Terms of Reference (TOR)

ENERGY FOR HEALTH – ACROSS KARNATAKA

Agency for Quality & Safety Check of Solar Installation at the Public Health Facilities throughout Karnataka.

Title	Request for proposals (RFP) from the Solar agencies/consultants for the quality & safety check of installed Solar DRE systems in public health facilities throughout Karnataka.
Timeline	10 Months
Expected area of expertise	Solar agencies/consultants for the quality check
Email and website	procurement@selcofoundation.org , http://www.selcofoundation.org/)
Apply Link	https://forms.gle/BE8t378bAyQYRjDv6 (Contact Procurement for Form Link)

About SELCO Foundation:

SELCO Foundation's mission is to create a platform of solutions that uses sustainable energy as a catalyst to bridge environmental sustainability and poverty alleviation. With holistic development as the primary focus, the organization strives to create equitable societies, where services are accessed by all communities. The interventions of SELCO lead to a sustainable delivery model of essential services like livelihoods, education, and health till the last mile. (Read more about SELCO here: http://www.selcofoundation.org/)

1. **Summary of the project:**

As a part of its "Energy for Health" program, SELCO Foundation aims to strengthen health services delivery through the deployment of decentralized sustainable energy solutions for health centres throughout Karnataka.

The SELCO Foundation plans to have a quality and safety check of installed Solar DRE systems in public health facilities throughout Karnataka. The process should be, by visiting the health facilities physically and filling prerequisite check list and recording all other issues/suggestions/feedback taken from the health facility staff along with observations made.

Proposals (Technical & Financial) from eligible Solar agencies/ consultants are invited to conduct Quality check at the public health facilities as mentioned in the TOR.

2. **Goals and Objectives**

SL.No.	Objective	Methodology
1.	Quality of installations	• Visual/physical inspection for compliance of the installation with reference to the approved SLD/Design/BOM/Other specified instructions as laid down in the agreement/Work order and associated Documents which are signed of between SELCO Foundation and the Vendor. Complete the inspections following the check list provided in Annexure 1. • Recording of the plant electrical performance should be a part of the monitoring process.

		• Verifying the load connectivity with the solar system in comparison with the load details with the sheet. • Verifying the working of connected loads and sockets
2.	Capacity and Awareness of Healthcare staff	Evaluation of the health staff on below given points: - • Knowledge of basic system functioning, it's limitations and purpose • Knowledge of best practices (cleaning, battery maintenance, safety) • Knowledge of disconnect switches. • Information and process of reporting complaints • Challenges (if any) • Any unmet energy needs. • Training programs (if any)
3.	Servicing and Maintenance	• System and equipment warranties
4.	Safety Assurance	Verify that all electrical connections and components meet safety standards to prevent hazards such as electrical shocks, fires, and system failures.
5.	Detection of Unauthorized Modifications	Quality checks should reveal any unauthorized changes or tampering made to the system, in reference to the original design and installation practice.

3. Scope of Work

The scope of work for the quality check of an installed solar system involves a comprehensive evaluation to ensure that the system meets all design specifications, safety standards, and performance expectations. The quality check should cover various aspects including visual inspections, electrical measurements, performance tests, and documentation review.

- The team is required to visit the 1280 **(1000 Sub Centres, 107 Taluk Hospitals, 173 PHC's)** Health facilities throughout Karnataka as outlined in Annexure No. 2.
- The inspection report needs to be thoroughly completed, to ensure all checkpoints are filled.
- Completing the checklist involves accurately recording the available information acquired through physical visits to the health facility and in close coordination with the staff.
- To ensure thorough inspection, it is imperative to meticulously review and assess each component of the solar system by referring to the documents outlined in Annexure 1 chart. Also, Annexure 1 Chart A & B documents should be duly filled, in references made with Annexure 1 chart documents: 1C, 1D, 1E, 1F, 1G.

Sl. No	**Annexure 1 Chart**	
1	Annexure-1 A	Solar Installation Monitoring Checklist
2	Annexure-1 B	Monitoring Observation Report
3	Annexure-1 C	SLD/Concept sheet of solar system
4	Annexure-1 D	SLD/Concept sheet of load wiring
5	Annexure-1 E	Bill Of Materials of solar system, Luminaries & fans
6	Annexure-1 F	Bill Of Materials of load wiring
7	Annexure-1 G	Load details sheet

- Record detailed recommendations, feedback, suggestions, and issues in the provided format for comprehensive follow-up and develop a corrective action plan for identified issues.
- The team or person visited should be easily accessible to provide explanations for any clarifications needed regarding the checklist or provided information.
- The visiting team is advised to maintain respectful and attentive interactions with health staff.
- The monitoring should be done without disturbing the medical services and without disturbing the patients.

- The monitoring should be done without damaging the physical infrastructure of the health facility, and if so, the agency is liable for repair of the same
- The individual must inform the SELCO Foundation immediately if any urgent or major rectification is required.
- The final payment will be initiated only after the complete closure of the project (I.e., all the inputs required by Selco foundation are fully furnished and validated. Incorrect and incomplete inputs will be considered invalid)
- The team should be available for online meeting discussions as and when called for.
- If staff are unaware of the basic system functioning, it would be the responsibility of the agency to provide basic orientation to staff on the points mentioned above and document to same.
- Prior coordination/appointment with staff of respective health facility should be compulsorily made, in order to avoid revisits to the same site (Revisits to health centers and the expenses incurred for the same will be the taken care by the vendor/monitoring team and it will not be in the scope of SELCO Foundation to entertain such requests)

4. Requirement:

- The team is expected to provide the checklist, preferably in MS Excel format, along with Photos and its respective comments made. Raw data sheets along with the final digitized formats would be required.
- After every visit, district-wise subfolders containing all the relevant information should be uploaded into the specified folder created by SELCO Foundation.
- To ensure the task is completed within the given timeframe, adequate team members must be available and must look after their own transport, food, and lodging arrangements.
- The Team members should be over 18+ years of age.
- The team members should possess qualifications such as ITI, Diploma, BE, etc., and preferably should have experience in solar installation and maintenance activities. The biodatas of the assigned personnel are to be shared with SELCO Foundation prior to work initiation.
- The details of the tour plan and the information about the team members are to be shared with SELCO Foundation as per the agreed-upon timeline. Day wise updates (Travel plan, Task completion) should be compulsorily shared with SELCO Foundation on a regular basis.

5. Timelines:

15th January 2025 to 31st October 2025

6. Selection Criteria:

- The agency/consultant should have at least 3 - 5 years of proven experience in solar installation, Monitoring, design.
- Demonstrated experience of rectification in various sized solar plants
- Experience in preferably working with public health facilities.
- This assignment would require travel to project sites throughout Karnataka.

7. Payment Terms:

40%	After signing the contract
20%	After completion of 50% of the deliverables
20%	After completion of draft report of all the deliverables
20%	After submitting the final deliverables

8. 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/BE8t378bAyQYRjDv6 on before **15th January 2025.**

Any further queries please write to procurement@selcofoundation.org with a subject line: **"Agency for Quality & Safety Check of Solar Installation at the Public Health Facilities throughout Karnataka."**

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 agencies 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 willful 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 of 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 Bangalore. Likewise, the jurisdiction will vest with courts in Bangalore.

Annexure 1A

Solar installation monitoring checklist				
Sl. No.	**Observation point**	**If "Yes", then mark with (✓)**	**If "No", then mark with (X)**	**Remarks if any:**
	Solar Panels Setup			
1	Number of panels used in the installation matches with the number of panels mentioned in the B.O.M. sheet			
2	Panels installed have the same technical specifications as mentioned in the B.O.M. sheet			
3	Serial numbers & bar codes are present inside the panels			
4	Discoloration of the solar panels are not seen			
5	Damages are not seen on the solar panels (Both front & back sides)			
6	The solar panels are free from shadows			
7	Cables are tied to panel frame and are protected with conduit pipes			
8	Panels are mounted well within the roof area			
9	Panels are clammped and firm & stable			
10	R.C.C. roof, low elevation set-up: The wind shields are firmly fastened at the back of panels, along with concrete works/ballast blocks			
11	R.C.C. roof, regular set-up: Front side clearance from the roof surface and the panel is 2-feet			
12	R.C.C. roof, regular set-up: The length of concrete work is 1 ft. x 1 ft. x 1 ft. (LxBxH)			
13	R.C.C. roof, high elevation set-up: The length of concrete work is 1.5 ft. x 1.5 ft. x 1.5 ft. (LxBxH)			
14	The orientation of the panel is south facing (For sites in India)			
15	Tilt angle of the panel is as per the latitude of the location			
16	Tin roof: 4-Inch uniform elevation from the sheet roof and the panel is seen			
17	Tin roof wind deflectors: Wind deflectors are firmly fastened at the back of panels			
18	Tin roof: E.P.D.M./Silicone gel/Butyl sealant used			
19	M.M.S. & Panel are given earthing protection			
20	4 Sq. mm cable from panel-panel-M.M.S. are used, and 10 Sq. mm cable from M.M.S. to A.J.B. is used			
	A.J.B. (Array Junction Box) Setup			
1	A.J.B.s have the same technical specifications as mentioned in the B.O.M. sheet			
2	Positive & negative lines are separated with separate termination blocks			
3	Positive lines have the in-line fuses provided			
4	PV1-F cables are used			
5	Cables used are of the specifications as mentioned in the B.O.M. sheet			
6	Cable colour codes are followed			
7	All cables are provided with solid conduit pipe protection			
8	A.J.B. is mounted firmly over the wall surface			
9	M.C.B.s, SPDs used in the A.J.B. are of the specifications as mentioned in B.O.M. copy			
10	Earthing down conductor is connected to S.P.D. and D.C. earth pit			
11	There are no physical damages seen at the A.J.B.'s body			
12	A.J.B. glands are tightened			
	G.I.P.B. (Grid Input Protection Box) Setup			
1	G.I.P.B.s have the same technical specifications as mentioned in the B.O.M. sheet			
2	Cables used are of the specifications as mentioned in the B.O.M. sheet			
3	Cable colour codes are followed			
4	Cables are provided with solid conduit pipe protection			
5	G.I.P.B. is mounted firmly over the wall surface			
6	Earthing down conductor is connected to S.P.D. and A.C. earth pit			
7	M.C.B.s, S.P.D.s are of the specifications as mentioned in B.O.M. copy			
8	There are no physical damages seen at the G.I.P.B.'s body			
9	G.I.P.B. glands are tightened			
	Battery Bank Setup			
1	No. of batteries used in the installation matches with the no. of batteries mentioned in the B.O.M. sheet			
2	Batteries have the same technical specifications as mentioned in the B.O.M. sheet			
3	Batteries have the serial number & barcode over them			
4	No physical damages are seen at the battery body			
5	Battery bank is placed in a clean, dust-free and dry place			
6	Battery room is well ventilated			
7	2-Inch ventilation space is provided between batteries			
8	There is no direct sunlight falling over the batteries			
9	Acid absorbent mat is provided at both the racks			
10	Petroleum based jelly/Vaseline is applied at all terminals of batteries			
11	Cable lugs are insulated			
12	Battery caps are firmly fixed at each terminal			
13	Battery cable size used should be as specified in the B.O.M. sheet			
14	Conduit pipe protection is provided to cables			
15	Float indicators are not damaged			
16	Distilled water level is up to the green mark of the indicator			
17	There are no fire and flammable materials placed/stored around the battery bank			
18	Minimum cable distance is maintained between battery bank and the inverter (No looping of cables)			
19	Cables don’t have sharp bending			
20	Insulation mats are provided			
21	Battery rack setup is as per the specifications mentioned in the B.O.M. sheet			
	D.C. Combiner Box Setup			
1	D.C.C.B has the same technical specifications as mentioned in the B.O.M. sheet			
2	D.C.C.B. is mounted firm on to the wall surface			
3	The number of H.R.C. fuses provided are as per the B.O.M. specifications			

4	H.R.C. fuse ratings are as per the B.O.M. specifications			

	Charge Controller Setup (if Applicable)			
1	Charge Controllers have the same technical specifications as mentioned in the B.O.M sheet			
2	Charge Controllers have the serial number & barcode mentioned over them			
3	There are no damages seen on the Charge Controller body			
4	Charge Controller display is clearly readable			
5	Good ventilation space is provided around the Charge Controller			
6	There is no direct sunlight over the Charge Controller			
7	The Chargecontroller is placed in a clean, dust-free and dry place			
8	There are no flammable materials placed around the Chargecontroller			
9	Charge controller is easy to reach and easy to read the display parameters			
10	Cables entering and exiting the charge controller are intact, and there is no loose connection			
11	Cables connected with chargecontroller are given conduit pipe protection			
12	There are no warning /error messages seen on the display			
13	Cable sizes used are as per the B.O.M. specifications			
14	Cables don't coil or have sharp bendings			
15	Charge Controller is mounted firmly on the wall			
	Inverter/P.C.U. Setup			
1	Inverters have the same technical specifications as mentioned in the B.O.M sheet			
2	Inverters have the serial number & barcode mentioned over them			
3	There are no damages seen on the inverter body			
4	Inverter display is clearly readable			
5	Inverter makes minimal noise during operations			
6	The room is well ventilated			
7	Good ventilation space is provided around the inverter			
8	3-inch ground clearance is provided for ventilation (< 2 kVA systems)			
9	There is no direct sunlight over the inverter			
10	The inverter is placed in a clean, dust-free and dry place			
11	There are no flammable materials placed around the inverter			
12	Inverter is easy to reach and easy to read the display parameters			
13	Cables entering the inverter are intact, and there is no loose connection			
14	Cables connected with inverter are given conduit pipe protection			
15	Priority settings are made as Solar-> Battery-> Grid			
16	Cable sizes used are as per the B.O.M. specifications			
17	Cables don't coil or lie on the floor			
18	Battery-Inverter distance is 50 cm. to 75 cm.			
19	Ground mounted: PCU is firm & stable on the resting platform			
20	Wall mounted: PCU is fixed firmly on the wall			
	Changeover Switch Setup			
1	Changeover switches have the same technical specifications as mentioned in the B.O.M. sheet			
2	Labelling is made for both the changeover switches			
3	(In case of changeover switch-1) Connectivity for both solar and grid is checked			
4	(In case of changeover switch-1) The orientation of the switch is towards solar power			
5	(In case of changeover switch-2) Connectivity for both grid and generator are checked			
6	(In case of changeover switch-2) The orientation of the switch is towards grid power			
7	Changeover switches are firmly mounted on the walls			
8	Earthing protection is provided for the change-over switches including the doors			
	Lightning Arrestor Setup			
1	Lightning arresters have specifications as mentioned in the B.O.M. sheet			
2	There are no physical damages seen to the L.A.s			
3	There is no corrosion seen in the L.A.s			
4	Insulation is provided between L.A.s & elevation pole (ceramic or porcelain insulators)			
5	Sheet roof: The entire L.A. set-up is firmly fixed over the roof surface using T-base			
6	R.C.C. roof: The entire L.A. set-up is firmly fixed over the roof surface using anchors and concrete blocks			
7	The L.A. set-up is given additional support by using support-wires			
8	R.C.C. roof: G.I. strips are supported with saddle insulators			
9	Sheet roof: G.I. strips are supported with capping-casing			
10	G.I. conductor strip does not make any contact with other D.C. cables or with any cables passing around			
11	The L.A. set-up stands vertical to the ground surface			
12	The L.A. maintains a distance of 0.75 metres from the panels			
13	The tip-height of the L.A. is 3-metre or more from the panel-top edge			
	Earthing Pits Setup			
1	The no. of electrodes used, matches with the no. of electrodes mentioned in the B.O.M. sheet			
2	Electrodes have the same technical specifications as mentioned in the B.O.M. sheet			
3	There is no physical damages seen at the electrodes			
4	There is no corrosion seen over the electrodes			
5	The no. of earth pits made matches with the no. of earth pits as specified in the B.O.M. sheet			
6	Separate earth pit is provided for A.J.B., G.I.P.B., Inverter and lightning arrestor			
7	Chemical earthing is made, and the pit are filled with chemical powder, up to the tip/green mark of electrode			
8	Chambers are built around the earth pits			
9	Earth conductors are protected with conduit pipe, till the pits			
10	Earth conductors and electrodes are making full contact			
11	Distance between pit-to-pit is 3 meters			

12	Distance between pit to building foundation/water sump is 1.5 meters			
13	Earth electrodes are fully buried in the earth			
14	Earth pit diameter is 1-feet & 8-feet by depth			

15	Earthing pits are made at backyard of the centre			
16	Earthing cable are of the size as mentioned in the B.O.M.			
17	Earth pits are given identification/labelling (A.J.B., G.I.P.B., Inverter, L.A.)			
	Cable Routing & Termination			
1	The sizes of the cables used, matches with the specifications as mentioned in the B.O.M. sheet			
2	Cable lugs are used for termination of cables			
3	Cable lugs are properly crimped			
4	Cable lugs are insulated			
5	There are no loose connections seen at the end termination points			
6	Cables are given solid conduit pipe protection along their entire run			
7	u.P.V.C. conduit pipes are used for cable protection			
8	M.C.-4 connectors are properly interlocked			
9	Cables don't make unnecessary loops/circles			
10	(In case of overhead transmission from block-to-block), cables are given G.I. wire support along with conduit pipe protection, and are given pole-support from sagging			
11	Labelling of cables/conduit pipes are done for the panels, batteries, inverter and load side			
12	Dressing/laying of conduit pipes are neatly done			
13	Conduit pipes are firmly held to building surfaces with metal clamps			
	Fire Extinguisher Setup			
1	The specifications of the fire extinguisher is as per the specification in B.O.M. sheet			
2	The pointer of the indicator lies in the green zone			
3	Fire extinguisher is placed at the entrance of battery-inverter room			
4	Fire extinguisher is placed in cool place			
5	Fire extinguisher can be easily reached and picked up			
	Luminaries Setup			
1	The no. of L.E.D. bulbs & tube lights installed matches with the numbers as specified in the B.O.M. sheet			
2	The specifications of the luminaries are as per the specifications in the B.O.M. sheet			
3	The luminaries installed are functional			
4	There are no physical damages seen on the luminaries			
5	The luminaries are fixed firm over the wall/ceiling			
	Fan Setup			
1	The no. of fans & regulators installed, matches with the numbers as specified in the B.O.M. sheet			
2	The specifications of the fans & regulators, are as per the specifications in the B.O.M. sheet			
3	The installed fans and regulators are functional			
4	Fans and regulators are intact and there is no physical damages seen			
5	Fan regulators control the speed at different levels			
6	The fans are fixed firmly under the ceiling/on the wall			
	Medical Equipment Setup			
1	The no. of medical equipment installed, matches with the numbers as specified in the B.O.M. sheet			
2	Medical equipment is assembled and are functional			
	M.C.B.s, A.C., D.C. Isolators & Load Side Protection Setup			
1	A.J.B.'s M.C.B. ratings are as per the B.O.M. specifications			
2	A.J.B.'s S.P.D. ratings are as per the B.O.M. specifications			
3	G.I.P.B.'s M.C.B. ratings are as per the B.O.M. specifications			
4	G.I.P.B.'s S.P.D. ratings are as per the B.O.M. specifications			
5	Load M.C.B. rating is as per the B.O.M. specifications			
6	When PV isolator is used: Switch disconnector installed is as per the B.O.M. specifications			
7	When battery isolator is used: Switch disconnector installed is as per the B.O.M. specifications			
8	When grid isolator is used: Switch disconnector installed is as per the B.O.M. specifications			
9	Isolator box is firmly mounted on the wall & is easy to reach			
	Metal Plaque Setup			
1	Metal plaques are installed at the reception/main-entrance of the health centre			
2	Metal plaque is clearly visible to the visitors at the health centre			
3	Metal plaques are not damaged			
	DOs and DON'Ts Plaque Setup			
1	DOs and DONTs practices foam plaques are pasted in the Battery/Inverter room			
2	Size of the foam plaques are as per the B.O.M. specifications			
3	Plaques have the emergency contact details and the customer-care details mentioned in them			
4	The plaques are firmly attached to the wall using round-clips			
5	Plaques are easy to reach and read.			
	Luminaries, Fans & Medical equipment Plaque Setup			
1	The B.O.M. sheet containing number of fans, luminaries & medical equipment provided to the health centre is pasted in the battery-inverter room			
	Load Details Plaque Setup			
1	The load details sheet containing the list of solar loads which are to be connected to inverter is pasted in the battery-inverter room			
	Solar System - Single Line Diagram Setup			
1	The S.L.D. of the solar system installed, is pasted in the battery-inverter room, and it is firmly pasted			
	Other Sign Boards Setup			
1	High voltage/caution sign board is pasted at the entrance of the battery-inverter room			
2	No-fire poster is pasted at the entrance of the battery-inverter room			

3	PASS poster (Fire extinguishing instructions) is pasted at the entrance of the battery-inverter room			
Complete System Functional Status				
1	Solar system functionality is normal without any fault/warning messages			
Solar System - Documentation				
1	In-efficient equipment handover document is cleared			

2	Solar system handover document is cleared			
3	Installation completion report with electrical readings are made			
Load Wiring Installation Setup				
1	All critical solar loads (As specified in the load details) are connected to the solar system			
2	The new solar lines installed, are functional			
3	Non-solar loads (Heavy, inefficient loads) are connected to the grid lines			
4	RCCBs used are as per the B.O.M. specifications			
5	Isolators used are as per the B.O.M. specifications			
6	M.C.B.s used are as per the B.O.M. specifications			
7	A separate circuit connects only fans, bulbs and tube lights			
8	A separate circuit connects only sockets			
9	The sockets are functional			
10	The number of sockets installed matches with the numbers as specified in the B.O.M. sheet			
11	The specifications of the installed sockets are as per the B.O.M. specifications			
12	The switches are functional and have specifications as mentioned in B.O.M sheet			
13	The number of switches installed matches with the numbers as specified in the B.O.M. sheet			
14	Labelling of the circuits are made			
15	Cable sizes used are as per the B.O.M. specifications			
16	Separate earthing is provided for medical loads			
17	Cables are protected using u.P.V.C. conduit pipes			
Load Wiring - Single Line Diagram				
1	The S.L.D. of the load wiring installation (circuits) and the loads they are connected with, is pasted at the entrance of the battery-inverter room			
Load Wiring - Documentation				
1	Installation completion report is made			

Sl. No.	Image details
1	Clear image of solar panels with Module mounting structure from a range in which gives better visibility (Please capture image with standard marking)
2	Clear image of batteries from a range in which gives better visibility including the water level (Please capture image with standard marking)
3	Clear image of inverter from a range in which gives better visibility (Front and back) (Please capture image with standard marking)
4	Clear image of the charge controller
5	Clear image of the inverter switch disconnectors C Load MCB
6	Clear image of cable routing from the complete system (Please capture image with standard marking)
7	Clear image of AJB
8	Clear image of GIPB
9	Clear image of Lightning Arrestor
10	Clear image of Earthing pits
11	Clear image of Changeover Switch
12	Clear image of DO's and Don'ts Poster
13	Clear image of Foam Palques (SLD, High Voltage, PASS, No Fire, Danger, Risk of Electric Shock)
14	Clear image of Metal Plaque
15	Clear image of Outdoor Light
16	Clear image of the Health Centre (Long Shot)
17	Clear image of Health staff with Solar system

Note: Pictures taken should cover all the details mentioned in the master checklist for each

Annexure-1B

MONITORING OBSERVATION REPORT						
1	Name of Visitor					
2	Date					
3	Visit Number					
4	Date:					
5	Name & Address of Installation site: (Please mention the complete address of the site including Health facility name, address, state, district, block, P.O, Pin code etc.)					
Solar Installation Bill Of Material (DC System)						
Sl. No.	**Product**	**Serial Number**	**Capacity**	**Quantity**	**As per BOM Yes/No**	
1	Solar Module					
2	Solar Battery					
3	Module Mounting Structure					
4	Solar Chrage Controller (CCU)					
5	Copper Cable (Module – CCU) - PV 1F (Solar Cables)					
6	Copper Cable (Battery - Battery & Battery - CCU) - (DC Cables)					
7	Battery Trolley Box with Wheels - Hard Plastic					
8	MC4 Connector with Inline Fuse					

9	MC4 Connectors					
10	MC4 Connector Y Branch					
11	Double Pole MCB (load Side) with Conduit box					
12	Single Line Diagram (SLD) for the system					
13	Do's and Don'ts Practices Poster (Solar Panels, Battery and CCU)					
14	Signboards - Danger (Electric Shock), No Fire and PASS					
15	Fire Extinguisher					
16	Metallic Enclosure with isolators having minimum gap of 1 inch (PV & Battery)					
17	Consumables					
Bill of material (For luminaries & fans)						
Sl. No.	**Products**	**Make**	**Capacity**	**Installed Quantity**	**Balance Quantity**	Additional Information
1	LED Bulb					
2	LED Bulb					
3	LED Tube light					
4	LED Tube light					
6	Wall Mounted Fan					
7	Mobile Charging USB Port					

Sl. No.	System Side As per BOM	Tick Yes/No	Remarks			
1	Solar panel setup					
2	Cables Size as per BOM					
3	Load MCB Rating is Correct					
4	Battery set up					
5	CCU Setup					
6	Cable management					
	Date of recording:		**Time of recording:**			
				(Tick on the appropriate box)		
	Weather Condition at the time of recording	Clear Sky	Partially Cloudy	Over cast	Rainy	
	At the CCU (Input side)					
	Test Condition	**Voltage in DC**	**Measured Value**	**Current in DC**	**Measured Value**	
	Measurement with CCU Solar Panel Input MCB OFF	Voc (in Volts)		NA	NA	
	CCU Solar Panel Input MCB ON (Wait for 15 Seconds)	Vmp (in Volts)	String 1: String 2: String 3: String 4:	Imp (in Amperes)	String 1: String 2: String 3: String 4:	
	Battery Bank parameters(With Grid OFF) and Load ON					

	Particulars	Measured Value	Unit			
	Battery Bank Volatge		V			
	Battery Bank Current		A			
	CCU parameters					
	Particulars	**Measured Value**	**Unit**			
	Load voltage/CCU output voltage		V			
	CCU Output current at full load (All solar loads turned on continuously for 10 minutes)		A			
	Measurements at Sockets (For both 1-Phase & 3-Phase connectivity)					
	Particulars	Measured Value	Unit			
	Voltage between Positive & Negative Line		V			
Images to be captured during Solar installation visit:						
Sl. No.	**Image details**	**Required no. of images**	**Tick if taken**	**Remarks**		
1	Clear image of solar panels with Module mounting structure from a range in which gives better visibility (Please capture image with standard marking)	2				
2	Clear image of batteries from a range in which gives better visibility (Please capture image with standard marking)	1				

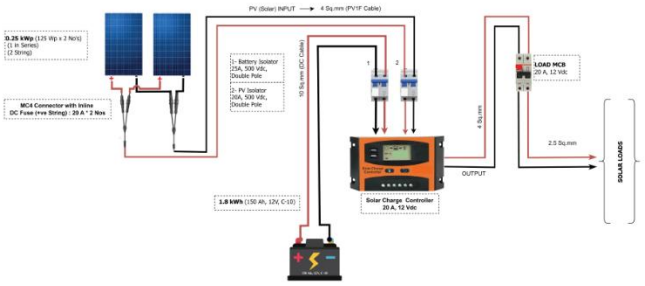
3	Clear image of CCU from a range in which gives better visibility (Front and back) (Please capture image with standard marking)	2				
4	Clear image of the CCU switch controls	1				
5	Clear image of cable routing from the complete system (Please capture image with standard marking)	3				
6	Clear image of DO's and Don'ts Poster	1				
7	Clear image of Metal Plaque	1				
8	Clear image of Connected Loads	1				
9	Clear image of the Health Centre (Long Shot)	1				
10	Clear image of Health staff with Solar system	1				
Images to be captured during Load Wiring						
Sl. No.	**Image details**	**Required no. of images**	**Tick if taken**	**Remarks**		
1	Distribution or MCB Box if Visible	2				
2	Switchboard	3				
3	Socket	3				
4	Fan and Bulb Points	5				
5	Outdoor Point	2				
Data to Be Captured for Solar Installation Side						
Sl. No	**Description**	**Distance in Feet**	**Remarks**			
1	Module to CCU					
2	CCU to Loads					

Annexure-1C

Sub Centre Solar System Details

Solar System Details	
Solar Panel Capacity	0.25 kWp (125 Wp x 2 Nos)
Solar Battery Capacity	1.8 kWh (150 Ah, 12 V x 1 Nos)
Solar Charge Controller Capacity	20 A, 12 Vdc x 1 No
Maximum Load that can be connected	0.164 kW
Maximum Units of Energy(kWh) usage per day	0.475 kWh

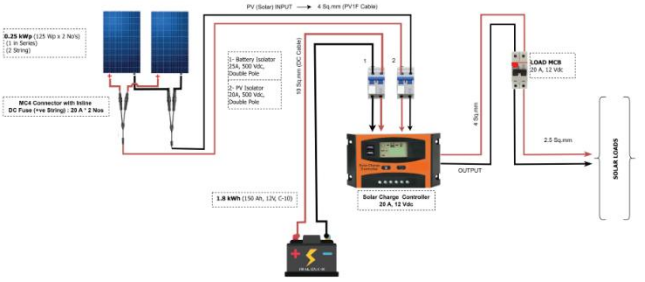
Equipments Connected to Solar System	
Other Equipments	Lights & Fans



Staff Quaters Solar System Details

Solar System Details	
Solar Panel Capacity	0.25 kWp (125 Wp x 2 Nos)
Solar Battery Capacity	3.6 kWh (150 Ah, 12 V x 2 Nos)
Solar Charge Controller Capacity	20 A, 12 Vdc x 1 No
Maximum Load that can be connected	0.146 kW
Maximum Units of Energy(kWh) usage per day	0.746 kWh

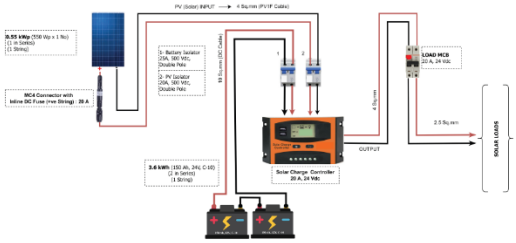
Equipments Connected to Solar System	
Other Equipments	Lights & Fans



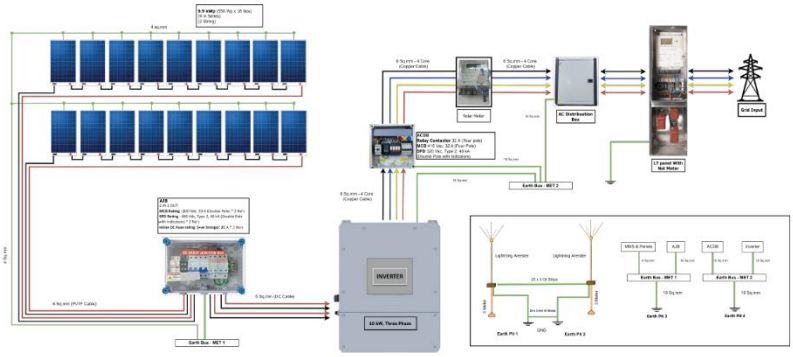
Sub Centre Solar System Details

Solar System Details	
Solar Panel Capacity	0.55 kWp (550 Wp x 1 No)
Solar Battery Capacity	3.6 kWh (150 Ah, 12 V x 2 Nos)
Solar Charge Controller Capacity	20 A, 24 Vdc x 1 No
Maximum Load that can be connected	0.310 kW
Maximum Units of Energy(kWh) usage per day	1.221 kWh

Equipments Connected to Solar System	
Other Equipments	Lights & Fans

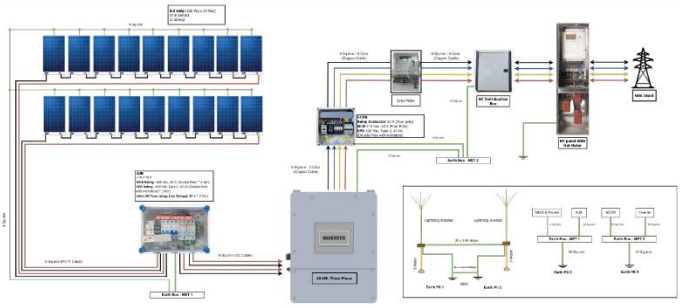


Taluk Hospital On-Grid Solar System Details



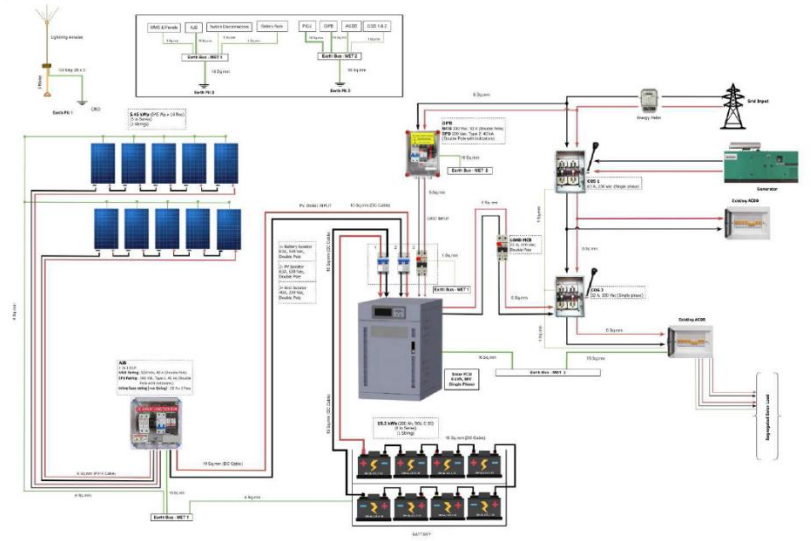
Solar System Details			
Solar Panel Capacity	9.9 kWp (550 Wp x 18 Nos)	Solar Inverter Capacity	10 kW, Three Phase x 1 No

Taluk Hospital On-Grid Solar System Details

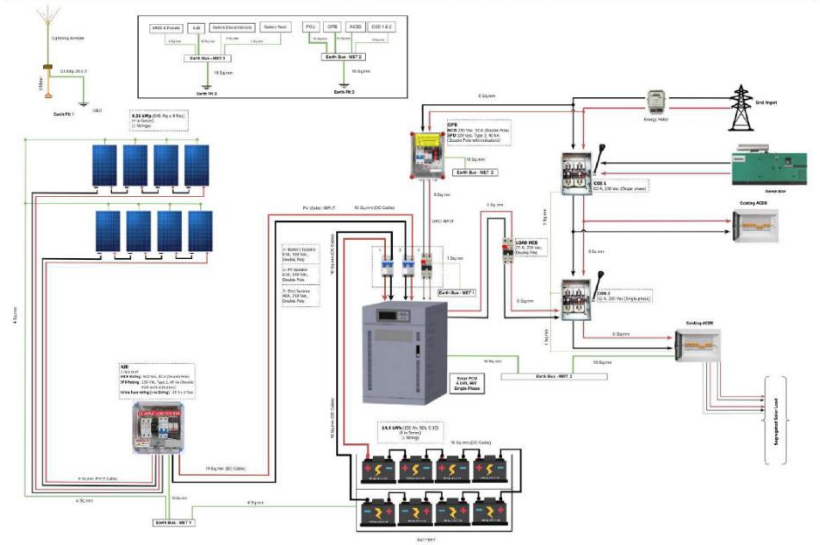


Solar System Details			
Solar Panel Capacity	9.9 kWp (550 Wp x 18 Nos)	Solar Inverter Capacity	10 kW, Three Phase x 1 No

Solar System SLD For Primary Health Centre Option 2

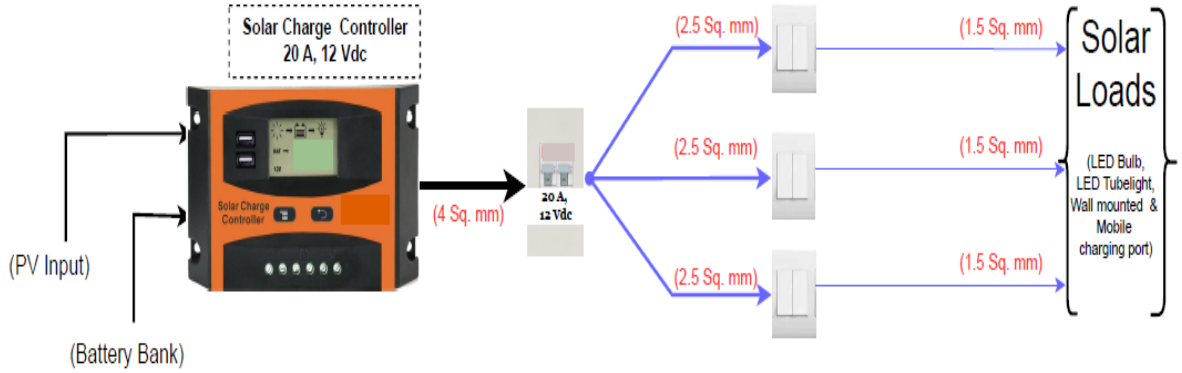


Solar System SLD For Primary Health Centre Option 1

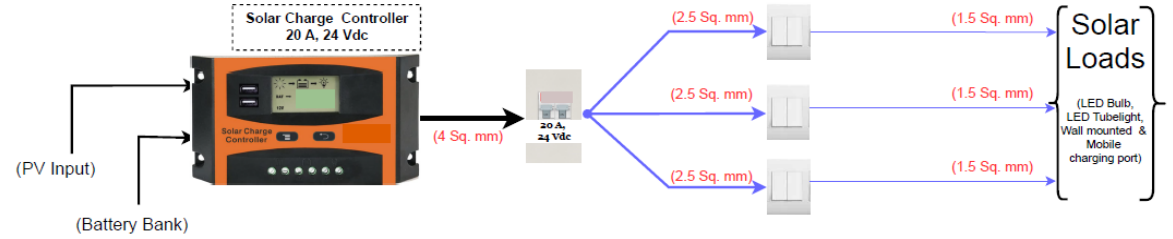


Annexure-1D

Load Wiring SLD For Sub Center/Staff Quaters Option 2 & 3



Load Wiring SLD For Sub Center Option 1



ANNEXURE 1E/F : TECHNICAL SPECIFICATIONS OF SOLUTIONS

Sub Centre Option 1: Sub Centre + Staff Quarters (Integrated Building)

Bill of Materials for Solar System:

Sl.No	Products	Capacity	Qty
1	Solar Module	Solar Photovoltaic Array of Total Minimum Capacity 550 Wp (Mono perc) Panel Make and Model should be approved under MNRE ALMM List	1 No
2	Solar Battery	Valve regulated lead-acid (VRLA) battery - 150 Ah @ 12 V, C – 10 (Battery terminal caps used, must be big enough to cover the entire terminal area and the nut bolt assembly. Also, spring washers to be used at each battery terminal).	2 Nos
3	Module Mounting Structure (MMS*)	Solar PV Module support structure. **RCC Roof :** Lower elevation/Landscape Orientation (Triangular MMS with concrete block). **It should withstand the wind speed of 100 – 150 km/hr It should be suitable for above mentioned solar module** - As per Sl.No. 1	1 Set.
4	Solar Charge Controller (CCU)	20 A, 24 Vdc with dedicated load port. (Wall Mount with base plate)	1 No.
5	Copper Cable Red+Black (Module – CCU) - PV1- F (Solar Cables)	**4 sq.mm** UV Protected Cable	30 m
6	Copper Cable (Battery -Battery & Battery - CCU) - (DC Cables)	**10 Sq.mm** (Tin-coated copper lugs with insulation to be used at each battery terminal).	10 m
7	Battery trolley box with wheels - Hard Plastic	For 150 Ah, 12 V - 2 Nos	1 Set.
8	MC4 Connector with Inline Fuse	Inline DC Fuse rating*: (+ve Strings): **20 A**	1 No.
9	MC4 Connectors	Male and Female	1 Set
10	Double Pole MCB (load Side) with Conduit box	**20 A, 24 Vdc**	1 No.

11	Single Line Diagram - (SLD) for the system	Sun board with 3 mm Thickness - 4 ft x 2 ft	1 No.
12	Do's and Don'ts Practices Poster (Solar Panels, Battery and CCU)	Foam Plaque - A4 Size for each	1 No.
13	Signboard for Danger, No Fire and PASS	Danger - Electric shock - A4 No Fire - A5 PASS - A4	1 No each
14	Fire Extinguisher	Multi Purpose - ABC Dry powder extinguishing agents (or) CO2 type with 2 kg net weight of the charge inside the cylinder.	1 No
15	Metallic Enclosure with Isolator's having minimum gap of 1 inch. (PV and Battery)	1st MCB for Battery Input - 25 A, 500 Vdc, Double Pole 2nd MCB for PV Input – 20 A, 500 Vdc, Double Pole	1 Set
16	Consumables	Includes: UPVC pipes and fittings, Flexible pipes, Screws, Cable lugs, Nuts and Bolts etc....	1 Set

Bill of Materials for Load Wiring:

Sl.no	Item	Description	UoM	Qty
1	Switch (Modular)	6 A, 1-Way (White colour).	Pcs	16
2	Socket (Modular)	3 pin, 6 A (White colour).	Pcs	5
3	USB Port for mobile charging	Input Voltage - 24 Vdc (Max - 28 Watt)	Pcs	2
4	Cables - For Load Connection (Red)	1.5 Sq. mm, EFFR copper cables. (Interconnecting switchboards with loads)	Mtrs	90
	Cables - For Load Connection (Black)	1.5 Sq. mm, EFFR copper cables. (Interconnecting switchboards with loads)	Mtrs	90
5	Power Cable - From CCU to Room (Red)	2.5 Sq. mm, EFFR copper cables. (Interconnecting distribution box with switchboards)	Mtrs	50
	Power Cable - From CCU to Room (Black)	2.5 Sq. mm, EFFR copper cables. (Interconnecting distribution box with switchboards)	Mtrs	50

6	Ceiling Rose	FR polycarbonate outer housing with ducts, Inner metal ring with high conductive brass terminals (White colour).	Pcs	7
7	Angle holder	FR polycarbonate outer housing with ducts, Inner metal ring with high conductive brass terminals (White colour).	Pcs	2
8	1 modular Switch Box with plate	Surface mounting type, ABS material with brass studs, Provision for conduits. (White colour)	Pcs	7
9	2 modular Switch Box with plate	Surface mounting type, ABS material with brass studs, Provision for conduits. (White colour)	Pcs	2
10	3 modular Switch Box with plate	Surface mounting type, ABS material with brass studs, Provision for conduits. (White colour)	Pcs	5
11	UPVC Conduit Pipe (White)	Polypropylene material, 19 mm diameter, White colour, Flame retardant, Anti-distortion.	Pcs	50
12	UPVC - Coupler (White)	UPVC pipe (White color), 19 mm diameter, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable.	Pcs	10
13	UPVC Conduit Tee Joint	UPVC pipe (White color), 19 mm diameter, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable.	Pcs	8
14	UPVC - Short & Long Elbow (White)	UPVC material, 19 mm diameter, White colour, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable. "	Pcs	30
15	2way Junction Box	UPVC material, 19 mm diameter, White colour, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable.	Pcs	6
16	3way Junction Box	UPVC material, 19 mm diameter, White colour, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable.	Pcs	6
17	Square Box		Pcs	9

18	Plastic wall lug	UPVC material, Size - 25 x 5 mm, Crack- proof, White colour, Eco-friendly.	Packs	5
19	Screw	Stainless steel/Galvanized Iron - rust-free material, Size - 35 x 8 mm, Flat head with deep slot.	Packs	1
20	Screw	Stainless steel/Galvanized Iron - rust-free material, Size - 25 x 7 mm, Flat head with deep slot.	Pcs	1
21	Electrical Insulating Tape	Size - 18 x 0.125 mm, High insulating resistance, Moisture & Corrosion resistant, Flame-retardant, Long-lasting adhesion.	Pcs	2
22	Pipe Saddle Clamps	UPVC material, Size: 20 mm diameter, Light duty pipe clamp, Single nail.	Pcs	100
23	Saddle Nail	Concrete nail Size - 1.5 inch GI/ Astel string steel	kg	0.6
24	Cable Tie	Polypropylene Material, Size – 150 mm, White Colour.	Packs	1
25	Cable Lugs - 1	2.5 Sq.mm, Pin-type, Tin-coated copper.	Pcs	8
26	Flexible Pipe	Polypropylene material, 20 mm diameter, White colour, Flame retardant, Anti-distortion.	Mtrs	5
27	Labelling Tags (Load identification tags)	Size - 3 x 1 Inch, Synthetic paper, Self- adhesive, Fluorescent Green colour, Waterproof, Temperature resistant.	Pack	1
28	Labelling Tags (Cable identification tags)	Size - 40 x 10 mm Synthetic paper, Self-adhesive, White colour, Waterproof, Temperature resistant.	Pack	1
29	Labelling Pen 1 Marker Pen	Line Width - 0.4 mm Dark black colour water resistance, Temperature resistance	Pcs	1
30	Labelling Pen 2 Marker Pen	Line Width - 2 mm Dark black colour water resistance, Temperature resistance	Pcs	1

Bill of Materials for Luminaries:

Sl.no	Products	Capacity	Unit	Qty
1	LED Tube light	20 W, 24 Vdc	Nos	4
2	LED Tube light	10 W, 24 Vdc	Nos	3
3	LED Bulb	5 W, 24 Vdc	Nos	2
4	Wall Mounted Fan	28 W, 24 Vdc	Nos	5
5	Mobile Charging USB Port	Input - 24 Vdc	Nos	2

Sub Centre Option 2: Sub Centre (Separate Building)

Bill of Materials for Solar System:

Sl.No	Products	Capacity	Qty
1	Solar Module	Solar Photovoltaic Array of Total Minimum Capacity 125 Wp Panel Manufacturer should be approved under MNRE ALMM List	2 Nos
2	Solar Battery	Valve regulated lead-acid (VRLA) battery - 150 Ah @ 12 V, C – 10 (Battery terminal caps used, must be big enough to cover the entire terminal area and the nut bolt assembly. Also, spring washers to be used at each battery terminal).	1 No
3	Module Mounting Structure (MMS*)	Solar PV Module support structure. **RCC Roof :** Lower elevation/Landscape Orientation (Triangular MMS with concrete block). **It should withstand the wind speed of 100 – 150 km/hr It should be suitable for above mentioned solar module** - As per Sl.No. 1	1 Set.
4	Solar Charge Controller (CCU)	20 A, 12 Vdc with dedicated load port. (Wall Mount with base plate)	1 No.
5	Copper Cable Red+Black (Module – CCU) - PV1- F (Solar Cables)	**4 sq.mm** UV Protected Cable	30 m

6	Copper Cable (Battery -Battery & Battery - CCU) - (DC Cables)	**10 Sq.mm** (Tin-coated copper lugs with insulation to be used at each battery terminal).	10 m
7	Battery trolley box with wheels - Hard Plastic	For 150 Ah, 12 V - 1 No	1 Set.
8	MC4 Connector with Inline Fuse	Inline DC Fuse rating*: (+ve Strings): **20 A**	2 No.
9	MC4 Connector	Male and Female	1 set
10	MC4 Connectors – Y branch	Male and Female	1 Set
11	Double Pole MCB (load Side) with Conduit box	**20 A, 12 Vdc**	1 No.
12	Single Line Diagram - (SLD) for the system	Sun board with 3 mm Thickness - 4 ft x 2 ft	1 No.
13	Do's and Don'ts Practices Poster (Solar Panels, Battery and CCU)	Foam Plaque - A4 Size for each	1 No.
14	Signboard for Danger, No Fire and PASS	Danger - Electric shock - A4 No Fire - A5 PASS - A4	1 No each
15	Fire Extinguisher	Multi Purpose - ABC Dry powder extinguishing agents (or) CO2 type with 2 kg net weight of the charge inside the cylinder.	1 No
16	Metallic Enclosure with Isolator's having minimum gap of 1 inch. (PV and Battery)	1st MCB for Battery Input - 25 A, 500 Vdc, Double Pole 2nd MCB for PV Input – 20 A, 500 Vdc, Double Pole	1 Set
17	Consumables	Includes: UPVC pipes and fittings, Flexible pipes, Screws, Cable lugs, Nuts and Bolts etc....	1 Set

Bill of Materials for Load Wiring:

Sl.no	Item	Description	UoM	Qty

1	Switch (Modular)	6 A, 1-Way (White colour).	Pcs	8
2	Socket (Modular)	3 pin, 6 A (White colour).	Pcs	3
3	USB Port for mobile charging	Input Voltage - 12 Vdc (Max - 25 Watt)	Pcs	1
4	Cables - For Load Connection (Red)	1.5 Sq. mm, EFFR copper cables. (Interconnecting switchboards with loads)	Mtrs	50
	Cables - For Load Connection (Black)	1.5 Sq. mm, EFFR copper cables. (Interconnecting switchboards with loads)	Mtrs	50
5	Power Cable - From CCU to Room (Red)	2.5 Sq. mm, EFFR copper cables. (Interconnecting distribution box with switchboards)	Mtrs	30
	Power Cable - From CCU to Room (Black)	2.5 Sq. mm, EFFR copper cables. (Interconnecting distribution box with switchboards)	Mtrs	30
6	Ceiling Rose	FR polycarbonate outer housing with ducts, Inner metal ring with high conductive brass terminals (White colour).	Pcs	3
7	Angle holder	FR polycarbonate outer housing with ducts, Inner metal ring with high conductive brass terminals (White colour).	Pcs	1
8	1 modular Switch Box with plate	Surface mounting type, ABS material with brass studs, Provision for conduits. (White colour)	Pcs	3
9	2 modular Switch Box with plate	Surface mounting type, ABS material with brass studs, Provision for conduits. (White colour)	Pcs	1
10	3 modular Switch Box with plate	Surface mounting type, ABS material with brass studs, Provision for conduits. (White colour)	Pcs	3
11	UPVC Conduit Pipe (White)	Polypropylene material, 19 mm diameter, White colour, Flame retardant, Anti-distortion.	Pcs	30
12		UPVC pipe (White color), 19 mm diameter, Flame retardant, Low halogen, Low smoke,		

	UPVC - Coupler (White)	Smoke suppressing, Temperature stable.	Pcs	7
13	UPVC Conduit Tee Joint	UPVC pipe (White color), 19 mm diameter, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable.	Pcs	5
14	UPVC - Short & Long Elbow (White)	UPVC material, 19 mm diameter, White colour, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable. "	Pcs	15
15	2way Junction Box	UPVC material, 19 mm diameter, White colour, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable.	Pcs	4
16	3way Junction Box	UPVC material, 19 mm diameter, White colour, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable.	Pcs	4
17	Square Box		Pcs	4
18	Plastic wall lug	UPVC material, Size - 25 x 5 mm, Crack-proof, White colour, Eco-friendly.	Packs	3
19	Screw	Stainless steel/Galvanized Iron - rust-free material, Size - 35 x 8 mm, Flat head with deep slot.	Packs	1
20	Screw	Stainless steel/Galvanized Iron - rust-free material, Size - 25 x 7 mm, Flat head with deep slot.	Pcs	1
21	Electrical Insulating Tape	Size - 18 x 0.125 mm, High insulating resistance, Moisture & Corrosion resistant, Flame-retardant, Long-lasting adhesion.	Pcs	2
22	Pipe Saddle Clamps	UPVC material, Size: 20 mm diameter, Light duty pipe clamp, Single nail.	Pcs	60
23	Saddle Nail	Concrete nail Size - 1.5 inch GI/ Astel string steel	kg	0.6
24	Cable Tie	Polypropylene Material, Size – 150 mm,	Packs	1

		White Colour.		
25	Cable Lugs - 1	2.5 Sq.mm, Pin-type, Tin-coated copper.	Pcs	6
26	Flexible Pipe	Polypropylene material, 20 mm diameter, White colour, Flame retardant, Anti-distortion.	Mtrs	5
27	Labelling Tags (Load identification tags)	Size - 3 x 1 Inch, Synthetic paper, Self-adhesive, Fluorescent Green colour, Waterproof, Temperature resistant.	Pack	1
28	Labelling Tags (Cable identification tags)	Size - 40 x 10 mm Synthetic paper, Self-adhesive, White colour, Waterproof, Temperature resistant.	Pack	1
29	Labelling Pen 1 Marker Pen	Line Width - 0.4 mm Dark black colour water resistance, Temperature resistance	Pcs	1
30	Labelling Pen 2 Marker Pen	Line Width - 2 mm Dark black colour water resistance, Temperature resistance	Pcs	1

Bill of Materials for luminaries:

Sl.no	Products	Capacity	Unit	Qty
1	LED Tube light	20 W, 12 Vdc	Nos	2
2	LED Tube light	10 W, 12 Vdc	No	1
3	LED Bulb	5 W, 12 Vdc	No	1
4	Wall Mounted Fan	28 W, 12 Vdc	Nos	3
5	Mobile Charging USB Port	Input - 12 Vdc	No	1

Sub Centre Option 3: Staff Quarters (Separate Building)

Bill of Materials for Solar System:

Sl.No	Products	Capacity	Qty
1	Solar Module	Solar Photovoltaic Array of Total Minimum Capacity 125 Wp Panel Manufacturer should be approved under MNRE ALMM List	2 Nos

2	Solar Battery	Valve regulated lead-acid (VRLA) battery - 150 Ah @ 12 V, C – 10 (Battery terminal caps used, must be big enough to cover the entire terminal area and the nut bolt assembly. Also, spring washers to be used at each battery terminal).	1 No
3	Module Mounting Structure (MMS*)	Solar PV Module support structure. **RCC Roof :** Lower elevation/Landscape Orientation (Triangular MMS with concrete block). **It should withstand the wind speed of 100 – 150 km/hr It should be suitable for above mentioned solar module** - As per Sl.No. 1	1 Set.
4	Solar Charge Controller (CCU)	20 A, 12 Vdc with dedicated load port. (Wall Mount with base plate)	1 No.
5	Copper Cable Red+Black (Module – CCU) - PV1- F (Solar Cables)	**4 sq.mm** UV Protected Cable	30 m
6	Copper Cable (Battery -Battery & Battery - CCU) - (DC Cables)	**10 Sq.mm** (Tin-coated copper lugs with insulation to be used at each battery terminal).	10 m
7	Battery trolley box with wheels - Hard Plastic	For 150 Ah, 12 V - 1 No	1 Set.
8	MC4 Connector with Inline Fuse	Inline DC Fuse rating*: (+ve Strings): **20 A**	1 No.
9	MC4 Connectors	Male and Female	1 Set
10	MC4 Connectors – Y branch	Male and Female	1 Set
11	Double Pole MCB (load Side) with Conduit box	**20 A, 12 Vdc**	1 No.
12	Single Line Diagram - (SLD) for the system	Sun board with 3 mm Thickness - 4 ft x 2 ft	1 No.
13	Do's and Don'ts Practices Poster (Solar Panels, Battery and CCU)	Foam Plaque - A4 Size for each	1 No.

14	Signboard for Danger, No Fire and PASS	Danger - Electric shock - A4 No Fire - A5 PASS - A4	1 No each
15	Fire Extinguisher	Multi Purpose - ABC Dry powder extinguishing agents (or) CO2 type with 2 kg net weight of the charge inside the cylinder.	1 No
16	Metallic Enclosure with Isolator's having minimum gap of 1 inch. (PV and Battery)	1st MCB for Battery Input - 25 A, 500 Vdc, Double Pole 2nd MCB for PV Input – 20 A, 500 Vdc, Double Pole	1 Set
17	Consumables	Includes: UPVC pipes and fittings, Flexible pipes, Screws, Cable lugs, Nuts and Bolts etc....	1 Set

Bill of Materials for Load Wiring:

Sl.no	Item	Description	UoM	Qty
1	Switch (Modular)	6 A, 1-Way (White colour).	Pcs	8
2	Socket (Modular)	3 pin, 6 A (White colour).	Pcs	2
3	USB Port for mobile charging	Input Voltage - 12 Vdc (Max - 25 Watt)	Pcs	1
4	Cables - For Load Connection (Red)	1.5 Sq. mm, EFFR copper cables. (Interconnecting switchboards with loads)	Mtrs	50
	Cables - For Load Connection (Black)	1.5 Sq. mm, EFFR copper cables. (Interconnecting switchboards with loads)	Mtrs	50
5	Power Cable - From CCU to Room (Red)	2.5 Sq. mm, EFFR copper cables. (Interconnecting distribution box with switchboards)	Mtrs	30
	Power Cable - From CCU to Room (Black)	2.5 Sq. mm, EFFR copper cables. (Interconnecting distribution box with switchboards)	Mtrs	30
6	Ceiling Rose	FR polycarbonate outer housing with ducts, Inner metal ring with high conductive brass terminals (White colour).	Pcs	4

7	Angle holder	FR polycarbonate outer housing with ducts, Inner metal ring with high conductive brass terminals (White colour).	Pcs	1
8	1 modular Switch Box with plate	Surface mounting type, ABS material with brass studs, Provision for conduits. (White colour)	Pcs	4
9	2 modular Switch Box with plate	Surface mounting type, ABS material with brass studs, Provision for conduits. (White colour)	Pcs	1
10	3 modular Switch Box with plate	Surface mounting type, ABS material with brass studs, Provision for conduits. (White colour)	Pcs	2
11	UPVC Conduit Pipe (White)	Polypropylene material, 19 mm diameter, White colour, Flame retardant, Anti-distortion.	Pcs	30
12	UPVC - Coupler (White)	UPVC pipe (White color), 19 mm diameter, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable.	Pcs	7
13	UPVC Conduit Tee Joint	UPVC pipe (White color), 19 mm diameter, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable.	Pcs	5
14	UPVC - Short & Long Elbow (White)	UPVC material, 19 mm diameter, White colour, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable. "	Pcs	15
15	2way Junction Box	UPVC material, 19 mm diameter, White colour, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable.	Pcs	4

16	3way Junction Box	UPVC material, 19 mm diameter, White colour, Flame retardant, Low halogen, Low smoke, Smoke suppressing, Temperature stable.	Pcs	4
17	Square Box		Pcs	5
18	Plastic wall lug	UPVC material, Size - 25 x 5 mm, Crack- proof, White colour, Eco-friendly.	Packs	3
19	Screw	Stainless steel/Galvanized Iron - rust-free material, Size - 35 x 8 mm, Flat head with deep slot.	Packs	1
20	Screw	Stainless steel/Galvanized Iron - rust-free material, Size - 25 x 7 mm, Flat head with deep slot.	Pcs	1
21	Electrical Insulating Tape	Size - 18 x 0.125 mm, High insulating resistance, Moisture & Corrosion resistant, Flame-retardant, Long-lasting adhesion.	Pcs	2
22	Pipe Saddle Clamps	UPVC material, Size: 20 mm diameter, Light duty pipe clamp, Single nail.	Pcs	60
23	Saddle Nail	Concrete nail Size - 1.5 inch GI/ Astel string steel	kg	0.6
24	Cable Tie	Polypropylene Material, Size – 150 mm, White Colour.	Packs	1
25	Cable Lugs - 1	2.5 Sq.mm, Pin-type, Tin-coated copper.	Pcs	6
26	Flexible Pipe	Polypropylene material, 20 mm diameter, White colour, Flame retardant, Anti- distortion.	Mtrs	5
27	Labelling Tags (Load identification tags)	Size - 3 x 1 Inch, Synthetic paper, Self-adhesive, Fluorescent Green colour, Waterproof, Temperature resistant.	Pack	1

28	Labelling Tags (Cable identification tags)	Size - 40 x 10 mm Synthetic paper, Self- adhesive, White colour, Waterproof, Temperature resistant.	Pack	1
29	Labelling Pen 1 Marker Pen	Line Width - 0.4 mm Dark black colour water resistance, Temperature resistance	Pcs	1
30	Labelling Pen 2 Marker Pen	Line Width - 2 mm Dark black colour water resistance, Temperature resistance	Pcs	1

Bill of Materials for luminaries:

Sl.no	Products	Capacity	Unit	Qty
1	LED Tube light	20 W, 12 Vdc	Nos	2
2	LED Tube light	10 W, 12 Vdc	Nos	2
3	LED Bulb	5 W, 12 Vdc	No	1
4	Wall Mounted Fan	28 W, 12 Vdc	Nos	2
5	Mobile Charging USB Port	Input - 12 Vdc	No	1

Section 2: Taluk Hospital On-grid System: Option 1:

Bill of Materials for Solar System

Sl.No	Products	Capacity	Qty
1	Solar Module	Solar Photovoltaic Array of Total Minimum Capacity of 550 Wp (Monoperc) Panel Make and Model should be approved under MNRE ALMM List.	18 Nos
2	Module Mounting Structure (MMS*)	Solar PV Module support structure. **RCC Roof:** Lower elevation/Landscape Orientation (Triangular MMS with concrete block). **Tin/Asbestos/Clay Tiles Roof:**	1 Set.

		Aluminium - Mini Rails **It should withstand the wind speed of 100 – 150 km/hr** **It should be suitable for above mentioned solar module** - As per Sl.No. 1	
3	Solar Grid tie String Inverter** - 415 Vac, 50 Hz	Total Minimum Capacity 10 kW – MPPT based, Three Phase Supply, With Data Port (RS 485)	1 No.
4	Copper Cable Red+Black (Module – Module - AJB) - PV1-F (Solar Cables)	**6 sq.mm** UV Protected Cable	72 m
5	Copper Cable Red + Black (AJB - Inverter) - (PV1-F - Solar Cables)	**6 sq.mm**	60 m
6	Inverter to ACDB	**6 Sq.mm - 4 Core (3P + 1N)** (Tin-coated copper lugs with insulation to be used at the cable-earth electrode interface).	30 m
7	ACDB - LT Panel - Grid Injection Point	**25 Sq.mm - 4 Core Line Cable (3P + 1N)** Aluminium Armoured cable	50 m
8	DC Earthing (Panels + MMS + AJB)	**Panel to Panel, Panel to MMS, MMS leg to AJB** - Grounding Lugs with 4 sq.mm earthing cable should be used.	30 m
9	Earthing Cable (AJB, ACDB, Inverter)	**16 Sq.mm** (Tin-coated copper lugs with insulation to be used at the cable-earth electrode interface).	60 m
10	Earthing Cable LT Panel	**4 Sq.mm** (Tin-coated copper lugs with insulation to be used at the cable-earth electrode interface).	20 m

11	Cable/Down conductor for Lightning Arrestor	Insulated (outdoor) GI strip of size 25 x 3 mm to be used. Each joint should consist of 2 - hexagonal nuts and bolt assembly. Saddle insulators to be provided along the length of the down conductor. Termination to the earthing electrode using SS Test links with clamps	30 m + 30 m
12	Earthing Kit ● LA – 1 ● LA - 2 ● ACDB + Inverter + LT Panel ● MMS+AJB	Solid electrode (Steel) Bonded copper – 16 mm diameter, 2000 mm long with 250 microns Bonding thickness, tin-coated copper lugs with insulation, clamps with nut-bolts assembly. protective concrete construction (Chamber) to earthing pit (L x B x H - 1.5 x 1.5 x 1.5 feet) with Metallic/FRP lid should be made. Earthing pit size should be minimum of 6 inch diameter and should be filled with back fill compound. Typology – Equipotential (Refer Annexure 2)	4 Set
13	Lightning Protection System	Lightning arrester kit: Lightning arrester, base plate and elevation pole Solid Aluminium Alloy Lightning arrestor of 15 mm diameter and 2000 mm long should be used. Ceramic insulation is to be provided at the lightning arrestor base plate. GI Elevation pole 40 mm diameter, 3000 mm height. Supporting wires to be incorporated for stability to withstand wind speed of 200 – 250 km/hr.	2 Set
14	AC Distribution Box with Solar Meter	Relay Contactor with Grid reference: **32 A, Four Pole** MCB Rating: **32 A, 415 Vac (Four Pole)** SPD Rating: **320 Vac, Type 2, 40 kA (Four pole with indicators)** **RYB Phase indicators** **Solar Meter:** Approved under ESCOM(Class 0.5s as per relavant IS & IEC Standard)	1 Set
15	Solar Array Junction Box with MCB and SPD and String Fuse.	**As per Sl.no - 1 & 3** MCB Rating: **As per Sl.no 1 & 3** SPD Rating: **600 Vdc, Type 2, 40 KA (Double pole with indicators)** Inline DC Fuse rating: (+ve Strings): **20 A** Inter connection of the components inside the AJB should be DC cable of 6 Sq.mm	1 No.

16	LT Panel With Net Meter	**LT Panel:** 10 kW, Three Phase, Suitable MCB with Phase Indicators **Net Meter:** Approved under ESCOM(Class 0.5s as per relavant IS & IEC Standard)	1 Set
17	Marking for AC earthing with Elevated Plaques (ACDB + Inverter + LT Panel)	Elevation pole length - 3 Feet. Metal plaque dimension - A5	1 No.
18	Marking for DC earthing with Elevated Plaques (AJB+MMS+Panels)	Elevation pole length - 3 Feet. Metal plaque dimension - A5	1 No.
19	Marking of Lightning Arrester Earthing with Elevated Plaques	Elevation pole length - 3 Feet. Metal plaque dimension - A5	2 Nos.
20	Single Line Diagram (SLD) for the system	Sun board with 3 mm Thickness - 4 ft x 2 ft	1 No.
21	Do's and Don'ts Practices Poster (Solar Panels, Battery and Inverter)	Foam Plaque - A4 Size for each	1 No.
22	Signboard for Danger, No Fire and PASS	Danger - Electric shock - A4 Danger - High Voltage - A4 No Fire - A5 PASS - A4	1 No each
23	Fire Extinguisher	Multi-Purpose - ABC Dry powder extinguishing agents (or) CO_2 type with 6 kg net weight of the charge inside the cylinder.	1 No
24	Consumables	Includes: UPVC pipes and fittings, Flexible pipes, Screws, Cable lugs, Nuts and Bolts etc….	1 Set

Taluk Hospital On-grid System: Option 2:

Bill of Materials for Solar System

Sl.No	Products	Capacity	Qty
1	Solar Module	Solar Photovoltaic Array of Total Minimum Capacity of 550 Wp (Monoperc) Panel Make and Model should be approved under MNRE ALMM List.	18 Nos
2	Module Mounting Structure (MMS*)	Solar PV Module support structure. **RCC Roof:** Lower elevation/Landscape Orientation (Triangular MMS with concrete block). **Tin/Asbestos/Clay Tiles Roof:** Aluminium - Mini Rails **It should withstand the wind speed of 100 – 150 km/hr** **It should be suitable for above mentioned solar module** - As per Sl.No. 1	1 Set.
3	Solar Grid tie String Inverter** - 415 Vac, 50 Hz	Total Minimum Capacity 10 kW – MPPT based, Three Phase Supply, With Data Port (RS 485)	1 No.
4	Copper Cable Red+Black (Module – Module - AJB) - PV1-F (Solar Cables)	**6 sq.mm** UV Protected Cable	72 m
5	Copper Cable Red + Black (AJB - Inverter) - (PV1-F - Solar Cables)	**6 sq.mm**	60 m
6	Inverter to ACDB	**6 Sq.mm - 4 Core (3P + 1N)** (Tin-coated copper lugs with insulation to be used at the cable-earth electrode interface).	30 m

7	ACDB - HT Panel - Grid Injection Point	**25 Sq.mm - 4 Core Line Cable (3P + 1N)** Aluminium Armoured cable	50 m
8	DC Earthing (Panels + MMS + AJB)	**Panel to Panel, Panel to MMS, MMS leg to AJB** - Grounding Lugs with 4 sq.mm earthing cable should be used.	30 m
9	Earthing Cable (AJB, ACDB, Inverter)	**16 Sq.mm** (Tin-coated copper lugs with insulation to be used at the cable-earth electrode interface).	60 m
10	Earthing Cable HT Panel	**4 Sq.mm** (Tin-coated copper lugs with insulation to be used at the cable-earth electrode interface).	20 m
11	Cable/Down conductor for Lightning Arrestor	Insulated (outdoor) GI strip of size 25 x 3 mm to be used. Each joint should consist of 2 - hexagonal nuts and bolt assembly. Saddle insulators to be provided along the length of the down conductor. Termination to the earthing electrode using SS Test links with clamps	30 m + 30 m
12	Earthing Kit ● LA – 1 ● LA - 2 ● ACDB + Inverter + HT Panel ● MMS+AJB	Solid electrode (Steel) Bonded copper – 16 mm diameter, 2000 mm long with 250 microns Bonding thickness, tin-coated copper lugs with insulation, clamps with nut-bolts assembly. protective concrete construction (Chamber) to earthing pit (L x B x H - 1.5 x 1.5 x 1.5 feet) with Metallic/FRP lid should be made. Earthing pit size should be minimum of 6 inch diameter and should be filled with back fill compound. Typology – Equipotential (Refer Annexure 2)	4 Set
13	Lightning Protection System	Lightning arrester kit: Lightning arrester, base plate and elevation pole Solid Aluminium Alloy Lightning arrestor of 15 mm diameter and 2000 mm long should be used. Ceramic insulation is to be provided at the lightning arrestor base plate. GI Elevation pole 40 mm diameter, 3000 mm height. Supporting wires to be incorporated for stability to withstand wind speed of 200 – 250 km/hr.	2 Set

14	AC Distribution Box with Solar Meter	Relay Contactor with Grid reference: **32 A, Four Pole** MCB Rating: **32 A, 415 Vac (Four Pole)** SPD Rating: **320 Vac, Type 2, 40 kA (Four pole with indicators)** **RYB Phase indicators** **Solar Meter:** Approved under ESCOM(Class 0.5s as per relavant IS & IEC Standard)	1 Set
15	Solar Array Junction Box with MCB and SPD and String Fuse.	**As per Sl.no - 1 & 3** MCB Rating: **As per Sl.no 1 & 3** SPD Rating: **600 Vdc, Type 2, 40 KA (Double pole with indicators)** Inline DC Fuse rating: (+ve Strings): **20 A** Inter connection of the components inside the AJB should be DC cable of 6 Sq.mm	1 No.
16	HT-CT with Cubicle Panel With Net Meter	**HT Panel:** 10 kW, Three Phase, Suitable MCB with Phase Indicators **Net Meter:** Approved under ESCOM(Class 0.5s as per relavant IS & IEC Standard)	1 Set
17	Marking for AC earthing with Elevated Plaques (ACDB + Inverter + HT Panel)	Elevation pole length - 3 Feet. Metal plaque dimension - A5	1 No.
18	Marking for DC earthing with Elevated Plaques (AJB+MMS+Panels)	Elevation pole length - 3 Feet. Metal plaque dimension - A5	1 No.
19	Marking of Lightning Arrester Earthing with Elevated Plaques	Elevation pole length - 3 Feet. Metal plaque dimension - A5	2 Nos.
20	Single Line Diagram (SLD) for the system	Sun board with 3 mm Thickness - 4 ft x 2 ft	1 No.

21	Do's and Don'ts Practices Poster (Solar Panels, Battery and Inverter)	Foam Plaque - A4 Size for each	1 No.
22	Signboard for Danger, No Fire and PASS	Danger - Electric shock - A4 Danger - High Voltage - A4 No Fire - A5 PASS - A4	1 No each
23	Fire Extinguisher	Multi-Purpose - ABC Dry powder extinguishing agents (or) CO2 type with 6 kg net weight of the charge inside the cylinder.	1 No
24	Consumables	Includes: UPVC pipes and fittings, Flexible pipes, Screws, Cable lugs, Nuts and Bolts etc….	1 Set

Primary Health Centre : Option 1

Bill of Materials for Solar System :

Sl. No	Products	Capacity	Qty
1	Solar Module	Solar Photovoltaic modules of Minimum Capacity 545 Wp (Mono PERC) Panel Make and Model should be approved under MNRE ALMM List	8 Nos
2	Solar Battery	Valve regulated lead-acid (VRLA) battery - 150 Ah @ 12 V, C – 10 (Battery terminal caps used, must be big enough to cover the entire terminal area and the nut bolt assembly. Also, spring washers to be used at each battery terminal).	8 Nos
3	Module Mounting Structure (MMS*)	Solar PV Module support structure. **RCC Roof:**	1 Set.

		GI based (120 microns), C-section purlins, rafters and legs of minimum 3 mm thickness. End clamps & mid clamps of Anodized Aluminum, SS nut-bolt assembly. Civil work to be made at each respective legs, and of minimum size, 1 feet by L x B x H, and to be cured for 3 consecutive days **It should withstand the wind speed of 100 – 150 km/hr** **It should be suitable for above mentioned solar module** - As per Sl.No. 1 **Inclined Tin Sheet roof:** **Mini rails of the following specifications are to be incorporated.** **Anodized aluminium(70 Microns)** **L x H x W x T – 300mm x 100mm x 40mm x 3mm** **EPDM tapes with adhesion to be used for each mini rail.**	
4	Solar Inverter/PCU - 230 Vac, 50 Hz	Total Minimum Capacity **6 kVA, 96 V – MPPT** based Single Phase Supply, With Data Port (RS 485) Output	1 No.
5	Changeover / Bypass Switch - 1 (For DG & Grid Input)	**63 A, 230 Vac** (Single Phase)	1 No.
6	Changeover / Bypass Switch - 2 (PCU – Grid/DG Inputs)	**32 A, 230 Vac** (Single Phase)	1 No.
7	Copper Cable Red + Black (Module – Module - AJB) - PV1-F (Solar Cables)	**6 sq.mm** UV Protected Cable (Tin-coated copper lugs with insulation to be used at each termination points).	48 m
8	Copper Cable Red + Black (AJB - Inverter) - (DC Cables)	**10 sq.mm**	20 m
9	Cables (or) Strips (Battery -Battery) - (DC Copper	**16 Sq.mm** Tin-coated copper lugs with insulation to be used at each battery terminal.	5 m

	Cables)	(or) Lead coated heavy-duty copper strips with not less than 25 microns of lead plating.	
	Copper Cable (Red + Black) (Battery - Inverter) - (DC Cables)	**16 Sq.mm** (Tin-coated copper lugs with insulation to be used at each battery terminal).	15 m
10	DC Earthing (Panels + MMS + Battery rack)	**Panel to Panel, Panel to MMS, MMS leg to Main Earthing Terminal (Copper busbar)** - Grounding Lugs with 4 sq.mm earthing cable should be used. (Tin-coated copper lugs with insulation to be used at each termination points).	20 m
11	Earthing Cable for COS 1 , COS 2 and Switch Disconnector	**1 Sq.mm** Grounding Lugs should be used. (Tin-coated copper lugs with insulation to be used at each termination points).	10 m
12	Earthing Cable (AJB, GIPB, Inverter)	**16 Sq.mm** (Tin-coated copper lugs with insulation to be used at the cable- earth electrode interface).	45 m
13	Cable / Down conductor for Lightning Arrestor	Insulated (outdoor) GI strip of size 25 x 3 mm to be used. Each joint should consist of 2 - hexagonal nut and bolt assembly. Saddle insulators to be provided along the length of the down conductor. Termination to the earthing electrode using SS Test links with clamps	36 m
14	Earthing Kit ● LA ● GIPB + Inverter + Load ACDB + Changeover 1 & 2 ● MMS + AJB + Switch Disconnector + Battery rack	Chemical earthing powder (50 kg per pit). Solid electrode (Steel) Bonded copper – 16 mm diameter, 2000 mm long with 250 microns Bonding thickness, tin-coated copper lugs with insulation, clamps with nut-bolts assembly. protective FRP chamber with lid should be made. Earthing pit size should be minimum of 6-inch diameter and 2.5-meters long and should be filled with back fill compound. SS clamps/flats to be used between GI strips and electrodes Inter connection of all earthing pits are to be made using GI strips 120 microns, 25 x 3 mm Copper Busbar of 6-inch long, 5-hole, 3 mm thick Typology – Equipotential (Refer Annexure 2)	3 Set
15	Lightning Protection System	Lightning arrestor Solid Aluminium Alloy of 15 mm	1 Set

		diameter and 2000 mm long with base plate should be used. RCC Flat roof: GI Elevation pole 40 mm diameter, 3000 mm height. Supporting wires 2.5 sq. mm (120 microns) to be incorporated for stability to withstand wind speed of 100 – 150 km/hr. Ceramic insulation to be provided between lightning arrestor base plate and GI elevation pole. 1.75 metre distance to be maintained between panel edges and LA Baseplate of elevation pole should be provided with anchor fasteners and to be provided with civil work of size 1.25 x 1.25 x 1.5 feet by L x B x H Inclined Sheet roof: T-based clamp of following specifications to be used Structural material : • GI - 120 microns. • L – Angle geometry Profile • L – Angle thickness – 3mm • L- Angle LxB – 37x37mm • Hexagonal Nut – M8x20mm • Hexagonal bolt – M8x6mm • Support Wire 2.5 Sq.mm	
16	Grid Input Protection Box with Line indicator, SPD and MCB	MCB Rating : **230 Vac, 32 A (Double Pole)** SPD Rating : **320 Vac, Type 2, 40 kA (Double pole with indicators)** Inter connection of the components inside the GIPB should be 6 Sq.mm (Tin-coated copper lugs with insulation to be used at each termination points).	1 No.
17	Double row battery rack with the following: Electrical Insulation mat (Minimum 0.4 kV)	**As per Solar Battery Sl. No. - 2** (Each leg should be given a base flat plate) The elevation height of battery rack should be 4-inches above the floor and should be made of GI structure • 120 microns. • L – Angle geometry Profile • L – Angle thickness – 3mm • L- Angle LxB – 37x37mm	1 Set.

		• Hexagonal Nut – M8x20mm • Hexagonal bolt - M8x6mm (Wood supports are not to be used) In the battery rack, each joint should be assembled with GI nut and bolt assembly and welding of any sort should be avoided.	
18	Inverter rack with the following: Electrical Insulation mat (Minimum 0.4 kV)	(Each leg should be given a base flat plate) The elevation height of battery rack should be 4-inches above the floor and should be made of GI structure • 120 microns. • L – Angle geometry Profile • L – Angle thickness – 3mm • L- Angle LxB – 37x37mm • Hexagonal Nut – M8x20mm • Hexagonal bolt - M8x6mm In the inverter rack, each joint should be assembled with GI nut and bolt assembly. (Welding of any sort should be avoided)	1 Set.
19	Solar Array Junction Box with MCB and SPD and String Fuse.	**2 IN 1 OUT** MCB Rating : **500 Vdc, 40 A (Double Pole)** SPD Rating: **250 Vdc, Type 2, 40 KA (Double pole with indicators)** Inline DC Fuse rating*: (+ve Strings): **20 A X 2 Nos.** Inter connection of the components inside the AJB should be DC cable of 10 Sq.mm (Tin-coated copper lugs with insulation to be used at each termination points).	1 No.
20	Load Side MCB with Conduit box	MCB Rating: **25 A, 230 Vac (Double Pole)**	1 No.
21	Marking for AC earthing with Elevated Plaques (GIPB + Inverter + Loads + Change over 1 & 2)	Elevation pole length - 3 Feet. Metal plaque dimension - A5	1 No.
22	Marking for DC earthing with Elevated Plaques (AJB + MMS + Panels + Switch Disconnector + Battery)	Elevation pole length - 3 Feet. Metal plaque dimension - A5	1 No.
23	Marking of Lightning Arrester Earthing with Elevated Plaques	Elevation pole length - 3 Feet. Metal plaque dimension - A5	1 Nos.

24	Single Line Diagram (SLD) for the system	Sun board with 3 mm Thickness - 4 ft x 2 ft	1 No.
25	Do's and Don'ts Practices Poster (Solar Panels, Battery and Inverter)	Foam Plaque - A4 Size for each	1 No.
26	Signboard for Danger, No Fire and PASS	Danger - Electric shock – A4 Danger - High Voltage – A4 No Fire – A5 PASS - A4	1 No each
27	I/P and O/P wiring of Grid Connection- AC cable	**6 Sq. mm.**	30 m
28	Fire Extinguisher	Multi-Purpose - ABC Dry powder extinguishing agents (or) CO2 type with 6 kg net weight of the charge inside the cylinder.	1 No
29	Metallic Enclosure with Isolator's having minimum gap of 1 inch. (PV, Battery & Grid Input to Inverter)	1st Switch for Battery Input - 63 A, 500 Vdc, Double Pole 2nd Switch for PV Input – 63 A, 500 Vdc, Double Pole 3rd Switch for Grid Input – 40 A, 230 Vac, Double Pole	1 Set
30	Consumables	Includes: UPVC pipes and fittings, Flexible pipes, Screws, Nuts and Bolts etc	1 Set

Note:

*Solar systems should be **only connected to solar loads** as mentioned in the load details sheet and for heavy loads (Loads which are excluded from solar system design) such as Autoclave, Sterilizer, Geyser, Air conditioner, Water cooler, Water Pump and CCTV etc, separate wiring for grid connectivity will be done accordingly.*

Primary Health Centre Option 2

Bill of Materials for Solar System :

Sl. No	Products	Capacity	Qty
1	Solar Module	Solar Photovoltaic modules of Minimum Capacity 545 Wp (Mono PERC) Panel Make and Model should be approved under	10 Nos

		MNRE ALMM List	
2	Solar Battery	Valve regulated lead-acid (VRLA) battery - 200 Ah @ 12 V, C – 10 (Battery terminal caps used, must be big enough to cover the entire terminal area and the nut bolt assembly. Also, spring washers to be used at each battery terminal).	8 Nos
3	Module Mounting Structure (MMS*)	Solar PV Module support structure. **RCC Roof:** GI based (120 microns), C-section purlins, rafters and legs of minimum 3 mm thickness. End clamps & mid clamps of Anodized Aluminum, SS nut-bolt assembly. Civil work to be made at each respective legs, and of minimum size, 1 feet by L x B x H, and to be cured for 3 consecutive days **It should withstand the wind speed of 100 – 150 km/hr** **It should be suitable for above mentioned solar module** - As per Sl.No. 1 **Inclined Tin Sheet roof:** **Mini rails of the following specifications are to be incorporated.** **Anodized aluminium(70 Microns)** **L x H x W x T – 300mm x 100mm x 40mm x 3mm** **EPDM tapes with adhesion to be used for each mini rail.**	1 Set.
4	Solar Inverter/PCU - 230 Vac, 50 Hz	Total Minimum Capacity **6 kVA, 96 V – MPPT** based Single Phase Supply, With Data Port (RS 485) Output	1 No.
5	Changeover / Bypass Switch-1 (For DG & Grid Input)	**63 A, 230 Vac** (Single Phase)	1 No.
6	Changeover / Bypass Switch - 2 (PCU – Grid/DG Inputs)	**32 A, 230 Vac** (Single Phase)	1 No.
7	Copper Cable Red + Black (Module – Module - AJB) - PV1-F (Solar Cables)	**6 sq.mm** UV Protected Cable (Tin-coated copper lugs with insulation to be used at each termination points).	60 m
8	Copper Cable Red + Black (AJB - Inverter) - (DC Cables)	**10 sq.mm**	20 m
9	Cables (or) Strips (Battery -Battery) - (DC	**16 Sq.mm** Tin-coated copper lugs with insulation to be used at each battery terminal.	5 m

	Copper Cables)	(or) Lead coated heavy-duty copper strips with not less than 25 microns of lead plating.	
	Copper Cable (red + Black) (Battery - Inverter) - (DC Cables)	**16 Sq.mm** (Tin-coated copper lugs with insulation to be used at each battery terminal).	15 m
10	DC Earthing (Panels + MMS + Battery rack)	**Panel to Panel, Panel to MMS, MMS leg to Main Earthing Terminal (Copper busbar) -** Grounding Lugs with 4 sq.mm earthing cable should be used. (Tin-coated copper lugs with insulation to be used at each termination points).	15 m
11	Earthing Cable for COS 1 , COS 2 and Switch Disconnector	**1 Sq.mm** Grounding Lugs should be used. (Tin-coated copper lugs with insulation to be used at each termination points).	10 m
12	Earthing Cable (AJB, GIPB & Inverter)	**16 Sq.mm** (Tin-coated copper lugs with insulation to be used at the cable-earth electrode interface).	45 m
13	Cable/Down conductor for Lightning Arrestor	Insulated (outdoor) GI strip of size 25 x 3 mm to be used. Each joint should consist of 2 - hexagonal nut and bolt assembly. Saddle insulators to be provided along the length of the down conductor. Termination to the earthing electrode using SS Test links with clamps	30 m
14	Earthing Kit ● LA ● GIPB + Inverter + Load ACDB + Changeover 1 &2 ● MMS + AJB + Switch Disconnector + Battery rack	Chemical earthing powder (50 kg per pit). Solid electrode (Steel) Bonded copper – 16 mm diameter, 2000 mm long with 250 microns Bonding thickness, tin-coated copper lugs with insulation, clamps with nut-bolts assembly. protective concrete construction (Chamber) to earthing pit (L x B x H - 1.5 x 1.5 x 1.5 feet) with Metallic/FRP lid should be made. Earthing pit size should be minimum of 6-inch diameter and 2.5-meters long and should be filled with back fill compound. SS clamps/flats to be used between GI strips and electrodes Inter connection of all earthing pits are to be made using GI strips 120 microns, 25 x 3 mm Copper Busbar of 6-inch long, 5-hole, 3 mm thick Typology – Equipotential (Refer Annexure 2)	3 Set

15	Lightning Protection System	Lightning arrestor Solid Aluminium Alloy of 15 mm diameter and 2000 mm long with base plate should be used. RCC Flat roof: GI Elevation pole 40 mm diameter, 3000 mm height. Supporting wires 2.5 sq. mm (120 microns) to be incorporated for stability to withstand wind speed of 100 – 150 km/hr. Ceramic insulation to be provided between lightning arrestor base plate and GI elevation pole. 1.75 metre distance to be maintained between panel edges and LA Baseplate of elevation pole should be provided with anchor fasteners and to be provided with civil work of size 1.25 x 1.25 x 1.5 feet by L x B x H T-based clamp of following specifications to be used Structural material : • GI - 120 microns. • L – Angle geometry Profile • L – Angle thickness – 3mm • L- Angle LxB – 37x37mm • Hexagonal Nut – M8x20mm • Hexagonal bolt – M8x6mm Support Wire 2.5 Sq.mm	1 Set
16	Grid Input Protection Box with Line indicator, SPD and MCB	MCB Rating : **230 Vac, 32 A (Double Pole)** SPD Rating : **320 Vac, Type 2, 40 kA (Double pole with indicators)** Inter connection of the components inside the GIPB should be 6 Sq.mm (Tin-coated copper lugs with insulation to be used at each termination points).	1 No.
17	Double row battery rack with the following: Electrical Insulation mat (Minimum 0.4 kV)	**As per Solar Battery Sl. No. - 2** (Each leg should be given a base flat plate) The elevation height of battery rack should be 4-inches above the floor and should be made of GI structure • 120 microns. • L – Angle geometry Profile • L – Angle thickness – 3mm • L- Angle LxB – 37x37mm • Hexagonal Nut – M8x20mm • Hexagonal bolt - M8x6mm (Wood supports are not to be used)	1 Set.

		In the battery rack, each joint should be assembled with GI nut and bolt assembly and welding of any sort should be avoided.	
18	Inverter rack with the following: Electrical Insulation mat (Minimum 0.4 kV)	(Each leg should be given a base flat plate) The elevation height of battery rack should be 4-inches above the floor and should be made of GI structure • 120 microns. • L – Angle geometry Profile • L – Angle thickness – 3mm • L- Angle LxB – 37x37mm • Hexagonal Nut – M8x20mm • Hexagonal bolt - M8x6mm In the inverter rack, each joint should be assembled with GI nut and bolt assembly. (Welding of any sort should be avoided)	1 Set.
19	Solar Array Junction Box with MCB and SPD and String Fuse.	**2 IN 1 OUT** MCB Rating : **500 Vdc, 40 A (Double Pole)** SPD Rating: **300 Vdc, Type 2, 40 KA (Double pole with indicators)** Inline DC Fuse rating*: (+ve Strings): **20 A X 2 Nos.** Inter connection of the components inside the AJB should be DC cable of 10 Sq.mm (Tin-coated copper lugs with insulation to be used at each termination points).	1 No.
20	Load Side MCB with Conduit box	MCB Rating: **32 A, 230 Vac (Double Pole)**	1 No.
21	Marking for AC earthing with Elevated Plaques (GIPB + Inverter + Loads + Change over 1 & 2)	Elevation pole length - 3 Feet. Metal plaque dimension - A5	1 No.
22	Marking for DC earthing with Elevated Plaques (AJB + MMS + Panels + Switch Disconnector + Battery)	Elevation pole length - 3 Feet. Metal plaque dimension - A5	1 No.
23	Marking of Lightning Arrester Earthing with Elevated Plaques	Elevation pole length - 3 Feet. Metal plaque dimension - A5	1 Nos.

24	Single Line Diagram (SLD) for the system	Sun board with 3 mm Thickness - 4 ft x 2 ft	1 No.
25	Do's and Don'ts Practices Poster (Solar Panels, Battery and Inverter)	Foam Plaque - A4 Size for each	1 No.
26	Signboard for Danger, No Fire and PASS	Danger - Electric shock – A4 Danger - High Voltage – A4 No Fire – A5 PASS - A4	1 No each
27	I/P and O/P wiring of Grid Connection- AC cable	**6 Sq. mm.**	30 m
28	Fire Extinguisher	Multi-Purpose - ABC Dry powder extinguishing agents (or) CO2 type with 6 kg net weight of the charge inside the cylinder.	1 No
29	Metallic Enclosure with Isolator's having minimum gap of 1 inch. (PV, Battery & Grid Input to Inverter)	1st Switch for Battery Input - 63 A, 500 Vdc, Double Pole 2nd Switch for PV Input – 63 A, 500 Vdc, Double Pole 3rd Switch for Grid Input – 40 A, 230 Vac, Double Pole	1 Set
30	Consumables	Includes: UPVC pipes and fittings, Flexible pipes, Screws, Nuts and Bolts etc	1 Set

Note:

*Solar systems should be **only connected to solar loads** as mentioned in the load details sheet and for heavy loads (Loads which are excluded from solar system design) such as Autoclave, Sterilizer, Geyser, Air conditioner, Water cooler, Water Pump and CCTV etc, separate wiring for grid connectivity will be done accordingly.*

Annexure-2

List of Sites

Sl no	Name of the health facility	Health facility type
1	Kakkabevanahalli	Sub centre
2	Handihal	Sub centre
3	Allipura	Sub centre
4	Benakal	Sub centre
5	Sindwala	Sub centre
6	New Yeraguddi	Sub centre
7	Hadligi/Hadlgi	Sub centre
8	Kammarchedu	Sub centre
9	Shankara Bande	Sub centre
10	K Veerapura	Sub centre
11	Baylachinta	Sub centre
12	Dhammur	Sub centre
13	Vadatti	Sub centre
14	Badanatti	Sub centre
15	Kallukamba	Sub centre
16	Kolagulu	Sub centre
17	Yelubenchi(Ellubenchi)	Sub centre
18	Devalapura	Sub centre
19	Jowak	Sub centre
20	S.R.R.Pura	Sub centre
21	New Nelludi	Sub centre
22	D Mallapur	Sub centre
23	Yeshvanthanagara	Sub centre
24	Sandur B	Sub centre
25	Sovenhalli	Sub centre
26	Nelludi Kottal	Sub centre
27	Tumbaraguddi	Sub centre
28	Agarahara	Sub centre
29	Bomma Gatta	Sub centre
30	SP Halli	Sub centre
31	Narasapura	Sub centre
32	Bhujanganagara	Sub centre
33	Rajapura	Sub centre
34	Jaisingpura	Sub centre
35	Sushilanagara	Sub centre
36	Vaddu	Sub centre

37	Halekote	Sub centre
38	Deshanur	Sub centre
39	Bandrahallu	Sub centre
40	Poppanal	Sub centre
41	K. Suguru	Sub centre
42	Devagiri	Sub centre
43	Krishna Nagar	Sub centre
44	Ittiganahal	Sub centre
45	Agasanuru	Sub centre
46	M Sugur	Sub centre
47	Nittur	Sub centre
48	No 2 Sanapura	Sub centre
49	Ramasagara	Sub centre
50	Anabi	Health & Wellness centre
51	Bilahara	Sub centre
52	Chatnalli	Sub centre
53	Doranahallia - B	Sub centre
54	Gogi(K)	Sub centre
55	Gulsram	Sub centre
56	Kongandi _ B	Sub centre
57	Kangondi_A	Sub centre
58	Madnala	Sub centre
59	Naganatagi	Sub centre
60	Naikal	Sub centre
61	Kanya kollur	Sub centre
62	Kollur	Sub centre
63	Sagar 2	Sub centre
64	Sagar 1	Sub centre
65	Tadibidi	Sub centre
66	ULLESUGUR	Sub centre
67	Tangadagi	Sub centre
68	Kodala	Sub centre
69	RAJAPYR	Sub centre
70	Shattikera	Sub centre
71	SHIRAVAL_A	Sub centre
72	Shiravala_B	Sub centre
73	T Wadagera	Sub centre
74	TUMKUR	Sub centre
75	UKKINAL	Sub centre
76	Aewoor	Sub centre

77	Agni	Sub centre
78	ARAKERA J	Sub centre
79	BANDODDI	Sub centre
80	Hattigidur	Sub centre
81	CHOUDESHWARIH	Sub centre
82	Geddalamari	Sub centre
83	Hegganadoddi	Sub centre
84	Jogundabhavi	Sub centre
85	VIBHUTINAHALLI	Sub centre
86	PG Hunashyal	Sub centre
87	Kalladevanalli	Sub centre
88	Karadakala	Sub centre
89	Kolihala	Sub centre
90	M. Bommanahalli	Sub centre
91	Lakshmipura	Sub centre
92	TINTHINI	Sub centre
93	Manjlapur	Sub centre
94	Maranala	Sub centre
95	Narayanapura	Sub centre
96	VAJJAL	Sub centre
97	Shallagi	Sub centre
98	BADDEPALLI	Sub centre
99	Badiyala	Sub centre
100	Sawoor	Sub centre
101	BORABANDI	Sub centre
102	Chapetla	Sub centre
103	CHINTAKUNTA	Sub centre
104	Chinnakar	Sub centre
105	Gondadagi	Sub centre
106	Gunjanura	Sub centre
107	Hathikuni	Sub centre
108	Honagera	Sub centre
109	Kalabelagundi	Sub centre
110	Kanekal	Sub centre
111	Killanakera	Sub centre
112	Kyasapanahalli	Sub centre
113	BICHABALA	Sub centre
114	Mylapura	Sub centre
115	Mushtura	Sub centre
116	Nasalavai	Sub centre

117	Yaragola-B	Sub centre
118	PUTAPAKA	Sub centre
119	Mudnala	Sub centre
120	Tanagundi	Sub centre
121	Mundaragi	Sub centre
122	Yaddalli	Sub centre
123	Yadlapura	Sub centre
124	Montalli	Sub centre
125	KHANAPUR	Sub centre
126	Gadilingadalli	Sub centre
127	Ganapura	Sub centre
128	Ainolli	Sub centre
129	Anwar	Sub centre
130	Chimmaidhlayee	Sub centre
131	Kupnoor	Sub centre
132	Hode.Birnalli	Sub centre
133	Narnal	Sub centre
134	Garampalli	Sub centre
135	Nawadgi	Sub centre
136	Karchkhed	Sub centre
137	Shadipur	Sub centre
138	Suntan	Sub centre
139	Motakpalli	Sub centre
140	Handaraki	Sub centre
141	Dugnoor	Sub centre
142	Betagera(A)	Sub centre
143	Madkal	Sub centre
144	Kadcherla	Sub centre
145	Malkhed A	Sub centre
146	Mugnoor	Sub centre
147	Keri Ambalaga	Sub centre
148	Kamalnagar	Sub centre
149	Tadola	Sub centre
150	Dattar Gaon	Sub centre
151	KodalHangarga	Sub centre
152	Hebli	Sub centre
153	Nirgudi	Sub centre
154	Mataki	Sub centre
155	Kawalga	Sub centre
156	Bilgunda	Sub centre

157	Hallisalgar	Sub centre
158	Salegaon	Sub centre
159	Sawaleshwar	Sub centre
160	Sakkarga	Sub centre
161	Bolani	Sub centre
162	Benni Sirur	Sub centre
163	Nimbal	Sub centre
164	Narona	Sub centre
165	Nilur	Sub centre
166	Naudarga	Sub centre
167	Chincholi	Sub centre
168	Ballurgi	Sub centre
169	Allagi B	Sub centre
170	Madra B	Sub centre
171	Bidnur	Sub centre
172	Chinamgera	Sub centre
173	Bhairmadgi	Sub centre
174	Ankalga	Sub centre
175	Sonna	Sub centre
176	Harwal	Sub centre
177	Vastari	Sub centre
178	Mudbal B	Sub centre
179	Honnal	Sub centre
180	Hangarga B	Sub centre
181	Itaga	Sub centre
182	Gudur	Sub centre
183	Kollakur	Sub centre
184	Bilwar	Sub centre
185	Gownalli	Sub centre
186	Kuralgera	Sub centre
187	Magangera	Sub centre
188	Yelgod	Sub centre
189	Mayur	Sub centre
190	Kadkol	Sub centre
191	Road Kinni	Sub centre
192	Hossur	Sub centre
193	Chandapura	Sub centre
194	HasarGundagi	Sub centre
195	Kanakapur	Sub centre
196	Korvee	Sub centre

197	Vantichinta	Sub centre
198	Juttur	Sub centre
199	Medak	Sub centre
200	Kukunda	Sub centre
201	Kotan Hipparga	Sub centre
202	Tambakwadi	Sub centre
203	Suntnoor	Sub centre
204	Muthkhod	Sub centre
205	Inchgera	Sub centre
206	Udagi	Sub centre
207	Halgadla	Sub centre
208	Muddadaga	Sub centre
209	Mannalli	Sub centre
210	Kognur	Sub centre
211	Shellgi	Sub centre
212	Sathkhed	Sub centre
213	Yalwar	Sub centre
214	Ranjangi	Sub centre
215	Havnur	Sub centre
216	Kachapur	Sub centre
217	Hullur	Sub centre
218	Balbatti	Sub centre
219	Hipparga	Sub centre
220	Bandarwad	Sub centre
221	HasarGundagi	Sub centre
222	Goudanahalli	Sub centre
223	Venkatapur	Sub centre
224	Degalamadi	Sub centre
225	Margutti	Sub centre
226	Bupal Tengnoor	Sub centre
227	Hagarga	Sub centre
228	Jogur	Sub centre
229	Herur B	Sub centre
230	Kavalga B	Sub centre
231	Astag	Sub centre
232	Holkunda	Sub centre
233	Jeevangi	Sub centre
234	Khanadal	Sub centre
235	Haruti Hadgil	Sub centre
236	Kusnur	Sub centre

237	Pattan	Sub centre
238	Kadani	Sub centre
239	Sindgi	Sub centre
240	Bedsur	Sub centre
241	Itga	Sub centre
242	Hebbal	Sub centre
243	Chincholi H	Sub centre
244	Mualnagaon	Sub centre
245	Marthur	Sub centre
246	Sugur K	Sub centre
247	Kalagi A	Sub centre
248	Rajapur	Sub centre
249	Ingalgi	Sub centre
250	Konchur	Sub centre
251	Alur	Sub centre
252	Kamardagi	Sub centre
253	Magatt	Sub centre
254	Gola K	Sub centre
255	Gundugurti	Sub centre
256	Tonasalli	Sub centre
257	Euni	Sub centre
258	Hunasi Hadgil	Sub centre
259	Kandgola	Sub centre
260	Halkatti	Sub centre
261	PaneGaon	Sub centre
262	Bhankur	Sub centre
263	Babalad	Sub centre
264	Habal T	Sub centre
265	Baudarwad	Sub centre
266	Sulepet	Sub centre
267	Sannati	Sub centre
268	Gotur	Sub centre
269	Ladlapur	Sub centre
270	Yagapur	Sub centre
271	Kurikota	Sub centre
272	Okali	Sub centre
273	Jeevngi	Sub centre
274	Malgatti	Sub centre
275	Taranalli	Sub centre
276	Kallur K	Sub centre

277	Kamaradgi	Sub centre
278	Bhankalga	Sub centre
279	Ainapur	Sub centre
280	Magdampur	Sub centre
281	Chintapalli	Sub centre
282	Hiremyageri	Sub centre
283	Masabanchinal	Sub centre
284	Mandalgeri	Sub centre
285	Bhandihal	Sub centre
286	Lakmapur	Sub centre
287	Talkal	Sub centre
288	Bhanapur	Sub centre
289	Taralkatti	Sub centre
290	Muradi	Sub centre
291	Hulegudda	Sub centre
292	Gedhigeri	Sub centre
293	Chikkamyageri	Sub centre
294	Yadiyapur	Sub centre
295	Bannikoppa	Sub centre
296	Thalakeri	Sub centre
297	Balutagi	Sub centre
298	Bandi	Sub centre
299	Hamamnal	Sub centre
300	Nilgol	Sub centre
301	Pattalchinti	Sub centre
302	Malagitti	Sub centre
303	Jahagir Gudadur	Sub centre
304	Hiregonnagar	Sub centre
305	Lingadalli	Sub centre
306	Hanamsagar B	Sub centre
307	Benekal	Sub centre
308	Hirenandihal	Sub centre
309	Hirebannigol	Sub centre
310	Katapur	Sub centre
311	Hoolgera	Sub centre
312	Tuggaldoi	Sub centre
313	Huliyapur	Sub centre
314	Navalhalli	Sub centre
315	Nidasheshi	Sub centre
316	K Bodur	Sub centre

317	Kyadiguppa	Sub centre
318	Mudenoor	Sub centre
319	Mainalli	Sub centre
320	Kunakeri	Sub centre
321	Karkihalli	Sub centre
322	Budagumpa	Sub centre
323	Hosahalli	Sub centre
324	Hasgal	Sub centre
325	Lebgera	Sub centre
326	Kalkera	Sub centre
327	Bahadurbandi	Sub centre
328	Bisarahalli	Sub centre
329	Somanal	Sub centre
330	Jeeral	Sub centre
331	Basarihal	Sub centre
332	Somsagar	Sub centre
333	Bevinal	Sub centre
334	Basavanadurga	Sub centre
335	Gunduru	Sub centre
336	Marali	Sub centre
337	Basapattana	Sub centre
338	Chikkajanthkal	Sub centre
339	Agoli	Sub centre
340	Karamudi	Sub centre
341	Mataldinni	Sub centre
342	Jangamar Kalgodi	Sub centre
343	Yerehanchinal	Sub centre
344	Sanknur	Sub centre
345	Sanapura	Sub centre
346	Hiremannapur	Sub centre
347	Garjnal	Sub centre
348	Belagatta	Sub centre
349	Basapura	Sub centre
350	Karadoni	Sub centre
351	Hatti	Sub centre
352	Bijkal	Sub centre
353	Hanwal	Sub centre
354	Kudrimoti	Sub centre
355	Agalkera	Sub centre
356	Haleshivapura	Sub centre

357	Dotihal	Sub centre
358	Menedal	Sub centre
359	Hosalingpura	Sub centre
360	Muddalagundi	Sub centre
361	Gudadalli	Health & Wellness centre
362	Marali	Health & Wellness centre
363	Muttagi	Sub centre
364	Narasalaja	Sub centre
365	Manur	Sub centre
366	Masuti	Sub centre
367	Dindawar	Sub centre
368	Yaranal	Sub centre
369	Hattarakihal	Sub centre
370	Malaghan	Sub centre
371	Talewad	Sub centre
372	Benal RS	Sub centre
373	Golasangi B	Sub centre
374	Kubakaddi	Sub centre
375	Hunshayal	Sub centre
376	Masibanal	Sub centre
377	Kavalagi	Sub centre
378	Yambatanal	Sub centre
379	Biraladinni	Sub centre
380	Unnibavi	Sub centre
381	Donur	Sub centre
382	Bairawadagi	Sub centre
383	Satihal	Sub centre
384	Bommanahalli	Sub centre
385	BENAKANALLI	Sub centre
386	Hebbal	Sub centre
387	Markapanhalli	Sub centre
388	SATAOGOAV- PI	Sub centre
389	BHATAGUNAKI	Sub centre
390	SAVALSANG	Sub centre
391	NIVARAGI	Sub centre
392	AGASANAL	Sub centre
393	TADDEVADI	Sub centre
394	BANTHNAL	Sub centre
395	HIREMASALI	Sub centre
396	HIRERUGI	Sub centre

397	Sarwad A	Sub centre
398	S D Hatti	Sub centre
399	Babanagar	Sub centre
400	Madubhavi	Sub centre
401	Aheri	Sub centre
402	Baratagi	Sub centre
403	Dyaberi	Sub centre
404	Shegunsi	Sub centre
405	Ainapur	Sub centre
406	Jumnal	Sub centre
407	Kotyal	Sub centre
408	Gonasagi	Sub centre
409	Kumate	Sub centre
410	Bellubi	Sub centre
411	Kengalgutti	Sub centre
412	Kanbur	Sub centre
413	Makhnapur	Sub centre
414	Minchnal	Sub centre
415	Siddapura	Sub centre
416	Basarkod	Sub centre
417	Rudagi	Sub centre
418	Balaganur	Sub centre
419	Ingalageri	Sub centre
420	Chabanur	Sub centre
421	Salotagi-A	Sub centre
422	ALUR	Sub centre
423	Halagani	Sub centre
424	Sarwad B	Sub centre
425	Minajigi	Sub centre
426	Bommanahalli	Sub centre
427	Geddalamari	Sub centre
428	Madnalli	Sub centre
429	Devanagaon	Sub centre
430	Ganiyar	Sub centre
431	Ramapur P A	Sub centre
432	Kakkameli	Sub centre
433	Bekinala	Sub centre
434	Kalakeri_ B	Sub centre
435	Ganganalli	Sub centre
436	Somjyal	Sub centre

437	Bommanalli	Sub centre
438	Khanapur	Sub centre
439	Hanjagi	Sub centre
440	Kanakal	Sub centre
441	Chimmalagi	Sub centre
442	Kodabagi	Sub centre
443	Uthnal	Sub centre
444	Balawat	Sub centre
445	Anjutagi	Sub centre
446	Devur	Sub centre
447	Jalavada	Sub centre
448	Solawadagi	Sub centre
449	Hattali	Sub centre
450	Miragi	Sub centre
451	Nimbal _ KD	Sub centre
452	Koluragi	Sub centre
453	UMARANI	Sub centre
454	Thamba B	Sub centre
455	Ittangihal	Sub centre
456	Dhandaragi	Sub centre
457	Torvi A	Sub centre
458	Aliyabad	Sub centre
459	Krjol	Sub centre
460	Tajour	Sub centre
461	Gunaki	Sub centre
462	Yatanal	Sub centre
463	Kuntoji	Sub centre
464	Rakkasagi	Sub centre
465	Navadagi	Sub centre
466	Balabatti	Sub centre
467	Nalathawad B	Sub centre
468	Kolur	Sub centre
469	Haranal	Sub centre
470	Hittanalli L. T	Sub centre
471	Katral	Sub centre
472	Gornal	Sub centre
473	Hegdihal	Sub centre
474	Hadagali	Sub centre
475	Tidagundi	Sub centre
476	Chirchinkal	Sub centre

477	Veereshnagar	Sub centre
478	Nagarbetta	Sub centre
479	Kokatanur	Sub centre
480	Madikeshwar B(Padekanur)	Sub centre
481	Chattaraki	Sub centre
482	Alagur	Sub centre
483	Yaragala B K	Sub centre
484	Nagur	Sub centre
485	Takkalaki	Sub centre
486	Hadalsang	Sub centre
487	Gundal	Sub centre
488	Bidarakundi	Sub centre
489	Bijjur	Sub centre
490	Babalad	Sub centre
491	Jevoor	Sub centre
492	Takkalki	Sub centre
493	Ankalagi	Sub centre
494	Bavoor	Sub centre
495	Madabala	Sub centre
496	Kalvithanda	Sub centre
497	Makarab B	Sub centre
498	Tippapura	Sub centre
499	Kombli	Sub centre
500	Dasanahalli	Sub centre
501	Shivalingamanahalli	Sub centre
502	K K Thanda	Sub centre
503	K M Thanda	Sub centre
504	Hosahalli	Sub centre
505	Hadagali B	Sub centre
506	Muddenur	Sub centre
507	Alipura	Sub centre
508	Varakanahalli	Sub centre
509	Dasarahalli Thanda	Sub centre
510	Hirekolachi	Sub centre
511	Navali	Sub centre
512	Umarani	Sub centre
513	H K gunte/kunte	Sub centre
514	Bayaluthambaraguddi	Sub centre
515	Hulikeri	Sub centre
516	Banavikallu	Sub centre

517	Ammanakere	Sub centre
518	Thimmenahalli	Sub centre
519	Appenahalli	Sub centre
520	Ramadurga	Sub centre
521	Sidigal	Sub centre
522	Pujanhalli	Sub centre
523	Jammobanahalli	Sub centre
524	Tayakanahalli	Sub centre
525	Harakabavi	Sub centre
526	Dupadahalli	Sub centre
527	K Ayyanahalli	Sub centre
528	Chitragunda	Sub centre
529	Mallanayakanahalli	Sub centre
530	Gajapura	Sub centre
531	A D Gudda	Sub centre
532	Kandagallu	Sub centre
533	Bheemasamudra	Sub centre
534	Bedeladaku	Sub centre
535	Yekkegundi	Sub centre
536	Harakanahalli	Sub centre
537	Mangapura	Sub centre
538	Suladahalli	Sub centre
539	Nimbalageri	Sub centre
540	Ambali	Sub centre
541	Yedramanahalli	Sub centre
542	Nagarkatte	Sub centre
543	Kallapura	Sub centre
544	Old H B Halli	Sub centre
545	Kadalabalu	Sub centre
546	Vallabhapura	Sub centre
547	G kodihalli	Sub centre
548	Gaddikere	Sub centre
549	Enagi	Sub centre
550	Byasigaderi	Sub centre
551	Dashamapura	Sub centre
552	Mangapura	Sub centre
553	Balahunasi	Sub centre
554	Vatamanahalli	Sub centre
555	Upinayakana Halli	Sub centre
556	Waradapura	Sub centre

557	Ramanagara 2	Sub centre
558	Bannigola	Sub centre
559	K K Thanda	Sub centre
560	Telagole	Sub centre
561	Basarakodu	Sub centre
562	Kadathi	Sub centre
563	Koolahalli	Sub centre
564	Garabhagudi	Sub centre
565	Hosakote	Sub centre
566	Singrihalli	Sub centre
567	Sovenahalli	Sub centre
568	Ramagatta	Sub centre
569	M K Halli	Sub centre
570	K(U) Kallalli	Sub centre
571	Hagari Gajapura	Sub centre
572	Ragimasalawada	Sub centre
573	Siraganahalli	Sub centre
574	Mydur	Sub centre
575	U Kallahalli	Sub centre
576	Kunchur	Sub centre
577	Gowrihalli	Sub centre
578	Kyrakatte	Sub centre
579	Chikkamegalagere	Sub centre
580	Kuruvatti	Sub centre
581	Talakallu	Sub centre
582	Nagatibasapura	Sub centre
583	M M Halli _A	Sub centre
584	Danapura	Sub centre
585	P K Halli	Sub centre
586	Nagalapura	Sub centre
587	Mariyammana Halli B	Sub centre
588	Nagenahalli	Sub centre
589	Diggavathi	Sub centre
590	Chilakanhatti	Sub centre
591	Hampi	Sub centre
592	Hagarigudihalli	Sub centre
593	Kallahalli	Sub centre
594	Kamalapura A	Sub centre
595	Kamalpura B	Sub centre
596	Old Mallapana Guddi	Sub centre

597	Bukkasagar	Sub centre
598	Hosakote	Sub centre
599	Kotabhagi	Sub centre
600	Lokur	Sub centre
601	Yadawada	Sub centre
602	Kurubagatti	Sub centre
603	Kanavi Honnapur	Sub centre
604	Managundi	Sub centre
605	Maradagi	Sub centre
606	Shivalli	Sub centre
607	Narendra A	Sub centre
608	Ramapura	Sub centre
609	Govanakoppa	Sub centre
610	Chandanamatti	Sub centre
611	Harobelavadi	Sub centre
612	Dori	Sub centre
613	Tegur	Sub centre
614	Kusugal B	Sub centre
615	Hebsur	Sub centre
616	Sulla	Sub centre
617	Rayanala	Sub centre
618	Sherewada	Sub centre
619	Varura	Sub centre
620	Kurdadikeri	Sub centre
621	Malligawada	Sub centre
622	Anchatageri	Sub centre
623	Murarahalli	Sub centre
624	Dastikoppa	Sub centre
625	Biravalli	Sub centre
626	Bambalwad	Sub centre
627	Tambur	Sub centre
628	Hirehonnalli	Sub centre
629	Ugnikeri	Sub centre
630	Kuravinakoppa	Sub centre
631	Devikoppa B	Sub centre
632	Jinnur	Sub centre
633	Malakanakoppa	Sub centre
634	Bagadageri	Sub centre
635	Muttagi	Sub centre
636	Dummawada	Sub centre

637	G Basanakoppa	Sub centre
638	Gambyapura	Sub centre
639	Beguru	Sub centre
640	Kudalagi	Sub centre
641	Tumarikoppa	Sub centre
642	Kalas A	Sub centre
643	Kalas B	Sub centre
644	Harlapur	Sub centre
645	Mattigatti	Sub centre
646	Tarlagatta	Sub centre
647	Kamadolli A	Sub centre
648	Chakalabbi	Sub centre
649	Khanatti	Sub centre
650	Hirenarthi	Sub centre
651	Rottigawada	Sub centre
652	Basapura	Sub centre
653	Arekurahatti	Sub centre
654	Kalawada	Sub centre
655	Gudisagar	Sub centre
656	Tuppadakurahatti	Sub centre
657	Sirur	Sub centre
658	MANTUR	Sub centre
659	Harlapur	Sub centre
660	Kalasapur	Sub centre
661	Beladadi A	Sub centre
662	Beladabi _B	Sub centre
663	Binkadakatti	Sub centre
664	Hosur	Sub centre
665	Sartur _A	Sub centre
666	Niralagi	Sub centre
667	Antur_ Bentur	Sub centre
668	Yelishirunj	Sub centre
669	Mundvad	Sub centre
670	Petalur	Sub centre
671	Mevundi	Sub centre
672	Chikkahandigol	Sub centre
673	Advi Somapur	Sub centre
674	Kanaginhal	Sub centre
675	Venktapur	Sub centre
676	Halligudi	Sub centre

677	Korlahalli	Sub centre
678	Konnur B	Sub centre
679	Khanapur	Sub centre
680	Singatalur	Sub centre
681	Bidnal	Sub centre
682	Redder Naganur	Sub centre
683	Hunasikatti	Sub centre
684	Kanakikoppa	Sub centre
685	Sankadal	Sub centre
686	Bairnatti	Sub centre
687	Ramapur	Sub centre
688	Gogeri	Sub centre
689	Kuntoji	Sub centre
690	Kalakeri	Sub centre
691	Chikkamannur	Sub centre
692	Itagi	Sub centre
693	Koujgeri	Sub centre
694	Gadagoli	Sub centre
695	Hullur	Sub centre
696	Halkeri	Sub centre
697	Kotabal	Sub centre
698	Madalgeri	Sub centre
699	Kuradagi	Sub centre
700	Bammasagar	Sub centre
701	Lakalkatti	Sub centre
702	Jigalur	Sub centre
703	Hullur	Sub centre
704	Doddur	Sub centre
705	Tarikoppa	Sub centre
706	Lakshmeshwar_ C	Sub centre
707	F_ Badni	Sub centre
708	Battur	Sub centre
709	Devihal	Sub centre
710	Holeitagi	Sub centre
711	Koganur	Sub centre
712	Adahalli	Sub centre
713	Badchi	Sub centre
714	Khotanatti	Sub centre
715	Badagi	Sub centre
716	Ainapur 2	Sub centre

717	Krishna Kittur	Sub centre
718	Tigadi	Sub centre
719	Melmatti	Sub centre
720	Sankonatti	Sub centre
721	Khilegoan	Sub centre
722	Katgeri	Sub centre
723	Chamkeri	Sub centre
724	Sautatti	Sub centre
725	Shiratti	Sub centre
726	Nadagoan	Sub centre
727	Kempawad	Sub centre
728	Hosatti	Sub centre
729	Shegunsi	Sub centre
730	Nandeshwar	Sub centre
731	Paridhkhanwad	Sub centre
732	Ugar B K	Sub centre
733	Darur	Sub centre
734	Mangavati	Sub centre
735	Saptasagar	Sub centre
736	Jambagi	Sub centre
737	Kattalagi	Sub centre
738	D Shigihalli	Sub centre
739	Degava	Sub centre
740	Belawadi _B	Sub centre
741	Nayanagar	Sub centre
742	Vakkund	Sub centre
743	Sulagatti	Sub centre
744	Nesargi	Sub centre
745	Turmari	Sub centre
746	Kadrolli	Sub centre
747	Devalapur	Sub centre
748	Hannikeri	Sub centre
749	H Nagalapur	Sub centre
750	Pattihal S B	Sub centre
751	Mugabasav	Sub centre
752	Aravalli	Sub centre
753	K K kopp	Sub centre
754	Kukadolli	Sub centre
755	Mutnal	Sub centre
756	Shivapur	Sub centre

757	Aralikatti	Sub centre
758	Mastmardi	Sub centre
759	Karle	Sub centre
760	Balekundri Pant	Sub centre
761	Shindholi	Sub centre
762	Kardiguddi	Sub centre
763	Bastwad	Sub centre
764	Hanchinal	Sub centre
765	Janawd	Sub centre
766	Koganolli_1	Sub centre
767	Vadral	Sub centre
768	Hatterwat	Sub centre
769	Karoshi _1	Sub centre
770	Vijaynagar	Sub centre
771	Mirapuratti	Sub centre
772	Belakud	Sub centre
773	Navalihal	Sub centre
774	Nainglaj	Sub centre
775	Kothali	Sub centre
776	Nagaral	Sub centre
777	Kurli	Sub centre
778	Kunnur	Sub centre
779	Kallol	Sub centre
780	Iranatti	Sub centre
781	Suladal	Sub centre
782	Basarakodu	Sub centre
783	Vannenur	Sub centre
784	Sriwara	Sub centre
785	Bylur	Sub centre
786	Suggenhalli	Sub centre
787	Devasamudra	Sub centre
788	Nidagurthi	Sub centre
789	D Anthapura	Sub centre
790	Uthanuru	Sub centre
791	K Beligal	Sub centre
792	K.Beligal B	Sub centre
793	Daruru	Sub centre
794	Kothalachinta	Sub centre
795	Halkundi	Sub centre
796	Diggi	Sub centre

797	Jaigram	Sub centre
798	Hotapet	Sub centre
799	Konkal	Sub centre
800	Ajalapura	Sub centre
801	Gajarakota	Sub centre
802	Kallur Road	Sub centre
803	Mogha	Sub centre
804	Kondampalli	Sub centre
805	Ranjol	Sub centre
806	Adki	Sub centre
807	Madki	Sub centre
808	Tellur	Sub centre
809	Sagnur	Sub centre
810	Kodadur	Sub centre
811	Kandkur	Sub centre
812	Chikka bommanal	Sub centre
813	Danapura	Sub centre
814	Heroor	Sub centre
815	Gunnal	Sub centre
816	Nilogipura	Sub centre
817	DHULKHED	Sub centre
818	Jambagi	Sub centre
819	Nebageri	Sub centre
820	Katnalli	Sub centre
821	Nagathan B(Hunashayal)	Sub centre
822	Dharmatti	Sub centre
823	Hullur	Sub centre
824	Jammaladinni	Sub centre
825	Advi Hulagbal	Sub centre
826	Thangadagi B	Sub centre
827	BB ingalagi	Sub centre
828	Hanchinal	Sub centre
829	Herehadagali B	Sub centre
830	Hyarada	Sub centre
831	Holalu B	Sub centre
832	Avaradhi	Sub centre
833	Jaganur	Sub centre
834	Satturu	Sub centre
835	Machihalli	Sub centre
836	Chabbi	Sub centre

837	M Shivapur	Sub centre
838	Mugali	Sub centre
839	Savadi	Sub centre
840	M Mallapur	Sub centre
841	Kalabhavi	Sub centre
842	Hanabaratti	Sub centre
843	Sampagova 2	Sub centre
844	Kesti	Sub centre
845	Shindikurbet 2	Sub centre
846	Belvatti	Sub centre
847	Vederahatti	Sub centre
848	Marihal	Sub centre
849	Dhavaleshwar	Sub centre
850	Kadapur	Sub centre
851	Gujanal	Sub centre
852	Dasanatti	Sub centre
853	Belgal	Sub centre
854	Banapura	Sub centre
855	New Moka	Sub centre
856	Rupanagudi	Sub centre
857	Sanjeevrayan kote	Sub centre
858	Somalapur	Sub centre
859	SRS Halli	Sub centre
860	G L Halli	Sub centre
861	Metri	Sub centre
862	Hayyal B	Sub centre
863	Bonal	Sub centre
864	Alahala	Sub centre
865	Aladal	Sub centre
866	Bappargi	Sub centre
867	Khanapura H- S	Sub centre
868	Malagatti	Sub centre
869	Eleheiri	Sub centre
870	Jinakera	Sub centre
871	Rummanaguda	Sub centre
872	Shirolli	Sub centre
873	Srichand	Sub centre
874	Jamga	Sub centre
875	Mogla	Sub centre
876	Lingampalli	Sub centre

877	Shivoor	Sub centre
878	Hosur	Sub centre
879	Daraga Shirur HWC	Sub centre
880	Kalgurthi	Sub centre
881	S/s Kuknoor B	Sub centre
882	Benakanal	Sub centre
883	Mangalore B	Sub centre
884	M Gudadur	Sub centre
885	Nidagundi	Sub centre
886	HAVINAL	Sub centre
887	Jalgeri	Sub centre
888	Kadani	Sub centre
889	Rampura	Sub centre
890	Kenchamanahalli	Sub centre
891	Marabbihal	Sub centre
892	Malvi	Sub centre
893	Sonna	Sub centre
894	Muthukur	Sub centre
895	Nichavvanahalli	Sub centre
896	Madlagere	Sub centre
897	Arasanahalu	Sub centre
898	Chirastahalli	Sub centre
899	Udagatti D Thanda	Sub centre
900	Jangamathumbigere	Sub centre
901	Karadigudda	Sub centre
902	Aravatagi	Sub centre
903	Surshettikoppa	Sub centre
904	Hebbal	Sub centre
905	H S Venkatapur	Sub centre
906	Hallikeri	Sub centre
907	Mallapur	Sub centre
908	Jakkali	Sub centre
909	Hulagbal	Sub centre
910	Honnihalli	Sub centre
911	Mastamaradi	Sub centre
912	Kochhari	Sub centre
913	Sridargadde	Sub centre
914	Yettin Budihal	Sub centre
915	Somasamudra	Sub centre
916	Genikehal	Sub centre

917	Swami Halli	Sub centre
918	Kenchangudda	Sub centre
919	Kudaralu	Sub centre
920	Budaguppa	Sub centre
921	T S Kudluru	Sub centre
922	Mudatnoore	Sub centre
923	Budanur	Sub centre
924	Ikur	Sub centre
925	Halgera	Sub centre
926	WANADURGA	Sub centre
927	BALASHETTIHALA	Sub centre
928	Hagaratagi	Sub centre
929	Mudnnura	Sub centre
930	Allipura	Sub centre
931	Yaragola-A	Sub centre
932	Kunchavaram A	Sub centre
933	Chandapura	Sub centre
934	Ladmulgi	Sub centre
935	Jawali D	Sub centre
936	Ladchincholi	Sub centre
937	Aloor	Sub centre
938	Khanapur	Sub centre
939	Tavargera	Sub centre
940	Kumsi	Sub centre
941	B Pattan	Sub centre
942	FirojAbad	Sub centre
943	Bhagodi	Sub centre
944	Durga Sirur	Sub centre
945	Wadi B	Sub centre
946	Hirearalalli	Sub centre
947	Sanganal	Sub centre
948	Kuknoor A	Sub centre
949	Chikkamannapur	Sub centre
950	Sanganal	Sub centre
951	Halagera	Sub centre
952	Holemudlapur	Sub centre
953	Kolur	Sub centre
954	Katarki	Sub centre
955	Kalkeri	Sub centre
956	Ulenoor	Sub centre

957	Hulihydar	Sub centre
958	Mangalore A	Sub centre
959	Hirekeda	Sub centre
960	Nidoni	Sub centre
961	Kaggod	Sub centre
962	Zalaki	Sub centre
963	Revatgoav	Sub centre
964	Halasangi B	Sub centre
965	B Salawadgi	Sub centre
966	Hiremural	Sub centre
967	Bandri	Sub centre
968	Goudageri	Sub centre
969	Dundur	Sub centre
970	Kotumachagi	Sub centre
971	Ramgiri	Sub centre
972	Bevnur	Sub centre
973	Malabad	Sub centre
974	Kusanal	Sub centre
975	Aralihatti	Sub centre
976	Kannal	Sub centre
977	Yallur (3)	Sub centre
978	Hirekudi	Sub centre
979	Nej	Sub centre
980	Old Darooji	Sub centre
981	New Darooji	Sub centre
982	Kodalu	Sub centre
983	H Hosahalli	Sub centre
984	Boggur	Sub centre
985	Konchageri	Sub centre
986	Balakundi	Sub centre
987	Bendegumballi	Sub centre
988	CHAMNAL	Sub centre
989	Rastapur	Sub centre
990	Salgarabasantai	Sub centre
991	Kurkunta A	Sub centre
992	Yaragera	Sub centre
993	Bochnahalli	Sub centre
994	Gabasavalagi	Sub centre
995	Tadakoda	Sub centre
996	Salakinakoppa	Sub centre

997	Bhadrapura	Sub centre
998	Kolavi	Sub centre
999	Vanahalli	Sub centre
1000	Hirehegdal	Sub centre
1001	Old Darooji	Sub centre
1002	New Darooji	Sub centre
1003	Kodalu	Sub centre
1004	H Hosahalli	Sub centre
1005	Boggur	Sub centre
1006	Konchageri	Sub centre
1007	Balakundi	Sub centre
1008	Bendegumballi	Sub centre
1009	CHAMNAL	Sub centre
1010	Rastapur	Sub centre
1011	Salgarabasantai	Sub centre
1012	Kurkunta A	Sub centre
1013	Yaragera	Sub centre
1014	Bochnahalli	Sub centre
1015	Gabasavalagi	Sub centre
1016	Tadakoda	Sub centre
1017	Salakinakoppa	Sub centre
1018	Bhadrapura	Sub centre
1019	Kolavi	Sub centre
1020	Vanahalli	Sub centre
1021	Hirehegdal	Sub centre
1022	Government mother and child hospital kanakapura	Taluk Hospital
1023	Sakaleshapura Taluk Hospital	Taluk Hospital
1024	Govenment General hospital channapatna	Taluk Hospital
1025	Channarayapatan Taluk Hospital	Taluk hospita
1026	Taluk Govt hospital Magadi	Taluk Hospital
1027	Alur Taluk Hospital	Taluk Hopital
1028	Government hospital yelhanka	Taluk Hospital
1029	Holenarasipura Taluk hospital	Taluk Hopital
1030	Govt hospital Turuvekere	Taluk Hospital
1031	Arasiker taluk Hospital	Taluk Hopital
1032	Govt general Hospital tiptur	Taluk Hospital
1033	Belur Taluk Hospital	Taluk Hopital

1034	Govt General Hospital Nagamangala	Taluk Hospital
1035	Govt general hospital anekal	Taluk Hospital
1036	GOVT general hospital KR pete	Taluk Hospital
1037	Government hospital malur	Taluk Hospital
1038	Sub division hospital Pandavapura	Taluk Hospital
1039	Government General Hospital Bangarpet	Taluk Hospital
1040	General Hospital Sriranapatna	Taluk Hospital
1041	Govt general hospital K G F	Taluk Hospital
1042	Taluk general hospital hosakote	Taluk Hospital
1043	Women and children hospital	Taluk Hospital
1044	Taluku hospital yalanduru	Taluk Hospital
1045	Government Genaral Hospital Koratagere	Taluk Hospital
1046	Mother and children hospital Nanjanagudu	Taluk Hospital
1047	General hospital Narasipura	Taluk Hospital
1048	Mother and child hospital KR Nagar	Taluk Hospital
1049	Government hospital karkala	Taluk Hospital
1050	Govt general Hospital Gubbi	Taluk Hospital
1051	Government General Hospital Chikkanayakanahalli	Taluk Hospital
1052	Government hospital kundhapura	Taluk Hospital
1053	Government Hospital Aurad	Taluk Hospital
1054	Government hospital bhatakal	Taluk Hospital
1055	Taluk hospital honavara	Taluk Hospital
1056	Taluk hospital kumta	Taluk Hospital
1057	General hospital hunasur	Taluk Hospital
1058	General hospital harihar	Taluk Hospital
1059	General hospital	Taluk Hospital
1060	General hospital	Taluk Hospital
1061	General hospital	Taluk Hospital
1062	Govt General hospital Kaduru	Taluk Hospital
1063	Govt General Hospital Tarikere	Taluk Hospital
1064	Taluk general hospital Bhadravathi	Taluk Hospital

1065	Govt General Hospital Narasimharajapura	Taluk Hospital
1066	Taluk hospital srisi	Taluk Hospital
1067	General hospital channagiri	Taluk Hospital
1068	General hospital Holakere	Taluk Hospital
1069	Taluk hospital siddpura	Taluk Hospital
1070	General hospital Hosadurga	Taluk Hospital
1071	Sri Jayachamarahendra General Hospital Thirthahalli	Taluk Hospital
1072	MS Devegowda memorial hospital	Taluk Hospital
1073	Taluk General Hospital Sringeri	Taluk Hospital
1074	GOVT HOSPITAL CHITTAPUR	Taluk Hospital
1075	GOVT HOSPITAL SORAPUR	Taluk Hospital
1076	Taluk hospital nargunda	Taluk Hospital
1077	Taluk Hospital badami	Taluk Hospital
1078	Taluk hospital navalagunda	Taluk Hospital
1079	General hospital Hadagali	Taluk Hospital
1080	Taluk General Hospital Hukkeri	Taluk Hospital
1081	General hospital Harappanahalli	Taluk Hospital
1082	General hospital	Taluk Hospital
1083	Yelburga Taluka Hospital	Taluk Hospital
1084	Taluk hospital Haliyal	Taluk Hospital
1085	General hospital	Taluk Hospital
1086	Kushtagi Taluka Hospital	Taluk Hospital
1087	Hunagund Taluk Hospital	Taluk Hospital
1088	Taluk government hospital kalaghatgi	Taluk Hospital
1089	GOVT HOSPITAL SHAHAPUR	Taluk Hospital
1090	Mother and child hospital	Taluk Hospital
1091	General hospital	Taluk Hospital
1092	General hospital	Taluk Hospital
1093	General hospital	Taluk Hospital
1094	Taluk hospital shiggon	Taluk Hospital
1095	Taluk General Hospital Athani	Taluk Hospital
1096	Mother and child care hospital Gokak	Taluk Hospital
1097	Taluk hospital savanura	Taluk Hospital
1098	Taluk General Hospital Rayabag	Taluk Hospital

1099	General hospital	Taluk Hospital
1100	Mother and child hospital Chikkodi	Taluk Hospital
1101	Taluk General hospital Ramadurga	Taluk Hospital
1102	Bilagi Taluk Hospital	Taluk Hospital
1103	Saundatti Taluk Hospital	Taluk Hospital
1104	Khanapur Taluk Hospital	Taluk Hospital
1105	Jamkhandi Taluk Hospital	Taluk Hospital
1106	Taluk hospital Hangal	Taluk Hospital
1107	Gangawathi Taluka Hospital	Taluk Hospital
1108	Molakalmuru Taluk Hospital	Taluk Hospital
1109	Bailhongal Taluk Hospital	Taluk Hospital
1110	Mudhol Taluk Hospital	Taluk Hospital
1111	General hospital Jagaluru	Taluk Hospital
1112	Taluk hospital H D kote	Taluk Hospital
1113	Mudigere Taluka Hospital	Taluk Hospital
1114	General hospital somwarpet	Taluk Hospital
1115	Sira Taluk Hospital	Taluk Hospital
1116	Siragppa Taluk Hospital	Taluk Hospital
1117	Devanahalli Taluk Hospital	Taluk Hospital
1118	Aland Taluk Hospital	Taluk Hospital
1119	Taluk Hospital Joida	Taluk Hospital
1120	GOVERNMENT TALUK HOSPITAL BAGEPALLI	Taluk Hospital
1121	GOVERNMENT TALUK HOSPITAL GAURIBIDANUR	Taluk Hospital
1122	GOVERNMENT TALUK HOSPITAL MULABAGILU	Taluk Hospital
1123	GOVERNMENT TALUK HOSPITAL SRINIVASAPURA	Taluk Hospital
1124	Nelamangala Taluk Hospital	Taluk Hospital
1125	Madhugiri Taluk Hospital	Taluk Hospital
1126	Pavagada Taluk Hospital	Taluk Hospital
1127	Maddur Taluk Hospital	Taluk Hospital
1128	Malavalli Taluk Hospital	Taluk Hospital
1129	Anugondanahally	PHC
1130	Kodamballi	PHC
1131	Banavara	PHC
1132	Kanakatte	PHC

1133	Vokkaleri	PHC
1134	Bheriya	PHC
1135	Kadaba	PHC
1136	Hosakere	PHC
1137	Nittur	PHC
1138	K T Halli	PHC
1139	Lingada Halli	PHC
1140	Mangalawada	PHC
1141	Chiratha Halli	PHC
1142	D H Kunte	PHC
1143	Pattnayakanahalli	PHC
1144	Honnudike	PHC
1145	Haranahalli	PHC
1146	Karehalli	PHC
1147	Basaralu	PHC
1148	Hebbalagere	PHC
1149	Igoor	PHC
1150	Kanasavadi	PHC
1151	Madderi	PHC
1152	Rayara Koppal	PHC
1153	Bidarkere	PHC
1154	Jadigenahalli	PHC
1155	Ramanathpura	PHC
1156	Pallya Phc	PHC
1157	Salagame	PHC
1158	Dodda Kadanur	PHC
1159	Mattanavile	PHC
1160	Sondekoppa	PHC
1161	Koppa (Maddur)	PHC
1162	Besagarahalli	PHC
1163	Thaggalli	PHC
1164	Melukote	PHC
1165	Myasandra	PHC
1166	Hanasoge	PHC
1167	Belakawadi Phc	PHC
1168	Koppal H.H	PHC
1169	Tubinakere	PHC
1170	S S Ghati	PHC
1171	Doddamaralawadi	PHC
1172	Hosadurga	PHC

1173	Devalapura	PHC
1174	Sr Hundi	PHC
1175	Perisandra	PHC
1176	Huliyurdurga	PHC
1177	Keregudu	PHC
1178	Hura	PHC
1179	Nandi	PHC
1180	Konaghatta	PHC
1181	K.Honnelageri	PHC
1182	Kothathi	PHC
1183	Chelur	PHC
1184	Khanasawadi	PHC
1185	Nagavalli	PHC
1186	Somayajalahalli 24X7	PHC
1187	K.R. Pette	PHC
1188	Mallanaayakanahalli (24X7)	PHC
1189	Kurudumale (24X7)	PHC
1190	Hulikere	PHC
1191	Hebbini 24X7	PHC
1192	Sakarayapatna	PHC
1193	Devarayasamudra	PHC
1194	Singatagere	PHC
1195	Nangali	PHC
1196	Mallandur	PHC
1197	Thayalur	PHC
1198	Ballupete	PHC
1199	Jigani	PHC
1200	Bettahalasuru	PHC
1201	Mathighatta	PHC
1202	Bellavi	PHC
1203	Dandinashivara	PHC
1204	Kandikere	PHC
1205	Kesthuru	PHC
1206	Holalu	PHC
1207	Kodiyala	PHC
1208	Kallambella	PHC
1209	Soonagahalli	PHC
1210	Kodihalli	PHC
1211	Tekal	PHC
1212	Bettadapura	PHC

1213	Kampalapura	PHC
1214	Koppa	PHC
1215	Ravandur	PHC
1216	Handanakere	PHC
1217	Byramangala	PHC
1218	Kallur	PHC
1219	Mahadevapura	PHC
1220	Hedathale	PHC
1221	Yadiyur	PHC
1222	Sankighatta	PHC
1223	Kudur	PHC
1224	Budikote	PHC
1225	Doddachinnahalli	PHC
1226	Guttahalli	PHC
1227	Kyasambally	PHC
1228	Kyalanuru	PHC
1229	Austin Town Mat Hom	MH
1230	Singasandra	UPHC
1231	Dargamohalla	UPHC
1232	Hanagodu	PHC
1233	Dodderi	PHC
1234	Baraguru	PHC
1235	Bukkapattana	PHC
1236	Tavarekere	PHC
1237	Moodala Palya Mat Home	PHC
1238	V V Puram	UPHC
1239	Adyanadka	Primary Health Centre
1240	Daivasthala	Primary Health Centre
1241	Navooru	Primary Health Centre
1242	Panjikallu	Primary Health Centre
1243	Pudu	Primary Health Centre
1244	Kalladka Balthila	Primary Health Centre
1245	Mani	Primary Health Centre
1246	Punjalkat	Primary Health Centre
1247	Aladangady	Primary Health Centre
1248	Padangady	Primary Health Centre
1249	Bondel	Primary Health Centre
1250	Kateel	Primary Health Centre
1251	Mundaje	Primary Health Centre
1252	Charmadi	Primary Health Centre

1253	Naravi	Primary Health Centre
1254	Kaniyoor	Primary Health Centre
1255	Hathyadka	Primary Health Centre
1256	Ujire	Primary Health Centre
1257	Venoor	Primary Health Centre
1258	Dharmasthala	Primary Health Centre
1259	Ladyhill kadri	Urban Primary Health Centre
1260	Paladka	Primary Health Centre
1261	Eshwaramangala	Primary Health Centre
1262	Nelyady	Primary Health Centre
1263	Puttur	Primary Health Centre
1264	Sarve	Primary Health Centre
1265	Rayee	Primary Health Centre
1266	Kuloor kunjathbail	Urban Primary Health Centre
1267	Katipalla	Primary Health Centre
1268	Natekal	Primary Health Centre
1269	Suratkal	Primary Health Centre
1270	Atturukemral	Primary Health Centre
1271	Padil Attavara	Urban Primary Health Centre
1272	Ekkuru	Urban Primary Health Centre
1273	Kompadavu	Primary Health Centre
1274	Kolthige	Primary Health Centre
1275	Kaniyuru	Primary Health Centre
1276	Aranthodu	Primary Health Centre
1277	Bellare	Primary Health Centre
1278	Guthigar	Primary Health Centre
1279	Panja	Primary Health Centre
1280	Ganjimatta	Primary Health Centre
1281	Bajpe	Primary Health Centre
1282	Kanyana	Primary Health Centre
1283	Benjanapadav	Primary Health Centre
1284	Manchi	Primary Health Centre
1285	Kotekar	Primary Health Centre
1286	Kallamundkuru	Primary Health Centre
1287	Kulayi	Urban Primary Health Centre
1288	Kudupu	Primary Health Centre
1289	Shakthinagar	Urban Primary Health Centre
1290	Shirthady	Primary Health Centre
1291	Nellikaru	Primary Health Centre
1292	Shirady	Primary Health Centre

1293	Koila	Primary Health Centre
1294	Palthadi	Primary Health Centre
1295	Sajipanadu	Primary Health Centre
1296	Boliyar	Primary Health Centre
1297	Amblaogaru	Primary Health Centre
1298	Binder Wenlock	Urban Primary Health Centre
1299	Adyar	Primary Health Centre
1300	Alike	Primary Health Centre
1301	Belavai	Primary Health Centre

*** Final selected list to be shared to the selected organization**