

**Annex A – Technical Specifications  
for Solar-PV Cooking System for Households**

**1. General information:**

UNHCR is a global organization dedicated to saving lives, protecting rights and building a better future for refugees, forcibly displaced communities and stateless people. UNHCR's activities include the provision of access to clean cooking.

In order to extend options for clean cooking, UNHCR is interested in the procurement of standalone solar-PV cooking system for households, especially for pre-positioning and deployment during emergencies. Solar-PV cooking refers to a system comprising of photovoltaic (PV) panels, batteries, an electric cooking device and all required auxiliary material.

The standalone solar-PV cooking system for households needs to sustain the cooking needs for 3 meals a day for a 5-person household.

**2. System Description**

The standalone solar-PV cooking system for households all-in-one solution shall include the below-mentioned items. Sizing and technical specifications of items need to be proposed by the potential supplier.

- PV module
- Charge controller
- Battery
- Box for battery and charge controller
- Electric cooking device (e.g. hotplate, pressure cooker etc.)
- If required by cooking device: inverter
- All wiring and necessary protection devices

**3. System operation**

The solar-PV cooking system for households is a standalone and all-in-one product for

- the generation of electricity through the usage of photovoltaic panels
- the internal storage of electricity in batteries
- the consumption of the stored electricity for cooking through the usage of adapted cook stoves

The solar-PV cooking system for households needs to sustain the cooking needs for 3 meals a day for a 5-person household. The battery backup is required to sustain the cooking needs of at least one full day.

Ideally, the standalone solar-PV cooking system for households can be included in a pay-as-you-go system.

#### **4. Product quality expectations**

All items of the standalone solar-PV cooking system for households need to be compatible to each other, and compliant with internationally recognised standards (e.g. IEC Standards; Tier 4 safety according to IWA / ISO 19867 etc.).

Warranty period of standalone solar-PV cooking system for households: at least 2 years.

Potential suppliers ideally provide end-of-life management certified by the following or comparable standards

- Waste Electrical and Electronic Equipment Label of Excellence WEEELabex ([www.weeelabex.org](http://www.weeelabex.org))
- Responsible Recycling R2 ([www.sustainableelectronics.org](http://www.sustainableelectronics.org))
- e-Stewards ([www.e-stewards.org](http://www.e-stewards.org))