



**VOLUME I  
SECTION 5.0  
SPECIAL CONDITIONS OF CONTRACT (SCC)**

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**SECTION – 5  
SPECIAL CONDITIONS OF CONTRACT (SCC)**

**1.0.0 INTENT OF CONTRACT**

The scope of the Contractor comprises of the design, engineering, procurement, manufacture, assembly, testing at Manufacturer's works, testing at third party accepted/approved facility/testing laboratory (as applicable and specified), packaging into properly sized units and shipping, comprehensive marine cum inland transit and erection insurance up to successful commissioning of the plant, transport, delivery to site, receipt, unloading, handling, storage and preservation (if required) at site, construction, erection, testing & commissioning, training of owner's personnel and putting into operation of the Battery Energy Storage System rated for 20MW/120MWh at the point of injection using Vanadium Redox Flow Battery Technology with all associated electrical, mechanical and civil systems for the project and operation and maintenance of the plant for ten (10) years by the bidder.

- I. The scope also includes supply of spares as per Volume-II GTS.
- II. It is also the intent of the contract to assign single point responsibility for the EPC Contract. All the work shall be executed on EPC basis in strict conformity with the provisions of the Contract documents explanatory detailed drawings, specifications and instructions by the Engineer-in-Charge whether mentioned in the contract or not.
- III. The equipment and installation shall conform to high standards of engineering, design, and workmanship in all respects and shall be capable of performing continuous operation in satisfactory manner. The Contractor within the contract price shall provide all supplies and services including any equipment or accessories not specified herein but necessary for satisfactory operation of entire Project.
- IV. It is the responsibility of the Contractor to obtain any permit or license etc. wherever applicable for this work on behalf of GIPCL.
- V. Bidder shall guarantee minimum system annual average availability of 95% from the date of trial operation. Bidder shall maintain full-fledged supervisory staff until such period. Any disruption in the STU/GSS side shall not account for reduction in availability of the BESS Project.

**2.0.0 SITE INSPECTION AND BASIS OF BID**

The volume and quantity of work indicated in schedule of works may vary. The Contractor should visit the Site before quoting rate for civil works. After taking into consideration all aspects of the site, condition of soil etc., the Contractor should quote for civil works. No extra claim will be entertained after award of work. The foundation design of the BESS along with equipment, building etc. shall have to be approved by GIPCL. In case of any defects arising in the building during guarantee period, the Contractor shall have to rectify the same at its own cost.

**3.0.0 PROGRAMME OF WORK**

The Contractor shall submit the Programme of work within 15 days from the date of receipt of Letter of Intent (LoI). The Programme shall include a Bar Chart indicating therein the starting position and completion date of each of the major items of work.

**4.0.0 ASSOCIATE ARRANGEMENT (If applicable)**

If the contractor desires to get qualified on the support of Associate's/Consortium back up (hereinafter called 'Associate/Consortium' or its successor, executors and permitted assignees), the Contractor and the Associate/Consortium will have to furnish the deed of joint undertaking as given in Appendix-27, Section-7, Vol-I.

**5.0.0 IMPORT LICENSE**



- I. The domestic bidders should note that Import license for importing any components or assemblies or raw materials or finished products from any country of any foreign collaborator or associate or sub-vendor etc. will have to be arranged by the bidder/contractor himself. The Owner will only issue essentiality certificate for availing concessional tariff (if applicable).
- II. The bidder is required to quote his price considering any concessional duty, if available. To avail the concessional custom duty the Owner shall issue certificate, at the request of the Contractor. It shall be the responsibility of the Contractor to get approval of the appropriate authority for the list of imported items and avail concessional custom duty.

#### **6.0.0 GENERAL REQUIREMENTS**

- I. The equipment covered under the scope are required for a vital installation where the continuity of service is of utmost importance. Their design, materials and manufacture shall be of highest order to ensure continuous and trouble free operation.
- II. The design of the equipment shall conform to the relevant provisions as brought out in Technical Specification (Volume II) of bidding document. All similar items and removable parts of similar equipment shall be identical and interchangeable with each other. All materials shall be of best quality and capable of satisfactory operation under tropical climatic conditions.
- III. In case of any conflict amongst various sections, drawings, schedules etc., the most stringent requirement shall govern; decision of the Owner shall always be final & binding on the Contractor.

#### **7.0.0 WORK COMPLETION PERIOD**

- The project schedule for design, engineering, manufacturing, supply, delivery at site, loading, unloading, handling at site, civil construction, erection, testing, commissioning, Taking Over/accepting (By Owner/GIPCL) of Battery Energy Storage System rated for 20MW/120MWh at the point of injection using Vanadium Redox Flow Battery Technology with all associated electrical, mechanical and civil systems for the project shall be 18 months from the date of issue of LOI.

The bidder has to furnish a schedule indicating various activities involved in the project and probable time required to complete each activity.

#### **8.0.0 DELAY IN COMPLETION OF WORK PERIOD**

- I. Liquidated damages for delay in completion of plant shall be levied.
- II. The recommended spares for O&M of plant to be supplied by the Supplier as stipulated in. In case the Supplier delays the supply of spares beyond the scheduled date, then the Owner shall recover as liquidated damages, a sum of 0.5% (zero point five percent) of the contract price of spares for each completed week of delay subject to a maximum of 10% (ten percent) of contract price for the spares.
- III. Where supply affected in part or works executed in part, could not be beneficially used by the GIPCL (due to such incomplete supply/execution), liquidated damages should be worked out on the basis of overall project contract price only, and not on the value of delayed portion.
- IV. The defaulting Contractor shall be made liable to pay to the GIPCL in addition to liquidated damages for delay, the actual difference in price, wherever GIPCL orders the delayed quantity to be supplied/executed by other agencies at a higher rate.
- V. If the Contractor fails to deliver the plant or fails to start the work within specified time frame after issue of Lol or fails to carry out the work as per agreed schedule or leaves the work site after partial execution of the work, GIPCL shall have the right to get the work done through any other agency at the risk and cost of the Contractor. Further to this, GIPCL may, without prejudice to the right of the Contractor to recover damages for breach of trust of the Contract, may impose penalties.
- VI. Notwithstanding anything contained in this tender document, bidders to note that Completion time of Project activities as per the prescribed timeline/schedule is the essence of the Contract.
- VII. If, at any time, the CONTRACTOR's actual progress falls behind or is likely to fall behind the agreed schedule, the CONTRACTOR shall submit to the OWNER, a revised programme with catch up schedule.



The CONTRACTOR shall forthwith notify GIPCL of the steps being taken to expedite progress and shall mobilize additional resources like manpower, materials, machineries etc. at his risk and cost.

- VIII. In case further slippage is observed, GIPCL reserves the right to engage any other Contractor(s)/sub-contractor(s) at any time, at the risk and cost of the EPC Contractor. GIPCL will also deduct Liquidated Damages (LD) as per terms of this tender document.
- IX. The said right of the GIPCL to levy damages on account of delay shall be without prejudice to and in addition to the right of the Company to get the concerned work done from a third party at the complete risk and cost of the Contractor.
- X. The Contractor shall indicate duration of all the activities in activity chart in conformity with the overall schedule of the completion of project, which shall be discussed and finalized and shall form a part of Contract.

#### **9.0.0 CONTRACT PRICE**

- I. The price for the entire scope of work as covered under the contract shall be treated as contract price. Price break up for supplies and services shall be as per Price Schedule. Bidder shall fill in the details required in all the schedules as prescribed and as per the price break up in each of the Price schedules, failing which the bid is liable for rejection.
- II. Bidder shall also fill in all the details required in all the formats and schedules as prescribed in the specification, (the performance parameters in particular required for evaluation of bids), failing which the bid is liable for rejection.
- III. Taxes & duties indicated in the price schedule are as prevailing on the date of submission of the bid. However, all taxes & duties applicable on direct transactions between the Owner and the Contractor shall be reimbursed to the Contractor at actual against the documentary evidence of payment of the same by the Contractor.
- IV. Contract price will be split into supply, erection packages. GST shall be paid as per prevailing statutory norms.
- V. **EVALUATION OF BID AND SELECTION OF BIDDER**

Bidder shall refer the details given in Appendix-23 for Evaluation of Bid and Selection of Bidder.

Bid evaluation criteria

Evaluation Basis

Bid evaluation is done on Total Project Cost (TPC) basis combining Initial Capital Cost and O&M cost of 10 years.

Evaluation Formula

Total Evaluated Project Cost P (INR) = PACKAGE-A i.e. Initial capital cost (Schedule 1 to 5) + PACKAGE-B i.e. O&M COST (Schedule 6)

Package - A Capital Cost    Package-A: Capital Cost

Initial Capital Cost, inclusive of all taxes, duties, GST, levies, etc., shall be the sum of price Schedules 1+2+3+4+5, namely Supply, Transportation, Installation, Spares, and Tools & Tackles

Package -B – O&M COST    Package-B: O&M Cost

Package-B shall be the Present Value of 10-year O&M cost, discounted at 8.5% per annum.

The bidder shall quote first-year O&M cost as a percentage of Package-A cost, along with the annual escalation factor.



The ceiling for first-year O&M cost shall be 0.8% of Package-A per year, with annual escalation capped at 2.5%.

Total evaluated bid price Total evaluated bid price  $P = A + B$   
(Lower 'P' determines L1 Bidder)

Notes: (1) All prices are firm and not subject to price adjustment. (2) GST as per prevailing regulation. (3) Final L1 determination post E-Reverse Auction.

#### E-reverse auction

- a. For conducting e-Reverse Auction, lowest 50% out of total eligible Bidders (rounded to the next higher whole number) or at least 03 (three) nos. of eligible bidders L1 to L3 (whichever is higher) will be invited.
- b. Original L1 price (including GST) will be declared through nProcure's e-Auction Portal: <https://e-auction.nprocure.com> to start e-Reverse auction process and final received lowest auction price in the value by e-Reverse auction process will be the final L1 price.
- c. Minimum decremental value for the e-Reverse auction will be set by GIPCL prior to start of e-Reverse auction and this will be applicable during each reverse bid hit.
- d. Duration for the e-Reverse auction will be 60 Minutes with a provision of extensions for further 15 Minutes at every single reverse bid received during the last 05 minutes, till there is no further reverse bid entry (hit) by the participating Bidders.
- e. Evaluation of tender will be done on gross total quoted amount with GST.
- f. After e-Reverse Auction process, final L1 bidder shall be decided on lowest offered rate amongst other bidders during specified e-Reverse Auction process.
- g. After e-Reverse Auction process, the original rate quoted by the final L1 bidder shall be reduced proportionately based on total % reduction from their original quoted gross price v/s price derived after e-reverse auction, keeping GST percentage (%) rate same as originally quoted by final L1 bidder.
- h. Prorata reduction will be applied in the quoted rates for all the items after price discovery through e-Reverse Auction.

#### **10.0.0 PAYMENTS**

The Owner, as per guidelines and conditions specified herein, shall authorise the payment to the Contractor only for the performance of the works under the contract. All payments during the currency of the contract shall be 'on account' payments only. It shall be the responsibility of the Contractor to effect payments to his collaborator/associate, principal, sub-vendor, sub-contractor, supplier etc.

#### **11.0.0 DUE DATES FOR PAYMENT**

The Owner shall make progressive payment as and when the payment is due as per the terms of payment set forth. Payment shall become due and payable by the owner within 30 (thirty) days from the date of receipt of contractor's bill/invoice/debit note by the Owner provided the documents submitted are clear and complete in all respects. Payment during O&M period shall be as per prevailing payment schedule.

#### **12.0.0 PAYMENT SCHEDULE (BILLING BREAK-UP)**

The contractor shall prepare and submit to the Engineer, for approval, a breakup of the Contract Price (Billing break up). Any payment under the Contract (except initial advance payment, if any), shall be made only after the Contractor's price breakup (billing break up) is approved by OWNER/GIPCL.

#### **13.0.0 APPLICATION FOR PAYMENTS**

- I. Subject to any deduction which the Owner may be authorized to make under this Contract, and or to any additions or deductions provided for in this Contract, the Contractor shall be entitled to payment as per the terms and conditions specified.



- II. All payments shall be made in Indian Rupees (INR), unless otherwise specified in the Lol/Contract Agreement.
- III. The Contractor shall submit the bill for claim in three copies with all supporting documents as per the Contract condition to GIPCL.
- IV. Each such application shall state the amount claimed and shall set forth in detail, in the order of the payment schedule, particulars of the works and of the equipment shipped/received at the site pursuant to the contract.
- V. No sum shall be included in any payment application in respect of the works that, according to the decision of the Engineer, does not comply with the contract, or has been performed, at the date of certificate, prematurely.
- VI. All taxes and deductions shall be applicable as per prevailing income tax and other statutory rules and provisions in force.
- VII. In case Contractor fails to submit the invoice with all the required documents to process payments, GIPCL reserves the right to hold the payment of the Contractor against such bills.

**14.0.0 MODE OF PAYMENT**

All payments shall be made by RTGS/NEFT transfer to the Contractor's designated bank account. The Contractor shall intimate the bank account details to GIPCL prior to commencement of work. Any bank charges for fund transfer shall be borne by the respective parties as per their bank's applicable norms. All payments (Supply and Works) shall be made within 30 days of receipt of invoice with valid supporting documents.

**15.0.0 TERMS OF PAYMENT**

The invoices along with the documents listed in the relevant clauses of tender document shall be submitted by the Contractor to the Owner for the payment towards supply, freight & insurance, loading, unloading, handling at site & storage & security, erection, testing and commissioning of equipment & supply of spares. The Original Invoice to be marked to Project Manager -GIPCL. Copies may be distributed as per instruction of owner. The Tender is a comprehensive EPC Contract of Supply and Works. The Lol shall be provided to the Successful Bidder.

The total contract price is categorized into components as follows:

<b>Milestone / Stage</b>	<b>Payment (%)</b>	<b>Documents Required</b>
Advance against Bank Guarantee subject to acceptance of LOI	10% of total contract price	Advance Payment Bank Guarantee
Supply & Receipt at site	45% (pro-rata) of total contract price	Inspection & Dispatch Clearance Certificate (IDCC / MDCC); Lorry Receipt (LR); Insurance Policy; Packing List; E-Way Bill, GIPCL receipt subject to verifications (JMV)
Construction	30% (pro-rata) of total contract price	Site Acceptance Report
Against successful Commissioning	10% of total contract price	Provisional Acceptance Certificate (PAC)
FAC/OAC at the end of Defect Liability Period	5% of total contract price	Final Acceptance Certificate (FAC)
<b>TOTAL</b>	<b>100%</b>	



**NOTE: A retention of 5% of each RA Bill value shall be withheld from each progressive installation payment, subject to a cumulative maximum of 5% of the total Installation Services Contract Price. All retention amounts shall be released along with the final payment on issuance of the FAC/OAC.**

**16.0.0 Payment towards Operation & Maintenance (10 Years):**

Stage	Payment	Documents Required
Annual O&M Charge — payable over ten (10) years from the date of Commissioning	Equal monthly installments of the Annual O&M Contract Value	Monthly Invoice; monthly Performance Report certified by Owner's representative; Safety Compliance Certificate
Deduction / Recovery of Liquidated Damages for performance shortfalls during the O&M period	LDs adjusted from monthly O&M payment, as per monthly RA	LD levy notice; Details of shortfall as per performance records

- The Bidder shall include Operation and Maintenance (O&M) of the complete system for a period of ten (10) years from the date of successful commissioning / OAT, as part of the scope of work.
- The Bidder shall quote the O&M charges separately in the O&M Price Bid .Based on total quoted price by bidder, the O&M charges shall not exceed zero point Eight percent (0.80%) of the Total Contract Value per annum.
- Any annual escalation in O&M charges shall be explicitly limited to a maximum of 2.5% per annum.
- Payment towards O&M services shall be released monthly, subject to satisfactory performance and certification by the Owner/Engineer-in-Charge. No additional claims on account of O&M, escalation, manpower, materials, or associated costs shall be entertained beyond the quoted prices.

**17.0.0 SPARES**

A list of Mandatory spare parts to be supplied by the Contractor is given in Volume-II GTS. These spares should be dispatched that they are available at site before commencement of trial operation. The value of the spares shall not exceed 5% of the CIF value of the equipment price to be supplied under this EPC contract.

**18.0.0 QUALITY PLAN FOR MANUFACTURE OF EQUIPMENT**

- I. The Quality plan for manufacture is a document which presents in a tabular form the Quality Control checks to be exercised by the Contractor during the various stages of manufacture and dispatch. This plan shall detail the components manufactured, characteristics being controlled and acceptance norms, and the agency responsible for performance and witnessing the checks.
- II. After issuance of Letter of Intent (LOI), the contractor shall submit to the Owner, the detailed quality plans to be followed during manufacture of all major equipment. These quality plans shall be discussed mutually and updated by the Contractor taking into consideration the requirement of the Owner. The quality plan when approved shall form a part of the contract.
- III. The contractor shall ensure that the approved quality plans are followed scrupulously by him and by his sub-vendors/sub-contractors and manufacturing of the items covered under the quality plans shall be taken up only after Owner has approved the quality plan.

**19.0.0 OWNER'S REPRESENTATIVE AT SITE**



Manager/Projects/VRFB, "20MW/120MWh Vanadium Redox Flow Battery Project in GIPCL's 165MW Gas Power Plant Complex in Vadodara, Gujarat" shall be the Owner's representative at site and shall act as an In-charge for all the site works. The contractor's Resident Engineer shall report to him for all the day to day works.

#### **20.0.0 CONSIGNEE**

All materials shall be consigned to:

J.A.Shah

Additional General Manager(RE Proj.& Business Development)

Gujarat Industries Power Company Limited

P.O.: Ranoli-391 350,

Dist: Vadodara, Gujarat, India

Ph:0265-2234422

(M) 9909925811

#### **21.0.0 PAINTS, CONSUMABLES**

- I. Pursuant to the Clause No. 32.0 of Section 6, Volume I, it shall be the responsibility of the contractor to supply all the paints as required.
- II. It shall be the responsibility of the Contractor to supply all consumables like, grease, lubricating oils, all chemicals, ink & graphs for recorders etc., up to satisfactory completion of trial operation and three months thereafter.

#### **22.0.0 THIRD PARTY INSPECTION**

- I. **Indigenous supplies:** The equipment to be supplied under this Contract shall be inspected during manufacturing as per the quality plan to be finalized. The inspection shall be carried out by a third party inspection agency to be appointed by the Owner or will be witnessed by the Owner for indigenous supplies. The cost towards this inspection shall be borne by the Contractor.
- II. **In the case of imported supplies:** For imported materials or non-indigenous supplies, the inspection shall be carried out either by a foreign agency of repute to be appointed by the contractor as approved by the Owner or will be witnessed by the Owner. All costs related to inspection of imported supplies shall be borne by the Contractor.

#### **23.0.0 OPERATION AND MAINTENANCE MANUALS**

For all the equipment supplied by the Contractor, he shall submit to the Owner ten sets of the O&M manuals. The manual shall contain the operational features of the equipment, DOs & DON'Ts, trouble shooting, maintenance schedules for preventive maintenance, detail dimensional drawings, cross sectional drawings, method of assembly etc. Manuals shall contain all information for ordering of the spares. Contractor shall ensure that these O&M manuals are made available to the Owner well before starting of initial trials of equipment.

#### **24.0.0 ERECTION MANUALS**

In order to enable the engineers of the Owner to supervise the works properly, Contractor shall furnish five copies of erection manuals depicting therein the erection procedure, special precautions to be taken, various clearances to be maintained, erection checks and tests to be carried out before the equipment is put to initial trials.



### **25.0.0 SUBMISSION AND APPROVAL OF DRAWINGS**

- I. The contractor shall submit the drawings in sequential order to match with completion of milestone activity. The contractor shall submit all the G.A. drawings, mechanical, electrical and civil drawings, data sheets etc. for approval of the Owner along with the design calculations and general write up wherever involved in the editable format.
- II. On completion of all the works, the Contractor shall incorporate all the changes necessitated in the drawings and submit 6 (six) sets of all the 'As built' drawing for the records of the Owner.
- III. The Contractor shall submit the following documents for considering the final payment: All As-Built Drawings and O&M Manuals; Detailed Engineering Document; Training manuals and certificate of completion of training; Bill of material of all supplied equipment; Inventory of spares at project Site; Copies of all warranties/guarantees; Parameter settings of equipment.

### **26.0.0 TEST REPORTS**

On completion of tests of equipment at manufacturer's works, the Contractor shall furnish four (04) copies of test certificates to the Owner for approval and subsequent dispatch clearance. The test report shall invariably indicate identification data, including model no., sl. no. etc. of the equipment, method of application and duration of test along with test results.

### **27.0.0 FIELD QUALITY PLAN**

Erection shall be carried out as per ECC, manufacturer's manual, approved quality plan & best practices of the industry. After completing erection of individual equipment, the equipment shall be tested for starting up. The schedule of inspections and tests shall be called as field quality plan and Contractor shall follow the same during various stages of erection, testing and operations.

### **28.0.0 PROCUREMENT OF MATERIALS**

The Contractor shall procure all necessary material required for the project work and arrange to store them properly. Test certificate in accordance with the specifications are to be furnished by the Contractor to GIPCL for approval in respect of the materials procured by the Contractor.

### **29.0.0 SAMPLES**

Apart from adhering to special provision made in the specification regarding submission of samples, the Contractor shall within fifteen (15) days of its receipt of Letter of Intent, provide to GIPCL samples along with detailed literature of all materials it proposes to use. GIPCL shall check the samples and give his comments and/or approval to the same.

### **30.0.0 NOTICE OF OPERATION**

The Contractor shall not carry out important operation without the consent in writing of GIPCL or his representative. For carrying out such important activity, the Contractor shall intimate to GIPCL at least seventy-two (72) hours before starting of the job OR as per prevailing conditions.

### **31.0.0 REJECTION OF MATERIAL**

GIPCL's decision in regard to the quality of the material and workmanship will be final. The Contractors at its own cost and risk without any compensation shall immediately remove any material rejected by the Project Manager or Engineer-in-Charge from the Site of work.

### **32.0.0 COMMISSIONING AND HANDING OVER**

- I. Bidder is requested to refer to volume II of the tender document in respect of testing, commissioning, and conducting performance tests. For detailed procedure, please refer Vol I Sec 6 ECC clause no:68



- II. The commissioning of the Project shall be witnessed by a Committee constituted by GEDA (Gujarat Energy Development Agency) which shall comprise officials of GIPCL, DISCOM/GETCO as applicable. Declaration of COD/UCOD shall only be done by GEDA subject to demonstration of the compliances as per the Commissioning Procedure.
- III. Contractor shall submit the copy of this tender document as well as EPC Contract signed with GIPCL to GEDA and give advanced intimation to GEDA regarding commissioning of the project.

### **33.0.0 PERFORMANCE GUARANTEES, PENALTIES & CAPABILITY TESTS**

- I. The Contractor shall meet the Performance Guarantees as have been indicated in the Specifications and Schedule thereof.
- II. The performance security towards O&M refer in clause 4.6 in Sec-1.
- III. The penalty for not meeting the performance guarantees during the Performance Guarantee Test shall be assessed and recovered from the Contractor, without limitations, in accordance with stipulations made in Technical Specification.
- IV. If the guarantees specified are not achieved by the Contractor within 30 days of notification by the Owner, he may at his discretion reject the equipment or accept it after levying and recovering suitable penalties.
- V. The Contractor shall mobilize all necessary resources, requirements, instruments, etc., to conduct the PG Test. The tests shall be conducted as per GIPCL/GUVNL/GEDA/SLDC etc only.

### **34.0.0 FINAL ACCEPTANCE**

- I. In case of Commissioning cannot be carried out, after Mechanical Completion and Pre-Commissioning test, at specified time due to reasons attributable to Owner, the Plant shall be taken over 6 months after the intimation from the Contractor provided the Owner is satisfied about his readiness of the Plant. In such case, the Owner shall give an adhoc final acceptance certificate for the purpose of triggering the Guarantee/Defect Liability period.
- II. On conducting the Performance Guarantee Test, if it is established to the satisfaction of the Owner that the equipment is performing as specified in the Technical Specifications, the Owner shall issue to the Contractor a final acceptance certificate indicating the date from which the equipment has been taken over.
- III. Such a certificate shall be given within 30 days after satisfactory completion of the performance guarantee test. Owner shall not delay the issuance thereof on account of minor omissions or defects which do not affect the safe and reliable operation.
- IV. For OAT procedure and acceptance please refer clause 2.2.0 of Vol I Sec 1 NIT, for PG test procedure refer Appendix 35.

### **35.0.0 TERMINATION ON THE DEATH OF THE CONTRACTOR**

Without prejudice to any of the rights or remedies under this contract, if the Contractor dies, the Engineer-in-Charge on behalf of GIPCL shall have the option of terminating the Contract without compensation to the contractor.

### **36.0.0 RETIRED GOVERNMENT SERVANTS TAKING TO CONTRACT**

No engineer of gazette rank or other gazette officer employed in engineering or administrative duties in the Engineering Department of the Company is allowed to work as contractor for a period of two years of his retirement from Company's service without the previous permission of the Company. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person.

### **37.0.0 MISCELLANEOUS**

- I. The project manager appointed by EPC contractor shall not be replaced without the prior written approval of GIPCL.



- II. Any project manager or member of the Contractor at Site shall be replaced within a period of forty eight (48) hours of intimation by GIPCL without assigning any reason thereof.
- III. The Contractor shall take care of all statutory, local clearance, approvals, etc.
- IV. All warranties on the equipment shall be in the name of GIPCL with reference to the Clause No. 48.0 of Section-4.0 (GCC).
- V. The Contractor shall be responsible for claiming and retaining any subsidy and shall quote only final price and responsibility of Project registration/applications etc. shall lie with the Bidder only.
- VI. The Contractor shall provide arrangement for water drainage, which shall be appropriately arranged for dispersion/evacuation as per the local statutory norms.
- VII. The design philosophy and related specifications mentioned in this Tender are to be treated as baseline specifications. The Contractor may further improve the design through minor modifications contingent on GIPCL's approval.
- VIII. Based on reviewing the Project, if the progress is below expectation as judged based on GIPCL's 's discretion, then GIPCL shall reduce the Scope of the Contractor in part or full and assign the same to other contractor(s) at the risk and cost of the existing Contractor.
- IX. Provision for installing any additional monitoring equipment to facilitate on-line transfer of data shall be provided by the Contractor.

**38.0.0 VRFB BESS GUARANTEED PERFORMANCE PARAMETERS**

The Contractor shall guarantee the following minimum performance parameters throughout the Contract Period (EPC + 10-year O&M):

Sr.	Performance Parameter	Guaranteed Value
1.	Technology	Vanadium Flow Redox Battery (VFRB / VRFB)
2.	System Power Rating (AC Output/Input at POI)	20 MW (AC) minimum net at 132 kV POI including auxiliary consumption
3.	Energy Rating (at COD)	120 MWh (AC) minimum net at 132 kV POI including auxiliary consumption
4.	Storage Duration	Charging Period: 01:00 to 05:00 hrs and 09:00 to 16:00 hrs (approx. 11 hours) Discharging Period: 06:00 to 09:00 hrs and 18:00 to 24:00 hrs (approx. 9 hours)
5.	Minimum Annual Average Availability	≥ 95% per annum over complete O&M life
6.	AC-to-AC Round Trip Efficiency (RtE) –	≥ 70% including the auxiliary consumption of VRFB battery system (Monthly average, measured at POI)



<b>Sr.</b>	<b>Performance Parameter</b>	<b>Guaranteed Value</b>
7.	Annual Capacity Degradation	Zero degradation – 100% of rated MWh maintained throughout O&M period (re-balancing of electrolyte may be required as per requirement)
8.	Minimum Dispatchable Energy Capacity – All O&M Years (Year 1 to Year 10)	100% of COD capacity for all 10 O&M years (no degradation)
9.	Operational Cycles	Minimum 1.5 full charge-discharge cycles per day;
10.	Max Recovery Time Between Cycles	≤ 30 Minutes
12.	Point of Interconnection (POI)	132 kV Bus at GIPCL's existing switchyard substation
43.	Black Start Facility	To be provided – grid support system as per CEA/GETCO requirement
44.	Reactive Power Capability	As per CEA (Technical Standards for Connectivity to the Grid) Regulations and GERC/SLDC requirements
15.	Designed Life of System	≥ 25 years from commissioning
16.	Depth of Discharge (DoD)	Bidder to specify
17.	Target Commissioning Date (SCD)	18 months from Effective Date of Lol
18.	O&M Period	10 years from successful commissioning (COD)

**39.0.0 ANNUAL AVAILABILITY CALCULATION METHODOLOGY**



**40.0.0 System Availability Definition:**

Availability of the Project shall mean the ability of the BESS to execute a function (i.e., charging or discharging), when called upon to do so, as per the schedule or signal provided by GIPCL/SLDC, subject to the minimum system ratings specified herein.

**41.0.0 System Availability in a Time-Block:**

System Availability in a time-block = Actual Injection/Drawl MUI(A) ÷ Scheduled Injection/Drawl MUI(B)

Where:

- I. 'i' refers to the i-th time-block in the month where Scheduled Injection/Drawl MUI ≠ 0
- II. Actual Injection/Drawl MUI is the actual energy charged/discharged in the i-th time-block, in MUs
- III. Scheduled Injection/Drawl MUI is the energy scheduled for charging/discharging in the i-th time-block, in MUs
- IV. A and B shall be as per the DSM/UI Reports published by the SLDC or measurement at the Main ABT Meter at the Point of Interconnection

**42.0.0 Monthly System Availability:**

Monthly System Availability = Mean of the System availabilities of all time-blocks during the Month in which GIPCL/SLDC has scheduled power for charging/discharging the BESS (i.e., only time-blocks where Scheduled Injection/Drawl ≠ 0 are counted).

**43.0.0 Annual Average Availability:**

Annual Average Availability = {Σ (Monthly Average Availability)} ÷ 12. While considering Annual Average Availability, only Monthly Average Availability values of 95% or below (up to 95%) shall be added to derive the Annual Average Availability; months where availability exceeds 95% shall be capped at 95% for the purpose of annual averaging.

**44.0.0 Liquidated Damages for Annual Availability Shortfall:**

If Annual Average Availability demonstrated by the Contractor is less than 95%, Liquidated Damages shall be calculated as:

$$LD = (A - B) \times C \times D \times n \times 1.5$$

Where:

- A = Guaranteed Annual Availability = 95%
- B = Actual Annual System Availability (as calculated above)
- C = Contracted Capacity (MW) = 20 MW
- D = Applicable Tariff / Capacity Charges per MW per month (as per O&M contract — reference Rs. 12 Lacs/MW/Month for evaluation)
- n = Number of months (= 12 for annual calculation)

The Annual Availability Shortfall LD shall be calculated at the end of each O&M year and recovered by GIPCL by deduction from the monthly O&M invoices raised by the Contractor.

The Minimum Annual Average Availability shall be relaxable by GIPCL to the extent of grid non-availability for evacuation which is beyond the control of the Contractor (as certified by the SLDC) and/or upon occurrence of Force Majeure event affecting availability and supply of contracted capacity.

**45.0.0 ROUND TRIP EFFICIENCY (RTE) — FORMULA & LIQUIDATED DAMAGES**

**46.0.0 Guaranteed Round Trip Efficiency:**



The Contractor shall guarantee AC to AC Round Trip Efficiency (RtE) of the VRFB BESS system on monthly average basis of  $\geq 70\%$ , measured at the 132 kV Point of Interconnection (POI).

**47.0.0 RtE Calculation Formula:**

System Round Trip Efficiency = Sum Total of Actual Injection/Discharging MUs in a month (C) ÷ Sum Total of Actual Drawl/Charging MUs in a month (D)

Where:

- I. 'j' refers to the j-th month in a year
- II.  $D \neq 0$
- III. C and D shall be as per the DSM/UI Reports published by the SLDC or measurement at the Main ABT Meter at the Point of Interconnection
- IV. power consumption of integral BESS auxiliaries such as electrolyte circulation pumps, stack cooling systems, HVAC dedicated to battery/process equipment rooms, control systems, SCADA, BMS, EMS, fire protection systems, communication systems and other equipment essential for BESS operation shall be included in the RtE calculation..
- V.

**48.0.0 Liquidated Damages**

RtE Band	Consequence
60% ≤ RtE < 70% including VRFB Battery system auxiliary consumption.	LD @ APPC tariff of previous financial year of GUVNL/GIPCL per unit of excess conversion losses considering system RtE = 70%. Excess losses = $(0.70 - \text{Actual RtE}) \times \text{Total Monthly Drawl from Grid (Charging Energy in MWh)}$

The liquidity damages for each non-compliance of monthly RtE shall be deducted from each monthly O&M invoice first then from relevant Bank guarantee.

For avoidance of doubt, Liquidated Damages for Annual Average Availability and Round Trip Efficiency are mutually exclusive and independent; both shall be payable simultaneously if applicable.

**49.0.0 CAPACITY DEGRADATION & MINIMUM DISPATCHABLE ENERGY**

**Minimum Dispatchable Energy Capacity – VRFB (Constant – All 10 O&M Years):**

O&M Year	Minimum Dispatchable Energy Capacity (as % of Capacity at COD)
Year 1	100% (120 MWh)
Year 2	100% (120 MWh)
Year 3	100% (120 MWh)
Year 4	100% (120 MWh)



Year 5	100% (120 MWh)
Year 6	100% (120 MWh)
Year 7	100% (120 MWh)
Year 8	100% (120 MWh)
Year 9	100% (120 MWh)
Year 10	100% (120 MWh)

The Contractor shall be responsible for periodic electrolyte re-balancing (vanadium state-of-charge re-balancing), if required, to maintain the guaranteed 100% dispatchable capacity throughout the O&M period. This shall be at the Contractor's cost as part of the O&M scope.

**50.0.0 Discontinuation / Termination of O&M Contract Before Completion of Contract Period**

In the event of discontinuation, abandonment, or premature termination of the O&M Contract by the Bidder/Contractor before completion of the contractual period of 10 years, the outstanding EPBG (Execution Performance Bank Guarantee) available at the time of such discontinuation/termination shall be liable for forfeiture by GIPCL.

Further, GIPCL reserves the right to terminate the O&M Contract, either in whole or in part, before completion of the contractual period, by giving written notice to the Bidder/Contractor under circumstances including but not limited to poor performance, persistent non-compliance with contractual obligations, safety violations, breach of contract conditions, insolvency, abandonment of work, or any other reasons considered detrimental to the interest of the project/GIPCL. In such cases also, the outstanding EPBG and any other recoverable dues, as applicable under the Contract, shall be liable for forfeiture/recovery by GIPCL, without prejudice to any other rights and remedies available under the Contract or applicable law.

**51.0.0 LD for Capacity Shortfall at End of O&M Period:**

In case the VRFB system fails to deliver 100% of COD capacity (120 MWh) at the end of the O&M period during the final capability/handover test, Liquidated Damages equivalent to 2 years of energy shortfall at APPC rates shall be levied on the Contractor.

The Contractor shall submit an Available Energy Test Report for the Project Capacity as per IEC 62933-2-1 on an annual basis throughout the O&M period.

**52.0.0 LIMITATION OF LIQUIDATED DAMAGES**

**52.1.0** The aggregate Liquidated Damages (LD) recoverable from the Contractor under this Contract for delay in completion, annual availability shortfall, round trip efficiency (RtE) shortfall, performance guarantee shortfall, capacity degradation, and all other performance related Liquidated Damages under the Contract shall be subject to the following limits:

- a) Liquidated Damages for delay in achieving the Scheduled Commissioning Date (SCD) shall be limited to a maximum of five percent (5%) of the total EPC Contract Price excluding O&M Price.



b) Liquidated Damages for O&M performance shortfalls including but not limited to annual availability, round trip efficiency (RtE), operational performance, and capacity shortfall during the O&M Period shall be limited to a maximum amount equivalent to one hundred percent (100%) of the prevailing value of the O&M-cum-Equipment Performance Bank Guarantee (EPBG) available under the Contract at the relevant time.

c) Liquidated Damages for final capacity shortfall at the end of the O&M Period and/or failure to meet guaranteed dispatchable energy obligations shall be recoverable in addition to yearly O&M performance LDs and may extend up to the balance available value of the EPBG.

**52.2.0** The total aggregate liability of the Contractor under the Contract, whether arising under contract, tort, indemnity, breach of statutory duty, or otherwise, excluding liabilities arising due to:

- i. fraud, wilful misconduct, or gross negligence;
- ii. abandonment of work;
- iii. breach of confidentiality obligations;
- iv. infringement of intellectual property rights;
- v. third-party claims relating to bodily injury, death, or damage to property;
- vi. environmental damage, hazardous material contamination, or statutory environmental liabilities; and
- vii. statutory liabilities, penalties, and non-compliance with applicable laws and regulations,

shall not exceed one hundred percent (100%) of the total Contract Price.

**52.3.0** Recovery or payment of Liquidated Damages shall not relieve the Contractor from:

- a) its obligation to complete the Works and perform the Services in accordance with the Contract;
- b) rectification of defects and deficiencies;
- c) fulfillment of performance guarantee obligations; or
- d) any other obligations and responsibilities under the Contract.

**52.4.0** The Owner/GIPCL shall have the right to recover Liquidated Damages from:

- i. running bills;
- ii. O&M invoices;
- iii. Security Deposit / CPBG / EPBG; and/or
- iv. any other amount payable to the Contractor under the Contract.

**52.5.0** The Liquidated Damages specified under various provisions of the Contract are mutually independent and may be imposed simultaneously wherever applicable, subject to the overall limits specified herein.

### **53.0.0 CHARGING POWER & OPERATIONAL CYCLES**



GIPCL / Owner shall provide the Charging Power to the BESS Project. Charging power shall include energy for contracted capacity plus additional energy for conversion losses (at the guaranteed RtE). GIPCL will schedule charging of the BESS with equal amount of energy plus energy expected to be lost as conversion losses (determined from the guaranteed Round-Trip Efficiency of the system).

For Example: For a Project Capacity of 20 MW / 120 MWh, assuming a guaranteed RtE of 70%, GIPCL shall supply charging power to the tune of 171.4 MWh, to expect a discharge of 120 MWh as per the desired schedule is given clause 2.2.0 in Sec-1.

#### **54.0.0 Operational Cycles Per Day:**

As part of the approved operational framework, the BESS shall be operated at approximately 1.5 cycles per day, with indicative charging and discharging schedule as under:

Charging Period: 01:00 to 05:00 hrs and 09:00 to 16:00 hrs (approx. 11 hours)

Discharging Period: 06:00 to 09:00 hrs and 18:00 to 24:00 hrs (approx. 9 hours)

The above schedule is indicative and shall be finalized/modified in coordination with GUVNL based on grid requirements and operational considerations.

The maximum recovery time required to restore the BESS for functional availability between consecutive duty cycles shall not exceed 30 Minutes.

#### **55.0.0 Operational Window:**

Operational Window shall mean the expected hours/duration of system (capacity) availability on each day during the term of the Contract, excluding: (a) Maximum BESS recovery time ( $\leq 30$  Minutes); (b) Grid Outages duly certified by the Grid Operator; The Contractor shall comply with the Charging and Discharging Schedule as intimated by SLDC/GIPCL. Frequent deviations from schedule by the Contractor on account of commercial gain shall be considered a material breach of this contract.

#### **56.0.0 ANNUAL IEC 62933-2-1 PERFORMANCE TEST**

- a. The Contractor shall submit an Available Energy Test Report for the Project Capacity as per IEC 62933-2-1 on an annual basis throughout the O&M period. The following tests shall be conducted as per IEC 62933-2-1 for Class B applications:
  - I. Duty Cycle Round Trip Efficiency Test
  - II. Equipment and Basic Function Test
  - III. Available Energy Test
  - IV. Insulation Test
- b. The annual test reports shall be submitted to GIPCL within 30 days of completion of each annual test. The tests shall be witnessed by GIPCL's representative or their authorized agency.
- c. Test certificates from ILAC member signatory accredited laboratories shall be submitted for all battery cells, modules, and system-level tests as per the applicable standards specified in Volume II – Technical Specifications.
- d. PG test format shall be submitted by bidder and get it approved by GIPCL.

#### **57.0.0 DSM / UI CHARGES & REACTIVE POWER CHARGES**

#### **58.0.0 DSM/UI Charges:**



Deviation Settlement Mechanism (DSM) / UI charges, if any, shall be levied separately on the Contractor as applicable for the charging and discharging activities of the BESS. DSM/UI charges on this account shall be directly paid by the Contractor as applicable to the respective authority.

**59.0.0 Reactive Power Charges:**

Reactive power charges shall be on account of the Contractor during charging and discharging of the BESS, as per CERC/GERC regulations. The Contractor shall pay such reactive power charges directly to GETCO from time to time.

For each kVARh drawn from the grid, the Contractor shall pay at the rate determined by GERC to GETCO from time to time.

**60.0.0 Scheduling Punch-in Obligation:**

As part of scheduling of power/energy from/to the Project for discharging/charging, the Contractor will be required to punch-in their respective schedules and subsequent revisions, by themselves, at the interface of SLDC for the corridor of power flow, as per the Regulations in force, under intimation to GIPCL and in consultation with GIPCL. The Contractor shall be solely responsible for discrepancy identification and its rectification to avoid any rejection/less payment of invoices or penalty.

**61.0.0 AUXILIARY POWER — METERED CONNECTION**

- I. Power consumption of auxiliary systems not directly associated with the charging, discharging, operation, protection and control of the BESS process system — including but not limited to MCR/control room lighting, office air-conditioning, area lighting, office equipment, pantry loads and administrative facilities — shall be fed through separate metered auxiliary power connection(s). The energy consumption of such non-process auxiliary loads shall be excluded from the calculation of AC-to-AC Round Trip Efficiency (RtE) of the BESS system.
- II. However, power consumption of integral BESS auxiliaries such as electrolyte circulation pumps, stack cooling systems, HVAC dedicated to battery/process equipment rooms, control systems, SCADA, BMS, EMS, fire protection systems, communication systems and other equipment essential for BESS operation shall be included in the RtE calculation..
- III. The Contractor shall take a separate, metered connection for the Auxiliary Power load of the BESS. Cost of Auxiliary power shall be borne by the Contractor as per the GERC regulations applicable from time to time.
- IV. The BESS system shall take separate metered connection for auxiliary power consumption (for BESS monitoring, control, communications, HVAC in control room, lighting, fire protection systems, etc.) which shall not be included in the energy accounting for Round Trip Efficiency calculations.
- V. All costs related to installation, maintenance, calibration, and renewal of auxiliary power meters shall be borne by the Contractor throughout the O&M period.

**62.0.0 SCADA / OPC DATA REPORTING OBLIGATIONS**

- I. The Contractor must install necessary equipment to continuously measure BESS operating parameters (including but not limited to voltage, current, State of Charge (SoC), ambient conditions, flow rates of electrolyte, pump pressures, stack temperatures, stack currents, DC bus voltage etc.) as well as energy input into and energy output from the BESS along with Metering arrangement in accordance with extant regulations.
- II. Online arrangement shall be made by the Contractor for submission of metering data regularly for the entire period of this Contract to the SLDC, GETCO, GIPCL and the concerned Ministry or concerned agency as per applicable regulation/directions.



- III. The plant SCADA should be OPC version 2.0a (or a later version including OPC UA) compliant and implement appropriate OPC-DA server as per the specification of OPC Foundation. All data should be accessible through this OPC server for providing real time online data (BESS parameters) to GIPCL. This time series data shall be available from the Project SCADA system to facilitate monitoring and should include daily, monthly and annual report generation for performance monitoring.
- IV. Web-based monitoring should be available, which should not be machine dependent. The web-based monitoring should provide the same screens as available in the plant. Also, it should be possible to download reports from a remote web-client in PDF or Excel format.
- V. Reports on metering parameters on monthly basis, and/or as required by regulation/guidelines, shall be submitted by the Contractor to GIPCL/GETCO/SLDC for the entire Term of the O&M Contract.
- VI. The Contractor shall provide the following monitoring data to GIPCL:
  - a. 15-minute logs of real and reactive power, frequency, transformer tap position, bus voltages, Main Meter and Back-up Meter Readings
  - b. BESS State of Charge (SoC) at 15-minute intervals
  - c. Electrolyte flow rates, tank levels, stack parameters at 15-minute intervals
  - d. Any unusual conditions found during operation/inspections
  - e. Chart and printout of event loggers for system disturbances/outages
  - f. All records shall be preserved for a period of 36 months

#### **63.0.0 10-YEAR O&M SCOPE AND DELIVERABLES**

The Contractor shall provide comprehensive Operation & Maintenance (O&M) of the complete 20 MW / 120 MWh VRFB BESS system for a period of ten (10) years from the date of successful commissioning (COD). The O&M scope shall include but not be limited to the following:

#### **64.0.0 O&M Scope – BESS Specific:**

- I. Complete O&M of VRFB battery stacks, electrolyte tanks, piping, pumps, valves, and associated mechanical systems
- II. O&M of Battery Management System (BMS), Energy Management System (EMS), SCADA, Power Conditioning System (PCS), and all C&I systems
- III. Electrolyte management including state-of-charge monitoring, re-balancing (if required), and electrolyte quality testing
- IV. Preventive and corrective maintenance of all VRFB components including stack membranes, electrolyte pumps, flow controllers, and associated instrumentation
- V. Annual performance testing as per IEC 62933-2-1 (Available Energy Test, RtE Test)
- VI. Fire protection system maintenance and testing

#### **65.0.0 O&M Scope – Electrical Systems:**

- I. O&M of Power Conditioning System (PCS) / Power Conversion System including inverters, transformers, HT/LT switchgear
- II. Maintenance and testing of protection relays, metering equipment, and communication systems
- III. O&M of 132 kV switchyard integration works (revival of existing infrastructure done under EPC scope)
- IV. Grid compliance activities including SLDC coordination, scheduling, and DSM compliance

#### **66.0.0 O&M Scope – Civil & General:**



- I. Civil maintenance of BESS complex buildings, control room, roads, drains, fencing, and boundary wall
- II. Housekeeping, security, and general maintenance of BESS plant premises
- III. Maintenance of fire detection, suppression, and alarm systems

**67.0.0 Key O&M Deliverables:**

- I. Monthly Performance Report certified by Contractor and countersigned by Owner's representative; Daily operational parameters including: Declared Capacity, scheduled injection, actual injection, Plant Availability Factor, Auxiliary Power Consumption, Round Trip Efficiency
- II. Annual Performance Test Report (IEC 62933-2-1)
- III. Annual Certificate of Plant Availability jointly signed by Owner and Contractor
- IV. Training of GIPCL operators and engineers (at least one structured training per year)
- V. Quarterly safety compliance certificate
- VI. Attendance register of Contractor's staff for the relevant period
  - a. Contractor shall take entire system O&M and guarantee/warranty (except Power Transformer owned by GIPCL) during the O&M period. The mandatory spares required for the BESS system and for the associated electrical system shall be part of the project CAPEX considering 10-year O&M spares requirements.
  - b. At the end of the O&M period, the Contractor shall hand over the BESS system to GIPCL in good working condition, having met all performance guarantees. A detailed handover report and final performance test shall be conducted as per GIPCL's requirements.

**68.0.0 O&M PAYMENT CEILING, ESCALATION & LD RECOVERY**

**69.0.0 O&M Payment Ceiling:**

The O&M charges shall not exceed zero point eight percent (0.80%) of the Total EPC Contract Value per annum. Any annual escalation in O&M charges shall be limited to a maximum of two point Five percent (2.5%) per annum as quoted by the Bidder in the O&M Price Bid.

**70.0.0 O&M Payment Structure:**

Subject to the receipt of the O&M Performance Bank Guarantee by GIPCL, the Yearly Operating Fee shall be paid monthly equivalent to the portion of the Yearly Operating Fee due in such month. Each such monthly operating fee shall be paid within 30 (thirty) days of receipt of following documents for the previous month from the Contractor by GIPCL duly certified by Owner's representative:

- Invoice
- Satisfactory monthly maintenance completion certificate
- Monthly maintenance plan vs. actual maintenance work performed
- List of consumables supplied
- Daily operational parameters for the month (Declared Capacity, scheduled injection, actual injection, Plant Availability Factor, Auxiliary Power Consumption, Round Trip Efficiency)
- Certificate of Annual Plant Availability (for the month and year-to-date) jointly signed by Owner and Contractor
- Attendance register of Contractor Staff for the relevant period

**71.0.0 LD Recovery Mechanism during O&M:**



Liquidated Damages for performance shortfalls (availability, RtE) shall be recovered by GIPCL through deduction from monthly O&M payment bills (up to 25% of annual O&M contract value per deduction); excess recovery via the O&M cum Equipment Performance Bank Guarantee.

- i) The Contractor shall furnish O&M cum Equipment Performance Guarantee (EPG) (EPBG) equivalent to 5% of EPC Contract price (Excluding O&M) ; furnished at least 15 days prior to the commissioning; valid until 90 days after O&M period; reduces 2.5% of EPG per year from Year.

**TABLE C: O&M cum Equipment Performance Bank Guarantee (EPBG) SCHEDULE**

Sl.	Activity	Amount	Timing
1	Submission	5% of Main Contract Price (excl. O&M and GST)	Furnished at least 15 days prior to the commissioning; valid until 90 days after O&M period;
2	Partial Release (Annual)	2.5% of EPG per year subject to performance parameters & non-applying of LD. In case of LD applied and BG encashment required, then the BG will be recouped accordingly.	From 2nd year to the end of each year of successful operation up to total O&M period (10 years)
3	Discontinuation of O&M Contract by Bidder Before Completion of Contract Period (10 Years)	In the event of discontinuation or premature termination of the O&M Contract by the Bidder before completion of the contracted period of 10 years, the outstanding EPBG (O &M cum Equipment Performance Bank Guarantee) available at the time of such discontinuation/termination shall be liable for forfeiture by GIPCL.	
3	Final Release	Remaining EPG amount	At end of 10th-year O&M period on satisfactory VRFB performance including at time of handover to Owner



#### **72.0.0 Bill payment & Disputed O&M Bills:**

Normally payment shall be paid within 30 days. If GIPCL disputes an O&M invoice amount, it shall pay 50% of the invoice amount while raising a Bill Dispute Notice within 30 days. The Bill Dispute Notice shall set out: (i) the details of the disputed amount; (ii) GIPCL's estimate of what the correct amount should be; and (iii) all written material in support. The undisputed 50% shall be released without delay.

#### **73.0.0 Grid Synchronization (Pre-requisite, Not Commissioning)**

60 days preliminary + 30 days final written notice to GIPCL, SLDC, GEDA, GETCO, and GUVNL before intended synchronization date.

Synchronization happens only after approval of synchronization scheme by the concerned substation/grid authority and verification by grid authorities.

#### **74.0.0 PART COMMISSIONING CONDITIONS**

Part commissioning of the Project shall be permitted in a maximum of three (3) instalments:

- Minimum capacity for the 1st part: 50% of Project Capacity (i.e., 10 MW / 60 MWh) first instalment minimum
- 2 subsequent instalments for the balance capacity
- Total number of instalments shall not exceed 03

The Scheduled Commissioning Date (SCD) will not be altered due to part commissioning. Irrespective of the dates of part commissioning or full commissioning, the EPC Contract and O&M obligations shall remain in force for the full Term.

#### **75.0.0 Commissioning**

Submission of required documents GIPCL and to GEDA, with advance intimation. submits charging approval and all applicable approvals/documents to GEDA. GEDA certifies commissioning only after verification of submitted documents. Part commissioning is also certified by GEDA. GEDA may provisionally certify commissioning on the actual date after witnessing rated capacity in operation with energy flowing into/out of the grid — subject to final certification after full document verification. Commissioning is witnessed by a Committee constituted by GEDA, comprising officials of DISCOM/GETCO. Project is considered commissioned when — all equipment as per rated Project Capacity is installed, synchronized with grid, all required parameters demonstrated, and certified by GEDA.

DLP explicitly shall be 18 months from Completion or 12 months from OAT, whichever earlier

#### **76.0.0 OAT Procedure and Acceptance, PG Test and O&M Commencement**

OAT shall establish that the BESS meets the functional, operational, safety and performance requirements specified in the contract, including rated capacity, response time, system integration, operational stability and all applicable performance parameters.

First Attempt: OAT shall be conducted within 30 days from commissioning. Upon successful completion, the PG Test Period and O&M Period shall commence from the start date of OAT.

Failure in First Attempt: The Contractor shall be allowed up to 30 days for corrective actions. The second OAT shall be conducted immediately thereafter, or earlier at the Contractor's request. The PG Test Period and O&M Period shall commence from the start date of the second OAT.

Failure in Second Attempt: A penalty equal to 1% of the EPC Contract Price shall be levied. The PG Test Period and O&M Period shall commence from the start of the second OAT, irrespective of the OAT result.



Subsequent Attempts: Additional attempts may be permitted at GIPCL's discretion without further penalty. If the Contractor successfully completes OAT in the third attempt, the penalty deducted earlier shall be refunded. If the Contractor fails in the third attempt, the penalty shall remain deducted.

Deemed Start of O&M: Notwithstanding the above, the O&M Period shall be deemed to commence from the earlier of successful completion of OAT or 60 days from commissioning.

#### **77.0.0 Liquidated Damages for Delay in Commissioning:**

- Delay beyond SCD: LD @ 0.5% of Contract Price per week on the un-commissioned portion; Maximum LD Cap: 5% of total Contract Price (Excluding GST)
  - If SCD is passed by 9 months for un-commissioned capacity, the system capacity shall stand reduced/amended to the Project Capacity commissioned, the entire CPBG shall be encashed by GIPCL, and the EPC Contract for the Project shall stand terminated for the balance un-commissioned capacity
- For avoidance of doubt, LD provisions shall be applicable even in cases where no capacity (i.e., 0 MW) is commissioned by SCD.

#### **78.0.0 Performance Guarantee Test Period**

The PG Test Period shall commence as specified above. During the PG Test Period, BESS performance shall be evaluated against rated power and energy capacity, system availability, round trip efficiency (where specified in the technical specifications), response time and dispatch compliance. Guarantees linked to availability, RTE and performance shall become applicable from the start of the PG Test Period.

#### **79.0.0 GEDA CERTIFICATION FOR COD**

- I. The commissioning of the Project shall be witnessed by a Committee constituted by GEDA (Gujarat Energy Development Agency) which shall comprise officials of GIPCL, DISCOM/GETCO, as applicable.
- II. The Contractor shall submit the copy of the EPC Contract signed with GIPCL to GEDA and give advanced intimation to GEDA regarding commissioning of the project.
- III. GEDA may provisionally certify commissioning of the project on the date of commissioning after witnessing that the rated capacity of the project is in operation and energy is flowing into/out of the grid, subject to final certification after verification of other documents.
- IV. Declaration of COD/UCOD shall only be done by GEDA subject to the demonstration of the compliances as per the Commissioning Procedure (Volume I ECC, Clause no 23).
- V. The Contractor shall also submit the documents relating to the charging approval and other applicable approvals to GEDA, and GEDA shall certify commissioning of the project or part thereof only after verification of such documents.

#### **80.0.0 TAXES, DUTIES & LABOUR ENGAGEMENT**

##### **81.0.0 Taxes and Duties:**

The Contractor shall bear and promptly pay all statutory taxes, duties, levies and cess assessed/levied on the Contractor, its contractors or their employees that are required to be paid by the Contractor as per the Law in relation to the execution of the Contract and for supplying BESS services as per the terms of this Contract.

##### **82.0.0 GST on Energy Storage Services:**

GST levied on the energy storage service being provided by the Project, if any (as and when notified by GoI), shall be passed through to GIPCL as per the applicable provisions. Any statutory variation in



taxes/duties during the O&M period shall be dealt with as per the Change in Law provisions applicable under the EPC Contract.

### **83.0.0 CHANGE IN LAW**

#### **83.1.0 Definition of Change in Law**

"Change in Law" shall mean the occurrence of any of the following events after the Bid Due Date, resulting in any additional recurring or non-recurring expenditure by the Contractor or any reduction in the Contractor's cost:

- i. enactment, adoption, promulgation, amendment, modification, repeal, or re-enactment of any law, rule, regulation, notification, order, policy, guideline, code, or ordinance by any Government Authority;
- ii. change in interpretation, application, or enforcement of any applicable law by any competent court, tribunal, statutory authority, Government Authority, SLDC, RLDC, CEA, GERC, CERC, GETCO, or any other regulatory body;
- iii. introduction, modification, withdrawal, or change in rates of any taxes, duties, cess, surcharge, royalty, levy, GST, customs duty, or statutory charges applicable to the Works or Services under the Contract;
- iv. imposition of any new environmental, safety, grid compliance, cyber security, hazardous material handling, battery management, recycling, or disposal requirements applicable to the Project; or
- v. any change in Applicable Law affecting performance of the Contractor's obligations under the Contract.

#### **83.2.0 Exclusions from Change in Law**

The following shall not constitute Change in Law:

- a) changes in corporate tax, income tax, withholding tax, or personal taxation applicable to the Contractor;
- b) changes arising due to negligence, default, breach, or non-compliance of the Contractor;
- c) changes in market conditions, exchange rates, inflation, labour rates, material prices, freight, insurance, or financing costs; and
- d) any requirement already existing on or before the Bid Due Date.

#### **83.3.0 Notification of Change in Law**

The affected Party shall notify the other Party in writing within thirty (30) days from the date of occurrence or becoming aware of the Change in Law event, providing:

- i. details of the Change in Law event;
- ii. documentary evidence supporting the claim;
- iii. estimated financial and/or time impact on the Contract; and
- iv. proposed measures for mitigation.

#### **83.4.0 Relief for Change in Law**

Subject to verification and approval by the Owner/GIPCL, the affected Party shall be entitled to:



- a) reimbursement of the net additional cost actually incurred due to the Change in Law; and/or
- b) extension of time for performance of obligations under the Contract to the extent affected by the Change in Law.

Any financial adjustment under this Clause shall be limited only to the direct and demonstrable impact of the Change in Law and shall not include any consequential loss, loss of profit, loss of opportunity, financing cost, overhead loading, or indirect damages.

#### **83.5.0 Mitigation Obligation**

The Contractor shall make all reasonable efforts to mitigate the impact of the Change in Law event and minimize the resulting delay and additional cost.

#### **83.6.0 Decision of Owner/GIPCL**

The determination of:

- i. whether a Change in Law event has occurred;
- ii. the extent of relief admissible; and
- iii. the quantum of compensation and/or extension of time,

shall be made by the Owner/GIPCL after review of supporting documents and shall be final and binding, subject to provisions relating to dispute resolution under the Contract.

#### **83.7.0 Continued Performance**

Pending resolution of any Change in Law claim, the Contractor shall continue to perform its obligations under the Contract without interruption, so far as reasonably practicable.

#### **83.8.0 GST and Statutory Variations**

Variation in GST and statutory levies applicable on supply and services under the Contract shall be dealt with in accordance with prevailing Government regulations and shall be reimbursable/payable by the Owner/GIPCL subject to submission of documentary proof and compliance with applicable statutory provisions.

#### **84.0.0 Labour Engagement:**

The Contractor shall comply with all applicable labour laws including but not limited to the Contract Labour (Regulation and Abolition) Act 1970, Employees' Provident Funds and Miscellaneous Provisions Act 1952 (EPF Act), Minimum Wages Act, and all state-level labour regulations applicable in Gujarat. The Contractor shall be solely responsible for all labour-related obligations, disputes, and claims arising from employment of personnel for EPC and O&M activities.

The Contractor shall maintain EPF/ESI registration and shall ensure timely deposit of applicable contributions. GIPCL shall not be liable for any EPF, ESI, or other statutory obligations of the Contractor's personnel. All the statutory norms shall be followed by contractor and as per prevailing rates & conditions.