



Bharat Heavy Electricals Limited
Electronics Division, Mysore Road, Bangalore-26.

NOTICE INVITING TENDER

Sl.No	PARTICULARS	DETAILS
1	TENDER REFERENCE	EDN/JC/SCPV/2010-12/01
2	NAME OF WORK	PIECE-RATED CONTRACT FOR MATERIAL MOVEMENTS, CLEANING OF GLASSES, PV MODULES etc. IN SC&PV DEPARTMENT.(Details as per Schedule - G in TENDER DOCUMENT).
3	CONTRACT PERIOD	TWO YEARS from the date of award of contract.
4	ESTIMATED VALUE	Rs. 34,24,543.00 (Thirty Four Lakhs Twenty four Thousand Five Hundred and Forty Three only).
5	EARNEST MONEY DEPOSIT (EMD)	Rs. 1,00,000/- (Rupees One Lakh Only)
6	TENDER DOCUMENT IS AVAILABLE FOR DOWNLOAD AT :	Available on www.bheledn.com & www.bhel.com (for download). For further clarifications contact prakashek@bheledn.co.in (PH : 080-26998699)
7	LAST DATE AND TIME FOR RECEIPT OF TENDER (TWO PART BID)	19 /11 /2010, @ 13.00 Hours
8	DATE AND TIME FOR TENDER OPENING	19 /11 /2010, @ 13.30 Hours
9	PLACE OF SUBMISSION OF TENDER DOCUMENT WITH EMD OF RUPEES ONE LAKH.	Tender Drop Box of SC&PV in Reception Area of BHEL-EDN , Mysore Road, Bangalore - 560 026.
10	TENDER OPENING	At CE-MM conference Hall in 2 nd floor, New Engg. Bldg of BHEL-EDN, Mysore Road ,Bangalore - 560 026.
Sd/ - Sr.Manager (SC&PV-PPC) BHEL,EDN,Bangalore -560 026		

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JOB CONTRACT FOR SC&PV DEPT

Name of work:

“**PIECE-RATED** CONTRACT FOR MATERIAL MOVEMENT, CLEANING OF PV MODULES e.t.c. IN SC& PV DEPARTMENT”. (Details as per Schedule –G, **attached along with this document**, seperately).

1. Instructions to Tenderers

- 1.1 Sealed Tenders for the above work are hereby invited from the Contractors experienced in works of similar kind and magnitude.
- 1.2 Tender shall be submitted in two parts, i.e. (1) Techno-Commercial bid and (2) Price Bid.

Techno-Commercial bid shall be submitted confirming acceptance to all the clauses indicated in this tender **along with EMD** and enclosures as required by the tender and any other which the tenderer wish to submit. Tenderers shall also sign each and every page of the tender document including the work instructions attached thereto before submitting tender. Deviations / variations, if any, to the clauses of the tender shall be indicated clearly. These are to be put in one sealed envelope and superscribed with tender reference and `Techno-Commercial Bid`.

Price Bid duly filled, must be submitted in another separate sealed envelope superscribed with tender reference and `Price Bid`. Price bid envelope must contain only the rates.

Sealed envelope of both (1) Techno-Commerical bid and (2) Price bid must be put in a single sealed envelope and superscribed with tender reference and due date and must be sent within the specified date and time.

Tenders should be addressed to:

***SDGM- SCPV (PPC),
BHEL, Electronics Division,
Mysore Road, Bangalore – 560 026.***

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The full name and address of the Tenderer and the name of the work with Tender reference should be indicated on the sealed Cover.

- 1.3 The full address of the Tenderer, the name of the person to whom all the correspondence are to be addressed should be indicated, with telephone number / mobile number (both Office & Residence) and fax numbers.
 - 1.4 **All the entries in the Tender Documents should be in one ink. Eraser and overwritings are not permitted.** The Tenderer concerned with proper indication of the name, designation and address of the person should duly sign all cancellations and insertions.
 - 1.5 Tenderer shall fill in all the required particulars in the blank spaces provided for this purpose in the tender documents and also sign each and every page of the tender document before submitting the tender.
 - 1.6 **Unit rate should be quoted in figures as well as in words in Indian currency only**, i.e Rupees and paise with reference to each item and for all the items shown in the attached tender Schedule - G . These rates shall be for the finished work at site. **The rates shall include all taxes and duties payable on account of octroi, sales tax, service tax and expenditure incurred on transportation or paymet of any additional incentive to the workmen on works contract etc and also expenses towards PF & ESI contributions.**For the purpose of ascertaining the total cost,unit rate only will be considered and the same be multiplied by the number of units to arrive at total.
 - 1.7 **The tenderer may consider Rs.30/- per day per person for Transport allowance and Attendance bonus and take it into account for the purpose of estimate and the quoted rate shall be inclusive of the above incentives as well. Further, the tenderer may include washing allowance @ Rs.75 per month per person payable to his workers in the estimation and quote unit rate inclusive of washing allowance.**
 - 1.8 The workmen engaged by the contractor shall be provided with 4 sets of uniform, 1 pair of safety shoes covering 2 year period, 1 no of toilet soap
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per person per month, as per BHEL norms & terms, **which will be reimbursed by BHEL.**

- 1.9 In case the rates quoted in figures differ from those quoted in words, the lower of the rates will be taken as the tendered rate and shall be binding on the tenderers. The lowest price bid (L1) shall be arrived based on the the total amount for all the activities under the “Schedule-G “ put together.
- 1.10 **In quoting their rates, the Tenderers are advised to take into account all factors including any fluctuations in the market rates in the future.** No claim for the enhanced rates will be entertained on this account after acceptance of the tender or during the contract period of 2 years.
- 1.11 **The rates to be quoted by the tenderer shall be firm and shall cover and include all statutory levies such as ESI, PF etc payable by the contractor for the workers he may deploy to carry out the job, under various enactments passed by Parliament or by the State legislature and Rules framed thereunder. The rates shall further be deemed to include statutory levies arising from such acts, central or state, which may come into force, subsequent to submission of tenders. The tenderer shall note that no claim for enhancement of rates on the ground that existing statutory levies have been increased or those new statutory levies have come into effect after submission of tender, or on any other ground, will be entertained.**
- 1.12 The rates quoted in the tender shall remain valid for a period of three months from the date of opening of the tender.
- 1.13 Tenderer shall not increase their quoted rates, once the tenderer has submitted his quotation and during execution of the contract, in case his tender is accepted.
- 1.14 **Quantities shown in the attached schedule - G are only approximate per annum and are liable to variations without entitling the contractor to any compensation through out the contract period of two years from the date of commencement of work.**
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- 1.15 Before submission of tender, the tenderers are advised to inspect the site of work and its environments and be well acquainted with the actual working and other prevailing conditions, position of the materials and labour. Pre bid meeting delebrating aspects involved in Job contract can be arranged on request to ensure proper understanding by the tenderers who wish to participate. They should be well versed with **BHEL General Conditions of Contract**, Instructions to tenderers, specifications and all other documents, which form part of the Agreement to be entered into subsequent to award of work. The tenderer shall specifically note that it is tenderer's responsibility to provide any item, which is not specifically mentioned in this specification but which is necessary to complete the work.
- 1.16 **Details and quantities of each item of work shown in the tender schedule attached hereto are only approximate. They are given as a guideline for the purpose of tendering only and are liable to variations and alterations at the discretion of the competent authority. The work under each item as executed shall be measured and paid at the corresponding rates to be quoted by the tenderer in the tender schedule attached hereto. It shall not be based on number of persons deployed or on any other criteria.**
- 1.17 Please note that our normal working hours are from 07.30 A.M. to 04.36 P.M. from Monday to Friday & 07.30 A.M. to 12.30 P.M. on Saturdays.

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1.18 ESSENTIAL ELIGIBILITY CRITERIA FOR THE TENDER

- A) The tenderer should have experience of at least THREE (3) years in executing labour contracts, which is considered to be similar work, preferably in large organization.
- B) The tenderer should have successfully completed similar works during the last 7 (seven) years from submission of tender as per the details hereunder (copy of the completion certificate to be enclosed)
 - a) Three similar completed works (each not less than 40% of the estimated value of this tender) or
 - b) Two similar completed works (each not less than 50% of the estimated value of this tender) or
 - c) One similar completed works (not less than 80% of the estimated value of this tender)
- C) The tenderer should have a legal status such as that of a proprietary concern, Partnership firm, Companies etc. The tenderer should have been registered under relevant Act for carrying out the nature of work for which this tender is invited.
- D) The average annual turnover of the tenderer for last three years from submission of tender should be at least 30% of the estimated value per annum of this tender. You are requested to submit copy of IT returns for the last 3 year or statement of accounts certified by a qualified chartered accountant for the last 3 years along with the offer as evidence.
- E) The tenderer should have PAN/TAN/TIN
- F) The tenderer should have ESI, PF and Service Tax registration number allotted under its name. The letter issued by the concerned authorities should be enclosed with the technical bid of the tender.
- G) The EMD should have been submitted along with Technical Bid.**
- H) The Tenderers should have categorical confirmed acceptance of the all the tender terms and condition including the payment terms.

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2. Terms and Conditions

- 2.1 This Tender is for
“PIECE-RATED CONTRACT FOR MATERIAL MOVEMENT, CLEANING OF PV MODULES e.t.c. IN SCPV DEPARTMENT” as per the SCHEDULE-G.(The quantity indicated in the Schedule is per annum) . The contract shall be for a period of TWO YEARS from the date of awarding the tender.
- 2.2 The tenderer has to indicate his rates both in words and figures and the lowest of the two will be reckoned and binding.
- 2.3 **The tenderer shall deposit Earnest Money Deposit (EMD) for the value as indicated in ‘NOTICE INVITING TENDER’ along with the tender document. (Rs. One Lakhs only).** When the work is awarded to the lowest tenderer the amount of EMD will be adjusted against the **security deposit** payable by the contractor. The EMD shall be in the form of demand draft from any nationalised bank drawn in favour of Bharat Heavy Electricals Ltd, Electronics Division, Mysore Road, Bangalore –560 026.
- 2.3.1 EMD by the Tenderer will be forfeited as per Tender Documents if
- i) After opening the tender, the tenderer revokes his tender within the validity period or increases his earlier quoted rates.
 - ii) The tenderer does not commence the work within the period as per LOI / Contract. In case the LOI / contract is silent in this regard then within 15 days after award of contract.
- 2.3.2 EMD given by all unsuccessful tenderers shall be refunded normally within fifteen days of acceptance of award of work by the successful tenderer.
- 2.3.3 EMD shall not carry any interest.
- 2.4 a) The earnest money deposited at the time of tendering will be treated as part of security deposit of the successful tenderer, and the balance amount
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to make up the full security deposit shall be remitted to BHEL. The security deposit may be furnished in any one of the following forms:

- i) Cash (as permissible under the Income Tax Act)
- ii) Pay Order, Demand Draft in favour of BHEL.
- iii) Local cheques of nationalized banks, subject to realization.

2.5 The contractor shall deposit an amount of Rs 2,81,840.00 (Rupees two lakhs eightyone thousand eight hundred and fourty only) as Security Deposit with BHEL in the form of cash, pay order, Demand Draft, local cheque (subject to realization) from a nationalized bank in the name of BHEL valid for 30 months from the date of commencement of contract. Alternatively, the amount of security deposit can be adjusted partly from EMD and balance amount from subsequent bills. **The contractor should deposit minimum 50% of the security deposit before start of the work and balance 50% may be recovered at the rate of 10% from the running bills.** EMD of the successful tenderer shall be converted and adjusted against security deposit in case of payment of EMD is in the form of Cash, pay order or DD as mentioned above.

2.6 The Security deposit will be forfeited and credited to BHEL in the event of breach of any of the terms and conditions of this contract by the Contractor.

2.7 The Security deposit will be refunded by BHEL after the fulfilment of the contract. On the Contractor rendering a No Demand and No Due Certificate from ESIC, EPFO to the effect that there is no claim or demand in respect of the contract executed and after adjusting any sums due to BHEL from the Contractor or under any other contract with this Division or any other sister division of BHEL.

2.8 The Payment will be made to the Contractor on the basis of Work carried out, keeping in view the Unit of measurement. In case the same persons continue to work beyond normal working hours, for any reasons whatsoever, the payment to workers by the contractor in such cases shall be at the rate applicable under the Factories Act and it should be at the cost of contractor. **In other words no overtime (OT) payment will be made by BHEL, as the payment is on "Unit Rate Basis".**

2.9 **Terms of Payment :** The payment will be made within 30 days from the date of submission of bills, duly certified by BHEL I/C; along with all

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necessary documents , challans for ESI /PF and returns etc. as applicable under contractor's statutory liability.

3 Contractor's Obligations:

Contractor shall decide the number of workmen to be deployed for execution of the work awarded to him and he or his authorized representative will be solely entitled to instruct such workers about the manner in which the awarded work is to be carried out as per the prescribed specifications and as directed by Engineer-In-charge. The Contractor shall be fully responsible for the work awarded to him.

- 3.1 Contractor shall supervise the work allotted to him and to be carried out by his workmen. The work shall be executed as per work instructions and to the satisfaction of Engineer-In-charge.
 - 3.2 Contractor shall ensure that the employees deployed in the premises of BHEL are physically and mentally fit and do not have any criminal records. Such employees should possess requisite skill, proficiency, experience etc.
 - 3.3 Contractor shall maintain appropriate records of his employees deployed to carry out the job(s).
 - 3.4 Contractor shall provide employment card / identity card with photograph duly verified and attested by the Contractor to his employees. Contractor shall also indicate the name of the proprietary / partnership firm / Company, place of work, contact number and duration of validity of the card etc. in such identity card.
 - 3.5 Contractor will be fully responsible for the good conduct of his employees. In case of any misconduct/ misbehaviour by any employee, the contractor will replace such employee(s) immediately.
 - 3.6 Contractor will ensure that the job is executed through his employees on his rolls and under no circumstances the contractor will deploy any casual employees to carry out the job; nor shall sub-contract the job without prior written permission from BHEL.
 - 3.7 Contractor will keep watch on his employees and he will be liable for any pilferage / loss to BHEL due to acts of omission and commission by his employees. Similarly, liability for any compensation to outsiders & his employees on account of any act of omission and commission by the employees deployed by the contractor shall lie exclusively with him.
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- 3.8 The contractor shall be responsible for enforcing all safety regulations as applicable strictly ensure wearing of safety equipments by them. BHEL may provide hand gloves & consumables, material handling equipment etc. wherever required.
- 3.9 The contractor has to provide a distinct uniform different from BHEL employees. The uniform should have logo of the contractors firm / company. The uniform shall be in neat, tidy and wearable condition.
- 3.10 Contractor to ensure that all precautions are taken for safety of his employees. The contractor shall be responsible for enforcing all safety regulations as applicable, while undertaking the work tendered inside the factory.
- 3.11 In the event of termination of contract for any reason whatsoever, the contractor shall withdraw all his employees and his equipments, if any; from the establishment of BHEL.
- 3.12 Contractor shall take necessary insurance policy for his workmen to cover workmen's compensation and accidental cover as may be applicable.
- 3.13 BHEL will provide consumables, material handling equipments etc. where ever applicable.

4 Contractor's statutory liability:

- 4.1 All statutory requirements under Minimum Wages Act 1948, Payment of Wages Act 1936, Workmen Compensation Act 1923, EPF & MP Act 1952, Payment of Gratuity Act 1972, ESI Act 1948, the Contract Labour (R&A) Act 1970, Payment of Bonus Act 1965, Income Tax Act 1961, Service Tax rules and all other applicable Acts and rules shall be complied with by the contractor.
- 4.2 Contractor shall comply with all statutory requirements, Rules, Regulations, and Notifications in relation to employment of his employees issued from time to time by the concerned authorities.
- 4.3 Contractor shall ensure payment of statutory prescribed minimum wages as applicable from time to time and maintain proper records of their timely disbursement.
- 4.4 Contractor to provide PF pass book to his employees and ensure payment of PF, EDLI, pension dues under EPF & MP Act 1952 to the RPFC.
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- 4.5 Contractor shall ensure payment of ESI contribution under ESI Act 1948 and provide ESI membership No. card of each employee.
- 4.6 Contractor shall produce proof of deductions as well as remittances of PF, EDLI, Pension, ESI contribution, administrative charges etc., wherever applicable and shall maintain proper records. Contractor to issue wage slips to his employees.
- 4.7 Contractor shall furnish proper Returns to the concerned statutory authorities and provide a copy of the same to BHEL.
- 4.8 Contractor shall be solely responsible for non payment / delayed payment of wages / DA, contributions under EPF & MP Act, ESI Act etc.
- 4.9 In case, the contractor fails to make payment of wages to his 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.
- 4.10 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.
- 4.11 The liability for any compensation on account of injury sustained by an employee of the contractor will be exclusively that of the contractor.
- 4.12 Contractor shall obtain necessary insurance cover at his own cost to mitigate any risk of accidents, losses, damages etc. BHEL shall not be responsible for any losses, damages to the contractor or to his workmen.
- 4.13 Contractor should have independent code numbers / exemptions under EPF & MP Act 1952 and ESI Act 1948 and shall cover his employees under the said codes.
- 4.14 Payment of bonus under the Payment of Bonus Act, payment of gratuity under the Gratuity Act, and retrenchment compensation under Act will be the sole responsibility of the contractors.
- 4.15 Over and above the daily wages rate, the contractor shall make payment towards leave with wages also.
- 4.16 Contractor shall observe provisions of Factories Act in respect of working hours, holidays, rest intervals, leave and overtime to his employee. No work shall be done on second / third shift, overtime, Sundays or on other declared holidays without written permission from BHEL.

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- 4.17 Contractor shall be responsible for making payment of wages before expiry of 7 days from the last day of wage period and to ensure disbursement of wages in the presence of the representative from BHEL.
- 4.18 Contractor shall obtain license under CL (R&A) Act, 1970.
- 4.19 All the Contractors will have to produce documentary evidence of being a Income Tax Assese. Income Tax Permanent Account No (IT PAN No) and Tax Deduction Account No (TAN) or Income Tax Clearance Certificate (ITCC) shall be produced.

GENERAL TERMS & CONDITONS

- 5 Engineer In charge shall give instruction to the contractor or his authorized representative for the jobs to be carried out. BHEL will have nothing to do or be concerned with the employment of employees working for the contractor. The relationship between BHEL and the contractor will be that of independent entities and nothing herein contained will amount to joint venture, partnership or on employer-employee relationship. Supervision of work shall be done by the contractor / his authorized Supervisor.
 - 5.1 The contractor shall maintain regular contact with the designated employee(s) of BHEL and will interact on matters relating to the work awarded under this contract.
 - 5.2 In case the contractor does not carry out the contractual / statutory obligations or the services rendered by him are found to be unsatisfactory, BHEL shall bring the same to his notice and he will be obliged to discharge the obligations and rectify the deficiency / anomaly within three days time failing which, BHEL reserves the right to terminate the contract without assigning any reason whatsoever. In such an event, no damages will be payable for short closure of the contract.
 - 5.3 This security deposit shall be liable to be returned to the contractor after satisfactory completion of the work at the end of contract period, subject to deduction on account of company dues, non-deposit of statutory dues etc. No interest shall be payable on the security deposit.
 - 5.4 The decision of BHEL regarding interpretation of any terms and conditions set forth in this agreement shall be final and binding on the contractor.
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- 5.5 Any matter arising out of or in connection with the agreement shall be under jurisdiction of Bangalore Court.
- 5.6 Notwithstanding anything contained in this agreement, the contract may be terminated by BHEL without assigning any reason thereof by giving a notice of 30 days to the contractor.
- 5.7 The contractor shall commence the work immediately on receipt of the order and the contract shall remain valid for a period of TWO YEARS from the date of issue of Job contract. The parties reserve the right to extend the contract on mutually agreed terms and conditions.
- 5.8 Tenderer shall furnish a solvency certificate for Rs. 3,50,000.00(Rupees Three Lakhs fifty thousand only) ie . 10% of estimated cost approx.
- 5.9 **Penalty at the rate of 0.5 % per week will be levied, upto a maximum of 10% of the unexecuted portion of contract value; for the delay in execution of wok.**

6. ARBITRATION AND GOVERNING LAW

All disputes arising in connection with the contract shall be settled by mutual consultation. If no agreement is reached, the dispute shall be settled in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and the Rules made thereunder. The dispute shall be referred for arbitration to any aribtrator to be appointed by the Head of unit of BHEL-EDN. Job with the BHEL will not be a disqualification for appointment as arbitrator. The award of the arbitrator shall be final and binding on both the parties. The venue of the arbitration shall be Bangalore. The award to be given by the arbitration shall be a speaking award. All questions, disputes, differences arising under, out of or in connection with this contract shall be to the exclusive jurisdiction of Bangalore Courts.

7. Signature of the Parties

The contract agreement needs to be executed as per BHEL format on non-judicial stamp paper of Rs 100/- to be purchased by the contractor. It should be signed with seal of the firm / company and witnessed.

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GENERAL SAFETY PRECAUTIONS WHILE ON WORK

1. Use proper hand gloves, masks while handling chemicals such as Iso propyle alcohol, thinner, flux, conformal coating (lacquer), solder paste.
 2. Use heat resistant gloves while cleaning near wave solder machine, temperature cycling Machines(dry chambers).
 3. Use safety goggles while cleaning near wave solder bath.
 - 4 .Do not keep materials / tools / components projecting into gangways / aisles.
 - 5.Do not store / stack materials in front of electrical control panels/ switches and fire extinguishers.
 - 6.Do not store inflammable near any electrical switch boards/ cubicles.
 7. Do not throw cotton waste soaked with inflammable liquids/ solvents/ chemicals in drains or room corners.
 8. Do wash thoroughly with water the affected part of the body in case of splashes of chemicals.
 9. Do not use solvents to clean hands after work.
 10. Do open cautiously a container, be alert for sprays or splashes of acids/alkalies.
 11. Do treat all liquids as dangerous, until you know that they are safe.
 12. Do handle very carefully the bottles / containers which have no labels.
 13. When cleaning, use nonflammable solvents. Never use thinner to clean floors.
 14. Before handling any chemical check with MSDS for the safety precautions required
 15. Keep your work area clean and dry.
 16. Store chemicals in stable racks in clearly marked containers and in designated areas.
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17. Always leave gangways between stacks and between stacks and walls.
18. Keep all combustible materials away from any kind of heat source.
19. Never block exits, fire extinguishers.
20. Do not store projecting material near gangways.
21. Do not carry a load, which is too heavy for you. Get help if the load is too heavy.
22. Never carry a load that obstructs the view ahead.
23. Make sure that your route is clear of obstacles.
24. Do not pull a hand truck, but push it.
25. When going down a ramp, keep the load in front.
26. Keep gangways clear and unobstructed.

Note : The above list is only indicative and not exhaustive regarding the various safety precautions to be taken at the end of the contractor

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SAFETY PRECAUTIONS DURING CHEMICAL HANDLING AT WORK

1. Use hazardous chemicals only as directed and for their intended purpose. Before handling any chemical, check with material storage data sheet (MSDS) for the safety precautions required.
2. Never smell or taste a hazardous chemical.
3. Know the location of safety equipment: emergency shower, eye wash, fire,extinguisher, fire alarm station.
4. Do not work alone in the department if you are working with hazardous materials.
5. Purchase the minimum amount of hazardous materials necessary to accomplish your work and dispense only the minimum amount necessary for immediate use.
6. Avoid direct contact with any chemical. Keep chemicals off hands, face and clothing.
7. Avoid practical jokes or other behavior which might confuse, startle or distract another worker.
8. Keep the work area clean and uncluttered with chemicals and equipment. Clean up the work area on completion of an operation or at the end of each work day.
9. Use good hygiene. Keep your hands and face clean. Wash thoroughly with soap and water after handling any chemical.
10. Smoking, drinking, eating, and the application of cosmetics is forbidden in areas where hazardous chemicals are in use.
11. Do not store food or drink for human consumption, or utensils or equipment for preparing food or drink, in the same cabinet, drawer, refrigerator or freezer with chemicals or equipment used with chemicals.
12. Garments contaminated with hazardous materials should not be taken home by staff for laundering. They should be laundered on-site or by a commercial laundry which has been apprised of potential hazards.



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13. Ensure all containers are in good condition and properly labeled.
14. Do not store incompatible chemicals in close proximity to each other.
15. Eye protection and rubber gloves should always be used when handling corrosive materials. A face shield, rubber apron, and rubber boots may also be appropriate, depending on the work performed.
16. When mixing concentrated acids (caustics) with water, add the acid (caustic) slowly to water. **Never add water to acid (caustic).**
17. Acids and bases should be stored separately from each other. Organic acids should be stored with flammable materials, separate from oxidizers and oxidizing acids.
18. When material is being transferred, keep chemical containers tightly closed.
19. Pyrophoric materials ignite spontaneously upon contact with air. The flame may or may not be visible. Examples include butyllithium, silane, and yellow phosphorous. Store and use all pyrophorics in an inert atmosphere.
20. Oil or grease on the high pressure side of an oxygen cylinder can cause an explosion. Do not lubricate an oxygen regulator or use a fuel gas regulator on an oxygen cylinder.
21. Always wear goggles or safety glasses with side shields when handling compressed gases.
22. For specific information regarding chemical handling, contact your supervisor.

ALL THE ABOVE SAFETY PRECAUTIONS ARE TO BE STRICTLY FOLLOWED

Note : The above list is only indicative and not exhaustive regarding the various safety precautions to be taken at the end of the contractor

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WORK PROCEDURE / INSTRUCTION for SC&PV

Sl.No.	ACTIVITY	INSTRUCTIONS
1	Cleaning of PV MODULES	Cleaning of PV MODULES to be carried out without damaging the modules. Proper cleaning is to be ensured so that no residues of RTV/EVA traces remain on the cleaned surface of the glass and also at the edges of the frames. There shall not be any stains on the front as well as on the back side of the module. Handglove and mask should be used while cleaning the modules with chemicals.
2	Movement of Materials a) From holding stores to shop floors b) From shop floor/holding stores to material gate (Sub-contract and ESD materials). c) From GI to holding stores	The bins loaded with components are to be moved carefully without spillage of components during transportation.
3	Collection of chemicals from IMS stores and distribution to production shops.	Chemicals are to be handled carefully during transportation. Necessary safety gadgets/equipments like hand glove etc. are to be used while handling. Care shall be taken while loading , unloading , moving and keeping the chemicals in the designated areas . The trolley shall not be overloaded while transporting the chemicals.
4	Movement of Modules and Devices : a) Shifting of framed PV Modules from framing area to testing area and shifting the tested module to Module cleaning area. b) Transporting of QC inspected and passed PV Cells, PV Modules and Devices to the dispatch area .	These items are of very high value items and hence should be handled with utmost care. The items are to be moved by using trolley.
5	Movement of Cylinders from cylinder store room to shop floor and to the gas bank area.	Movement of cylinders from store room to the gas bank area, shop floor and shifting the empty cylinders to the empty cylinder area to be done carefully since they are heavy. Necessary safety gadgets/equipments are to be used while handling. Care shall be taken while loading , unloading , moving and keeping the cylinders in the designated areas . The trolley shall not be overloaded while transporting the cylinders. Care must be taken so that the various gas cylinders are not mixed .
6	Collection of shop floor wastes / scrap and putting in respective bins for disposal.	Item wise wastes and scraps are to be collected from the shop floor and put in designated bins for disposal.

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Format for Technical & Commercial terms

Sl.	Description	If yes, furnish details
1	As per Constitution : <ul style="list-style-type: none">- If you are a Company , furnish the Certificate of Incorporation- If you are a Firm , furnish the Partnership Deed- If you are a proprietary, furnish IT return with PAN card	
2	Have you executed Job Contract with the provision of labourers complying with Labour laws in the preceeding 7 Years? <ul style="list-style-type: none">- One such job valued not less than Rs. 27.39 lakhs. OR- Two such jobs each valued not less than Rs.17.12 lakhs OR- Three such jobs each valued not less than Rs.13.7 lakhs.	
3	Was your average Turnover in the previous 3 years equal or more than Rs.10.27 lakhs as evidenced by Balance Sheet & Profit and Loss account statement filed with IT authority?	
4	You are required to indicate <ul style="list-style-type: none">- ESI No- PF No- Service Tax No	
5	If you are a Income Tax assessee, indicate <ul style="list-style-type: none">- Income Tax Permanent Account No (PAN No)- Tax Deduction Account No (TAN No)	
6	Whether you are registered under Contract Labour Act 1970? If so, furnish details.	
7	Is Solvency Certificate attached here with? <ul style="list-style-type: none">- A Certificate by Banker for an amount equal to 10 % of estimate value (i.e. Rs.3,50,000 /-)	

Note: The documentary evidence shall be furnished for verification.

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CONTRACTOR

SCHEDULE -G - ESTIMATED BILL OF QUANTITY FOR 2 YEARS. (PRICE BID) TENDER REF DOC NO: EDN/JC/SCPV/2010-12/01												
Sl.No.	Activity	Category	Frequ ency	Quantum of work /Frequen cy	Unit of work	Total manhou rs reqd	Unit of Measur ement	Quantu m of Work per annum	Quantum of Work FOR 2 YEARS	Rate per Unit of Work in Fig (Rs)	Rate per Unit of Work in Words (Rs)	Total Amount (Rs) for 2 Years (10 x 11)
1	2	3	4	5	6	7	8	9	10	11	12	
1	MOVING OF 10W GLASS FROM STORES AREA TO PRODN SHOP	USW	Daily	1	Nos	0.02	1	302	604			
2	MOVING OF 35W GLASS FROM STORES AREA TO PRODN SHOP	USW	Daily	2	Nos	0.03	1	604	1208			
3	MOVING OF 70W GLASS FROM STORES AREA TO PRODN SHOP	USW	Daily	3	Nos	0.10	1	906	1812			
4	MOVING OF 150W GLASS FROM STORES AREA TO PRODN SHOP	USW	Daily	5	Nos	0.17	1	1510	3020			
5	MOVING OF 220W GLASS FROM STORES AREA TO PRODN SHOP	USW	Daily	115	Nos	5.75	1	34730	69460			
6	CLEANING OF 10W GLASS BEFORE LAMINATION	USW	Daily	1	Nos	0.02	1	302	604			
7	CLEANING OF 35W GLASS BEFORE LAMINATION	USW	Daily	2	Nos	0.07	1	604	1208			
8	CLEANING OF 70W GLASS BEFORE LAMINATION	USW	Daily	3	Nos	0.15	1	906	1812			
9	CLEANING OF 150W GLASS BEFORE LAMINATION	USW	Daily	5	Nos	0.42	1	1510	3020			
10	CLEANING OF 220W GLASS BEFORE LAMINATION	USW	Daily	115	Nos	11.50	1	34730	69460			
11	MOVING OF LAMINATES TO FRAMING AREA	USW	Daily	126	Nos	2.10	1	38052	76104			
12	MOVING OF FRAMED MODULES FROM FRAMING AREA TO QC TESTING AREA	USW	Daily	126	Nos	2.10	1	38052	76104			
13	CLEANING OF PV MODULES 10 W	USW	Daily	1	Nos	0.08	1	302	604			
14	CLEANING OF PV MODULES 35 W	USW	Daily	2	Nos	0.33	1	604	1208			
15	CLEANING OF PV MODULES 70 W	USW	Daily	3	Nos	0.75	1	906	1812			
16	CLEANING OF PV MODULES 150 W	USW	Daily	5	Nos	1.67	1	1510	3020			
17	CLEANING OF PV MODULES220W	USW	Daily	115	Nos	42.17	1	34730	69460			
18	CLEANIG OF TERMINAL BOXES	USW	Daily	126	Nos	4.20	1	38052	76104			
19	CLEANING OF CABLE GLANDS FOR MODULES	USW	Daily	126	Nos	4.20	1	38052	76104			

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1	2	3	4	5	6	7	8	9	10	11	12	
20	REMOVING OF DUST IN THE MODULES BEFORE QC INSPECTION AND REMOVAL OF STICKER AFTER INSPECTION	USW	Daily	126	Nos	6.30	1	38052	76104			
21	MOVING OF QC PASSED MODULES TO DISPATCH AREA	USW	Daily	8	Trip	4.00	1	2416	4832			
22	PACKING OF CELLS	USW	Daily	1000	Nos	0.83	100	302000	604000			
23	MOVING OF CELLS FROM CELL PRODN AREA TO CELL STORAGE AREA	USW	Daily	2	Trips	1.50	1	604	1208			
24	MOVING OF CELLS IN BATCHES TO PRODN AREA FROM STORE	USW	Daily	2	Trip	0.75	2	604	1208			
25	MOVING OF CELLS TO DISPATCH AREA	USW	Daily	1	Trip	0.50	1	302	604			
26	CLEANINF OF DEVICES BEFORE QC INSPECTION	USW	Daily	70	Nos	4.67	1	21140	42280			
27	MOVING AND CLEANINGOF PACKING BOXES TO DEVICE PACKING AREA	USW	Daily	70	Nos	2.33	1	21140	42280			
28	CLEANING OF DEVICE'S HEAT SINK	USW	Weekly	2	Nos	0.50	1	104	208			
29	PACKING OF DEVICES	USW	Daily	70	Nos	3.50	1	21140	42280			
30	MOVING OF QC PASSED DEVICES TO DESPATCH AREA& EDN STORES	USW	Daily	70	Nos	3.50	1	21140	42280			
31	PACKING OF DEVICES MATERIALS FOR SUBCONTRACTING	USW	Daily	70	Nos	2.33	1	21140	42280			
32	MOVING OF SUB CONTRACTING MATERIALS TO THE SECURITY GATE	USW	Daily	2	Trip	1.50	1	604	1208			
33	MOVING OF SUB CONTRACTING MATERIALS FROM THE SECURITY GATE TO SHOP FLOOR	USW	Daily	2	Trip	1.50	1	604	1208			
34	MOVING OF CHEMICALS FROM IMS STORES AND TRANSPORT THE SAME TO RESPECTIVE SHOPS OF PV & DEVICES	USW	Daily	1	Nos	1.00	1	302	604			
35	MOVING OF PV MATERIALS FROM STORES TO PV ASSEMBLY AREA AND TO CELL AREA	USW	Daily	2	Nos	2.00	1	604	1208			
36	MOVING OF MATERIAL FROM GI TO SHOP FLOOR/STORES ON A CASE TO CASE BASIS	USW	Daily	1	Trips	1.00	1	302	604			

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Sl.No.	Activity	Category	Frequency	Quantum of work /Frequency	Unit of work	Total manhours reqd	Unit of Measurement	Quantum of Work per annum	Quantum of Work FOR 2 YEARS	Rate per Unit of Work in Fig (Rs)	Rate per Unit of Work in Words (Rs)	Total Amount (Rs) for 2 Years (10 x 11)
1	2	3	4	5	6	7	8	9	10	11	12	
37	MOVING OF LPG CYLINDERS FROM LPG STORAGE SPACE (NEAR CANTEEN) THE ARC STORAGE AREA AND VICEVERSA	USW	Weekly	2	Trips	2.00	1	104	208			
38	MOVING OF GAS CYLINDERS HELIUM, C2F2,H2, FREON, SILANE, AMMONIA, ARGON AND MIXED GAS TO THE RESPECTIVE SHOP FLOOR AREA	USW	Weekly	2	Trips	1.50	1	104	208			
39	MOVING OF OXYGEN CYLINDERS FROM MANIFOLD TO GAS BANK AND BACK	USW	Daily	2	Trips	1.50	1	604	1208			
40	DISTRIBUTION OF FILES AND PAPERS	USW	Daily	3	Trips	1.50	1	906	1812			
41	ADDITIONAL SWEEPING AND MOPPING OF SHOP FLOOR TO MAINTAIN DUST FREE ENVIRONMENT	USW	Daily	1000	SqMtr	8.33	1	302000	604000			
42	Maintenance of office cleaning of tables & other items , photo copying, filing of documents,serving beverages and miscellaneous works.	USW	Daily	1	Nos	8.00	1	302	604			
43	SUPERVISION	SSW	Daily	1	Nos	8.00	1	302	604			
			Total Man Hour ->			144				GRAND TOTAL FOR 2 YEARS(RS)->		
			(No of persons : 17+ 1 Supervisor)							Grand total Amount in words Rs _____		