

CORRIGENDUM

In the light of pre-bid meeting held on **27.07.2018 (Friday)** at 1.00 P.M. & suggestions received from the prospective bidders, JREDA has decided to make following amendments/addendum in the NIB No. **12/JREDA/SAUBHAGYA/18-19**, Request for Proposal (RfP) for 3738 Nos. of Household Electrification Works in 85 Villages of 09 districts through Solar Stand Alone Systems under Saubhagya Scheme in State of Jharkhand:

Section/ Annexure	Original Criteria	Read as/ Amendments/Addendums												
e- procurement notice	<table border="1" style="width: 100%;"> <tr> <td style="width: 30%;">Last date & time for receipt of online bids</td> <td>07.08.2018 (Tuesday) upto 05:00 PM</td> </tr> <tr> <td>Submission of original copies of Bid fee & EMD (Offline)</td> <td>07.08.2018 and 08.08.2018 up to 5.00 P.M.</td> </tr> <tr> <td>Technical Bid Opening Date</td> <td>09.08.2018 (Thursday) at 03:00 PM</td> </tr> </table>	Last date & time for receipt of online bids	07.08.2018 (Tuesday) upto 05:00 PM	Submission of original copies of Bid fee & EMD (Offline)	07.08.2018 and 08.08.2018 up to 5.00 P.M.	Technical Bid Opening Date	09.08.2018 (Thursday) at 03:00 PM	<table border="1" style="width: 100%;"> <tr> <td style="width: 30%;">Last date & time for receipt of online bids</td> <td>20.08.2018 (Monday) upto 05:00 PM</td> </tr> <tr> <td>Submission of original copies of Bid fee & EMD (Offline)</td> <td>20.08.2018 and 21.08.2018 up to 5.00 P.M.</td> </tr> <tr> <td>Technical Bid Opening Date</td> <td>23.08.2018 (Thursday) at 03:00 PM</td> </tr> </table>	Last date & time for receipt of online bids	20.08.2018 (Monday) upto 05:00 PM	Submission of original copies of Bid fee & EMD (Offline)	20.08.2018 and 21.08.2018 up to 5.00 P.M.	Technical Bid Opening Date	23.08.2018 (Thursday) at 03:00 PM
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Section-5	<p>Page no. 24 of the NIB, Clause 7 Payment Terms & Conditions:</p> <p>7. Payment terms and conditions: The payment will be made to the successful bidder as per the work order issued basing on the L1 price arrived at as per the break up in Annexure 9. Subject to any deduction, which JREDA may be authorized to make under this contract, the contractor shall be entitled to payment as follows:</p> <p>6.1. The payment, against project, cost to the Successful</p>	<p>Page no. 21 of the NIB, Table: General Terms & Conditions/Scope of work:</p> <p>7. Payment terms and conditions: The payment will be made to the successful bidder as per the work order issued basing on the L1 price arrived at as per the break up in Annexure 9. Subject to any deduction, which JREDA may be authorized to make under this contract, the contractor shall be entitled to payment as follows:</p> <p>7.1. The payment, against project, cost to the Successful Bidder shall be made as per given below:</p>												

<p>Bidder shall be made as per given below: a. 60% of Project cost shall be released after supply and delivery of all goods in full and in good condition including Construction of boundary wall and control room and at project sites certified by Consignee & JREDA Officials. This payment shall be released after receipt of inspection report by JREDA accompanied by bill;</p> <p>b. 30% of project cost shall be released after successful installation and Commissioning of complete Project. This payment shall be released after receipt of inspection report by JREDA accompanied by bill;</p> <p>c. Balance 10% of the project cost shall be released within 6 months from performance guarantee testing.</p> <p>6.2. Presentation of appropriate bill in triplicate for each stage of payment.</p> <p>6.3. All payments shall be released only after milestones are achieved and certified for satisfactory completion as per three tier quality control mechanism under Saubhagya Scheme.</p> <p>6.4. The following conditions shall also be applicable: a) Income tax will be deducted at source;</p> <p>b) No payment will be payable in foreign currency;</p> <p>c) The price shall remain constant during the period of the</p>	<p>a. 60% of Project cost shall be released after supply and delivery of all goods in full and in good condition at project sites certified by Consignee & JREDA Officials. This payment shall be released after receipt of inspection report by JREDA accompanied by bill and photographs;</p> <p>b. 30% of project cost shall be released after successful installation and Commissioning of complete Project. This payment shall be released after receipt of inspection report by JREDA accompanied by bill and photographs;</p> <p>c. Balance 10% of the project cost shall be released within 6 months from performance guarantee testing.</p> <p>7.2. Presentation of appropriate bill in triplicate for each stage of payment.</p> <p>7.3. All payments shall be released only after milestones are achieved and certified for satisfactory completion as per three tier quality control mechanism under Saubhagya Scheme.</p> <p>7.4. The following conditions shall also be applicable: a) Income tax will be deducted at source; b) No payment will be payable in foreign currency; c) The price shall remain constant during the period of the contract</p> <p>7.5. Bidders shall have to submit photographs of all system (Solar panel along with structure, Charge Control Unit, Battery)</p>
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	<p>contract</p> <p>6.5. Bidders shall have to submit photographs of all system (Solar panel, Inverter, Battery, Pole)</p>	
<p>Section-5</p>	<p>Page no. 24 of the NIB, Table: General Terms & Conditions/8. Performance Guarantee:</p> <p>A. Successful bidder shall submit a performance guarantee @5% of the work order value in the form of Bank Guarantee valid for 4 months on or before release of any payment.</p> <p>B. The Performance Guarantee will have to be maintained by the bidder with JREDA till the Successful design, development, and launching JREDA website as per the requirements of JREDA.</p> <p>C. The Security Deposit/Performance Guarantee shall be submitted in the form of bank guarantee in favour of "Director, JREDA" payable at Ranchi from any Indian Nationalized bank/Scheduled bank.</p> <p>D. Non submission of Security Deposit/Performance Guarantee within the time frame, shall lead to forfeiture of EMD and cancellation of Work Order.</p> <p>E. If Bidder fails to carry out the work allotted as per the provisions of the tender documents then such Bidder may be black listed for future awards of work.</p>	<p>Page no. 24 of the NIB, Table: General Terms & Conditions/8. Performance Guarantee:</p> <p style="text-align: center;">Deleted</p>

<p>Section-6</p>	<p>Page no. 27 of the NIB, Table: Technical Specification (SOLAR POWER PACKS) :</p> <p>A solar home system (SHS) provides a comfortable level of illumination in one or more rooms of a house. The SHS consists of a PV module. Control electronics, battery, and luminaire(s). The Systems featuring 5 numbers of luminaires based on White Light emitting Diode (W-LED) and could be used to run a small DC fan and / or a 12-V DC television with mobile charging.</p> <p>The System consists of :</p> <ul style="list-style-type: none"> • SPV Module (with Module Mounting Structure) : 200 Wp (The selection of standalone module Wp capacity is based on solar radiation data of NREL and Solar Energy Centre of MNRE in the form of GHI enclosed at Annexure-IV) • Battery: 12.6 Volts, 75 Ahr. (approx. 1000 Watt hours) Lithium Ferro phosphate • Solar Charge Controller with MPPT to appropriately charge and protect the battery against overcharge. • Load : <ul style="list-style-type: none"> ○ 5 Nos. of White Light Emitting Diode (W-LED) Luminaire (7.0 Watts each) for 5-6 Hrs./day ○ 1 D.C. Fan(20Watts) for 5-6 Hrs./day ○ power for a 12V DC TV (max. 25 watts) set, to be purchased separately(Optional) for 5-6 hrs./day ○ Provision for Mobile Phone Charging <p>Online Monitoring shall also be conducted through mobile phone sms (feature to be built in).</p>	<p>Page no. 27 of the NIB, Table: Technical Specification (SOLAR POWER PACKS) :</p> <p>A solar home system (SHS) provides a comfortable level of illumination in one or more rooms of a house. The SHS consists of a PV module. Control electronics, battery, and luminaire(s). The Systems featuring 5 numbers of luminaires based on White Light emitting Diode (W-LED) and could be used to run a small DC fan and / or a 12-V DC television with mobile charging.</p> <p>The System consists of:</p> <table border="1" data-bbox="1165 695 2032 1344"> <thead> <tr> <th>S.No</th> <th>Item/System</th> <th>Specification</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SPV Module (with Module Mounting Structure)</td> <td>200 Wp</td> </tr> <tr> <td>2</td> <td>Battery</td> <td>12.8 Volts, 80 Ahr. (approx. 1000 Watt hours) Lithium Ferro phosphate. A very good battery management system to be incorporated and got it tested with battery from MNRE/NABAL/IEC accredited lab as per IEC/BIS standard. IEC 62133 , IEC 61960 & UL 1642 : SAFETY OF LIFEPO4 BATTERY</td> </tr> </tbody> </table>	S.No	Item/System	Specification	1	SPV Module (with Module Mounting Structure)	200 Wp	2	Battery	12.8 Volts, 80 Ahr. (approx. 1000 Watt hours) Lithium Ferro phosphate. A very good battery management system to be incorporated and got it tested with battery from MNRE/NABAL/IEC accredited lab as per IEC/BIS standard. IEC 62133 , IEC 61960 & UL 1642 : SAFETY OF LIFEPO4 BATTERY
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		3	Solar DC Charge Controller	<p>Solar Charge Controller with MPPT to appropriately charge and protect the battery against overcharge. Charge Controller should have following Protection:</p> <ul style="list-style-type: none"> • Transient/Surge. • Over Charging/Deep Charging. • Solar and battery reserve Protection. • Reverse current from battery at night. • Overload-Auto Shutdown and Restart: <table border="1" data-bbox="1501 755 2016 1088"> <thead> <tr> <th data-bbox="1501 755 1837 844">Description</th> <th data-bbox="1837 755 2016 844">12.8 V Operation</th> </tr> </thead> <tbody> <tr> <td data-bbox="1501 844 1837 933">Higher Vol. Cut-off Setting</td> <td data-bbox="1837 844 2016 933">14.6 V</td> </tr> <tr> <td data-bbox="1501 933 1837 1031">Battery Low Load Disconnect</td> <td data-bbox="1837 933 2016 1031">11.5 V</td> </tr> <tr> <td data-bbox="1501 1031 1837 1088">Load Reconnect</td> <td data-bbox="1837 1031 2016 1088">12.6 V</td> </tr> </tbody> </table>	Description	12.8 V Operation	Higher Vol. Cut-off Setting	14.6 V	Battery Low Load Disconnect	11.5 V	Load Reconnect	12.6 V
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Higher Vol. Cut-off Setting	14.6 V											
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		4	Load	<ul style="list-style-type: none"> ○ 5 Nos. of White Light Emitting Diode (W-LED) Luminaire (7.0 Watts each) for 5-6 Hrs./day <p style="text-align: center;">and</p> <ul style="list-style-type: none"> ○ 1 D.C. Pedestial Fan(20Watts) for 5-6 Hrs./day 								

	<p>TECHNICAL DETAILS</p> <p>PV MODULE(S)</p> <ul style="list-style-type: none"> i. Indigenously manufactured PV modules should be used ii. The PV modules should be made up of crystalline silicon solar cells and must have a certificate of testing conforming to IEC 61215 Edition II /BIS 14286 from an NABL or IECQ accredited Laboratory. iii. The module efficiency should not be less than 14%. iv. The terminal box on the module should have a provision for opening, for replacing the cable, if required. v. There should be a 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. A distinctive serial number starting with NSM will be engraved on the frame of the module or screen printed on the tedlar sheet of the module. 		<ul style="list-style-type: none"> o Provision for Mobile Phone Charging. o Power for a 12V DC TV (max. 25 watts) set, to be purchased separately(Optional) for 5-6 hrs./day
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	<p>BATTERY</p> <ul style="list-style-type: none"> i. Lithium Ferro phosphate type battery only. ii. Capacity approx. 1000 Watt Hour iii. Maximum Depth of Discharge 90% iv. Battery should conform to the latest BIS/International standards. <p>LIGHT SOURCE</p> <ul style="list-style-type: none"> i. Two light sources shall be with 7.0 Watts of white LED and Light Output should be Minimum 25 Lux when measured at the periphery of 2.5 meter diameter from a height of 2.5 meter ii. At any point within area of 2.5mtr diameter periphery the light level should not be more than three limes of the periphery value. iii. The illumination should be uniform without Dark Bands or abrupt variations and soothing to the eyes. Higher output would be preferred. iv. The colour temperature of W-LEDs used in the system should be in the range of 5500 °K-6500°K. v. LEDs should not emit ultraviolet light. vi. The light output from the W-LED light source should be constant throughout the duty cycle. vii. The lamps should be housed in an assembly suitable for indoor use. 	<p>BATTERY</p> <ul style="list-style-type: none"> i. Lithium Ferro phosphate type battery only. ii. Capacity approx. 1000 Watt Hour iii. Maximum Depth of Discharge 90% iv. Battery should conform to the latest BIS/International standards. v. The cell and battery should be got tested as per IEC62133-2012 or BIS specifications with MNRE/NABAL accredited center vi. Cycle life: more than 2000 cycles <p>LIGHT SOURCE</p> <ul style="list-style-type: none"> i. Two light sources shall be with 7.0 Watts of white LED and Light Output should be Minimum 25 Lux when measured at the periphery of 2.5 meter diameter from a height of 2.5 meter ii. At any point within area of 2.5mtr diameter periphery the light level should not be more than three limes of the periphery value. iii. The illumination should be uniform without Dark Bands or abrupt variations and soothing to the eyes. Higher output would be preferred. iv. The colour temperature of W-LEDs used in the system should be in the range of 5500 °K-6500°K. v. LEDs should not emit ultraviolet light. vi. The light output from the W-LED light source should be constant throughout the duty cycle. vii. The lamps should be housed in an assembly suitable for indoor use. viii. white LED of NICHIA/OSRAM/SEOUL SEMICONDUCTOR/PHILIPS/LUMILEDS/LEDNIUM/L
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	<p>ELECTRONICS</p> <ul style="list-style-type: none"> i. The total electronic efficiency should be at least 85%. ii. Electronics should have temperature compensation for proper charging of the battery throughout the year. iii. The idle current should be less than 2 mA. iv. The voltage drop from module terminals to the battery terminals should not exceed 0.6 volts including the drop across the diode and the cable when measured at maximum charging current. v. The PCB containing the electronics should be capable of solder free installation and replacement. vi. Necessary lengths of wires/cables, switches suitable for DC use and fuses should be provided. 	<p>G Make or equivalent (Having LM 80 test report) shall only be use</p> <ul style="list-style-type: none"> ix. The LEDs luminaire should have life time about 50,000 hrs as per IESNA latest standard. x. The lumen depreciation of LED luminaire shall not be more than 30% at 50,000 burning hours as per IESNA latest edition. xi. The Luminary should be tested as per LM79-08 or latest standard by the MNRE/NABL accredited lab for such Standards and copy of such test certificate should be submitted. The test report should have the Polar curve of luminaire xii. The LED lights should comply the latest BIS specification (IS 10322 (Part 5/Sec I):2012 Certificate from BIS is required for its compliance for respective manufacturer and should be submitted. <p>ELECTRONICS</p> <ul style="list-style-type: none"> i. The total electronic efficiency should be at least 85%. ii. Electronics should have temperature compensation for proper charging of the battery throughout the year. iii. The idle current should be less than 20 mA. iv. The voltage drop from module terminals to the battery terminals should not exceed 0.6 volts including the drop across the diode and the cable when measured at maximum charging current. v. The PCB containing the electronics should be capable of solder free installation and replacement. vi. Necessary lengths of wires/cables, switches suitable for DC use and fuses should be provided.
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	<p>ELECTRONIC PROTECTIONS</p> <ul style="list-style-type: none"> i. Adequate protection is to be incorporated under “No Load” condition. ii. The system should have protection against battery overcharge, deep discharge condition. iii. Load reconnect should be provided at 80% of the battery capacity status. iv. Adequate protection should be provided against battery reverse polarity. v. Fuses should be provided to protect against short circuit conditions. vi. Protection for reverse flow of current through the PV module(s) should be provided. <p>MECHANICAL COMPONENTS</p> <ul style="list-style-type: none"> i. Corrosion resistant frame structure should be provided to hold the SPV module. ii. The frame structure should have provision to adjust its angle of inclination to the horizontal, so that it can be installed at the specified tilt angel. iii. Light source should be either for wall mounted or ceiling mounted or can be hung from the ceiling in a stable manner, as per site requirements. iv. A vented plastic/wooden/metallic box with acid proof corrosion resistant paint for housing the storage battery indoors should be provided. 	<p>ELECTRONIC PROTECTIONS</p> <ul style="list-style-type: none"> i. Adequate protection is to be incorporated under “No Load” condition. ii. The system should have protection against battery overcharge, deep discharge condition. iii. Load reconnect should be provided at 80% of the battery capacity status. iv. Adequate protection should be provided against battery reverse polarity. v. Fuses should be provided to protect against short circuit conditions. vi. Protection for reverse flow of current through the PV module(s) should be provided. <p>MECHANICAL COMPONENTS</p> <ul style="list-style-type: none"> i. Corrosion resistant frame structure should be provided to hold the SPV module. ii. The frame structure should have provision to adjust its angle of inclination to the horizontal, so that it can be installed at the specified tilt angel. iii. Light source should be either for wall mounted or ceiling mounted or can be hung from the ceiling in a stable manner, as per site requirements. iv. A metallic box of minimum 18 SWG thick made of pre coated galvanized (60 micron thickness) ms sheet for housing the storage battery indoors should be provided v. The size of box should be as per battery size. The battery should be fixed inside the battery box so it should be properly separated to avoid the electrical contract between battery and box. vi. The Box should have separate compartment for BMS with IP65.
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		<p>vii. Signboard of Saubhagya Scheme should be installed in each village covered under the scheme.</p> <p>viii. Specification of board:</p> <ul style="list-style-type: none"> • Iron Sheet: MS Sheet 14 gauge (1.6mm thickness) • Size of Iron Sheet: 3Feet x 4Feet (Length x Breadth) • Height of board from ground level: 5 feet • Support L type angle: 3"x3", 6 mm thickness • Sample copy of signboard material will be provided later <p>Pedestal FAN</p> <p>The fan should be 12 volt DC operated with following minimum requirement:</p> <p>i. Type of motor: BLDC</p> <p>ii. Rated voltage: 12 Volt</p> <p>iii. Sweep size : 300 mm (diameter) (minimum).</p> <p>iv. Blade: Three leaves Alluminium Powder Coated</p> <p>v. Power: 20 Watt (+ 5% including instrumental errors)</p> <p>vi. Air delivery: > 150 CMM (cubic meter per minute)</p> <p>vii. RPM: >1100</p> <p>viii. Speed : 3 Electronically controlled</p> <p>ix. Operating Voltage range: 10.8 Volt to 14.4 Volt</p>
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Addendum:

3. Liquidated damages for delay in completion of Work:

If the Successful Bidder fails to complete the Work within the period specified in the Agreement or any extension granted thereto under force majeure conditions, JREDA will recover from the Successful Bidder as penalty @ 0.5% at the contract price for each week of delay. The total penalty shall not exceed 10% (ten percent) of the contract price. Beyond 10 weeks of delay, JREDA may:

a) Allow Successful Bidder to continue Work; OR

b) JREDA may terminate the Contract with Successful Bidder and get Work completed by other party at risk and cost of Successful Bidder.

In either of the cases above, JREDA would recover the loss of subsidy from the Central Govt. as per REC guidelines from the Successful Bidder. This recovery shall be in addition to penalty for delay for 10 weeks.

4. Insurance:

The supplier shall arrange for transit and erection insurance of the materials & equipments for supply & installation of Solar Stand alone System.

**5. Annexure-12 Certificate of Delivery of Solar Stand Alone Systems (Solar Power Packs)
received from the Consignee as Proof of Compliance by the Supplier
NIB No: 12/JREDA/SAUBHAGYA/18-19**

Certificate Name of Beneficiary:.....

Address of Beneficiary:.....
.....

Certified that we have received the following materials ofNos. of Solar Stand Alone Systems (Solar Power Pack):

1. Serial nos. of SPV Modules (200Wp) & Make:.....
2. Serial nos. of Batteries (80Ah) & Make:.....
3. Serial nos. of LED Luminaries & Make:.....
4. Serial nos. of Charge Controller & Make:.....
5. Serial no. fan & Make:.....
6. Other materials:.....

Above materials have been supplied by M/s.....on dated.....

Attachment: Photographs of materials (Module, Battery, Charge Controller, fan etc.)

Signature of Consignee

Date.....

Signature of Supplier along with Seal

Date.....

Signature of JREDA representative

Date.....

6. Annexure-13 Certificate of Installation of Solar Stand Alone Systems (Solar Power Packs) received from the Consignee as Proof of Compliance by the Supplier

NIB No: 12/JREDA/SAUBHAGYA/18-19

Certificate Name of Beneficiary:.....

Address of Beneficiary:.....
.....

Certified that M/s has successfully installedNos. of Solar Stand Alone Systems on..... and are in working condition since seven days:

1. Serial nos. of SPV Modules (200Wp) & Make:-----
2. Serial nos. of Batteries (80Ah) & Make:.....
3. Serial nos. of LED Luminaries & Make:.....
4. Serial nos. of Charge Controller & Make:.....
5. Serial nos. of fan & Make:.....
6. Other materials:.....

Attachment: Photographs of installed system (Three views of each component of each system)

Signature of Consignee

Signature of Supplier along with Seal

Date.....

Date.....

Signature of JREDA representative

Date.....

7. Annexure-14: Format for Quarterly O&M and CMC Report

NIB No: 12/JREDA/SAUBHAGYA/18-19

[On the letterhead of Bidding Company]

To,

The Director,
Jharkhand Renewable Energy Development Agency
3rd Floor, S.L.D.C. Building,
Kusai Colony, Doranda,
Ranchi – 834002.

Sub: Request for Proposal (RfP) for 3738 Nos. of Household Electrification Works in 85 Villages of 09 districts through Solar Stand Alone Systems under Saubhagya Scheme in State of Jharkhand.

Sir,

Date of Installation.....
JREDA Dispatch Order No..... Dated.....
Place of Supply.....
Name of Technicians:.....

S. N.	Place of Installed System	System Details	Date of Site Visit/CMC	Fault observation	Fault repaired	Status of the system
		Module No.				
		Battery No.				
		Charge Controller No.				
		Luminaire and Fan				

(Signature of Consignee)

Name:

Designation:

Seal:

Signature of JREDA representative

Signature of Agency with Seal

8. Annexure-15 Performance Guarantee Testing Report format
NIB No: 12/JREDA/SAUBHAGYA/18-19

This is to certify that the 200W Solar Stand alone System in village.....block.....
District..... is working satisfactory for the following parameters:

- 1.
- 2.
- 3.
- 4.

Further, the following installations/structures were found in satisfactory working order

- 1.
- 2.
- 3.
- 4.

It is also certified that the Successful Bidder provided powerhours per day fordays every month from the date of commissioning of the plant.

Signature of Consignee

Signature of Supplier along with Seal

Date.....

Date.....

Signature of JREDA representative

Date.....

9. Changes made as above in NIB may be read accordingly for similar changes in related technical specification.
10. The Corrigendum shall form the integral part of the tender documents.

Sd/-
Director,
JREDA, Ranchi