

Attachment 1 – Key Challenges and Opportunities

The key challenges and opportunities highlighted below have been informed by comprehensive energy needs assessment, two market dialogue sessions, a co-design workshop held with IDPs and bilateral talks with national and international renewable energy actors.

The challenges and opportunities are examined from the demand and supply side of electricity and, with a specific focus on the four main components that encompass the mesh grid project:

1. Power generation
2. Operation and maintenance (O&M)
3. End user / payment system

DEMAND

Category	Challenges	Opportunities
POWER GENERATION	Community has high expectation of the mesh grid to be affordable, reliable and good quality to promote employment opportunities	Create a consultative forum by leveraging existing community governance structures to manage community expectations, leading to better alignment and project success
OPERATIONS AND MAINTENANCE	Some community members are apprehensive that selling power to each other might raise conflicts.	Developing workshops and case studies on cooperation and conflict resolution
	Limited exposure to solar technologies might result in difficulties in operating and understanding the technology	Provide hands-on training and support for community members to improve technical understanding
PAYMENT SYSTEM	Inability and/or unwillingness to pay by community members coupled with lack of access and understanding of financial services	–Provide financial support by utilizing village savings groups and scale up productive use of energy (PUE) activities

SUPPLY

Category	Challenges	Opportunities
POWER GENERATION	Number of households in the selected sites is limited from a supply perspective	With more than 100 resettlement sites in the country, this presents an opportunity for scale
	High upfront cost for electrifying household in displacement setting	Part of the grant can help offset the high capital expenditures (CAPEX) involved in setting up mesh grids
	Limited number of local energy actors in country familiar with this technology	Synergies and collaboration between international and national actors can derisk the space and provide knowledge transfer
OPERATIONS AND MAINTENANCE	Technology vulnerable to damages due to vandalism theft or natural hazards	Community engagement and provision of resilient and high-quality technology
PAYMENT SYSTEM	Low mobile phone penetration rate and limited use of mobile money. Community members walk long distances to access mobile money players/agents	Provide a business case for the mobile telecommunication companies to invest in the resettlement sites