



Terms of Reference for

Detail site assessment of the Solar systems Installed at Primary Health Centres across three District in Maharashtra (Nagpur, Latur, Wardha)

Title	Detail Site Assessment of the Solar systems Installed at Primary Health Centres across three District in Maharashtra (Nagpur, Latur, Wardha)
Timeline	20 Days
Expected area of expertise	Relevant experience in conducting studies/ evaluation/ assessments on decentralised renewable energy solutions.
Apply Link	https://forms.gle/dxsDSZB9BhZQEXSc8 Apply Link

About SELCO Foundation

SELCO Foundation is a not-for profit, public charitable trust. It was founded in 2010 and is headquartered in Bangalore, Karnataka, India. SELCO Foundation seeks to inspire and implement solutions that alleviate poverty by improving access to sustainable energy to underserved communities across India in a manner that is socially, financially, and environmentally sustainable.

SELCO Foundation's key objectives include:

- Systematically identify diverse needs of the poor, understand and define the role of sustainable development, poverty alleviation and decentralized energy.
- Create and deploy innovative solutions that positively impact well-being, health, education and livelihoods towards the alleviation of poverty.
- Foster the development of enabling conditions or an ecosystem through holistic thought processes in technology, finance, entrepreneurship and policy. Currently the foundation works across 10 states in India.

About the Program:

Stronger primary healthcare systems are essential to achieve Sustainable Development Goal 3 (SDG3) which aims to ensure healthy lives and promote well-being for all, of all ages, through universal health coverage. This in turn, facilitates achieving other SDGs. Primary healthcare systems in rural, remote and vulnerable environments often lack the resources integral to



provide affordable, accessible and good quality health care. Reliable and affordable electricity access, alongside appropriate medical and electrical appliances contribute to increased efficacy and positive impact of healthcare provision. The need for energy is crucial when it comes to storing vaccines, using medical equipment such as baby warmers, suction apparatus and lighting especially during deliveries, powering diagnostic services and accessing basic lighting and communication for regular surgeries. Sustainable Energy when combined with efficient medical and electrical technologies helps to democratize the delivery of health services. As the country is putting their best foot forward in preparing to handling pandemic like COVID 19, SELCO Foundation along with philanthropic organisations and NGOs have partnered with the Ministry of Health, Government of India and NHSRC in one of the largest programs for upgrading and empowering public health facilities with solar energy and efficient medical equipment across India. The larger goal of the project is to strengthen 25,000 public health with Decentralised Renewable Energy and efficient medical equipment in the next 5 years.

Due to improved reliability and access to clean energy, primary outcomes of the program include:

- Increase in footfall, deliveries, types and number of services provided at the centre
- Reduced out of pocket expenditure and transaction costs on accessing basic health services for poorer communities in the selected region
- Improved staff comfort and retention levels especially in remote and vulnerable contexts
- Reduction in cost per patient healthcare provision at a state level
- Improved climate resilient and reliable access to critical health services for last mile populations

Purpose of this ToR

SELCO Foundation is deploying solar energy led efficient energy solutions at 25,000 public health facilities across 12 states in India and Maharashtra being one among the 12 states of intervention, there arises a need for the Rectification work for the Solar systems Installed at Primary Health Centres in Nagpur, Wardha and Latur District. The purpose of this TOR is to find agencies/consultants who could responsibly execute the Rectification activities in proposed public health facilities.



The districts and the number of Centres selected for Rectification are mentioned below: -

SL No	District	Primary Health Centres
1	Nagpur	48
2	Wardha	30
3	Latur	52
Total		130

Objectives

- To understand and assess the solar energy scenario at the health facilities
- To assess and identifying the energy gaps at the Primary Health Centres.
- To evaluate the installed Solar PV System's conditions at the Primary Health Centres including all the components and functionality and to submit the technical study report along with recommended BOM and its Specifications for rectification.

Tasks and Responsibilities

Scope of Work:

1. Assessment of existing Solar System installed in Primary Health Centres, district-wise.
2. Preparation of Detail Study Report based on the Site Assessment, district-wise.
3. Prepare final BOQ for Rectification.

The tasks and responsibilities of the agency include the following:

1. Detail Site Assessment

- Conduct site visits to collect the technical details as per the *Annexure 1a Attached*.
- Prepare Bill of Materials with specifications to be used at each site.
- Prepare System and Load Wiring Single Line Diagram for each category of Design for existing Solar PV system.
- Load Assessment at Sites (for the connected Solar and Non-Solar Loads).
- Physical Observation and Electrical Recording of Components.

2. Preparation of Detail Study Report

- Prepare Site-Wise Study Report mentioning the Components Failure and causes of System Breakdown.



- Prepare List of PHCs under each category of Solar System (Hybrid/On-Grid/Off-Grid) mentioning functional or non-functional.
- Prepare and submit a comprehensive, well-structured report of the study. Initial Draft Report to be submitted within 15 days of signing of contract which will be reviewed before the final Submission.

3. Prepare final BOQ for Rectification

- Prepare a detailed solution for Solar PV system rectification (Detail BOQ-Technical Specification and Quantity for each component replacement) centre-wise. The complete details of the centres will be provided once the Agency is selected.

The essential qualification to undertake this

- The agency should have a minimum of 7-10 years' experience in providing technical services in the field of Solar PV technology.
 - The agency should have expertise in performing detailed energy audits.
 - The team members deployed by the agency are expected to have technical expertise in electrical/ solar solutions.
 - The agency should have the ability to interact with concerned government bodies whenever required.
 - Need to delegate through team representative in the geographies assigned by SELCO Foundation.
- **Payment Terms:**

40%	After signing of contract.
40%	After submission of initial draft report.
20%	After submission of final reports, and invoice

Interested Agencies should apply by presenting a proposal in the following format:

- A. Technical Proposal
 - Organizational Profile
 - Key Personnel and Staffing
 - Workplan with the Timelines
- B. Financial proposal



Proposal Submission:

To apply

Interested consultants / organizations, with relevant experience (please include samples and/or references of the previous similar work as proof of experience) and based out of India are requested to reach out with a detailed proposal giving a brief on the methodology and the process they will uptake for this project, including budgets (with break-ups and explanation), timelines and milestones and submit the same to google form <https://forms.gle/dxsDSZB9BhZQEXSc8> on before 26th August 2024. Any further queries

please write to: procurement@selcofoundation.org with a subject line: “**Detail site assessment of the Solar systems Installed at Primary Health Centres across three District in Maharashtra**”.

Refer Terms and Condition:

1. **Sub-contracting:** In the event that the Consultant requires the services of subcontractors to perform any obligations under the Contract, the Consultant shall obtain the prior written approval of the Foundation. Any rejection or non-performance of the subcontractor shall not, in and of itself, entitle the Consultant to claim any delays in the performance, or to assert any excuses for the non-performance, of any of its obligations under the Contract, and the Consultant shall be solely responsible for all services, obligations and deliverables performed by its subcontractors.

2. Quality Assurance

The data submitted to Selco Foundation should be accurate, complete, reliable and relevant. Consulting agency shall establish additional layers for data cleaning and submission.

3. Financials & Reporting

TDS will be deducted on the fixed amount as per Income Tax Act and Rate of Percentage. In accordance with the Central Board of Direct Taxes circular No. 7 of 2022 dated 30th March, 2022 in relation to the clarifications with respect to Section 114AAA of the Income-tax Rules, 1962, failure to link Aadhar number to the PAN card and/or failure by any person, who falls within the income tax bracket or otherwise, to file tax returns in relation to payment of TDS for any service (in accordance with Section 206AB and 206AA) and/or an inoperative PAN card will result in a 20% tax deduction.

4. Indemnification

Both parties shall indemnify and hold its Trustees, Directors and representative officers, employees, agents harmless from and against any and all claims, demands, actions, losses, liabilities, charges, damages, costs and expenses (including but not limited to reasonable



attorney's fees) arising out of or resulting from (1) any claims arising in connection with activities undertaken by both parties in connection with the project or (2) Consultant's gross negligence or wilful misconduct or breach of any undertaking, covenant, representation or warranty contained in this agreement and/ or the actual infringement of any patent, trademark, copyrights, trade secret or any other intellectual property right of the third party.

5. Patent, Copyright and other Proprietary Rights

- i. Except as is otherwise expressly provided in writing in the Contract, the Foundation shall be entitled to all intellectual property and other proprietary rights including, but not limited to, patents, copyrights, and trademarks, with regard to products, processes, inventions, ideas, know-how, or documents and other materials which the Consultant has developed for the Foundation under the Contract and which bear a direct relation to or are produced or prepared or collected in consequence of, or during the course of, the performance of the Contract. The Contractor acknowledges and agrees that such products, documents and other materials constitute works made for hire for the Foundation.
- ii. Subject to the foregoing provisions, all documents, reports, recommendations, documents, and all other data compiled by or received by the Consultant under the Contract shall be the property of the Foundation, shall be made available for use or inspection by the Foundation at reasonable times and in reasonable places, shall be treated as confidential, and shall be delivered only to the Foundation's authorized officials on completion of work under the Contract
- iii. The Consultant will treat all information given to him/her as information with proprietary value and will not disclose the same to competitors or any outsiders. The Consultant will not at any time, except under legal process, divulge any trade or business secret relating to the Foundation or any customer or agent of the Foundation, which may become known to him by virtue of his position as consultant, save in so far as such disclosure shall be necessary in the interest and for the benefit of the said Foundation and will be true and faithful to the Foundation in all dealings and transactions whatsoever relating to the said Foundation.
- iv. Reports or other data that are developed specifically for the performance of this Contract shall be the property of the Foundation and the Consultant shall deliver reports and data to the Foundation as per the milestones. Dissemination of the reports and any information from the said contracts shall be done with written approval from the Foundation.

6. **Publicity, use of name & Logo of the Foundation:** The Consultant shall not advertise or otherwise make public for purposes of commercial advantage or goodwill that it has a contractual relationship with the Foundation, nor shall the Consultant, in any manner whatsoever use the name, emblem, logo or official seal of the Foundation or that of SELCO in connection with its business or otherwise without the written permission of the Foundation.



7. Observance of Law:

- i. The Consultant shall comply with all laws, ordinances, rules, and regulations bearing upon the performance of its obligations under the Contract.
- ii. The Consultant represents and warrants that neither it, its parent entities, partners or subcontractors nor any of its subsidiary or affiliated entities (if any) is engaged in any practice inconsistent with the rights set forth in the Child Labour (Prohibition and Regulation) Act of 1986, which, inter alia, requires that a child shall be protected from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.
- iii. The Consultant represents and warrants that it shall adhere to the mandates prescribed under the Sexual Harassment of Women (Prevention, Prohibition & Redressal) Act, 2013, which requires all workplaces to have a Policy and Internal Committee to address complaints of sexual harassment that women may face at the workplace

8. Termination:

Either party may terminate this contract by giving a notice in writing to the other party stating their intention to terminate the same on the expiration of Seven (7) days from the date of such notice. In addition, the Foundation may also terminate this contract forthwith in the event of any fraud, misconduct or neglect of duties on the part of the Consultant. Any notice to be given hereunder shall be sufficiently given to the Consultant if forwarded by registered post or by Courier Service to the last known postal address of the Consultant and shall be sufficiently given to the Foundation if similarly forwarded to the registered office. Upon the termination of this contract and payment of the said fees due up to such termination, and payment of all disbursements and out-of-pocket expenses incurred up to the date thereof (provided the same have been incurred after obtaining prior approval), the Consultant shall deliver all deeds, documents and paper in his possession relating to the business of the Foundation or as the Foundation shall direct, and shall continue to afford him all reasonable assistance for concluding pending matters at the date of such termination without making any charge thereof.

9. Force Majeure:

- i. Force majeure as used herein means any unforeseeable and irresistible act of nature, any act of war (whether declared or not), invasion, revolution, insurrection, terrorism, or any other acts of a similar nature or force, provided that such acts arise from causes beyond the control and without the fault or negligence of the Consultant
- ii. In the event of and as soon as possible after the occurrence of any cause constituting force majeure, the affected Party shall give notice and full particulars in writing to the other Party, of such occurrence or cause if the affected Party is thereby rendered unable, wholly or in part, to perform its obligations and meet its responsibilities under the Contract. The affected Party shall also notify the other Party of any other changes in condition or the occurrence of any



event which interferes or threatens to interfere with its performance of the Contract. Not more than fifteen (15) days following the provision of such notice of force majeure or other changes in condition or occurrence, the affected Party shall also submit a statement to the other Party of estimated expenditures that will likely be incurred for the duration of the change in condition or the event of force majeure.

- iii. On receipt of the notice or notices required hereunder, the Party not affected by the occurrence of a cause constituting force majeure shall take such action as it reasonably considers to be appropriate or necessary in the circumstances, including the granting to the affected Party of a reasonable extension of time in which to perform any obligations under the Contract.
- iv. If the Consultant is rendered unable, wholly or in part, by reason of force majeure to perform its obligations and meet its responsibilities under the Contract, the Foundation shall have the right to suspend or terminate the Contract on the same terms and conditions as are provided for in this Contract.

10. Both the Foundation and the Consultant fully and freely intend to create an independent Contractor relationship under this Contract. Nothing herein shall be deemed to establish a partnership, joint venture, association or employment relationship between the parties. Both parties agree that the consultant has the right to sole and exclusive control over the manner and means employed in performing their activities under this Contract.

11. Settlement of disputes:

- i. The Parties shall use their best efforts to amicably settle any dispute, controversy, or claim arising out of the Contract or the breach, termination, or invalidity thereof.

Any dispute, controversy, or claim between the Parties arising out of the Contract or the breach, termination, or invalidity thereof, unless settled amicably, within sixty (60) days after receipt by one Party of the other Party's written request for such amicable settlement, the matter shall be referred by either Party to arbitration in accordance with the Arbitration and Conciliation Act, 1996. The venue of the arbitration shall be at Bangalore. Likewise, the jurisdiction will vest with courts in Bangalore.



Annexure:1a

Checklist

Parameters	Details
1. Name of Agency	
2. Date of Site visit	
3. Name of District	
4. Name of Block	
5. Name of the Health Centre	
6. Name of Concerned Person Facilitating the Site Assessment (Officials of the Department)	
7. Contact No. of the Concerned Person Facilitating the Site Assessment (Officials of the Department)	
8. Total Plant Capacity (kWp)	
9. Sanctioned Load (As per Electricity Bill)	
10. Implementing Company	
11. EPC Company/Contractor Name	
12. Type of Solar System	1.Hybrid 2.On-Grid 3.Off-Grid
13. Current Status of Solar Plant	1.Functional 2.Non-Functional
14. GPS Coordinate of Center	
15. Geo-tag site Photograph (Attached)	

Annexure:1b



Sr. No.	Components	Observations	Remarks
1	Installation of Solar Module	No. of Solar Module, Make & Rating Take Photo of Module Date Sheet	
		AJB available (Yes/No) If Yes Rating	
2	Battery Room (If Applicable)	Dimension (L*B*H) in feet	
		Window available (Yes/No) Any leakage (Yes/No)	
3	Solar Inverter (PCU)	PCU Rating/ Make Take Photo of PCU data Sheet	
		PCU health (Output Parameters) Working/Not Working Need for Replacement Any Fault Reported	
		ACDB available (Yes/No) MCB Rating used	
4	Battery Bank	No. of solar Battery Make Voltage Rating AH Rating Type of battery	
5	Earthing System	Total No. of Earthing System Is there separate earthing for DC side, AC side and Lightning Protection System(Y/N)	
		Earth Pit Construction available (Y/N)	
		Size of Earthing Cable-	
6	Lightning Arrestor	LA available (yes/No)	
		No. of LA	
		Type of Size of Down conductor	

7	Safety Equipment Details	Fire Extinguisher available (Y/N)	
8	General	Sign Board Available(Y/N)	Yes () No ()
		Consumer Mobile No. Consumer No as per Electricity Bill Unit Consumed per Month Bill Due Electricity Bill till date	
9	Attach Bill of Materials Used at the Site (With Specification and quantity of the Major components)		
10	SLD (Single Line Diagram)	Solar System (Clearly mentioning Cable Size and Component interconnection)	
		Load Wiring (From Distribution Box with MCB Rating for each circuit)	
11	Energy Assessment of the Site (Clearly Indicating Solar /Non-Solar Loads)		
12	Physical and Electrical Recording of (PCU/Battery) Specify if the Readings are faulty		
13	Attach System Design Sizing		
14	Causes of Breakdown (In Detail)		
15	List of Components with Specification needs to be Replaced for Proper Functionality of Solar System (With Justification) Example <ul style="list-style-type: none"> . Solar Panels . Batteries . Other components 		
16	Is Regular Maintenance from Vendor Happening		
17	Is the maintenance contract valid/expired?		
	For how many years was the contract?		
18	Is the Presence of Installation team from local or outside state?		
19	Who is doing the maintenance of the Solar System in the Health Centre? i.e Designation of the staff coordinating for the maintenance at the Health Centre. Vendor/funder for the maintenance.		
20	General	Is safety Sign Board and Single Line Diagram Available on the site(Y/N)	Yes () No ()



Health Centres List

S.NO	District	PHC Name	Taluka Name
1	Nagpur	Jawali	Bhiwapur
2	Nagpur	Somnala	Bhiwapur
3	Nagpur	Nand	Bhiwapur
4	Nagpur	Takalghat	Hingna
5	Nagpur	Adegaon	Hingna
6	Nagpur	Kanholibara	Hingna
7	Nagpur	Tishti	Kalmeshwar
8	Nagpur	Gondkhairi	Kalmeshwar
9	Nagpur	Mohpa	Kalmeshwar
10	Nagpur	Gumthada	Kamptee
11	Nagpur	Gumthi	Kamptee
12	Nagpur	Bhugaon	Kamptee
13	Nagpur	Kondhali	Katol
14	Nagpur	Kacharisawanga	Katol
15	Nagpur	Veltur	Kuhi
16	Nagpur	Mandhal	Kuhi
17	Nagpur	Salwa	Kuhi
18	Nagpur	Titur	Kuhi
19	Nagpur	Dhanla	Mauda
20	Nagpur	Tarsa	Mauda
21	Nagpur	Khat	Mauda
22	Nagpur	Kodamendhi	Mauda
23	Nagpur	Salai Godhani	Nagpur
24	Nagpur	Vyahad	Nagpur
25	Nagpur	Borkhedi	Nagpur
26	Nagpur	Mowad	Narkhed
27	Nagpur	Bhishnur	Narkhed
28	Nagpur	Sawargaon	Narkhed
29	Nagpur	JALALKHEDA	Narkhed
30	Nagpur	Mendhala	Narkhed
31	Nagpur	Kanhan	Parseoni
32	Nagpur	Dorli	Parseoni
33	Nagpur	Navegaon Khairi	Parseoni
34	Nagpur	Dahegaon Joshi	Parseoni
35	Nagpur	Satak	Parseoni
36	Nagpur	Karwahi	Ramtek
37	Nagpur	Hiwarabazar	Ramtek
38	Nagpur	Bhandarbodi	Ramtek
39	Nagpur	Nagardhan	Ramtek
40	Nagpur	Mansar	Ramtek



41	Nagpur	Khapa	Saoner
42	Nagpur	Badegaon	Saoner
43	Nagpur	Kelwad	Saoner
44	Nagpur	Chicholi	Saoner
45	Nagpur	Sirsi	Umred
46	Nagpur	Makardhokda	Umred
47	Nagpur	Pachgaon	Umred
48	Nagpur	Bela	Umred
49	Wardha	Anji (mo)	Wardha
50	Wardha	Waifad	Wardha
51	Wardha	Talegaon (Ta.)	Wardha
52	Wardha	Kharangana (gode)	Wardha
53	Wardha	Waigaon (Nipani)	Wardha
54	Wardha	Hamdapur	Seloo
55	Wardha	Zadshi	Seloo
56	Wardha	Salaikala	Seloo
57	Wardha	Dehegaon (gosai)	Seloo
58	Wardha	Sindhi (Railway)	Seloo
59	Wardha	Hingani	Seloo
60	Wardha	Muradgaon (belsare)	Deoli
61	Wardha	Nachangaon	Deoli
62	Wardha	Giroli	Deoli
63	Wardha	Vijaygopal	Deoli
64	Wardha	Goul	Deoli
65	Wardha	Kharangna (Mo)	Arvi
66	Wardha	Rohana	Arvi
67	Wardha	Jalgaon	Arvi
68	Wardha	Sahur	Ashti
69	Wardha	Sarwadi	Karanja
70	Wardha	Kanmwargram	Karanja
71	Wardha	Nara	Karanja
72	Wardha	Kangaon	Hinganghat
73	Wardha	Allipur	Hinganghat
74	Wardha	Burkoni	Hinganghat
75	Wardha	Pohana	Hinganghat
76	Wardha	Nandori	Samudrapur
77	Wardha	Girad	Samudrapur
78	Wardha	Kora	Samudrapur
79	Latur	Chikudi	Latur
80	Latur	Bora	Latur
81	Latur	Bathagahi	Latur
82	Latur	Gangapur	Latur
83	Latur	Javlgaa	Latur



84	Latur	Chicholi	Latur
85	Latur	Thandhuja	Latur
86	Latur	Nivali	Latur
87	Latur	Kavha	Latur
88	Latur	Bittergaon	Renapur
89	Latur	Pangaon	Renapur
90	Latur	Kharola	Renapur
91	Latur	Pohregaon	Renapur
92	Latur	Karepur	Renapur
93	Latur	Lamjna	Ausa
94	Latur	Belkund	Ausa
95	Latur	Bada	Ausa
96	Latur	Ujani	Ausa
97	Latur	Hasegaon	Ausa
98	Latur	Matholi	Ausa
99	Latur	Jvaliga P.	Ausa
100	Latur	Handarguhi	Udgir
101	Latur	Vadvana	Udgir
102	Latur	Hair	Udgir
103	Latur	Devarjan	Udgir
104	Latur	Gudsur	Udgir
105	Latur	Naligeer	Udgir
106	Latur	Valandi	Deoni
107	Latur	Borol	Deoni
108	Latur	Nagaral	Deoni
109	Latur	Athnur	Jalkot
110	Latur	Mangrul	Jalkot
111	Latur	Wanjarwada	Jalkot
112	Latur	Sirur	Ahmadpur
113	Latur	Kingaon	Ahmadpur
114	Latur	Hadolthi	Ahmadpur
115	Latur	Andori	Ahmadpur
116	Latur	Sathala	Ahmadpur
117	Latur	Chapovli	Chakur
118	Latur	Nalegaon	Chakur
119	Latur	Janvali	Chakur
120	Latur	Vadval Nagnath	Chakur
121	Latur	Auvradh Shajani	Nilanga
122	Latur	Panchincholi	Nilanga
123	Latur	Madansuri	Nilanga
124	Latur	Kasar Balkunda	Nilanga



125	Latur	Ambulga	Nilanga
126	Latur	Nitur	Nilanga
127	Latur	Mudgad R.	Nilanga
128	Latur	Halgara	Nilanga
129	Latur	Yerol	Nilanga
130	Latur	Sakol	Nilanga