



एनर्जी एफिशिएंसी सर्विसेज लिमिटेड  
विद्युत मंत्रालय के सार्वजनिक क्षेत्र के उपक्रमों की संयुक्त उद्यम कंपनी  
**ENERGY EFFICIENCY SERVICES LIMITED**  
A JV of PSUs under the Ministry of Power

Amendment No.-5

Ref: EESL/06/2019-20/KUSUM/SWPS /Phase-1/Off Grid//192007012/Amdt-5

Date: 23-09-2019

To,  
M/s .....  
.....

SUB: Amendment no. 5 against NIT/Bid Document No.: EESL/06/2019-20/KUSUM/SWPS /Phase-1/Off Grid//192007012 for “Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of approximate 1,75,000 numbers of Off Grid Solar Photovoltaic Water Pumping Systems in selected states on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under MNRE off-grid and decentralized solar PV applications scheme on behalf of State Nodal Agencies (SNAs).”

References:

1. NIT/Bid Document No.: EESL/06/2019-20/KUSUM/SWPS /Phase-1/Off Grid//192007012, E-tender Id – 1554.
2. Amendment no -1 dated 27-08-2019
3. Pre Bid Meeting held on 28-08-2019 at 11:30 AM
4. Amendment no.-2 dated 09-09-2019
5. Amendment no.-3 dated 17-09-2019
6. Amendment no.-4 dated 18-09-2019

Dear Sir/Madam,

Following Clarification/Amendment(s) are hereby authorized:

1. Following Clarification/Amendment(s) are hereby authorized:

Sr. No.	Description/Query/ Clarification Required	As per RfP/Previous Amendments	Amended As/ Clarified as/Read as/ Incorporated as/Added as
1.	Document Sale Date & Timing i.e. Last Date for downloading RfP from website	Extended up to 26-09-2019 (up to 1400 hours IST).	Extended up to 30-09-2019 (up to 1400 hours IST).
	Online Bid Submission Time	Extended up to 26-09-2019 (up to 1430 hours IST).	Extended up to 30-09-2019 (up to 1430 hours IST).
	Technical E-Bid Opening Date & Time	Extended up to 26-09-2019 (up to 1500 hours IST).	Extended up to 30-09-2019 (up to 1500 hours IST).

2. Detailed Queries on Amendment-3 are enclosed herewith.
3. Detailed Clarifications on Remote Monitoring System are enclosed herewith.

Rest all the terms and conditions of the RfP and subsequent amendment(s) remain unchanged.

For and on behalf of EESL

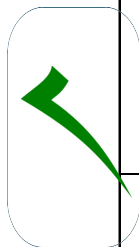


*Gaurav*  
23/9/19  
Gaurav Kapoor  
Assistant Manager (Tech)

पंजीकृत कार्यालय: एन. एफ. एल. बिल्डिंग, पाँचवा और छठा तल,  
कोर - 3, स्कोप कॉम्प्लेक्स, लोधी रोड, नई दिल्ली - 110003  
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<b>Tender Name</b>		<b>Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of approximate 1,75,000 numbers of Off Grid Solar Photovoltaic Water Pumping Systems in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under MNRE off-grid and decentralized solar PV applications scheme on behalf of State Nodal Agencies (Implementing Agencies).</b>		
<b>NIT /Tender No.</b>		<b>EESL/06/2019-20/KUSUM/SWPS/Phase-1/Off Grid/192007012 dated: 21-08-2019; E-Tender ID - 1554</b>		
<b>Sr. No.</b>	<b>Amendment No. Page No. Para No/ Clause</b>	<b>Description as per Amendment</b>	<b>Bidders Query</b>	<b>New Modifications</b>
1	Amendment No. 3 Page No. 2 ItemNo/ Clause No. 4	Test reports for each pump category bidder bids for (1 HP DC, 2 HP DC, 3 HP DC, 5 HP DC, 7.5 HP DC, 1 HP AC, 2 HP AC, 3 HP AC, 5 HP AC, 7.5 HP AC) at any head based on mnre technical specs 2015-16 will be considered for the qualification. However, bidder has to submit the test certificates for each pump category bidder bids for (1 HP DC, 2 HP DC, 3 HP DC, 5 HP DC, 7.5 HP DC, 1 HP AC, 2 HP AC, 3 HP AC, 5 HP AC, 7.5 HP AC) at any head based on mnre technical specs 2019 before Implementing Agency places the first NTP. Bidder has to provide a declaration as per attachment-16 (enclosed with this amendment)  In case Bidder fails to submit test certificates as per MNRE technical specs 2019 within 30 days of placing first NTP or a period specified by Implementing Agency, his empanelment will stand cancelled, without any prior intimation.	Since many Bidders do not have all the Test Reports in hand so please confirm can they submit the bid with Acknowledgment Receipts of test submission in Lab, for all the categories of Pump sets (as per MNRE 2019 Technical specs)?	Bidder have to submit test reports for any category of Solar Photo voltaic water pumping system at any head based on MNRE technical specs 2015-16. <b>Incase, bidder do not have the above, Acknowledgment Receipts of submission in Lab, for any categories of Pump sets (as per MNRE 2019 Technical specs) shall be submitted for qualification requirement.</b>  However, bidder has to submit the test certificates for each pump category in which bidder gets empanelled based on MNRE technical specs 2019 within 30 days issuance of Letter of Empanelment by Implementing Agency. Bidder has to provide a declaration as per <b>revised</b> attachment-16 (enclosed with this amendment)
2	Amendment No. 3 Page No. 12 ItemNo/ Clause No. 74	Technical specifications will remain the same as per latest MNRE technical specifications issued in 2019	All module combinations are even. Agencies which have odd combinations do not have an option. For eg : to mount 9 Modules we will have to use 4+6 MMS	The MMS design specified by the MNRE in the Technical Specification issued in 2019 shall be followed. However, in case of any change in MMS design having improved design features than MNRE specified design, the vendor shall submit a certificate to this effect from recognized structural engineering institutions like IIT Roorkee, IIT Madras, etc.
3	Amendment No. 3 Page No. 12 ItemNo/ Clause No. 24	As per various state responses on allocation of pumps, MNRE has decided to re-form the clusters. But, as electronic price bids are dynamic in nature and could not be changed, bidders are required to submit a declaration as per Attachment-17 enclosed with this amendment to quote the prices in price bid tables according to the new cluster wise allocations.		As per various state responses on allocation of pumps, MNRE has decided to revise the clusters for North East and Hill States. Due to this, cluster 9 as per amendment-3 has now divided into two clusters. Requirements for past experience and ATO are revised thereby as per <b>revised Annexure V</b> enclosed with this amendment. Bidders are required to submit a declaration as per <b>revised Attachment-17</b> enclosed with this amendment to quote the prices in price bid tables according to the new cluster wise allocations.



Signature: \_\_\_\_\_  
 User ID : RAJRESH RANA  
 Serial No: T2AS52  
 Date : 23-09-2019  
 CTS O-ENERGY EFFICIENCY SERVICES LIMITED, C=IN  
 \*\*\*\*\*3, OU=BD AND CONTI

## Revised Annexure V

Cluster	States				Average ATO in INR Crore
		Total No. of Pumps	For Solar Pumps (No. of Solar Pumps supplied or installed)	For Solar PV Modules supplied or installed (Experience in MWp)	
1	Chhattisgarh	20000	1,200	6.00	36.60
2	Madhya Pradesh	25000	1,500	7.50	45.75
3	Rajasthan	25000	1,500	7.50	45.75
4	Tamil Nadu, Karnataka, Telangana, kerala and Puducherry	19650	1,179	5.90	35.96
5	Haryana, Punjab, Gujarat, Goa, Chandigarh, Dadra & Nagar Haveli, Daman & Diu and Delhi	23750	1,425	7.13	43.46
6	Bihar, Jharkhand, West Bengal and Odisha	15700	942	4.71	28.73
7	Maharashtra	30000	1,800	9.00	54.90
8	Uttar Pradesh	15000	900	4.50	27.45
9	Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura	4100	246	1.23	8.25
10	Himachal Pradesh, Uttarakhand and Jammu & Kashmir	3000	180	0.90	6.04
		<b>181200</b>	<b>10872</b>	<b>54.36</b>	<b>332.8953</b>



Signature :-  
 Subject : CN=RAJNEESH RANA, ST=DELHI, OID.2.5.4.17=110003, OU=BD AND CONTI  
 CTS, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN  
 User ID : Rajneesh.rana  
 Serial No. : F2A592  
 PS : a.bhattacharya(Ashim.Bhattacharya)  
 Date : 23-09-2019

Tender Name: Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of approximate 1,75,000 numbers of Off Grid Solar Photovoltaic Water Pumping Systems in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under MNRE off-grid and decentralized solar PV applications scheme on behalf of State Nodal Agencies (Implementing Agencies).

Revised ATTACHMENT -16

Ref. NIT/Bid Document No.: \_\_\_\_\_.

**DECLARATION FOR SUBMITTING THE TEST CERTIFICATE AS PER MNRE TECHNICAL SPECIFICATIONS FOR SOLAR WATER PUMPSETS ISSUED IN 2019**

From: M/s \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Sub: Declaration for the test certificate as per MNRE technical specifications for solar water pump sets issued in 2019**

*We are agreeing to accept that the test certificates are to be submitted to the Implementing Agency, reports as per MNRE technical specifications and testing procedures issued in 2019, will be submitted by us within 30 days of issuance of Letter of Empanelment by Implementing Agency. In failure of which our empanelment will stand cancelled, without any prior intimation.*

*These certificates shall be submitted either in original form or attested copy by the issuing test lab.*

Name of Authorized Signatory

Signature of supplier  
With stamp



Signature :-  
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CTS, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN  
User ID : Rajneesh.rana  
Serial No. : F2A592  
PS : a.bhattacharya(Ashim.Bhattacharya)  
Date : 23-09-2019

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Revised ATTACHMENT -17

Ref. NIT/Bid Document No.: \_\_\_\_\_.

**DECLARATION TO QUOTE PRICES AS PER NEW CLUSTER FORMATION**

From: M/s \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Sub: Declaration to quote prices as per new cluster formation**

*We are agreeing to accept that the price bid headings in electronic price bid formats (to be filled online) shall be read as per below table and prices quoted by us in electronic price bid formats (to be filled online)is as per below clusters:*

Cluster	States
1	Chhattisgarh
2	Madhya Pradesh
3	Rajasthan
4	Tamil Nadu, Karnataka, Telangana, kerala and Puducherry
5	Haryana, Punjab, Gujarat, Goa, Chandigarh, Dadra & Nagar Haveli, Daman & Diu and Delhi
6	Bihar, Jharkhand, West Bengal and Odisha
7	Maharashtra
8	Uttar Pradesh
9	Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura
10	Himachal Pradesh, Uttarakhand and Jammu & Kashmir

Name of Authorized Signatory  
Signature of supplier  
With stamp



Signature :-  
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Date : 23-09-2019

Tender Name: Design, Manufacture, Supply, Transport, Installation, Testing and Commissioning of approximate 1,75,000 numbers of Off Grid Solar Photovoltaic Water Pumping Systems in selected States on PAN India basis, including complete system warranty and its repair and maintenance for 5 Years under MNRE off-grid and decentralized solar PV applications scheme on behalf of State Nodal Agencies (Implementing Agencies).

### Queries raised on RMS specifications issued by MNRE for solar water pumping system

Para No.	Query	Response
<b>2 (d)</b> Geo Location: Real time latitude and longitude should be captured	Why real time location is required when the system is stationary?	This is required to ensure that system is not moved from its original location.
<b>2 (h)</b> Complaint and Ticket Management	Complaint and ticket management through RMS system is not understood clearly	Complaint management system is a part of centralized monitoring software platform – State Level Solar Energy Management Platform to be operated and maintained by the State implementing agency (SIA).
<b>3.</b> RMS provided by all bidder's should connect to State Level Solar Energy Data Management platform, which will have interface with National Level Solar Energy Data Management platform.	Clarity is required on who will provide the server infrastructure and who will be do the DBA and maintenance in case of crash , back-up etc.	As mentioned in above point, SIA will provide server infrastructure as well as software. SIA will maintain the same. All vendors should provide SIM card of suitable ISP having maximum Signal Strength in the respective location of SWPS and ensure connectivity as well as pushing of data to centralized platform as mentioned in specifications.
<b>4 a (iv) Sensor Connectivity:</b> RMS should have provision for at least two Analog/Digital inputs with 0.1% accuracy to address the requirement of local sensors connectivity if required by SIA/Consumer for applications such as irradiation, flow meter for water discharge, moisture sensor for micro irrigation, etc.	The purpose of this sensor is not clear. How will the output of this sensor be utilized. This will simply add cost burden to the project if left unused.	As mentioned in specifications, Analog/digital sensor inputs will be required for integration of flow meter for water discharge, moisture sensor for micro irrigation, level sensor for overhead tank water storage etc. Only provision for Analog/digital inputs with 0.1% accuracy of Full Scale Range is required. Sensors will not be in scope of bidder
<b>4 a (v)</b> RMS should have provision to give remote On/Off command to pump through farmer mobile app.	Remote ON/OFF facility though easy to implement poses a safety hazard.	To save ground water, provision for remote operation is required so that farmer can switch on and off remotely.



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<p><b>4 b (ii) Push Data Periodically:</b> important parameters of solar pump (as mentioned above) should be pushed to central server on configurable interval. Interval should be configurable for 60 sec or less.</p>	<p>60 seconds is very low and will pose huge load on server infrastructure. This should be 15 minutes minimum considering the mass of pumps</p>	<p>Agreed.  Default interval should be of 15 minutes. However, if required, it should be possible to configure the periodic interval in multiple of 1 minute starting from 1 minute and up to 15 minutes. Further, in case of any abnormalities or event, RMS should push on event immediately.</p>
<p><b>4 f. Data Storage:</b> In case of unavailability of cellular network, RMS should store data locally and on availability of network it should push data to central Server. Local data storage should be possible for at least five years in case of unavailability of cellular network.</p>	<p>5 years data storage is a wasteful feature. 1 year would be an optimal feature</p>	<p>Agreed. Local data storage capacity should be to store at least one year data.</p>
<p><b>4 g. Firmware Over-The-Air:</b> RMUs should have Firmware Over-The-Air (FOTA) feature. Through FOTA one should be able to update – Display, Data logging interval, IP of the server, APN, Data logging parameters etc. Software updating should be possible with 2G and even without the presence of SD card. Software updating process and/or failure to update software shouldn't disrupt pumping operations</p>	<p>FOTA feature could completely corrupt the hardware system in case of power loss in mid-way of flashing process. Power loss could result due to sudden appearance of clouds or due to loss of solar radiation due to any specific reason</p>	<p>Instead of Firmware Over The Air, configuration update over the Air of multiple parameters such as IP, APN, Data logging Interval, Set Points etc. is essential</p>



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