

	PURCHASE SPECIFICATION	BDC-P1718-0003	
Rudrapur	GROUP : BDC	Rev no	01

BDC-P1718-0003

Supply of 350 Nos Solar DC submersible Pumps with controller at Vadodra Gujarat with 05 years of Warranty.

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1 **INTRODUCTION:**

This specification defines the scope of the Bidder in **Supply of 350 Nos Solar DC submersible Pumps with controller at Vadodara, Gujarat with 05 years of Warranty.**

2 **BIDDER'S SCOPE:**

- Supply of Submersible DC Pumps with controller along with all accessories.
- Freight & Transit insurance
- Warranty of Supplied item for 05 Years.

Sl. No.	ITEM DESCRIPTION	Qty	SUPPLY	E&C	REMARKS
1	Solar Submersible DC Pumps with inbuilt protection features and controller with accessories. The Technical specifications are as per Clause 3 of this document.	350	✓	*	Original manufacturers only

Note:

- Pumping Head : 60 mtr.
- The Solar DC submersible pump should be suitable for 100 mm & above /onward bore size.
- The technical particulars, installation procedures and drawings shall be submitted for approval to BHEL before procuring.
- Bidder has to procure materials as per listed make. Whenever equivalent make has to be procured prior approval has to be taken from BHEL submitting the make and technical particulars of the component.
- Test Certificates of material should be submitted to BHEL after finalization of order.

2.1 Warranty of 05 years.

Solar DC submersible Pump with controller shall be under warranty for 05 (Five) years from the date of successful commissioning of the pump or for 05(Five) years from Four months from the date of supply whichever is earlier.

General:

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- During Warranty period Bidder shall carry out all necessary repairs/Replacement /service regularly without any extra cost.
- In case any repair or replacement of parts is necessary during warranty period, the same shall be carried out by the Bidder without any extra cost. The bidder shall ensure genuine and original spares and parts and consumables throughout warranty period department will not bear any cost what so ever.
- During the warranty period faulty pump shall be handed over to the bidder's local representative/ service center. The response time for repair of Solar DC submersible pump with controller should not be more than 48 hours (02 days).
- After completion of 5 years of warranty of the Pumps with controller, the item should be in sound working condition. The respective department may extend the service contract for further period on mutual agreement between Bidder and department at agreed service charges.

Any payment liability is being deliberately ignored thinking that this will unnecessarily increase per pump cost. On the other hand = supplier has to honour warranty as a corporation.

Note: The Pump shall be installed in different district of Gujarat mainly Vadodara, Dahod, Chotudaypur, Surat and Valsad. This information is being given for servicing purpose during warranty period, as required.

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3 Technical Specification

3.1 Submersible DC Pumps With Controller

- Lightweight S. S. Permanent magnet submersible pump with **embedded controller inside motor.**
- Pump type-Helical Rotor/ centrifugal type of Pump with Brushless Permanent Magnet
- Rated rpm – 500 to 3600
- Rated Voltage – 30 to 300V
- Rated Current – 8.4 amp(max)
- Built in features- Dry Run Protection
- Over & Under Voltage Protection
- Overload Protection
- Temperature Protection
- ISI mark Cable 3 Core x 4.0 Sq.mm
- Maximum Pumping Head 60 mtr.
- Daily yield of Solar Submersible Pump at Solar irradiance 7 KWh/m²-9000 LPD

The supplied pump shall be forming part of Solar PV Submersible Water Pump System having following main features.

1	PV Array rating (Wp) at Standard Temperature Condition.	>=675Watts. (Input Wattage of Pump close to 675 Watt is preferred for meeting desired delivery and Head requirement. Bidder to quote required PV array capacity in their technical bid)
2	Type of Pump & Capacity	Submersible 675 Wp
3	Capacity of Pump in LPD Minimum	7200 LPD
2	Total Head of Pump	60 Mtrs
3	Overall efficiency of Pump	Minimum 45%
4	Pump motor type	Helical/ Centrifugal rotor DC brush less type permanent magnet motor

- Outside Casing & shaft of pump set is made from Stainless Steel.
- **Motor should have inbuilt MPPT for optimum utilization of solar PV modules.**

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- Motor should be directly connected to solar PV modules.
- ISI mark cable 3 core x 4.0. sq. mm.

Protection

- **Dry run protection**
The pump is protected against dry running in order to prevent damage to the pump.
- **Overload Protection**
In panel over load protection device also fit for protection of pump & motor
- **Temperature Protection**
When the temperature rises the motor should automatically cut out. When the temperature has dropped to normal range, the motor should automatically cut in again.

Additionally, Protection against over and under voltage, open circuit, accidental short circuit, reverse polarity lightening hails & storms etc. shall also be provided either inbuilt with motor or in control panel. Bidder to clarify all these points in data sheet of pump to be submitted along with offer.

3.2 Control Panel Board

The Specification for Electric controller is as under

- Suitable for DC incoming Power Supply.
- Suitable for 0.7 KW/ 1 H.P. Pump.
- Frequency > 50 HZ.
- Efficiency at maximum Power > 90 %.
- DC Voltage input/ output -30 to 300 VDC.
- Maximum Amp. Input 8 Amp dc.
- Temperature range 0 to 50 degree c.
- Relative Humidity 95%.
- Voltage & current harmonicas as per relevant IS Limitations.
- Input Connections for Low, High Float Switches.
- Indication for Power on, Fault, PUMP OFF, Tank Full and Tank Empty.
- Auto Operation based on the Float Level Switch signals.
- Manual Operation through membrane type On / Off Buttons.

Bidder to clarify all these points in data sheet of controller be submitted along with offer.

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4 **Special Terms and conditions:**

4.1 **Freight & Transit insurance:**

Price quoted by the bidder for item is inclusive of the freight & transit insurance.

4.2 **Testing and Inspection**

Pre dispatch inspection

The pre-dispatch inspection will be carried out by BHEL/GWSSB/ accredited agencies vendors' works/sub-supplier works/lab.

- During inspection, the bidder should produce all the documentary evidences having procured and used new and quality components which go into the Pump. These documents including guarantee / warrantee / test certificate of the component manufacturer will be verified and authenticated by the inspection agencies. Such authenticated document should form a part of the total document required for clearing the bill for payment as per the schedule of payment.
- Third party inspection shall be carried out by inspection agency which is fixed by GWSSB/MNRE in presence of GWSSB representative at Works/ Any Govt. approved test center.
- Inspection charges for inspection of item shall be borne by the bidder & then it will reimbursed after producing receipt of payment.

4.3 **Packing, forwarding and transportation**

Packing shall be sturdy and adequate to protect all assemblies' components and accessories from injury by corrosion, dampness, heavy rains breakage and vibration encountered during transportation at site.

4.4 **Delivery**

The total time period for Supply is within **08 weeks** from the date of PO in the following sequence:

- Supply of 150 Nos. pumps: Within 03 weeks from date of order.
- Supply of next 150 Nos. pumps: Within 05 weeks from date of order
- Supply of next 50 nos. pumps: Within 08 weeks from date of order.

Offer quoting delivery period longer than 10 weeks shall be rejected. Regarding the loading in excess delivery time beyond the 08 Weeks please read clause -10 of Annexure - A. Earlier completion periods are desirable. Early delivery period is desirable.

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5 **GENERAL TERMS & CONDITIONS**

Note:

1. **Supply shall be made directly to the Vadodara.**
2. The Unloading of item at Vadodara is in the scope of Bidder.

6 **LIST OF ENCLOSURES:**

Following enclosure makes the part of BDC-P1718-0003.

- 6.1 Annexure – A includes Qualifying Criteria, Payment terms, bidder's information, and declaration by Bidder etc.
- 6.2 Annexure – B format for certificate by chartered accountant

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Annexure A

Qualifying Criteria

Sl. No	Description	Required
1	Acceptance to BDC-P1718-0003, Annexure-A and B. Attach signed & stamped/Digital signature copies of each page.	Applicable
2	Copy of proof of supply DC solar submersible pump with controller along with Order copy of having experience of minimum 01 Purchase order of 50 Nos. with aggregate of minimum 350 Nos in last Five years.	Applicable
3.	The Average annual financial turnover during last Three years should be minimum 132 lakhs. Bidder have to submit audited balance sheet & profit and loss account of last three financial years.	Applicable
4	Fresh solvency certificate issued from the nationalized or scheduled bank after 31.01.2017 of value not less than 30 Lakhs.	Applicable
5	EMD of Rs.8,75,000/- (Eight lakh Seventy Five Thousand Only) shall be submitted in form of Demand draft/NEFT/RTGS . Demand Draft shall be made in favor to Bharat Heavy Electricals Limited, payable at Rudrapur. Demand Draft shall be sent to BHEL through Speed Post/courier etc. However, details of Demand Draft must be submitted along with offer. In case of submission of NEFT/RTGS, details of bank Account are given below: Bank Details are as follow: Bank: HDFC Bank Beneficiary Name: Bharat Heavy Electricals Limited A/C NO: 02830310000080 Account Type: Cash Credit BRANCH: Shop 1 & 2, NAINITAL ROAD RUDRAPUR, U. S. Nagar PIN CODE-263153 Tel: 05944 - 241756 / 241368 MICR CODE: 263240002 IFSC CODE: HDFC0000283 EMD is exempted for micro & small scale enterprises (MSE). Note: submit attested documentary Evidence/ Govt. Certificate etc. in support of the same along with their Techno-commercial offer.	Applicable

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	MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM–II certificate having deemed validity (Five years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or Udyog Aadhar or EM-II certificate along with attested copy of a CA certificate (Format enclosed as per Annexure- B) where deemed validity of EM-II certificate of five years has expired) applicable for the relevant financial year (last audited). EMD to unsuccessful bidders shall be returned after finalisation of PO. EMD to successful bidder shall be returned only after submission of PBG as per Clause 8 of NIT terms & conditions of Annexure-A. No interested shall be payable on EMD. In case of any unilateral change, withdrawal of offer within validity period during any stage of tendering or not performing the contract post finalization of tender, EMD shall be forfeited.	
7	Bidder has to accept GST clause as attached	Applicable
8	Only original manufacturers of pump can quote in this tender. Offer submitted by any trader/Dealer shall not be acceptable.	Applicable

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NIT Terms & Condition

- 1. Price basis:** Firm i.e. from date of PO to completion.
- 2. Delivery:** The total time period for Supply is within **08 weeks** from the date of PO. Offer quoting delivery period longer than **10 weeks** shall be rejected. Regarding the loading in excess delivery time beyond the 08 Weeks please read clause -10 of this Annexure - A

3. Term of Delivery: FOR Vadodara

4. Testing and Inspection **Pre dispatch inspection**

The pre-dispatch inspection will be carried out by BHEL/GWSSB/ accredited agencies vendors' works/sub-supplier works/lab.

- During inspection, the bidder should produce all the documentary evidences having procured and used new and quality components which go into the Pump. These documents including guarantee / warrantee / test certificate of the component manufacturer will be verified and authenticated by the inspection agencies. Such authenticated document should form a part of the total document required for clearing the bill for payment as per the schedule of payment.
- Third party inspection shall be carried out by inspection agency which is fixed by GWSSB/MNRE in presence of GWSSB representative at Works/ Any Govt. approved test center.
- Inspection charges for inspection of item shall be borne by the bidder & then it will reimbursed after producing receipt of payment.

5. Payment terms:

The payment shall be made by BHEL in the following manner:

- a. On Supply:** 90% of the PO value (as per BDC-P1718-000.) on successful supply of 100% quantity. Certificate issued by **Gujarat Water Supply & Sewerage Board (GWSSB)/BHEL representative** for the receipt of material shall be submitted along with invoice.
- b. Trail Run:** 10% of the PO value (as per BDC-P1718-0003) after successful trail run certificate issued by GWSSB/BHEL shall be furnished along with invoice or 10% of the PO value after 6 months from the date of supply whichever is earlier.

Payments shall be made to Bidder's account within 45 days through e-payment on submission of bill along with all necessary document as mentioned above. Bidder shall provide its bank A/c details for making e-payment.

All payments to be made to the bidder under the contract will be in Indian rupees only.

Payment shall be released on furnishing performance Bank Guarantee.

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6. **Liquidated Damages:** In case of delay in delivery, a penalty of 0.5% per week, maximum up to 10% of total purchase order value on delayed portion shall be applicable. **In case of quoting any deviation from the above LD clause, the offer shall be loaded in comparison statement for un-accepted portion of LD, maximum up to 10% of basic value. Delivery refers total scope like supply, installation & commissioning, handing over etc. as per NIT.**

7. **Warranty:**

The bidder must ensure that the goods supplied under the contract are new, unused and of most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. Detail of warranty points please read clause 2.1 of BDC-P1718-0003 under point Bidders scope.

8. **PBG:** A performance bank Guarantee of 10% of PO value valid for warranty period of 05 years from the date of successful commissioning or Four months from the date of supply whichever is earlier with a claim period of 6 months thereafter by the successful Tenderer shall be furnished to BHEL within 10 days from the date of the Purchase order. The performance Bank Guarantee shall be as per BHEL format from a Nationalized/ Scheduled Bank. The Bank Guarantee towards Performance Guarantee will be released after completion of warranty period.

9. **Evaluation Criterion:**

Tender shall be awarded to techno-commercially qualified L-1 bidder solely on the basis of quoting lowest "Total Landed Cost of package" to BHEL Rudrapur in Indian Rupees in comparison sheet prepared on F.O.R. (Free on Road) Vadodara basis.

Total Landed Cost to BHEL Rudrapur = Complete item Cost + warranty + All Taxes/duties + Loading in-lieu of deviation and relaxations accepted by BHEL – discount (if any) – (CENVAT credit provided to BHEL based on proper documents).

10. **Loading Criterion:**

- In case of quoting any deviation from the above LD clause (see the clause 06 of this Annexure A), the offer shall be loaded in comparative statement for un-accepted portion of LD, maximum up to 10% of basic value.
- In case of quoted delivery period being longer than **08 weeks from the date of PO** as specified in tender **but less than or equal to 10 weeks**, a loading of 0.5% per week of complete Item cost shall be done for which relaxation is sought.

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11. Type Test:

L-1 bidder shall establish the performance of pump by successfully conducting the Type-test at any MNRE accredited laboratory of offered DC Solar pump as per NIT integrated with BHEL Solar PV modules before the pre-dispatch inspection of offered system. Report shall be in the favor of BHEL Rudrapur. The SPV module shall be issued to the successful bidder on returnable basis.

- 12. Reverse Auction:** BHEL reserves the right to go for Reverse Auction (RA) (Guidelines as available on www.bhel.com) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. Bidders to give their acceptance with the offer for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit 'Process compliance form' (to the designated service provider) as well as 'Online sealed bid' in the Reverse Auction. Non-Submission of 'Process compliance form or Online sealed bid' by the agreed bidder (s) will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on www.bhel.com). The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid already submitted to BHEL along with the offer. The envelope sealed price bid of successful L1 bidder in RA, if conducted, shall also be opened after RA and the order will be placed on lower of the two bids (RA closing price & envelope sealed price) thus obtained. The bidder having submitted this offer specifically agrees to this condition and undertakes to execute the contract on thus awarded rates. *If it is found that L1 bidder has quoted higher in online sealed bid in comparison to envelope sealed bid for any item(s), the bidder will be issued a warning letter to this effect. However, if the same bidder again defaults on this count in any subsequent tender in the unit, it will be considered as fraud and will invite action by BHEL as per extant guidelines for suspension of business dealing with suppliers/ contractors (as available on www.bhel.com).* As a reminder to the bidders, system will flash following message (in RED Color) during the course of 'online sealed bid': "Bidders to submit online sealed bid less than or equal to their envelope sealed bid already submitted to BHEL".

- 13. Risk Purchase Clause:** If the supplier fails to deliver the whole or any part of the goods or services within the stipulated delivery period mentioned in the Purchase order, BHEL shall be entitled to terminate the contract and to purchase the same

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or the best and the nearest available substitute from elsewhere at the risk and cost of the seller either the whole or any part of the goods/Services. In case of deviation or non-acceptance of Risk Purchase clause, offer shall be liable for rejection.

14. **Suspension of Business Dealings:** Action shall be taken as per extant BHEL "Guidelines for Suspension of Business Dealings with Suppliers/Contractors AA/MM/SB/01 Rev.02 Dated 22.07.2016" against Supplier as well their agents who either fail to perform or are in default without any reasonable cause like force majeure, cause loss of business/money/reputation, indulge in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding processor influence the price, tempering with tender process etc. Further details in this regard can be accessed through BHEL website www.bhel.com
15. **Fraud Prevention Policy:** The Bidder along with its associate/ collaborators/ sub-contractors/ 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 any fraud or suspected fraud as soon as it comes to their notice."

Note: Non-acceptance/non-submission of any of the above requirements will render the offer liable for rejection.

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DECLARATION BY THE BIDDER

I/We

(Hereinafter referred to as Bidder) being desirous of participating for tender, having fully understood the scope of tender and having carefully noted all the terms and conditions, specifications etc. as mentioned in the tender document (BDC-P1718-0003) do hereby declare that-

1. The Bidder is fully aware of all the requirements of the tender document (BDC-P1718-0003) and agrees with all provisions of the tender document and accepts all risks, responsibilities and obligations directly or indirectly connected with the performance of the tender.
2. The Bidder is fully aware of all the relevant information for proper execution of the proposed scope of work, with respect to the proposed place of works/ site, its local environment, approach road and connectivity etc. and is well acquainted with actual and other prevailing working conditions, availability of required materials and labour etc. at site.
3. The Bidder is capable of executing and completing the work as required in the tender and is financially solvent and sound to execute the tendered work. The Bidder is sufficiently experienced and competent to perform the contract to the satisfaction of BHEL the Bidder gives the assurance to execute the tendered work as per specifications, terms and conditions of the tender on award of work.
4. The Bidder has no collusion with other Bidders, any employee of BHEL or with any other person or firm in the preparation of the tender.
5. The Bidder has not been influenced by any statement or promises by BHEL or any of its employees but only by the tender document.
6. The Bidder is familiar with all general and special laws, acts, ordinances, rules and regulations of the Municipal, District, State and Central Government that may affect the work, its performance or personnel employed therein.
7. The Bidder has never been debarred from similar type of work by any Government undertaking /Department. (An undertaking in this regard shall have to be submitted)
8. The Bidder accepts that the earnest money may be absolutely forfeited by BHEL if the Bidder fails to sign the contract or to undertake the work within stipulated time.
9. All the information and the statements submitted with the tender are true.

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Details of Bidder

Name of the Party: _____

Address of the Party: _____

Email ID: _____

Bank A/c No: _____

Bank Name: _____

Bank Address: _____

IFS Code: _____

Contact Person (Name of a suitable qualified person who will act as project manager during execution of system & shall be single point contact for BHEL.): _____

Phone No of
Contact Person: _____

Signature and seal of Bidder