Mini-Grid Private Sector

Mandatory questions are marked with a star (*)

This survey is part of LEAP-RE (Pillar 2-SETADISMA) which aims to tackle the African mini-grid sector as a whole, thus addressing the challenging topics of technology, energy planning, digitalization research, and development. For more information about the survey, please contact Leticia Tomas Fillol from LUT University: Leticia.Tomas.Fillol@lut.fi

All the data collected will be kept confidential. The information provided will be used solely for the purpose of this research project and only the research team will deal with the responses.

Definitions

- Mini-Grid: also sometimes referred to as a micro-grid. Involves small-scale electricity generation (less than 10 MW) and serves a limited number of customers via a distribution grid, capable to operate in isolation from national electricity transmission networks. A mini-grid can be fully isolated from the main grid (off-grid) or connected to a larger power system (on-grid)

- Productive uses: “productive uses” of energy involve the utilization of energy for activities that enhance income and welfare. These activities are typically in the sectors of agriculture, rural enterprise, health, and education. Examples of such activities are pumping water for agriculture, agro-processing, lighting, information and communications, and vaccine refrigeration.

Respond to this survey referring only to one of the countries where you

operate. The options are: Kenya, Rwanda, or Uganda

1. Country of operation related to which you answer this survey

- ◯ Kenya
- ◯ Rwanda
- ◯ Uganda

2. Do you operate in rural areas?

- ◯ Yes
- ◯ No

Respond to the following questions regarding the country of operation to which you answer this survey.

Rating scale:

1 = STRONGLY DISAGREE
2 = DISAGREE
3 = NEITHER AGREE NOR DISAGREE
4 = AGREE
5 = STRONGLY AGREE

3. In your region of operation there are enough of the following industrial actors:

	1	2	3	4	5
Mini-Grid developers	◯	◯	◯	◯	◯
Mini-Grid operators	◯	◯	◯	◯	◯
Technology suppliers (generation, storage, hardware equipment)	◯	◯	◯	◯	◯

	1	2	3	4	5
IT companies (smart technology, digital platform, control system...)	◯	◯	◯	◯	◯
Appliance suppliers (especially for productive uses of energy)	◯	◯	◯	◯	◯
Consultancy/planning/demand assessment services	◯	◯	◯	◯	◯
Microfinance institutions for private customers	◯	◯	◯	◯	◯

Optional open comments

4. There is conformity between the technical knowledge provided by universities, training centers, and R&D centers and the needs of the Mini-Grid industry.

	1	2	3	4	5
	◯	◯	◯	◯	◯

Optional open comments

5. There are enough good-quality training institutions / educational programs available for Mini-Grid developers and operators.

	1	2	3	4	5
Amount	◯	◯	◯	◯	◯
Quality	◯	◯	◯	◯	◯

Optional open comments

6. There are enough physical or digital spaces (forums, workshops, conferences…) where you can learn or connect with:

	1	2	3	4	5
Actors from the Mini-Grid/energy sector	◯	◯	◯	◯	◯
Actors from other sectors	◯	◯	◯	◯	◯
Actors from outside your geographical borders	◯	◯	◯	◯	◯

Optional: Can you name an example of an event in which you participated?

7. How often do you participate in events described in the previous question?

	Never	Less than once a year	Once a year	Once a month	More than once a month
Events related to the Mini-Grid/energy sector	◯	◯	◯	◯	◯
Events related to other sectors	◯	◯	◯	◯	◯
International events	◯	◯	◯	◯	◯

9. The national rural electrification programs are aligned with the needs of the Mini-Grid industry.

1	2	3	4	5

1	2	3	4	5
◯	◯	◯	◯	◯

Optional comments: What is missing? / What works well?

10. The government visions, forecasts, and objectives regarding Mini-Grid development are clearly presented and publicly available.

1	2	3	4	5
◯	◯	◯	◯	◯

Optional comments: What is missing? / What works well?

11. There are enough legal incentives to support scaling up the Mini-Grid sector.

Take into account: subsidies, tax exemption products, feed-in tariffs...

1	2	3	4	5
◯	◯	◯	◯	◯

Optional comments: What is missing? / What works well?

12. There are enough policies and regulations to support Mini-Grid market development.

Take into account: The existence of a defined mechanism in the event of the arrival of the main grid, standardization of guidelines, the inclusion of a Mini-Grid in rural electrification plans, cost recovery, and tariff regulation...

1	2	3	4	5
◯	◯	◯	◯	◯

Optional comments: What is missing? / What works well?

13. There are enough supportive policies and mechanisms promoting cross-sector collaboration and inclusion of complementary services for electricity in rural Mini-Grid projects.

Take into account services needed for demand stimulation and economic growth (e.g., promotion of productive uses, capacity building/training, digitalization, partnership encouragement, cross-sector collaboration, such as energy-agriculture-water-industry...)

1	2	3	4	5
◯	◯	◯	◯	◯

Optional comments: What is missing? / What works well?

14. There is enough skilled labor in the country.

Take into account skills needed for Mini-Grid development (energy experts, technicians, commercial and managerial skills, R&D ...)

1	2	3	4	5
◯	◯	◯	◯	◯

Optional comments: What are most missing skills?

15. The following infrastructures are developed well enough to support the diffusion of off-grid and Mini-Grid technologies:

	1	2	3	4	5
Roads	◯	◯	◯	◯	◯
Telecom networks	◯	◯	◯	◯	◯

Is there any other infrastructure not mentioned above that creates a barrier for scaling up the Mini-Grid sector?

16. There are enough grants available for innovation and experimentation in the Mini-Grid sector.

	1	2	3	4	5
Inside the region of operation	◯	◯	◯	◯	◯
Internationally	◯	◯	◯	◯	◯

Optional open comments

17. There are funds available to support the inclusion of complementary services (other than electricity) in the Mini-Grid projects.

Examples of complementary services are user financing, promotion of productive uses, training or capacity building activities, digital services, business development support...

	1	2	3	4	5
Inside the region of operation	◯	◯	◯	◯	◯
Internationally	◯	◯	◯	◯	◯

Optional open comments

18. The bureaucracy to implement a Mini-Grid project is uncomplicated.

Take into account the average length of a project from application to installation, easiness to get the license to operate, process standardization …

1	2	3	4	5
◯	◯	◯	◯	◯

Optional open comments

20. There is resistance from customers in rural areas to change their habits or to adopt new technologies.

1	2	3	4	5
◯	◯	◯	◯	◯

Optional open comments

21. The extent and manner in which the Mini-Grid technology is presented in social networks, TV, or the Internet is encouraging.

	1	2	3	4	5
	◯	◯	◯	◯	◯

Optional open comments

Respond to the following questions regarding operations of your firm.

Rating scale:

1 = STRONGLY DISAGREE
2 = DISAGREE
3 = NEITHER AGREE NOR DISAGREE
4 = AGREE
5 = STRONGLY AGREE

22. General information of the Organization/Firm

(Organization name or headquarter will not be published anywhere)

Organization name	
Country of head-quarter	
Technologies used (solar, hydro, wind, biomass...)	
Customer segment (residential, com-mercial, indus-trial...)	
Year of establish-ment	

23. How many Mini-grids has your organization developed?

- ◯ Between 1 and 3
- ◯ Between 4 and 6
- ◯ More than 6
- ◯ None

24. In the last 5 years, your organization:

- ☐ Has not made much changes
- ☐ Has implemented new products
- ☐ Has implemented new services
- ☐ Has started pilot projects
- ☐ Has increased the number of partnerships
- ☐ Has implemented new technology (e.g., IT, smart systems, generation technology, storage ...)
- ☐ Has expanded to new market segments

☐ Other _____

25. Which one of the following services does your organization offers to rural customers?

☐ User financing for electricity service

☐ Appliance financing

☐ Skills training

☐ Productive uses program/Productive uses support

☐ Digital services (such as an internet connection)

☐ Business development support

☐ Access to a market for local products

☐ Other _____

☐ None of them

Is any of the services mentioned above offered with the support of your business partners or development agencies? Which one?

_____

_____

_____

_____

_____

26. What are the reasons for offering such services mentioned in the previous question?

☐ Improve users affordability

☐ Improve viability of Mini-Grid project

☐ Create greater socio-economic impact for users

☐ Stimulate energy demand

☐ Increase number of connections

☐ Other _____

☐ N.A.

30. Your organization often collaborates with other partners/organizations from:

	1	2	3	4	5
Energy Sector	◯	◯	◯	◯	◯
Other sectors	◯	◯	◯	◯	◯

If you collaborate with actors from other sectors, please mention them below (e.g., agriculture, water, appliance providers, NGOs/development partners...)

_____

_____

_____

_____

_____

32. Do you document the learning outcomes from the innovations or projects that you implement?

◯ Yes

◯ No

◯ N.A.

35. What revenue sources do you have?

☐ Electricity

☐ Appliances

☐ Digital services

☐ Other _____

37. Do you consider that the operating costs in rural areas are too high?

◯ Yes

◯ No

END OF SURVEY

38. General information of the respondent

(This information will not be published anywhere)

Name of the respondent	
Position in the organization	
Preferred contact e-mail	

39. Would you be willing to participate also in an interview related to this topic in the future?

◯ Yes

◯ No

◯ Maybe

40. DO YOU HAVE ANY OTHER COMMENTS OR QUESTIONS FOR US?