



Expression of Interest (Eoi) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under GoI's PLI Scheme

BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)

Delhi – 110 049

India

Notice for Inviting
Expression of Interest (Eoi)

for

Selection of Partner(s) for setting up GWh scale Advanced Chemistry Cell (ACC) manufacturing facility through SPV route under Government of India PLI Scheme

Eoi Ref No.: BHEL/ AA/ JV MA/Eoi/ 2021/ 002

Date: 12.10.2021



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LETTER OF INVITATION

India is progressing rapidly on the path of decarbonization through aggressive adoption of Renewable Energy (RE) with around 100 GW Installed RE capacity, while another 75 GW capacity is planned by 2022. Further, in order to ensure grid stability due to variability in RE power, demand for Energy Storage System (ESS) is expected to grow manifold in Indian market. Similarly, Government of India (GoI) has announced Faster Adoption and Manufacturing of Hybrid and Electric vehicle (FAME)-II scheme to promote adoption of Electric Vehicles (EVs).

NITI Aayog, the public policy think tank of GoI has projected a battery demand of 107 GW-260 GW in India by 2030. To meet the demand and stimulate the establishment of Advance Chemistry Cell (ACC) manufacturing capacity in India, GoI has announced the Production Linked Incentive (PLI) scheme.

Bharat Heavy Electricals Limited (BHEL) is a leading state-owned company wherein GoI's shareholding is 63.17%. BHEL intends to diversify its business offerings to sunrise sectors such as Battery Energy Storage Systems etc. GoI's PLI scheme for setting up Advance Chemistry Cells (ACC) manufacturing plant(s) will be advantageous to both BHEL and prospective Partner(s) to take advantage of the scheme by participating in the upcoming Request for Proposal ("RFP") likely to be issued by GoI by end October 2021. Further, Draft Model Bid Document version#1 ("DMBD") on National Programme on Advance Chemistry Cell Battery Storage has been issued by NITI Aayog on November 11, 2020 (refer:<https://www.niti.gov.in/sites/default/files/2020-11/Model-Bid-Documents-ACC.pdf>).

BHEL intends to participate in the PLI scheme for setting up Advance Chemistry Cells (ACC) manufacturing plant by forming consortium with equity Partner(s): (i) Technology owner with experience of manufacturing ACC and (ii) Off-take Partner for assured off-take of ACC/batteries.

In view of above, BHEL seeks response from prospective Partner(s) meeting the requirements of this EoI and willing to participate in GoI's upcoming RFP for "Setting up GWh scale Advanced Chemistry Cell Manufacturing Facility" in consortium with BHEL. BHEL intends to bid for minimum 5 GWh capacity. However, actual manufacturing capacity for bidding will be decided in consultation with selected consortium Partner(s).

As per the DMBD, in the event the consortium is declared as the selected bidder and awarded the project, the consortium members shall form a Special Purpose Vehicle (SPV) company under the Indian Companies Act, 2013. The SPV shall also enter into a Tripartite Agreement with the Government and the State Government for availing additional incentives within 60 days of letter of award. Further, the SPV will also be required to enter into an agreement with the Government for availing the subsidy and specifying the details of implementation of the Project ("Programme Agreement") within 30 days of signing of Tripartite Agreement.

The SPV company will set up and operate Advanced Chemistry Cell (ACC) manufacturing facility of allotted capacity if successful in the bidding process and manufacturing capacity is allotted to the consortium by GoI. Suggested scope of each consortium Partner is mentioned in Annexure- 5.



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Definition of Advanced Chemistry Cell (ACC) shall be as per Gol's Gazette notification dated 09.06.2021 attached as Annexure-8.

The interested parties can apply against any or both of below categories:

- a. Category I: Technology Partner - Companies having technology to design/ engineer, manufacture, test, assemble and service ACC.
- b. Category II: Off-take Partner- Consumer of ACC/batteries viz. electric vehicle manufacturers, Battery Energy Storage System (BESS) developers, telecom operators, consumer electronics manufacturers, power sector companies etc.

The proposed SPV company should have the capability to design, engineer, manufacture, test, supply and provide services after sales of ACC meeting the parameters laid down in Gol's DMBD / RFP and further commitments made in the bid against stipulated conditions as per DMBD/ RFP. The terms and conditions of Joint Bidding Agreement will be mutually discussed and finalized before bidding. Other definitive documents including long-term business plan, SPV Agreement, Memorandum of Association, Articles of Association etc. shall be mutually agreed upon.

The proposed SPV company may have maximum 3 parties (including BHEL).

Manufacturing facility and the ACC should meet the requisite national/ international quality and testing standards as mentioned in Schedule-D of DMBD / as required in upcoming RFP. Cells/ battery packs produced by SPV company should be cost competitive as per market levels.



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SECTION-1
DISCLAIMER

The information contained in this Expression of Interest (EoI) document provided to the prospective Partners, by or on behalf of Bharat Heavy Electricals Limited (BHEL) or any of its employees or advisors, is provided to the prospective Partner on the terms and conditions set out in this EoI document and all other terms and conditions subject to which such information is provided.

1. The purpose of this EoI document is to provide the prospective Partner with information to assist the formulation of their proposal. This EoI document does not purport to contain all the information each prospective Partner may require. This EoI document may not be appropriate for all persons, and it is not possible for BHEL, its employees or advisors to consider the business/investment objectives, financial situation and particular needs of each prospective Partner who reads or uses this EoI document. Each prospective Partner should conduct his own investigations and analysis and should check the accuracy, reliability and completeness of the information in this EoI document and where necessary obtain independent advice from appropriate sources.
2. BHEL, its employees and advisors make no representation or warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of the EoI document.
3. BHEL may, in its absolute discretion, but without being under any obligation to do so, modify, amend or supplement the information in this EoI document.
4. The issue of this EoI does not imply that BHEL is bound to select and shortlist any or all the prospective SPV Partner(s). Even after selection of suitable prospective SPV Partner BHEL is not bound to proceed ahead with the prospective SPV Partner and in no case be responsible or liable for any commercial and consequential liabilities in any manner whatsoever.
5. The prospective SPV Partner shall bear all costs associated with the preparation, technical discussion/presentation and submission of response against this EoI. BHEL shall in no case be responsible or liable for these costs regardless of the conduct or outcome of the EoI process.
6. Canvassing in any form by the prospective SPV Partner or by any other agency on their behalf shall lead to disqualification of their EoI.



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SECTION-2

SCHEDULE OF Eoi PROCESS & CONTACT DETAILS

A. SCHEDULE OF Eoi PROCESS

The schedule of activities during the Eoi Process shall be as follows -

Sl. No.	Description	Date
1	Issue of Eoi document	12.10.2021
2	Pre-bid meeting (virtual)	20.10.2021
3	Issue of clarifications on queries received in the pre bid meeting	23.10.2021
4	Last date of submission of Eoi response	02.11.2021

B. CONTACT DETAILS:

Deputy General Manager (CTM)
Corporate Technology Management,
Bharat Heavy Electricals Limited (BHEL),
BHEL House, Siri Fort, New Delhi 110049
Tel: +91-11- 66337213 / 66337375
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SECTION – 3

DETAILS OF EXPRESSION OF INTEREST (EoI)

3.1 ABOUT BHEL

BHEL is a leading state owned company, wherein Government of India is holding 63.17% of its equity. BHEL is an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing organization in India, catering to the core infrastructure sectors of Indian economy viz. energy, transportation, heavy engineering industry, defence, renewable and non-conventional energy. The energy sector covers generation, transmission and distribution equipment for thermal, gas, hydro, nuclear and solar photo voltaic. BHEL has been in this business for more than 50 years and BHEL supplied equipment account for more than 57% (approx. 180 GW) of the total thermal generating capacity in India. BHEL is also listed in Indian stock exchanges. BHEL has 16 manufacturing units, 4 power sector regions, 8 service centres and 15 regional offices besides host of project sites spread all over India and abroad. BHEL has its footprint in all the inhabited continents with references in 86 countries including Malaysia, Oman, Iraq, Syria Sudan, Libya, Cyprus, Malta, Afghanistan, Bangladesh, Bhutan, New Zealand etc. with cumulative overseas installed capacity of BHEL manufactured power plants nearing 10,000 MW. The annual turnover of BHEL for the year 2020-21 was around US\$ 2.3 Billion. BHEL's highly skilled and committed manpower of approx. 31000; state-of-the-art manufacturing, R&D facilities and latest technologies helped BHEL to deliver a consistent track record of performance since long. To position leading state-owned companies as Global Industrial giant and as a recognition for their exemplary performance, Government of India categorized BHEL as "Maharatna Company" in 2013.

Our ongoing major technology tie-ups include agreements with Siemens AG, Germany (for Steam Turbines, Generators and Condensers); MHI, Japan (for Pumps); MPL, Japan (for Flue Gas Desulfurization Systems); Oto Melara, Italy (for Super Rapid Gun Mount); GE Tec GmbH, Switzerland (for Steam Turbine for Nuclear Power Plant); Vogt Power International, USA (for Heat Recovery Steam Generators); Indian Space Research Organization (ISRO) (for Space Grade Lithium-Ion Cells); CSIR-IIP (PVSA based Medical Oxygen Plant); NANO Company Ltd., Korea (for SCR Catalysts); HLB Power Company Ltd., Korea (for Gates and Dampers); Kawasaki Heavy Industries, Japan (for Stainless Steel Coaches for Metros); Valmet Automation Oy, Finland (for DCS System) and Babcock Power Environmental Inc., USA (for Selective Catalytic Reduction Systems).

Currently, BHEL has three (03) operational Joint Ventures Companies namely:

- 1) BHEL-GE Gas Turbine Services Pvt. Ltd. (BGGTS) – with GE for repair & servicing of GE designed Gas Turbines;
- 2) NTPC BHEL Power Projects Private Limited (NBPPL) - with NTPC Limited for carrying out EPC contracts for Power Plants and other infrastructure Projects in India and abroad;
- 3) Raichur Power Corporation Limited (RPCL) - with Karnataka Power Corporation Limited (KPCL) for setting up of supercritical thermal power plants on build, own and operate (BOO) basis;

* **More details about the entire range of BHEL's products and operations can be viewed by visiting our web site www.bhel.com.**



3.2 MANUFACTURING FACILITIES AT BHEL:

BHEL has 16 manufacturing units, 2 Repair Units spanning across India equipped with state-of-the-art manufacturing facilities for manufacturing power plant equipment, various Industrial products and defence related products. The high level of quality & reliability of BHEL products is due to adherence to international standards by acquiring and adapting some of the best technologies from leading companies in the world, together with technologies developed in its own R&D centres.

BHEL has been associated with Indian Space Research Organisation (ISRO) for space grade Lithium Ion Battery packaging and testing. Further, BHEL has also set up state-of-the-art MWh manufacturing facility for manufacturing space grade Li-Ion cells (NCA chemistry). BHEL is continuously engaged in the R& D activities in the areas of EV chargers, Battery Management systems etc.

3.3 SCOPE OF ASSOCIATION:

Common Points for both Category I & Category II:

- 3.3.1 BHEL and prospective Partner(s) together (in consortium) shall address GoI PLI ACC scheme and submit the joint proposal against DMBD / RFP and adhere to commitments as per the submitted bid against stipulated conditions DMBD/RFP.
- 3.3.2 The purpose of SPV company formed with Partner(s) identified and selected through this EoI shall be setting up and operating the plant of allotted capacity till its useful life. SPV Partner(s) will not be allowed to cede its shareholding in the SPV company for a minimum of 5 years since commencement of production of the full manufacturing capacity.
- 3.3.3 The proposed SPV company intends to design, engineer, manufacture, test, supply and provide services after sales of Advanced Chemistry Cells and Battery Packs as per market requirements.
- 3.3.4 A provision of future scaling up capacity as market demand accelerates may be kept.
- 3.3.5 Provision of setting up multiple cell chemistry manufacturing/ assembly lines of cell/ Battery Packs to be kept.
- 3.3.6 The facility set up by SPV shall cater to various requirements in Indian and/ or Global market of various fields like E-mobility, Grid Energy Storage, Telecom, Consumer Electronics etc. The SPV company shall also undertake marketing and business development activities in all above segments and also explore new potential segments while the SPV Partner(s) will also support the SPV company in above activities.
- 3.3.7 Respondent may be a private entity, public sector undertaking or a consortium of Category-I and Category-II entities. In case of consortium, roles and responsibilities of the consortium members shall be furnished by the respondent.
- 3.3.8 While participating in the upcoming RFP, all the partners will share all costs related to bid preparation and submission such as tender fee, bid security, performance security or any other charges mentioned explicitly or incurred implicitly in the ratio of their equities.
- 3.3.9 Any penalty at any point of time if imposed by GoI or any authority shall be shared by the Partners in ratio of their equity if the default is collective. However, If the penalty is imposed on account of default from a particular Partner, then only the concerned Partner should bear the penalty.



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▪ **Category I (Technology cum investment Partner)**

- 3.3.10 BHEL is seeking response from companies possessing technology for R&D, design/ engineer, manufacture, testing, disposal of ACC and willing to invest and form SPV with BHEL to enter into business of ACC manufacturing and address GoI ACC PLI scheme.
- 3.3.11 Prospective Partner shall have minimum 25% equity participation/stake in the SPV company.
- 3.3.12 The prospective SPV Partner must possess necessary knowledge of setting up and operation of GWh scale ACC manufacturing facility. Relevant documentary evidence in support of this may be furnished in response to this EoI. Any additional document sought by BHEL during evaluation process may also be furnished to the satisfaction of BHEL.
- 3.3.13 The technology possessed by prospective SPV Partner must be non-infringing while delivering the desired performance and it must be clear from third-party Intellectual Property (IP) infringement claims.
- 3.3.14 Prospective SPV Partner must be technically competent to keep pace with advancement in ACC technology to be able to suitably adapt and upgrade to latest cell technologies.
- 3.3.15 It should be feasible to manufacture cells of different chemistries (like NMC/ NCA/LFP/LMP etc as per technology eligibility matrix specified in Gazette notification for ACC PLI Scheme for availing PLI subsidy) as per market/ customer/ application requirements with minor adjustments in the cell manufacturing line.
- 3.3.16 The prospective SPV Partner should furnish roadmap/ methodology to achieve minimum desired value addition (60% overall in 5 years, 25% in initial 2 years of production and 25% at mother unit level) as described in DMBD/RFP.
- 3.3.17 Prospective Partner should help SPV company to achieve committed scale of production as per DMBD/RFP to take full advantage of subsidy disbursement for 5 years from start of production and commencement of sale of ACC.
- 3.3.18 Prospective Partner shall make available the technology to engineer, manufacture, supply ACC (as per technology eligibility matrix of ACC PLI scheme) to SPV company.
- 3.3.19 Prospective Partner bringing assured off-take arrangements shall be preferred. Also, technology Partner can bring an off-take cum investment company along with it in consortium and such a combination shall be given preference.
- 3.3.20 Prospective Partner having long term access/ tie-up for critical raw materials required for manufacturing ACC shall be preferred.

▪ **Category II (Off-take cum investment Partner)**

- 3.3.21 Response is sought from companies who are deemed to be off-takers of Advanced Chemistry Cells/batteries, e.g. EV manufacturers, BESS, battery swapping station aggregators, developers of battery grid storage projects etc.
- 3.3.22 Minimum equity investment required from Off-take cum Investment Partner is 25%. Prospective Partner willing to invest higher equity participation in the SPV company shall be preferred.

Interested companies meeting the Pre-Qualification Criteria as given in Section-4 and ready to associate with BHEL as per broad scope/ expectations given above are invited to submit the response to this EoI.



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Upon receipt of responses against this Eoi, BHEL will review the responses to ascertain suitability of the offer and shortlist prospective SPV Partner(s) for further discussions. Detailed discussions on commercial and other terms and conditions shall be held with shortlisted prospective SPV Partner(s).

3.4 INSTRUCTIONS

- 3.4.1 **Language:** All correspondences and documents related to the Eoi response shall be in English language, provided that any printed literature furnished by the prospective Partner may be written in another language, as long as such literature is accompanied by a translation of its pertinent passages in English language in which case, for purposes of interpretation of the bid, the English translation shall govern.
- 3.4.2 The prospective Partner(s) shall abide by the terms & conditions, as applicable, of the Eoi.
- 3.4.3 All pages of the response against this Eoi shall be duly signed by the authorised signatory.
- 3.4.4 Multiple proposals from the same prospective Partner should not be submitted.
- 3.4.5 BHEL at its discretion shall inspect the prospective Partner's works/office/reference site premises for the purpose of evaluation, as deemed necessary before selection of Partner. BHEL decision in this regard shall be final.
- 3.4.6 Any prospective Partner which has been debarred/blacklisted by Central/State Governments or by any entity controlled by Central/State Governments from participating in any of their project, as on date of submission of Eoi, shall not be eligible to submit the Eoi.

3.5 CONFLICT OF INTEREST

Prospective Partner(s) shall not have a conflict of interest that affects the bidding process. Any/all prospective Partner(s) found to have a conflict of interest shall be disqualified. A prospective SPV Partner may be considered to have a conflict of interest, if:

- (a) Prospective Partner has been engaged by BHEL to provide consultancy services for the Eoi document/ tender preparation related to this project or similar projects;
- (b) Prospective Partner is an associate/affiliate (inclusive of parent firms) of a firm or an organization mentioned in subparagraph (a) above; or
- (c) Prospective Partner lends, or temporarily seconds its personnel to or utilizes services of personnel of firms or organizations which are engaged by BHEL in consultancy services for preparation of tender document or implementation of this project or any other similar project
- (d) Any other conflict of interest criteria specified in the GoI's DMBD/RFP.

3.6 PROCESS TO BE CONFIDENTIAL:

Information relating to the examination, clarification, evaluation and comparison of Eoi and recommendations shall not be disclosed to prospective SPV Partner. Any effort by prospective SPV Partner to influence BHEL in processing of Eoi or selection decisions may result in the rejection of the response against Eoi.



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3.7 MISCELLANEOUS:

3.7.1 Right to accept or reject any or all Applications:

- i. Notwithstanding anything contained in this Eoi, BHEL reserves the right to accept or reject any application and to annul the Eoi process and reject all applications, at any time without any liability or any obligation for such acceptance, rejection or annulment and without assigning any reasons, thereof. In the event that BHEL rejects or annuls all the applications, it may at its discretion, invite all eligible prospective SPV Partners to submit fresh applications.
- ii. BHEL reserves the right to disqualify any applicant during or after completion of Eoi process, if it is found there was a material misrepresentation by any such applicant or the applicant fails to provide within the specified time, supplemental information sought by BHEL.
- iii. BHEL reserves the right to verify all statements, information and documents submitted by the applicant in response to the Eoi. Any such verification or lack of such verification by BHEL shall not relieve the applicant of his obligations or liabilities hereunder nor will it affect any rights of BHEL.

3.7.2 Governing Laws & Jurisdiction:

The Eoi process shall be governed by, and construed in accordance with the laws of India and the Courts at New Delhi (India) shall have exclusive jurisdiction over all disputes arising under, pursuant to and / or in connection with the Eoi process.

3.8 BRIEF DESCRIPTION OF Eoi PROCESS:

The interested prospective Partner(s) shall ensure that their response along with below stated Annexures is received by BHEL on or before **02.11.2021**:

- i. Annexure-1- General Information
- ii. Annexure-2- Financial Information
- iii. Annexure-3A (Category-I)- Broad technical capabilities of prospective SPV Partner
- iv. Annexure-3B (Category-II)- Broad details of prospective SPV Partner
- v. Annexure-4 Reference list and details of existing projects/ manufacturing facilities
- vi. Annexure-5- Scope split
- vii. Annexure-6- Technical details of ACC technology offered by prospective Partner
- viii. Annexure-7- Details to be submitted by bidder.
- ix. Annexure-8- Gol's Gazette notification dated 09.06.2021

The response shall necessarily be accompanied with details on company background, product profile, detail of current ACC manufacturing facilities and relevant certificates and documents as per above Annexures.

In case any amendment/corrigendum to this Eoi is issued, it shall be notified only at www.bhel.com .



SECTION- 4
Pre-QUALIFICATION CRITERIA

The Prospective SPV Partner(s) willing to associate with BHEL for SPV formation should meet all of the following Qualification Criteria. The determination of eligibility will be based upon documentary evidence of the prospective SPV Partner(s) qualifications submitted as response this EoI, as well as such other information as BHEL deems necessary and appropriate.

Category I: Technology cum Investment Partner

Sl.	Requirement
1.	The prospective Partner must have manufactured and supplied minimum 1 MWh of ACC as on 12.10.2021 meeting energy density and cycle requirements specified in PLI scheme notified in GoI notification (refer Annexure-8). Performance certificates to be provided from its customer(s).
2.	The prospective Partner must have experience of design / setting up / operating a GWh scale ACC factory as on date of submission of response to this EoI. The prospective Partner must submit requisite documents in this regard.
3.	The prospective Partner must possess proven technology for R&D, design, engineering, manufacturing & testing of Advanced Chemistry Cells. Party to provide relevant supporting documents viz IPRs/test reports etc.
4.	The prospective Partner should be able to provide non-infringing technology solutions to the SPV Company.
5.	The prospective Partner should be willing to invest with equity participation (minimum 25%) in the SPV company. Bidder to ensure committed equity participation and to submit documents supporting at least 50% funding either on its own or through soft commitment from their investor/lender at the time of EoI bid submission.
6.	For bidders representing countries sharing land borders with India, rule 144 (xi) of the General Financial Rules (GFR) 2017 as per Ministry of Finance, GoI order dated 23 rd July 2020 shall apply.

Category II: Off-take cum Investment Partner

Sl.	Requirement
1.	The prospective Partner must have a minimum turnover of INR 200 Cr or net worth of INR 200 Cr in FY 2020-21.
2.	The prospective Partner should be willing to invest with equity participation (min 25%) in the SPV company. Bidder to ensure committed equity participation and to submit documents supporting at least 50% funding either on its own or through soft commitment from their investor/lender at the time of EOI bid submission.
3.	The prospective Partner to commit the off-take price at cost plus basis.



SECTION- 5

Documents to be submitted along with EoI

5.1 List of documents to be mandatorily submitted along with response to ascertain compliance of the Pre Qualification Criteria :

Sl.	Documents	Document Ref. No.	Remarks
Category-1: Technology cum Investment Partner			
1.	Performance certificates from its customer(s) for minimum cumulative 1 MWh of ACC cells meeting energy density and cycle requirements specified in PLI scheme notified in Gazette of India dated 09.06.2021 (refer Annexure 8) as on date of submission of response to this EoI.		
2.	Relevant documents viz. list of equipment, floor plan etc. regarding experience of design / setting up/ operating a GWh scale ACC factory as on date of submission of response to this EoI.		
3.	Certificates of IPRs/ test reports as per IEC or equivalent standards for Advanced Chemistry Cell.		
4.	Commitment letter from the bidder for min 25% of the equity participation in the SPV. Documents for supporting at least 50% funding either on its own or through soft commitment from their investor/lender.		
Category 2-(Off-take cum Investment Partner)			
1.	Audited financial statement of the Company ascertaining minimum turnover of INR 200 Cr or net worth of INR 200 Cr in FY 2020-21.		
2.	Commitment letter from the bidder for min 25% of the equity participation in the SPV.		



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	Documents for supporting at least 50% funding either on its own or through soft commitment from their investor/lender.		
3.	Commitment letter from the bidder for assured off-take price on cost plus basis.		

5.2 List of documents to be submitted along with the response (in addition to documents listed under 5.1).

Sl.	Document Description	Filled in Formats to be Submitted with Proposal	Remarks
1.	Covering Letter		As per attached format
2.	General information	Annexure-1	
3.	Financial Information	Annexure-2	
4.	Broad technical capabilities of prospective SPV Partner for ACC manufacturing facilities (Category-I)	Annexure-3A	
5.	Broad details of prospective SPV Partner for ACC manufacturing facilities (Category-II)	Annexure-3B	
6.	Reference list and details of existing projects/ manufacturing facilities	Annexure-4	
7.	Scope split	Annexure-5	
8.	Technical details of ACC technology offered by prospective Partner	Annexure-6	
9.	Details of offer	Annexure-7	May attach additional sheets as necessary



Section-6

Evaluation Criteria

A. For Partner applying under Category-1 only

- i. Response of prospective Partner(s) who do not meet the Pre-Qualification Requirement as per section-4 shall not be considered for evaluation.
- ii. Following evaluation methodology shall be adopted for shortlisting of prospective Partner(s). Partners who score minimum 24 marks out of Total 80 marks (8 parameters of 10 marks each) will be shortlisted for further negotiations with BHEL.

1. Commitment for equity investment in the SPV Company:

Please specify the % equity willing to take in the proposed SPV(E)- Max equity allowed in the proposed SPV is 74%.

Marks will be allotted as per following formula:

Marks= 10* E/ 74

2. Production capacity of ACC manufacturing facility in commercial operation as on the date of submission of response to this EoI (production capacity per annum)- Relevant documents to support the claim may be furnished along with response to this EoI:

a.	Gigafactory of cumulative production capacity $\geq 5\text{GWh}$	10 Marks
b.	Factory of cumulative production capacity $\geq 1\text{ GWh}$ but $< 5\text{ GWh}$	8 Marks
c.	Pilot plant or factory of production capacity $\geq 500\text{MWh}$ but $< 1\text{ GWh}$	6 Marks
d.	Pilot plant or factory of production capacity $\geq 100\text{MWh}$ but $< 500\text{MWh}$ under Development	4 Marks
e.	Pilot plant or factory of production capacity $< 100\text{MWh}$	2 Marks

3. Cells produced and subsequently sold using prospective Partner's technology (Customer credentials/certificate for the same to be submitted by Partner):

a.	Min 1 GWh (cumulative) cells produced and sold in last 3 years	10 Marks
b.	Min. 0.5 to $< 1\text{ GWh}$ (cumulative) cells produced and sold in last 3 years	6 Marks
c.	Min. 0.1 to $< 0.5\text{ GWh}$ (cumulative) cells produced and sold in last 3 years	3 Marks
d.	$< 0.1\text{ GWh}$ (cumulative) cells produced and sold in last 3 years	1 Mark



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4. ACC performance parameters (documentary evidence for commercialized product to be furnished):

ACCs		Energy Density (Wh/Kg) ~ Specific Density					
		≥50	≥125	≥200	≥275	≥350	
Cycle Life	<1000	N.A.	N.A.	N.A.	N.A.	2	
	≥1000				2	4	
	≥2000			2	4	6	
	≥4000			2	4	6	8
	≥10000			2	4	6	8

NA: Offers from respondents to the EoI in this category will not be accepted.

5. Prospective Partner has developed and tested/ under development future technologies meeting Energy Density & Cycle life requirements as per above table (Relevant documents in support of claim to be furnished):

a.	Developed, Tested & Commercialised	10 Marks
b.	Developed, Tested & Prototype ready	8 Marks
c.	Developed but under testing mode	6 Marks
d.	Under Development	2 Marks

6. Willingness to provide exclusive marketing rights:

a.	India and abroad (unrestricted)	10 Marks
b.	India and limited territories abroad	8 Marks
c.	Within India (unrestricted)	6 Marks

7. Raw Material tie-up with suppliers in place and willingness to share with SPV on mutually agreed terms (Relevant documentary evidence in support of the claim to be furnished):

a.	Tie-up for more than 5 years	10 Marks
b.	Tie-up for less than 5 years	5 Marks
c.	No tie-up	0 Marks

8. Additional marks to respondents having tie-ups for wider range of raw materials as under and willingness to share with SPV on mutually agreed terms (Marks will be added for more than one tie-ups):



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a.	Cathode	5 Marks
b.	Anode	3 Marks
c.	Separator	1 Marks
d.	Electrolyte	1 Marks

B. For Partner applying under Category-2

- i. Response of prospective Partners who do not meet the Pre-Qualification Requirement as per section-4 shall not be considered for evaluation.
- ii. Following evaluation methodology shall be adopted for shortlisting of prospective Partners. Partners who score minimum 6 marks out of 20 marks will be shortlisted for further negotiations with BHEL.

- 1. The prospective Partner shall invest equity in the SPV Company:

Please specify the % equity respondent is willing to invest in the proposed SPV
.....(E)- Max equity allowed in the proposed SPV is 74%.

Marks will be allotted as per following formula:

Marks= 10* E/ 74

- 2. Off-take agreement with proposed SPV company for procurement of ACC /batteries:

- a. Specify GWh of ACC /batteries off-take Partner is willing to procure per annum
..... GWh (P).
- b. Specify the number of years for which off-take Partner is willing to enter into off-take agreement.....(N).

Marks will be allotted as per following formula:

Marks = 10*P*N/(5*5)



Expression of Interest (EoI) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under GoI's PLI Scheme

EoI FORMS

Format for Covering Letter

[On the Letterhead of the prospective SPV Partner]



Expression of Interest (Eoi) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under GoI's PLI Scheme

To,

Deputy General Manager
Corporate Technology Management,
Bharat Heavy Electricals Limited (BHEL),
BHEL, New Delhi-110 049
India
E-Mail: jveoi@bhel.in

Ref: Submission of Expression of Interest (Eoi) against BHEL/ AA/ JV_MA/Eoi/ 2021/ 002 dated 12.10.2021.

Sir,

Being duly authorized to represent and act on behalf of..... (hereinafter referred to as "the Applicant"), and having reviewed and fully understood the evaluation criteria and information provided, the undersigned hereby applies in response to the Eoi document.

We would like to associate as SPV Partner with BHEL for setting up GWh Lithium Ion based Cell Factory.

I am enclosing the response to the Expression of Interest with the details as per the requirements of the Eoi document for your evaluation. We understand that BHEL is not bound to accept the response against the Eoi.

I hereby declare that the details furnished in this Eoi proposal are true and correct to the best of my knowledge and belief. In case any of the information is found to be false or untrue or misleading or misrepresenting. I am aware that I will be held liable for it and BHEL is free to take any legal / commercial action not limited to barring / blacklisting.

Yours faithfully,

(Signature & Seal of Authorised Signatory)

Name:

Designation:

Date:

Address:



Expression of Interest (EoI) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under GoI's PLI Scheme

Annexure-1

General Information to be submitted by applicant along with cover letter

1. Name of the Company/ Companies (if consortium):
2. Legal status of the Company/ ies:
3. Brief description of the Company/ies including details of its business groups/subsidiaries/ affiliates:
4. Date of Incorporation:
5. Date of Commencement of Business:
6. Full address including Telephone nos.:
Registered Office:
Head Office:
Address for communication:
Contact Details:
Email ID:
Single point contact (Name, Email, Mobile no. etc):
Official Website:
Office Address in India, if any:
7. Offer is being submitted for (Tick as applicable):
 - a. Category-I
 - b. Category-II
 - c. Both Category-I & Category-II
8. Documents to be enclosed:
 - a) Technical Credentials – Relevant product/system catalogues, experience /reference list, copies of customer certificates, R&D/ design/engineering/ manufacturing strengths, quality accreditations, etc.
 - b) Details of access/ Tie-up for critical raw materials required for manufacturing Li-Cells.
 - c) Financial Credentials – Copies of audited financial statements (Annual Reports) for last 3 years.
 - d) Other documents considered relevant.

Signature & Seal:
Authorised Signatory of the Party



Financial Information

Date: [insert day, month, year]

Legal Name: [insert full name]

1. Financial Data

Financial information in (INR equivalent)	Historic information for previous five years (INR. Millions) [Insert amount in INR equiv.]*		
	Year -1	Year -2	Year -3
Information from Balance Sheet			
Total Assets (TA)			
Total Liabilities (TL)			
Net Worth (NW) (TA-TL)			
Current Assets (CA)			
Current Liabilities (CL)			
Information from Income Statement			
Total Revenue (TR)			
Profit Before Tax (PBT)			

***-Exchange rate for conversion to INR shall be taken as closing TT selling rate published by the State Bank of India as on date of floating of this EoI.**

2. Financial documents

The prospective Partner shall provide copies of the financial statements including balance sheets all notes and related income statements for last three years.

The financial statements shall:

- a) Reflect the financial situation of the prospective Partner submitting EoI
 - Be audited by a certified accountant.
 - Be complete, including all notes to the financial statements.
- b) Correspond to accounting periods already completed and audited (no statements for partial periods shall be accepted).

(Signature & Seal)
Authorised Signatory of the Party



Annexure-3A (Category-I)

Broad technical capabilities of prospective SPV Partner for ACC Manufacturing Facilities

Sl. No.	Description	Response and remarks if any.
1	Whether prospective SPV Partner is willing to invest in the SPV with BHEL for ACC manufacturing.	Y/N
2	Whether prospective SPV Partner is willing to invest minimum 25% in the SPV for ACC manufacturing.	Y/N
3	How much equity participation/ stake is the prospective Partner willing to contribute in SPV company?	%
4	Prospective SPV Partner to indicate the ACC battery chemistry being offered (Please mention the technical details as per Annexure-6).	
5	Whether prospective SPV Partner has R&D, Design, Engineering, Manufacturing capabilities for ACC. (If Yes, please provide details)	Y/N
6	Whether prospective SPV Partner has the ability to transfer know-how and has the core technical team for the same.	Y/N
7	Whether prospective SPV Partner has the capability of ACC battery packaging along with Battery Management System (BMS) as per requirements/ specifications of customer (If Yes, please provide details).	Y/N
8	Whether prospective SPV Partner has an operational ACC manufacturing facility? (If Yes, please provide details)	Y/N
9	Whether prospective SPV Partner is currently supplying ACC/ Battery, for applications in Electrical Vehicles and Storage System. (Details considered relevant can be provided as attachments).	Y/N
10	Indicate % yield of your ACC Manufacturing facilities for last two years.	
11	Indicate all major cell chemistries, prospective SPV Partner has experience of working and future plans too. Details like technical specifications, cost aspects etc. may be shared.	
12	Mention all the critical raw materials required for manufacturing ACC and for which prospective SPV Partner has long term access/ tie-up.	



Expression of Interest (EoI) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under GoI's PLI Scheme

13	Whether prospective SPV Partner is part of any other existing SPV for manufacturing of ACC.	
14	Indicate the corporate long-term credit rating from CRISIL or ICRA (in case the Respondent is incorporated in India) and S&P or FITCH or Moody's (if the Respondent is incorporated in a jurisdiction other than India) from at least 2 (two) credit rating agencies ("Credit Rating").	

Signature & Seal:
Authorized Signatory of the Party



Expression of Interest (EoI) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under GoI's PLI Scheme

Annexure-3B (Category-II)

Broad details of prospective SPV Partner for ACC Manufacturing Facilities

Sl. No.	Description	Response and remarks if any.
1.	Whether prospective SPV Partner is willing to invest in the SPV with BHEL for ACC manufacturing.	Y/N
2	Whether prospective SPV Partner is willing to invest minimum 25% in the SPV for ACC manufacturing.	Y/N
3.	How much equity participation/ stake is the prospective Partner willing to contribute in SPV company?	%
4.	Details of existing business portfolio where ACC / battery packs are being consumed (annual demand, segment etc.).	
5.	Details of future business plan of business where ACC / battery packs are envisaged to be consumed (annual demand, segment etc.).	
6	Indicate minimum annual off-take in GWh that prospective Partner willing to offer to SPV company for minimum 5 years (year wise).	
7	Indicate your corporate long-term credit rating from CRISIL or ICRA (in case the respondent is incorporated in India) and S&P or FITCH or Moody's (if the respondent is incorporated in a jurisdiction other than India) from at least 2 (two) credit rating agencies ("Credit Rating").	
8	Intended use of ACC / battery pack sourced from prospective SPV.	
9	Type of ACC to be sourced from prospective SPV (Cylindrical/ Pouch/ Prismatic).	
10	Specification of ACC to be sourced from prospective SPV (Please attach a separate sheet if required).	

Signature & Seal:
Authorised Signatory of the Party



Expression of Interest (Eoi) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under Gol's PLI Scheme

Annexure -4

Reference list and details of existing projects/ manufacturing facilities

Signature & Seal:
Authorised Signatory of the Party



Expression of Interest (Eoi) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under Gol's PLI Scheme

Annexure-5

Scope Split

BHEL

1. To invest equity in the SPV ($\geq 26\%$).
2. BHEL has a large pool of skilled manpower with exposure to various aspects of energy sector including engineering, manufacturing, marketing, material management, finance etc. This manpower resource can be apportioned to SPV company with necessary upskilling & training.
3. BHEL has Pan-India presence and can support SPV company with know-how and know-why in handling logistics, supply chain and services.
4. BHEL is a Public Sector Enterprise with immense goodwill and brand value in the Indian market. Backing of BHEL to the SPV company may help to improve customer acceptability.
5. Support the SPV in marketing & business development activities.

Technology Partner

1. Invest equity in the SPV ($> 25\%$).
2. Provide latest technology to SPV company for producing ACC & battery pack as per market requirement and provide support for continual technology improvement.
3. Help the SPV company in setting up the manufacturing plant, stabilization of production and achieve desired quality and level of production.
4. Helping the SPV company in raw material tie-up.
5. Support the SPV in marketing & business development activities.

Off-take Partner

1. Invest equity in SPV ($> 25\%$).
2. Commit off-take (Plant Capacity in operation) annually from start of production as per Section-6, Clause B. ii. 2.
3. Support the SPV in marketing & business development activities.

Signature & Seal:
Authorised Signatory of the Party



Expression of Interest (Eoi) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under Gol's PLI Scheme

Annexure-6

Details of Technology offered: Technical details of ACC technology offered by prospective Partner.

1. Please mention the battery technology(ies) offered:
2. Please furnish following data for each battery chemistry offered:

Sl. No.	Technical Parameter	Unit	Data
1	Positive Electrode	Material	
2	Negative Electrode	Material	
3	Configuration	Shape	
4	Nominal Voltage	V	
5	Nominal Capacity	Ah	
6	Cell case and Lid	Material	
7	Terminal seal	Material	
8	Separator	Material	
9	Electrolyte	Material	
10	Cell Dimension	mm	
11	Cell Mass	g	
12	Energy Density	Wh/Kg	
13	Internal Resistance	mΩ	
14	Maximum Charge Voltage range	V	
15	Discharge Cut-off voltage range	V	
16	Operating Temperature range	Deg C	
17	Helium Leak rate	mBar L / Sec	
18	Capacity at different temperature range	Ah	
19	Capacity at Different discharge rate	Ah	
20	Self Discharge rate @ 25 Deg C	% per month	
21	Maximum Charge Current	C	
22	Maximum Discharge Current	C	
23	Thermal Runaway temperature in standard operating conditions using CCCV protocol	Deg C	
24	Test results as per applicable National/ International Standards from accredited labs.	As per applicable standard for EV/ ESS / Propulsion applications	
25	Safety Features	Availability	
26	Storage temperature range	Deg C	
27	Cycle Life @ 80 % DOD	Number	
28	Calendar life	Years	

Signature & Seal:
Authorised Signatory of the Party



Expression of Interest (Eoi) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under Gol's PLI Scheme

Annexure-7

Details to be submitted by bidder

A. Details of offer (Category-1):

1. Please specify the % equity respondent is willing to invest in the proposed SPV(E)- Max equity allowed in the proposed SPV is 74%.
2. Cumulative production capacity (in GWh) of ACC production facility set up by the prospective Partner which is in operation as on date of submission of response to this Eoi-Relevant documents to support the claim may be furnished along with response to this Eoi.
3. Location of production facility.
4. Sale of ACC/batteries achieved by prospective Partner in last 3 years in GWh (Customer credentials/certificate for the same to be submitted by Partner).
5. Performance of battery offered by prospective Partner (Documentary evidence for Commercialized product to be furnished):
 - a. Energy Density (in Wh/Kg):
 - b. Cycle Life (in Cycles):
6. Status of future ACC technology developed/under development by the prospective Partner (Please provide detailed writeup) – Tick as applicable

a.	Developed, Tested & Commercialised	
b.	Developed, Tested & Prototype ready	
c.	Developed but under testing mode	
d.	Under Development	

7. Willing to provide exclusive marketing rights (Tick as applicable)

a.	India and abroad (unrestricted)	
b.	India and abroad (with restrictions)	
c.	India and limited territories abroad	
d.	Within India (unrestricted)	
e.	In India with application restrictions	

8. Raw material tie-up with suppliers in place (Relevant documentary evidence in support of the claim to be furnished) (Tick as applicable):

a.	Tie-up for more than 5 years	
b.	Tie-up for less than 5 years	
c.	No tie-up	



Expression of Interest (Eoi) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under Gol's PLI Scheme

9. Status of tie-ups for wider range of raw materials (Tick as applicable):

a.	Cathode	
b.	Anode	
c.	Separator	
d.	Electrolyte	

10. **Phasing of % local Value Addition:** Prospective Partner to indicate the phasing for local value addition that will help the SPV to achieve in 5 years from the appointed date. (Prospective Partner to submit roadmap and methodology for committed local value addition)

Year	Phasing for Value Addition (%) (Respondent to fill the values)	Weightage	Remarks
Year 1	---		
Year 2		4	
Year 3		3	
Year 4		2	
Year 5		1	

$$\text{Weight} = \sum (\text{Proposed \% Value Addition} \times \text{Weightage})$$

11. **Phasing of scale of production capacity:** Prospective Partner to indicate the phasing production capacity that will help the SPV to achieve in 5 years from the appointed date. (prospective Partner to submit roadmap and methodology for committed achievement of scale of production capacity)

Year	Phasing of scale of production capacity (GWh) (Respondent to fill the values)	Weightage	Remarks
Year 1	---		
Year 2		4	
Year 3		3	
Year 4		2	
Year 5		1	



Expression of Interest (Eoi) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under Gol's PLI Scheme

B. Details of offer (Category-2):

1. Please specify the % equity respondent is willing to invest in the proposed SPV(E).
2. Off-take agreement with proposed SPV company for procurement of ACC / batteries:
 - a. Specify GWh of ACC / batteries off-take Partner is willing to procure per annum GWh (P).
 - b. Specify the no of years for which off-take Partner is willing to enter into off-take agreement.....(N).

Signature & Seal:
Authorised Signatory of the Party



Expression of Interest (Eoi) for selection of Partners for Setting up GWh Scale Advanced Chemistry Cell Manufacturing Facility through SPV route under GoI's PLI Scheme

Annexure-8

Refer following Link for

“GoI Notification dated 09.06.2021 on PLI Scheme “ NATIONAL PROGRAMME ON ADVANCED CHEMISTRY CELL (ACC) BATTERY STORAGE for implementation of giga-scale ACC manufacturing facilities in India”

<https://dhi.nic.in/writereaddata/UploadFile/ACC%20Scheme%20Notification%209June21.pdf>