BESS projects of 50 MWh and above, supplied in last 5 years

S.No.	Project name	Client	Country	MW	MWh	Chemistry	Container model	PCS make	Commissioning date	Status
1										
2										

Table B-2: Reference projects of 200 MWh and above with client contact

S.No.	Project	Client contact name, designation, email	Years in operation	Availability achieved (per cent)	Capacity retention achieved (per cent)
1					

Table B-3: Projects in India and projects under execution

S.No.	Project	Client	MW / MWh	Stage	Expected commissioning
1					

Annexure C: Technology and technical data

One Annexure C per technology offered. Attach datasheets, test reports and certificates.

S.No.	Parameter	Unit	Value	Guaranteed or typical	Reference document
C.1	Cell chemistry				
C.2	Cell form factor and dimensions				
C.3	Cell nominal capacity	Ah			
C.4	Cell nominal voltage	V			
C.5	Cell manufacturer and plant				
C.6	Module energy	kWh			
C.7	Rack energy and DC voltage	kWh, V			
C.8	Container nominal energy, DC	MWh			
C.9	Container usable energy, AC at PCS terminal, beginning of life	MWh			
C.10	Container dimensions (L x W x H) and	m, t			

S.No.	Parameter	Unit	Value	Guaranteed or typical	Reference document
	weight				
C.11	Footprint per MWh including clearances	sq m			
C.12	Thermal management type				
C.13	Auxiliary power consumption at 45 degrees C	kW per MWh			
C.14	Round-trip efficiency at PCS AC terminal, 25 degrees C, 0.25C	per cent			
C.15	Round-trip efficiency at PCS AC terminal, 45 degrees C, 0.5C	per cent			
C.16	Cycle life at 100 per cent DoD to 70 per cent capacity	cycles			
C.17	Cycle life at 90 per cent DoD to 70 per cent capacity	cycles			
C.18	Calendar life	years			
C.19	Guaranteed usable capacity at end of year 1, 5, 10, 15 at 2 cycles per day	per cent			
C.20	Augmentation philosophy and typical years				
C.21	Operating temperature range without derating	degrees C			
C.22	PCS make, model, rating	MW			
C.23	PCS grid-forming capability	yes / no			
C.24	PCS black start capability	yes / no			
C.25	PCS efficiency at full and half load	per cent			
C.26	Response time from idle to full power	ms			
C.27	Reactive power capability				
C.28	UL 9540A test: cell, module, unit level results				
C.29	Thermal runaway propagation: cell to				

S.No.	Parameter	Unit	Value	Guaranteed or typical	Reference document
	cell, module to module				
C.30	Fire detection and suppression system in container				
C.31	Explosion venting and gas detection				
C.32	Standards complied with (IEC 62619, IEC 62933, NFPA 855, IEC 61850, CEA)				
C.33	EMS functions and SCADA protocols				
C.34	Cyber security compliance				
C.35	Field safety incidents in last 5 years, with cause and corrective action				
C.36	Design life at Jawaharpur conditions	years			

Annexure D: Supply chain and delivery

S.No.	Item	Response
D.1	Manufacturing location proposed for cells	
D.2	Manufacturing location proposed for modules and containers	
D.3	Manufacturing location proposed for PCS	
D.4	Present Indian manufacturing, if any, and capacity	
D.5	Planned Indian manufacturing and timeline	
D.6	Indicative Indian value addition, per cent	
D.7	Lead time from order to delivery at Indian port: 800 MWh, 1600 MWh, 3200 MWh	
D.8	Lead time from Indian port to Jawaharpur site	
D.9	Minimum block size per delivery	
D.10	Transport constraints: road and rail suitability of container	
D.11	Spares philosophy and Indian spares stock	
D.12	Any restriction on supply due to export controls or country of origin rules	

Annexure E: Service, warranty and life-cycle

S.No.	Item	Response
E.1	Standard warranty: period and coverage for cells, containers, BMS, PCS	
E.2	Performance guarantee model: capacity, efficiency, availability	
E.3	Approach to liquidated damages for shortfall	
E.4	Long-term service agreement: scope, duration offered	
E.5	LTSA staffing in India and response time to site	
E.6	Remote monitoring and diagnostics	
E.7	Augmentation approach: in-container, add-on, replacement	
E.8	Training programme for owner's staff	
E.9	End-of-life take-back and recycling, compliance with Battery Waste Management Rules 2022	
E.10	Insurance and bank guarantee practice in recent projects	

Annexure F: Indicative budgetary information

For UPRVUNL's internal estimation only. Not an offer. Ranges are acceptable.

S.No.	Item	Unit	Indicative range	Basis and assumptions
F.1	Battery containers with BMS, delivered at Indian port	INR per kWh		
F.2	Battery containers with BMS, delivered at site	INR per kWh		
F.3	PCS, delivered at site	INR per kW		
F.4	Supervision of erection and commissioning	INR per MWh		
F.5	Annual LTSA cost	INR per MWh per year		
F.6	Augmentation cost at typical augmentation year	INR per kWh added		
F.7	Typical payment milestones			
F.8	Validity of indicative range	months		

Annexure G: Suggestions on specification and contracting

S.No.	Topic	Respondent's view
G.1	Recommended power-to-energy ratio for the stated duty cycle	
G.2	Recommended block size and phasing	
G.3	Interconnection voltage and PCS arrangement	
G.4	Preferred scope boundary of manufacturer's supply and interfaces with other works at site	
G.5	Suggested qualifying requirements for the tender	
G.6	Clauses in recent Indian BESS tenders that are difficult to accept, with reasons	
G.7	Any other technology or commercial option UPRVUNL should consider	

Issued by: Chief Engineer (Commercial), U.P. Rajya Vidyut Utpadan Nigam Limited, 14th Floor, Shakti Bhawan, 14 Ashok Marg, Lucknow 226001. Email gm.commercial@uprvunl.org. Telephone +91 94159 00856.