

**WORKS CONTRACT FOR SUPPLY, APPLICATION AND PROVE OUT OF THIN LAYER NANO COATING SOLUTION OVER THE SURFACE OF SOLAR PANELS AT BHEL-TRICHY**



A Maharatna Company  
ISO 9001 Company  
ISO 50001 Company

**भारत हेवी इलेक्ट्रिकल्स लिमिटेड**  
**Bharat Heavy Electricals Limited**

(A Government of India Enterprise)  
Tiruchirappalli – 620 014

**WORKS CONTRACTS MANAGEMENT**

**NOTICE INVITING e-TENDER**

Dear Sir/ Ma'am,

Ref : **Tender No. 9472100035 dt.12.04.2021**

Subject : Two-part **e-Tender** inviting techno-commercial and price bids for **WORKS CONTRACT FOR SUPPLY, APPLICATION AND PROVE OUT OF THIN LAYER NANO COATING SOLUTION OVER THE SURFACE OF SOLAR PANELS AT BHEL-TRICHY.**

Kindly submit your competitive offer for the above subject work as per the tender terms and conditions given in the tender document through e-procurement portal <https://eprocurebhel.co.in> only.

1.	Scope of work	Scope of work and technical terms and conditions as per Techno-Commercial Part-I bid.
2.	Location of work	BHEL Trichy.
3.	Period of contract	<b>18 months</b> from date of Award of work at BHEL, Trichy.
4.	Last date/ time for receipt of tender	12:00 Hrs on dt. 24.04.2021
5.	Date/ time of opening of Techno-commercial bids	16:00 Hrs on dt. 24.04.2021 Change in opening date, if any, will be intimated later.
6.	Date of price bid opening	The date/ time of price bid opening will be intimated to the techno-commercial qualified tenderer separately.
7.	<b>Total EMD amount</b>	<b>₹ 37,340/- (₹ Thirty seven thousand three hundred forty only)</b> <b>(EMD is compulsory for all vendors, No EMD waiver for any vendor. Offer without EMD will be rejected)</b> <b><u>The original should be posted/couriered/given in person in a sealed cover super scribing 'Tender number/date/Part-I(A)/EMD' to the Tender Inviting Authority.</u></b>
8.	Contact details for queries related to tender	Sathese M, Dy.Manager/ WCM; 0431 257 5438; e-mail: <a href="mailto:msathese@bhel.in">msathese@bhel.in</a> Balamurugan M, Manager/ WCM; 0431 257 6757; e-mail: <a href="mailto:mbn@bhel.in">mbn@bhel.in</a>
9.	Working Area Contact details	Dr. T.Sriharsha, Manager / NGA. e-mail : <a href="mailto:sriharsha@bhel.in">sriharsha@bhel.in</a> / Ph: 0431 257 8624

Authorized Digital Signature

April 12, 2021

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**WORKS CONTRACT FOR SUPPLY, APPLICATION AND PROVE OUT OF THIN LAYER**  
**NANO COATING SOLUTION OVER THE SURFACE OF SOLAR PANELS AT BHEL-**  
**TRICHY.**

This two-part e-tender consists of the following:

**Part – I (A) :: Pre-qualification Bid**

1. Earnest Money Deposit (EMD)

**Part – I (B) :: Techno-Commercial Bid**

2. Qualifying criteria for the contract
3. Scope of work and technical terms & conditions
4. General terms & conditions of the contract
5. Annexures (I & II)

**Part – II :: Price Bid** (Vendor to quote the price in e-procurement portal as per reference price bid format enclosed as Annexure-III)

**Special Instructions to the bidders:**

- EMD should be submitted as per Part-I(A)/Prequalification Bid/EMD. Techno-commercial bid will be considered only, if the Part-I(A)/Prequalification Bid/EMD is valid. EMD in any other form and tender without EMD will be summarily rejected.
- In case of offline payments, the hardcopies of Earnest Money Deposit (EMD) document/ DD submitted to WCM/BHEL and the soft-copies uploaded at the time of online bid submission should be the same, otherwise the tender will be summarily rejected.
- Bidder should arrange for the EMD as specified in the tender. The original should be posted/couriered/given in person in a sealed cover super scribing 'Tender number/date/Part-I(A)/EMD' to the Tender Inviting Authority.
- Any deviation to this tender terms & conditions, and schedules of this tender will lead to total rejection of the offer submitted.
- Tenderer who have been suspended or black listed or issued with "Show Cause Notice" by BHEL, Tiruchirappalli -620014 or any other unit or GOI will not be allowed to participate in the tender, and bidder should declare the same in the tender. Even during the course of evaluation/ finalization of tender if it is found that some of the parties are black listed/ barred from business transaction/ under business hold, BHEL will not consider them for further participation in the tender.
- Should a tenderer find discrepancies or omissions in the tender documents, or should there be any doubt as to their meaning, he should at once address the authority inviting the tender, for clarification well before the due date, so as to submit his tender in time. No extension of time shall be given for submission of the tender on any account.
- Rates should be quoted as per the Work / Rate schedule (Price bid/Part –II). Rates quoted in any other form will not be accepted, and will be rejected.
- The tender must be signed separately and legibly by Partner/ Director of the Firm or by the person holding the Power of Attorney on behalf of the Firm concerned. In the latter case, a copy of Power of Attorney, duly attested by a Notary Public must accompany the tender.
- If a tenderer deliberately gives wrong information in his tender or creates conditions favourable for the acceptance of his tender, the BHEL will reject such tender at any stage.
- Words imparting singular number shall be deemed to include plural number and vice-versa where the context so requires.
- Canvassing in any form in connection with tenders is strictly prohibited and the tenders submitted by the Contractors who resort to canvassing will be liable for rejection.



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- Should a Tenderer's or a Contractor's or in the case of a firm or company of contractors/any of its shareholder's or shareholder's relative is employed in BHEL, the authority inviting the tenders shall be informed in writing of this fact at the time of submission of the tender, failing which the tender may be disqualified, or if such fact subsequently comes to light, the contract may be cancelled.
- The tender schedule, and the tender shall be deemed to form an integral part of the contract to be entered into for this work.
- Tenderer shall sign the tender documents for having accepted the conditions and upload in e-procurement portal.
- Tender can be cancelled at any stage due to unavoidable circumstances.
- Kindly ensure that the total size of the scanned documents to be uploaded remains minimum. If required, documents may be scanned at lower resolutions say at 150 dpi. However, it shall be sole responsibility of bidder that the uploaded documents remain legible.
- Bidder are advised not to wait till the last minutes or last few seconds w.r.t tender closing time to submit their offer to avoid complications related with internet connectivity / network problem/ power failure etc.
- Bidders are advised take due care while quoting the technical and price bids forms in the e-procurement system. Bidders, those who tampers with tendering procedure affecting ordering process **or** misusing the technical information of the tender document **or** withdrawing their offer after price bid opening, will be penalized as per BHEL guidelines on suspension of business dealings with suppliers/ contractors. Abridged version of the guideline is available in [www.bhel.com](http://www.bhel.com).
- It is advised that all the documents to be submitted are kept scanned or converted to PDF format in a separate folder on your computer before starting online submission.
- The bidder has to upload the scanned copy of all the mentioned original documents (in colour) during online bid-submission.
- In case you are not in a position to submit the offer, please send letter suitably specifying the reasons thereof.

Thanking you,

For **Bharat Heavy Electricals Limited**

**M Sathese**

Dy. Manager / Works Contracts Management,

3rd floor, 24 Building,

B.H.E.L., Tiruchirappalli – 620 014, Tamilnadu.

Phone: 0431-2575438,

Email: [msathese@bhel.in](mailto:msathese@bhel.in)

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**PART – I (A)**

PRE-QUALIFICATION / EMD

**1 EARNEST MONEY DEPOSIT (EMD)**

**1.1 EMD AMOUNT:** Refer page 1 of this tender document

- 1.1.1 EMD given by all unsuccessful tenderers will be refunded after award of contract.
- 1.1.2 EMD shall not carry any interest.
- 1.1.3 EMD of successful tenderer will be retained as part of Security Deposit.

**1.2 MODES OF DEPOSIT OF EMD AMOUNT:**

The EMD may be accepted only in the following forms:

- 1.2.1 Electronic Fund Transfer credited in BHEL account (before tender opening) - Online Payment procedure for EMD and SD amount attached (Annexure – I) for vendors' reference.
  - 1.2.2 Demand draft, in favour of BHEL, Trichy-14 payable at Trichy (along with offer).
  - 1.2.3 Fixed Deposit Receipt (FDR) issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (**FDR should be in the name of the Contractor, a/c BHEL and backside sign & seal on Revenue Stamp without fail.**)
  - 1.2.4 In addition to above, the EMD amount in excess of ₹2 lakhs (TWO LAKHS) will also be accepted in form of Bank Guarantee from scheduled bank, provided the Bank Guarantee is valid for at least six months from the due date of tender submission. For instance, if EMD amount is ₹2,50,000/-, BG can be submitted for ₹50,000/- and rest ₹2,00,000/- to be submitted through other modes mentioned above.
- 1.3 FORFEITURE OF EMD:**
- EMD by the tenderer will be forfeited along with applicable GST as per tender documents if:
- 1.3.1 After opening the tender and within the offer validity period, the tenderer revokes his tender or makes any modification in his tender which is not acceptable to BHEL.
  - 1.3.2 The Contractor fails to deposit the required Security deposit or commence the work within 15 days of LOI/ WO/ Contract.
  - 1.3.3 EMD by the tenderer shall be withheld in case any action on the tenderer is envisaged under the provisions of extant "Guidelines on Suspension of business dealings with suppliers/ contractors" and forfeited/ released based on the action as determined under these guidelines. Abridged version of the guideline is available in [www.bhel.com](http://www.bhel.com).

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**PART – I (B) TECHNO-COMMERCIAL BID**

**2 QUALIFYING CRITERIA FOR THE CONTRACT**

S. No	CATEGORY	DETAILS
2.1	<b>EARNEST MONEY DEPOSIT (EMD)</b> EMD AMOUNT: <u>Refer page 1 of this tender document</u>	Refer Part-I (A)
2.2	<b><u>STATUS OF THE COMPANY</u></b> o Proprietorship: PAN card on owner name o For partnership firms: PAN card <u>and</u> PARTNERSHIP DEED o For others: PAN card in the name of company / firm / business <u>and</u> CERTIFICATE OF INCORPORATION / MOA <u>and</u> AOA.	copy to be uploaded in eprocurebhel.co.in portal mandatory document.
2.3	<b>TECHNICAL COMPETENCE:</b> Bidder shall have supplied and coated with nano-coating for arresting or minimizing deposition of dust layer at least ONE solar plant of minimum 5 kWp generation capacity OR supplied and coated at least 50 nos. of solar panels in different plants (as on the original date of tender opening) <b>EITHER</b> (i) In India OR (ii) In at least any one country globally, The name and contact addresses of the customers to whom the above mentioned nano-coating solutions were supplied/application was done, either by the OEM or their authorized partners, to be furnished with details (like PO copies). • (Above experience other than BHEL to be supported by TDS (Tax Deducted at Source) certificate issued by the organization OR Form 26 AS OR Bank statement for transaction of payment. • Above experience from BHEL to be supported by PO/ Work Order copy) Documentary evidence (WO /Agreement/ Completion certificate) copy to be uploaded in eprocurebhel.co.in portal as mandatory document	Copy of Purchase order, work completion or completion certificate to be uploaded in eprocurebhel.co.in portal as mandatory document
2.4	Bidder shall be an OEM of nano-coating solutions or an authorized dealer. In case of an authorized dealer, the bidder shall provide necessary certificates from the respective OEM.	Copy of certificates to be uploaded in eprocurebhel.co.in portal as mandatory document
2.5	Vendor (OEM or authorized dealer) has to submit at least ONE PERFORMANCE CERTIFICATE from their customers in India or abroad, for satisfactory performance of the system, referred under clause 2.3 of Qualifying criteria for the contract mentioned above, Performance certificate as Original Certificate or E-mail directly from the customer may be submitted. The original certificate may be returned after verification by BHEL, if required. Certified copies of any technical research work completed using the vendor's product, if available, may also be submitted.	Copy of performance certificate to be uploaded in eprocurebhel.co.in portal as mandatory document)

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2.6	<p>Bidder shall supply a free sample of the nano-coating solution separately to the address mentioned below. The quantity of the supplied sample should be sufficient to coat at least 2 panels of a typical 2m<sup>2</sup> surface area each. The panel(s) coated with the samples shall be subjected to tests as per clause 12.0 Qualifying Test Conditions of Scope of work against an uncoated panel. The bidder's offer will be considered for further evaluation subject to meeting the anticipated results as per clause 12.9 of Qualifying Test Conditions of Scope of work.</p> <p>Bidder shall deliver a free sample of their nano-coating solution for trials immediately upon successful submission of the bid.</p> <p><u>Address for sending free Sample:</u>  Attention: R. Muhammad Ehsan/T. Sriharsha  Maintenance &amp; Services  Unit-II, High Pressure Boiler Plant  Bharat Heavy Electricals Limited  Trichy - 620014, Tamil Nadu, India  Phone: +91.431.257.8101/+91.431.257.8624  Attention: R. Muhammad Ehsan/T. Sriharsha  Email: muhammad@bhel.in/sriharsha@bhel.in</p>	To be agreed eprocurebhel.co.in portal
2.7	The coating shall be carried out by the OEM or their authorised dealer/representative.	To be agreed in eprocurebhel.co.in portal
2.8	BHEL reserves the right to verify the information provided by the Vendor for the referred coating application at their referred customer's works. It shall be the responsibility of the vendor to facilitate the visit of BHEL's team at their referred customer works. Travel, Board and Lodging expenses for BHEL Personnel shall be borne by BHEL. In case the information provided by vendor is found to be false/ incorrect, the offer shall be rejected. BHEL reserves the right to accept or reject the offer based on the assessment of their technical and financial capability.	To be agreed in eprocurebhel.co.in portal
2.9	No Deviation Declaration	To be agreed eprocurebhel.co.in portal

**Note:**

- At any stage, BHEL may ask for original documents and contractor has to submit the same.
- If at any stage, the document(s) submitted by contractor is/are found incorrect/ false/ manipulated, the necessary action will be taken by BHEL against contractor and business dealing with BHEL may be suspended.

**3 SCOPE OF WORK AND TECHNICAL TERMS & CONDITIONS**

**BILL OF QUANTITY, SCOPE OF WORK AND TERMS & CONDITIONS**

**A. BILL OF QUANTITY & TECHNICAL DESCRIPTION OF MACHINES**

SL No	Description of Work	UOM	QTY
1	<b>THIN LAYER NANO COATING SOLUTION OVER THE SURFACE OF SOLAR PANELS (Details enclosed)</b>	Nos	1.000

**B. SCOPE OF WORK AND TECHNICAL TERMS & CONDITIONS**

Technical Specifications for Supply, Application, and Prove-out of Thin Layer Nano-coating Solution over the surface of Solar Panels in BHEL Trichy		
Sl. No.	Particulars and BHEL Specification	Bidder's Offer (with complete Technical Details)
<b>1.0</b>	<b>Purpose &amp; Scope</b>	
1.1	Supply, application and prove-outs of a thin layer of nano-coating on the glassy surface of 2,496 solar panels. The purpose of the coating is to arrest or minimize the soiling losses due to accumulation of various kinds of dust, pollen and particulate matter, which is a function of local geography. Pre-cleaning of the panels, drying, application of the coating and post treatment, if required, are under the scope of bidder.	Bidder to note
<b>2.0</b>	<b>Solar Plant Details</b>	
2.1	Type: Grid-interactive	Bidder to note
2.2	Total capacity: 5MW <sub>p</sub>	
2.3	Total number of panels: 19,968	
2.4	Total number of PCUs (Power Conditioning Units): 8	
2.5	Capacity of each PCU: 630kVA	
2.6	Total number of panels to be coated: 2,496	
2.7	Panel rating: 250W <sub>p</sub> at STC	
2.8	Surface area of one panel: 1.64m <sup>2</sup>	
2.9	Total surface area to be coated: 4,094m <sup>2</sup> Bidder to account for additional quantities due to losses/spillage.	
<b>3.0</b>	<b>Geography of the Location</b>	
3.1	Latitude: 10° 48' 18" N	Bidder to note
3.2	Longitude: 78° 41' 08" E	
3.3	Elevation: 88m	
3.4	Wind speed (average): 2.7m/s	

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3.5	Temperature (average): 34.5°C	
3.6	Relative Humidity (average): 71.1%	
<b>4.0</b>	<b>Technical Specifications of the Nano-coating</b>	
4.1	Coating Base Compound/Material Composition (typical)	Bidder to specify
4.2	Process	
4.3	Typical crystal structure of the coating composition	
4.4	Typical particle sizes of the composition and morphology	
4.5	Estimated dry film thickness of coating layer after application on panel surface (in microns)	
4.6	Specific gravity of the liquid	
4.7	Spread rate/coverage rate	
4.8	pH value (before and after dilution)	
4.9	Design viscosity in Poise (P) (before and after dilution (if any))	
4.10	Density	
4.11	No. of coating layers required (Single/Double/Triple etc. to be specified)	
4.12	Curing time after pre-cleaning and post-application (and recoat, if any).	
4.13	Coating should not affect the transmittance of the underlying glass substrate. The nature of the coating material shall be such that it does not block the electromagnetic component of solar radiation comprising the visible, UV and IR components of the solar spectra. The coating should be most effective in the wavelength ranges from 250nm to 800nm. Bidder to enclose relevant test reports/certificates.	Bidder to submit
4.14	Coating compound shall be environment-friendly. It should not adversely affect the glass substrate. Aqueous base formulations preferable. Material Safety Data Sheets (MSDS) and broad chemical composition of the coating liquid and degreaser/cleaning solution to be submitted along with the offer. MSDS shall be in English and in line with latest shipping, safety and health/environmental regulations.	Bidder to provide
4.15	Application of coating shall not affect the qualification and type approval of crystalline silicon modules complaint to IEC 61215-1-1:2016, either physically or chemically.	Bidder to confirm
4.16	Coating layer should have resistance to weathering, abrasion, chemical and harmful electromagnetic radiations. It should withstand the local environmental conditions.	Bidder to confirm
4.17	Physicochemical, human health and environmental effects of the coating liquid to be provided in detail.	Bidder to specify
4.18	Volume of coating required for the surface area as per clause 2.9.	Bidder to specify
4.19	Bidder to enclose pertinent test certificates and product catalogues of the offered coating solution along with the offer. Any certifications or documents submitted by the bidder if found unacceptable can be rejected by BHEL.	Bidder to submit



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<b>5.0</b>	<b>Application</b>	
5.1	Surface preparation and application of coatings for surface area as per clause 2.9 shall be completed within a period of <b>45 Days</b> .	Bidder to confirm
5.2	Application shall be done only during clear weather days and at ambient environmental conditions to ensure no damage to the coating layer till curing. The days so selected shall be mutually agreed upon by both BHEL and Bidder.	Bidder to confirm
5.3	Prior to application of coating, the entire surface shall be thoroughly cleaned of all rust, grease, dirt, any solid matter etc. High pressure water jets may be employed. The surface shall be dried of any moisture using manual cleaning. Any chemical required for necessary surface preparation is in the scope of the bidder. Soft cotton clothes and other cleaning materials are under the scope of the bidder. Bidder shall ensure sufficient quantities of cleaning materials to ensure uniformity in preparation of all panels.	Bidder to confirm
5.4	Coating thickness and coverage shall be uniform across the entire surface of panel. Formation of air bubbles, droplets etc. shall be avoided.	Bidder to confirm
5.5	BHEL will ensure healthiness of the panels prior to coating. In case any damaged panels are encountered, BHEL will replace the same prior to coating.	Bidder to note
5.6	The coating shall be carried out with air assisted spray system. Suitable pressure spray guns shall be used to achieve consistent coverage.	Bidder to confirm
5.7	Consumption pattern/coverage rate in ml per sq.m.	Bidder to specify
5.8	The coating shall be carried out by the bidder or bidder certified applicators. Bidder to ensure direct and constant supervision during the entire period of application. Bidder shall ensure that all panels are uniformly prepared, treated and coated as per agreed criteria of coating.	Bidder to confirm
5.9	Bidder to ensure requisite manpower to ensure completion of job in the stipulated time period.	Bidder to confirm
5.10	Necessary equipment like crawlers, scissor lifts for reachability etc. shall be under the scope of the bidder. Any automation required for the application process shall also be under the scope of the bidder.	Bidder to confirm
5.11	Hardness of the surface after coating	Bidder to specify
5.12	The coated surface shall be easy to clean with water without any special tools/equipment after application.	Bidder to confirm
5.13	BHEL personnel will carry out inspections during the application process. Any rework or repair suggested by BHEL inspectors shall be completed by the bidder.	Bidder to confirm
5.14	Typical cleaning frequency post-application (suggestive)	Bidder to specify

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5.15	Typical life expectancy of the coated surface.	Bidder to specify
5.16	Dry Film Thickness (DFT), humidity and temperature to be monitored monthly for a period of 3 months after application.	Bidder to confirm
5.17	Bidder shall ensure cleanliness of work and storage spots. Any waste generated shall be handled safely and disposed by the bidder as per prevalent methods and procedures.	Bidder to confirm
<b>6.0</b>	<b>Scope of Supply</b>	
6.1	Supply and application of thin layer of nano-coating solution over the surface of 2,496 solar panels to arrest or reduce the deposition of dust and other organic matter.	Bidder to confirm
6.2	Surface preparation of 2,496 panels prior to application using cleaning solutions, manual wiping and post treatment.	Bidder to confirm
6.3	Complete supply of all materials, transportation of materials to site, storage at site, handling, unpacking, disposal of packing material, providing scaffolding/supports, cleaning, surface preparation, application testing and retouching, if required.	Bidder to confirm
<b>7.0</b>	<b>Documentation</b>	
7.1	Bidder shall submit detailed product information sheets including procedures for handling, storage, and application of the proposed coating material.	Bidder to submit
7.2	Bidder shall provide all relevant performance certificates, test certificates of the supplied materials.	Bidder to confirm
7.3	All documentation shall be in English.	Bidder to confirm
<b>8.0</b>	<b>Intellectual Property Rights (IPR)</b>	
8.1	No IPR liability is assumed or accepted on account of using the product.	Bidder to confirm
8.2	If BHEL files any IPR protection arising out of the entire operation or methodology, BHEL will be the sole assignee/beneficiary in such instances.	Bidder to confirm
<b>9.0</b>	<b>Prove-out</b>	
9.1	BHEL will monitor the performance of the coated panels against uncoated lots for a period of 3 months. The electrical characteristics of the panels will be monitored and recorded PCU-wise in the SCADA system of the 5MW SPV. During this period, all panels (Coated and Uncoated) will be subjected to standard maintenance by BHEL in a routine manner.	Bidder to note
9.2	Increase in generation efficiency by a conservative 1% from the current operating conditions post application in conformance to Sl. No 2 of Milestones of Page 15 of NIT.	Bidder to confirm
<b>10.0</b>	<b>Guarantee Terms</b>	
10.1	Bidder shall guarantee the coated surface for a minimum period of 1 year from the date of application.	

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10.2	Bidder shall repair/recoat the panel surface in case of any damages within the guarantee period.	Bidder to confirm
10.3	Bidder or their nominated personnel shall carry out inspection of the coatings every 3 months for a period of 1 year after application.	
10.4	Bidder shall also repair any damage to the coated surface during the time specified in Clause 5.15 if the damage is attributed to abnormal aging of the coating which will be mutually agreed by both parties.	
11.0	<b>General Terms</b>	
11.1	Bidder is encouraged to visit the site to understand the techno-commercial requirements before submitting their offer.	Bidder to note
11.2	415V + 10% / -10%, 50HZ +/-3 Hz, 3 Phase AC power supply will be provided by BHEL at a single point near the panels. Necessary length extension of cables is under the scope of bidder.	Bidder to note
11.3	BHEL is not responsible for any loss or damage to the contractor's equipment as a result of variations in voltage frequency or interruptions in power supply.	Bidder to note
11.4	Bidder has to arrange for manpower and tool, tackles, spray guns, trolley, scissor lifts, compressors etc. for application of coating material.	Bidder to note
11.5	Water will be provided at single point at the site by BHEL free of cost. Further distribution, if required, shall be under the scope of the bidder.	Bidder to note
11.6	Boarding, lodging, accommodation, local conveyance of workmen for the entire duration shall be under the scope of the bidder.	Bidder to note
11.7	Bidder shall ensure safety of the workmen employed. They shall be provided with necessary and recommended PPE like mask, shoes etc. Any health checkup or medical attention, if required, during the work shall be under the scope of the bidder.	Bidder to note
11.8	BHEL will designate an appropriate location for storage of the supplied materials. Necessary safety precautions and containments required for safe storage of the materials are under the scope of the bidder.	Bidder to note
11.9	Bidder shall ensure safety to men and environment while handling of the materials during preparation, mixing and application of the coating.	Bidder to note
11.10	Bidder shall demonstrate the proper method of application of coating systems to BHEL personnel as training.	Bidder to note
11.11	Bidder shall comply to delivery schedules and milestone payment terms for the entire process as given in Annexure-III & IV respectively.	Bidder to confirm
12.0	<b>Qualifying Test Conditions</b>	
12.1	Bidder shall supply a free sample of the nano-coating solution for trials along with the submission of their offer.	Bidder to confirm
12.2	This trial coating using the free sample submitted and its acceptance based on evaluation by BHEL is a mandatory acceptance criteria and is compulsory for all bidders participating in the tender. Non agreement to this (bidder can	Bidder to confirm

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	specify in clear terms as needed) will cause to disqualify the bidder from further participation in the tender.	
12.3	The quantity of the supplied sample should be sufficient to coat at least 2 panels of a typical 2sq.m surface area each.	Bidder to note
12.4	<p>Bidder shall deliver a free sample of their nano-coating solution for trials immediately upon successful submission of the bid.</p> <p><u>Address for sending free Sample:</u>  <i>Attention: R. Muhammad Ehsan/T. Sriharsha</i>  <i>Maintenance &amp; Services</i>  <i>Unit-II, High Pressure Boiler Plant</i>  <i>Bharat Heavy Electricals Limited</i>  <i>Trichy - 620014, Tamil Nadu, India</i>  <i>Phone: +91.431.257.8101/+91.431.257.8624</i>  <i>Attention: R. Muhammad Ehsan/T. Sriharsha</i>  <i>Email: muhammad@bhel.in/sriharsha@bhel.in</i></p>	Bidder to confirm
12.5	Bidder shall ensure that the sample is appropriately packed to avoid spillage/damage during transit while ensuring necessary safety precautions.	Bidder to note
12.6	One solar panel of typical 2sq.m surface area shall be coated with the supplied nano-coating solution.	Bidder to note
12.7	The coating shall be carried out either by BHEL (with necessary guidelines provided by the vendor) or directly by the vendor or their representatives.	Bidder to note
12.8	In case of coating by BHEL, the bidder shall detail the methodology and safety guidelines to be followed/practiced. In case the bidder wishes to do the application by themselves, they shall visit BHEL campus (at their own expenses) immediately upon submission of their bids. Bidder may also choose to bring the sample in person if that is the case.	Bidder to note
12.9	<p>The coated panel shall be subjected to the following physicochemical and electrical characterization tests alongside an uncoated panel simultaneously:</p> <ol style="list-style-type: none"> <li>1. Visual observation of water flow over the surface for confirming the claimed effects</li> <li>2. High resolution images of the coated surface for examining the surface morphology, defects and coating uniformity.</li> <li>3. Power generation characteristics of the coated panel compared with an uncoated panel under the following conditions: <ol style="list-style-type: none"> <li>a. Both panels will be mounted side-by-side in the field</li> <li>b. Power generated by both panels across a constant DC load will be recorded for a period of 5 days</li> <li>c. Panel surface temperatures will also be recorded during the same period</li> </ol> </li> </ol>	Bidder to note

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12.10	<p>Bidder's offer will be considered for further evaluation only if supplied sample:</p> <ol style="list-style-type: none"> <li>1. Clears the visual tests</li> <li>2. Shows no deformation, no micro-cracks, no islands while ensuring uniformity in the high resolution images</li> <li>3. Shows a minimum of 1% increase in power generation over the uncoated panel under all environmental conditions</li> <li>4. Does not show any abrupt local temperature variations post coating</li> </ol>	Bidder to note
12.11	Bidder is welcome to observe/participate in the testing process (at their own expenses).	Bidder to note
12.12	The test results as observed by BHEL shall be considered final and binding.	Bidder to confirm
12.13	The bidder will be provided one additional opportunity to re-coat the surface in the event of not meeting BHEL test criterion, if they so wish. In such a case, the bidder shall ensure that the process is completed within 5 working days.	Bidder to confirm
12.14	BHEL reserves the right to confidentiality of the test results.	Bidder to confirm
12.15	Bidder, upon successful tendering process, shall ensure that the final delivered volume of coating solution is exactly the same as the tested sample. BHEL reserves the right to randomly test the supplied volume for conformance.	Bidder to confirm
12.16	Details on SERVICE-AFTER-SALES Set-up in India including the Address of Agents/Service Centers in India.	Vendor to specify
12.17	Any additional data to supplement the application capability of the BIDDER for the subject requirement.	Vendor to specify
12.18	The Technical Offer shall be supported by copies of product Catalogues, Data Sheets and technical details of Bought-Out Items.	Vendor to comply
12.19	Performance Certificate from (Vendor name)	Vendor to specify
12.20	Month and Year of Supply/Application	Vendor to specify

**C: Delivery Schedule:**

Sl. No.	Milestones	Delivery Dates
1	Supply of coating materials/solutions as per agreed specifications at BHEL, Trichy	2 months from the date of confirmation of WO
2	Pre-cleaning and coating of 2,496 panels	45 days from the date of receipt of materials at BHEL, Trichy

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3	Successful prove-out of energy yield increase by 1% in coated panels against un-coated panels.	3 months from the date of completion of coatings
4	1st inspection (and repair/recoat, if required) of the coatings as per 10.0 Guarantee Terms of Scope of work	Within 3 months from the date of completion of coatings
5	2nd inspection (and repair/recoat, if required) of the coatings as per 10.0 Guarantee Terms of Scope of work	3 months from the date of 1st inspection
6	3rd inspection (and repair/recoat, if required) of the coatings as per 10.0 Guarantee Terms of Scope of work	3 months from the date of 2nd inspection
7	4th inspection (and repair/recoat, if required) of the coatings as per 10.0 Guarantee Terms of Scope of work	3 months from the date of 3rd inspection

**LIQUIDATED DAMAGES (LD)/PENALTY:**

If the contractor fails to complete the service/work as per terms & conditions of the order within the delivery schedule,

- Penalty @ 0.5 % of order value per week of delay in execution of work as per delivery schedule of scope of work or part thereof subject to maximum of 10 % of total order value.
- In case of any amendment / revision, Penalty shall be linked to the amended / revised PO value.

**PAYMENT TERMS:**

1. Payment will be made after completion of work on pro-rata basis based on actual work executed as **per following milestone completion** after acceptance and certification of Area in charge (BHEL Executive). Payment shall be made after 45 days of submission of bill complete in all respect.
2. The proof of execution of work should be submitted along with each bill (printed form with covering letter and proof for execution of work).
3. If the Contractor is not registered for any statutory obligation and not liable thereto, then a declaration shall be submitted along with offer that they are within the threshold limit / exempted.
4. No advance may be paid for operational or any other expenses.
5. Goods and Services tax will be payable extra by BHEL at prevailing rates and corresponding TDS will be made as per Government norms.
6. In case in bidder not meeting any of these milestones mentioned below, payment will be done for the milestones completed only and payment will not be done for the upcoming milestones.

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Sl. No.	Payment (% of contract value)	Milestones
1	75%	Upon receipt of coating materials/solutions as per agreed specifications at BHEL, Trichy and upon completion of pre-cleaning and coating of 2,496 panels. Penalty of 0.5% per week shall be levied in case of delay in completion.
2	5%	Upon successful prove-out of energy yield increase by 1% in coated panels against un-coated panels within a measurement period of 3 months
3	2.50%	After 1st inspection (and repair/recoat, if required) of the coatings as per 10.0 Guarantee Terms of Scope of work
4	2.50%	After 2nd inspection (and repair/recoat, if required) of the coatings as per 10.0 Guarantee Terms of Scope of work
5	2.50%	After 3rd inspection (and repair/recoat, if required) of the coatings as per 10.0 Guarantee Terms of Scope of work
6	2.50%	After 4th inspection (and repair/recoat, if required) of the coatings as per 10.0 Guarantee Terms of Scope of work
7	10%	After one year from application of coating on meeting the guarantee parameters
	<b>100%</b>	

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#### **4 GENERAL TERMS & CONDITIONS OF THE CONTRACT**

##### **4.1 PROVISION FOR START-UPS.**

- i. Start-up companies will be provided benefits and relaxation as per the latest government norms. For availing start-up benefits, relevant certificates issued by Department of Industrial Policy and Promotion shall be submitted along with the tender.

##### **4.2 REGISTRATION WITH STATUTORY BODIES**

- 4.2.1** If Company/ Firm/ Agency/ Vendor is not registered with PF, ESI and Labour License (as applicable), they will have to comply with the statutory requirements within 30 days from award of contract, otherwise their bills will not be processed.
- 4.2.2** If Company / Firm is not having valid labour License, they have to get registered immediately after award of contract, in case they are engaging more than 20 workers, and submit the same within 30 days from award of work failing to do so contract will be cancelled and BHEL will entrust the work to any other contractor at the risk and cost of the contract, and the contractor shall be liable to pay the extra expenditure.
- 4.2.3** The contractor shall have separate PF and ESI code, BHEL will not allow the contractor to remit the PF and ESI of his employees through codes of others.
- 4.2.4** Apart from furnishing the above details, self-attested copies of relevant documents/ certificates must be enclosed with the Technical Bid. If at any stage, the document(s) submitted by Contractor is/are found incorrect/false, the necessary action will be taken by BHEL against contractor.
- 4.2.5** BHEL may reject the bid or in case the contract has been awarded, then terminate the contract apart from taking any other suitable action under the contract or applicable legal provisions or BHEL guidelines including Guidelines for suspension of Business Dealings, without any liability for any compensation to the bidder if, BHEL discovers at any time that any statement made by the bidder in the affidavit cum undertaking is false, fraudulent (or) Any document submitted by the bidder was fake and forged (or) If BHEL determines in the sole discretion that any statement was aimed at deliberately misleading BHEL with a view to ensure award of the subject contract to the bidder.

##### **4.3 GOODS AND SERVICES TAX (GST)**

- 4.3.1** GST will be charged on the EMD / SD amount forfeited from the bidder at the applicable rates. GST tax Invoice will be issued to the vendor on receipt/recovery of GST amount from the vendor.
- 4.3.2** At the time of bill passing, the contractor shall submit the copy of the remitted GST challan of previous month / Quarter as proof of GST remitted to tax authorities and also a Certificate Stating that "GST Collected from BHEL has been remitted to tax authorities".
- 4.3.3** For services / supplies after implementation of New GST Return System i.e. from 01/10/2019, the following conditions will apply and contractor shall fully comply to the below points.
- 4.3.4** Response to Tenders for Indigenous contractor will be entertained only if the vendor has a valid GST registration No (GSTIN) which should be clearly mentioned in the offer. If the dealer is exempted from GST registration, a declaration with due supporting documents need to be furnished for considering the offer. Dealers under composition scheme should declare that he is a composition dealer supported by the screen shot taken from GST portal. The dealer has to submit necessary documents if there is any change in status under GST.
- 4.3.5** Contractor shall mention their GSTIN in all their invoices (incl. credit Notes, Debit Notes) and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like ERP invoice no, commercial invoice no etc., then the Invoice No. which is linked/uploaded in GSTN network shall be clearly indicated), Billed to party (with GSTIN) & Shipped to party details, item description as per PO,



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Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, Place of Supply etc.

- 4.3.6** All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).
- 4.3.7** Invoices will be processed only upon completion of statutory requirement and further subject to following:
- a. Vendor declaring such invoice in Form GST ANX-1
  - b. Receipt of Goods or Services and Tax invoice by BHEL
- 4.3.8** As the continuous uploading of tax invoices in GSTN portal (in GST ANX-1) is available for all (i.e. both Small & Large) tax payers under proposed new GST Return System, all invoices raised on BHEL may be uploaded immediately in GST portal on despatch of material /rendering of services. The supplier shall ensure availability of Invoice in GST portal before submission of invoice to BHEL. Invoices will be admitted by BHEL only if the invoices are available in GSTN portal (in BHEL's GST ANX-2).
- 4.3.9** In case of discrepancy in the data uploaded by the supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Contractor has to rectify the data discrepancy in the GSTN portal or issue credit note or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims, within the calendar month informed by BHEL.
- 4.3.10** In cases where invoice details have been uploaded by the vendor but failed to remit the GST amount to GST Department (Form PMT-08 or Form GST RET-01 to be submitted) within stipulated time, then GST paid on the invoices pertaining to the month for which GST return not filed by the vendor will be recovered from the vendor along with the applicable interest (currently 24% p.a) and all subsequent bills of the vendor will not be processed till filing of the GST return by the vendor
- 4.3.11** In case GST credit is denied to BHEL due to non-receipt or delayed receipt of goods and/ or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, GST amount claimed in the invoice shall be disallowed to the vendor.
- 4.3.12** Where any GST liability arising on BHEL under Reverse Charge (RCM), the vendor has to submit the invoices to BHEL well within the timeline prescribed in GST Law, to enable BHEL to discharge the GST liability. If there is a delay in submission of invoice by the vendor resulting in delayed payment of GST by BHEL along with Interest, then such Interest payable or paid shall be recovered from the vendor.
- 4.3.13** Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contractors. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Tax Invoice will be issued by BHEL indicating the respective supply invoice number.
- 4.3.14** GST TDS will be deducted as per Section 51 of CGST Act 2017 and in line with Notification 50/2018 – Central Tax dated 13.09.2018. GST TDS certificate which will be generated in GST portal subsequent to vendor accepting the TDS deduction in the GST portal, will be issued to the vendor.
- 4.3.15** In case any changes in taxes and duties as per Gov. Notification (including GST), the same shall be applicable from time to time.

**4.4 TERMS FOR PRICE BID & RATE BASIS**

- 4.4.1** Price bid is to be submitted in a separate price bid form provided in the portal.
- 4.4.2** The period of the contract can be extended if required by BHEL and agreed by contractor.
- 4.4.3** The rate quoted shall remain firm and valid throughout the contract period (including if extended on mutual acceptance, if needed) and no extra payment will be reimbursed to the contractor by BHEL. Any increase of DA/ wages to the contract labour shall be absorbed by the contractor themselves during the period of contract.
- 4.4.4** Quotation should be valid for a period of 120 days from the date of tender opening.
- 4.4.5** The quoted rate should be excluding GST and inclusive of any taxes and duties levied or to be levied both by Central and State Government authorities from time to time. Such levies should be borne by the Contractor. GST will be paid extra only on submission of documentary evidence.

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- 4.4.6** The quoted rate will be inclusive of supply of all items as per the scope of work. Any miscellaneous materials that have not been mentioned specifically in the specification/tender which are required for work, shall be deemed to be included in the specification and shall be supplied by the bidder without any extra charges. Any scope of activities which are not specifically mentioned in this specification but required for the completion of the work for safe, trouble free, normal operation shall be provided at no extra cost by the bidder, unless explicitly excluded in the specification. Any charges for the civil works/ construction materials used for the work will be in the scope of bidder.
- 4.4.7** The Contractor will have to cover their workmen under PF, ESI, Bonus Act etc. based on the above payment rate (Minimum Wage + Additional Wage).
- 4.4.8** Except applicable statutory deductions towards EPF, ESI, etc., the above stipulated wages shall be paid by the Contractor without any deductions like advance, training cost, accommodation cost, loan, etc.
- 4.4.9** The contractor should follow and comply with Minimum Wages, ESI, PF, Bonus, Group Insurance and other statutory regulations as stipulated in Factories Act and other applicable State/Central Government rules & regulations.
- 4.4.10** New vendors responding against BHEL website/ NIC/ CPPP, may visit the area of work, if they want to know the scope/ work details, and also area of work, prior to quoting.
- 4.4.11** Evaluation of the offer shall be done on the basis of delivered cost (i.e. "Total Cost to BHEL").
- 4.4.12** The vendor will be permitted to work round the clock to complete the work.

#### **4.5 RATE FINALIZATION**

- 4.5.1** Lowest prices received against BHEL Tenders need not be the acceptable to BHEL and in that case BHEL would not consider the same for award of Contract. BHEL would negotiate or re-float the Tender opened if L1 price is not the lowest acceptable price to them inter-alia other reasons.
- 4.5.2** BHEL will finalize the rates through price bid opening. Hence, Tenderers are requested to give their best prices at the first instant itself.
- 4.5.3** In the event of the final L1 prices are not reasonable/ acceptable to BHEL, BHEL also may resort to short closure of this Tender.

#### **4.6 CRITERIA FOR AWARD OF WORK**

- 4.5.1** The evaluation of offer for award of work shall be on the basis of "Total Cost to BHEL" for package-wise L1 (lowest bidder) on basis on "Net Cash outflow to BHEL after taking into account applicable Taxes and Duties.
- 4.5.2** In case of more than one L1 bidders, BHEL will get fresh revised reduced price bids from all such L1 bidders & ranking will be decided based on these revised bids. The new rates quoted should be lower than their previous L1 rates. If L1 could not be decided by this process, ranking will be decided by draw of lots in the presence of all such L1 bidders.
- 4.5.3** The quantity mentioned in BOQ / Price bid is tentative. BHEL reserves the right to increase or decrease the quantity during award of work or issue work order in phase manner as per requirement of BHEL.

#### **4.6 TERMS & CONDITIONS FOR THE CONTRACTS**

- 4.6.2 DEFINITION:** In these General Conditions of Contract, the following terms shall have the meaning hereby assigned to them, except where the context otherwise requires:
- The "Contract" means, the documents forming the Tender and acceptance thereof, together with all the documents referred to therein including general and special conditions to contract. All these documents as applicable taken together shall be deemed to form one contract and shall be complementary to one another.

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- ii. The "work" means, the work described in the Tender documents in individual work-orders as may be issued from time to time to the contractor by the Officer-In charge within the power conferred upon him including all notified or additional items of works and obligations to be carried out as required for the performance of contract.
  - iii. The "contractor" means, the individual Firm or Company whether incorporated or not, undertaking the work and shall include the legal personal representatives of such individuals or the persons composing the firm or Company or the successors of the firm or company and the permitted assigns of such individual or firm or Company.
  - iv. "The Officer-In charge" means, the Officer deputed by the Head of Indenting department (User), to supervise the work or part of the work.
  - v. "Approved" and "Directed" means, the approval or direction of Head of Indenting department (User), or person deputed by him for the particular purposes.
  - vi. BHARAT HEAVY ELECTRICALS LIMITED" (herein after referred to as BHEL) shall mean the Board of Directors, Chairman, Executive Director, General Manager or other Administrative Officer of the said Company including AGM / WCM authorised to invite tenders and enter into contract for works on behalf of the Company.
  - vii. The "Contract sum" means, the sum accepted or the sum calculated in accordance with the prices accepted in Tender and / or the contract rates as payable to the contractor for the execution of the work during the currency of the contract.
  - viii. A "week" means, Seven Days, without regard to the number of hours worked or not worked in any day in that week.
  - ix. A "day" means, the day of 24 hours (TWENTY-FOUR) irrespective of the number of hours worked or not worked in that day.
  - x. A "working day" means, any day other than that prescribed by the NEGOTIABLE INSTRUMENTS ACT as being a Holiday, and consists of the number of hours of labour as commonly recognised by good employers in the trade in the district where the work is carried out or as laid down in the BHEL regulations.
- 4.6.3 **HEADING TO THE CONTRACT CONDITIONS:** The heading to these conditions shall not affect the interpretations thereof.
- 4.6.4 **WORK TO BE CARRIED OUT:** The Contract shall, include all labour, materials, tools, plant, equipment and transport which may be required for the execution of the work. The Contractor will be deemed to have satisfied himself as to the nature of the site, local facilities of access and all matters affecting the execution of the work. No extra charges consequent on any misunderstanding in these respects or otherwise will be allowed.
- 4.6.5 **DEVIATIONS:** The contractor shall not carry out any work not covered by schedule except in pursuance of the written instructions of the respective area HOD/WCM. No such work shall be valid unless the same has been specifically confirmed and accepted by BHEL in writing and incorporated in the Contract.
- 4.6.6 **ASSIGNMENT OF TRANSFER OF CONTRACT:** The Contractor shall not without the prior written approval of the BHEL, assign or transfer the contract or any part thereof, or any share, or interest thereon to any other persons. No sum of money which may become payable under the contract shall be payable to any person, other than the contractor unless the prior written approval of the BHEL to the assignment or transfer of such money is given.
- 4.6.7 **SUB-CONTRACT:** The Contractor shall not sub-let any portion of the contract without the prior written approval of the BHEL.
- 4.6.8 **COMPLIANCE TO REGULATIONS AND BY-LAWS:** The Contractor shall confirm to the provisions of any statute relating to the work and regulations and Bye-Laws of any local authority. The Contractor

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shall be bound to give all notices required by statute regulations or By-Laws as aforesaid and to pay all fees and taxes payable to any authority in respect thereof.

**4.6.9 SECURITY DEPOSIT (SD):** Security Deposit means the security provided by the Contractor towards fulfilment of any obligations in terms of the provisions of the contract. The total amount of Security Deposit will be 5% of the contract value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit. Security Deposit has to be deposited within 15 days of LOI. Else EMD will be forfeited and may also attract the provision of "Suspension of Business dealings with Suppliers/Contractors".

**4.6.9.1 MODES OF DEPOSIT OF SD:** The balance amount to make up the required Security Deposit of 5% of the contract value may be accepted in the following forms:

- i. Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL (Online Payment procedure for EMD and SD amount attached (Annexure – I) for vendor's reference)
- ii. Bank Guarantee from Scheduled Banks/ Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL
- iii. Fixed Deposit Receipt issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL)
- iv. Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL)

BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

**4.6.9.2 COLLECTION OF SECURITY DEPOSIT**

- i. The Security Deposit must be deposited before the start of Work.
- ii. At least 50% of the required Security Deposit, including the EMD, is to be submitted before start of the work. Balance of the Security Deposit can be collected by deducting 10% of the gross amount progressively from each of the running bills of the Contractor till the total amount of the required Security Deposit is collected.
- iii. If the value of work done at any time exceeds the contract value, the amount of Security Deposit shall be correspondingly enhanced and the additional Security Deposit shall be immediately deposited by the Contractor or recovered from payment/s due to the Contractor.
- iv. The Security Deposit shall not carry any interest.

**NOTE:** After issue of LOI / Work Order, if the Contractor fails to commence the work within 15 Days or as indicated in LOI / Work Order, and do not complete the work in total as per the terms & conditions of tender, EMD / SD deposited by the Contractor will be forfeited and suitable action as per suspension of business dealing guidelines of BHEL will be taken.

**4.6.10 SUBMISSION OF BILLS BY CONTRACTOR:** Bills should be submitted within a week after execution of work during the calendar month. The Contractor shall submit a bill in triplicate detailing the various items of work done during the month supported by the requisitions issued from time to time. The Contractor shall, once in every month, submit to the end user / executing agency, separately details of his claims for the work done by him up to and including the previous month which are not covered by his contract agreement in any of the following respects:

- i. Deviation from the items provided in the contract documents.
- ii. Extra items / new items of work.
- iii. Items in-respect of which rates have not been settled. He should in addition furnish a clear certificate to the effect that the claims submitted by him as aforesaid cover all his claims and that no further claims shall be raised by him in respect of the work done up to and including the period under report.

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- iv. Tenderer has to quote rates both in figures and in words for all the items given in the Bill of Quantities provided.

Along with bills, Contractors has to furnish self-attested copy of the following documents for further processing of bills:

- v. Copy of PAN card.
- vi. Documentary proof for payment of PF/ESI (for the last month) with respect to the employees engaged by the contractor with payment details relating to individual names to be submitted.
- vii. Copy of payment challan of previous Month / Quarter as proof of deposit of GST along with a certificate from the Contractor that tax collected from BHEL has been remitted to tax authorities.
- viii. If the Contractor is not registered for any statutory obligation and not liable there to, then a declaration shall be submitted along with offer that they are within the threshold limit.
- ix. Any other relevant document which is required from time to time as per BHEL requirement.
- 4.6.11 **PAYMENT OF BILLS:** All payments to be made to the contractor, under this contract shall be through Electronic Fund Transfer (EFT) after the certification of bills by the end user / executing agency.
- i. Payment will be made after completion of work as per tender conditions on acceptance and certification of bills by respective area Executive in charge.
- ii. Payment shall be made against Certification by respective area Executive in charge.
- iii. Statutory deduction like IT etc. will be deducted from contractor payment as required by Law.
- 4.6.12 **REFUND OF SECURITY DEPOSIT:** Security Deposit will be refunded on completion of the work and after the expiry of the maintenance period, if any, provided always that the Contractor shall first have been paid the last and final bill and have rendered a "NO DEMAND CERTIFICATE". In case no maintenance period is applicable, then 100% of security Deposit will be refunded after providing "NO DEMAND CERTIFICATE" by the contractor as per format provide by BHEL.
- 4.6.13 **EXTENTION OF CONTRACT:** One or more extensions of the Contract may be done with mutual agreement between BHEL, Trichy and the approved Contractor. Such agreements shall be based on acceptance of the lowest rates and terms & conditions of the corresponding contract.
- 4.6.14 **RECOVERY FROM CONTRACTOR:** Whenever under the contract, any sum of money, shall be recoverable from or payable by the Contractors, the same may be deducted from or any sum then due or which at any time thereafter may become due to Contractor under the contract or under any other contract with BHEL or from his Security Deposit or he shall pay the claim on demand.
- 4.6.15 **POST TECHNICAL AUDIT OF WORK AND BILLS:** BHEL reserves the right to carry out the post-payment Audit and technical examination of the work and final bill including all supporting vouchers, abstracts etc., and enforce recovery of any sum becoming due as a result thereof in the manner provided in the presiding sub-paragraphs. However, no such recovery shall be enforced after three years of passing the final bill.
- 4.6.16 **PREFERENCE TO MAKE IN INDIA:** For this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/ Non Local supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.
- 4.6.17 **INCOME TAX:**
- i. Income Shall be deducted at the applicable rate in respect of the service contract including supply of labour for any work as follows:
- ii. Self-attested copy of PAN card shall be submitted to Account Dept. along with original for verification.

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- iii. TDS Certificate will be issued to vendors for each quarter ending as on 30th June, 30th Sept, 31st Dec and 31st Mar during the following quarter.

**4.6.18GST:**

- i. Wherever GST is liable to be paid by the contractor, the contractor shall register himself under the GST Rules and a Self-attested copy of Certificate of Registration shall be furnished to Account Dept.
- ii. After registration, the payment of GST shall be effected by the contractor to the Central Government monthly/quarterly based on the invoices raised before the due date of payment. The GST Return also shall be submitted to the Government before the due date.
- iii. The invoice/bill in original duly signed by the contractor claiming the payment for GST shall clearly indicate the following:
  - Continuous Serial no. & date of the bill
  - Cost of the service
  - Separately showing the GST amount calculated at the applicable rate
  - PAN based GST Registration No.
- iv. The GST claimed in the bill will be paid to the contractor based on the proof of payment of GST to the Government for the previous month/quarter as the case may be.

**4.6.19 AVAILING INPUT TAX CREDIT (ITC):** As per GST in line with new GST Return System from 1<sup>st</sup> Oct 2019.

**4.6.20 ORDERS UNDER THE CONTRACT:** All orders, notices etc. to be given under the contract shall be in writing, type-script or printed and if sent by registered post to the address given in the Tender of the Contract, shall be deemed to have been served on the date, when in the ordinary course they would have been delivered to him. The Contractor shall carry out without delay all orders given to him. Contractor shall be deemed to have included in his tender price of all the plant, machinery and appliances required for the purpose of all operations connected with the work embraced under the contract to secure a satisfactory quality of work and rate of progress which in the opinion of the "Contract Signing Officer" will ensure the completion of the work within the time specified. BHEL is having every right to split the schedule and to award the work to single or many parties on the lowest offered rates basis. This is a time bound contract for period mentioned, and does not envisage any extension of time / period.

**4.6.21CONTRACTOR'S SUPERVISION:**

- i. The contractor shall either himself supervise the execution of the contract or shall appoint a competent agent acceptable to BHEL Officials.
- ii. Orders given to the contractor's agent shall be considered to have the same force as if they have been given to the contractor himself.
- iii. The contractor or his accredited agent shall attend when required without making any claim for doing so to the Executive/WCM or OFFICER-INCHARGE, to receive instructions.
- iv. The respective area HOD have full powers and without assigning any reason, require the contractor to immediately cease to employ in connection with this contract, any agent, servant or employee where continued employment is, in his opinion undesirable. The contractor shall not be allowed any compensation on this account.

**4.6.22LABOUR:**

- i. The Contractor shall remain liable for the payment of all wages and other payments in connection with the employees engaged by him and with regard to the work.



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- ii. The Contractor shall comply with the applicable provisions of Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act. 1938, Employees Compensation Act 1923, Payment of Bonus Act, EPF and Miscellaneous Provisions Act, 1952, Employees State Insurance Act, 1948 and other relevant Acts and rules framed, there under from time to time.
- iii. Contractor shall be responsible for making payment of wages and shall ensure disbursement of wages in the presence of the authority's representative of contract operating division who shall record under his signature at the end of entries in the Register of wages.
- iv. Contractor shall have/ obtain license under CL(R&A) Act, 1970.
- v. As per BHEL circular Contractor will have to make an additional wage per month has to be paid by the Contractor over and above minimum wages declared by Tamil Nadu Government to labours as:

Unskilled : ₹ 3200/-	Semi-skilled	: ₹ 3700/-
Skilled : ₹ 4100/-	Highly Skilled	: ₹ 4,300/-
- vi. The contractor has to disburse the salary/wages for their workmen only through Bank (RTGS). The relevant Bank statement/proof for Bank payment should be produced along with PF and ESI and challans to Welfare Section every month.

**4.6.23 COMPENSATION TO WORKMEN:** BHEL shall recover the amount of compensation paid to victim(s) by BHEL towards loss of life / permanent disability due to an accident which is attributable to the negligence of contractor, agency or firm or any of its employees as detailed below.

- a) Victim: Any person who suffers permanent disablement or dies in an accident as defined below
- b) Accident: Any death or permanent disability resulting solely and directly from any unintended and unforeseen injurious occurrence caused during the manufacturing / operation and works incidental thereto at BHEL factories/ offices and precincts thereof, project execution, erection and commissioning, services, repairs and maintenance, trouble shooting, sewing, overhaul, renovation and retrofitting, trial operation, performance guarantee testing undertaken by the company or during any works / during working at BHEL Units/ Offices/ townships and premises/ Project Sites.
- c) Compensation in respect of each of the victims:
  - (i) In the event of death or permanent disability resulting from Loss of both limbs: ₹ 10,00,000/- (Rupees Ten Lakh)
  - ii) In the event of other permanent disability: ₹ 7,00,000/- (Rupees Seven Lakh)
- d) Permanent Disablement: A disablement that is classified as a permanent total disablement under the proviso to Section 2 (I) of the Employee's Compensation Act, 1923

**4.6.24 PRECAUTIONS AGAINST RISK:** The Contractor shall be responsible for providing at his own expense for all precautions to prevent loss or damage from any and all risks and to minimize the amount of any such loss or damage and for the necessary steps to be taken for the said purpose.

**4.6.25 DAMAGE & LOSS TO PRIVATE PROPERTY & INJURY TO WORKMEN:** The Contractor shall at his own expense reinstate and make good to the satisfaction of the respective area HOD and pay compensation for any injury, loss or damage occurred to any property or rights whatever including property and rights of BHEL (or agents) servants or employee of BHEL, the injury loss or damage arising out of or in any way in connection with the execution or purported execution of the contract and further the contractor shall indemnify, the BHEL against all claims enforceable against BHEL (or any agent, servant or employee of BHEL) or which would be so enforceable against BHEL where BHEL is a private person, in respect of any such injury (including injury resulting in death) loss or damage to any person whomsoever or property including all claims which may arise under the Workmen's Compensation Act or otherwise.

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**4.6.26 LAWS GOVERNING THE CONTRACT:**

The contract shall be governed by the Indian Laws for time being in force.

- i. Should a tenderer or a contractor has a dependent/relative or in the case of a partnership firm, any of its partners or dependents of partners employed in BHEL, the authority inviting tenders should be informed of this fact at the time of submission of the Tender failing which Tender may be disqualified or if such fact subsequently come to light, the contract may be cancelled.
- ii. No BHEL employee and their dependents are eligible to submit their offer against this tender.

**4.6.27 CANCELLATION OF CONTRACT FOR CORRUPT ACTS:** BHEL, whose decision shall be final and conclusive, shall without prejudice to any other right or remedy which shall have accrued shall accrue thereafter to BHEL cancel the contract in any of the following cases and the Contractor shall be liable to make payment to BHEL for any loss or damage resulting from any such cancellation to the same extend as provided in the case of cancellation for default. If the Contractor shall:

Offer or give or agree to give to any person in BHEL service any gift or consideration of any kind, as an inducement or reward for doing or for bearing to do or for having done or for borne to do any act, in relation to the obtaining or execution of this or any other contract for BHEL service,

OR

Enter in to a contract with BHEL in connection with which commission has been paid or agreed to be paid by him or with his knowledge, unless the particulars of any such commission and the terms of payment thereof have previously been disclosed in writing to BHEL.

OR

To obtain a contract with BHEL as a result of ring tendering or by non-bonafide methods of competitive tendering, without first disclosing the fact in writing to BHEL.

**4.6.28 CANCELLATION OF CONTRACT FOR INSOLVENCY ASSIGNMENT OF TRANSFER OR SUB-LETTING OF CONTRACT:** BHEL, without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter to BHEL shall cancel the contract in any of the following cases:

If the Contractor,

- i. being an individual or if a firm any partner thereof shall at any time be adjudged bankrupt or have a receiving order for administration of his estate, made against him or shall take any proceedings for liquidation or composition under any bankruptcy Act or assignment of his effects of composition or arrangement for the benefit of his creditors or purport to do so, or if any application made under any: Bankruptcy Act for the time being in force for the sequestration of his estate or if a trust deed be granted by him on behalf of his creditors.

OR

Being a Company, shall pass a resolution or the Court shall make an order for the liquidation of its affairs, or a receiver or Manager on-behalf of the debenture holders shall be appointed or circumstances shall arise which entitle the Court or debenture holders to appoint a receiver or Manager,

OR

Assigns, Transfers, Sub-lets or attempts to assign, transfer or sub-let any portion of the work without the prior written approval of the BHEL.

- ii. Whenever BHEL exercise the authority to cancel the contract under this conditions, BHEL may have the work done by any means at the contractor's risks and expenses provided always that in the event of the cost of the work so done (as certified by the respective area HOD) being less than the contract cost, the advantage shall accrue to the BHEL and if the cost exceeds the money due to Contractor



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under the contract, the Contractor shall either pay the excess amount ordered by the respective area HOD or the same shall be recovered from the Contractor by other means.

- iii. In case the BHEL carries-out the work under the provisions of this condition the cost to be taken into account in determining the excess cost to be charged to the Contractor under this condition shall consist of the cost of the materials, hire charges of tools and plants and/or labour provided by the BHEL with an addition of such percentage to cover superintendence and establishment charges as may be decided by the respective area HOD whose decision shall be final and conclusive.
- iv. Labour engaged by the contractor should be disciplined & exhibit good behaviour in dealing with employees of BHEL. Any misbehaviour or undesirable conduct of any person engaged by the contractor is reported, contractor shall change that person immediately or else it may even lead to termination of the contract & in such case security deposit will be forfeited as penalty.

**4.6.29 CANCELLATION OF CONTRACT IN PART OF FULL FOR CONTRACTOR'S DEFAULT:**

If the Contractor:

- i. makes default in carrying out the work as directed and continues in that state after a reasonable notice from Head of WCM., or his authorised representative;
- ii. fails to comply with any of the Terms and Conditions of the contract or after reasonable notice in writing with orders properly issued thereunder:

BHEL, may without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter to BHEL CANCEL the contract as whole or in part thereof or only such work order or items of work in default from the contract. Whenever BHEL exercise the authority to cancel the contract as whole or part under this condition BHEL may complete the work at the contractor's risk and cost (as certified by Head of WCM., which is final and conclusive) being less than the contract cost, the advantage shall accrue to the BHEL. If the cost exceeds the moneys due to the contractor under this contract the contractor shall either pay the excess amount ordered by Executive/WCM or the same shall be recovered from the contractor by other means. In case the BHEL carries out the work or any part thereof under the provisions of the conditions the cost to be taken into account in determining the excess cost to be charged to the contractor under this condition shall consist of the cost of the materials, hire charges of tools and plant and/or labour provided by the BHEL with an addition of such percentage to cover the superintendence and establishment charges as may be decided by the Head of WCM., whose decision shall be final and conclusive.

- 4.6.30 **TERMINATION OF CONTRACT ON DEATH OF CONTRACTOR:** Without prejudice to any of the rights or remedies under this contract, if the Contractor dies, or if the firm is dissolved or the company is liquidated BHEL shall have the option of terminating the contract without compensation to the Contractor.

- 4.6.31 **SPECIAL POWER TO TERMINATION:** If at any time after the award of contract, BHEL shall for any reason whatsoever does not require whole or any part of the work to be carried out, then Head of WCM shall give notice in writing of the fact to the Contractor and terminate the contract. The contractor shall have no claim to any payment of compensation or otherwise howsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not derive in consequence of the fore-closing of the work.

- 4.6.32 **FORCE MAJEURE CLAUSE:** If, at any time during the continuance of this Contract the performance in whole or in part by either party of any obligations under this Contract shall be prevented or delayed by reason of any War, Hostile acts of the public enemy Civil Commotion, Epidemics, or Acts of God (Floods, Storm/Cyclone, Hurricane, Earth Quake etc.) then provided notice of happening of any such event is given by either party to other within 7 days from the date of occurrence therefor neither party

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shall by reason of such event be entitled to terminate this Contract nor shall either party have any claim for damages against the other in respect of such non-performance and delay in performance under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist. If the performance in whole or part of any obligation under this Contract is prevented or delayed by reason of any such event, claims for extension of time shall be granted for periods considered reasonable by the Manager/WCM subject to prompt notification by the contractor.

- 4.6.33 **ARBITRATION & CONCILIATION:** Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sole arbitration of an arbitrator appointed by Head of the BHEL Unit/Region/Division issuing the Contract. The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties. Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be (the place from which the contract is issued). The cost of arbitration shall be borne as per the award of the Arbitrator.

Subject to the arbitration in terms of Clause above, the Courts at TRICHY shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract.

Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the contractor shall proceed with and continue without hindrance the performance of its obligations under this contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.

In case of contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable: In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred by either Party for arbitration to the sole arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the arbitrator shall be binding upon the Parties to the dispute, provided, however, any Party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the Parties hereto finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

- 4.6.34 **JURISDICTION:** In case of any suit or other legal proceedings arising under or relating to this Contract, the courts at Trichy, Tamil Nadu only shall have the Jurisdiction and is only after exhausting the aforesaid arbitration clause.
- 4.6.35 **SIGNING OF CONTRACT:** Each contract document shall be signed by the Contractor with his usual signature. Contract by partnership of Hindu Joint Family firm, may be signed in the FIRM'S name by one of the Partners or the Karta or Manager as the case may be or by any other duly authorised representative followed by the name and designation of the persons so signing. Contracts by a

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Company shall be signed with the name of the Company by a person authorised in this behalf and a power of attorney or other satisfactory proof showing that the persons signing the Contract documents on behalf of the Company is duly authorised to do so, shall accompany the contract.

4.6.36 **FRAUD PREVENTION POLICY:** The Bidder along with its associate/ collaborators/ sub – vendors/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about fraud or suspected fraud as soon as it comes to their notice. Fraud Prevention policy and List of Nodal Officers shall be hosted on BHEL website, vendor portals of Units / Regions intranet.

4.6.37 **SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS / CONTRACTORS:** Penal action can be initiated on the suppliers / Contractors in line with extant 'Guidelines for Suspension of Business Dealings with Suppliers/ Contractors'. The abridged version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' has been uploaded on <http://www.bhel.com> on "supplier registration page".

The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site [www.bhel.com](http://www.bhel.com).

1.0 Integrity commitment, performance of the contract and punitive action thereof:

1.1. Commitment by BHEL:

BHEL commits to take all measures necessary to prevent corruption in connection with the tender process and execution of the contract. BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity.

1.2. Commitment by Bidder/ Supplier/ Contractor:

1.2.1. The bidder/ supplier/ contractor commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.

1.2.2. The bidder/ supplier/ contractor will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.

1.2.3. The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.

If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage indulges in mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, then, action may be taken against such bidder/ supplier/ contractor as per extant guidelines of the company available on [www. bhel.com](http://www.bhel.com) and/or under applicable legal provisions.

4.6.38 **SECRECY OF CONFIDENTIAL INFORMATION:** The Contractor undertakes and agrees that he/it will not disclose or reveal in part or full the proprietary/confidential information, which terms shall mean and include patents, trademarks, service marks, registered designs, copyright, design rights, know-how, confidential information, trade and business names and any other similar protected

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information of BHEL received during negotiation or currency of the contract to any third party or governmental authorities without written permission from BHEL. In the event of termination or expiry of the contract, the contractor shall return all proprietary/confidential information to BHEL. This clause shall survive termination or expiry of the contract.

All the input details: transmittals and sample drawings supplied for preparation of drawings are confidential information of BHEL for specific purpose only. The contractor shall never pass on / part with the information to anybody and shall maintain the secrecy of the information. As soon as the bills are certified by BHEL, all the relevant drawing files shall be erased from PCs and shall not be made use under any circumstances.

BHEL reserves the right to initiate appropriate action including legal proceeds / termination of contract, recovery of damages, penalties etc., if the contractor is found guilty / wrong usage of the documents given by BHEL for any unauthorised activity.

**4.6.39 STATUTORY REQUIREMENTS:**

- i. All statutory requirements under Minimum Wages Act, 1948, Factories Act 1948, Workmen Compensation Act 1923, Employees Provident Fund and Miscellaneous Provisions Act, 1952, Payment of Gratuity Act 1972, Employee State Insurance Act 1948, Contract Labour (R&A) Act 1970, Payment of Bonus Act 1965, Income Tax Act, GST Act and all other applicable Acts shall be complied with by the Contractor.
- ii. Contractor shall comply with all statutory requirements, rules, regulations, notifications in relation to employment of his employees issued from time to time by the concerned authorities.
- iii. Contractor shall indemnify BHEL against all claims and losses under various Labour Laws, statutes or any civil or criminal law in connection with employees deployed by him.
- iv. Contractor wherever applicable shall maintain proper records prescribed by the concerned statutory authorities and provide a copy of the same to BHEL.
- v. Contractor shall furnish proper returns to the concerned statutory authorities and provide a copy of the same to BHEL.

**4.6.40 MOTOR VEHICLE ACT:** The contractor should comply the relevant Motor Vehicle Act and other statutory requirement.

**4.6.41 REMOTE TRANSACTIONS:** The contractor shall agree to and comply with all such terms and conditions as BHEL may prescribe from time to time and shall confirm that all transactions effected by or through facilities for conducting remote transactions including the Internet, World Wide Web, electronic data interchange, call centres, teleservice operations (whether voice, video, data or combination thereof) or by means of electronic, computer, automated machines network or through other means of telecommunication established by BHEL shall constitute legally binding and valid transactions when done.

**4.6.42 CHANGE IN CONSTITUTION OF FIRM:** Changes in constitution of firm whenever it is made after submission of application or during currency of the contract, the existing firm has to duly inform the proposed changes to contracting department of BHEL at the appropriate time before the changes in the constitution are made. In case the absence of any such information BHEL is not responsible for the consequences arising out of the absence or suppression of information and the issue / dispute arising out of these changes and the firm is responsible for settling the issue or dispute among themselves (Partners etc.) or with the bankers or with any third party. Under the above circumstances when dispute arises and the firm does not inform the change in the constitution of the firm BHEL has the right for suspending or terminating the contract.

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**4.6.43 LIEN OF CONSIGNMENTS:** The Contractor shall have no 'lien' of any kind over the consignments entrusted for transportation. Any dispute with the Contractor and the consignees shall be settled on negotiations but under no circumstances, delivery of the materials shall be withheld by the Contractor.

**4.6.44 SAFEGUARD OF EMPLOYER'S INTERESTS:** Contractor shall watch and safeguard Employer's interests during the performance of the work. The contractor shall carefully check each and every consignment/item/commodity with the relevant forms/documents.

**4.6.45 RIGHTS:**

- i. BHEL may enter into parallel Contract simultaneously with any number of Contractor as may be deemed fit at any time during the period of Contract in the Interest of the work for any or all the stations and for any or all the schedules.
  - ii. In case of breach of any of the terms and conditions of the Contract, BHEL will entrust the work to any other Contractor at the risk and cost of the Contract and the Contractor shall be liable to pay the extra expenditure, damages, loss suffered on account of the cancellation of the Contract
  - iii. All amounts including the losses / damages / penalties / compensations etc., resulting from non-compliance with the terms of Contract, payable by the Contractor to BHEL under the Terms of the Contract will be recovered from the outstanding payments to Contractor either under this Contract or any other Contracts or from Security Deposit or from both. In case this amount is insufficient for such recoveries, the Contractor shall make good the balance amount by actual payment. In addition, BHEL, Trichy will recover the said amounts through its sister concerns, from the payments due to the Contractor in any of the units of BHEL located in any part of India.
  - iv. The Contractor is not allowed to pass the responsibilities connected with the Contract to other agencies / Contractors, the Contractors shall not sublet or transfer the Contract or any part thereof, which tantamount to termination of the Contract and thereby attracting the penalty or forfeiture of security deposit.
  - v. The Contractor shall have no right to demand at any time during the currency of this Contract any minimum quantity of Work for this Contract.
  - vi. BHEL may verify / audit check by surprise visits at various locations of Works at their discretion and see whether the above requirements are complied with by the Contractor. In case the above requirements are not complied with, severe actions may be taken by BHEL on such Contractors, as deemed fit.
- 4.6.46 RISK PURCHASE:** In case of abnormal delays (beyond the maximum late delivery period as per LD clause) or non-fulfilment of any other terms and conditions given in work order, BHEL may cancel the work order in full or part thereof, and may also make a contract of such work/service from elsewhere / alternative source at the risk and cost of the original contractor. BHEL will take all reasonable steps to complete the contract obligations from alternate source at optimum cost. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer. In case for compelling reasons BHEL accepts the offer without acceptance of this clause by the bidder and in the eventuality of Risk Purchase, appropriate action will be taken as per BHEL extant rules. This will be without prejudice to any other right of BHEL under the contract. Risk & cost clause, in line with conditions of contract may be invoked in any of the following cases:
1. Contractor's poor progress of the work vis-à-vis execution timeline as stipulated in the contract, backlog attributable to contractor/ supplier including unexecuted portion of work/ supply does not appear to be executable within balance available period (#) considering its performance of execution.
  2. Withdrawal from or abandonment of the work by contractor before completion of the work as per contract.

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3. Non completion of work / Non-supply by the contractor within scheduled completion/delivery period as per contract or as extended from time to time, for the reason attributable to the contractor.
4. Termination of contract on account of any other reason (s) attributable to contractor.
5. Assignment, transfer, subletting of contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
6. Non-compliance to any contractual condition or any other default attributable to contractor.

Risk and Cost amount against balance work will be calculated as follows:

Risk & Cost Amount=  $[(A-B) + (A \times H/100)]$

Where,

A= Value of Balance scope of Work/ Supply (\*) as per rates of new contract

B= Value of Balance scope of Work/ Supply (\*) as per rates of old contract being paid to the contractor/ supplier at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

\*(Balance scope of work/ supply)

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work/ Supply for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose. Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: In case portion of work is being withdrawn, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work/supply' for calculating Risk & Cost amount.

**4.7 COMPLIANCE WITH VARIOUS LABOUR LAWS BY THE CONTRACTS:**

The contractor shall not engage in connection with the work any person who has not completed 18 years of age.

The contractor shall in respect of labour employed by him, comply with following statutory provisions and rules and in regard to all matters provided therein.

- a) The contract Labour (Regulation & Abolition) Act 1970 and the related Rules.
- b) The minimum wages Act 1948 and the related rules
- c) The payment of wages Act 1936 and the related rules.
- d) The Factories Act 1948 and related Tamil Nadu Rules.
- e) The Employees' Provident Fund & Miscellaneous provisions Act 1952.
- f) The Employees State Insurance Act 1948.
- g) Workmen Compensation Act 1923
- h) Payment of Bonus Act 1965
- i) Maternity Benefit Act, 1961
- j) Payment of Gratuity Act, 1972
- k) Inter-State Migrant Workmen (Regulation of Employment & Conditions of Service) Act, 1979
- l) Equal Remuneration Act, 1976



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- m) Industrial Employment (Standing Order) Act, 1960 (In case of engaging 100 or more workmen)
  - n) The Industrial Disputes Act 1947
- and any other law, or modifications to the above or to the rules made there under from time to time.

**4.7.2 REGISTRATIONS AND LICENCING:**

Every contractor shall register his name with the Personnel & Administration Department of BHEL Trichy-14 before taking up the work awarded to him by giving the following information and getting a code Number.

- a) Name of the Contractor
- b) Nature of Work
- c) Period of Work
- d) Number of maximum labour employed by him on anyone day.
- e) License No. & Date (Applicable in case of contractors employing 20 or more workers)
- f) The labourer should be enrolled with PF, ESI and enrolment No should be furnished on finalization of contract.

The contractor employing 20 or more workmen shall obtain a license from the authorities (The Deputy Chief Inspector of Factories / Assistant Commissioner of Labour as the case may be). This license shall be amended and / or renewed wherever there is an increase in the workmen employed by him or in the event of contract being extended or renewed. The contractor shall inform the license number to the BHEL Management before taking up the work.

The contractor (licensed or unlicensed) shall promptly furnish every information and document required by BHEL Authorities.

**WAGES:** The contractor has to disburse the salary/wages for their workmen only through Bank. The relevant Bank statement/proof for Bank payment should be produced along with PF and ESI challans to Welfare Section every month. The contractor shall have separate PF and ESI code, BHEL will not allow the contractor to remit the PF and ESI of his employees through codes of others. The contractor shall pay wages to the workmen employed by him at the rate, which shall not be less than the minimum wages declared by Tamil Nadu Government from time to time plus additional wages prescribed by BHEL. A certificate of payment shall be furnished in duplicate by the contractor to the Engineer In-charge for each month. The contractor shall inform the BHEL Management every month the details of contract labour engaged for each contract in the following forms:

- a) Serial Number
- b) Location
- c) Period of Work
- d) No. of Contract labour engaged during the month
- e) No. of days worked
- f) No. of Man – days worked
- g) Wages paid to his workers.

The above statement shall be furnished to BHEL Management at the end of every month.

- 4.7.3 REGISTERS AND RECORDS:** The contractor shall maintain necessary documents/ Formats and Registers and submit returns as required under the Contract Labour (Regulation and Abolition) Act 1970 periodically to BHEL Management and to the Licensing Authority. All registers and records shall be preserved in original for a period of three years. All the registers, records and notice maintained under the Act and rules shall be produced on demand by inspector or any authority under The Act.

**4.7.4 WORKING CONDITIONS:**

- a) The contractor shall provide all safety devices and personal protective equipment to his workmen at his own cost and shall ensure that his workmen wear / use such device or equipment provided to them while doing the work and there should not be any relaxation on this.
- b) The contractor shall ensure that his workmen vacate the premises after shift is over.

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- c) The Contractor should bring contract labour to BHEL premises at his/her own cost, risk and execute the work allotted to him in BHEL premises. All safety equipment's to the workmen, safety rules & regulations are to be followed as per BHEL's Safety Rules & Regulations.
  - d) BHEL will no way be responsible for any loss of life or any injury caused to any of the contractors or their crew while executing the above work at BHEL premises.
- 4.7.5 NOTICES OF ACCIDENTS:** In the event of an accident the contractor shall be required to fill injury report and submit to the Engineer In-charge immediately and ensure compliance of ESI / Workmen's Compensation of accident as per the Act. The contractor shall get the contract labour engaged by him insured under workmen's compensation policy from General Insurance Corporation of India before actually starting the work of contract. The Insurance Coverage should be for the entire period of contract. The contractor shall comply with the provisions of the Workmen's Compensation Act 1923. (This should be read in connection with the provisions of ESI Act.)
- 4.7.6 COVERAGE UNDER THE ESI / PF ACT MISCELLANEOUS PROVISIONS ACT:**
- a) The contractor shall ensure that all his workmen are covered under the Employee's Sate Insurance Act and produce to BHEL such Registration number/ Enrolment Number before executing the contract work.
  - b) The contractor shall regularly pay the amount by contribution i.e., employers contribution as well as employee's contribution in pursuance of the above scheme as fixed from time to time.
  - c) The contractor shall ensure that his workmen are covered the PF & miscellaneous provisions Act 1952 and accordingly produce to the BHEL Management the Registration / Enrolment number before awarding of contract work.
  - d) The Contractor shall within seven days of the close of every month submit to BHEL a statement showing the amount of contribution payable / paid for employees engaged by him or through him and shall also furnish to BHEL such information, as Principal Employer is required to furnish under the provisions of the ESI Act PF as well as the schemes made there under to the authorities concerned.
  - e) Whenever any sum of money is found to be recoverable from or payable by the contractor, the same shall be deducted from any sum that may be due or which at any time thereafter may become due to the contractor under this contract or under any other contract or from his security deposit. In case the recoveries are not sufficient to satisfy the claims, the contractor shall pay the balance thereof on demand. In case any recoveries are made under this clause from the security deposit, the contractor shall immediately thereafter pay such further sum as may be required to replenish the shortage caused by such recoveries in the amount of security deposit.
  - f) In case of non-compliance of the provisions of the Acts and in case BHEL having complied with the same BHEL will be entitled to recover the same from the contractor / sub-contractor.
  - g) The contractor shall abide by all the labour and other laws applicable to contract labour / worker under this contract and shall at all-time keep BHEL Indemnified against all losses, claims, prosecutions under any law.
  - h) Non exercise of any of the powers or rights available under any law, shall not in any way operate as waiver thereof.
- 4.7.7 BIOMETRIC ENTRY/EXIT SYSTEM FOR CONTRACT WORKMEN:**
- a) The Entry/Exit of the contract workmen is to be regulated only through Biometric system.
  - b) The Contractor initially will be issued with a temporary gang pass for his/her contract workmen for period of ten days.
  - c) The contractor should arrange photo coverage for all his/her workmen within the above stipulated time.
  - d) The Contractor has to submit Form I for all his/her contract workmen. All the particulars required in Form I are to be provided by the contractor without fail.
  - e) The contractor should educate the contract workmen in registering the attendance through the system.
  - f) Whenever a contract workman migrates or leaves service, the contractor has to surrender the biometric card of the particular contract workman to Contract Cell with immediate effect.



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- g) If a contract workman having biometric card joins another contractor, the contractor who engages them, has to intimate contract cell along with the biometric card for switching over the contract workmen from the earlier contractor to the present contractor.
- h) On completion of the work, the contractor has to surrender all the biometric cards immediately to the contract cell. Otherwise, an amount of Rs.100/- per card will be deducted from the final bill/security deposit of the contractor.
- i) If any contract workmen lose his/her card, the contractor shall arrange a duplicate for the workmen by paying an amount of Rs.100/-.
- j) The Contractor is totally responsible for the biometric cards issued to his/her contract workmen.
- k) The Contractor has to indemnify BHEL for all the damages and losses caused by his/her workmen.

**4.7.8 SAFETY CONDITIONS:** Tamil Nadu Factories Rules, 1950:

- a) Rule 61F: Methods of Work: No process or work shall be carried on in any factory in such a manner as to cause risk of bodily injury.
- b) Rule 61G: Stacking and storing of materials etc.: No materials or Equipment shall be stacked or stored in such a manner as to cause risk of bodily injury.
- c) Rule 61-N and Rule 61- O: Workers to be provided with Personal Protective equipment suitable for the hazards and should be of good quality / have certification by Indian Standard Institute.
- d) Rule 96: Notification of Accidents: Shall be complied with as required in the Factories Act (Section 88 and Section 88A) and Tamil Nadu Factories Rules.

**4.7.9 COMMON TERMS AND CONDITIONS FOR WORKS CONTRACT RELEVANT TO SAFETY:**

- a) All the Contract employees should be trained on Safety and certified by Safety/BHEL. New employees should undergo Safety Training before take up the work, without Safety Training no contract person is allowed to do any work.
- b) Use of cell phones and other mobile electronic devices (including hands-free devices) in the work spot and during the operation of a vehicle in the BHEL premises is prohibited.
- c) Contractor employees working on BHEL premises must wear appropriate personal protective equipment. Strict adherence to all required Personal Protective Equipment (Helmet, Safety Shoes and Goggles) are mandatory, specific PPE requirements will be based on job type or tasks performed.
- d) Excessively loose-clothing, dhoti/Lungi is prohibited especially around rotating or moving equipment.
- e) The contractors work area should be kept clean and orderly, free of clutter and trash, so that work may proceed in a safe and orderly manner. Tools should be safely positioned during use and promptly put away when no longer required.
- f) Fire-fighting, emergency shutdown devices, and life-saving equipment, should not be blocked by the contractors and access to the path to this equipment should be maintained at all times.
- g) Only approved equipment should be used in locations where flammable mixtures are present. A Hot Work Permit is required when open flames, or electric arcs are in the work area and while handling flammable materials.
- h) Smoking is not allowed in work area.
- i) BHEL operate under a comprehensive Emergency Response Plan. Contractor should be aware of the site Emergency Response Plan and communicate that plan to all their employees.
- j) It is recommended that the contractor should know & display the emergency phone number like Fire, Ambulance, Safety, Security etc. at their work area.
- k) It is the responsibility of the contractor to understand and use the appropriate Work Permits and to verify any permit requirements at the location. Contractor must make necessary arrangements with their Representative to acquire appropriate authorization to perform those operations at the site.

**4.7.10 TERMS & CONDITIONS** of the Contract shall be applicable to the extent that the condition therein do not supersede these special condition given below:

- a) The Contractor or his/ her crew should handle the machinery and other equipment's entrusted to them by BHEL with utmost care and return them safely after execution of stipulated work. The cost of

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damage, repair due to improper handling of machinery and equipment will be recovered from the contractor.

- b) Contractor shall supervise the work carried out by his/her employees.
- c) Contractor shall ensure that the employees deployed in the premises of BHEL are physically and mentally fit and do not have any criminal record. Such employees should possess requisite skill, proficiency, qualification, experience etc.
- d) Contractor shall maintain appropriate records of his/her employee's deployed carry out the job(s).
- e) Contractor will be responsible for the good conduct of his/her employees. In case any misconduct/misbehaviour by any employee, the contractor will replace such employee(s) immediately.
- f) Contractor will ensure that the job is executed through his/her employees only and under any circumstances; the contractor will neither deploy any casual employee to carry out the job nor shall subcontract the job without prior written permission.
- g) Contractor shall be solely responsible for non-payment / delayed payment of minimum contribution under EPF & MP Act, ESI Act, Bonus, etc.
- h) In case, the contractor fails to make payment of wages to his/her employees or remittance of contribution to the concerned authorities, the security deposit / other dues / running bills under the contract can be utilized by BHEL to discharge the liability of the contractor.
- i) The liability for any compensation on account of injury sustained by an employee of the contractor will be exclusively that of the contractor.
- j) Contractor shall observe provisions of the Factories Act, 1948 in respect of working hours, holidays, rest intervals, leave and overtime to his/her employee. No work shall be done on second / third shift, overtime, Sundays or on other declared holidays without proper permission.
- k) The Contractor should maintain a 'Work Diary' containing the details of work executed by him from time to time on Shift/ Daily basis and obtain the signature from official concerned nominated for this purpose for having executed the work correctly and satisfactorily.
- l) The proof of execution of work should be submitted along with each bill (printed form with covering letter and proof for execution of work).
- m) Necessary gate entry pass will be issued by BHEL Security Department for Contract Workmen based on your application duly forwarded by the Contract Executing Department and approved by HR/ Welfare/ Contract Cell on fulfilment of the Statutory Obligation by the Contractor. In order to ensure compliance to Minimum Wage payment to all workmen entering the factory premises, the entry of manpower shall be regulated based on the quoted/awarded value and the prevailing minimum wages.
- n) In the event of termination of contract for any reason whatsoever, the contractor shall withdraw all his/her employees from the establishment of BHEL. In case, contractor decides to terminate services of his/her employees, he should settle all terminal dues including retrenchment compensation.
- o) The Contractor has to equip himself with standard wire ropes, nylon ropes, belt, lifting tackles, tools etc. In addition, BHEL will supply special type of wire ropes, lifting tackles, tools etc., to the Contractor free of cost as and when required if necessary.
- p) The contractor is directly responsible for injuries / death of vehicle driver or any person employed by him as well as to the third party occupants or other users arising due to accident or otherwise of vehicle during the contractual period. At any point of time, BHEL will not be responsible for any loss / damage either to the person or to the vehicle arising out of accident of the vehicle for performing the contractual obligations.
- q) Any damage to BHEL materials due to rough and faulty handling by the contractor's men will have to be made good by the contractor to BHEL. Similarly, if any damage caused to BHEL equipment's/installation, property of third party in the course of work by the contractor's men, the same shall be made good by the contractor.
- r) The workmen engaged under this contract should not be permitted to stay inside BHEL complex after completing their day's work. It will be the responsibility of the contractor to take the labourers out of BHEL Complex as soon as their day's work is over.



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- s) WCM will be arranging the contract. User Department is to be approached by the contractor regarding execution of work, Bill Certification, Bill processing / passing, Payment, Penalty, Contract closing etc.

**4.9.10: Bidder Declaration:**

- a) We declare that we will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- b) In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.



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**ANNEXURE – I**

**E-PAYMENTS**

- This annexure to the techno-commercial bid explains how to make e-payments to BHEL- Tiruchirappalli through SBI e-collect.
- Vendors (EMD and SD Payments payable by others) can utilise this facility.
- Payments can be made using Internet Banking, Debit Cards/Credit Cards etc.
- SBI Charges a minimum amount (Service Charge) for every transaction. This may vary according to the MODE selected.

**STEP BY STEP PROCEDURE:**

Login to <https://www.onlinesbi.com>

1. Select State Bank Collect available on the top (pre login page)
2. Accept the terms and conditions and click “PROCEED”
3. Select State “TAMILNADU “and Institution type “INDUSTRY “.
4. Select “BHEL TRICHY under “INDUSTRY”.
5. In the next page, Select APPROPRIATE category, fill details correctly & click “SUBMIT”.
6. If all details entered are correctly populated, click “CONFIRM “to proceed.
7. Make payment as per your convenience. (Options available are payment of fees through SBI Net Banking, State Bank ATM cum Debit Cards / Other Bank Debit / Credit Cards and through SBI Branches).
8. SAVE & Keep the copy of receipt for future reference.

**HOW TO TAKE RECEIPT FOR A PAYMENT MADE, EVEN ON A LATER DATE:**

**(PLEASE CHECK THE STATUS BEFORE MAKING PAYMENT SECOND TIME)**

1. Login to [www.onlinesbi.com](http://www.onlinesbi.com)
2. Select State Bank Collect available on the top ( pre login page )
3. Accept the terms and conditions and click “PROCEED”
4. Select “PAYMENT HISTORY “option available on the left side of screen.
5. Using two options as mentioned below, you can get the receipt:
  - a. Type the same Date of Birth, Mobile Number which you have entered at the time of making payment through SB collect. Select the date range and submit.
  - b. If you know the payment reference number, then enter the Reference number (DU...) along with anyone information (Date of Birth / Mobile number, which you have entered at the time of making payment). Select the date range and submit.
6. In the next page, take print out of receipt.



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**ANNEXURE-II**

**(TO BE AGREED IN E-PROCUREMENT PORTAL)**

**No Deviation Declaration**

I/We, have read and clearly understood all the Terms and conditions in Tender Schedule of and accordingly accept the same without any deviation what so ever.

- I/ We unconditionally agree to all the tender conditions and no new conditions are imposed by us in the technical / price bid. I understand in the event of imposing any condition in the technical / price bid, such condition would be ignored by BHEL and only the prices will be considered for the purpose of evaluation”
- I/ We confirm that none of our group concern or affiliates etc., appears on the list of banned firms / companies by BHEL (list available on [www.bhel.com](http://www.bhel.com)) nor any of the Director / Partner / proprietor of bidder / such group concern or affiliate etc. are involved with such company.
- I/ We also declare that, we have not been suspended or black listed or issued with Show Cause Notice by BHEL- Trichy or any other BHEL Unit or any PSU/ Government organization.
- I/ We confirm that other than us, none of our group concerns or affiliates etc. are participating in the tender either directly or indirectly through any other agency under same proprietor / common director(s) / common partner(s).
- I/ We confirm that if any of the above statement / information furnished by us in this tender is found to be false/ fake at any stage of tender evaluation or during execution of contract, BHEL will have the right to initiate appropriate action including legal proceeds / termination of contract, recovery of damages, penalties etc. as deemed fit.

Yours Sincerely,

Signature of the Bidder with date & Seal



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Annexure-III

**PART-II (PRICE BID)**  
**(FOR REFERENCE ONLY)**

(Vendor to quote the price in e-procurement portal)

SI N O	Description of work	Lump Sum Value (Excluding GST)
1	<b>WORKS CONTRACT FOR SUPPLY, APPLICATION AND PROVE OUT OF THIN LAYER NANO COATING SOLUTION OVER THE SURFACE OF 2,496 SOLAR PANELS AT BHEL-TRICHY as per Scope of Work</b>	Vendor to quote the lump sum value in eprocurebhel.co.in portal.