

**Afghanistan Local Economic Development (ALED)**  
**Health Facilities Shortlisted for solar electrification and hot water system**

ملاحظات	نوعیت سیستم برق			نوع مرکز صحي Type of H.Fs	اسم مرکز Name of Health facility	ولسوالی District	ولایت Province	Lot
	سولر Solar	جنراتور Generator	برق عمومی Grid, unstable					
1		√		BHC	Cha Rig Clinic	Ghoryaan	Hirat	Lot 1
2		√		BHC	Posht-e-Koh Clinic	Guzarah (Nizam Shaheed)	Hirat	
3			√	BHC	Seyah Woshan Clinic	Guzarah (Nizam Shaheed)	Hirat	
4			√	BHC	Toqchi Clinic	Guzarah (Nizam Shaheed)	Hirat	

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	سولر Solar	جنراتور Generator	برق عمومی Grid, unstable					
5		√		BHC	Jandah Khan Clinic	Karokh	Hirat	2
6		√		BHC	Khowaja Chahar Shanbah Clinic	Karokh	Hirat	
7		√		BHC	Awkal Clinic	Shindand	Hirat	
8		√		BHC	Karnil Clinic	Zindah Jan	Hirat	

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	سولر Solar	جنراتور Generator	برق عمومی Grid, unstable					
1		√		SHC	Kariz Zaman SHC	Keshk-e- Kohna	Hirat	3
2		√		CHC	Koklam Clinic	Keshk-e- Kohna	Hirat	

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	سولر Solar	جنراتور Generator	برق عمومی Grid, unstable					
11		√		CHC+	Oba Clinic	Obeh	Hirat	Lot 4
12		√		BHC	Maar Aabad Clinic	Pashtoon Zarghoon	Hirat	

**Afghanistan Local Economic Development (ALED)****Bill of Quantities - Lot 1****Provision of Electricity and Hot Water System to Basic Health Centers in Herat****Electrical system size 7.5 kW, Hot Water System Size 300 litre storage capacity**

Item	Description	Qty	Unit of Measure	Unit Price	Amount
				USD	USD
1	Solar Photovoltaics panel, 380 Wp or more, each including mounting assembly, cables and sockets	100	nos.		
2	Battery storage system along with battery rack, connectors and cables, GEL battery- 200 Ah- 12 V each	60	nos.		
3	Hybrid inverter including charge controller, cable, connectors and accessories, 7.5 kW	4	nos.		
4	Solar Water Heater Assembly incl. mounting assembly, valves etc. and all other auxiliary equipment rendering the system Fit-for-Purpose, with the storage capacity of 300 Lit.	4	units		
5	Solar Water Pump, Submersible or surface as per the site condition, operating at approx. TDH=40 m and flow rate=0.30 m <sup>3</sup> /h and a Maximum Power Input = 250W incl. Controller, Junction Boxes, Protection Gear, Grounding Rod, Cabling and all other equipment rendering the system Fit-for-Purpose	4	units		
6	Battery fuse, 10 A (Fit for the purpose model)	20	Pc		
7	Main busbar (Multi Cluster Box) to be able to switch to/from solar and generator power	4	Pc		
8	PV distribution outdoor box, with 3XC-50A and 1XD03-163A breakers, Complete wiring	12	Pc		
9	Earthing system with earthing rod , cables, cable ways and all necessary materials	4	LS		
10	Cabling with cable ways, cable shoes, trenches and necessary accessories	4	Set		
11	Transportation to the site	4	LS		
12	Installation, configuration and testing, commissioning and users' training	4	LS		
13	One-year warranty and after sales services	4	LS		
14	Measurement and verification of project site data	4	LS		
<b>TOTAL FOR LOT 1</b>					

# Afghanistan Local Economic Development (ALED)

## Bill of Quantities - Lot 2

### Provision of Electricity and Hot Water System to Basic Health Centers in Herat

Electrical system size 7.5 kW, Hot Water System Size 300 litre storage capacity

Item	Description	Qty	Unit of Measure	Unit Price	Amount
				USD	USD
1	Solar Photovoltaics panel, 380 Wp or more, each including mounting assembly, cables and sockets	100	nos.		
2	Battery storage system along with battery rack, connectors and cables, GEL battery- 200 Ah- 12 V each	60	nos.		
3	Hybrid inverter including charge controller, cable, connectors and accessories, 7.5 kW	4	nos.		
4	Solar Water Heater Assembly incl. mounting assembly, valves etc. and all other auxiliary equipment rendering the system Fit-for-Purpose, with the storage capacity of 300 Lit.	4	units		
5	Solar Water Pump, Submersible or surface as per the site condition, operating at approx. TDH=40 m and flow rate=0.30 m <sup>3</sup> /h and a Maximum Power Input = 250W incl. Controller, Junction Boxes, Protection Gear, Grounding Rod, Cabling and all other equipment rendering the system Fit-for-Purpose	4	units		
6	Battery fuse, 10 A (Fit for the purpose model)	20	Pc		
7	Main busbar (Multi Cluster Box) to be able to switch to/from solar and generator power	4	Pc		
8	PV distribution outdoor box, with 3XC-50A and 1XD03-163A breakers, Complete wiring	12	Pc		
9	Earthing system with earthing rod , cables, cable ways and all necessary materials	4	LS		
10	Cabling with cable ways, cable shoes, trenches and necessary accessories	4	Set		
11	Transportation to the site	4	LS		
12	Installation, configuration and testing, commissioning and users' training	4	LS		
13	One-year warranty and after sales services	4	LS		
14	Measurement and verification of project site data	4	LS		
<b>TOTAL FOR LOT 2</b>					<b>-</b>

# Afghanistan Local Economic Development (ALED)

## Bill of Quantities - Lot 3

### Provision of Electricity and Hot Water System to Basic Health Centers in Herat

Electrical system size 7.5 kW, Hot Water System Size 300 litre storage capacity

Item	Description	Qty	Unit of Measure	Unit Price	Amount
				USD	USD
1	Solar Photovoltaics panel, 380 Wp or more, each including mounting assembly, cables and sockets	100	nos.		
2	Battery storage system along with battery rack, connectors and cables, GEL battery- 200 Ah- 12 V each	60	nos.		
3	Hybrid inverter including charge controller, cable, connectors and accessories, 7.5 kW	4	nos.		
4	Solar Water Heater Assembly incl. mounting assembly, valves etc. and all other auxiliary equipment rendering the system Fit-for-Purpose, with the storage capacity of 300 Lit.	4	units		
5	Solar Water Pump, Submersible or surface as per the site condition, operating at approx. TDH=40 m and flow rate=0.30 m <sup>3</sup> /h and a Maximum Power Input = 250W incl. Controller, Junction Boxes, Protection Gear, Grounding Rod, Cabling and all other equipment rendering the system Fit-for-Purpose	4	units		
6	Battery fuse, 10 A (Fit for the purpose model)	20	Pc		
7	Main busbar (Multi Cluster Box) to be able to switch to/from solar and generator power	4	Pc		
8	PV distribution outdoor box, with 3XC-50A and 1XD03-163A breakers, Complete wiring	12	Pc		
9	Earthing system with earthing rod , cables, cable ways and all necessary materials	4	LS		
10	Cabling with cable ways, cable shoes, trenches and necessary accessories	4	Set		
11	Transportation to the site	4	LS		
12	Installation, configuration and testing, commissioning and users' training	4	LS		
13	One-year warranty and after sales services	4	LS		
14	Measurement and verification of project site data	4	LS		
<b>Sub TOTAL FOR LOT 3</b>					

# Provision of Electricitiy and Hot Water System to Comprehensive Health Centers-Plus in Herat

Electrical system size 30 kW, Hot Water System Size 2 x 300 litre storage capacity

Item	Description	Qty	Unit of Measure	Unit Price	Amount
				USD	USD
1	Solar Photovoltaics panel, 380 Wp or more, each including mounting assembly, cables and sockets	90	nos.		
2	Battery storage system along with battery rack, connectors and cables, GEL battery- 200 Ah- 12 V each	60	nos.		
3	Hybrid inverter including charge controller, cable, connectors and accessories, 30 kW	1	nos.		
1	Solar Water Heater Assembly incl. mounting assembly, valves etc. and all other auxiliary equipment rendering the system Fit-for-Purpose	2	units		
2	Solar Water Pump, Submersible or surface as per the site condition, operating at approx. TDH=40 m and flow rate=0.30 m3/h and a Maximum Power Input = 250W incl. Controller, Junction Boxes, Protection Gear, Grounding Rod, Cabling and all other equipment rendering the system Fit-for-Purpose	2	units		
8	Battery fuse, 10 A (Fit for the purpose model)	15	Pc		
9	Main busbar (Multi Cluster Box) to be able to switch to/from solar and generator power	4	Pc		
10	PV distribution outdoor box, with 3XC-50A and 1XD03-163A breakers, Complete wiring	6	Pc		
	Earthing system with earthing rod , cables, cable ways and all necessary materials	1	LS		
	Cabling with cable ways, cable shoes, trenches and necessary accessories	1	Set		
	Transportation to the site	1	LS		
11	Installation, configuration and testing, commissioning and users' training	1	LS		
12	One-year warranty and after sales services	1	LS		
14	Measurement and verification of project site data	1	LS		
Sub TOTAL FOR LOT 3					-
TOTAL FOR LOT 3					-

# Afghanistan Local Economic Development (ALED)

## Bill of Quantities - Lot 4

### Provision of Electricity and Hot Water System to Basic Health Centers in Herat

Electrical system size 7.5 kW, Hot Water System Size 300 litre storage capacity

Item	Description	Qty	Unit of Measure	Unit Price	Amount
				USD	USD
1	Solar Photovoltaics panel, 380 Wp or more, each including mounting assembly, cables and sockets	100	nos.		
2	Battery storage system along with battery rack, connectors and cables, GEL battery- 200 Ah- 12 V each	60	nos.		
3	Hybrid inverter including charge controller, cable, connectors and accessories, 7.5 kW	4	nos.		
4	Solar Water Heater Assembly incl. mounting assembly, valves etc. and all other auxiliary equipment rendering the system Fit-for-Purpose, with the storage capacity of 300 Lit.	4	units		
5	Solar Water Pump, Submersible or surface as per the site condition, operating at approx. TDH=40 m and flow rate=0.30 m <sup>3</sup> /h and a Maximum Power Input = 250W incl. Controller, Junction Boxes, Protection Gear, Grounding Rod, Cabling and all other equipment rendering the system Fit-for-Purpose	4	units		
6	Battery fuse, 10 A (Fit for the purpose model)	20	Pc		
7	Main busbar (Multi Cluster Box) to be able to switch to/from solar and generator power	4	Pc		
8	PV distribution outdoor box, with 3XC-50A and 1XD03-163A breakers, Complete wiring	12	Pc		
9	Earthing system with earthing rod , cables, cable ways and all necessary materials	4	LS		
10	Cabling with cable ways, cable shoes, trenches and necessary accessories	4	Set		
11	Transportation to the site	4	LS		
12	Installation, configuration and testing, commissioning and users' training	4	LS		
13	One-year warranty and after sales services	4	LS		
14	Measurement and verification of project site data	4	LS		
<b>Sub TOTAL FOR LOT 4</b>					

# Provision of Electricitiy and Hot Water System to Comprehensive Health Centers-Plus in Herat

## Electrical system size 30 kW, Hot Water System Size 2 x 300 litre storage capacity

Item	Description	Qty	Unit of Measure	Unit Price	Amount
				USD	USD
1	Solar Photovoltaics panel, 380 Wp or more, each including mounting assembly, cables and sockets	90	nos.		
2	Battery storage system along with battery rack, connectors and cables, GEL battery- 200 Ah- 12 V each	60	nos.		
3	Hybrid inverter including charge controller, cable, connectors and accessories, 30 kW	1	nos.		
1	Solar Water Heater Assembly incl. mounting assembly, valves etc. and all other auxiliary equipment rendering the system Fit-for-Purpose	2	units		
2	Solar Water Pump, Submersible or surface as per the site condition, operating at approx. TDH=40 m and flow rate=0.30 m3/h and a Maximum Power Input = 250W incl. Controller, Junction Boxes, Protection Gear, Grounding Rod, Cabling and all other equipment rendering the system Fit-for-Purpose	2	units		
8	Battery fuse, 10 A (Fit for the purpose model)	15	Pc		
9	Main busbar (Multi Cluster Box) to be able to switch to/from solar and generator power	4	Pc		
10	PV distribution outdoor box, with 3XC-50A and 1XD03-163A breakers, Complete wiring	6	Pc		
	Earthing system with earthing rod , cables, cable ways and all necessary materials	1	LS		
	Cabling with cable ways, cable shoes, trenches and necessary accessories	1	Set		
	Transportation to the site	1	LS		
11	Installation, configuration and testing, commissioning and users' training	1	LS		
12	One-year warranty and after sales services	1	LS		
14	Measurement and verification of project site data	1	LS		
Sub TOTAL FOR LOT 4					-
TOTAL FOR LOT 4					
GRAND TOTAL FOR LOT 1, LOT 2, LOT 3 AND LOT 4					-