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Efficiency for Access Design Challenge Webinar: Gender and Social Inclusion

December 2019

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Dr. Margaret Matinga

- Expert modern cleaner energy access across Africa and Asia
- Delivered projects for clients such as the AfDB, UNDP, UNECA, the World Bank, the EU, various international NGOs, and lectured at the University of Twente Board member of the Uganda Solar Energy Association (USEA)
- BSc in Mechanical Engineering from the University of Malawi, an MSc Eng in Energy Studies from the University of Cape Town and a PhD from the University of Twente

Dr. Jon Cloke

- National Network Manager for the UK Low Carbon Energy for Development Network and as Senior Research Associate at Loughborough University
- Worked on a variety of DfID-funded projects including Understanding Sustainable Energy Solutions (USES) and Transforming Energy Access (TEA)
- lecturer in human geography in the Geography Department at Loughborough from 2007 to date and worked as an NGO Consultant to different non-government organizations

Katherine Lucey

- Founder and Chief Executive Officer of Solar Sister, an innovative last mile distribution solution for clean energy technologies in rural Africa that taps into the power of women entrepreneurs
- Schwab Foundation Entrepreneur of the Year, an Ashoka Fellow, and a Draper Richards Kaplan Foundation Entrepreneur
- M.B.A. from Georgia State University and a Bachelor’s Degree in Journalism from the University of Georgia

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Leaving no one behind: A gender perspective

Margaret Matinga, Dunamai

Why gender and energy

- Women and men's needs differ. But design and policy has traditionally had a gender-blind approach
- Women tend to have less economic and decisionmaking power affecting appliances they can access and use
- Lower levels of technical capacity means fewer women in technology design and thus their voice is often silent. Also lower capacity to affect policy making

Forgetting women's complex needs

- Being driven by single-issue focus and not needs
  - While general narrative calls for transition from open fire cooking, for some dishes, women (and men) needed this to impart particular flavour desired by customers),
  - Ceremonial cooking
- Reducing women's energy needs to cooking for family

Is small always beautiful?

- Most gender-sensitive or responsive design focus on low capacity systems
- Study of systems and their impact on women's empowerment in Nepal showed low capacity systems yielded lower benefits for women than high capacity systems
- With high capacity, women saved time by using rice cookers, blenders, mills
- Affordability vs needs

Technical performance is not everything

- Assessment of 5 stoves in a refugee camp showed that the most technically efficient stove was the least preferred
- Some high performance systems do not suit user needs
- Required to much attendance time, added to women's work burdens

Forgetting context and underlying factors

- Power relations are often forgotten in design of appliances
- A thermogenerator cookstove is a great idea. But who is likely to have smart phones to charge? How does that affect women's use of the cookstove or demand for firewood?
- Cost of technology might affect who has overall decision making power
- Similarly, without supportive transformative measures, who is likely to benefit from solar irrigation? Who looses out?
  - Consider what other allied resources and ownership or power patterns

Involving women in supply chains is more than production and sales

- How friendly is the product to local assembly? Peer2peer sales etc
- Women's businesses need more than financing and involvement in production and sales
  - Warehousing
  - Transportation
  - Connection to markets
  - Support for changing norms e.g. regarding women travelling outside the village
- Considering women's "non development" priorities

Not all women are the same

- It is ok to design for non-poor women! Really!

Contact

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Any questions?

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‘MERE’ ELECTRIFICATION: Design Challenge Webinar on Gender Perspectives

Dr Jon Cloke, Low Carbon Energy for Development Network (www.lcedn.com)

LOW CARBON ENERGY FOR DEVELOPMENT NETWORK

COMMUNITY ENERGY PROJECTS ARE MORE THAN TECHNOLOGY..

LOW CARBON ENERGY FOR DEVELOPMENT NETWORK

PROBLEMS WITH TECHNOLOGY-FOCUSED INTERVENTIONS –

LOW CARBON ENERGY FOR DEVELOPMENT NETWORK

- Projects with a top-down technologically-driven framework
- Projects are frequently reverse-engineered through focus combinations of technologies, financial models and delivery mechanisms
- Projects not looking at the particular energy needs/aspirations of individuals/communities
- Assumptions over the association between energy access and livelihood enhancement
- **There is no necessary causation between scaleability and outcomes**

Cloke, J., Mohr, A. and Brown, E. (2017) Imagining renewable energy: Towards a Social Energy Systems approach to community renewable energy projects in the Global South, Energy Research & Social Science, ER&SS

ALL YOU NEED IS COMMUNITY OWNERSHIP?

- SETTING UP SOLAR NANOGRIDS IN KENYA:
- Exhausting process of community consultation to work out energy needs, wants and aspirations.
- Presenting data to the community from consultations, interviews, focus group discussions – what they told the team about their lives and their priorities.
- Presenting basic ideas for the energy system designed from community responses, divided into three elements: HOUSEHOLD, COMMUNITY and BUSINESS.
- Setting up an elected Village Energy Committee (VEC) officially registered with local government authorities
- The introduction of the idea of a Community Fund as a feature of the energy project.

LOW CARBON ENERGY FOR DEVELOPMENT NETWORK

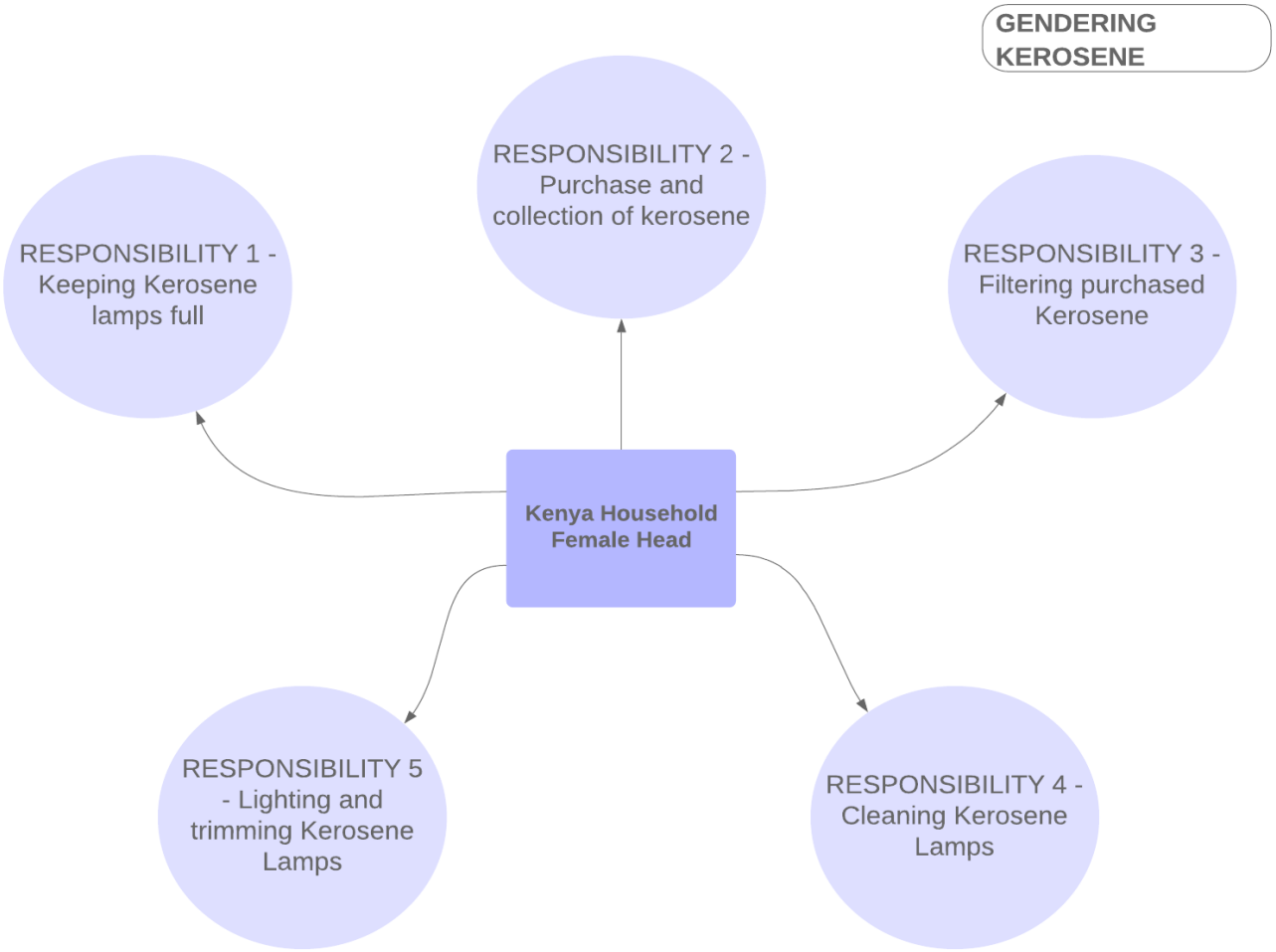
"You will need to design an appliance for **people**…" (Efficiency for Access Design Challenge Challenge Brief P.6)

LOW CARBON ENERGY FOR DEVELOPMENT NETWORK

SOCIAL IMPACT What difference does your design make to people's lives?

Judges will want to see how you have researched the needs of your target end-user. They will want to understand why you think your design will improve peoples' lives, and how you have considered social inclusion and equality in your solution.

How well has your target end-user been considered in the design?	Research and understanding of end user	Limited	Some	Detailed
What is the likely potential of the design to improve quality of life for your target end-user?	Potential to positively impact the target end user	Poor	Moderate	Strong
How well has your design considered the SDG commitment to 'leave no one behind'? In particular, consider gender equality and disability inclusion.	Research and understanding	Limited consideration & understanding	Some	Detailed


GENDERING KEROSENE
RESPONSIBILITY 1 - Keeping Kerosene lamps full
RESPONSIBILITY 2 - Purchase and collection of kerosene
RESPONSIBILITY 3 - Filtering purchased Kerosene
Kenya Household Female Head
RESPONSIBILITY 5 - Lighting and trimming Kerosene Lamps
RESPONSIBILITY 4 - Cleaning Kerosene Lamps

Towards a Social Energy Systems Approach....

LOW CARBON ENERGY FOR DEVELOPMENT NETWORK

"it is the social scale via which optimum forms of local participation and ownership can be achieved."

BECAUSE:

"While there is a wealth of empirical evidence to suggest that projects often achieve developmental benefits in terms of health, education, security and social integration to varying degrees, the degree to which RET projects address the poverty of household members and their ability to generate income is less clear. In fact, evidence suggests that they do not and in some cases actually impose additional financial burdens."

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Solar Sister – Women Powered Impact
Katherine Lucey

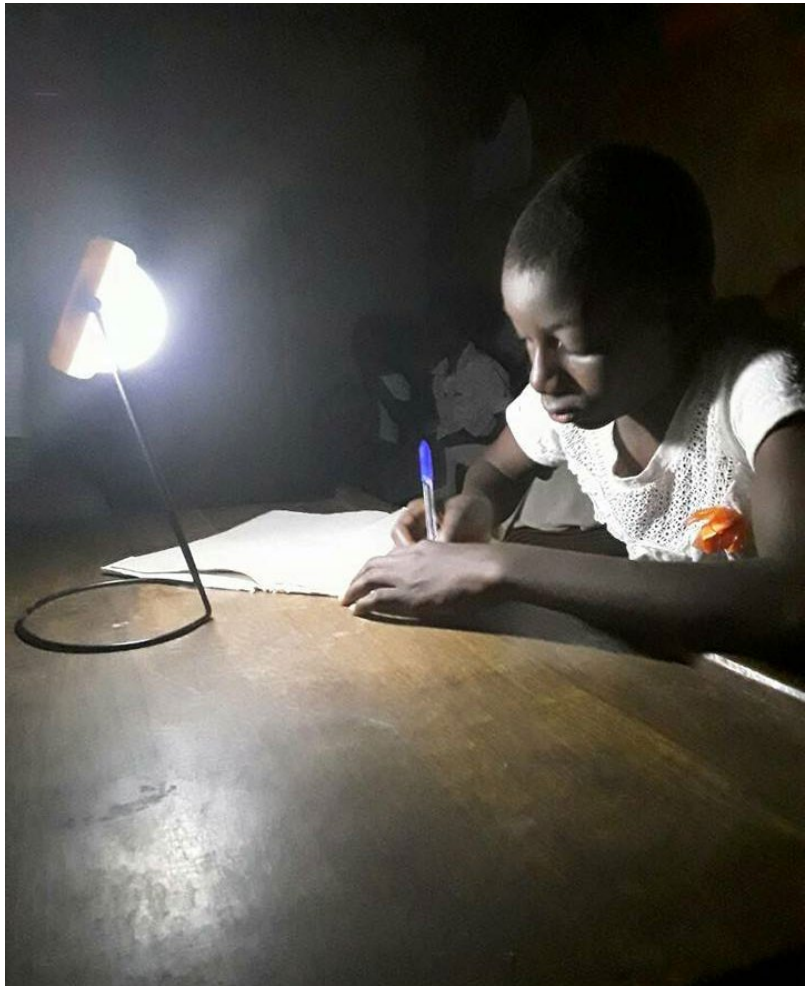
The Problem

- 600 million people in sub-Saharan Africa without access to electricity
- Women and girls are particularly impacted
- Lack of electricity means no lights at night to care for family, cooking over open fires, using kerosene lamps for lights
- Impacts on health, safety, education, productivity, general wellbeing

SOLAR SISTER

Local Solution

- Technology exists that is appropriate and affordable
- Solar lights can be used in the most remote locations and enhance lives – providing light for education, improving health, productivity and well being
- Distributed off-grid solar technology can be used for generating energy for lighting, phone charging, productive use appliances
- The technology is not the issue - so what is the issue?



Solving the Last Mile

- Getting products delivered to the ‘Last Mile’
- ”Last Mile’ is defined as remote, underserved, hard to reach, lacking in economic resources – essentially all the qualities that make this market difficult and uneconomic to serve
- Recruiting local women to become the distribution network anchors the solution in the community and builds off of their deep social networks

Solar Sister's Approach

- Recruit, train, support local women to be clean energy entrepreneurs
- Provide key tools to start a business in a branded bag
- Curated, certified quality products
- Local delivery
- Marketing support
- Aftermarket support including repair and warranty

Solar Sister's Approach

- Training
  - Technology
  - Business
  - Empowerment
- Mentoring
- Peer support in "Sisterhood Groups"

Women Powered

- Solar Sister trains and supports women to deliver clean energy directly to homes in rural African communities.
- We provide essential services and training that enable women entrepreneurs to build sustainable businesses in their own communities.
- Business is designed to be sustainable from day one – a “business is a bag” that is highly adaptable to each woman’s individual life, available time, individual needs

Business solution = Social impact

"Solar Sister training helped me increase my income – taught me about customer care, how to save and the importance of building trust."

Hilaria, Solar Sister

Yes We Can!

Any questions?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