OFFICE OF THE

EXECUTIVE ENGINEER, EDUCATION WORKS DIVISION KAMBER-SHAHDADKOT a D.C COMPLEX KAMBER

P.NO. 074-941105 email:- xeneduworks@gmail.com

No: XEN/Edu:/(W)/- 3449

Kamber Dated: 25/5 /2017

NOTICE INVITING TENDERS

Sealed tenders are invited on Standard bidding documents from interested contractors / firms for the following works as per SPPRA Rules 2010

ADP No: Sr.No:	Name of Scheme / Location	Estimated Cost (Rs. In Millions)	Earnest Money (Rs. In Rupees)	Tender Fee (Rs. In Rupees)	Period of Completion
1	Installation of Solar Energy System in Existing 200 Primary Schools in District Kamber-Shahdadkot (Under School Specification Budget)		5% of Quoted Rate	3,000	2 Months
2	Providing Drinking Water Facilities in Existing 20 Primary Schools in District Kamber-Shahdadkot (Under School Specification Budget)	12.600	630,000	3,000	2 Months
3	Installation of Solar Energy System in Existing 50 Secondary Schools in District Kamber-Shahdadkot (Under School Specification Budget)		5% of Quoted Rate	3,000	2 Months
4	Providing Drinking Water Facilities in Existing 10 Secondary Schools in District Kamber-Shahdadkot (Under School Specification Budget)	6.300	315,000	3,000	2 Months

- 2. **Eligibility:** Valid Registration with Income Tax, Sales Tax, Sindh Revenue Board, Pakistan Engineering Council in EE-11 (Solar Energy) for solar and category CE-10 for civil works ending up to December 2017.
- 3. Method of Procurement (Single Stage Single Envelope)
- 4. Annual Financial Turnover of last Three Years
- 5. Under taking on affidavit that the firm is not involved in any litigation or abandoned any work in the department.
- 6. Bidding / Tenders Documents.
- 7. i). **Issuance:** Documents will be issued from date of Publication / Hosting i.e. in the news paper / web site **Up to 15.06.2017**
 - ii). Submission: Last dated will be 16.06.2017 Up to 12.00 Noon
 - iii). Opening:- will be opened on 16.06.2017 @ 1.0 P.M (on the same day of submission)
 - iv). **Un-responded Tenders:-** will be again issued / submitted / opened on Following dated.

Attempt	Issue Date	Submission Date	Opening Date
2^{nd}	19.06.2017	03.07.2017 1.0 P.M	04.07.2017 on the same day @ 2.0 P.M

8. Under Following Conditions bid will be rejected.

- i) Conditional and telegraphic bids / tenders
- ii) Bids received after specified date and time
- iii) Bids of Black Listed Firms (Affidavit should be furnished)
- 9. Bids received without information of Technical Staff Working with Firm
- Bids received without list of Machinery & Equipment available without documentary evidence of its ownership and certificate of Bank showing the credit worthiness along with Bank Statement.
- 11. Bid Validity Period 90 Days
- 12. Application should be accompanied with <u>5% earnest money</u> of tender amount in the shape of Call Deposit.
- 13. The firms / contractors should have successfully completed at least Two Contracts of equivalent value and of same nature of work done during last three years specially related to structural works/ Solar Panels (complete solution).
- 14. If the undersigned or any member of the Procurement Committee remains out of head quarter on date of opening of tenders, the same will be opened on the next working day at the same time as mentioned above.
- 15. In case of firm, list of partners / partnership deed, giving full particulars of Director / Proprietor or other connected along with power of attorney or being sole proprietor or other connected along with power of attorney or being sole proprietor such undertaking on affidavit is to be furnished.
- 16. Procuring Agency reserves the right to reject all or any bids subject to the relevant provisions of Sindh Public Procurement Rule 2010.
- 17. Two renewable energy engineer, having bachelor degree and registered with PEC submitted tax payment challan of last month (for Solar).

EXECUTIVE ENGINEER

ROUCATION WORKS DIVISION

KAMBER-SHAHDADKOT

Copy F.W.C's to:-

- 1. The Deputy Commissioner Kamber-Shahdadkot, for favour of his kind information
- 2. The Chief Engineer, Education Works Sukkur
- 3. The Superintending Engineer, Education Works Circle Larkano
- 4. The Director (Information) Advertisement Government of Sindh Karachi, along with 03 Extra copies for publication in the leading newspapers
- 5. The Director (C.B) SPPRA, Planning & Development Department GoS Karachi, for posting NIT on website.
- The Secretary (Focal Person), Information Technology Department Govt. of Sindh, New Sindh Secretariat 1st floor Karachi, for floating tenders on website.
- 7. The Executive Engineer, Roads Division / Building Division, Kamber-Shahdadkot
- 8. The Assistant Engineer, Education Works Sub-Division Kamber, Warah, Shahdadkot, Electric Works Larkano Region, for vide publicity.
- 9. Copy to Divisional Accounts Officer / Draughtsman / Establishment Branch / Notice board (Local)

ANNUAL PROCUREMENT PLAN FOR THE YEAR 2016-17 EDUCATION WORKS DIVISION KAMBER-SHAHDADKOT (EDUCATION & LITERACY DEPARTMENT)

ANNUAL PROCUREMENT PLAN FOR THE YEAR 2016-17

DEPARTMENT:- EDUCATION & LITERACY DEPARTMENT (EDUCATION WORKS)

S.No:	Total Cost Roleage (ADP/ Non-ADP)		Proposed Procurement Method	Timing of Procurement 2016-17						
		(Rs. In Million)	Total oost	Norcaso	(ADI / NOII-ADI)		Q-1	Q-2	Q-3	Q-4
	Installation of Solar Energy System in Existing 200 Primary Schools in District Kamber-Shahdadkot (Under Specification Budget)	5% of Quoted Rate	5% of Quoted Rate		One Time Grant	National Opening Competitive Bidding	Yes	-	-	
2)	Providing Drinking Water Facilities in Existing 20 Primary Schools in District Kamber-Shahdadkot (Under School Specification Budget)	12.600	12.600	12.600	One Time Grant	National Opening Competitive Bidding	Yes		-	-
3)	Installation of Solar Energy System in Existing 50 Secondary Schools in District Kamber-Shahdadkot (Under Specification Budget)	5% of Quoted Rate	5% of Quoted Rate		One Time Grant	National Opening Competitive Bidding	Yes	-		
4)	Providing Drinking Water Facilities in Existing 10 Secondary Schools in District Kamber-Shahdadkot (Under School Specification Budget)	6.300	6.300	6.300	One Time Grant	National Opening Competitive Bidding	Yes	-	-	-

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EDUCATION & LITERACY DEPARTMENT



EDUCATION WORKS DIVISION KAMBERSHANDADKOT

STANDARD BIDDING DOCUMENT PROCUREMENT OF WORKS

NAME OF CONTRACTOR

NAME OF WORK

Installation of Solar Energy System in Existing 200 Primary Schools in District Kamber-Shahdadkot (Under School Specification Budget)

NIT SR: NO: <u>01</u>

Standard Bidding Document

Is intended as a model for admeasurements (Percentage Rate / Unit price for unit rates in a Bill of Quantities) types of contract. The main text refers to admeasurements contracts.

Instruction to Bidders / Procuring Agencies

General Rules and Directions for the Guidance of Contractors

This section of the bidding documents should provide the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Procuring Agency. It should also given information on bid submission opening and evaluation, and on the award of contract.

Matters governing the performance of the contract or payments under the contract, or matters effecting the risks, rights, and obligations of the parties under the Contract are included as conditions of contract and contract Data

The instructions to Bidders will not be part of the Contract and will cease to have effect once the contract is signed.

- 1. All work proposed to be executed by contract shall be notified in a form of Notice Inviting Tenders (NIT) invitation for Bid (IFB) hoisted on website of Authority and procuring Agency and also in printed media where ever required as per rules. NIT must state the description of the work, dates, time and place of issuing, submission opening of bids, completion time, Cost of bidding documents and bid security either in lump sum or percentage of Estimated Cost / Bid Cost. The interested bidder must have valid NTN also
- Content of Bidding Documents must include but not limited to Conditions of Contract, Contract
 Date, Specifications or its reference, Bill of Quantities containing description of items with
 schedule premium to be filled in form of percentage above / below or on item rates to be
 quoted, form of Agreement and drawings.
- Fixed Price Contracts:- The Bid prices and rates are fixed during currency of contract and under not circumstance shall any contractor be entitled to claim enhanced rates for any item in this contract.
- The procuring Agency shall have right of rejecting all or any of the tenders as per provisions of SPPR Rule 2010.
- 5. Conditional Officer:- Any person who submits a tender shall fill up the usual printed form stating at what percentage above or below on the rates specified in Bill of Quantities for items of work to be carried out he is willing to undertake the work and also quote the rates for those items which are based on market rates. Only one rate of such percentage, on all the Schedule Rates shall be framed. Tenders which proposed any alternative in the works specified in the said form of invitation to tender or in the time.

Allowed for carrying out the work, or which contain any other conditions, will be liable to rejection. No printed form of tender shall include a tender for more than one work, but if contractor wish to tender for two or more works, they shall submit a separate tender for each. The envelope containing the tender documents shall refer the name and number of the work.

(CONTRACTOR)

- 6. The works shall be measured by standard instructions according to the rules.
- 7. Bidders shall provide evidence of their eligibility as and when requested by the Procuring Agency.
- 8. Any bid received by the Agency after the deadline for submission of bids shall be rejected and returned unopened to the bidders.
- 9. Prior to the detailed evaluation of bids, the Procuring Agency will determine whether the bidders fulfills all codal requirements of eligibility criteria given in the tender notice such as registration with tax authorities, registration with PEC (where applicable) turnover statement, experience statement, and any other condition mentioned in the NIT and bidding documents. If the bidder does not fulfill any of these conditions, it shall not be evaluated further.
- 10. Bid without bid security of required amount and prescribed form shall be rejected.
- 11. Bids determined to be substantially responsive shall be checked for any arithmetic errors Arithmetical errors shall be rectified on the following basis;
- A) In case of schedule rates, the amount of percentage quoted above or below will be checked and added or subtracted from amount of bill of quantities to arrive the final bid cost.
- B) In case of item rates. If there is a discrepancy between the unit rate and the total cost that is obtained by multiplying the unit rate and quantity, the unit rate shall prevail and the total cost will be corrected unless in the opinion of the Agency there is an obvious misplacement of the decimal point in the unit rate, in which case the total cost as quoted will govern and the unit rate corrected. If there is a discrepancy between the total bid amount and the sum of total costs, the sum of the total costs shall prevail and the total bid amount shall be corrected.
- C) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.

(CONTRACTOR)

CONDITIONS OF CONTRACT

Clause-1 Commencement and Completion Dates of work. The contractor shall not enter upon or commence any portion or work except with the written authority and instructions of the Engineer incharge or of in sub-ordinate in-charge of the work. Failing such authority the contractor shall have no claim to ask for measurements of or payment of work.

The contractor shall proceed with the works with due expedition and without delay and complete the work in the time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall reckoned from the date on which the order to commence work is given to the contractor, and further to ensure good progress during the execution of the work, contractor shall be bound, in all in which the time allowed for completion of any work exceeds one month to achieve progress on the prorate basis.

Clause-2 Liquidated Damages; The contractor shall pay liquidated damages to the Agency at the rate per day stated in the bidding data for each day that the completion date is later than the Intended completion date, the amount of liquidated damage paid by the contractor to the Agency shall not exceed 10 per cent of the contract price. Agency may deduct liquidated damages from payments due to the contractor. Payment of liquidated damages does not affect the contractor's liabilities.

Clause-3 Termination of the Contract.

- A) Procuring Agency / Executive Engineer, may terminate the contract if either of the following condition exist:
 - i) Contractor causes a breach of any clause of the contract
 - ii) The progress of any particular portion of the work is unsatisfactory and notice of 10 days has expired
 - iii) In the case of abandonment of the work owing to the serious illness or death of the contractor or any other cause
 - iv) Contractor can also request for termination of contract if a payment certified by the Executive Engineer, is not paid to the contractor within 60 days of the date of the submission of the bill.
- B) The Executive Engineer / Procuring Agency has power to adopt any of the following courses as may deem fit:-
- i) To forfeit the Security Deposit available except conditions mentioned at A (iii) and (iv) above

ii) To finalize the work by measuring the work done by the contractor

(CONTRACTOR)

BIDDING DATA

E OF CONTRACTOR:-	
(This section should be filled in by the Executive / Procu	uring Agency before issuance of the Bidding Documents)
Name of Procuring Agency Brief Description of Work	Executive Engineer, Education Works Division Kamber-Shahdadkot Installation of Solar Energy System in Existing 200 Primary Schools in District Kamber-Shahdadkot (Under School Specification Budget)
Procuring Agency Address	D.C Complex Kamber
Estimated Cost	Rs:
(Fill in lump sum amount or in % age of bid amount	5%
Period of Bid Validity (days)	90 Days (Not more than Ninety Days)
(in % age of bid amount / estimated cost equal to	Rs: 5% of Quoted Rate
Percentage, if any, to be deducted from Bills	7.5% Income Tax & 5% Security Deposit
Deadline for submission of Bids along with Time	16.06.2017 up to 12.0 Noon
Venue, Time and Date of Bid Opening	Executive Engineer, Education Works Division Kamber-Shahdadkot
Time for completion from written order of commence	2 Months
	Nil
Call Deposit Receipt	No: Dated
	Amount Rs: of
D.R No:	No: Dated
	Rs:
Rate Quoted by Contractor	Part A
	Part B
	Procuring Agency Address Estimated Cost Amount of Bid Security:- (Fill in lump sum amount or in % age of bid amount / Estimated cost, but not exceeding 2%) Period of Bid Validity (days) Security Deposit:- (in % age of bid amount / estimated cost equal to 10%) Percentage, if any, to be deducted from Bills Deadline for submission of Bids along with Time Venue, Time and Date of Bid Opening Time for completion from written order of commence Liquidity damages:- (0.05 of Estimated Cost or Bid Cost per day of delay, but total not exceeding 10%) Call Deposit Receipt D.R No:

CONTRACTOR

- C) In the event of any of the above courses being adopted by the Executive Engineer / Procuring Agency the contractor shall have
 - No claim to compensation for any loss sustained by him by reason of his having purchase or procured any materials, or entered into any engagements or made any advance on account of or which a view to the execution of the work or the performance of the contract.
 - ii) However, the contractor can claim for the work done at site duly certified by the Executive Engineer, in writing regarding the performance of such work and has not been paid.

Procuring Agency / Executive Engineer may invite fresh bids for remaining work

Clause-4 Possession of the site and claims for compensation for delay. The Engineer shall give possession of all parts of the site to the contractor. If possession of site is not given by the date stated in the contract data no compensation shall be allowed for any delay caused in starting of the work on account of any acquisition of land, water standing in borrow pits / compartments or in according sanction to estimates. In such case, either date of commencement will be changed or paid or completion is to be extended accordingly.

Clause-5 Extension of Intended Completion Date. The Procuring Agency either at its own initiatives, before the date of completion or on desire of the contractor or on desire of the contractor may extend the intended completion date, if any event (which hinders the execution of contract) occurs or a variation order is issued with makes it impossible to complete the work by the intended completion date for such period as he may think necessary or proper. The decision of the Executive Engineer, in this matter shall be final; where time has been extended under this or any other clause of this aggregate of all such orders, made under this agreement. When time has been extended as aforesaid, it shall continue to be the essence of the contract and all clauses of the contract shall continue to be operative during the extended period.

Caluse-6 Specification. The contractor shall executer the whole and every par of the work in the most substantial and work man like manner and both as regards materials and all other matters in strict accordance with the specifications lodged in the office of the Executive Engineer, and initialed by the parties, the said specification being a part of contract. The contractor shall also confirm exactly, fully and faithfully to the designs, drawings, and instruction in writing relating to the work signed by the Executive Engineer in-charge and lodge in his office and to which the contractor shall be entitled to have access at such office or on the site of work for the purpose of inspection during office hours and the and the contractor shall, if he so requires, be entitled at his own expense to make or cause to be made copies of the specifications and of all such designs drawings, and instructions as aforesaid.

(CONTRACTOR)

Clause-7 Payments

A) Interim / Running Bill. A bill shall be submitted by the contractor as the progress of the work may justify for all work executed and not included in any previous bill at least once in a month and the Executive Engineer-In-Charge shall take or cause to be taken the requisite measurements for the purpose of having the same verified and the claim, as for as admissible, adjusted, if possible before the expiry of ten days from the presentation of the bill at any time depute a subordinate to measure up the said work in the presence of the contractor or his authorized agent, whose countersignature to the measurement list will be sufficient to warrant and the Engineer-In-Charge may prepare a bill from such list which shall be binding on the contractor in all respects.

The Engineer / Procuring Agency shall pass / certify the amount to be paid to the contractor, which he considers due and payable in respect thereof, subject to deduction of security deposit, advance payment if any made to him and taxes.

All such intermediate payment shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed, and shall not preclude the Engineer-In-Charge from recoveries from final bill and ratification of defects and unsatisfactory items of works pointed out to him during defect liability period.

B) The Final Bill. A bill shall be submitted by the contractor within one month of the date fixed for the completion of the work otherwise Engineer-In-Charge certificate of the measurement and of the total amount payable for the works shall be final and binding on all parties.

Clause-8 Reduced Rates. In cases where the items of work are not accepted as so completed, the Engineer-In-Charge may make payment on account of such items at such reduced rates as he may consider reasonable in the preparation of final or on running account bills with reasons recorded in writing.

Clause-9 Issuance of Variation and Repeat Orders.

A) Agency may issue a variation Order for procurement of works physical services from the original contractor to cover any increase or decrease in quantities including the introduction of new work times that are either due to change of plans, design or alignment to suit actual field conditions, within the general scope and physical boundaries of the contractor.

B) Contractor shall not perform a variation until the procuring Agency has authorized the variation in writing subject to the limit not exceeding the contract cost by of 15% on the same conditions, in all respects on which he agreed to do them in the work, and at the same rates, as are specified in the tender for the main work. The contractor has no right to claim for compensation by reason of alterations or curtailment of the work.

(CONTRACTOR)

- C) In case the nature of the work in the variation does not correspond with items in the Bill of Quantities, the quotation by the contractor is to be in the form of new rates for the relevant items of work, and if the Engineer-In-Charge is satisfied that the rate quoted is within the rate worked out by him on detailed rate analysis, and them only he shall allow him that rate after approval from higher authority.
- D) The time for the completion of the work shall be extended in the proportion that the additional work bear to the original contact work.
- E) In case of quantities of work executed result the Initial contract price to be exceeded by more than 15% and then Engineer can adjust the rates for those quantities causing excess the cost of contract beyond 15% after approval of Superintending Engineer.
- (F) Repeat Order; Any cumulative variation, beyond the 15% of initial contract amount, shall be subject of another contract to be tendered out if the works are separable from the original contract.

Clause-10: Quality Control.

- A) Identifying Defects: If at any time before the security deposit is refunded to the contractor / during Defect liability period mentioned in bid dada, the Engineer-In-charge or his subordinate-in-charge of the work may instruct the contractor to uncover and test any part of the works which he considers may have a defect due to use of unsound materials or unskillful workmanship and the contractor has to carry out a test at his own cost irrespective of work already approved or paid.
- **B)** Correction of Defects; The contractor shall be bound forthwith to rectify or remove and reconstruct the work so specified in whole or in part as the case may require. The contractor shall correct the notified defect within the Defects Correction Period mentioned in notice.

C) Uncorrected Defects:

- i) In the case of any such failure, the Engineer-In-Charge shall give the contractor at least 14 days notice of his intention to use a third party to correct a defect. He may rectify or remove, and re-execute the work or remove and replace the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor.
- ii) If the Engineer, considers that rectification / correction of a defect is not essential and it may be accepted or made use of it shall be within his direction to accept the same at such reduced rates as he may fix therefore.

(CONTRACTOR)

Clause-11

- **A) Inspection of Operations.** The Engineer and his subordinates, shall at all responsible times have access to the site for supervision and inspection of works under or in course of execution in pursuance of the contract and the contractor shall afford every facility for and every assistance in obtaining the right to such access.
- **B)** Dates for Inspection and Testing. The Engineer shall give the contractor responsible notice of the intention of the Engineer-In-Charge or his subordinate to visit the work shall have been given to the contractor, then he either himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for that purpose, orders given to the contractor's duly authorized agent shall be considered to have the same force an effect as if they had been given to the contractor himself.

Clause-12 Examination of work before covering up.

- A) No part of the works shall be covered up or put out of view / beyond the reach without giving notice of not less than five days to the Engineer, whenever any such part of the works or foundations is or are ready or about to be ready for examination and the Engineer shall, without delay, unless he considers it unnecessary and advises the contractor accordingly, attend for the purpose of examining and measuring such part of the works or of examining such foundations.
- B) If any work is covered up or placed beyond the reach of measurement without such notice having been given the same shall be uncovered at the contractor's expense, and in default thereof no payment or allowance shall be made for such work, or for the materials with which the same was executed.

Clause-13 Risks. The contractor shall be responsible for all risks of loss of or damage to physical property or facilities or related services at the premises and of personal injury and death which arise during and in consequence of its performance of the contract, if any damage is caused while the work is in progress or become apparent within three months of the grant of the certificate of completion, final or otherwise, the contractor shall make good the same at his own expense, or in default the Engineer may cause the same to be made good by other workmen, and deduct the expenses from retention money lying with the Engineer.

Clause-14 Measures for prevention of fire and safety measures. The contractor shall not set fire to any standing jungle, trees, bush wood or grass without a written permit from the Executive Engineer, when such permit is given, and also in all cases when destroying, cutting or uprooting trees, bushwood grass, etc by fire the contractor shall take necessary measures to prevent such fire spreading to or other wise damaging surrounding property. The contractor is responsible for the safety of all its activities including protection of the environment on and off the site. Compensation of all damage done intentionally or unintentionally on or off the site by the contractor's labour shall be paid by him.

(CONTRACTOR)

Clause-15 Sub-contracting. The contractor shall not subcontract the whole of the works, except where other wise provided by the contract. The contractor shall not subcontract any part of the works without the prior consent of the Engineer. Any such consent shall not relieve the contractor form any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any subcontractor, his agents, servants or workman as if these acts, defaults or neglects were those of the contractor, his agents servants or workman. The provisions of this contract shall apply to such subcontractor or his employees as if he or it were employees of the contractor.

Clause-16 Disputes. All disputes arising in connection with the present contract, and which cannot be amicably settled between the parties, the decision of the Superintending Engineer, of the circle / office / one grade higher to awarding authority shall be final conclusive and binding on all parties to the contract upon all questions relating to the meaning of the specifications, designs, drawings, and instructions, hereinbefore mentioned and as to the quality of workmanship or materials used on the work or as to any other questions specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, or the execution, of the failure to execute the same, whether arising during the progress of the work, or after the completion or abandonment thereof.

Clause-17 Site Clearance. On completion of the work, the contractor shall be furnished with a certificate by the Executive Engineer (hereinafter called the Engineer in-charge) of such completion, but neither such certificate shall be given nor shall the work be considered to be complete until the contractor shall have removed all temporary structures and materials brought at site either for use or for operation facilities including cleaning debris and dirt at the site. If the contractor fails to comply with the requirements of this clause then Engineer-in-charge, may at the expense of the contractor remove and dispose of the same as he thinks fit and shall deduct the amount of all expenses so incurred from the contractor's retention money. The contractor shall have no claim in respect of any surplus materials as aforesaid except for any sum actually realized by the sale thereof.

Clause-18 Financial Assistance / Advance Payment

- A) Mobilization Advance is not allowed.
- B) Secured Advance against material brought at site.
- i) Secured Advance may be permitted only against imperishable materials / quantities anticipated to be consumed / utilized on the work within a period of three months from the date of issue of secured advance and definitely not for full quantities of materials for the entire work / contract. The sum payable for such materials on site shall not exceed 75% of the market price of materials.
- ii) Recovery of Secured Advance paid to the contractor under the above provisions shall be affected from the monthly payments on actual consumption basis, but not less than period more than three months (even if unutilized)

(CONTRACTOR)

Clause-19 Recovery as arrears of Land Revenue. Any sum due to the Government by the Contractor shall be liable for recovery as arrears of Land Revenue.

Clause-20 Refund of Security Deposit / Retention Money. On completion of the whole of the works (a work should be considered as complete for the purpose of refund of security deposit to a contractor from the last date on which its final measurements are checked by a competent authority, if such check is necessary otherwise from the last date of recording the final measurements) the defects notice period has also passed and the Engineer has certified that all defects notified to the contractor before the end of this period have been corrected, the security deposit lodged by a contractor (in cash or recovered in installments from his bills) shall be refunded to him after the expiry of three month from the date on which the work is complete.

(CONTRACTOR)

DIVISIONAL ACCOUNTS OFFICER
EDUCATION WORKS DIVISION
KAMBER-SHAHDADKOT

BILL OF QUANTITIES

A) Description and Rate of Items based on Composite Schedule of Rates

Item #	Quantities	Description of Item to be executed at site	Rate	Unit	Amount
		ely			
		Attached Separately			
		Sed Se			
		Attack			

Amount Total (A)

_____ % above / below on the Rates of CSR.

Amount to be added / deducted on the basis of premium quoted Total Part B

Total Part A+B in words and figures.

(CONTRACTOR)

BILL OF QUANTITIES

A) Description and Rate of Items based on Market (Offered Rates)

Item #	Quantities	Description of Item to be executed at site	Rate	Unit	Amount
		Attached Separately			
			-		

Amount Total (B)

(CONTRACTOR)

S.NO DESCRIPTION OF ITEMS. QTY Unit OFFER RATE P.UNIT AMOUNT.

PART - A (Installation of Solar Energy System in Existing 200 Primary Schools in District Kamber - Shahdadkot under School Specific Budget (SSB).

1	Solar Panels "Crystalline" (IEC61215:2005, IEC 61730 certified			
	from TUV/VDE Laboratory Germany			
	ISO 9001:2008 / Quality Management system			
	ISO/TS 16949:2009, ISO 14001:2004, OHSAS 18001:2007			
	VDE/MCS /CE / SII / CEC AU / IN METRO UL1703 : CSA/ IEC 61701			
	UL 1703 : CSA / 61701 ED2: VDE / IEC 62716: VDE / IEC 60068	510	pcs	P.Watt
2	Sealed maitenance free, VRLA AGM Solar Dry			
	Battery Bank)IEC61056-1/2:2002 and JIS			
	C8702-1/2:2009,UL and CE life Cycles must			
	be 1200 cycel at 30% DOD (When the battery			
	is 70% fully charged Size)(150 AH)	308	pcs	P.AH
	,		10.00	
3	Lockable Single Box for Battery Bank & Inverter			
	GI Powder Coated	77	Set	P.Set
4	High Efficiency Inverters (Hybird) with built in MPPT			
	and charge Controller.(3 KW-48-V)			
	Isolated transformer design , LCD Display Multilingual			
	with efficient battery management, Alarm & protection			
	PV reverse protection			
	65-120Vdc , 97% Efficiency , 62A Charging Current	77	pcs	P.K.W
	PV : 3.5 KW on builtin charger			
5	Iron made, Powder coated mounting structure			
	for Solar panels (Roof/Ground mounted)	350	Set	P.Set
	TO SECURIO MELLOCO MILLOCO SECULO DE CONTROL MUNICIPAL COLONO			
6	Electric Motor 0.5 HP 220VAC	77	pcs	no
7	Timer for Automatic On/Off Solar System (Prevent from Mis use)	77	pcs	P.Set
	4 (1) (1996) (1996) (1) (1996)		■Er davite	
8	Multi-strand wire 10mm2 (1 core) for Combiner box			
	to inverters and to main distribution boxe.			
	(Turnkey wiring scheme/Branded)	16640.00	Ft	P.Ft
	Newage / Fast / Allied or Equivalent			
	reverge / Last / filled of Equivalent			
9	Multi-straned electric wire 4-mm2 (1 core) for			
-	PV panels inter connections and combiner box.			
	Newage / Fast / Allied or Equivalent	15400.00	Ft	P.Ft
	g set / mod of Equitations	20.00.00		
10	Multi-stramed electric wire 16-mm2 (1 core) for			× '
				ann S

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1	PV combiner box to CC & for Battery Bank Fast / Newage / Allied or Equivalent	4620.00	Ft	P.Ft
11	Circiut Breaker 40 Amps Two pole for PV Pannels . (Schneider/Hager/ABB or Equivalent)	77	pcs	Each
12	Circiut Breaker 63 Amps Battery Bank Single pole for PV Pannels (Schneider/Hager/ABB or Equivalent)	77	pcs	Each
13	Circiut Breaker 32 Amps double pole for AC load. (Schneider/Hager/ABB or Equivalent)	154	nos	Each
14	Change Over Switches 15/ 40 Amps.	77	Set	P.Set
15	Junction Boxes. (with Copper Strips)	77	Nos	Each
16	All Standard accessories for safe installation of Solar power system and electrification including (Cable tiles, Nuts/Bolts, Screws, Nails, Tape etc)	77	Set	P.Set
17	Main Power distriction cabnet.	77	Set	P.Set
18	Installation, Testing and commissioning of Solar PV system .(Hybird)	77	nos	P.Set
19	Transporation.	77	Nos	Each

TOTAL PART - A

Executive Engineer
Education W - Division
Kambe - W

Total Rs:

PART - B (Installation of Solar Energy System in Existing 200 Primary Schools in District Kamber - Shahdadkot under School Specific Budget (SSB).

S. No	Item Discription & Speceification	Local / Imported	Quantity	Amount
	PV Panel 150W Poly Solar Panel- TUV (IEC)			
1	61215:2005, IEC 61730:2004-1-2 EN 61730-1:2007,	Imported	944	
	CE Certified (TUV/VDE Germany)			
	Battery 12V-100AH Battery, Maintenance Free CE,			
2	IEC, ISO 9001:2008, ISO14001:2004,	Imported	323	
	OHSAS18001:2007, UL Listed			
	Charge Controller 12V,20A- Charge Controller CE,			
3	EN 62109-1:2010 EN 62109-2:2011 Certified	Imported	5	
	EN SEIS 1.2010 EN SEIS 2.2011 COMME			
	Charge Controller 12V,30A- Charge Controller CE,			
4	EN 62109-1:2010 EN 62109-2:2011 Certified	Imported	95	
5	Charge Controller 12V,45A- Charge Controller CE,	I a a a a a a a a	122	
5	EN 62109-1:2010 EN 62109-2:2011 Certified	Imported	133	
6	DC CEILING FAN 56" 12 V		2173	
7	LED Bulb	Imported	1482	
8	Solar Motor 0.5H/Power 12 Volt		243	
9	DC Flexible Cables in meters		41460	
10	On/ Off Switches		3908	
11	LED Bulb Holders		1482	
	Rust Proof Iron Box with interconnected switches,			
12	Fuses and DC output jacks fixed with protection		323	
	system for inputs & outputs			
13	Rust Proof Iron Adjustable frame for Solar Panel		531	
14	Installation at School		323	
15	Transportation		323	

TOTAL PART -B	TOTAL DART P	
	TOTAL PART -B	
	TOTALTANTO	

Executive Engineer
recation Works Division
to Indee Shahdadkot

EDUCATION & LITERACY DEPARTMENT



EDUCATION WORKS DIVISION WAMBER-SHANDADNOT

STANDARD BIDDING DOCUMENT PROGUREMENT OF WORKS

NAME OF CONTRACTOR

NAME OF WORK

Providing Drinking Water Facilities in Existing 20 Primary Schools in District Kamber-Shahdadkot (Under School Specification Budget)

NIT SR: NO: <u>02</u>

Standard Bidding Document

Is intended as a model for admeasurements (Percentage Rate / Unit price for unit rates in a Bill of Quantities) types of contract. The main text refers to admeasurements contracts.

Instruction to Bidders / Procuring Agencies

General Rules and Directions for the Guidance of Contractors

This section of the bidding documents should provide the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Procuring Agency. It should also given information on bid submission opening and evaluation, and on the award of contract.

Matters governing the performance of the contract or payments under the contract, or matters effecting the risks, rights, and obligations of the parties under the Contract are included as conditions of contract and contract Data

The instructions to Bidders will not be part of the Contract and will cease to have effect once the contract is signed.

- 1. All work proposed to be executed by contract shall be notified in a form of Notice Inviting Tenders (NIT) invitation for Bid (IFB) hoisted on website of Authority and procuring Agency and also in printed media where ever required as per rules. NIT must state the description of the work, dates, time and place of issuing, submission opening of bids, completion time, Cost of bidding documents and bid security either in lump sum or percentage of Estimated Cost / Bid Cost. The interested bidder must have valid NTN also
- Content of Bidding Documents must include but not limited to Conditions of Contract, Contract
 Date, Specifications or its reference, Bill of Quantities containing description of items with
 schedule premium to be filled in form of percentage above / below or on item rates to be
 quoted, form of Agreement and drawings.
- 3. Fixed Price Contracts:- The Bid prices and rates are fixed during currency of contract and under not circumstance shall any contractor be entitled to claim enhanced rates for any item in this contract.
- The procuring Agency shall have right of rejecting all or any of the tenders as per provisions of SPPR Rule 2010.
- 5. Conditional Officer:- Any person who submits a tender shall fill up the usual printed form stating at what percentage above or below on the rates specified in Bill of Quantities for items of work to be carried out he is willing to undertake the work and also quote the rates for those items which are based on market rates. Only one rate of such percentage, on all the Schedule Rates shall be framed. Tenders which proposed any alternative in the works specified in the said form of invitation to tender or in the time.

Allowed for carrying out the work, or which contain any other conditions, will be liable to rejection. No printed form of tender shall include a tender for more than one work, but if contractor wish to tender for two or more works, they shall submit a separate tender for each. The envelope containing the tender documents shall refer the name and number of the work.

(CONTRACTOR)

- 6. The works shall be measured by standard instructions according to the rules.
- 7. Bidders shall provide evidence of their eligibility as and when requested by the Procuring Agency.
- 8. Any bid received by the Agency after the deadline for submission of bids shall be rejected and returned unopened to the bidders.
- 9. Prior to the detailed evaluation of bids, the Procuring Agency will determine whether the bidders fulfills all codal requirements of eligibility criteria given in the tender notice such as registration with tax authorities, registration with PEC (where applicable) turnover statement, experience statement, and any other condition mentioned in the NIT and bidding documents. If the bidder does not fulfill any of these conditions, it shall not be evaluated further.
- 10. Bid without bid security of required amount and prescribed form shall be rejected.
- 11. Bids determined to be substantially responsive shall be checked for any arithmetic errors Arithmetical errors shall be rectified on the following basis;
- A) In case of schedule rates, the amount of percentage quoted above or below will be checked and added or subtracted from amount of bill of quantities to arrive the final bid cost.
- B) In case of item rates. If there is a discrepancy between the unit rate and the total cost that is obtained by multiplying the unit rate and quantity, the unit rate shall prevail and the total cost will be corrected unless in the opinion of the Agency there is an obvious misplacement of the decimal point in the unit rate, in which case the total cost as quoted will govern and the unit rate corrected. If there is a discrepancy between the total bid amount and the sum of total costs, the sum of the total costs shall prevail and the total bid amount shall be corrected.
- C) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.

(CONTRACTOR)

BIDDINGDATA

MAK	E OF CONTRACTOR:-	
	(This section should be filled in by the Executive / Procu	uring Agency before issuance of the Bidding Documents)
A	Name of Procuring Agency Brief Description of Work	Executive Engineer, Education Works Division Kamber-Shahdadkot Providing Drinking Water Facilities in Existing 20 Primary Schools in District Kamber-Shahdadkot (Under School Specification Budget)
В	Procuring Agency Address	D.C Complex Kamber
С	Estimated Cost	Rs: 12,600,000
D	Amount of Bid Security:- (Fill in lump sum amount or in % age of bid amount / Estimated cost, but not exceeding 2%)	5%
Ε	Period of Bid Validity (days)	90 Days (Not more than Ninety Days)
F	Security Deposit:- (in % age of bid amount / estimated cost equal to 10%)	Rs: 1,260,000
G	Percentage, if any, to be deducted from Bills	7.5% Income Tax & 5% Security Deposit
Н	Deadline for submission of Bids along with Time	16.06.2017 up to 12.0 Noon
1	Venue, Time and Date of Bid Opening	Executive Engineer, Education Works Division Kamber-Shahdadkot
J	Time for completion from written order of commence	2 Months
K	Liquidity damages:- (0.05 of Estimated Cost or Bid Cost per day of delay, but total not exceeding 10%)	Nil
L	Call Deposit Receipt	No: Dated
		Amount Rs: of
М	D.R No:	No: Dated
		Rs:
N	Rate Quoted by Contractor	Part A
		Part B

CONTRACTOR

CONDITIONS OF CONTRACT

Clause-1 Commencement and Completion Dates of work. The contractor shall not enter upon or commence any portion or work except with the written authority and instructions of the Engineer incharge or of in sub-ordinate in-charge of the work. Failing such authority the contractor shall have no claim to ask for measurements of or payment of work.

The contractor shall proceed with the works with due expedition and without delay and complete the work in the time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall reckoned from the date on which the order to commence work is given to the contractor, and further to ensure good progress during the execution of the work, contractor shall be bound, in all in which the time allowed for completion of any work exceeds one month to achieve progress on the prorate basis.

Clause-2 Liquidated Damages; The contractor shall pay liquidated damages to the Agency at the rate per day stated in the bidding data for each day that the completion date is later than the Intended completion date, the amount of liquidated damage paid by the contractor to the Agency shall not exceed 10 per cent of the contract price. Agency may deduct liquidated damages from payments due to the contractor. Payment of liquidated damages does not affect the contractor's liabilities.

Clause-3 Termination of the Contract.

- A) Procuring Agency / Executive Engineer, may terminate the contract if either of the following condition exist:
 - i) Contractor causes a breach of any clause of the contract
 - ii) The progress of any particular portion of the work is unsatisfactory and notice of 10 days has expired
 - iii) In the case of abandonment of the work owing to the serious illness or death of the contractor or any other cause
 - iv) Contractor can also request for termination of contract if a payment certified by the Executive Engineer, is not paid to the contractor within 60 days of the date of the submission of the bill.
- B) The Executive Engineer / Procuring Agency has power to adopt any of the following courses as may deem fit:-
- i) To forfeit the Security Deposit available except conditions mentioned at A (iii) and (iv) above

ii) To finalize the work by measuring the work done by the contractor

(CONTRACTOR)

C) In the event of any of the above courses being adopted by the Executive Engineer / Procuring Agency the contractor shall have

No claim to compensation for any loss sustained by him by reason of his having purchase or procured any materials, or entered into any engagements or made any advance on account of or which a view to the execution of the work or the performance of the contract.

ii) However, the contractor can claim for the work done at site duly certified by the Executive Engineer, in writing regarding the performance of such work and has not been paid.

Procuring Agency / Executive Engineer may invite fresh bids for remaining work

Clause-4 Possession of the site and claims for compensation for delay. The Engineer shall give possession of all parts of the site to the contractor. If possession of site is not given by the date stated in the contract data no compensation shall be allowed for any delay caused in starting of the work on account of any acquisition of land, water standing in borrow pits / compartments or in according sanction to estimates. In such case, either date of commencement will be changed or paid or completion is to be extended accordingly.

Clause-5 Extension of Intended Completion Date. The Procuring Agency either at its own initiatives, before the date of completion or on desire of the contractor or on desire of the contractor may extend the intended completion date, if any event (which hinders the execution of contract) occurs or a variation order is issued with makes it impossible to complete the work by the intended completion date for such period as he may think necessary or proper. The decision of the Executive Engineer, in this matter shall be final; where time has been extended under this or any other clause of this aggregate of all such orders, made under this agreement. When time has been extended as aforesaid, it shall continue to be the essence of the contract and all clauses of the contract shall continue to be operative during the extended period.

Caluse-6 Specification. The contractor shall executer the whole and every par of the work in the most substantial and work man like manner and both as regards materials and all other matters in strict accordance with the specifications lodged in the office of the Executive Engineer, and initialed by the parties, the said specification being a part of contract. The contractor shall also confirm exactly, fully and faithfully to the designs, drawings, and instruction in writing relating to the work signed by the Executive Engineer in-charge and lodge in his office and to which the contractor shall be entitled to have access at such office or on the site of work for the purpose of inspection during office hours and the and the contractor shall, if he so requires, be entitled at his own expense to make or cause to be made copies of the specifications and of all such designs drawings, and instructions as aforesaid.

(CONTRACTOR)

'Clause-7 Payments

A) Interim / Running Bill. A bill shall be submitted by the contractor as the progress of the work may justify for all work executed and not included in any previous bill at least once in a month and the Executive Engineer-In-Charge shall take or cause to be taken the requisite measurements for the purpose of having the same verified and the claim, as for as admissible, adjusted, if possible before the expiry of ten days from the presentation of the bill at any time depute a subordinate to measure up the said work in the presence of the contractor or his authorized agent, whose countersignature to the measurement list will be sufficient to warrant and the Engineer-In-Charge may prepare a bill from such list which shall be binding on the contractor in all respects.

The Engineer / Procuring Agency shall pass / certify the amount to be paid to the contractor, which he considers due and payable in respect thereof, subject to deduction of security deposit, advance payment if any made to him and taxes.

All such intermediate payment shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed, and shall not preclude the Engineer-In-Charge from recoveries from final bill and ratification of defects and unsatisfactory items of works pointed out to him during defect liability period.

B) The Final Bill. A bill shall be submitted by the contractor within one month of the date fixed for the completion of the work otherwise Engineer-In-Charge certificate of the measurement and of the total amount payable for the works shall be final and binding on all parties.

Clause-8 Reduced Rates. In cases where the items of work are not accepted as so completed, the Engineer-In-Charge may make payment on account of such items at such reduced rates as he may consider reasonable in the preparation of final or on running account bills with reasons recorded in writing.

Clause-9 Issuance of Variation and Repeat Orders.

- A) Agency may issue a variation Order for procurement of works physical services from the original contractor to cover any increase or decrease in quantities including the introduction of new work times that are either due to change of plans, design or alignment to suit actual field conditions, within the general scope and physical boundaries of the contractor.
- B) Contractor shall not perform a variation until the procuring Agency has authorized the variation in writing subject to the limit not exceeding the contract cost by of 15% on the same conditions, in all respects on which he agreed to do them in the work, and at the same rates, as are specified in the tender for the main work. The contractor has no right to claim for compensation by reason of alterations or curtailment of the work.

(CONTRACTOR)

- C) In case the nature of the work in the variation does not correspond with items in the Bill of Quantities, the quotation by the contractor is to be in the form of new rates for the relevant items of work, and if the Engineer-In-Charge is satisfied that the rate quoted is within the rate worked out by him on detailed rate analysis, and them only he shall allow him that rate after approval from higher authority.
- D) The time for the completion of the work shall be extended in the proportion that the additional work bear to the original contact work.
- E) In case of quantities of work executed result the Initial contract price to be exceeded by more than 15% and then Engineer can adjust the rates for those quantities causing excess the cost of contract beyond 15% after approval of Superintending Engineer.
- (F) Repeat Order; Any cumulative variation, beyond the 15% of initial contract amount, shall be subject of another contract to be tendered out if the works are separable from the original contract.

Clause-10: Quality Control.

- A) Identifying Defects: If at any time before the security deposit is refunded to the contractor / during Defect liability period mentioned in bid dada, the Engineer-In-charge or his subordinate-in-charge of the work may instruct the contractor to uncover and test any part of the works which he considers may have a defect due to use of unsound materials or unskillful workmanship and the contractor has to carry out a test at his own cost irrespective of work aiready approved or paid.
- B) Correction of Defects; The contractor shall be bound forthwith to rectify or remove and reconstruct the work so specified in whole or in part as the case may require. The contractor shall correct the notified defect within the Defects Correction Period mentioned in notice.

C) Uncorrected Defects:

- i) In the case of any such failure, the Engineer-In-Charge shall give the contractor at least 14 days notice of his intention to use a third party to correct a defect. He may rectify or remove, and re-execute the work or remove and replace the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor.
- ii) If the Engineer, considers that rectification / correction of a defect is not essential and it may be accepted or made use of it shall be within his direction to accept the same at such reduced rates as he may fix therefore.

(CONTRACTOR)

Clause-11

- A) Inspection of Operations. The Engineer and his subordinates, shall at all responsible times have access to the site for supervision and inspection of works under or in course of execution in pursuance of the contract and the contractor shall afford every facility for and every assistance in obtaining the right to such access.
- B) Dates for Inspection and Testing. The Engineer shall give the contractor responsible notice of the intention of the Engineer-In-Charge or his subordinate to visit the work shall have been given to the contractor, then he either himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for that purpose, orders given to the contractor's duly authorized agent shall be considered to have the same force an effect as if they had been given to the contractor himself.

Clause-12 Examination of work before covering up.

- A) No part of the works shall be covered up or put out of view / beyond the reach without giving notice of not less than five days to the Engineer, whenever any such part of the works or foundations is or are ready or about to be ready for examination and the Engineer shall, without delay, unless he considers it unnecessary and advises the contractor accordingly, attend for the purpose of examining and measuring such part of the works or of examining such foundations.
- B) If any work is covered up or placed beyond the reach of measurement without such notice having been given the same shall be uncovered at the contractor's expense, and in default thereof no payment or allowance shall be made for such work, or for the materials with which the same was executed.
- Clause-13 Risks. The contractor shall be responsible for all risks of loss of or damage to physical property or facilities or related services at the premises and of personal injury and death which arise during and in consequence of its performance of the contract, if any damage is caused while the work is in progress or become apparent within three months of the grant of the certificate of completion, final or otherwise, the contractor shall make good the same at his own expense, or in default the Engineer may cause the same to be made good by other workmen, and deduct the expenses from retention money lying with the Engineer.

Clause-14 Measures for prevention of fire and safety measures. The contractor shall not set fire to any standing jungle, trees, bush wood or grass without a written permit from the Executive Engineer, when such permit is given, and also in all cases when destroying, cutting or uprooting trees, bushwood grass, etc by fire the contractor shall take necessary measures to prevent such fire spreading to or other wise damaging surrounding property. The contractor is responsible for the safety of all its activities including protection of the environment on and off the site. Compensation of all damage done intentionally or unintentionally on or off the site by the contractor's labour shall be paid by him.

(CONTRACTOR)

Clause-15 Sub-contracting. The contractor shall not subcontract the whole of the works, except where other wise provided by the contract. The contractor shall not subcontract any part of the works without the prior consent of the Engineer. Any such consent shall not relieve the contractor form any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any subcontractor, his agents, servants or workman as if these acts, defaults or neglects were those of the contractor, his agents servants or workman. The provisions of this contract shall apply to such subcontractor or his employees as if he or it were employees of the contractor.

Clause-16 Disputes. All disputes arising in connection with the present contract, and which cannot be amicably settled between the parties, the decision of the Superintending Engineer, of the circle / office / one grade higher to awarding authority shall be final conclusive and binding on all parties to the contract upon all questions relating to the meaning of the specifications, designs, drawings, and instructions, hereinbefore mentioned and as to the quality of workmanship or materials used on the work or as to any other questions specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, or the execution, of the failure to execute the same, whether arising during the progress of the work, or after the completion or abandonment thereof.

Clause-17 Site Clearance. On completion of the work, the contractor shall be furnished with a certificate by the Executive Engineer (hereinafter called the Engineer in-charge) of such completion, but neither such certificate shall be given nor shall the work be considered to be complete until the contractor shall have removed all temporary structures and materials brought at site either for use or for operation facilities including cleaning debris and dirt at the site. If the contractor fails to comply with the requirements of this clause then Engineer-in-charge, may at the expense of the contractor remove and dispose of the same as he thinks fit and shall deduct the amount of all expenses so incurred from the contractor's retention money. The contractor shall have no claim in respect of any surplus materials as aforesaid except for any sum actually realized by the sale thereof.

Clause-18 Financial Assistance / Advance Payment

- A) Mobilization Advance is not allowed.
- B) Secured Advance against material brought at site.
- i) Secured Advance may be permitted only against imperishable materials / quantities anticipated to be consumed / utilized on the work within a period of three months from the date of issue of secured advance and definitely not for full quantities of materials for the entire work / contract. The sum payable for such materials on site shall not exceed 75% of the market price of materials.
- ii) Recovery of Secured Advance paid to the contractor under the above provisions shall be affected from the monthly payments on actual consumption basis, but not less than period more than three months (even if unutilized)

(CONTRACTOR)

Clause-19 Recovery as arrears of Land Revenue. Any sum due to the Government by the Contractor shall be liable for recovery as arrears of Land Revenue.

Clause-20 Refund of Security Deposit / Retention Money. On completion of the whole of the works (a work should be considered as complete for the purpose of refund of security deposit to a contractor from the last date on which its final measurements are checked by a competent authority, if such check is necessary otherwise from the last date of recording the final measurements) the defects notice period has also passed and the Engineer has certified that all defects notified to the contractor before the end of this period have been corrected, the security deposit lodged by a contractor (in cash or recovered in installments from his bills) shall be refunded to him after the expiry of three month from the date on which the work is complete.

(CONTRACTOR)

DIVISIONAL ACCOUNTS OFFICER EDUCATION WORKS DIVISION KAMBER-SHAHDADKOT

BILL OF QUANTITIES

A) Description and Rate of Items based on Composite Schedule of Rates

Item #	Quantities	Description of Item to be executed at site	Rate	Unit	Amount
		tely			
		Attached Separately			
		Sped			
		Atta			

Amount Total (A)	

% above / below on the Rates of CSR.

Amount to be added / deducted on the basis of premium quoted Total Part B

Total Part A+B in words and figures.

(CONTRACTOR)

BILL OF QUANTITIES

A) Description and Rate of Items based on Market (Offered Rates)

Item #	Quantities	Description of Item to be executed at site	Rate	Unit	Amount
		ately			· · · · · · · · · · · · · · · · · · ·
		Spars			
		Attached Separately			
		tache			
		¥			

Amount Total (B)

(CONTRACTOR)

BOQ-02

PROVIDING DRINKING WATER FACILITIES IN EXISTING 20 PRIMARY SCHOOLS IN DISTRICT KAMBER-SHAHDADKIT (UNDER SCHOOL SPECIFICATION BUDGET)

S.#	BILL OF QUANITITES B.O.Q (CIVIL WORK) DESCRIPTION	Qnty:	Rate	Unit	Amount
2.11	Excavation in foundation of building bridges & other structure i/c		Rate	Unit	Amount
1	refilling around structure with excavated lead upto one chain and lift upto 5'feet. (S.I.No:18(b)-P/4)		3176.25	%0.Cft	22,869
2	Cement Concrete brick or stone ballast 11/2" to 2" guage Ratio 1:4:8. (S.I.No:4©-P/14)	1,900.00	9416.28	%.Cft	178,909
В	Ratio 1:5:10	620.00	8,694.95	%.Cft	53,909
3	Reinforced cement concrete including all labour and material except the cost of steel reinforcement and its labour for bending and binding which will be paid separately. This rate also includes all kinds of forms moulds lifting shuttering curring rendering and finishing the exposed surface (including screening and washof shingle) (a) R.C work in roof slab, beams coloumns rafts lintel & other structurel member laid in situ or precast laid in position in all respect (i) Ratio 1:2:4 90 Lbs. cement 2 Cft sand 4 Cft shingle 1/8" to 1/4" guage. (S.I.No:6(a)(i)-P/16)		337.00	P.Cft	2,756,660
4	Fabrication of Tar bars steel reinforcement for cement concrete including cutting bending laying in position making joints and fastenings including cost of binding wire also includes removal of rust from bars (b) Using Tar Bars. (S.I.No:8(b)-P/16)	440.00	5,001.70	P.Cwt	2,200,748
5	Pacca brick work in Foundation and plinth in cement sand mortor 1:6 (S.I.No:1-P/20)	1,600.00	11,948.36	%.Cft	191,174
6	Cement Concrete plain including placing compacting finishing and curring complete (including screening and washing at stone aggregate without shuttering Ratio 1:2:4)	320.00	14,429.25	%.Cft	46,174
7	Pacca brick work in G.Floor i/c stricking of joints cement sand mortor 1:6. (S.I.No:5@-P/20)	1,780.00	12,674.36	%.Cft	225,604
8	P/L tiles glazed 6"x6"x1/4" on floor or wall facing in required colour and apttern of STILE specification jointed in white cement and pigment over a base of 1:2 grey cement mortar 3/4" thick including washing and filling of joints with slurry of white cement and pigment in desired shape with finishing cleaning and cost of wax polish etc complete including cutting (S.I.No:60-P/46)	7,160.00	30,509.77	%.Cft	2,184,500
9	P/L 2" thick topping cement concrete 1:2:4 including saurface finishing and dividing into panells (S.I.No:16@-P/41)	4,800.00	3,275.50	%.Cft	157,224
10	Cement Plaster 1:6 up to 20' height Ratio 1/2" thick (S.I.No:13(b)-P/51)	6,180.00	2,206.60	%.Cft	136,368
11	Cement Plaster 1:4 up to 20' height Ratio 3/8" thick (S.I.No:11(a)-P/51)	6,180.00	2,197.52	%.Cft	135,807
12	Preparing the surface and painting with weather coat i/c rubbing the surface with rubbing brick / sand paper, filling the voids with chalk / plaster of pairs and then painting with weather coat of approved mae (B) 2nd and subsequent coat. (S.I.No:38(A,B)-P/55)	12,320.00	1,948.10	%.Cft	240,006
13	P/F iron steel grill door with angle iron frame of 1-1/2"x1-1/2"x1/4" and flat iron of 3/4"x1/4" with approved design and locking arrangement embeded in masonary as per instruction Engineer, incharge. (S.I.No:71-P/93)	1,120.00	231.60	P.Sft	259,392

Executive Engineer
I day used Works Division
I store Shappadkot

	1			
t 6 160 00	194.16	P.Sft	1,196,026	
	TOTA	9,985,368		
180.00	95.79	P.Rft	17,242	
120.00	1,384.24	P.Nos	166,109	
20.00	14,201.00	P.Nos	284,020	
20.00	4,500.00	P.Nos	90,000	
TOTAL P-B				
G.TOTAL				
1	180.00 1 120.00 20.00	180.00 194.16 TOTA 180.00 95.79 120.00 1,384.24 20.00 14,201.00 20.00 4,500.00	TOTAL PART-A TOTAL PART-A 1 180.00 95.79 P.Rft 1 120.00 1,384.24 P.Nos 2 20.00 14,201.00 P.Nos TOTAL P-B	

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Executive Engineer
Education Works Division
Kamber Shundadkot

EDUCATION & LITERACY DEPARTMENT



EDUCATION WORKS DIVISION KAMBER-SHANDADKOT

STANDARD BIDDING DOCUMENT PROCUREMENT OF WORKS

NAME OF CONTRACTOR

NAME OF WORK

Installation of Solar Energy System in Existing 50 Secondary Schools in District Kamber-Shahdadkot (Under School Specification Budget)

NIT SR: NO: <u>03</u>

Standard Bidding Document

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Matters governing the performance of the contract or payments under the contract, or matters effecting the risks, rights, and obligations of the parties under the Contract are included as conditions of contract and contract Data

The instructions to Bidders will not be part of the Contract and will cease to have effect once the contract is signed.

- 1. All work proposed to be executed by contract shall be notified in a form of Notice Inviting Tenders (NIT) invitation for Bid (IFB) hoisted on website of Authority and procuring Agency and also in printed media where ever required as per rules. NIT must state the description of the work, dates, time and place of issuing, submission opening of bids, completion time, Cost of bidding documents and bid security either in lump sum or percentage of Estimated Cost / Bid Cost. The interested bidder must have valid NTN also
- Content of Bidding Documents must include but not limited to Conditions of Contract, Contract
 Date, Specifications or its reference, Bill of Quantities containing description of items with
 schedule premium to be filled in form of percentage above / below or on item rates to be
 quoted, form of Agreement and drawings.
- Fixed Price Contracts:- The Bid prices and rates are fixed during currency of contract and under not circumstance shall any contractor be entitled to claim enhanced rates for any item in this contract.
- The procuring Agency shall have right of rejecting all or any of the tenders as per provisions of SPPR Rule 2010.
- 5. Conditional Officer:- Any person who submits a tender shall fill up the usual printed form stating at what percentage above or below on the rates specified in Bill of Quantities for items of work to be carried out he is willing to undertake the work and also quote the rates for those items which are based on market rates. Only one rate of such percentage, on all the Schedule Rates shall be framed. Tenders which proposed any alternative in the works specified in the said form of invitation to tender or in the time.

Allowed for carrying out the work, or which contain any other conditions, will be liable to rejection. No printed form of tender shall include a tender for more than one work, but if contractor wish to tender for two or more works, they shall submit a separate tender for each. The envelope containing the tender documents shall refer the name and number of the work.

(CONTRACTOR)

- 6. The works shall be measured by standard instructions according to the rules.
- 7. Bidders shall provide evidence of their eligibility as and when requested by the Procuring Agency.
- 8. Any bid received by the Agency after the deadline for submission of bids shall be rejected and returned unopened to the bidders.
- 9. Prior to the detailed evaluation of bids, the Procuring Agency will determine whether the bidders fulfills all codal requirements of eligibility criteria given in the tender notice such as registration with tax authorities, registration with PEC (where applicable) turnover statement, experience statement, and any other condition mentioned in the NIT and bidding documents. If the bidder does not fulfill any of these conditions, it shall not be evaluated further.
- 10. Bid without bid security of required amount and prescribed form shall be rejected.
- 11. Bids determined to be substantially responsive shall be checked for any arithmetic errors Arithmetical errors shall be rectified on the following basis;
- A) In case of schedule rates, the amount of percentage quoted above or below will be checked and added or subtracted from amount of bill of quantities to arrive the final bid cost.
- B) In case of item rates. If there is a discrepancy between the unit rate and the total cost that is obtained by multiplying the unit rate and quantity, the unit rate shall prevail and the total cost will be corrected unless in the opinion of the Agency there is an obvious misplacement of the decimal point in the unit rate, in which case the total cost as quoted will govern and the unit rate corrected. If there is a discrepancy between the total bid amount and the sum of total costs, the sum of the total costs shall prevail and the total bid amount shall be corrected.
- C) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.

(CONTRACTOR)

BIDDING DATA

NAM	E OF CONTRACTOR:-					
	(This section should be filled in by the Executive / Procu	uring Agency before issuance of the Bidding Documents)				
Α	Name of Procuring Agency Brief Description of Work	Executive Engineer, Education Works Division Kamber-Shahdadkot Installation of Solar Energy System in Existing 50 Secondary Schools in District Kamber-Shahdadkot (Under School Specification Budget)				
В	Procuring Agency Address	D.C Complex Kamber				
C D	Estimated Cost Amount of Bid Security:- (Fill in lump sum amount or in % age of bid amount	Rs:				
E F	/ Estimated cost, but not exceeding 2%) Period of Bid Validity (days) Security Deposit:-	90 Days (Not more than Ninety Days)				
	(in % age of bid amount / estimated cost equal to 10%)	Rs: 5% of Quoted Rate				
G	Percentage, if any, to be deducted from Bills	7.5% Income Tax & 5% Security Deposit				
Н	Deadline for submission of Bids along with Time	16.06.2017 up to 12.0 Noon				
1	Venue, Time and Date of Bid Opening	Executive Engineer, Education Works Division Kamber-Shahdadkot				
J	Time for completion from written order of commence	2 Months				
K	Liquidity damages:- (0.05 of Estimated Cost or Bid Cost per day of	Nil				
L	delay, but total not exceeding 10%) Call Deposit Receipt	No: Dated				
		Amount Rs: of				
M	D.R No:	No: Dated				
		Rs:				
N	Rate Quoted by Contractor	Part A				
		Part B				

CONTRACTOR

CONDITIONS OF CONTRACT

Clause-1 Commencement and Completion Dates of work. The contractor shall not enter upon or commence any portion or work except with the written authority and instructions of the Engineer incharge or of in sub-ordinate in-charge of the work. Failing such authority the contractor shall have no claim to ask for measurements of or payment of work.

The contractor shall proceed with the works with due expedition and without delay and complete the work in the time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall reckoned from the date on which the order to commence work is given to the contractor, and further to ensure good progress during the execution of the work, contractor shall be bound, in all in which the time allowed for completion of any work exceeds one month to achieve progress on the prorate basis.

Clause-2 Liquidated Damages; The contractor shall pay liquidated damages to the Agency at the rate per day stated in the bidding data for each day that the completion date is later than the Intended completion date, the amount of liquidated damage paid by the contractor to the Agency shall not exceed 10 per cent of the contract price. Agency may deduct liquidated damages from payments due to the contractor. Payment of liquidated damages does not affect the contractor's liabilities.

Clause-3 Termination of the Contract.

- A) Procuring Agency / Executive Engineer, may terminate the contract if either of the following condition exist:
 - i) Contractor causes a breach of any clause of the contract
 - ii) The progress of any particular portion of the work is unsatisfactory and notice of 10 days has expired
 - iii) In the case of abandonment of the work owing to the serious illness or death of the contractor or any other cause
 - iv) Contractor can also request for termination of contract if a payment certified by the Executive Engineer, is not paid to the contractor within 60 days of the date of the submission of the bill.
- B) The Executive Engineer / Procuring Agency has power to adopt any of the following courses as may deem fit:-
- i) To forfeit the Security Deposit available except conditions mentioned at A (iii) and (iv) above

ii) To finalize the work by measuring the work done by the contractor

(CONTRACTOR)

C) In the event of any of the above courses being adopted by the Executive Engineer / Procuring Agency the contractor shall have

No claim to compensation for any loss sustained by him by reason of his having purchase or procured any materials, or entered into any engagements or made any advance on account of or which a view to the execution of the work or the performance of the contract.

ii) However, the contractor can claim for the work done at site duly certified by the Executive Engineer, in writing regarding the performance of such work and has not been paid.

Procuring Agency / Executive Engineer may invite fresh bids for remaining work

Clause-4 Possession of the site and claims for compensation for delay. The Engineer shall give possession of all parts of the site to the contractor. If possession of site is not given by the date stated in the contract data no compensation shall be allowed for any delay caused in starting of the work on account of any acquisition of land, water standing in borrow pits / compartments or in according sanction to estimates. In such case, either date of commencement will be changed or paid or completion is to be extended accordingly.

Clause-5 Extension of Intended Completion Date. The Procuring Agency either at its own initiatives, before the date of completion or on desire of the contractor or on desire of the contractor may extend the intended completion date, if any event (which hinders the execution of contract) occurs or a variation order is issued with makes it impossible to complete the work by the intended completion date for such period as he may think necessary or proper. The decision of the Executive Engineer, in this matter shall be final; where time has been extended under this or any other clause of this aggregate of all such orders, made under this agreement. When time has been extended as aforesaid, it shall continue to be the essence of the contract and all clauses of the contract shall continue to be operative during the extended period.

Caluse-6 Specification. The contractor shall executer the whole and every par of the work in the most substantial and work man like manner and both as regards materials and all other matters in strict accordance with the specifications lodged in the office of the Executive Engineer, and initialed by the parties, the said specification being a part of contract. The contractor shall also confirm exactly, fully and faithfully to the designs, drawings, and instruction in writing relating to the work signed by the Executive Engineer in-charge and lodge in his office and to which the contractor shall be entitled to have access at such office or on the site of work for the purpose of inspection during office hours and the and the contractor shall, if he so requires, be entitled at his own expense to make or cause to be made copies of the specifications and of all such designs drawings, and instructions as aforesaid.

(CONTRACTOR)

Clause-7 Payments

A) Interim / Running Bill. A bill shall be submitted by the contractor as the progress of the work may justify for all work executed and not included in any previous bill at least once in a month and the Executive Engineer-In-Charge shall take or cause to be taken the requisite measurements for the purpose of having the same verified and the claim, as for as admissible, adjusted, if possible before the expiry of ten days from the presentation of the bill at any time depute a subordinate to measure up the said work in the presence of the contractor or his authorized agent, whose countersignature to the measurement list will be sufficient to warrant and the Engineer-In-Charge may prepare a bill from such list which shall be binding on the contractor in all respects.

The Engineer / Procuring Agency shall pass / certify the amount to be paid to the contractor, which he considers due and payable in respect thereof, subject to deduction of security deposit, advance payment if any made to him and taxes.

All such intermediate payment shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed, and shall not preclude the Engineer-In-Charge from recoveries from final bill and ratification of defects and unsatisfactory items of works pointed out to him during defect liability period.

B) The Final Bill. A bill shall be submitted by the contractor within one month of the date fixed for the completion of the work otherwise Engineer-In-Charge certificate of the measurement and of the total amount payable for the works shall be final and binding on all parties.

Clause-8 Reduced Rates. In cases where the items of work are not accepted as so completed, the Engineer-In-Charge may make payment on account of such items at such reduced rates as he may consider reasonable in the preparation of final or on running account bills with reasons recorded in writing.

Clause-9 Issuance of Variation and Repeat Orders.

- A) Agency may issue a variation Order for procurement of works physical services from the original contractor to cover any increase or decrease in quantities including the introduction of new work times that are either due to change of plans, design or alignment to suit actual field conditions, within the general scope and physical boundaries of the contractor.
- B) Contractor shall not perform a variation until the procuring Agency has authorized the variation in writing subject to the limit not exceeding the contract cost by of 15% on the same conditions, in all respects on which he agreed to do them in the work, and at the same rates, as are specified in the tender for the main work. The contractor has no right to claim for compensation by reason of alterations or curtailment of the work.

(CONTRACTOR)

- E) In case the nature of the work in the variation does not correspond with items in the Bill of Quantities, the quotation by the contractor is to be in the form of new rates for the relevant items of work, and if the Engineer-In-Charge is satisfied that the rate quoted is within the rate worked out by him on detailed rate analysis, and them only he shall allow him that rate after approval from higher authority.
- D) The time for the completion of the work shall be extended in the proportion that the additional work bear to the original contact work.
- E) In case of quantities of work executed result the Initial contract price to be exceeded by more than 15% and then Engineer can adjust the rates for those quantities causing excess the cost of contract beyond 15% after approval of Superintending Engineer.
- (F) Repeat Order; Any cumulative variation, beyond the 15% of initial contract amount, shall be subject of another contract to be tendered out if the works are separable from the original contract.

Clause-10: Quality Control.

- A) Identifying Defects: If at any time before the security deposit is refunded to the contractor / during Defect liability period mentioned in bid dada, the Engineer-In-charge or his subordinate-in-charge of the work may instruct the contractor to uncover and test any part of the works which he considers may have a defect due to use of unsound materials or unskillful workmanship and the contractor has to carry out a test at his own cost irrespective of work already approved or paid.
- B) Correction of Defects; The contractor shall be bound forthwith to rectify or remove and reconstruct the work so specified in whole or in part as the case may require. The contractor shall correct the notified defect within the Defects Correction Period mentioned in notice.

C) Uncorrected Defects:

- i) In the case of any such failure, the Engineer-In-Charge shall give the contractor at least 14 days notice of his intention to use a third party to correct a defect. He may rectify or remove, and re-execute the work or remove and replace the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor.
- ii) If the Engineer, considers that rectification / correction of a defect is not essential and it may be accepted or made use of it shall be within his direction to accept the same at such reduced rates as he may fix therefore.

(CONTRACTOR)

Clause-11

- A) Inspection of Operations. The Engineer and his subordinates, shall at all responsible times have access to the site for supervision and inspection of works under or in course of execution in pursuance of the contract and the contractor shall afford every facility for and every assistance in obtaining the right to such access.
- B) Dates for Inspection and Testing. The Engineer shall give the contractor responsible notice of the intention of the Engineer-In-Charge or his subordinate to visit the work shall have been given to the contractor, then he either himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for that purpose, orders given to the contractor's duly authorized agent shall be considered to have the same force an effect as if they had been given to the contractor himself.

Clause-12 Examination of work before covering up.

- A) No part of the works shall be covered up or put out of view / beyond the reach without giving notice of not less than five days to the Engineer, whenever any such part of the works or foundations is or are ready or about to be ready for examination and the Engineer shall, without delay, unless he considers it unnecessary and advises the contractor accordingly, attend for the purpose of examining and measuring such part of the works or of examining such foundations.
- B) If any work is covered up or placed beyond the reach of measurement without such notice having been given the same shall be uncovered at the contractor's expense, and in default thereof no payment or allowance shall be made for such work, or for the materials with which the same was executed.
- Clause-13 Risks. The contractor shall be responsible for all risks of loss of or damage to physical property or facilities or related services at the premises and of personal injury and death which arise during and in consequence of its performance of the contract, if any damage is caused while the work is in progress or become apparent within three months of the grant of the certificate of completion, final or otherwise, the contractor shall make good the same at his own expense, or in default the Engineer may cause the same to be made good by other workmen, and deduct the expenses from retention money lying with the Engineer.

Clause-14 Measures for prevention of fire and safety measures. The contractor shall not set fire to any standing jungle, trees, bush wood or grass without a written permit from the Executive Engineer, when such permit is given, and also in all cases when destroying, cutting or uprooting trees, bushwood grass, etc by fire the contractor shall take necessary measures to prevent such fire spreading to or other wise damaging surrounding property. The contractor is responsible for the safety of all its activities including protection of the environment on and off the site. Compensation of all damage done intentionally or unintentionally on or off the site by the contractor's labour shall be paid by him.

(CONTRACTOR)

Clause-15 Sub-contracting. The contractor shall not subcontract the whole of the works, except where other wise provided by the contract. The contractor shall not subcontract any part of the works without the prior consent of the Engineer. Any such consent shall not relieve the contractor form any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any subcontractor, his agents, servants or workman as if these acts, defaults or neglects were those of the contractor, his agents servants or workman. The provisions of this contract shall apply to such subcontractor or his employees as if he or it were employees of the contractor.

Clause-16 Disputes. All disputes arising in connection with the present contract, and which cannot be amicably settled between the parties, the decision of the Superintending Engineer, of the circle / office / one grade higher to awarding authority shall be final conclusive and binding on all parties to the contract upon all questions relating to the meaning of the specifications, designs, drawings, and instructions, hereinbefore mentioned and as to the quality of workmanship or materials used on the work or as to any other questions specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, or the execution, of the failure to execute the same, whether arising during the progress of the work, or after the completion or abandonment thereof.

Clause-17 Site Clearance. On completion of the work, the contractor shall be furnished with a certificate by the Executive Engineer (hereinafter called the Engineer in-charge) of such completion, but neither such certificate shall be given nor shall the work be considered to be complete until the contractor shall have removed all temporary structures and materials brought at site either for use or for operation facilities including cleaning debris and dirt at the site. If the contractor fails to comply with the requirements of this clause then Engineer-in-charge, may at the expense of the contractor remove and dispose of the same as he thinks fit and shall deduct the amount of all expenses so incurred from the contractor's retention money. The contractor shall have no claim in respect of any surplus materials as aforesaid except for any sum actually realized by the sale thereof.

Clause-18 Financial Assistance / Advance Payment

- A) Mobilization Advance is not allowed.
- B) Secured Advance against material brought at site.
- i) Secured Advance may be permitted only against imperishable materials / quantities anticipated to be consumed / utilized on the work within a period of three months from the date of issue of secured advance and definitely not for full quantities of materials for the entire work / contract. The sum payable for such materials on site shall not exceed 75% of the market price of materials.
- ii) Recovery of Secured Advance paid to the contractor under the above provisions shall be affected from the monthly payments on actual consumption basis, but not less than period more than three months (even if unutilized)

(CONTRACTOR)

Clause-19 Recovery as arrears of Land Revenue. Any sum due to the Government by the Contractor shall be liable for recovery as arrears of Land Revenue.

Clause-20 Refund of Security Deposit / Retention Money. On completion of the whole of the works (a work should be considered as complete for the purpose of refund of security deposit to a contractor from the last date on which its final measurements are checked by a competent authority, if such check is necessary otherwise from the last date of recording the final measurements) the defects notice period has also passed and the Engineer has certified that all defects notified to the contractor before the end of this period have been corrected, the security deposit lodged by a contractor (in cash or recovered in installments from his bills) shall be refunded to him after the expiry of three month from the date on which the work is complete.

(CONTRACTOR)

DIVISIONAL ACCOUNTS OFFICER
EDUCATION WORKS DIVISION
KAMBER-SHAHDADKOT

BILL OF QUANTITIES

A) Description and Rate of Items based on Composite Schedule of Rates

Item #	Quantities	Description of Item to be executed at site	Rate	Unit	Amount
		∑, e i			
		Attached Separately			
		Se			
		Attac			

Amount Total (A)

_____ % above / below on the Rates of CSR.

Amount to be added / deducted on the basis of premium quoted Total Part B

Total Part A+B in words and figures.

(CONTRACTOR)

	PV combiner box to CC & for Battery Bank Fast / Newage / Allied or Equivalent	5400.00	Ft	P.Ft
11	Circiut Breaker 40 Amps Two pole for PV Pannels . (Schneider/Hager/ABB or Equivalent)	90	pcs	Each
12	Circiut Breaker 63 Amps Battery Bank Single pole for PV Pannels (Schneider/Hager/ABB or Equivalent)	90	pcs	Each
13	Circiut Breaker 32 Amps double pole for AC load & AC in (Schneider/Hager/ABB or Equivalent)	180	nos	Each
14	Change Over Switches 15/ 40 Amps.	90	Set	P.Set
15	Junction Boxes. (with Copper Strips)	90	Nos	Each
16	All Standard accessories for safe installation of Solar power system and electrification including			
	(Cable tiles, Nuts/Bolts, Screws, Nails, Tape etc)	90	Set	P.Set
17	Main Power distriction cabnet.	90	Set	P.Set
18	Installation, Testing and commissioning of Solar PV system .(Hybird)	90	nos	P.Set
19	Transporation.	90	Nos	Each

TOTAL FOR SOLAR POWER SYTEM

Total Rs:

Executive Engineer
Education Wark- Sharen
Kamber - Shahdadkot

EDUCATION & LITERACY DEPARTMENT



EDUCATION WORKS DIVISION KAMBERSHANDADKOT

STANDARD BIDDING DOCUMENT PROGUREMENT OF WORKS

NAME OF CONTRACTOR

NAME OF WORK

Providing Drinking Water Facilities in Existing 10 Secondary Schools in District Kamber-Shahdadkot (Under School Specification Budget)

NIT SR: NO: 04

Standard Bidding Document

Is intended as a model for admeasurements (Percentage Rate / Unit price for unit rates in a Bill of Quantities) types of contract. The main text refers to admeasurements contracts.

- 6. The works shall be measured by standard instructions according to the rules.
- 7. Bidders shall provide evidence of their eligibility as and when requested by the Procuring Agency.
- 8. Any bid received by the Agency after the deadline for submission of bids shall be rejected and returned unopened to the bidders.
- 9. Prior to the detailed evaluation of bids, the Procuring Agency will determine whether the bidders fulfills all codal requirements of eligibility criteria given in the tender notice such as registration with tax authorities, registration with PEC (where applicable) turnover statement, experience statement, and any other condition mentioned in the NIT and bidding documents. If the bidder does not fulfill any of these conditions, it shall not be evaluated further.
- 10. Bid without bid security of required amount and prescribed form shall be rejected.
- 11. Bids determined to be substantially responsive shall be checked for any arithmetic errors Arithmetical errors shall be rectified on the following basis;
- A) In case of schedule rates, the amount of percentage quoted above or below will be checked and added or subtracted from amount of bill of quantities to arrive the final bid cost.
- B) In case of item rates. If there is a discrepancy between the unit rate and the total cost that is obtained by multiplying the unit rate and quantity, the unit rate shall prevail and the total cost will be corrected unless in the opinion of the Agency there is an obvious misplacement of the decimal point in the unit rate, in which case the total cost as quoted will govern and the unit rate corrected. If there is a discrepancy between the total bid amount and the sum of total costs, the sum of the total costs shall prevail and the total bid amount shall be corrected.
- C) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.

(CONTRACTOR)

CONDITIONS OF CONTRACT

Clause-1 Commencement and Completion Dates of work. The contractor shall not enter upon or commence any portion or work except with the written authority and instructions of the Engineer incharge or of in sub-ordinate in-charge of the work. Failing such authority the contractor shall have no claim to ask for measurements of or payment of work.

The contractor shall proceed with the works with due expedition and without delay and complete the work in the time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall reckoned from the date on which the order to commence work is given to the contractor, and further to ensure good progress during the execution of the work, contractor shall be bound, in all in which the time allowed for completion of any work exceeds one month to achieve progress on the prorate basis.

Clause-2 Liquidated Damages; The contractor shall pay liquidated damages to the Agency at the rate per day stated in the bidding data for each day that the completion date is later than the Intended completion date, the amount of liquidated damage paid by the contractor to the Agency shall not exceed 10 per cent of the contract price. Agency may deduct liquidated damages from payments due to the contractor. Payment of liquidated damages does not affect the contractor's liabilities.

Clause-3 Termination of the Contract.

- A) Procuring Agency / Executive Engineer, may terminate the contract if either of the following condition exist:
 - i) Contractor causes a breach of any clause of the contract
 - ii) The progress of any particular portion of the work is unsatisfactory and notice of 10 days has expired
 - iii) In the case of abandonment of the work owing to the serious illness or death of the contractor or any other cause
 - iv) Contractor can also request for termination of contract if a payment certified by the Executive Engineer, is not paid to the contractor within 60 days of the date of the submission of the bill.
- B) The Executive Engineer / Procuring Agency has power to adopt any of the following courses as may deem fit:-
- i) To forfeit the Security Deposit available except conditions mentioned at A (iii) and (iv) above

ii) To finalize the work by measuring the work done by the contractor

(CONTRACTOR)

BIDDING DATA

NAM	E OF CONTRACTOR:-					
	(This section should be filled in by the Executive / Procu	uring Agency before issuance of the Bidding Documents)				
Α	Name of Procuring Agency Brief Description of Work	Executive Engineer, Education Works Division Kamber Shahdadkot Providing Drinking Water Facilities in Existing 10 Secondary Schools in District Kamber-Shahdadkot (Under School Specification Budget)				
В	Procuring Agency Address	D.C Complex Kamber				
C D	Estimated Cost Amount of Bid Security:- (Fill in lump our amount or in % one of hid amount	Rs: 6,300,000				
E	(Fill in lump sum amount or in % age of bid amount / Estimated cost, but not exceeding 2%) Period of Bid Validity (days)	90 Days (Not more than Ninety Days)				
F	Security Deposit:- (in % age of bid amount / estimated cost equal to 10%)	o Rs: 630,000				
G	Percentage, if any, to be deducted from Bills	7.5% Income Tax & 5% Security Deposit				
Н	Deadline for submission of Bids along with Time	16.06.2017 up to 12.0 Noon				
1	Venue, Time and Date of Bid Opening	Executive Engineer, Education Works Division Kamber-Shahdadkot				
J	Time for completion from written order of commence	2 Months				
K	Liquidity damages:- (0.05 of Estimated Cost or Bid Cost per day of delay, but total not exceeding 10%)	Nil				
L	Call Deposit Receipt	No: Dated				
		Amount Rs: of				
M	D.R No:	No: Dated				
		Rs:				
Ν	Rate Quoted by Contractor	Part A				
		Part R				

CONTRACTOR

C) In the event of any of the above courses being adopted by the Executive Engineer / Procuring Agency the contractor shall have

- No claim to compensation for any loss sustained by him by reason of his having purchase or procured any materials, or entered into any engagements or made any advance on account of or which a view to the execution of the work or the performance of the contract.
- ii) However, the contractor can claim for the work done at site duly certified by the Executive Engineer, in writing regarding the performance of such work and has not been paid.

Procuring Agency / Executive Engineer may invite fresh bids for remaining work

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Clause-5 Extension of Intended Completion Date. The Procuring Agency either at its own initiatives, before the date of completion or on desire of the contractor or on desire of the contractor may extend the intended completion date, if any event (which hinders the execution of contract) occurs or a variation order is issued with makes it impossible to complete the work by the intended completion date for such period as he may think necessary or proper. The decision of the Executive Engineer, in this matter shall be final; where time has been extended under this or any other clause of this aggregate of all such orders, made under this agreement. When time has been extended as aforesaid, it shall continue to be the essence of the contract and all clauses of the contract shall continue to be operative during the extended period.

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(CONTRACTOR)

Clause-7 Payments

A) Interim / Running Bill. A bill shall be submitted by the contractor as the progress of the work may justify for all work executed and not included in any previous bill at least once in a month and the Executive Engineer-In-Charge shall take or cause to be taken the requisite measurements for the purpose of having the same verified and the claim, as for as admissible, adjusted, if possible before the expiry of ten days from the presentation of the bill at any time depute a subordinate to measure up the said work in the presence of the contractor or his authorized agent, whose countersignature to the measurement list will be sufficient to warrant and the Engineer-In-Charge may prepare a bill from such list which shall be binding on the contractor in all respects.

The Engineer / Procuring Agency shall pass / certify the amount to be paid to the contractor, which he considers due and payable in respect thereof, subject to deduction of security deposit, advance payment if any made to him and taxes.

All such intermediate payment shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed, and shall not preclude the Engineer-In-Charge from recoveries from final bill and ratification of defects and unsatisfactory items of works pointed out to him during defect liability period.

B) The Final Bill. A bill shall be submitted by the contractor within one month of the date fixed for the completion of the work otherwise Engineer-In-Charge certificate of the measurement and of the total amount payable for the works shall be final and binding on all parties.

Clause-8 Reduced Rates. In cases where the items of work are not accepted as so completed, the Engineer-In-Charge may make payment on account of such items at such reduced rates as he may consider reasonable in the preparation of final or on running account bills with reasons recorded in writing.

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- A) Agency may issue a variation Order for procurement of works physical services from the original contractor to cover any increase or decrease in quantities including the introduction of new work times that are either due to change of plans, design or alignment to suit actual field conditions, within the general scope and physical boundaries of the contractor.
- B) Contractor shall not perform a variation until the procuring Agency has authorized the variation in writing subject to the limit not exceeding the contract cost by of 15% on the same conditions, in all respects on which he agreed to do them in the work, and at the same rates, as are specified in the tender for the main work. The contractor has no right to claim for compensation by reason of alterations or curtailment of the work.

(CONTRACTOR)

- C) In case the nature of the work in the variation does not correspond with items in the Bill of Quantities, the quotation by the contractor is to be in the form of new rates for the relevant items of work, and if the Engineer-In-Charge is satisfied that the rate quoted is within the rate worked out by him on detailed rate analysis, and them only he shall allow him that rate after approval from higher authority.
- D) The time for the completion of the work shall be extended in the proportion that the additional work bear to the original contact work.
- E) In case of quantities of work executed result the Initial contract price to be exceeded by more than 15% and then Engineer can adjust the rates for those quantities causing excess the cost of contract beyond 15% after approval of Superintending Engineer.
- (F) Repeat Order; Any cumulative variation, beyond the 15% of initial contract amount, shall be subject of another contract to be tendered out if the works are separable from the original contract.

Clause-10: Quality Control.

- A) Identifying Defects: If at any time before the security deposit is refunded to the contractor / during Defect liability period mentioned in bid dada, the Engineer-In-charge or his subordinate-in-charge of the work may instruct the contractor to uncover and test any part of the works which he considers may have a defect due to use of unsound materials or unskillful workmanship and the contractor has to carry out a test at his own cost irrespective of work already approved or paid.
- **B)** Correction of Defects; The contractor shall be bound forthwith to rectify or remove and reconstruct the work so specified in whole or in part as the case may require. The contractor shall correct the notified defect within the Defects Correction Period mentioned in notice.

C) Uncorrected Defects:

- i) In the case of any such failure, the Engineer-In-Charge shall give the contractor at least 14 days notice of his intention to use a third party to correct a defect. He may rectify or remove, and re-execute the work or remove and replace the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor.
- ii) If the Engineer, considers that rectification / correction of a defect is not essential and it may be accepted or made use of it shall be within his direction to accept the same at such reduced rates as he may fix therefore.

(CONTRACTOR)

Clause-11

- A) Inspection of Operations. The Engineer and his subordinates, shall at all responsible times have access to the site for supervision and inspection of works under or in course of execution in pursuance of the contract and the contractor shall afford every facility for and every assistance in obtaining the right to such access.
- **B)** Dates for Inspection and Testing. The Engineer shall give the contractor responsible notice of the intention of the Engineer-In-Charge or his subordinate to visit the work shall have been given to the contractor, then he either himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for that purpose, orders given to the contractor's duly authorized agent shall be considered to have the same force an effect as if they had been given to the contractor himself.

Clause-12 Examination of work before covering up.

- A) No part of the works shall be covered up or put out of view / beyond the reach without giving notice of not less than five days to the Engineer, whenever any such part of the works or foundations is or are ready or about to be ready for examination and the Engineer shall, without delay, unless he considers it unnecessary and advises the contractor accordingly, attend for the purpose of examining and measuring such part of the works or of examining such foundations.
- B) If any work is covered up or placed beyond the reach of measurement without such notice having been given the same shall be uncovered at the contractor's expense, and in default thereof no payment or allowance shall be made for such work, or for the materials with which the same was executed.
- Clause-13 Risks. The contractor shall be responsible for all risks of loss of or damage to physical property or facilities or related services at the premises and of personal injury and death which arise during and in consequence of its performance of the contract, if any damage is caused while the work is in progress or become apparent within three months of the grant of the certificate of completion, final or otherwise, the contractor shall make good the same at his own expense, or in default the Engineer may cause the same to be made good by other workmen, and deduct the expenses from retention money lying with the Engineer.

Clause-14 Measures for prevention of fire and safety measures. The contractor shall not set fire to any standing jungle, trees, bush wood or grass without a written permit from the Executive Engineer, when such permit is given, and also in all cases when destroying, cutting or uprooting trees, bushwood grass, etc by fire the contractor shall take necessary measures to prevent such fire spreading to or other wise damaging surrounding property. The contractor is responsible for the safety of all its activities including protection of the environment on and off the site. Compensation of all damage done intentionally or unintentionally on or off the site by the contractor's labour shall be paid by him.

(CONTRACTOR)

Clause-15 Sub-contracting. The contractor shall not subcontract the whole of the works, except where other wise provided by the contract. The contractor shall not subcontract any part of the works without the prior consent of the Engineer. Any such consent shall not relieve the contractor form any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any subcontractor, his agents, servants or workman as if these acts, defaults or neglects were those of the contractor, his agents servants or workman. The provisions of this contract shall apply to such subcontractor or his employees as if he or it were employees of the contractor.

Clause-16 Disputes. All disputes arising in connection with the present contract, and which cannot be amicably settled between the parties, the decision of the Superintending Engineer, of the circle / office / one grade higher to awarding authority shall be final conclusive and binding on all parties to the contract upon all questions relating to the meaning of the specifications, designs, drawings, and instructions, hereinbefore mentioned and as to the quality of workmanship or materials used on the work or as to any other questions specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, or the execution, of the failure to execute the same, whether arising during the progress of the work, or after the completion or abandonment thereof.

Clause-17 Site Clearance. On completion of the work, the contractor shall be furnished with a certificate by the Executive Engineer (hereinafter called the Engineer in-charge) of such completion, but neither such certificate shall be given nor shall the work be considered to be complete until the contractor shall have removed all temporary structures and materials brought at site either for use or for operation facilities including cleaning debris and dirt at the site. If the contractor fails to comply with the requirements of this clause then Engineer-in-charge, may at the expense of the contractor remove and dispose of the same as he thinks fit and shall deduct the amount of all expenses so incurred from the contractor's retention money. The contractor shall have no claim in respect of any surplus materials as aforesaid except for any sum actually realized by the sale thereof.

Clause-18 Financial Assistance / Advance Payment

- A) Mobilization Advance is not allowed.
- B) Secured Advance against material brought at site.
- i) Secured Advance may be permitted only against imperishable materials / quantities anticipated to be consumed / utilized on the work within a period of three months from the date of issue of secured advance and definitely not for full quantities of materials for the entire work / contract. The sum payable for such materials on site shall not exceed 75% of the market price of materials.
- ii) Recovery of Secured Advance paid to the contractor under the above provisions shall be affected from the monthly payments on actual consumption basis, but not less than period more than three months (even if unutilized)

(CONTRACTOR)

Clause-19 Recovery as arrears of Land Revenue. Any sum due to the Government by the Contractor shall be liable for recovery as arrears of Land Revenue.

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Clause-20 Refund of Security Deposit / Retention Money. On completion of the whole of the works (a work should be considered as complete for the purpose of refund of security deposit to a contractor from the last date on which its final measurements are checked by a competent authority, if such check is necessary otherwise from the last date of recording the final measurements) the defects notice period has also passed and the Engineer has certified that all defects notified to the contractor before the end of this period have been corrected, the security deposit lodged by a contractor (in cash or recovered in installments from his bills) shall be refunded to him after the expiry of three month from the date on which the work is complete.

(CONTRACTOR)

DIVISIONAL ACCOUNTS OFFICER EDUCATION WORKS DIVISION KAMBER-SHAHDADKOT

BILL OF QUANTITIES

A) Description and Rate of Items based on Composite Schedule of Rates

Item #	Quantities	Description of Item to be executed at site	Rate	Unit	Amount
		arately			
		Attached Separately			
		Attach			

Amount Total (A)

_____ % above / below on the Rates of CSR.

Amount to be added / deducted on the basis of premium quoted Total Part B

Total Part A+B in words and figures.

(CONTRACTOR)

BILL OF QUANTITIES

A) Description and Rate of Items based on Market (Offered Rates)

Item #	Quantities	Description of Item to be executed at site	Rate	Unit	Amount
		>-			
		atel			
		Separately			
		ő B			
		che			
		Attached			

Amount Total (B)

(CONTRACTOR)

BOQ-04

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PROVIDING DRINKING WATER FACILITIES IN EXISTING 10 SECONDARY SCHOOLS IN DISTRICT KAMBER-SHAHDADKIT (UNDER SCHOOL SPECIFICATION BUDGET)

	BILL OF QUANITITES B.O.Q (CIVIL WORK)				
S.#	DESCRIPTION	Qnty:	Rate	Unit	Amount
1	Excavation in foundation of building bridges & other structure i/c refilling around structure with excavated lead upto one chain and lift upto 5'feet. (S.I.No:18(b)-P/4)		3176.25	%0.Cft	11,435
2	Cement Concrete brick or stone ballast 11/2" to 2" guage Ratio 1:4:8. (S.I.No:4©-P/14)	950.00	9416.28	%.Cft	89,455
В	Ratio 1:5:10	310.00	8,694.95	%.Cft	26,954
3	Reinforced cement concrete including all labour and material except the cost of steel reinforcement and its labour for bending and binding which will be paid separately. This rate also includes all kinds of forms moulds lifting shuttering curring rendering and finishing the exposed surface (including screening and washof shingle) (a) R.C work in roof slab, beams coloumns rafts lintel & other structurel member laid in situ or precast laid in position in all respect (i) Ratio 1:2:4 90 Lbs. cement 2 Cft sand 4 Cft shingle 1/8" to 1/4" guage. (S.I.No:6(a)(i)-P/16)	4,000,00	337.00	P.Cft	1,378,330
4	Fabrication of Tar bars steel reinforcement for cement concrete including cutting bending laying in position making joints and fastenings including cost of binding wire also includes removal of rust from bars (b) Using Tar Bars. (S.I.No:8(b)-P/16)	220.00	5,001.70	P.Cwt	1,100,374
5	Pacca brick work in Foundation and plinth in cement sand mortor 1:6 (S.I.No:1-P/20)	800.00	11,948.36	%.Cft	95,587
6	Cement Concrete plain including placing compacting finishing and curring complete (including screening and washing at stone aggregate without shuttering Ratio 1:2:4)	160.00	14,429.25	%.Cft	23,087
7	Pacca brick work in G.Floor i/c stricking of joints cement sand mortor 1:6. (S.I.No:5@-P/20)	890.00	12,674.36	%.Cft	112,802
8	P/L tiles glazed 6"x6"x1/4" on floor or wall facing in required colour and apttern of STILE specification jointed in white cement and pigment over a base of 1:2 grey cement mortar 3/4" thick including washing and filling of joints with slurry of white cement and pigment in desired shape with finishing cleaning and cost of wax polish etc complete including cutting (S.I.No:60-P/46)	3,580.00	30,509.77	%.Cft	1,092,250
9	P/L 2" thick topping cement concrete 1:2:4 including saurface finishing and dividing into panells (S.I.No:16@-P/41)	2,400.00	3,275.50	%.Cft	78,612
10	Cement Plaster 1:6 up to 20' height Ratio 1/2" thick (S.I.No:13(b)-P/51)	3,090.00	2,206.60	%.Cft	68,184
11	Cement Plaster 1:4 up to 20' height Ratio 3/8" thick (S.I.No:11(a)-P/51)	3,090.00	2,197.52	%.Cft	67,903
12	Preparing the surface and painting with weather coat i/c rubbing the surface with rubbing brick / sand paper, filling the voids with chalk / plaster of pairs and then painting with weather coat of approved mae (B) 2nd and subsequent coat. (S.I.No:38(A,B)-P/55)	6,160.00	1,948.10	%.Cft	120,003
13	P/F iron steel grill door with angle iron frame of 1-1/2"x1-1/2"x1/4" and flat iron of 3/4"x1/4" with approved design and locking arrangement embeded in masonary as per instruction Engineer, incharge. (S.I.No:71-P/93)	560.00	231.60	P.Sft	129,696

Executive Engineer Education Works Division Kamber · Shahdadkot

14	P/F iron steel grill using solid square bars of size 1/2"x1/2" placed at 4" i/c ang frame iron patti of 3/4"x3/4" i/c circle shape at 1-0 a part equivalent fitted with screws or pains i/c painting 3 coats with ist coat of red oxide paint etc. (S.I.No:30-P/93)	3,080.00	194.16	P.Sft	598,013
			TOTA	AL PART-A	4,992,684
	PART-B				
1	Providing G.I pipe specials, clamps etc, i/c fixing cutting and fitting complete with and including the cost of vreaking through walls and roof making good etc painting two coat after cleaning the pipe tec with white zink paint with pigment to match the colour of the building and testing with water t a pressure head of 200' feet and handling (S.I.No:1-P/12)	90.00	95.79	P.Rft	8,621
2	Supplying & Fixing long bib cock of superior quality with C.P head 1/2" dia	60.00	1,384.24	P.Nos	83,054
3	P/F approved quality A.C mortor Mono Block set made 1-1/4"x1" suction and delivery, 1 H.Power single phase mortor (Diamond / Siemens make or equal) including the cost of C.I fitting nuts, bolts etc complete	10.00	14,201.00	P.Nos	142,010
4	Providing & Fixing Hand Pump maching i/c fitting and fixing including etc complete	10.00	4,500.00	P.Nos	45,000
			T	OTAL P-B	278,686
				G.TOTAL	5,271,369

Executive Engineer Education Works Division Kamber - Shahdadkot

BILL OF QUANTITIES

A) Description and Rate of Items based on Market (Offered Rates)

Item #	Quantities	Description of Item to be executed at site	Rate	Unit	Amount
		<u>></u>			
		Attached Separately			
		ed Se			
		Attach			
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Amount Total (B)

(CONTRACTOR)

S.NO DESCRIPTION OF ITEMS. QTY Unit OFFER RATE P.UNIT AMOUNT.

PART - A (Installation of Solar Energy System in Existing 50 Secondary Schools in District Kamber - Shahdadkot under School Specific Budget (SSB).

1	Solar Panels "Crystalline" (IEC61215:2005, IEC 61730 certified from TUV/VDE Laboratory Germany ISO 9001:2008 / Quality Management system ISO/TS 16949:2009, ISO 14001:2004, OHSAS 18001:2007 VDE/MCS /CE / SII / CEC AU / IN METRO UL1703 : CSA/ IEC 61701 UL 1703 : CSA / 61701 ED2: VDE / IEC 62716: VDE / IEC 60068	696	pcs	P.Watt
2	Sealed maitenance free, VRLA AGM Solar Dry			
	Battery Bank)IEC61056-1/2:2002 and JIS			
	C8702-1/2:2009,UL and CE life Cycles must			
	be 1200 cycel at 30% DOD (When the battery	260		D 411
	is 70% fully charged Size)(150 AH)	360	pcs	P.AH
3	Lockable Single Box for Battery Bank & Inverter			
	GI Powder Coated	90	Set	P.Set
4	High Efficiency Inverters (Hybird) with built in MPPT and charge Controller.(3 KW-48-V) Isolated transformer design , LCD Display Multilingual with efficient battery management, Alarm & protection PV reverse protection 65-120Vdc , 97% Efficiency , 62A Charging Current PV : 3.5 KW on builtin charger	90	pcs	P.K.W
5	Iron made, Powder coated mounting structure			
	for Solar panels (Roof/Ground mounted)	380	Set	P.Set
6	Electric Motor 0.5 HP 220VAC	90	pcs	no
7	Timer for Automatic On/Off Solar System (Prevent from Mis use)	90	pcs	P.Set
8	Multi-strand wire 10mm2 (1 core) for Combiner box to inverters and to main distribution boxe. (Turnkey wiring scheme/Branded) Newage / Fast / Allied or Equivalent	21880.00	Ft	P.Ft
9	Multi-straned electric wire 4-mm2 (1 core) for PV panels inter connections and combiner box. Newage / Fast / Allied or Equivalent	18000.00	Ft	P.Ft

10 Multi-stramed electric wire 16-mm2 (1 core) for

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