## **UNDP** Afghanistan

## Site Assessment Data

## Provision of Electricity and Hot Water Systems to Health Facilities in the Western Region

Date: 10-Feb-22

Name of Health Facility, Type	Mara Abad, BHC
Village, Province, District	Mara Abad village, Pashtun Zarghun district, Herat Province
Name, phone number of contract person	Mohammad Juma, 0797918405
Assessment Conducted by (UNDP Field Engineer)	Eng. Ebadullah Momand
Distance from Herat, type of road to the health facility	83 Km distance from Herat City (62 Km Asphalt road+21Km Earth road) to HF
GPS Point (Coordinates)	34.25694° N, 62.89944° E
Review and recommendation of project manager	

S/N	Description	Field Data				
1	Existing Power Source (Generator, Solar	Existing Solar panels (750 watts),(2 Batteries, 12 v, 70 A)				
	etc.) and its capacity in kW	2 Generator each with 2.5 KW capacity (need to repairing).				
2	Number of rooms in the facility	Total Health facilities: <mark>14 Rooms</mark> , 4 Bathrooms, 1 Corridor				
		Residency building <mark>: 7 Rooms</mark> , 2 bath				
3	Existing house wiring? Number of power	The building has internal wiring but some parts need				
	points	checkup and Repairing.				
4	Total electrical load	Health Facilities existing equipments:				
	- Total number of light bulbs- total	Bulbs: 15				
	Watt	Refrigerator: 1				
	- Refrigerator, heater - total Watt	Warmer:1				
	<ul> <li>Any other equipment – total Watt</li> </ul>	Ceiling fans: 0				
	(Use a separate sheet, if required)	Water cooler: 2				
		Light (for child birth room):1				
		LCD: 1				
		Printer: 1				
		Computer: 1				

		Water pump:1
		DR and Midwife residency Building electricity equipments: Bulbs: 7
		See Annex A & B for further details and needs.
5	Cables, wiring, conduits, Junction box etc. require maintenance/replacement. If yes, prepare a BoQ.	Health facility buildings has internal wiring, Need to check up and Maintenance and extension. Toilets don't have sockets. All bulbs and holders are need to be replaced.
6	Existing streetlight in the compound?	HF has 3 street light damaged. Need to New
7	Total number of staff	8 personals (1 MD, 1 Midwife,1 supervisor CHS, 2 vaccinator, 2 guards)
8	Average number of patients per day	120 Patients per day
	Number of Villages under coverage	73 villages
9	Existing water supply facility, existing plumbing system	Health facility Has water supply system.
10	Existing water boiler? Provide detail (type, capacity, year of installations, lifespan etc.)	Doesn't have water boiler Health Facility has Solar hot water system, capacity 300 liter, Install date 2018. Three glass tubes are damaged. Need to replace. See the site photos for details
11	Functional Water well in the facility. Water depth in the well. Water depth from the surface	Yes, Health Facility has water well (borehole 40 meter deep, water depth in the well 5 m, water depth from the surface is 35 m)
12	Capacity of water tank. Insulated or not? Tank height from the surface	Three water tank, each capacity 1000 liter, one is insulated. Tank height is 8 meter from the surface.
13	Type of the existing Structure (RCC/load bearing walls)	5 Buildings, One of them is RCC. The other buildings' walls mad of brick masonry and the roofs are mad of Brick masonry and used RCC Girder in the roof.
14	Type of existing roof (Pitch or Flat)	Flat Roof

15	If the roof is Pitch, how many solar	No			
	panels can be installed on the south face				
	of the Pitch roof?				
16	If the roof is flat concrete, how many	Building # 1 roof area: 144 sqm			
	solar panels could be installed toward	Building # 2 (RCC) roof area:75 sqm			
	the south face?	Building # 3 roof area:136 sqm			
		Building # 4 roof area: 117 Sqm			
17	Does the existing roof is fit for	Yes			
	installation of Solar System or Required				
	Maintenance/repairing works?	See site plane and roof plan for further details.			
10					
18	If above answer is yes, prepare BoQ and	NII			
10	estimation for the repairing/upgrading	France was in the idding was of the adaptivisity the and the 20 m			
19	Distance from roof to existing main panel	From main building root to electricity board to: 30 m			
	board				
20	Dimension of existing building in m. (Use	Clinic main building dimensions:			
	a separate paper for a sketch)	Length: 18 m East to west Width: 8 m north to south			
		2 <sup>nd</sup> building (RCC):Length : 15 m north to south width: 5 m			
		East to west			
		3 <sup>rd</sup> Building: Length: 16 m East to west Width: 8 m			
		north to south			
		4 <sup>th</sup> Building: Length: 13 m East to west Width: 9 m			
		north to south			
		Annex D: Sketch			
21	Are there any technical	There were no technical obstacle and challenges for			
	obstacles/challenges to affect the	installation of solar panel. The responsible person expressed			
	installation and implement of the solar	his willingness.			
	system as planned? If yes, provide				
	detailed information, recommendation,				
	BoQ along with photos.				
22	Is there access to the roof for	Doesn't have stable stairs, uses wooden ladder.			
	installations of solar panels				
23	Take photos of the facility showing a bird	See Annex C for photos			
	eye view, structures, wirings, existing				
	electrical system and roof				

Surveyors' Comment:

Maar Abad BH exciting electrical equipment and energy consumption								
No	Equipment	Existing QTY	Power (watts)	Total Power (Watts)	Hours used per day	Energy used (watt- hours)	KW-Hr per day	Remarks
1	Bulbs	15	15	225				
2	Refrigerators	1	200	200				
3	Water Boiler	0	1500	0				
4	Warmer	1	1500	1500				
5	Auto Clave	0	1000	0				
6	LCD	1	60	60				
7	Exam light	1	50	50				
8	Fans	0	100	0				
9	Street light	3	60	120				
10	Water cooler	2	200	400				Solar
11	Printer	1	100	100				
12	Laptop	1	20	20				
13	Total			2675				

Annex B: Needed electricity load assessment

Maar Abad BH Needed electrical appliances load assessment								
No	Equipment	QNY	Power (watts)	Total Power (Watts)	Hours used per day	Energy used (watt- hours)	KW- Hr per day	Remarks
1	Bulbs	50	15	750				
2	Refrigerators	1	200	200				
3	Water Boiler		-	0				Solar hot water system
4	Warmer	1	1500	1500				
5	Auto Clave	1	1000	1000				
6	LCD	1	60	60				
7	Exam light	1	50	50				
8	Fans	22	100	2200				
9	Street light	3	100	300				

10	Printer	1	100	100		
11	Laptop	1	20	20		
12	Water cooler	8	200	1600		
13	Total			7680		

## Annex C: site photos











Annex C: Site plan

