

RENEWABLE ENERGY FOR REFUGEES

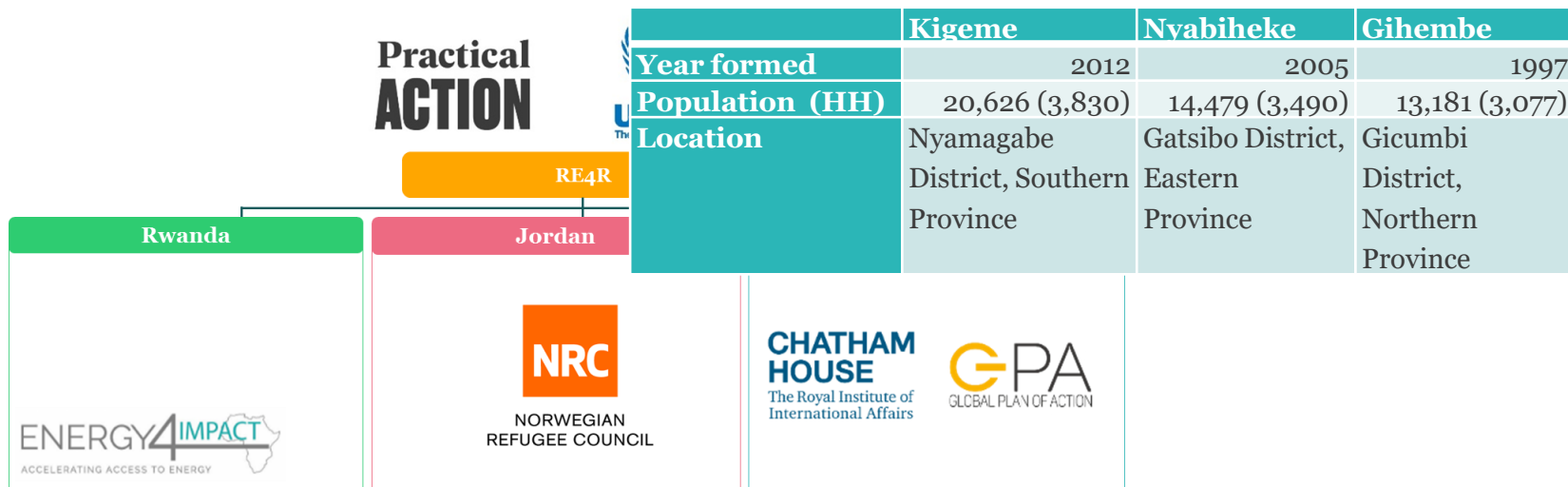
Household Electricity
Services in
Displacement Settings

Practical
ACTION

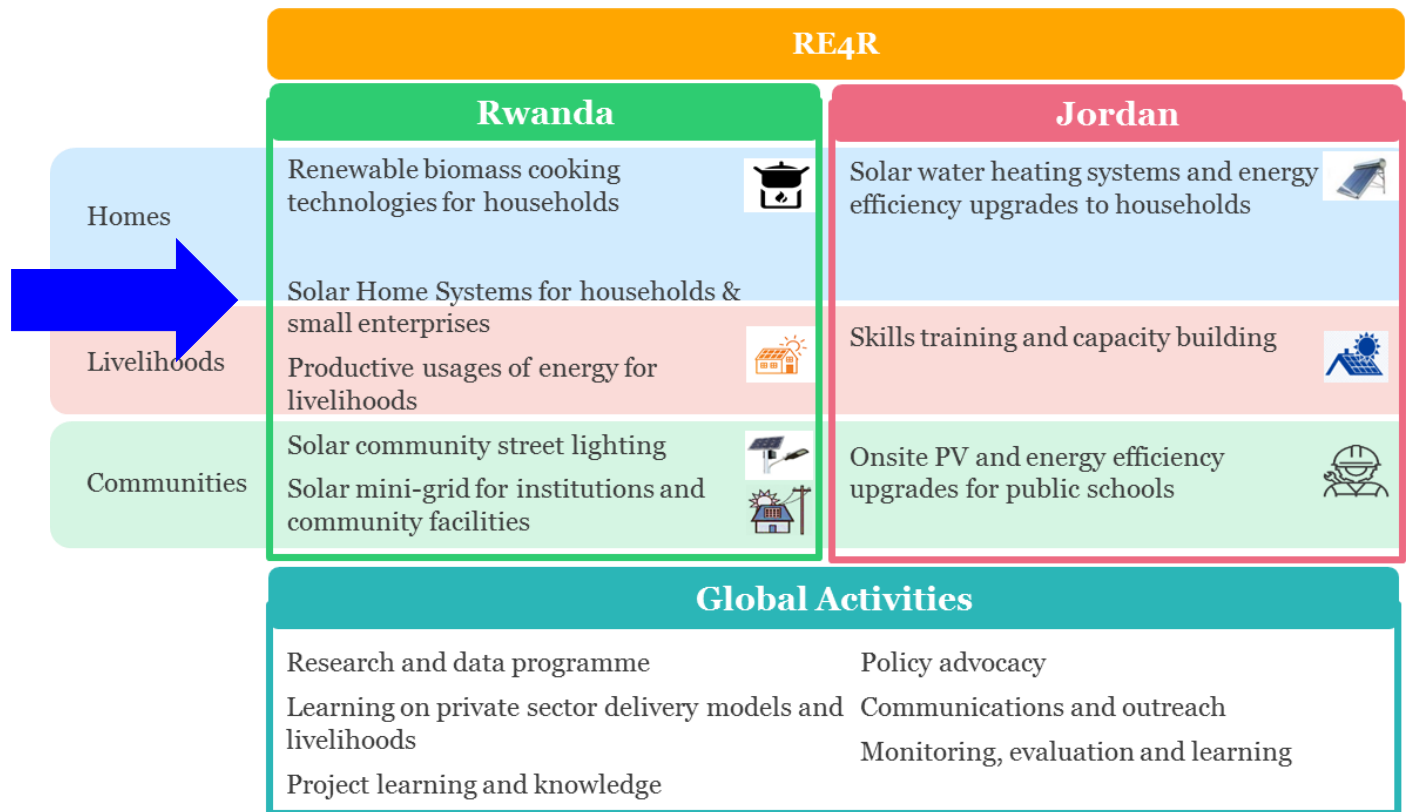


About RE4R

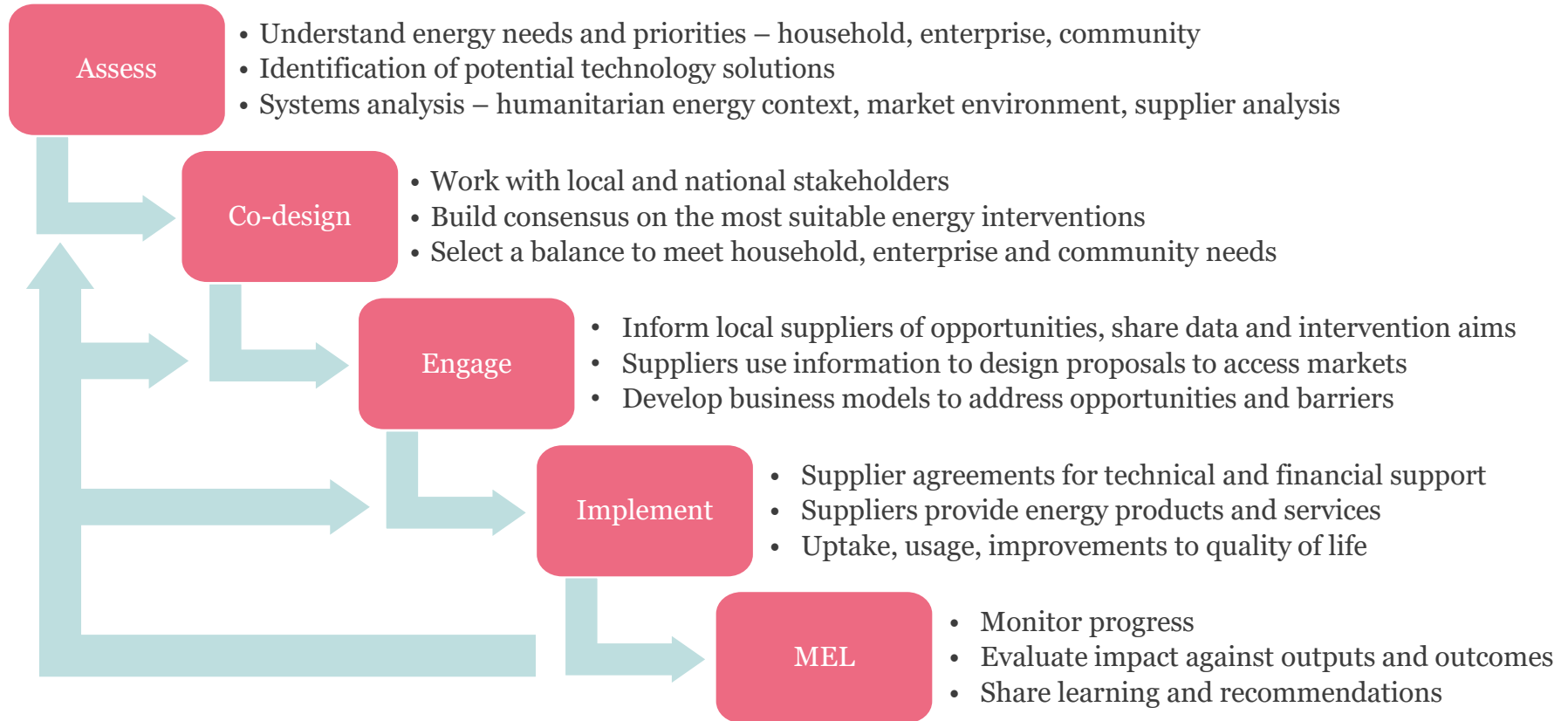
- Partnership between Practical Action and UNHCR, funded by the IKEA Foundation
- Project dates: April 2017 - February 2022
- Direct beneficiaries: >62,000
- Working in:
 - Urban settings in Irbid, Jordan
 - **Camp settings in Gihembe, Kigeme and Nyabiheke camps in Rwanda**



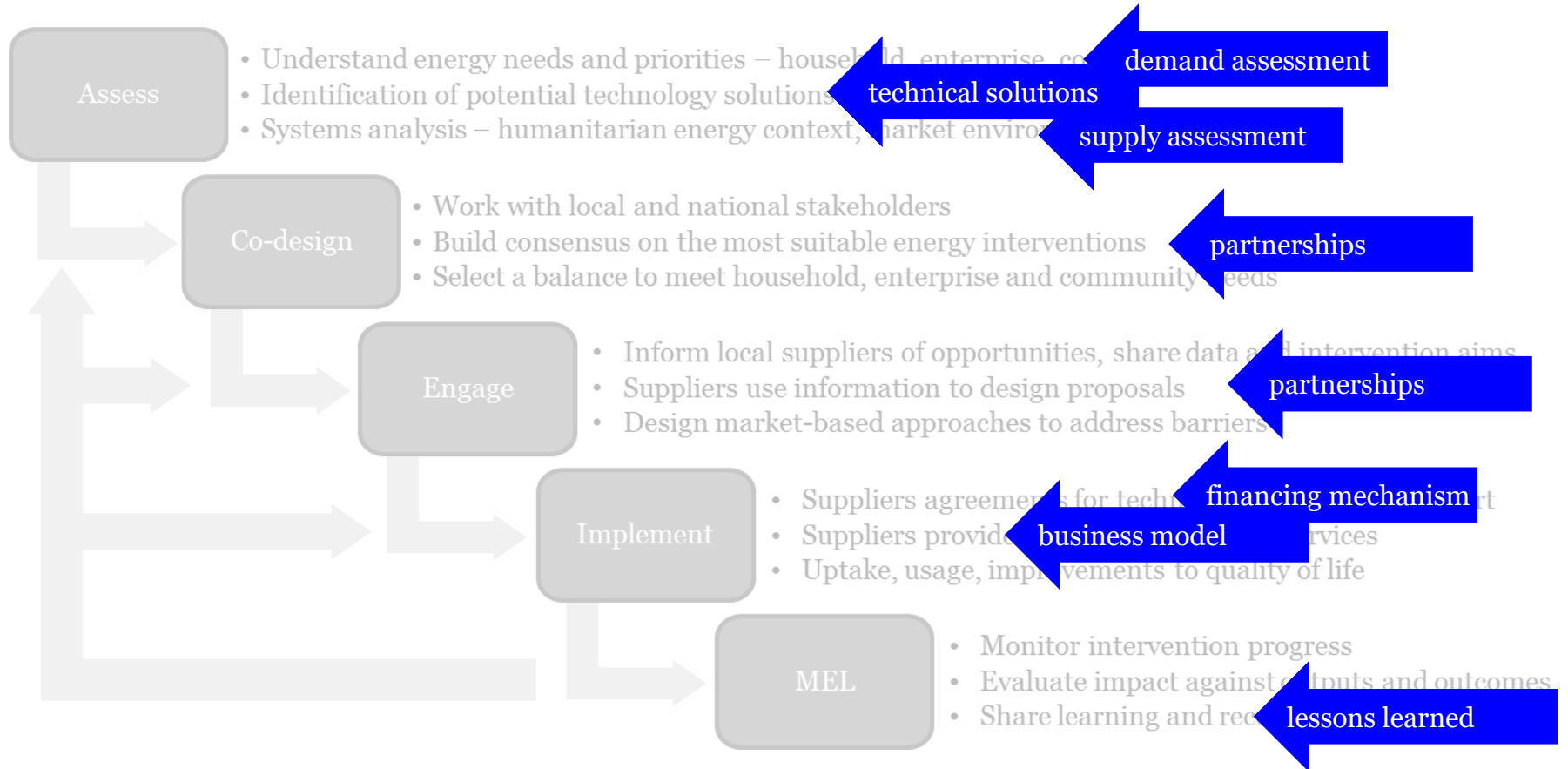
About RE4R



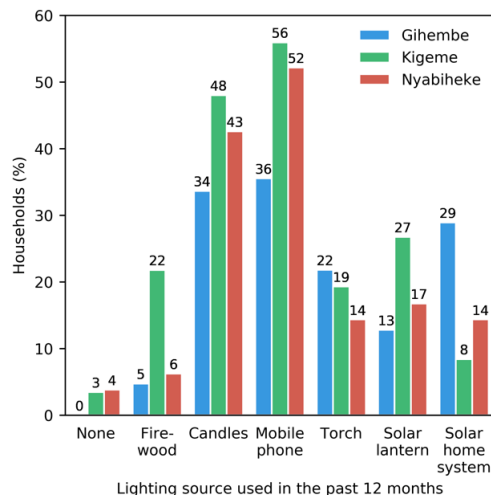
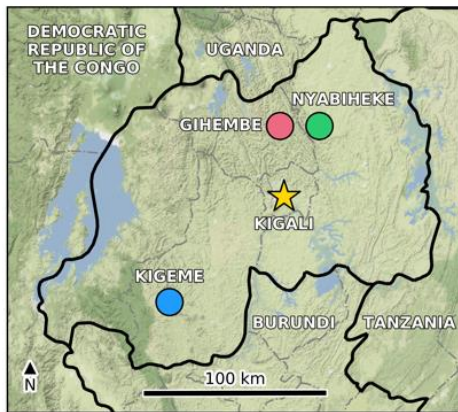
RE4R Intervention Delivery Process (Rwanda)



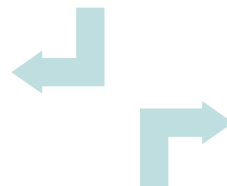
RE4R Intervention Delivery Process



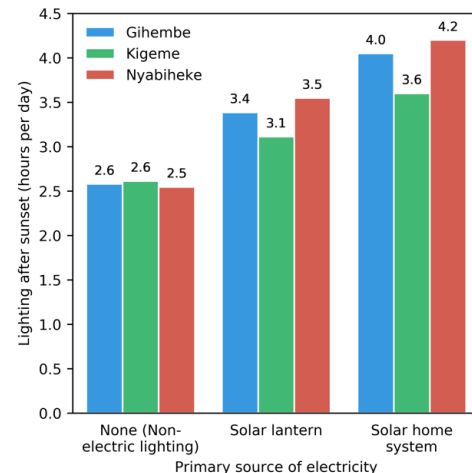
Assess – Household Electricity before RE4R



Most households rely on combinations of basic sources of lighting



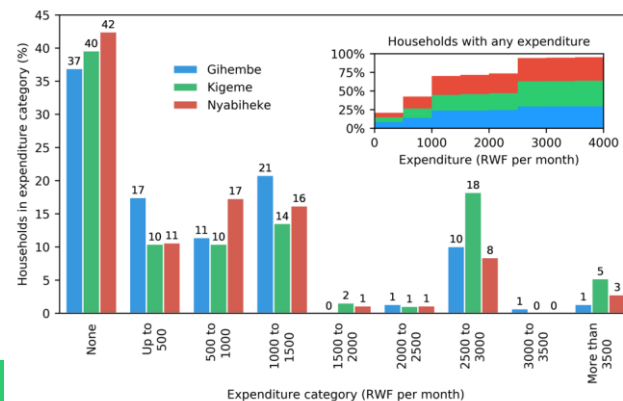
Improved lighting technologies provide tangible increases in lighting availability



- Households ranked their own energy needs as the most important to be addressed
- Working, studying and doing chores were the most important reasons why electric lighting is important
- Lighting, phone charging and radios/televisions were the most important uses if energy were available



Households have modest expenditure on non-renewable lighting sources



Assess - Co-design - Engage

Assess

Quantitative surveys, focus groups, interviews and market assessments

Domestic electricity access is very low (Tier 0) and can be improved by greater access to solar home systems (Tier 1)

Co-design

Workshop with stakeholders to select interventions, followed by further scoping and design

Intervention I: Renewable electricity services for households and small enterprises

- Increase camp-wide access to SHS
- Decrease spend on non-renewables
- Ensure service quality
- Training & capacity building

Engage

Competitive process to select suppliers to deliver SHS in the three camps



- Suppliers integrated intervention aims to their business models
- Goals shared in advance and informed by assessment data
- Package of financial, technical and facilitation support to overcome barriers identified by each supplier

Engage

Engaging with suppliers for market-based approaches:

- What information do we need to provide for suppliers to design effective business models?
- How do we identify barriers and enablers in the market, and strategies to address them?

Market size

- Camp population
- Location and local area
- Current levels of energy access
- Technologies being used
- Intervention goals

Market viability

- Household income and expenditure
- Ability to pay
- Willingness to pay
- Market segments
- Viability of models

Supplier support

- Technical, financial and facilitation support
- Relationship building
- Adaptive management
- Feedback and joint MEL activities

Information to design effective business models

Enablers and support strategies

Implement – Supplier Business Models

Supplier business models include:



SHS sales, installation and user training



Awareness raising, marketing and product demonstration



After sales services such as technical repair & customer support, and warrantied

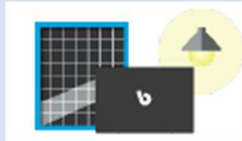


Refugee Vocational Training and Employment



Sales data, progress reporting and monitoring

BBOXX



50W system, 3 bulbs + phone charger
Optional appliances (additional cost) -
radio, TV, Torch, sub-woofer, shaver

Target market: Households and enterprises



- RWF 2,900/month for 3 years (40% subsidized rate) then Energy Service Fee of RWF 2,900/month for 1 year
- Can opt in or out of ESF annually < 7 yrs

BELECOM



12W/20W system, 3 bulbs + phone charger + radio

Target market: Households



- RWF 2,600/month for 3 years
- Revolving fund mechanism to support lower income customers

Implement – Financial Support Examples

Revolving fund

The Belecum model used seed capital for a revolving fund which provides access to finance services (loans and savings groups) for low income households so that they can boost their income and afford the monthly payments for Belecum SHS.

Retail outlet

Belecum requested financial support to construct a retail outlet in each camp. This would allow them to establish a selling point, provide a base for Belecum staff (including refugee sales agents and technicians) and offer ongoing customer support.

Subsidies

Bboxx requested a subsidy to reduce the monthly cost to the consumer to 2,900 RWF for an initial 3-year period. It was anticipated that this would accustom refugee customers to the financial commitment of the ESF after the initial 3 years was completed and increase uptake for high to middle-income households.

Implement – Results

Uptake → Usage → Improvements to Quality of Life

3,543

SHS sold and installed

424

Participants in revolving fund

87%

Customers on time with monthly payments

97%

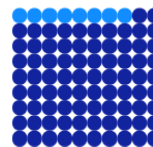
Report that they are satisfied with the quality of lighting of the SHS

62%

Report that the SHS meets their basic needs

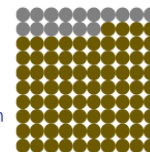
82%

Use SHS as their primary source of lighting



92%

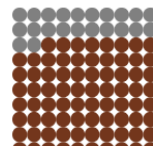
Report that they feel safer in their home after dark



84%

Report that they are able to do recreational/leisure activities after dark

"The TV we bought made us aware of the news all over the world and protected us from isolation."



78%

Report that they are able to study after dark

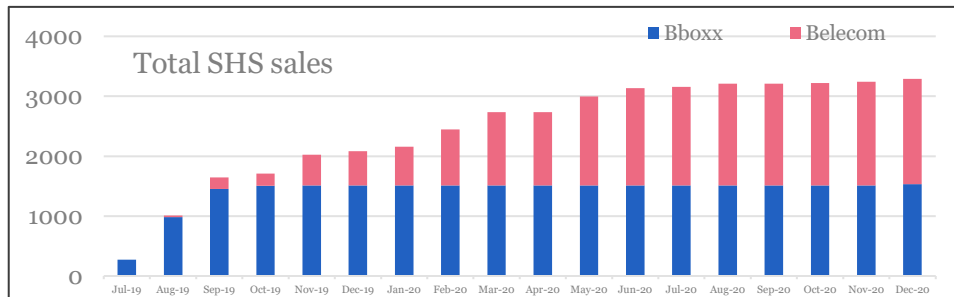
"Having SHS in my house during the lockdown allowed my children to revise their studies and listen to music."

"As a mobile money agent, having a SHS in my house has permitted me to charge my phone anytime I want. Before I used to spend money on charging my phone and buying candles for lighting. I am now able to serve clients anytime. My life has become easier."



88%

Report that they are able to do business or productive activities after dark









MEL – Lessons Learned/Recommendations

1

Improving energy access and household incomes builds economic resilience

Build synergies from household, enterprise and community energy access, and maximise refugee participation and employment across all (e.g. PUE, revolving fund, technicians)

2

Market conditions for businesses within camps are challenging, building commitment is key

Assess supplier risks and willingness to work in fragile markets, establish what conditions make business models viable in the long term

3

Affordability of energy products and services will always be an issue for some households

Be realistic about the use of subsidies, and adopt strategies for inclusion, adaptations will be necessary

Practical **ACTION**

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Thank **YOU**

