EXPRESSION OF INTEREST

FOR

SELECTION AND REGISTRATION OF SOLAR PHOTOVOLTAIC WATER PUMP SUPPLIERS FOR SURVEYING, DESIGNING, SUPPLYING, INSTALLATION AND COMMISSIONING OF SOLAR PHOTOVOLTAIC (SPV) WATER PUMPING SYSTEM

FOR

SOLAR PHOTOVOLTAIC (SPV) WATER PUMPING SYSTEM COMPONENT UNDER "SUB-MISSION ON AGRICULTURAL MECHANISATION (SMAM) PROGRAMME"

IMPLEMENTED BY

GUJARAT GREEN REVOLUTION COMPANY LTD, VADODARA

Gujarat Green Revolution Company Ltd.
P.O. Fertilizernagar-391750,Dist: Vadodara,Gujarat
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INVITATION OF EXPRESSION OF INTEREST (EoI):

The GUJARAT GREEN REVOLUTION COMPANY LIMITED (GGRC), Vadodara invites Expression of Interest (EoI) from your firms / company for Surveying, Designing, Supplying, Installation and Commissioning of tentatively 500 numbers of Solar Photovoltaic (SPV) Water Pump System on farmer's field under Solar Photovoltaic (SPV) Water pumping System Component of "Sub-Mission on Agricultural Mechanisation (SMAM) Programme", Government of Gujarat in the Gujarat State.

EoI Notification Number: GGRC/EoI/Solar Water Pump/01/2017-18
EoI Notification Name: Selection and Registration of SPV Water Pump Supplier for **"**Surveying, Designing, Supplying, Installation and Commissioning of SPV Water Pump system for irrigation on farmers' field.

Issue Date of EoI	Date of Advertisement In News Papers
EoI Submission Date	On or Before 15 days from the date of Advertisement.
EoI Submission Address:	**Joint Managing Director** Gujarat Green Revolution Company Ltd. (GGRC) Fertilizernagar Township, PO: Fertilizernagar, Dist: Vadodara- 391750, Gujarat, India.

Note:

i. Please address all queries and correspondence to the Joint Managing Director, Gujarat Green Revolution Company Ltd. (GGRC),Fertilizernagar Township, PO: Fertilizernagar, Dist: Vadodara- 391750, Gujarat, India.
ii. If the Office of the GGRC happens to be closed on the day of receipt of the EoIs as specified, the EoIs will be received on the next working day on opening of the Office up to the same time and at the same venue.
iii. Please quote EoI notification number "GGRC/EoI/Solar Water Pump/01/2017-18 in all your correspondence.

General Instructions

Interested Agencies who wish to participate in this EoI will have to submit EoI in prescribed format hereunder.
EoI applicants are advised check the eligible criteria before submitting the EOI as mentioned in the point number 12.0 of this document

i. **Submission of EoI:** Interested Agencies shall submit physically their filled-in EoI in sealed envelope super-scribed as "Project Name: EOI for Selection and Registration of SPV Water Pump Supplier for **"**Surveying, Designing, Supplying, Installation and Commissioning of SPV Water Pump system for irrigation on farmers' field".

The EoI should be submitted in triplicate (One original and Two copies). Original printed document shall be considered as authentic.

ii. Goods/Services offered should be strictly as per specifications mentioned in this EoI Document.

iii. Interested Agencies shall quote the prices of Goods/services as mentioned which would be valid for at least for 1 year from the opening of the EoI document.

iv. Once quoted, the Interested Agencies shall not make any subsequent price changes, whether resulting or arising out of any technical/commercial clarifications sought regarding the EoI, even if any deviation or exclusion may be specifically stated in the EoI document. Such price changes shall render the EoI liable for rejection.

v. The duly filled in EoI should be sent by Registered Post / Speed Post/ Hand Delivery only so as to reach the office of GGRC, Vadodara on or before the specified date and time as advertised in the newspaper. GGRC shall not be responsible for non-receipt of the EoI for any postal delay.

Joint Managing Director
Gujarat Green Revolution Company Ltd.
Vadodara

EXPRESSION OF INTEREST DOCUMENT FOR SURVEYING, DESIGNING, SUPPLYING, INSTALLATION AND COMMISSIONING OF SPV WATER PUMP SYSTEM FOR IRRIGATION IN FARMERS' FIELD IN THE STATE OF GUJARAT

1. Introduction

1.1 **GUJARAT GREEN REVOLUTION COMPANY LIMITED, GGRC** is established on 2005 by changing the name of "Gujarat Agri processing Co. Ltd." which was promoted by GSFC, GNFC and GAIC and is mandated with promote Micro Irrigation System (MIS) in farmer fields of Gujarat State. **GGRC** is working as an Implementing Agency on behalf of Government of Gujarat (GOG) and Government of India (GOI) to bring second Green Revolution in consonance with the Agriculture Policy and Vision of Government of Gujarat so as to save water,fertilizer and energy, besides multiple benefits to improve agricultural productivity and farmer's prosperity at large. To add the value to the success of Micro Irrigation Scheme, Government of Gujarat has entrusted GGRC to implement Protected Cultivation (PCS) Scheme from 2014-15 .To add another feather to the success of GGRC, Government of Gujarat (Deptt. of Agriculture) has entrusted to implement Solar water pump component under Sub Mission on Agricultural Mechanisation (SMAM) in the state of Gujarat with GR No. Budget-10-2016-1243-K-5-dated 03-04-2017.

The SMAM Programme will be integrated with Micro irrigation Scheme implemented by GGRC in the state. Under the Scheme, AC/DC type submersible/surface pump of 3 HP and 5 HP capacity of SPV Water Pump system will be provided to beneficiary farmer. The beneficiary farmers will be entitled to avail subsidy from Government of Gujarat towards Project cost of erection and commissioning of SPV water Pump System for irrigation at his field as mentioned under.

Category of Farmer	Subsidy for AC Pump (Submersible/ Surface Pumps)	Subsidy for DC Pump (Submersible/ Surface Pumps)
Small and Marginal/Women/Schedule Caste/Schedule Tribe	Rs 47,520 per HP	Rs 59,400 per HP
Other Farmer	Rs 43,200 per HP	Rs 54,000 per HP

To avail the benefit of installation of SPV water Pump for irrigation under the scheme, beneficiary farmer normally should have Drip Irrigation System under the MIS scheme implemented by GGRC in the state of Gujarat.

Solar Photovoltaic Pump System Suppliers (SPV Water Pump Supplier) shall Survey, Design, Supply, Install and Commission the Solar Photovoltaic Water (SPV) Pump System for irrigation on farmers field.

1.2 Objectives:

i. To Create Awareness and Demonstrate Effective Use Of Solar Water Pump With Drip Irrigation System For Farmer.
ii. To provide clean, green and assured source of energy to farmer for irrigation where grid connection is not economical and affordable to farmer.
iii. To replace Diesel/Grid electric operated water pump set by SPV water pump to reduce carbon footprint in environment
iv. To promote as a means of Climate-Smart Agriculture (FAO-2010) to increase productivity in an environmentally and socially sustainable way and strengthen farmers' resilience to climate change.
v. To improve water use efficiency & crop productivity per unit of water, increase farmers' income and consequent improvement of their life standard.
vi. To improve energy use efficiency in agriculture sector.
vii. Culminating to empowerment of the farming community.

2. Checklist of Documents comprising the EoI

The EoI submitted shall have the following documents:

Your submission should be signed in Original with two photocopies.

i. In case interested SPV Water Pump Suppliers is a company- copy of Certificate of incorporation or In case of Firm- copy of the Registration Deed. These documents should be self attested by competent authority and carry the name designation of authorized signatory along with seal of the company.
ii. List of present Partners/Directors/owners/executive council members/ trustees/ Board members as applicable with permanent as well as present address, phone numbers and fax number.
iii. Notarised valid Test Certificate for the offered Model of Solar Water Pumping System from a MNRE authorized testing centre. (Test Certificate should have been issued on or after 1 January 2014.)
iv. Notarised valid Registration certificate issued by MNRE, New Delhi for MNRE channel partner for OFF - GRID PV systems and/or MNRE empanelled partner for Solar Pumps under NABARD scheme (MNRE channel partners for any other programme are not eligible).
v. Self attested copies of GST/Sales Tax Registration Certificate, Service Tax Registration Certificate and PAN number.
vi. Audited Balance sheet, Income statement, certificate of positive networth duly signed by the statutory auditors and authorized signatories of the SPV water Pump Supplier for the years 2014-15, 2015-16 & 2016-17.
    a. Audited report of turnover of solar water pumping business should be mentioned separately if not mentioned separately in balance sheet.
vii. Acceptance of General terms and conditions for online reverse auction of surveying, designing, supplying, installation and commissioning of solar photovoltaic water pump system for "solar photovoltaic water pumping programme" implemented by Gujarat green revolution company ltd, Vadodara in the Gujarat state as **Annexure-I**
viii. Undertaking for submission of Expression of Interest Document as per **Annexure-II.**
ix. Profile of the Solar Water Pump System Supplier as per **Annexure – III.**
x. Deviation Sheet As **per Annexure-IV**
xi. Details of the Plant, Machinery and Manufacturing Facilities as per **Annexure –V.**

xii. Company's/ PV System Integrators Experience In Surveying, Designing, Supplying, Installation And Commissioning Of Spv Water Pump System In Farmers' Field In Gujarat Or In Any State Of India as per **Annexure –VI.**
xiii. Details of Offered Solar Pump Models and Configuration as per **Annexure –VII.**
xiv. Details of the Agreement/ MOU between EoI applicant and the SPV Modules/Controller/SPV water Pump manufacturer as per **Annexure-VIII**
xv. Undertaking in regard to stop deal/black list thereof as per **Annexure –IX.**
xvi. Acceptance of process flow chart for implementation of solar water pumping programme by GGRC as per **Annexure-X**
xvii. Acceptance of Completion of Joint Commissioning Report as per **Annexure –XI.**
xviii. Acceptance of Minimum Technical Requirements for Design, Construction, Test procedure and Safety for Solar PV modules and Performance Standards for Solar PV pumping System up to 5 HP Technical Specifications of SPV Water Pumping System. As per **Annexure –XII.**
xix. Acceptance of Warrantee Card of installed solar pumping system as per **Annexure –XIII.**
xx. Acceptance of Regular Maintenance & Servicing Report as per **Annexure – XIV.**
xxi. Declaration of relative working with GGRC or its parent promoter company i.e. GSFC,GNFC or GAIC as per **Annexure – XV**
xxii. Acceptance on the other condition of the SPV water Pumping System EOI as per **Annexure – XVI.**

3. EoI DOCUMENT

The EoI shall be submitted for the complete scope of work as envisaged in this EoI document. The EoI for partial scope of work or with additional conditions/deviation/ additions/alterations/omissions shall be out-rightly rejected without assigning any reason thereof.

4. AMENDMENT OF EoI DOCUMENTS

At any time prior to the deadline for submission of EoI, GGRC, Vadodara for any reason, whether at its own initiative or in response to the clarifications requested by prospective Interested Agencies, may modify the EoI document by amendment. The same amendment will be notified in leading newspaper and on GGRC website (www.ggrc.co.in) and changed modification will be binding on them. In order to allow prospective Agencies a reasonable time to take the amendment into account in preparing their EoI document, GGRC, Vadodara, at its discretion, may extend the deadline for the submission of EoI.

5. EoI FEES

A complete set of Expression of Interest as downloaded from the GGRC web site www.ggrc.co.in. should be submitted along with Non refundable EoI fee of Rs. 10,000/- (Rupees Ten Thousand Only). EoI submitted without requisite fees will be summarily rejected. The mode of payment of EoI fee will be only in the form of Demand Draft from any nationalized bank payable at Vadodara in favour of "Gujarat Green Revolution Company Ltd."

Those SPV water pump supplier who are already registered with GGRC for the year 2016-17 need not to pay EoI fees.

6. COST OF EoI

The interested agencies shall bear all costs associated with the preparation and submission of the EoI and GGRC, Vadodara will in no case be responsible for those costs, regardless of the conduct or outcome of the EoI process.

7. FRAUDULENT AND CORRUPT PRACTICE

i. Fraudulent practice means a misrepresentation of facts in order to influence a procurement process or the execution of a Contract and includes collusive practice among interested agencies (prior to or after submission of EoI) designed to establish EoI prices at artificial on-competitive levels and to deprive the GGRC, Vadodara of the benefits of free and open competition.

ii. GGRC reserves right to reject EoI if it determines that the SPV Water Pump Supplier recommended for selection has engaged in corrupt or fraudulent practices in executing the work assigned.

8. OFFER OF RATES

8.1 Those EoI applicant SPV water pump supplier who qualify the eligibility criteria as mentioned below in clause number 12.0 and his EoI is accepted by GGRC should submit their pump wise rate of offer in Online Reverse Auction organized by GGRC. The date and timing of Online reverse auction will be notified separately after evaluation of Expression of Interest. The general terms and condition for participation in online reverse auction is enclosed as Annexure-I

It may please be noted that the EoI applicant SPV water pump supplier should not offer any rate physically along with EoI submission to GGRC.

Interested SPV Water Pump Supplier shall categorically confirm strict compliance to the following with respect to their offer.

i. Any effort by an Interested SPV Water Pump Supplier or Interested SPV Water Pump Supplier's agent/consultant or representative howsoever described to influence the GGRC, Vadodara in any way concerning scrutiny/consideration/ evaluation/ comparison of the EoI or decision concerning as registered supplier shall entail rejection of the EoI.
ii. The Interested SPV Water Pump Supplier should indicate a single consolidated rate for the specified goods and services based on the payment terms specified in the EoI while quoting in online reverse auction organised by GGRC.
iii. EoIs should be submitted directly by the Interested SPV Water Pump Supplier.

8.2 GGRC, Vadodara reserves the right to seek clarification/justification from the Interested SPV Water Pump Supplier on the EoI price after completion of online reverse auction in case GGRC, Vadodara as deems it necessary.

Based on the justification provided by the Interested SPV Water Pump Supplier, if GGRC, Vadodara feels that the price is unrealistic/ infeasible, GGRC Vadodara

reserves the right to reject the said EoI. The Interested Agencies shall be governed by the decision of GGRC, Vadodara.

9. FORMAT AND SIGNING OF EoI

i. The original and two copies of the EoI shall be typed or written in indelible ink and shall be signed by the Interested SPV Water Pump Supplier or a person duly authorized to bind the Interested SPV Water Pump Supplier to the Contract/Concession Agreement. All pages of the EoI, except for un-amended printed literature, shall be initialled by the person or persons signing the EoI document.

ii. The complete EoI shall be without alteration or erasures, except those to accord with instruction issued by the GGRC or as necessary to correct errors made by the interested SPV Water Pump Supplier, in which case such corrections shall be initiated by the person or persons signing the EoI.

10. SEALING AND MARKING OF EoI DOCUMENT

i. Interested SPV Water Pump Supplier shall submit their EoI document in Single part in sealed envelopes super-scribed as “Project Name: EoI for Surveying, Designing, Supplying, Installation and Commissioning of SPV Water Pump system for irrigation in farmers’ field”.
ii. Original and 2 copies of EoI complete as per technical specification specified in Annexure-XII for AC/DC type submersible/surface pump of 3 HP/ 5 HP capacity of SPV water pump system.
iii. The envelopes containing EoI should be enclosed in a larger envelope duly sealed. All pages of the offer must be signed.
iv. The outer envelope shall indicate the name and address of the interested SPV Water Pump Supplier to enable the EoI to be returned unopened in cases it is declared ‘late'.
v. If the outer envelope is not sealed and marked as required, the GGRC will assume no responsibility for the EoI's misplacement or premature opening.

11. EoI DUE DATE

i. EoI must be received by the GGRC at the address specified in the EoI Document not later than the date specified in the advertisement of newspaper.
ii. The GGRC may, at its discretion, on giving reasonable notice by fax or any other written communication to all prospective EoI applicant who have been downloaded the EoI documents may extend the EoI submission due date. GGRC reserve all rights to extend the due date and the interested agencies, previously subject to the EoI due date, shall thereafter be subject to the new EoI due date as extended.
iii. Any EoI received by the GGRC after the EoI due date/time prescribed in the EoI Document shall be rejected.
iv. Any EoI indicating conditions beyond those indicated in this EoI Document i.e. conditional EoI shall be rejected.

12. EoI EVALUATION

The evaluation will be carried out by GGRC based on criteria set out here under in EoI.

ELIGBLE CRITERIA FOR SELECTION OR SHORT LISTING FOR REGISTRATION OF SPV WATER PUMP SYSTEM SUPPLIERS

(i)* The party is eligible to apply for registration as SPV water Pump System Supplier if they fulfil any one of the following criteria:

A Registered Company with manufacturing facility in India for SPV Cells / Modules OR Motor-pump Sets OR Solar Pumps Inverter (Tested & Certified by MNRE accredited lab) and Company must be either a MNRE channel partner for OFF - GRID PV systems and/or MNRE empanelled partner for Solar Pumping programme under NABARD scheme (MNRE channel partners for any other programme are not eligible).

OR

A PV System Integrator who must be either a MNRE channel partner for OFF - GRID PV systems and/or MNRE empanelled partner for Solar Pumping programme under NABARD scheme (MNRE channel partners for any other programme are not eligible).

(ii) Company's/ PV System Integrator must have experience in surveying, designing, supplying installation , commissioning and maintenance of SPV water Pump system on farmers' field in Gujarat or in any State of India along with the satisfactory completion certificate from the implementing agency. (Should be proved by documentary evidence)

At least 30 numbers of the Solar Photovoltaic Water Pumping Systems should have been installed & commissioned (should be proved by documentary evidence) by the party during the last three years from the date of submission of EOI, GGRC may at its discretion reduce the number of solar water pump limit.

(iii) Financial strength of the organization; the party must have turnover of minimum Rs. 3 crore in business (should be proved by documentary evidence)of SPV water pump system (i.e. in installation and commissioning) during any one year of the three year period from 2014-15 to 2016-17, GGRC may at its discretion reduce the minimum turn over limit. The EoI applicant should have positive networth during the last three year and certificate from Charted accountant in this regard is required to be submitted.

(iv) EOI Applicant should have Valid Test Certificate for the offered Model of Solar Water Pumping System from a MNRE authorized testing centre. (Test Certificate should have been issued on or after 1 January 2014).

The SPV water pump supplier will have to supply and install the SPV water pump material of same make/model/specification as mentioned in the valid test report

for the offered Model of Solar Water Pumping System from a MNRE authorized testing centre.

(v) The EOI applicant should have valid GST/CST / State VAT/ TIN registration certificate in that state. A copy of which should be enclosed.

(vi) The Company/ PV System Integrator must have at least 10 numbers of well qualified staff i.e. Technician / Engineers/Agronomist with suitable year of experience.

(viii) GGRC at its own sole discretion may appoint a third party inspection agency to assess manufacturing capability and quality assurance system of company's/ PV system integrator's manufacturing site. GGRC or its competent authorized officer may visit manufacturing site and registered office for verification of credentials of company/ PV system integrator.

In addition to above, GGRC if required may pick up samples from the manufacturing facility, SPV water pump material supplied & Installed at beneficiaries' site at random for quality check only. The samples picked up will be tested for acceptance test as decided by GGRC at MNRE/Government approved laboratory as per relevant ISS/BIS/ GGRC specifications.

If the SPV water pumping system fails in any of the acceptance tests carried out, then full supply of materials will be considered as rejected and SPV water pump supplier has to replace the entire material with satisfaction of GGRC. The GGRC may impose suitable amount of penalty at its own discretion on SPV water pump suppliers and all these will be binding on the supplier. In case if the materials does not confirm to specifications or fails at Government approved laboratory or other laboratory decided by GGRC for testing and then all Testing fees, expenses of the third party inspection agency and other expenses incurred by GGRC will be borne by SPV water pump supplier.

This programme will be implemented on the line of Micro irrigation Scheme implementation module adopted by GGRC in Gujarat state. It is advised to all EoI applicants to study separately the implementation module of GGRC before applying for registration of the SPV water Pump System Supplier.

The process flow chart for implementation of solar water pumping programme is attached as **Annexure- X.**

Criteria no. (i)* is essential for selection as registered SPV Water Pump system supplier under the programme. SPV water Pump system supplier while submitting their EOI should ensure that they are meeting the criteria.

13. REGISTRATION FEE:

i. Non refundable fee of Rs. 1,00,000 (Rupees One lakhs only) shall be required to be paid for registration as one of the registered SPV Water Pump System Suppliers with GGRC subject to acceptance and assessment of EOI and your selection as registered SPV water pump supplier.

ii. The amount of Rs. 1,00,000/- (Rupees One lakhs only) shall be paid to GGRC either by NEFT/RTGS transfer/Demand Draft/multi city cheque in favour of Gujarat Green Revolution Company Ltd. Payable at Vadodara (Baroda) after selection as registered SPV Water Pump System Suppliers of GGRC.

iii. The SPV water pump suppliers who have already registered with GGRC in year 2016-17 will be exempted from payment of registration fees. Such SPV water pump suppliers have to pay renewal registration as mentioned in point number 14.0.

14. RENEWAL REGISTRATION FEES:

Once SPV Water Pump System Suppliers are registered in GGRC, for every next financial year, a renewal fees of Rs 25,000/- (Rupees Twenty Five Thousand only) or as decided from time to time would be charged by GGRC and is binding on all SPV water pump suppliers. The Non-payment of such fees would lead to cancellation of SPV Water Pump System Suppliers registration..

15. THE GGRC'S RIGHTS TO ACCEPT ANY EoI AND TO REJECT ANY OR ALL EoIs

The GGRC reserves the right to reject any EoI and to annul the EoI process and reject all EoIs at any time prior to registration without thereby incurring any liability to the affected Agency(ies) or any obligation to inform the affected Agency(ies) of the grounds for such decision.

16. PAYMENT TERMS

The terms of payment under the Scheme:

i. Advance Payment:

25% advance payment of total SPV water pump system cost or farmer share whichever is less will be released to SPV Water Pump System Suppliers after receipt of Tri Party Agreement (to be executed between farmer-Supplier and GGRC) along with Farmer's Share in case of non-loanee farmers.

In case of loanee farmers, GGRC will advice bank to release 25% advance payment of total SPV Water Pump System cost or farmer share whichever is less after receipt of Tri Party Agreement.

ii. **Balance/Final Payment:** In case of non-loanee farmers, remaining 70% payment of total SPV Water Pump System cost will be given after the submission of completion of the Joint Commissioning report (Annexure-XI) along with prescribed photographs in prescribed format by GGRC appointed third party agencies or any

authorized officer from GGRC and remaining 5 % will be kept as security deposit for five years.

In case of loanee farmers, an advice will be sent to bank to credit remaining 70% payment of total SPV Water Pump System cost farmer's loan account and for onward release in favor of SPV water Pump supplier after the submission of completion of the installation work and satisfactory trial run report in prescribed format by GGRC appointed third party agencies or any authorized officer from GGRC and remaining 5 % will be kept as security deposit for five years.

However, it is to be noted that the release of final payment will depend upon the receipt of financial grant from Government of Gujarat from time to time.

17. SECURITY DEPOSIT

i. The Security Deposit will be 5% of the total SPV water Pumping System cost. The security deposit will be held for period of 5 years. But the SPV water Pump System supplier may claim his security deposit after completion of 3 years from the date of handover of SPV Water Pump System to farmer by providing the bank guarantee of same amount for remaining 2 years and GGRC will refund the amount after deduction of penalty and other dues, if any. The security deposit will be interest free.

ii. At the time of registration of SPV water pump supplier in GGRC, The SPV water pump supplier initially should furnish the security deposit of Rs Ten lakhs of either in form of bank guarantee or deposit in favour of GGRC for five years. The deposit will be refunded once the security deposit deducted as per the above (i) will exceed ten lakhs subject to the satisfaction of GGRC.

18. PENALTY

In case the SPV Water Pump Supplier fails to complete the work as per the time limit given in the work order issued after registration, the GGRC will levy a maximum penalty @ 1% (one per cent) of the total SPV Water Pump System cost for each week of delay for a maximum of 30 days after which, the GGRC may ask any other registered SPV Water Pump Supplier to complete the work at the risk and cost of the original SPV Water Pump Supplier and the same will be recovered from them.

Thereafter, the amount for which SPV water pump supplier has defaulted will be recovered from security deposit or any due payment to be made to the defaulter SPV Water Pump Supplier. The defaulter SPV Water Pump Supplier will cease to have any right to carry out the work under the SPV water pumping system programme implemented by GGRC.

19. SCOPE OF WORK

Surveying, Designing, Supplying, Installation, Commissioning and Maintenance of 3 HP and 5 HP capacity of AC/DC type submersible/surface SPV water Pump

system. The SPV water pump should be compatible to integrate and work with drip irrigation system in the farmer's field.

As per GGRC implementing module, the registered SPV Water Pump Supplier will generate the demand of SPV water pump from the applicant beneficiary farmers by deploying its own machinery or by any other publicity mode. The SPV water pump supplier should supply and install the AC/DC type submersible/surface pump of 3 HP and 5 HP capacity of SPV Water Pump system as chosen and required by farmer within technical specifications (**Annexure- XII**).

20. INSURANCE OF THE SPV WATER PUMP SYSTEM AND LIFE OF BENEFICIARY FARMERS:

GGRC appointed Insurance Agency will provide Insurance Coverage to the SPV Water Pump system as well as the life of the beneficiary farmers for the period of one year. The insurance coverage will start from the 1st date of subsequent month of date of Joint Commissioning and Trail Run and the handing over the SPV Water Pump system to the beneficiary farmers.

The Insurance premium will form a part of total SPV Water pump system cost which would be borne separately by farmer and deposited in GGRC. The annual charges of insurance premium as on date is 0.28% + applicable Tax (may change from time to time) on the value of each SPV water Pump system.

The farmer has choice to renew his insurance policy at his own discretion from insurance agency after the expiry of 1st year of insurance coverage.

21. SPECIFIC TERMS AND CONDITIONS WITH RESPECT TO WARRANTY / MAINTENANCE/TRAINING TO BENEFICIARY FARMER.

i. Warranty:

The Warranty period for the components / equipment supplied is as per GGRC/SMAM/MNRE guidelines issued from time to time and for this EoI which shall be **Five years** from the date of installation and handover to the farmer. Any equipment / component is found to have manufacture defect or poor workmanship within the warranty period, the SPV Water Pump system supplier shall replace the same with free of cost within five days of intimation from the beneficiary farmer. The SPV water pump has to provide a Warrantee card (As per Annexure XIII) to farmer and will submit its copy to GGRC.

In the event of any instrument / component getting broken or damaged during installation and trial run at the site before handing over the SPV Water Pump system to the farmer / applicant, SPV Water Pump system supplier shall replace the same free of cost.

ii. Maintenance and Repairing Services:

SPV Water Pump system Supplier shall provide maintenance and repairing services free of cost for a period of 5 year from the date of handling over the SPV Water Pump system. The SPV water pump system suppliers will also submit the regular maintenance and servicing report (Annexure XIV) after every six month from the date of Joint Commissioning till completion of warrantee period of 5 year

Except manufacturing defect, in case of any repair / replacement of fitting / spare parts during the period of 5 year from the date of handing over to the farmer, the SPV Water Pump system supplier will supply the same and recover the cost from the farmer/applicant as per the rates decided from GGRC. However, SPV Water Pump system Supplier must provide repairing services free of cost and ensure availability of fittings and spare parts of the total system within five days of getting the request from the farmers. This is to ensure optimal crop performance and system sustainability.

iii. Training to the farmer / applicant

It is obligatory on the part of SPV Water Pump system Supplier to provide operational and maintenance training along with operational manual to run SPV Water Pump system smoothly and trouble free.

22. OTHER OBLIGATIONS

The registered SPV Water Pump system Supplier shall provide all assistance to the GGRC representative/s and to the authorized officers as they may reasonably require to perform their duties and services in implementation of this programme viz.,

i. The SPV Water Pump system Supplier shall provide progress reports on a weekly basis to GGRC or as and when demanded.
ii. The SPV Water Pump system Supplier will allow GGRC or their authorized representative to enter the premises to monitor the progress of work.
iii. The SPV Water Pump system Supplier shall be responsible for all statutory obligations/ liabilities like Salary, ESI, PF, etc. as per Labour Laws for the manpower employed by them for the project.
iv. The SPV Water Pump system Supplier shall be responsible for any damage done during the demolition and indemnify the GGRC against any claims on account thereof including third party and workmen's compensation claims. If damages are done to the said property or any adjoining property, GGRC shall be entitled to have the same put right at the risk and expense of the interested SPV Water Pump Supplier or treat the default as a ground for termination of the registration.
v. The SPV Water Pump system Supplier shall acquire no interest in the land comprised in the said property except to enter therein for the purpose indicated in assigned work, and in particular shall not be entitled to reside or allow anyone to reside or remain on the property except a Chowkidar to protect the supplied material.

vi. The SPV Water Pump system Supplier will observe all local laws applicable while executing the scope of work.

vii. The SPV Water Pump system Supplier will hand over the premises to the Farmer on completion of their work.

23. GGRC'S OBLIGATION

Grant in a timely manner all such approvals, permissions and authorizations which the SPV Water Pump Supplier may require or is obliged to seek from GGRC in connection with the performance of the their obligations.

24. TERMINATION OF THE REGISTRATION

The GGRC will have the right to cancel the registration if the SPV Water Pump Supplier commits breach of any or all conditions of the registration. Breach of condition of registration includes, but not limited to, the following:

i. It is found that the schedule of implementation of the work is not being adhered to.

ii. The SPV Water Pump Supplier stops work and such stoppage has not been authorized by GGRC.

iii. The failure of SPV Water Pump Supplier to attend the complaint in correcting the defects/irregularity for smooth operation of SPV water Pump within a reasonable period as given in the notice by the GGRC.

If the registration is terminated by the GGRC unilaterally, GGRC will settle all claims through a mutually agreeable settlement.

25. SUSPENSION

The GGRC may, by a written notice may keep SPV Water Pump Supplier under suspension if the SPV Water Pump Supplier fails to perform any of its obligations under the given scope of work (including the carrying out of the services) provided that such notice of suspension:

i. Shall specify the nature of the failure and

ii. Shall request the SPV Water Pump Supplier to make good such failure within a specified period from the date of receipt of such notice of suspension by the SPV Water Pump Supplier.

26. Sublet of Scope of Work

The SPV water pump supplier shall not assign or sublet his scope of work or any part thereof, any breach of this condition shall entitle the GGRC to terminate his registration as per Clause no. 24 and also render the SPV water pump supplier liable for payment to the GGRC in respect of any loss or damage arising or ensuing from such termination.

27. JURISDICTION OF COURT

The Courts of Vadodara within city limit shall have Jurisdiction in all the matters arising under this EoI.

28. FORCE MAJOURE

"If, at any time during the continuance of this contract, the performance in whole or any part by either party of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, act of the public enemy, civil commotion, sabotage, fires, floods, explosion, epidemics. Quarantine restrictions, strikes, lock-outs or acts of god (hereunder referred to as event)" then provided notice of the happening of any such event is given by either party to the other within seven days from the date of occurrence thereof neither party shall be reason of such event be entitled to terminate this contract nor shall either party shall have any claim for damages against the other in respect of such non-performance or delay in performance, and deliveries under the contract shall be resumed as soon as practicable after such event has come to end or ceased of exist, and the decision of the Joint Managing Director, GGRC as to whether the deliveries have been so resumed or not shall be final and conclusive.

29. ARBITRATION

All questions, disputes or differences whatsoever, which may, at any time, arises between the parties i.e. the selected SPV Water Pump Supplier, Farmers of group and GGRC, upon or in relation to or in connection with the contract shall be referred to the Joint Managing Director, GGRC for that purpose and the decision of the Joint Managing Director, GGRC shall be final and binding upon both the parties.

30. WORKMEN'S COMPENSATION FUND AND EMPLOYER'S LIABILITY INSURANCE

The SPV Water Pump Supplier shall cover all his employees under workmen's compensation fund and under the liability insurance. The GGRC shall not be responsible for any payments of compensation to the workers/supervisor of the SPV Water Pump Supplier for fatal or non-fatal accidents during the currency of the contract.

31. WORK SCHEDULE

The total period for Surveying, Designing, Procurement, Supply, Installation, Testing and Commissioning of SPV Water Pump system is as per the scope of work defined by GGRC time to time.

32. Joint Commissioning of SPV water pump System

The Joint Commissioning of installed SPV Water Pump system will be carried out by GGRC appointed third part inspection agencies or authorised officer from GGRC.

****

GENERAL TERMS AND CONDITIONS FOR ONLINE REVERSE AUCTION OF SURVEYING, DESIGNING, SUPPLYING, INSTALLATION AND COMMISSIONING OF SOLAR PHOTOVOLTAIC WATER PUMP SYSTEM FOR "SOLAR PHOTOVOLTAIC WATER PUMPING PROGRAMME" IMPLEMENTED BY GUJARAT GREEN REVOLUTION COMPANY LTD, VADODARA IN THE GUJARAT STATE.

1. GGRCL may avail the services of M/s. (n) Code Solutions, A division of GNFC Ltd., 301,GNFC Info Towers,BodakDev,Ahmedabad-380 054 for on line bidding (Reverse Auction) on Internet. EOI applicant solar water pump suppliers is requested to get registered with M/s. (n) Code Solutions for getting the USB key for participating in Reverse Auction.

2. The "bidding value" shall be 'Total cost of solar water pump system value in Rs. For 01 QUANTITY OF SURVEYING, DESIGNING, SUPPLYING, INSTALLATION AND COMMISSIONING OF SOLAR PHOTOVOLTAIC WATER PUMP SYSTEM FOR "SOLAR PHOTOVOLTAIC WATER PUMPING PROGRAMME" IMPLEMENTED BY GUJARAT GREEN REVOLUTION COMPANY LTD, VADODARA AT FARMER SITES IN ENTIRE GUJARAT STATE, as per EXPRESSION OF INTEREST (EoI) published by GGRC in the auction.

3. Total cost of solar water pump system value means as per terms and condition mentioned in document of Expression of Interested Dated 05-06-2017.

4. Reverse Auction date and time will be separately communicated by GGRC is as under.

5. 'Start bidding value' and 'bid decrement value' will be decided by GGRCL and will be visible only during Online English Reverse (No Ties) Auction.

6. Computerized reverse auction shall be conducted by GGRCL, on pre-specified date, while the vendors shall be quoting from their own offices/ place of their choice. Internet connectivity/ Power availability shall have to be ensured by vendors themselves. In extreme case of failure of Internet connectivity&/ Power failure, (due to any reason whatsoever may be) it is the bidders' responsibility / decision to send communication immediately to M/s. (n) Code Solutions/ GGRCL. In order to ward-off such contingent situation bidders are requested to make all the necessary arrangements/ alternatives whatever required so that they are able to circumvent such situation and still be able to participate in the reverse auction successfully.

7. If required, M/s. (n) Code Solutions/ GGRCL shall arrange to train your nominated person (s) for the Reverse Auction, if required by you, without any cost to you.

8. Procedure of Reverse Auctioning:

    i. Online English Reverse (no ties) Auction {Reverse Auction}: GGRCL will declare its 'initial bidding parameter value', which shall be visible to all vendors during the start of the Reverse Auction. You will be required to start bidding after announcement of 'initial bidding parameter value' and 'decrement value'. Also, please note that the 'initial bidding parameter value' is open to all the

participating bidders. Any bidder can start bidding, in the online reverse auction, from the 'initial bidding parameter value' itself. If the 'initial bidding parameter value' is your own price, you still need to bid in the online reverse auction. Also, please note that the first online bid that comes in the system during the online reverse auction can be equal to the auction's 'initial bidding parameter value', or lesser than the auction's 'initial bidding parameter value' by one 'decrement value', or lesser than the auction's 'initial bidding parameter value' by multiples of 'decrement value'. The second online bid and onwards will have to be lesser than the L1 rate by one 'decrement value', or lesser than the L1 rate by multiples of the 'decrement value'. During the course of Reverse Auction, a 'hammer' symbol will be shown to the L1 bidder. If any other participating bidder revises his bid by one or multiple decrement value(s) and becomes new L1, the 'hammer' symbol will be shown to him.

ii. Online English Reverse (no ties) Auction shall be for a period of thirty minutes. If a bidder places a bid in the last 3 minutes of closing of the Reverse Auction and if that bid gets accepted, then the auction's duration shall get extended automatically for another 05 minutes, from the time that bid comes in. There will be total five such extensions. Please note that the auto-extension will take place only if a bid comes in those last 3 minutes and if that bid gets accepted. If the bid does not get accepted, the auto-extension will not take place even if that bid might have come in the last 3 minutes. In case, there is no bid in the last 3 minutes of closing of Reverse Auction, the auction shall get closed automatically without any extension. However, vendors are advised not to wait till the last minute or last few seconds to enter their bid during the auto-extension period to avoid complications related with internet connectivity, network problems, system crash down, power failure, etc.

iii. If no bids are received during initial 30 minutes, then the reverse auction shall get closed.

9. If the price derived through Online English Reverse (No Ties) Auction is not as per our budget/ estimate, then GGRCL, at its discretion, may decide to reconduct the online reverse auction process OR explore the other option.

10. During the Online English Reverse (No Ties) Auction, if no bid is received in the auction system/ website within the specified time duration of the reverse auction, then GGRCL, at its discretion, may decide to revise the auction's 'initial bidding parameter value'/ scrap the online reverse auction process / proceed with the conventional mode of tendering etc..

11. Bids once made by you, cannot be cancelled / withdrawn and you shall be bound to provide your services as per the terms and conditions mentioned in the Expression of Interest.

12. At the end of the Reverse Auction, GGRCL will decide upon the winner. GGRCL's decision on award of Contract shall be final and binding on all the Bidders.

13. After completion of Reverse Auction, the lowest bidder has to submit the duly signed& stamped filled-in prices (based on which the lowest bidding parameter value has calculated) as per our prescribed format (as mentioned in EoI) within 30 minutes of auction without any new condition other than those already agreed to before start of auction.

14. GGRCL may negotiate further with the lowest bidder.

15. GGRCL shall place the order on winner of Reverse Auction in due course of time after taking necessary internal approval. However, GGRCL shall be at liberty to cancel the reverse auction process / tender at any time, before ordering, without assigning any reason. Winning in the Reverse Auction shall not entitle for the award of work and GGRCL shall be at liberty to conduct the re-negotiation with vendors and decide upon the vendor for award of work. GGRCL's decision on award of work shall be final and binding on all the Bidders.

16. GGRCL shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause.

17. Other terms and conditions shall be as per your techno-commercial offers and other correspondences till date.

18. All decisions of GGRCL related to conduct of Online English Reverse (No Ties) Auction, selection of vendor, award of work etc., shall be final and binding on all the Bidders. Any representation for whatsoever reason from any of the vendors regarding GGRCL's decision will not be entertained at any stage.

19. GGRCL may split the order by considering requirement of GGRCL and the capacity of supplier.

20. **You are required to submit your acceptance to the above General Terms and Conditions of Reverse Auction by signing all the pages along with company stamp and revert back vide mail urgently.**

Name of the Person: _____ Designation: _____

Mobile No: _____

Name of the Organization: _____

Signature: _____ Date: _____

Stamp of organization

Annexure-II

To
Joint Managing Director
Gujarat Green Revolution Company Ltd. (GGRC)
Fertilizernagar Township, PO: Fertilizernagar,
Dist: Vadodara- 391750, Gujarat

Sub: **UNDERTAKING FOR SUBMISSION OF EXPRESSION OF INTEREST (EoI) DOCUMENT.**

In connection with the above subject, I / We confirm the following:

1.0 I / We the undersigned have read and examined the Expression of Interest for Selection of SPV Water Pump Supplier for **"**Surveying, Designing, Supplying, Installation and Commissioning of SPV Water Pump system for irrigation on farmers' field" EoI No. GGRC/EoI/Solar Water Pump/01/2017-18 dated ..... of GGRC in the state of Gujarat.

2.0 I / We declare that our offer is strictly in line with EoI Specification and there is no deviation. Further, I/We also agree that additional conditions /deviations, if any, found in our EoI submission, the offer shall be out rightly rejected without assigning any reason thereof.

3.0 I / We hereby submit our EoI and undertake to keep our EoI valid for a period of 120 days from last date of EoI Submission at GGRC. I / We hereby further undertake that during the said period, I / We shall not vary/alter or revoke my/our EoI submission.

4.0 I / We, an authorized signatory of our company (EoI applicant) here by certify that our company ((EoI applicant) is not stopped deal/blacklisted by GGRC, GUVNL and or their any subsidiary company or by any other Govt. PSU / Govt. Company / Govt.Department.

I/We also agree to abide by and fulfill all the terms, conditions and provisions of the above mentioned EoI documents.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

ANNEXURE- III

Profile of the SPV Water Pump Supplier

1.0 The SPV Water Pump System Supplier/PV System Integrator should furnish the following details:

Sr. No.	Particulars		Details
1	a. Name of the Organization		
	b. Registered Name as per Company Act		
	c. Registered Brand Name of SPV Water Pump System		
2	Type of the Organization (Govt./ Public/ Private/ Partnership/Proprietorship/ Trust/ Society)		
3	List of Present Partners / Directors / owners / Executive council members / trustees / Board members (attach separate sheet showing the details)		
3	Address with phone no and fax	Registered Office	
		Corporate office	
4	Name of the Applicant Person and Designation		

5	Any other details in support of your offer (if required)	

2.0 Organizational set up of professional experts/specialists at the head quarter:

a) Details of technical Staff Available with company for execution of work

S.No	Name	Qualification	Additional Certification	Total Experience	Remark

(Attach manpower wise separate sheet (includes Name, qualification, experience) as mentioned in the above table.)

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

Annexure-IV

DEVIATION SHEET

1.0 Any deviations offered from the terms and conditions of the EoI should be clearly specified below in this sheet. If there are no deviations offered, it should be clearly mentioned on this page.

Deviation offered to Chapter No./	Clause No. of the tender document Deviation offered

Above furnished is true and correct to best of my knowledge.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal

Details of Plant, Machinery and Manufacturing Facilities

I. PV Array Manufacturing Facility

Sr. No.	Address of the Mfg. Location	Type of PV Array	Name of Equipment	Date of Purchase	Date of Calibration	Utility	Capacity (unit/year)

II. Electronic Inverter/Controller Components

Sr. No.	Address of the Mfg. Location	Name of Equipment	Date of Purchase	Date of Calibration	Utility	Capacity (unit/year)

III. Motor Pump

Sr. No.	Address of the Mfg. Location	Type of Pump (AC/DC) Surface or Submersible	Name of Equipment	Date of Purchase	Date of Calibration	Utility	Capacity (unit/year)

Attach copy of applicable IEC standard conformity test report from approved testing centre of MNRE, New Delhi for SPV water pumping system components manufactured by your company / firm.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

ANNEXURE –VI

Company's/ PV System Integrators Experience In Surveying, Designing, Supplying, Installation and Commissioning of SPV Water Pump System In Farmers' Field In Gujarat or In any State of India

1. List of total SPV Water pump System commissioned

S. No	Name of Agency/Company with Full adresse, phone Fax and Contact person with email id	Work Description/Qty Supplied	Ref and Date of the work order	Work order Value	Details of Order and its configuration

Note : Please Submit the copies of Major work order along with Work completion certificates.

2. List of farmers (minimum 30 in numbers) where SPV Water pump System are commissioned by you which can illustrate best of your ability as SPV Water pump System Supplier

Sr. No.	Name of the farmer	Mobile No.	Village	Taluka	District	State	Type of Pump and capacity	Installation year
1								
2								
3								
..								
20								

Above furnished is true and correct to best of my knowledge.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

Annexure-VII

DETAILS OF SOLAR PUMP MODELS AND CONFIGURATION

1.0 The details of Solar pump model offered under the EoI and its configuration is as under

S.No	Name of Solar Water Pump Component	Offer Model
1	Test Certificate No.	
2	Name of Laboratory from where Test Certificate is issued	
3	MNRE approved Model Type and Specification Year	
4	SPV Array Used Wp, Make and Model	
5	Proposed No. of SPV Modules with Wp (minimum 200 Wp)	
6	Type of Module Cell Used, Module Make and Model	
7	Water Pump HP, Make, and Model No.	
8	Pump Controller Make and Model No.	
9	Total Dynamic Head (M)	
10	Water Output (Ltrs. /day)	

(Pls attach the copy of Valid test certificate for each offered solar pump offerd)

Note: Head v/s discharge details of every model of pump should be provided with this document. Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation “condition of 7.15 KWH / sq. m/ day on the surface of PV array (i.e. coplanar with the PV modules).

The SPV water pump supplier will have to supply and install the SPV water pump material of same make/model/specification as mentioned in the valid test report for the offered Model of Solar Water Pumping System from a MNRE authorized testing centre.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

ANNEXURE – VIII

Details of the Agreement/ MOU between EoI applicant and the SPV Modules/Controller/SPV water Pump manufacturer (in case of EoI applicant is not manufacturer of any or all of the SPV Modules/Controller/SPV water Pump). If the EoI applicant is a manufacturer of the SPV module, the name & address of their works/factory where the SPV modules are manufactured is required to be mentioned in this annexure.

S.No	Particulars	EOI Applicant details
1	EoI applicant Name	
2	EoI applicant's address	
3	Manufacturers' Name for i.SPV Modules ii.Controller iii. SPV water Pump (may strike off whichever is not applicable)	
4	Manufacturing Location –(specify Within Gujarat /Outside Gujarat) i.SPV Modules ii.Controller iii. SPV water Pump (may strike off whichever is not applicable)	
5	Date of Agreement /MOU executed i.SPV Modules ii.Controller iii. SPV water Pump (may strike off whichever is not applicable)	
6	Expiry date of the agreement/ MOU i.SPV Modules ii.Controller iii. SPV water Pump (may strike off whichever is not applicable)	

Note:-

Notarized copy of agreement or MOU between EoI applicant and manufacturer of SPV Module /Controller /SPV water Pump is required to be submitted.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

Annexure-IX

(Declaration IN REGARD TO STOP DEAL / BLACK LIST THERE OF)

Sub: Declaration in regard to Stop Deal / Black List thereof.

Ref: GGRC Expression of Interest Notification No. GGRC/EoI/Solar Water Pump/01/2017-18 dated >>>>>>>>

I / We _____authorized signatory of M/S _____ (SPV water pump supplier) hereby declare that M/S _____ (SPV water pump supplier) is not stop deal/blacklisted by GGRC/ GUVNL or its subsidiary companies or by any Central/State Government PSU / Govt. Company or by any Central/State Government Department in India.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

Annexure-X

Process Flow chart for implementation of Solar Water Pump Program

Farmer handover the Solar Pump application along with required documents to Solar Pump Supplier.

↓

Online entry of Solar Pump application and physical submission of the same to GGRC.

↓

Document Verification by GGRC.

↓

Verification of cost estimation and calculation of Government subsidy.

↓

Work instruction to sign Tri-party agreement and submission of farmer share in GGRC.

↓

Verification of Tri-party agreement and Farmer share instrument by GGRC and its approval.

↓

Release of Advance Payment by GGRC to Solar Pump supplier.

↓

Material Supply and Installation of Solar water pump at beneficiary farmer site and informing GGRC for Joint Commissioning

↓

Joint – commissioning Report (JCR) of Solar Pump System by Third Party Inspection Agency

↓

Insurance coverage of Solar Pump System.

↓

Submission of Final Payment Documents along with JCR Report.

↓

Verification of Final Payment Documents by GGRC.

↓

Release of Final Payment by GGRC to Solar Pump supplier.

The above GGRC flow chart is accepted to me unconditionally.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

ANNEXURE - XI

A FORMAT FOR SUBMISSION OF JOINT COMMSSIONING REPORT

It is certified that a solar PV water pumping system of _____ watt peak (Wp) capacity with _____HP
AC/DC submersible/Surface pump have been supplied, installed and comissioned by (*Name of SPV water Pump Supplier*) On the field of (name of Farmer)
_____ All the terms and condition stipulated under the programme by MNRE, New Delhi and GGRC are complied with.

_____

Make of Module:

Wattage (Peak) per module: _____watts

No. of Modules and their serial Nos: _____nos

Sr No	Module Sr. No.	Sr No.	Module Sr. No	Sr . No		Module Sr. No
1		9		17		
2		10		18		
3		11		19		
4		12		20		
5		13		21		
6		14		22		
7		15				
8		16				

Make of inverter/Solar Pump Contoller & Capacity:_____

Motor Pump Set Type:_____ **Make: _____**

Capacity of Pump:_____ **Serial No. of Pump:**

_____ **Serial no.**

of motor:_____

Discharge (Ltrs per day) on clear sunny day of _____

Total Head (Suction + delivery head) in meter:_____

The above system has been installed and commissioned on _____. The system is
working satisfactorily.

1	**Signature of farmer/user**	**2**	**Signature of SPV water Pump Supplier**	**3**	**Signature of the Third Party Insepction Agency/GGRC Officer with stamp.**

Place:

Name of Farmer/user:

Full Address:

Project completion Report for SPV Water Pumping System
PART A (by SPV water Pump Supplier)

Sr No.	Component	Obseravtion
1	**Sanction No & Date**	
2	**Catergory :** Nodal Agency / Channel Partner Name and Complete address:	
2.1	In case of Nodal Agency, Name and Complete address of : Installer	
3	**Site / Location** Longitude / Latitude Type (Bore Well / Open Well.)	
4	**Solar PV Array** Capacity:	
4.1	Make of Modules Whether imported or indigenous?	
4.2	IEC certificate Agency Date of issue Validity (Enclose a copy of IEC certificate	
4.3	Whether RFID tag is pasted or not? If so, tag is inside or outside. If not, the reason? Type of RFID	
5	**Support structures/**	
5.1	Indigenous or imported	
5.2	Tracking system: Manual / Automatic	
5.3	Seasonal Tilt Angle adjustment provided or not?	
6	**Type of motor pump set** I. Surface mounted DC Motor pump-set (with brushes or brushless) II. Submersible DC motor pump set III. Submersible AC motor pump set IV. Floating DC motor pump set V. Any other type of motor pump set	
6.1	Motor pump set capacity (h.p) and make	

	Whether indegenous or imported?	
6.2	Max. Total dynamic head (Specify suction head in case of surface pumps)	
6.3	Water output figures are on a clear sunny day with three times tracking of SPV panel when solar radiation on panel surface is: 7.15 KWN/sq.m/day	
6.4	Certification of Pumping system Agency Date of issue Validity (Enclose a copy of certificate)	
7	**Electronics / controls**	
7.1	MPPT provided or not? If yes provide details	
7.2	In case of A.C. Motor pump set, Details of Inverter/ VFD	
8	**Monitoring Mechanism for the installed System**	
8.1	Technical Person Trained to maintain the System Name of the person with Mobile No.	
9	Date of comissioning (Enclosure test certificate of Pumping System as per MNRE requirement)	
10	Copy of invoice and details of loan if taken from any bank	

Declaration

It is to certify that all the components/subsystems and material including junction
boxes, cables, distribution boards, switches, circuit barkers used in the system are as
per MNRE/GGRC requirement

Authorised Signatory
(SPV Water Pump Supplier)
With seal

Date:
Place:

PART - B

(By the customer beneficiary farmer)

Sr. No.	Component	Observation	
1	Name of the person with photo graph (enclose USER ID proof- Pan card/Adhaar card/Voter ID)		Photograph
2	Location Capacity (kWp & HP) Location		
3	Whether training was provided by installer for operation and maintenance		
4	Whether the following documents were provided or not		
	I-V curves of all modules		
	Inverter module		
	Warranty card for system		
5	Date of handing over of the system		
6	Cost Breakup	Total project cost: farmer Share: MNRE share:	

It is to certify that all information given above is true and correct to best of my knowledge

(Farmer Signature)

Date & place

PART-C
Inspection Report
(by inspecting approval)

Sr No.	Component	Observation
1	Site / location with complete address	
2	Capacity of system installed(kWp)	
3	Whether the system is installed in shadow free are or not? If not mentioned the details	
	Any inter module shading exixts or not	
	Whether the modules contains information about company name, serial no and year manufacturing inside	
4	**Electronic / controls**	
	Whether the information given in part A is same or found any deviation	
5	**Structures Fixed tilt / Tracking - Manual / Automatic**	
6	**Cable make and size**	
7	User feed back	
8	Any specific problem	

1. Signature of farmer with stamp and date
2. SPV Water Pump Supplier signature with stamp and date
3. Signature of inspecting officer and date

List of Enclosures.

I. Copy of invoice billed to user
II. List of serial no. of modules installed in the system
III. Test certificate of the components
IV. Statement of expenditure
V. Original photographs of
    1. Photographs of SPV water Pump System
    2. Serial No/Model Name plates each PV Module Array.
    3. Serial No/Model Name plate of Controller/Invertors.
    4. Serial No/Model Name Plate of Motor and Pumpset.
    5. Serial No/Model Name plate of Cables used.
    6. Photograph of
        a) Stand Alone System, b) with farmer, c) With farmer, d) representative of SPV pump supplier and third party inspection agency, e)Farmer borewell/water source with MIS if adopted.

The above conditions are unconditionally accepted to me and EOI is submitted according to the above conditions.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

Minimum Technical Requirements for Design, Construction, Test procedure and Safety for Solar PV modules and Performance Standards for Solar PV pumping System up to 5 HP Technical Specifications of SPV Water Pumping System.

I. Solar photovoltaic (SPV) water pumping system consisting of:

i) PV Array

Capacity in the range of 200 Wp to 10 KWp**.**

PV array capacity for

-3 HP Pump is 2700 Wp (Minimum)
-5 HP Pump is 4800 Wp (Minimum)

PV Array Should be mounted on a suitable structure with a provision of tracking the sun as mentioned in the specification.

ii) Motor Pump set (Surface or Submersible):
D.C. Motor Pump Set (With Brushes or Brush less D.C.)
OR
A.C. Induction Motor Pump set with a suitable inverter.

iii) Electronics:
   a. Maximum Power Point Tracker (MPPT)
   b. Inverter for A.C. Motors (Appropriate Electronic Controller in Case of B.L.D.C)
   c. Electronic Protections

iv) Interconnect Cables of suitable size, “On-Off” switch and LCD display showing following parameters : 1) Frequency of VFD (in case of AC) , 2) Voltage, 3) Current, 4) Outputt Watt and 5) Cumulative KWH.

II. Performance Specifications and Requirements (Duty Cycle).

Solar PV Water Pumps with PV array minimum capacity in the range of 900 Wp to 5 KWp to be installed on a suitable bore well/open well/water reservoir/water stream etc at location specified by farmer in the state of Gujarat.

Under the “Average Daily Solar Radiation” condition of 7.15 KWh/sq.m. on the surface of PV array (i.e. coplanar with the PV Modules), the minimum water output from a Solar PV Water Pumping System at different “Total Dynamic Heads” should be as specified below:

A. For D.C. Motor Pump Set with Brushes or Brush Less D.C. (B.L.D.C.) :

i) 100 liters of water per watt peak of PV array, from a Total Dynamic Head of 10 metres (Suction head, if applicable, minimum of 7 metres) and with the shut off head being at least 12 metres.

ii) 50 liters of water per watt peak of PV array, from a Total Dynamic Head of 20 metres (Suction head, if applicable, up to a maximum of 7 metres) and with the shut off head being at least 25 metres.

iii) 35 liters of water per watt peak of PV array, from a Total Dynamic Head of 30 metres and the shut off head being at least 45 metres.
iv) 21 liters of water per watt peak of PV array, from a Total Dynamic Head of 50 metres and the shut off head being at least 70 metres.
v) 14 liters of water per watt peak of PV array, from a Total Dynamic Head of 70 metres and the shut off head being at least 100 metres.
vi) 9.5 liters of water per watt peak of PV array, from a Total Dynamic Head of 100 metres and the shut off head being at least 150 metres.

The actual duration of pumping of water on a particular day and the quantity of water pumped could vary depending on the solar intensity, location, season, etc.

Indicative performance specifications for the Shallow and Deep well SPV Water Pumping Systems are given as under.

a) Indicative Technical Specifications as per MNRE/SMAM guideline for Shallow Well (Surface) D.C. Solar Pumping Systems

With D.C. Motor Pump Set with Brushes or Brush Less D.C.(B.L.D.C.) Description	Model-III
PV array	2700 Wp
Motor capacity	3 hp
Shut Off Dynamic Head	25 metres
Water output *	135,000 litres per day from a total head of 20 metres

Water output figures are on a clear sunny day with three times tracking of SPV panel, under the "Average Daily Solar Radiation" condition of 7.15 KWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules).

Notes:

1. Suction head, if applicable, minimum 7 metres.
2. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause II. (i.e. performance specifications and requirements) specified earlier.
3. If submersible pumps are used in lieu of surface pumps, the water output must match that of the surface pumps as specified in this table.
4. Module mounting structure shall be MS hot dipped galvanised, with a facility of manual tracking at least three times a day.

b) Indicative Technical Specifications as per MNRE/SMAM guideline for Deep well (submersible) D.C. Solar Pumping Systems

With D.C. Motor Pump Set with Brushes or Brush Less D.C.(B.L.D.C.) Description	Model-III	Model-IV	Model-V	Model-VI	Model-VII	Model-VIII
PV array	3000 Wp	3000 Wp	3000 Wp	4800 Wp	4800 Wp	4800 Wp
Motor capacity	3 hp submersible with controller	3 hp submersible with controller	3 hp submersible with controller	5 hp Submersible with controller	5 hp Submersible with controller	5 hp Submersible with controller
Shut Off Dynamic Head	45 metres	75 metres	100 metres	70 metres	100 metres	150 metres
Water output*	105,000 litres per day from a total head of 30 mtres	63,000 litres per day from a total head of 50 mtres	42,000 litres per day from a total head of 70 metres	100,800 litres per day from a total head of 50 metres	67,200 litres per day from a total head of 70 metres	45,600 litres per day from a total head of 100 metres

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the "Average Daily Solar Radiation" condition of 7.15 KWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules).

Notes:

1. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause II. (i.e. performance specifications and requirements) specified earlier.
2. If surface pumps are used in lieu of submersible pumps, the water output must match that of the submersible pumps as specified in this table.
3. Module mounting structure shall be MS hot dipped galvanised, with a facility of manual tracking at least three times a day.

B. For A.C. Induction Motor Pump Set with a suitable Inverter :

i) 90 liters of water per watt peak of PV array, from a Total Dynamic Head of 10 metres (Suction head, if applicable, minimum of 7 metres) and with the shut off head being at least 12 metres.

ii) 45 liters of water per watt peak of PV array, from a Total Dynamic Head of 20 metres (Suction head, if applicable, up to a maximum of 7 metres) and with the shut off head being at least 25 metres.
iii) 32 liters of water per watt peak of PV array, from a Total Dynamic Head of 30 metres and the shut off head being at least 45 metres.
iv) 19 liters of water per watt peak of PV array, from a Total Dynamic Head of 50 metres and the shut off head being at least 70 metres.
v) 13 liters of water per watt peak of PV array, from a Total Dynamic Head of 70 metres and the shut off head being at least 100 metres.
vi) 8.5 liters of water per watt peak of PV array, from a Total Dynamic Head of 100 metres and the shut off head being at least 150 metres.

The actual duration of pumping of water on a particular day and the quantity of water pumped could vary depending on the solar intensity, location, season, etc.

Indicative performance specifications for the Shallow and Deep well SPV Water Pumping Systems are given as under.

a) Indicative Technical Specifications as per MNRE/SMAM guideline for Shallow Well (Surface) A.C Solar Pumping Systems,

With A.C. Induction Motor Pump Set and a suitable Inverter: Description	Model-III	Model-IV
PV array	2700 Wp	2700 Wp
Motor capacity	3 hp	3 hp
Shut Off Dynamic Head	15 metres	25 metres
Water output *	243,000 litres per day from a total head of 10 metres	121,500 litres per day from a total head of 20 metres

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the “Average Daily Solar Radiation” condition of 7.15 KWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules).

Notes:

1. Suction head, if applicable, minimum 7 metres.
2. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause II. (i.e. performance specifications and requirements) specified earlier.
3. If submersible pumps are used in lieu of surface pumps, the water output must match that of the surface pumps as specified in this table.
4. Module mounting structure shall be MS hot dipped galvanised, with a facility of manual tracking at least three times a day.

b) Indicative Technical Specifications as per MNRE/SMAM guideline for Deep well (submersible) Solar A.C Pumping Systems:

With A.C. Induction Motor Pump Set and a suitable Inverter: Description	Model-III	Model-IV	Model-V	Model-VI	Model-VII	Model-VIII
PV array	3000 Wp	3000 Wp	3000 Wp	4800 Wp	4800 Wp	4800 Wp
Motor capacity	3 hp submersible with controller	3 hp submersible with controller	3 hp submersible with controller	5 hp Submersible with controller	5 hp Submersible with controller	5 hp Submersible with controller
Shut Off Dynamic Head	45 metres	75 metres	100 metres	70 metres	100 metres	150 metres
Water output*	96,000 litres per day from a total head of 30 metres	57,000 litres per day from a total head of 50 metres	39,000 litres per day from a total head of 70 metres	91,200 litres per day from a total head of 50 metres	62,400 litres per day from a total head of 70 metres	40,800 litres per day from a total head of 100 metres

* Water output figures are on a clear sunny day with three times tracking of SPV panel, under the "Average Daily Solar Radiation" condition of 7.15 KWh/ sq.m. on the surface of PV array (i.e. coplanar with the PV Modules).

Notes:

1. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause II. (i.e. performance specifications and requirements) specified earlier.
2. If surface pumps are used in lieu of submersible pumps, the water output must match that of the submersible pumps as specified in this table.
3. Module mounting structure shall be MS hot dipped galvanised, with a facility of manual tracking at least three times a day.

III. PV ARRAY

The SPV water pumping system should be operated with a PV array capacity in the range of 200 Watts peak to 10000 Watts peak, measured under Standard Test Conditions (STC). Sufficient number of modules in series and parallel could be used to obtain the required PV array power output. The power output of individual PV modules used in the PV array, under STC, should be a minimum of 125 Watts peak,

with adequate provision for measurement tolerances. Use of PV modules with higher power output is preferred.

Indigenously produced PV module (s) containing mono/ multi crystalline silicon solar cells should be used in the PV array for the SPV Water Pumping systems.

i) Modules supplied with the SPV water pumping systems should have certificate as per IEC 61215 specifications or equivalent National or International/ Standards.
ii) Modules must qualify to IEC 61730 Part I and II for safety qualification testing.
iii) The efficiency of the PV modules should be minimum 14% and fill factor should be more than 70%.
iv) The terminal box on the module should have a provision for "Opening" for replacing the cable, if required.
v) There should be a laminated Name Plate fixed inside the module which will give:
    a. Name of the Manufacturer or Distinctive Logo.
    b. Model Number
    c. Serial Number
    d. Year of manufacture
vi) Each PV module must have RF identification tag (RFID), which must contain the following information.
    a. Name of the Manufacturer of PV module
    b. Model or Type Number
    c.Serial Number
    d.Month and Year of Manufacture
    e.I-V Curve for the Module
    f. Peak Wattage of the Module at 16.4 volts.
    g.Im,Vm and FF for the module
    h.Unique Serial No. and Model No. of the Module

IV. MOTOR PUMP SET

i) The SPV water pumping systems may use any of the following types of motor pump sets:
    a. Surface mounted motor pump-set.
    b. Submersible motor pump set.
    c. Floating Motor Pump Set
    d. Any other type of Motor pump set after approval from test centre of the Ministry of New and Renewable Energy, New Delhi
ii) The "Motor Pump Set" should have a capacity of 3 HP and 5 HP and should have the following features:
a. The mono block DC/ AC centrifugal motor pump set with the impeller mounted directly on the motor shaft and with appropriate mechanical seals which ensures zero leakage.
b. The motor of the capacity should be AC, PMDC or BLDC type. The suction and delivery head will depend on the site specific condition of the field.
c. Submersible pumps could also be used according to the dynamic head of the site at which the pump is to be used.
d. The suction/Delivery Pipe (HDPE), electric cables, floating assembly, civil work and other fittings required to install the system.
e. Following details should be marked indelibly on the motor pumpset
    a) Name of the Manufacturer or Distinct Logo

b) Capacity of Motor Pump
c) Model Number
d) Serial Number
e) Year of Manufacture

iii) All parts of the pump and the motor of the submersible pumps should be made of stainless steel.

a. The manufacturers of pumps should self certify that, the pump and ***all external parts of motor used in submersible pump which are in contact with water, are of stainless steel.*** The pumps used for solar application should have a 5 years warranty so it is essential that the construction of the pump be made using parts which have a much higher durability and do not need replacement or corrode for at least 5 years.

iv) Provision for remote monitoring of the installed pumps must be made in the controllers or the inverters either through an integral arrangement or through an externally fitted arrangement. It should be possible to ascertain the daily water output, the power generated by the PV array, the UP TIME of the pump during the year, Number of days the pump was unused or under breakdown/repairs.

SPV Water Pumping Systems shall have online Remote Monitoring Mechanism (RMM) and the SPV water pump supplier would make provision for monitoring the performance of SPV Water pump till the warranty period.

The channels for remote communication and other communication devices/equipment associated with RMM shall be provided by the SPV water Pump Supplier

The RMM should have following features:-

a. Web portal to view on line data such as voltage, current, power, energy generated and pump on / off duration.
b. Provision for Generation of various reports in the printable format
c. Data shall be extracted locally and uploaded to the server in the event of loss of communication.
d. Provision for Data export in standard format
e. Historical data made available in server for report generation
f. The sample log-book deployed for output data and performance of the SPV water pump:-

From DD/MM/YY to DD/MM/YY

S.no	Parameter Name	Unit	Result	Date (DD/MM/YY)
1	Maximum Voltage (Vmax)	Volt		
2	Maximum Current (I Max)	Amp		
3	Power Generated by PV Array(Pmax)	Watt		
4	Total Water Putput	Ltr		
5	Pump on/Off	On/Off/Error		

Note: - It is expected that the software shall be able to show the results of above listed parameters at a glance / individual as desired for a day / particular period.

V. MOUNTING STRUCTURES and TRACKING SYSTEM.

The PV modules should be mounted on metallic structures of adequate strength and appropriate design, which can withstand load of modules and high wind velocities up to 150 km per hour. The support structure used in the pumping system should be hot dip galvanized iron with minimum 80 micron thickness.

The structure design (along with the civil work) declared by the manufacturer should technically be full proof / sufficiently strong against the prevailing wind load. The manufacturing firm will be fully responsible for any damages caused by high wind velocity within guarantee period. The parameters of prevailing wind speed, soil conditions, load, and upward lift should be taken care of while preparing the design and the same is required to be mentioned on design.

The SPV water pump supplier shall ensure that mounting structure is efficient, strong enough to sustain load and is capable against high wind velocity. The standalone type cylindrical base panel mounting structure is would be used. The Antitheft bolts must be provided for fixing of solar panel with structure.

VI. To enhance the performance of SPV water pumping system, manual tracking system must be provided so that the panel can be manually adjusted three times a day (east-south-west) to face the sun optimally. This adjustment could be done in the early morning, noon and afternoon time to increase total solar radiation on the solar panel surface substantially. This provision helps the motor pump-sets to start early in the morning and function efficiently till late in the afternoon, thereby increasing the total output of the pumping system. Also, the arrangement for seasonal tilt angle adjustment should be provided to adjust the optimal tilt throughout the year.

VI. ELECTRONICS AND PROTECTIONS

i) Maximum Power Point Tracker (MPPT) should be included to optimally use the Solar panel and maximize the water discharge.
ii) Inverter could be used, if required, to operate an A.C. Pump. The inverter must have IP 54 protection or must be housed in a cabinet having at least IP 54 protection or must be housed in a cabinet having at least IP 54 protection.
iii) Controller for BLDC motor driven pumps, if required be used. The controller must have IP 54 protection or must be housed in a cabinet having at least IP 54 protection.
iv) Adequate protections should be incorporated against dry operation of motor pump set, lightning, hails and storms.
v) Full protection against open circuit, accidental short circuit and reverse polarity should be provided.

a) Earthing and Lightning Protection:

Earthing: The array structure of the PV shall be grounded properly using adequate number of earthing kits. All metal casing or shielding of the pumping system shall be thoroughly grounded to ensure safety of the solar pumping systems.

Lighting Arrester: The SPV water pumping system should be provided with lightning and overvoltage protection. The principle aim in this protection is to reduce the over voltage to a tolerable value before it reaches the PV or other sub systems components. The source of over voltage can be lightning or another atmospheric disturbance. Necessary foundation for holding the Lightning Arrestors (LA) is to be arranged keeping in view the wind speed of the site and flexibility in maintenance in future. Suitable number of lightning arrestors will be provided in the array field.

Lighting & Over Voltage Technical Specifications	
Parameters	Specification
Diameter of pipe	1 ½ " diameter
GI Spike	5 feet long
Earth Pit	Maintenance free earthing
Color	Red/Blue/Black
Protection	Power Surges/ Lightning Strikes

VII. ON/OFF SWITCH

A good reliable switch suitable for DC use is to be provided. Sufficient length of cable should be provided for inter-connection of the PV array, Controller / Inverter and the motor pump set. Preferably the Inver/Controller should have a arrangement to switchover from solar to Grid connection and vice versa for easy operation.

VII. LCD Display showing following parameters

a) Frequency of VFD,
b) Voltage,
c) Current,
d) Output Watt and
e) Cumulative in KWH.

VIII. Any other item not specifically mentioned in the specifications but which are required for Supply, Installation & Commissioning of Solar Water Pumping system are deemed to be included in the scope of the specification as per relevant and latest IS, IEC, MNRE guidelines, standards of Rural Electrification Corporation (REC) and specified by GGRCL unless specifically excluded.

Specification of all the items covered under this EoI is mentioned above. However, if any item is left out, standard specification of relevant and latest IS,IEC, MNRE, Rural Electrification Corporation (REC) and specified by GGRC will be applicable for the same.

VIII. WARRANTY

The PV Modules must be warranted for output wattage, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. The whole system including submersible/ surface pumps shall be warranted for 5 years. Required Spares for trouble free operation during the Warrantee period should be provided along with the system.

IX. OPERATION AND MAINTENANCE MANUAL

An Operation and Maintenance Manual, in English and/or Vernacular language, should be provided with the solar PV pumping system. The Manual should have information about solar energy, photovoltaic, modules, AC motor pump set, mounting structures, electronics and switches. It should also have clear instructions about mounting of PV module, DO's and DONT's and on regular maintenance and Trouble Shooting of the pumping system. Name and address of the person or Centre to be contacted in case of failure or complaint should also be provided. A warranty card for the modules and the motor pump set should also be provided to the beneficiary.

X. NOTES

i) Wherever the "Water table" or the level of water in the reservoir or the water source (e.g. Diggie) from which the water is to be pumped, is within 10 meters depth, 'Surface Motor Pump sets" should be preferred.

ii) The type of pump set used must match the total dynamic head requirement of the site (i.e. the location at which it is installed). Moreover, it should be appropriately tested and certified by the authorized test centers of the Ministry to meet the performance and water discharge norms specified in section II above.

iii) There should not be any compulsion to use only one or the other type of Motor-pump set. The beneficiary may select an appropriate Model (i. e. Capacity of PV Array and Type of Motor Pump Set) as per site requirement.

XI. NAME PLATE:

Name Plate in Gujarati Language of size 2ft by 2 ft on iron plate is required to be prepared as per following details and required to be fixed on the system for every installation.

GGRC Prayojit "Surya Urja Sanchalit Tapak Sinchayi Paddhati "	
1	Name of beneficiary (farmer)
2	Name of Village Taluka /District
3	Solar PV capacity in Wp and DC/AC submersible Pump capacity in HP
4	Pump head
5	Name of Supplier of the system
6	Address and Contact no of Supplier 's Service centre for informing faults in the system
7	Programme Implemented by Gujarat Green Revolution Co. Ltd, Vadodara

The above technical specifications are unconditionally accepted to me and rates quoted are according to the above tech. specifications.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

ANNEXURE-XIII

WARRANTEE CARD OF INSTALLED SOLAR PUMPING SYSTEM

1.0 FORMAT FOR WARRANTEE CARD TO BE SUPPLIED WITH EACH SOLAR PUMPING SYSTEM

1	*Name & Address of the supplier of the System:*	
2	*Name & Address of Purchasing Agency :*	
3	*Date of supply of the system :*	
4	*Details of PV Module (s) supplied in the System*	
i.	Make (EoI Applicant):	
ii.	Model Serial No(s)	
iii.	Wattage of the PV Module (s) under STC	
iv.	Guarantee valid up to	
5	Details of Electronics & other BOS items	
i.	System Make (Name of the EoI applicant)	
ii.	Model	
iii.	Serial No(s)	
iv.	Guarantee valid up to	
6	Details of AC/DC submersible pumps	
i.	Make	
ii.	Model	
iii.	Guarantee valid up to	
7	Designation & Address of the person to be Contacted for claiming Guarantee obligations	

(During the guarantee period **GGRC** / beneficiary users reserves the right to cross check the performance of the systems with the minimum performance levels specified in the MNRE / EoI specifications).

(Signature)
Name & Designation

(SEAL) Place & Date:

The above conditions are unconditionally accepted to me and EOI is submitted according to the above conditions.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

REGULAR MAINTENANCE & SERVICING REPORT

(To be submitted every six month from the date of Joint Commisioning till completion of warrantee period of 5 year)

1. DETAILS OF SOLAR PHOTOVOLTAIC WATER PUMPING SYSTEM INSTALLED

i	Supplied by :	
ii	Date of installation :	
iii	Servicing period : From to	

2. FARMER PROFILE

Name and address of Farmer:	

3 Solar water Pump DETAILS

i	Module Capacity, make and serial numbers :	
ii	AC/DC Pump make and serial numbers :	

4. CHECK OF THE PRODUCT

i	Correct inclination and orientation of SPV panel :	
ii	Cleaning of dust from SPV panel :	
iii	Interconnection of modules, charge controller etc.	
iv	Fuse of charge controller:	

5. DIFFICULTIES IN OPERATION/ PROBLEM FACED BY USER:

6. DIAGNOSIS DETAILS/ REPAIR ACTION:

7. DATE ON WHICH SYSTEM WAS LAST ATTENDED:

8. REMARKS (if any):

User Name & Signature Technician's Name & Signature
Date: (with rubber stamp)

The above conditions are unconditionally accepted to me and EOI is submitted according to the above conditions.
Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

ANNEXURE – XV

Declaration of Relative working with GGRC
(Strike off whichever is not applicable)

This is to declare that Mr. / Ms. _____, employee of **Gujarat Green Revolution Company Limited** _____ (place), is related to our_____ _____ (designation & name).

Note: EoI Applicant has to reproduce above declaration in the text box area with filling of all blanks.

OR

This is to declare that none of the Proprietors / Partners / Directors is having any relatives employed or working with **Gujarat Green Revolution Company Limited** at any of its offices or its parent companies i.e. Gujarat State Fertilizer Company Limited, Gujarat Narmada Valley Fertilizer Company Limited and Gujarat Agro Industries Corporation.

The above information is true and correct as per my knowledge.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)

ANNEXURE – XVI

ACCEPTANCE OF OTHER CONDITIONS

OTHER CONDITIONS:

i. EOI applicant experience should be in supply, installation and commissioning of SPV water Pumping system on farmer field for MNRE/Govt. supported Schemes as well as self financed by farmer in India.

ii. The above experience may be anywhere in India.

iii. The total experience of solar pumping systems will be taken into account irrespective of the experience being in AC or DC Motor pump sets and surface or submersible Pump sets.

iv. Consortium agreements, joint ventures and assignment of the project is not permitted to seek eligibility in this programme.

v. The same make of Solar Panels, pumps, inverter / controller for which the test report is submitted in the EOI document should be supplied by the registered SPV water Pump supplier.

vi. EOI applicant who are black-listed in any state would not be eligible to apply in GGRC.

vii. Remote monitoring should not be a complex system involving flow and pressure sensors and transducers.

viii. For any technical specification to be referred is as per MNRE/SMAM/GGRC guidelines issued from time to time.

The above conditions are unconditionally accepted to me and EOI is submitted according to the above conditions.

Seal of Organization Signature

Date:

(For and on behalf of Name and Designation with Seal)