# Supply, Installation and Commissioning of (630) ceiling Fans and (505) led bulbs to Hajjah, Al Hodaidah, Lahj and Abyan Governorates.

# **Technical Specifications**

## Introduction:

The Enhanced Rural Resilience in Yemen ERRY Project, The solar component aims to build community energy resilience, in the target areas. Through its interventions it enhances community-based access and application of sustainable solar energy across rural communities in the project targeted areas. Priority will be given to rural basic services such as health, water supply, education, communal services, market places, solar water pumping etc. that contribute and build community energy resilience. It also promote application and spreading of the use of solar water pumps in the agriculture sector within a comprehensive package including use of efficient water irrigation system. Furthermore, it also promotes micro solar-based business development. Following are the key planned intervention for building rural community solar resilience in the targeted districts: • Solar energy applications to strengthen rural energy resilience are improved through capacity building and recovery considerations.

• Decentralized solar energy services installations in public service centers are enhanced so as to reinforce livelihood resilience of vulnerable rural communities.

- Solar energy introduced to support enhancement of rural community energy resilience is strengthened.
- Marketing of micro-business development for solar energy is supported and promoted.

#### **General Description:**

United Nations Development Programme UNDP, ERRY Project-Solar Component is planning to Replace old Fans and Fluorescent lamps By New Low-Consumption Fans and LED lamps With installation and commissioning for schools, Health units, local offices and productive associations that will be provided with integrated Solar Systems in Hajjah, Lahj, Abyan Al Hodaidah Governorates.

### Scope of Works:

- Supply of the complete Quantity, including all accessories and tools etc. as per technical specifications.
- Erection and commissioning of the supplied Fans & Lamps on the specified site and ensure the functioning and full operation of it.
- Detailed implementation plan should be submitted along with the offer.
- Delivery period shall be not more than 2 months from the date of issue of order.
- Regarding actual work to be carried out at the site, bidder needs to execute the work in consultation with the UNDP Personnel.
- Instructions Manuals for operation and maintenance wherever applicable should be supplied along with the equipment free of cost.
- The materials / appliances are to be guaranteed for trouble free performance for a minimum period of two years after installation. The defect if any, during the guaranteed period are to be rectified free of charge by arranging free replacement where ever necessary.
- The supplier has to replace the old fans and lamps by using the existing cables and switches and if they are damaged, the supplier has to use a new cables and switches to ensure the operation of those lamps and fans. Complete in all respect including connections, wiring etc.
- Locations: Supply of Fans and LED lamps, transportation, installation and commissioning as per the following Quantities & Delivery locations:

Gov.	District	Activity	Location Name	Ceiling Fan	LED Bulbs
	Abs	School	Al-Nor	16	0
Hajjah	Aslam		26 Sep	9	0
		School	Al-Falah	0	10
			Assma'a	0	10
	Bajel		Mohd.Ali Othman	0	10
			Thabit Brothers	0	10
		School	Alyarmook	16	5
			Alkhanssa	18	5
Hodeidah			Alwahdah	20	5
Hodeldan	AlZohrah		AlTawn	12	5
			Balqes	12	5
			Arwa	13	5
			AlNassr Boys	15	5
	AlMarawa'ah	Productive Association	Aldari and Almihad	10	10
	Al Hawak		Al-Sabalia	10	10
			Shawhat school	24	10
		School	Al-homaish school	20	10
	Lawdar		AlQaa school	24	10
		Local office	Head Office	5	10
			Al- quoos HF	4	10
		Health	Al-dakhlah HF	4	10
			Emergency Lawder hospital	8	20
			Ammar bn yasser	28	20
Abyan	Khanfar	School	Shima Bnt Al-harth	22	20
		Senoor	Al-Hikmah School	28	20
			saad bn moath School	14	10
		Local office	Head Office	6	10
		Health	Al-mosaimeer HF	5	10
			Al-dergag HF	5	10
			Gool yarams	5	10
			Al-rawa	5	10
	Modyah	School	Om salamh school	40	20
		Health	Amsorah HF	4	10
	Toban	School	Saeed Haidarh School	20	10
			Labouzh School	25	10
			Omer Bin Abdulaziz	20	10
			Mansour School	20	10
		Health	Al Khudad HU	6	10
Lahj			Al Hasky HU	5	10
			Al Noubah HU	8	10
			Al Mejhefa HU	5	10
	Tor AlBaha	School	Abo Mousa Al Ashari	20	10
			Al-Ansar School	17	10
		T 1 00	Salah Al Dien School	25	10
		Local office	Local Authority Office	10	10

Lahj	Tor AlBaha	Health	Al Shuaba HU	4	10
			Araeara HU	4	10
			Al Ma'ameah HU	4	10
			AlMuqheliah HU	5	10
	Habel Jabr	School	Khairan School	20	10
	AlHwtahcity	Local office	Education Office/Lahj	10	10
	Total		630	505	

# **Technical Specification**

roomitation				
1.Ceiling Fans:				
	Item	Description	Must be filled by Bidder	
1.	Manufacturer of module	To be specified by Bidder		
2.	Country of Origin	To be specified by Bidder		
3.	Data sheet of Fan module that contains all technical information.	To be attached by Bidder .		
4.	Input Voltage	220-240 VAC		
5.	Fan Wattage	Not more than 50 W. Energy Efficient		
		Ceiling fans.		
6.	Frequency	50 Hz		
7.	Speed	≥ 300 Rpm		
8.	Wall mounted or Remote Controller	$\geq$ 3 Speeds		
9.	Sweep Size	1200 mm (48") or 1400 mm (56")		
10.	Number of Fan Blades	$\geq$ 3		
11.	Air Delivery (CMM)	≥ 210.		
12.	Fan Service Value	$\geq$ 4 (m3/min/watt).		
13.	Operating temperature	0° to 50°C		
14.	Sound Level	Low noise		
15.	Warranty	2 Years		
16.	Module Material	Corrosion Resistance		
17.	Product Certificates	All related international quality certificates.		

2.LED Bulb						
The bulbs sh	The bulbs should be provided with all accessories needed for installation and operation.					
	Item	Description	Must be filled by Bidder			
1.	Lamp shape	Bulb				
2.	Base Type	E26 or E27				
3.	Input voltage	220-240 VAC				
4.	Power	9 W				
5.	Color temp(Kelvin)	≥ 4500K.				
		Blue-white light that mimics daylight				
6.	Beam Angle	Wider beam angle to increase the beam				
		intensity.				
7.	Luminous Flux	$\geq$ 750 lm, the higher the better				
8.	Working lifetime	≥ 20000 Hour				
9.	Warranty	2 Years				
10.	Product Certificates	Energy Star, ROHS Compliance, CE,UL				
		Listed or any Equivalent international				
		quality Certificates.				