

REPORT

Millennium Challenge Corporation's Electricity Transmission and Distribution Line-Extension Activity in Tanzania: Qualitative Evaluation — Appendix D

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APPENDIX D

FOCUS GROUP AND KEY INFORMANT INTERVIEW PROTOCOLS

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HOUSEHOLD FOCUS GROUP DISCUSSION PROTOCOL

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Evaluation of the Millennium Challenge Account (MCA-T)
Tanzania Energy Sector Project
Focus Group Discussion Guide for Households

Note: Use this protocol for conducting focus groups with household members. Encourage all respondents to participate in the focus group, and note any diversity in responses among them. Also note any characteristics that clearly identify respondents as members of important sub groups, such as by poor or wealthy households.

INTRODUCTION – CONSENT STATEMENT

Thank you for taking time to talk with me today. My name is _____, and I am a representative of (local research group). We are working with Mathematica Policy Research from the United States. We are conducting an evaluation of a project to extend the national electricity grid by building new power lines in communities in this region. I'd like to talk with you about electricity in your community and your energy usage. We are trying to learn more about the potential impacts of electricity on living standards, poverty, and economic development. We are interested in your experience as household heads. Your community is selected for this research together with other communities in Tanzania. Thank you for your interest and your time.

We have been collecting information about electricity in Tanzania for several years. Experience and information shared by people like you helps the policy makers make decisions about electricity in Tanzania. We are here today to hold a focus group discussion. The discussion will last for about 1.5 hours. I would like to assure you that your names won't be linked to your comments in reports or other materials; however, since it is a group discussion we cannot ensure that other participants won't share what they hear. We ask you to maintain each other's confidentiality.

I hope you all will feel comfortable sharing your opinions and experiences. There is no right or wrong answer to my questions, just sincere responses. You can always choose not to answer if you prefer. We ask that you speak loudly and distinctly. I would like to tape-record our discussion. I am taping our discussion so our team can listen to it later when we write up our notes. No one besides our research team will listen to the tape. If you want to say anything that you don't want taped, please let me know and I will be glad to pause the tape recorder. The tapes will be destroyed after transcription and transcripts will be stored electronically with password protection such that only the research team can gain access to them. Does anybody have any objections to being part of this discussion or to my taping our discussion?

Do you have any questions for me before we begin?

Interviewer: Note that all questions are for all households unless noted otherwise in italics.

Basic Household Characteristics

1. Let's get started by going around the circle. Please tell us how long have you lived in this community?
2. Is your household connected to the electrical grid? Why or why not?
 - a. *Probe:* What is/was the process for getting connected through TANESCO?
 - b. *Probe:* If connected, how did you decide to connect to the new lines?
 - c. *Probe:* If not connected, why not?
 - i. *Probe:* Can you describe any financial or logistical constraints?
 - ii. *Probe:* Can you please describe any factors that made your household ineligible for connection? Are there any circumstances under which you would be able to/decide to connect? What are these?
 - d. *Probe:* *If there are no lines in your community currently*, would you connect if there were lines in your community? Why or why not?
3. What are all the energy sources that your household uses?
 - a. *Probe:* Please explain if you use multiple energy sources

Construction of Lines

4. If new lines were constructed in your community or nearby in the past two years, what do you think about the placement of the lines
 - a. *Probe:* How has the placement of the lines affected the numbers of households that have connected?
 - b. *Probe:* Have you moved, or considered the possibility of moving to connect to the lines? Why or why not?
 - c. *Probe:* Do you expect other households to relocate to connect to the lines? Why or why not?
5. *For communities with no lines:* If there were lines available would you connect? Why or why not?
6. *For communities with no lines:* How do you think having power lines would change your community?

Connecting to and Satisfaction with the Lines

7. How common is it (*or do you think it would be if you had lines*) for households to connect informally to neighbors' or business's lines?
 - a. *Probe:* Are there situations where businesses or households "onsell" (i.e. run a line to a neighbor and charge for the use)?
 - b. *Probe:* Are these connections reliable? Are there risks to using them? Will there be more of these connections? Why?

8. What obstacles were there to connecting to the new lines (*or if there are no lines yet, what obstacles do you anticipate in connecting to lines*)? How did you or would you overcome them?
 - a. *Probe:* Were there (*or do you anticipate*) issues related to the wiring of the house, the application, or costs, etc.?
9. *For households connected to the grid:* How would you describe the quality of the electricity from the new lines?
 - a. *Probe:* How frequent are outages? How long do they last? *Probe:* How common are power fluctuations? What problems have they caused? *Probe:* Have you had delays in service, incorrect billing, equipment or metering problems?
 - b. *Probe:* If you had these problems, did you complain to TANESCO? Why or why not? *Probe:* If so, how did they respond? Were you satisfied with the response?

Costs and Benefits of Electricity

10. Have there been any changes in what you spend on energy in the last year, for all energy sources, including grid electricity? How has spending changed?
 - a. *Probe:* Have there been any changes in fuel costs or other sources? How have the costs changed?
11. How affordable is grid electricity as a household cost?
 - a. *Probe:* How do you think the costs of grid electricity compares with the costs of other energy sources? Please explain.
 - b. *Probe:* Are the costs of electricity offset by increased household income? Please explain.
12. What do you think are (*or would be*) the benefits of grid electricity to your household? Please explain.
 - a. *Probe:* Do you think males or females in your household would benefit the most from grid electricity? Why do you think so?
13. *For households connected to the electrical grid:* What were the costs of connecting to the grid electricity for your household? Please explain.
 - a. *Probe:* Costs may include wiring, connection fees, costs to get house up to standard to be able to be electrified, maintenance costs, unofficial costs (bribes) etc.)
 - b. *Probe:* How did you cover these costs? Did you save? Borrow? Use money set aside for something else? Please explain.
14. How have you managed (*or how would you manage*) to cover the monthly costs of electricity usage in your household budget?
 - a. *Probe:* Are there other expenses that you have (*would*) cut? What?

Electricity Usage

15. Have you reduced or increased the use of other non-electric energy sources since the lines were built? Which ones? Why?
16. *If connected,* how does your household use electricity? *If not connected,* what would you use electricity for?
 - a. *Probe:* Uses such as lighting, food preparation, cooking, TV/radio, cell phone, other?

- b. *Probe:* Have you bought new appliances to make use of electricity? Please explain.
 - c. *Probe:* Do you intend to buy any appliances? Please explain. *Probe:* What source of energy do you use for cooking? If not electricity, why not?
17. *If using electricity*, who in your household uses or would use electricity the most? Males, females, or both equally?
- a. *Probe:* Do/would males and females use electricity for the same or different things?
 - b. *Probe:* How are school children using electricity? Please explain.
18. How has your quality of life changed since lines were built or since you connected to the new lines, if at all?

Health and Education

19. Have there been any changes in the health of your family members since lines were built in this community or nearby?
- a. *Probe:* Have children experienced changes? Have adults experienced changes?
 - b. *Probe:* What types of changes and how did these changes happen?
 - c. *Probe:* Are the changes due to accessing electricity?
20. Have there been any changes in schooling/studying practices of family members since lines were built in this community or nearby? How did these changes happen?
- a. *Probe:* If there have been changes, for what aged children or youth?
 - b. *Probe:* Is there any change to students' performance?
 - c. *Probe:* Have both boys and girls experienced changes? How did the changes happen?
 - d. *Probe:* Are the changes due to accessing electricity?

Productivity and Income:

21. Have there been any changes in the way household members spend their time since the lines were built in this community or nearby? Please explain.
- a. *Probe:* Any change in time spent cooking, cleaning, other chores? Time spent collecting water and firewood? Time spent working? Leisure time? Watching TV?
 - b. *Probe:* Have these been different for males and females?
 - c. *Probe:* Are the changes due to accessing electricity?
22. Since lines were built or since your household connected to the new lines, has anyone in the household started a new business or other activity to earn income (aside from wage employment)?
- a. *Probe:* What type of business/activity?
 - b. *Probe:* Does the business/activity use electricity? How?
 - c. *Probe:* Are the changes due to accessing electricity?
23. In terms of any changes in household expenditures, income, time use, health, and education, who is mostly affected? Males, females, or both equally?
- a. *Probe:* Household expenses, income, time use, health

- b. *Probe:* Are the changes due to accessing electricity?

Community Effects

24. Have there been any important changes in schools since lines were built in this/ neighboring community that could be attributed to the new lines? How has the school environment or the schooling experience of children in the community changed?
- Probe:* What are the benefits of the school's connection to grid electricity? Are there after-hour programs?
 - Probe:* Have there been any negative effects?
25. Have there been any important changes in health facilities since lines were built in this/ neighboring community that could be attributed to the new lines?
- Probe:* Has the availability of services changed? Are facilities open more days or hours?
Probe: Has the quality or number of new/ different services changed?
26. Have there been changes in markets, such as new businesses and/ or economic activity since the new lines were built? How has this benefited the community?
- Probe:* Do these changes benefit your household or community? How?
 - Probe:* Have there been any changes in the price or availability of goods or services in the community since the new lines were built? Please explain.
 - Is there any change of market business hours after connection?
27. Have there been any negative effects of the new lines on the businesses and/ or economic activity in the community? Please explain.
28. Are there other benefits of the new lines that affect the whole community, such as street lighting? What are they? Can you give examples?

Financing Scheme Initiative: *For FS communities only*

29. What information did you receive about the financing initiative to connect households to lines?
- Probe:* Were all of your questions answered about the subsidy?
30. If eligible, did you take advantage of this initiative? Why or why not?
- Probe:* *If yes*, would you have connected to the new lines without the assistance? *Probe:* *If no*, why didn't you use the subsidy to connect to the lines?
31. What did you think of the process of connecting to the lines using the financial assistance?
- Probe:* Please describe the application process and assessing eligibility for the connection.
Probe: Please describe the process of wiring your house and getting connected.
 - Probe:* What do you think of the subsidy amount?
 - Probe:* What do you think about the timing of the subsidy offer?
 - Probe:* If the subsidy process was modified, what changes would you suggest?
32. Is there anything I haven't asked about that you feel is important for me to know?

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BUSINESS INTERVIEW PROTOCOL

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Evaluation of the Millennium Challenge Account (MCA-) Tanzania Energy Sector Project
In Depth Interview Guide for
- Owners/Managers of Income Generating Activities (IGAs)

INTRODUCTION – CONSENT STATEMENT

Thank you for taking time to talk with me today. My name is _____, and I am a representative of (local research group). We are working with Mathematica Policy Research from the United States. We are conducting an evaluation of a project to extend the national electricity grid by building new power lines in communities in this region. I'd like to talk with you about electricity in your community and your energy usage. We are trying to learn more about the potential impacts of electricity on living standards, poverty, and economic development. We are interested in your experience as a business owner. Your community is selected for this research together with other communities in Tanzania. Thank you for your interest and for contributing your time.

We have been collecting information about electricity in Tanzania for several years. Experience and information shared by people like you helps the policy makers in the decision making process about electricity in Tanzania. We are here today to interview you. The interview will last for about 30 minutes to 1 hour. I would like to assure you that your name won't be linked to your comments in reports or other materials.

I hope you all will feel comfortable sharing your opinions and experiences. There is no right or wrong answer to my questions, just sincere responses. You can always choose not to answer if you prefer. We ask that you speak loudly and distinctly. I would like to tape-record our discussion. I am taping our discussion so our team can listen to it later when we write up our notes. No one besides our research team will listen to the tape. If you want to say anything that you don't want taped, please let me know and I will be glad to pause the tape recorder. The tapes will be destroyed after transcription and transcripts will be stored electronically with password protection such that only the research team can gain access to them. Do you have any objections to being part of this discussion or to my taping our discussion?

Do you have any questions for me before we begin?

Interviewer: Note that all questions are for all households unless noted otherwise in italics.

Basic Business Characteristics

1. Please tell me what type of business you have and how long you have been in business.
2. Is your business connected to the electrical grid? Why or why not?
 - a. *Probe:* What is/was the process for getting connected through TANESCO?
 - b. *Probe:* If connected, how did you decide to connect to the new lines?
 - i. *Probe:* Can you describe any financial or logistical constraints?
 - ii. *Probe:* Can you please describe any factors that made your business ineligible for connection?
 - iii. *Probe:* Are there any circumstances under which you would be able to/decide to connect? What are these?
 - iv. *Probe:* *If there are no lines in the community currently*, would you connect if there were lines near your business? Why or why not?
3. What are all the energy sources that your business uses?
 - a. *Probe:* Please explain if you use multiple energy sources.

Construction of Lines

4. If new lines were constructed in or near your community in the past two years, what do you think about the placement of the lines?
 - a. *Probe:* How has the placement of the lines affected the numbers of businesses that have connected?
 - b. *Probe:* Have you moved, or considered the possibility of moving to connect to the lines? Why or why not?
 - c. *Probe:* Do you expect other businesses to relocate to connect to the lines? Why or why not?
 - d. *Probe:* Do you expect new businesses to open due to the new lines? Why or why not? If yes, what kind of businesses do you think will open?
5. *For communities with no lines:* If there were lines available would you connect? Why or why not?
6. *For communities with no lines:* How do you think having power lines would change your community?

Connecting to and Satisfaction with the Lines

7. How common is it (*or do you think it would be if you had lines*) for households to connect informally to neighbors' or business's lines?
 - a. *Probe:* Are there situations where businesses or households "onsell" (i.e. run a line to a neighbor and charge for the use)?
 - b. *Probe:* Are these connections reliable? Are there risks to using them? Will there be more of these connections? Why or why not?
 - c. *For communities with no lines:* If lines were built in your community, how common do you think informal connections would be?

8. What obstacles were there to connecting to the new lines? *Or, if there are no lines yet, what obstacles do you anticipate in connecting to lines?* How did you or can you overcome them?
 - a. *Probe:* Were there (*or do you anticipate*) issues related to the wiring of the house, the application, or costs, etc.?
9. *For businesses connected to the grid:* How would you describe the quality of the electricity from the new lines?
 - a. *Probe:* How frequent are outages? How long do they last? *Probe:* How common are power fluctuations? What problems do they cause your business?
 - b. *Probe:* Have you had delays in service, incorrect billing, equipment or metering problems? *Probe:* If you had these problems, did you complain to TANESCO? Why or why not?
 - c. *Probe:* If so, how did they respond? Were you satisfied with the response?

Costs and Benefits of Electricity

10. Have there been any changes in your energy costs in the past one year, for all energy sources, including grid electricity? How have the costs changed?
 - a. *Probe:* Have there been any changes in fuel costs or other sources? How have the costs changed?
11. How affordable is grid electricity as a business cost?
 - a. *Probe:* Are there different opinions among male and female business owners.
 - b. *Probe:* How do you think the costs of grid electricity compares with the costs of other energy sources? Please explain.
 - c. *Probe:* Are the costs of electricity offset by increased profits? Please explain.
12. What are (*or would be*) the benefits of grid electricity to your business? Please explain.
13. How has (*or how would*) grid electricity affect your business's profits? Please explain.
14. *For businesses connected to the electrical grid:* What were the costs of connecting to the grid electricity for your business? Please explain.
 - a. *Probe:* Costs may include wiring, connection fees, costs to get house up to standard to be able to be electrified, maintenance costs, unofficial costs (bribes) etc
 - b. *Probe:* How did you cover these costs? Did you save? Did you take a loan or borrow? Did you use your savings? Did you receive support from family or elsewhere? Please explain.
15. *For businesses connected to the electrical grid:* How have you managed (*or how would you manage*) to cover the costs of electricity usage in your monthly expenses to run the business?
 - a. *Probe:* Are there other expenses that you have (would) cut? What?

Electricity Usage

16. Have you reduced or increased the use of other non-electric energy sources since the lines were built? Which ones? Why?
17. *If connected,* how does your business use electricity? *If not connected,* what would you use electricity for?

- a. *Probe for differences between male and female business owners.*

Changes to Business Productivity and Revenue:

(Interviewer: for all changes, ask whether they should be attributed to having connected to the grid.)

18. Has your use of electrical appliances or equipment changed since the lines were built in this community or nearby? *For connected businesses:* Do you attribute any of these changes to connecting to the electricity grid?
 - a. *Probe:* Appliances or equipment including mobile phone, lighting, fans, radio, video for business, refrigeration, new equipment, tools, water pump, etc
 - b. *Probe:* Did you buy any items? Do you intend to buy new items? Please explain.
 - c. *Probe for differences between male and female business owners.?*

19. *For connected businesses:* Have you made any other business investments since lines were built in this community or nearby? *For connected businesses:* Do you attribute any of these changes to connecting to the electricity grid?
 - a. *Probe:* For capital investments, such as machinery, infrastructure, delivery, etc.
 - b. *Probe:* Has there been any change in inputs, purchases (materials or stock)?
 - c. *Probe for differences between male and female business owners.*

20. Have there been any changes in how you run your business since lines were built in this community or nearby? *For connected businesses:* Do you attribute any of these changes to connecting to the electricity grid?
 - a. *Probe:* Are there business activities that you can do more quickly or efficiently? Do you attribute any of these changes to connecting to the electricity grid?
 - b. *Probe:* Have there been any changes in how much your business produces? For example, a seamstress or tailor might make more clothing items.
 - c. *Probe:* Any changes in billing, manufacturing, assembling, or packing?
 - d. *Probe:* Have there been changes in business hours or changes due to better lighting, continuity of services, radio/TV for customers, refrigeration, etc.? Please explain.
 - e. *Probe for differences between male and female business owners..*

21. Have there been any changes in communications between your business and suppliers or buyers or customers since lines were built in this community or nearby? Please explain. *For connected businesses:* Do you attribute any of these changes to connecting to the electricity grid?
 - a. *Probe:* For example, communication could improve due to better charged, consistent power radios, mobile phones, computer, internet etc.

22. What, if any, changes have there been in the number or types of jobs since lines were built in this community or nearby? Please explain. *For connected businesses:* Do you attribute any of these changes to connecting to the electricity grid?
 - a. *Probe:* What if any changes have there been in number of workers or hours worked?
 - b. *Probe:* What if any changes have there been in hiring? Please explain.

23. Has there been any change in to your business's revenue/profits since lines were built in this community or nearby? *For connected businesses:* Do you attribute any of these changes to connecting to the electricity grid?

- a. *Probe:* Does anything else have to happen—in addition to getting grid electricity—for profits to increase?
24. Have there been any changes in your sales since lines were built in this community or nearby?
For connected businesses: Do you attribute any of these changes to connecting to the electricity grid?
 - a. *Probe for differences between male and female business owners.*
25. Has there been any change in what you are selling (e.g. items or services) since lines were built in this community or nearby? *For connected businesses:* Do you attribute any of these changes to connecting to the electricity grid?
 - a. *Probe for differences between male and female business owners.*

Business Community Impacts:

26. Have there been changes in the community in terms of new businesses and/or economic activity since lines were built in this community or nearby? Please explain.
27. Have there been any changes in the price or availability of goods or services in local markets since lines were built in this community or nearby? What goods or services? Please explain.
28. Have there been any negative effects of the new lines on the businesses and/or economic activity in the community? Please explain.
29. Are there other benefits of grid electricity that affect the whole community, such as street lighting, stable government services, or businesses open longer etc.? Can you give examples?
30. Is there anything I haven't asked about that you feel is important for me to know?

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SCHOOL DIRECTOR INTERVIEW PROTOCOL

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Evaluation of the Millennium Challenge Account (MCA-) Tanzania Energy Sector Project Guide for Interviews with School Directors/Head Masters

INTRODUCTION– CONSENT STATEMENT

Thank you for taking time to talk with me today. My name is _____, and I am a representative of (local research group). We are working with Mathematica Policy Research from the United States. We are conducting an evaluation of a project to extend the national electricity grid by building new power lines in communities in this region. I would like to talk with you about the potential impacts of electricity on public services such as schools and on children’s education. Our study aims to learn more about the impacts of electricity on living standards, poverty, and economic development. Thank you for your interest and for contributing your time.

We have been collecting information about electricity in Tanzania for several years. We are here today to conduct an interview with you, which will last for about an hour. I would like to assure you that your name will not be linked to your comments in reports or other materials. I hope you will feel comfortable sharing your opinions and experiences. There is no right or wrong answer to my questions, just sincere responses.

I would like to tape-record our discussion. I am taping our discussion so our team can listen to it later when we write up our notes. No one besides our research team will listen to the tape. If you want to say anything that you don’t want taped, please let me know and I will be glad to pause the tape recorder. The tapes will be destroyed after transcription and transcripts will be stored electronically with password protection such that only the research team can gain access to them. Do you have any objections to being part of this discussion or to my taping our discussion?

Once again, thank you for participating in this interview. Do you have any questions before we start?

Basic School Characteristics *(Interviewer note the level of school and whether public or private).*

1. Let's get started by discussing the school. What is the total enrollment of the school? How many teachers and staff? How many buildings are there?

Connecting to and Satisfaction with the Lines

2. Is your school connected to the electrical grid? Why or why not? *Interviewer note whether connected to MCC-funded line or other line.*
 - a. *Probe:* What is/was the process for getting connected through TANESCO?
 - b. *Probe:* If not connected, why not?
 - i. *Probe:* Can you describe any financial or logistical constraints?
 - ii. *Probe:* Can you please describe any factors that made your school ineligible for connection?
 - iii. *Probe:* Are there any circumstances under which you would be able to/decide to connect? What are these?
 - c. *Probe:* *If there are no lines in the community currently*, would you connect if there were lines near the school? Why or why not?
3. What are all the energy sources that your school uses?
 - a. *Probe:* Please explain if you use multiple energy sources.
4. *If connected*, how did school decide to connect to the national grid? *If not connected*, how would your school make the decision whether to connect?
 - a. *Probe:* Why did the school decide to connect to the new lines? Who made the decision to connect? Can you explain how the decision was made?
 - b. *Probe:* *For FS communities:* Did you receive a free connection through the FS initiative?
5. What obstacles were there to connecting to the lines? *If there are or if there are no lines yet, what obstacles do you anticipate in connecting to lines?* How did the school *or would the school* overcome them?
 - a. *Probe:* Were there *(or do you anticipate)* logistical issues, such as distance to the lines, issues with the wiring of the building, or application challenges? Please describe.
 - b. *Probe:* Were there issues getting the connection itself? Please describe.

Energy Costs and Benefits:

6. Have there been any changes in what the school spends on energy for all energy sources, including grid electricity? How has spending changed?
 - a. *Probe:* Have there been any changes in fuel costs or other sources? How have the costs changed?
7. How affordable is grid electricity to a school?
 - a. *Probe:* How do you think the costs of grid electricity compare with the costs of other energy sources (including up-front and monthly costs)?
8. *If connected*, how does the school use electricity? *If not connected*, what would the school use electricity for?

- a. *Probe:* Light, food preparation and/or cooking, computers for teachers/administrators, computers for students, heating/air conditioning/fans, after hours programs, other?
 - b. *Probe:* Is electricity available throughout the entire school building(s)? If not, please explain where the electricity is available.
9. *If connected to lines*, has the school changed its schedule of classes, or added or removed any activities for students since connecting to the new lines? *If the school connected to lines in the future*, would you make any changes to schedule and activities? Please describe.
10. *If connected to lines*, what new electrical equipment, if any, has the school purchased since connecting to the grid? *If the school connected to lines in the future*, what might the school purchase?
 - a. *Probe:* If connected, is the school benefiting from the equipment as expected?
11. How would you describe the value of electricity to your school?
 - a. *Probe:* What is the most valuable use of electricity for the school?
12. What are the benefits and drawbacks of connecting to electricity lines? What have you seen or what would you expect?
 - a. *Probe:* In what ways does *or would* connecting to lines benefit or cause problems for students?
Probe for differences based on gender or SES status
 - b. *Probe:* In what ways does *or would* connecting to lines benefit or cause problems for teachers?
Probe for differences based on gender or level of teacher
 - c. *Probe:* In what ways does *or would* connecting to the new lines benefit parents or the community as a whole?
13. Do you think that connecting to the new lines would have or has had any negative consequences for students, teachers, parents or the community? What are they?
 - a. *Probe:* For difference based on gender, ethnicity or SES.
14. *For connected schools:* How would you describe the quality of the electricity from the new lines?
 - a. *Probe:* How frequent are outages? How long do they last?
 - b. *Probe:* How common are power fluctuations? What problems have they caused your school
 - c. *Probe:* Have you had delays in service, incorrect billing, equipment or metering problems?
 - d. *Probe:* If you had these problems, did you complain to TANESCO? Why or why not?
 - e. *Probe:* If so, how did they respond? Were you satisfied with the response?
15. *For connected schools:* What were the costs involved in connecting to the new lines?
 - a. *Probe:* For costs such as wiring, connection, any other fees or purchases
 - b. *Probe:* How did the school cover these costs?
16. How does the school (*or would the school*) cover the monthly costs of electricity usage for the school?
 - a. *Probe:* Were fees increased? Did you do any IGAs? What other expenses were reduced?

17. What changes have there been *(or would you expect if connected)* in staffing or in staff availability since connecting?
- a. *Probe:* Staffing differences may include the number, types, or qualifications of staff
 - b. *Probe:* Changes in staff availability may include hours worked, shifts per day etc.
18. What changes have there been *(or would you expect if connected)* in enrollment since the school connected to the new lines? Why?
- a. *Probe:* Are there gender differences in new enrollment?

Other Interventions

19. Have any other interventions been implemented in this school in the past two years that might affect enrollment, students' performance or staff retention?
- a. *Probe:* For interventions including educational programs or school infrastructure improvements that are not included in standard ministry or school operations.

Other Comments

20. Is there anything I haven't asked about that you feel is important for me to know?

HEALTH FACILITY INTERVIEW PROTOCOL

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**Evaluation of the Millennium Challenge Account (MCA-) Tanzania Energy Sector Project
Guide for Interview with Health Facility Staff**

INTRODUCTION – CONSENT STATEMENT

Thank you for taking time to talk with me today. My name is _____, and I am a representative of (local research group). We are working with Mathematica Policy Research from the United States. We are conducting an evaluation of a project to extend the national electricity grid by building new power lines in communities in this region. I would like to talk with you about the potential impacts of electricity on public services such as hospitals and health centers, and on people's health. Our study aims to learn more about the impacts of electricity on living standards, poverty, and economic development. Thank you for your interest and for contributing your time.

We have been collecting information about electricity in Tanzania for several years. We are here today to conduct an interview with you, which will last for about an hour. I would like to assure you that your name will not be linked to your comments in reports or other materials. I hope you will feel comfortable sharing your opinions and experiences. There is no right or wrong answer to my questions, just sincere responses.

I would like to tape-record our discussion. I am taping our discussion so our team can listen to it later when we write up our notes. No one besides our research team will listen to the tape. If you want to say anything that you don't want taped, please let me know and I will be glad to pause the tape recorder. The tapes will be destroyed after transcription and transcripts will be stored electronically with password protection such that only the research team can gain access to them. Does anybody have any objections to being part of this discussion or to my taping our discussion?

Once again, thank you for participating in this interview. Do you have any questions before we start?

Basic Facility Characteristics (*Interviewer note whether it is a hospital, district health center, dispensary, community health center, or other type of facility and whether it is public or private.*)

1. Let's start by discussing this facility. How many staff work here? How many patients do you see, on average, per day, week, or month?

Connecting to and Satisfaction with the Lines

2. Is this health facility connected to the electrical grid? Why or why not? *Interviewer note whether connected to MCC-funded line or other line.*
 - a. *Probe:* What is/was the process for getting connected through TANESCO?
 - b. *Probe:* If not connected, why not?
 - i. *Probe:* Can you describe any financial or logistical constraints?
 - ii. *Probe:* Can you please describe any factors that made the facility ineligible for connection?
 - iii. *Probe:* Are there any circumstances under which you would be able to/decide to connect? What are these?
 - c. *Probe:* *If there are no lines in the community currently*, would you connect if there were lines near the facility? Why or why not?
3. What are all the energy sources that your facility uses
 - a. *Probe:* Please explain if you use multiple energy sources.
4. How did the health facility decide (*or would the facility decide whether*) to connect to the national grid?
 - a. *Probe:* Why did the facility decide to connect to the new lines? Who made the decision to connect? Can you explain how the decision was made?
 - b. *Probe:* *For FS communities:* Did you receive a free connection through the FS initiative?
5. What obstacles were there to connecting to the lines? *If there are no lines yet, what obstacles do you anticipate in connecting to lines?* How did the health facility *or would the facility* overcome them?
 - a. *Probe:* Were there (or do you anticipate) logistical issues, such as distance to the lines, issues with the wiring of the building, or application challenges? Please describe.
Probe: Were there issues getting the connection itself? Please describe.

Energy Costs and Benefits:

6. Have there been any changes in what the health facility spends on energy since lines were built in this community or nearby, including grid electricity? Why are you spending more or less?
 - a. *Probe:* Have there been any changes in fuel costs or other sources? How have the costs changed?
7. How affordable is grid electricity to the health facility?
 - a. *Probe:* How do you think the costs of grid electricity compare with other energy sources (including up-front and monthly costs)?

8. *If connected*, what does the health facility use electricity for? *If not connected*, what would the health facility use electricity for?
 - a. *Probe*: Medical equipment, lighting, food preparation and/or cooking, computers for staff, heating/air conditioning/fans, other?
 - b. *Probe*: Is electricity available throughout the entire health facility building(s)? If not, please explain where the electricity is available.
9. How would you describe the value of electricity to patient care at this facility?
Probe: What are the most valuable uses of electricity?
10. *If connected*, in what ways, if any, has connecting to the new lines benefited patients? Which patients benefit most? *If not connected*, how would connecting benefit patients? Which patients?
 - a. *Probe*: Are there differences in benefits to male and female patients?
11. *If connected*, has there been any change in the number of patients or frequency of visits since the facility connected to the new lines? Why? *If not connected*, how would the number of patients or frequency of visits change if connected?
12. *If connected*, what, if any, changes have there been in staffing since connecting? *If not connected*, what changes, if any, would there be in staffing if connected?
 - a. *Probe*: Staffing differences may include the number, types, or qualifications of staff
 - b. *Probe*: Changes in staff availability may include hours worked, shifts per day etc.
 - c. *Probe*: Do you think that connecting benefits facility staff? In what ways? Please explain.
13. *If connected*, has the facility purchased any new electrical equipment since connecting? What and why? *If not connected*, what would the facility purchase if connected?
14. *If connected*, has the facility changed its hours of operation, or added or removed any services for patients since connecting to the new lines? Please describe. *If not connected*, how would hours and services be affected if connected?
15. *If connected*, do you think that connecting to the new lines has benefited the community? How? *If not connected*, do you think that connecting would benefit the community? Please explain.
16. Do you think that connecting to the new lines has had any negative consequences for patients or the community? What are they? Who would experience the negative consequences (i.e. men, women, girls, boys, community, etc?)
17. *For connected facilities*, how would you describe the quality of the electricity from the new lines?
 - a. *Probe*: How frequent are outages? How long do they last?
 - b. *Probe*: How common are power fluctuations? What problems have they caused your facility? Has patient care been affected? Please explain.
 - c. *Probe*: Have you had delays in service, incorrect billing, equipment or metering problems?
 - d. *Probe*: If you had these problems, did you complain to TANESCO? Why or why not?
 - e. *Probe*: If so, how did they respond? Were you satisfied with the response?

18. *For connected facilities*, what were the costs involved in connecting to the new lines?
 - a. *Probe:* For costs such as wiring, connection, any other fees or purchases.
 - b. *Probe:* How did the health facility cover these costs?
19. How does the health facility (would the facility) cover the monthly costs of electricity usage?
 - a. *Probe:* Did the government cover the cost?
 - b. *Probe:* Were fees increased/would increase? What other expenses were reduced?
20. *For connected facilities*, does the health facility spend more or less on energy now that it is connected to the grid?
 - a. *Probe:* Overall, how do the costs of electricity (including up-front and monthly costs) compare with the costs of the energy sources you used before connecting to the new lines?

Other Interventions:

21. Have any other interventions been implemented in this facility in the past two years that might affect number of patients, services offered, quality of care or staff retention?
 - a. *Probe:* For interventions including health programs or facility infrastructure improvements that are not included in standard ministry or facility operations.

Other Comments

22. Is there anything I haven't asked about that you feel is important for me to know?

COMMUNITY LEADER INTERVIEW PROTOCOL

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Evaluation of the Millennium Challenge Account (MCA-) Tanzania Energy Sector Project
Guide for Interview with Community Leaders

INTRODUCTION – CONSENT STATEMENT

Thank you for taking time to talk with me today. My name is _____, and I am a representative of (local research group). We are working with Mathematica Policy Research from the United States. We are conducting an evaluation of a project to extend the national electricity grid by building new power lines in communities in this region. I would like to talk with you about the electricity project including the potential impacts of electricity on your community, as well as the costs and benefits of electricity. Overall, our study aims to learn more about the impacts of electricity on living standards, poverty, and economic development. Thank you for your interest and for contributing your time.

We have been collecting information about electricity in Tanzania for several years. We are here today to conduct an interview with you, which will last for about an hour. I would like to assure you that your name will not be linked to your comments in reports or other materials. I hope you will feel comfortable sharing your opinions and experiences. There is no right or wrong answer to my questions, just sincere responses.

I would like to tape-record our discussion. I am taping our discussion so our team can listen to it later when we write up our notes. No one besides our research team will listen to the tape. If you want to say anything that you don't want taped, please let me know and I will be glad to pause the tape recorder. The tapes will be destroyed after transcription and transcripts will be stored electronically with password protection such that only the research team can gain access to them. Does anybody have any objections to being part of this discussion or to my taping our discussion?

Once again, thank you for participating in this interview. Do you have any questions before we get started?

Respondent and Community Characteristics

1. How long have you lived in this community? What is your official position?
2. Is there anything that makes this village unique or different from neighboring villages?
3. What are the main energy sources used in this village or MTAA (e.g. grid electricity, generator, kerosene, firewood, charcoal, batteries, dung, solar etc.)?
 - a. *Probe:* Please explain if you use multiple energy sources.

Construction of Lines

For communities that are connected:

4. In the last two years, new electricity lines were built in this village/ MTAA or nearby.
 - a. *Probe:* When was construction of the lines completed?
 - b. *Probe:* Did this village/MTAA have any grid electricity prior to the construction of these lines?
6. Can you please describe your role as the community leader in the planning and construction of the new lines? Please explain how you were involved.

Probe: What was your role, if any, in determining the location of the new lines?
7. Where were the lines built?
 - a. *Probe:* Are they near or far from households and businesses in the community?
 - a. *Probe:* Are they near or far from schools and health facilities?
 - b. *Probe:* Did the placement of the lines impact the number of households or businesses that have connected to the lines?
8. How was the location of the poles and transformers determined?
 - a. *Probe:* Do you think that the process for determining the pole locations was fair? Why was it fair or how could it be made more fair?
 - b. *Probe:* Were there changes in the planned location of the new lines during the construction process? If so, why was there a changes and how were these handled?
 - c. *Probe:* If there were changes in line placement, how were community members informed?
9. How satisfied are you with the placement of the lines? Please explain.
 - a. *Probe:* Was there any tension within the community regarding the placement of the lines?
 - b. *Probe:* If so, what was the source of the tension and how was it resolved?
10. How were community members and leaders informed about the grid expansion?
 - a. *Probe:* Were community members informed about how to connect to the lines?
 - b. *Probe:* Were community members informed about the benefits and costs of connecting?
11. Can you please describe your experiences working with the organizations building the new lines? (Pike/Symbion, TANESCO, MCA-T, Africare)
 - a. *Probe:* What worked well?

Probe: What were the main challenges?

12. Were the new lines completed in a timely manner? Did the schedule for completing the lines affect community members' desire to connect to the grid? Please explain.

For communities that are not connected:

13. How far from here were the new lines built?
a. *Probe:* Are lines close enough that households, public facilities, or businesses from this community can use the lines? **Please explain.**

For all communities:

14. What do you see as the key challenges to the construction of the new lines? Please explain.
15. What suggestions do you have for how new line construction could be carried out better or differently (*Or could be carried out efficient and effectively in communities without lines currently*)?
16. What other public works projects were initiated in the last two years? Can you please describe some of the new projects?
a. *Probe:* For community water pump or rehabilitation projects, new road construction, etc.
b. *Probe:* Are there any projects planned for the next two years? Please describe.

Connecting to the Lines

For all communities:

17. Did any households or businesses move to be near the lines? Have any schools or health facilities moved? Why or why not?

In communities with lines

18. What percentage of households and businesses in this village connected to the lines?
a. *Probe:* How many households have connected?
b. *Probe:* How many businesses?
19. How many do you think will ultimately connect? What makes you think so?
20. Has the quantity of power been sufficient power to meet demand? Has the quality of power been sufficient to meet demand? Please explain.
a. *Probe:* If no, how often do blackouts occur?
b. *Probe:* If no, what types of problems have power surges or low levels of power caused?

In communities without lines

21. If lines were available, what percentage of households and businesses in this village do you think would connect to the lines?
a. *Probe:* How many households would connect?
b. *Probe:* How many businesses?

Costs and Benefits of Electricity

22. *In communities with lines:* How would you describe the costs of electricity? *In communities with outlines:* Do you think grid electricity is affordable for households and businesses in your community? Please explain.
- a. *Probe:* How affordable is grid electricity for households? Businesses? Public facilities?
23. *In communities with lines:* Have the new lines impacted your community's land or resources? *In communities with outlines:* Would you expect the new lines to impact your land or resources? Please explain.
- a. *Probe:* Did the installation change access to water or change the availability of farmland?
24. *In communities with lines:* Have you seen any benefits or drawbacks (positive or negative aspects of electricity) in your community from the new lines? *In communities with outlines:* What benefits or drawbacks would you expect from having lines in your community?
- a. *Probe:* New or fewer business activities/commerce?
- b. *Probe:* New jobs, fewer jobs or employment opportunities?
- c. *Probe:* Change in pay for certain jobs?
- d. *Probe:* Infrastructure such as water or roads?
- e. *Probe:* Quality of life/social aspects?
- f. *Probe:* Availability or price of goods?
- g. *Probe:* Other

Financing Scheme Initiative (FOR FS COMMUNITIES ONLY)

25. What information did you receive about the financing scheme initiative, in which households were offered assistance with the connection fees?
- a. *Probe:* What do you understand about this initiative?
- b. *Probe:* Who did you get information from?
- c. *Probe:* Has widely has this been utilized? How many households took advantage of the FS?
- d. *Probe:* Can you describe your role in the implementation of the FS activity?
26. What activities were there to inform community members about the FS?
- a. *Probe:* Were there activities in the community?
- b. *Probe:* What activities did TANESCO undertake to let community members know about the FS?
27. Did representatives from Camco visit your community?
- a. *Probe:* What activities did they do?
- b. *Probe:* How would you characterize the effectiveness of Camco's communication work in terms of sharing information about: (a) benefits of electricity, (b) FS procedures, (c) process for applying for connection through TANESCO?
28. How would you characterize the working relationship between you, TANESCO, and Camco?
- a. *Probe:* What worked well? What were the challenges?
29. What do you see as the key challenges to the implementation of the FS activities?
- a. *Probe:* How did the challenges affect the implementation of the FS?

30. What information, if any, about ready boards was made available to community members?
 - a. *Probe:* Did many community members make use of ready boards? Why or why not?
31. What are your suggestions for how the implementation of the FS expansion could have improved?
 - a. *Probe:* Were there issues related to timing or the design of the subsidy?

Other interventions

32. Have any other interventions been implemented in this community in the past two years that might affect economic activity or causes household to move in/out of the community.
 - a. *Probe for* Interventions including social programs, economic stimulus programs or community infrastructure improvement (including water and roads)

Other Comments

33. Is there anything I haven't asked about that you feel is important for me to know?

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COMMUNITY OBSERVATION PROTOCOL

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Evaluation of the Millennium Challenge Account (MCA) Tanzania Energy Sector Project

Observations of Community Characteristics

Note: Use this protocol for conducting community observations. The guide is designed to guide the process of observing and documenting grid electrification in specified communities. Visit and observe all of these features of the community both in the day light and after dark and note any differences. Please also take digital photographs, as appropriate, of key findings, such as unusual businesses using electricity, LV wires, household connections, and odd wiring. These photographs should be submitted to include with the observation reports.

To classify communities:

<i>Please describe the community's key features.</i>	
Any key features nearby? (e.g. lake, river, mountains, major business, main road)	
Roads: Any paved, murrum (hard dirt), any rough dirt? Mix?	
Does the market have any key features (e.g. very large or small, many bars, drinks, cell charging shops etc.)?	
What types of businesses are there? (e.g. cell phone charging, tuck shops, maize mills, etc.)	
What is the number of businesses?	
What is the local leader structure and numbers?	
Is there piped water in the community: Are there water pumps that increase access to water? Community pumps? Water flowing? Piping to individual households?	
Prevailing home structure, particularly roof (thatched or aluminum)	
Church and other related buildings	

To observe:

<i>Please describe the community's grid electrification.</i>					
Determine the number of meters of new power lines in the community by asking local leaders.					
Please observe the power lines, are there any obvious down or broken lines?					
What is the location of power lines relative to households and businesses?					
How many households are within 30 meters of the new power lines?					
Did you see any disruption of lines in the community during your observation?					
Is there any evidence of illegal connections or wire sharing?					
What other energy sources are visibly used (i.e. gas tanks, piles of coal, generators, solar panels etc.)					
Is there public lighting? Did you see the lights on? Is the lighting on all streets in the community? What fraction of lights is broken?					
<i>Please describe the community's government buildings and infrastructure.</i>					
	Does the community have this building? / Yes or No	If yes, is it electrified? Yes or No		Does the community have this building? Yes or No /	If yes, is it electrified? Yes or No
Schools			Bank		
Public Works			Police Station		
Post Office			Hospital		
Government offices			Health Center		
			Dispensaries		
<i>Please describe the community's Grid Electrification with regards to markets and the economy</i>					
Is the market electrified?					
What is the percent of businesses that appear electrified?					
Have new businesses emerged? (check with local leaders)					
What are the types of new business?					
Any other important features?					

MCA-T ENERGY STAFF INTERVIEW PROTOCOL

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Evaluation of the Millennium Challenge Account (MCA) Tanzania Energy Sector Project Guide for Interview with MCAT-Energy

INTRODUCTION – CONSENT STATEMENT

Thank you for taking time to talk with me today. My name is _____, and I am a representative of (local research group). We are working with Mathematica Policy Research from the United States. We are conducting an evaluation of the Millennium Challenge Corporation’s Energy Sector project. I’d like to talk with you about the Millennium Challenge Account electricity project including the implementation and the sustainability of the electrical grid and lines. We are trying to learn more about the impacts of electricity on living standards, poverty, and economic development and the operations of the MCA project. Thank you for your interest and for contributing your time.

We have been collecting information about electricity in Tanzania for several years. We are here today to conduct an interview with you, which will last for about an hour. I would like to assure you that your name will not be linked to your comments in reports or other materials. I hope you will feel comfortable sharing your opinions and experiences. There is no right or wrong answer to my questions, just sincere responses.

I would like to tape-record our discussion. I am taping our discussion so our team can listen to it later when we write up our notes. No one besides our research team will listen to the tape. If you want to say anything that you don’t want taped, please let me know and I will be glad to pause the tape recorder. The tapes will be destroyed after transcription and transcripts will be stored electronically with password protection such that only the research team can gain access to them. Do you have any objections to being part of this discussion or to my taping our discussion?

Once again, thank you for participating in this interview. Do you have any questions before we get started?

Implementation and Sustainability of T&D Activity

1. Can you please describe MCA-T Energy’s role in the implementation of the T&D activity?
2. Can you please describe MCA-T Energy’s relationship with contractors? For example, what is the relationship with TANESCO, Pike, Symbion, Africare, ESBI, and Mathematica?
 - a. How would you characterize the working relationship with these contractors? (*Probe to see if MCA-T sees the relationship as positive or if there were challenges.*)
 - b. Can you describe the relationship between MCA-T Energy, TANESCO headquarters, and the district TANESCO offices?

3. Could you describe how the layout of the grid expansion was determined? By this we mean, the location of the poles and transformers.
 - a. What was your role in determining the layout of the grid expansion? *(If there was a role, probe to see the perception of the quality of the information that was used to determine the location of the poles for the grid expansion.)*
 - b. Did the poles ever have to be moved from their originally planned location? What were some of the reasons for the changes and how were these handled?
 - c. Were community members consulted during the development of the plans to expand the grid?
4. Did the implementation go as planned? Why or why not?
5. What do you see as the key challenges to the implementation of the T&D activities? *(Probe to see if the following were challenges)*
 - a. Availability of materials (e.g. poles, transformers, cable)?
 - b. Communication among contractors?
 - c. Transportation?
 - d. Resettlement? Other?
6. What are your suggestions regarding how the implementation of the T&D expansion could have been improved?
7. What are your impressions about the rate of new customer connections in communities where the Compact built distribution lines? Have connections been slower, the same, or faster than expected? What is the expectation for connections in rural vs. urban communities?
 - a. Is the number of connections that have been completed thus far more or less than what you would have expected?
 - b. Why do you think the number is more/less and does it vary by region?
8. In your opinion, are there significant barriers for households and businesses wishing to connect to the new lines? Can you give examples from what you have seen or heard?
9. To the best of your knowledge what is the demand for ready-boards and the extent to which TANESCO informs customers about them?
 - a. In your view, what is the impact of the tariff decreases on connections to the new lines? Do you see an impact on households? At the community level? Please explain the impact and where you see it.
 - b. In order to meet the goals for new connections set at the outset of the project, what needs to happen? Who needs to get involved and what should they do? Please explain.
10. Do you think the new lines are sustainable over the long term? Why or why not?
11. What are the challenges to sustainability?

- a. Does TANESCO have sufficient resources to maintain the lines? Can you please explain?
 - b. Will the quality of the power be high enough to meet customer expectations? Can you please explain? If not, what do you expect to happen?
12. The two engineering firms, Pike and Symbion, used different models in the construction of the new lines. What is your opinion about the suitability of one model or the other for this project?
- a. What is your opinion about which model will be better suited to long-term expansion?

Implementation of Financing Scheme Initiative

13. Can you please describe MCA-T Energy's role in the design and implementation of the FS initiative?
14. Can you please describe MCA-T Energy's relationship with the other contractors -- specifically MCC, TANESCO, Camco, and Mathematica -- in the design and implementation of the FS initiative?
15. How would you characterize the working relationship with these contractors? *Probe to see if MCA-T sees the relationship as positive or if there were challenges.*
16. What do you see as the key challenges to the implementation of the FS initiative? *Probe to see if the following were challenges.*
- a. Moving the payment location from the community to the district TANESCO office?
 - b. Availability of ancillary materials (e.g. application forms, brackets)?
 - c. Delays in the energization of the new lines?
 - d. Transportation at the district level?
17. How did these challenges affect the implementation?
18. What are your suggestions for how the implementation of the FS could have improved?

Other Comments

19. Is there anything I haven't asked about that you feel is important for me to know?

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MCA-T MONITORING & EVALUATION STAFF INTERVIEW PROTOCOL

Evaluation of the Millennium Challenge Account (MCA) Tanzania Energy Sector Project

Guide for Interview with MCAT-Monitoring & Evaluation Staff

INTRODUCTION – CONSENT STATEMENT

Thank you for taking time to talk with me today. My name is _____, and I am a representative of (local research group). We are working with Mathematica Policy Research from the United States. We are conducting an evaluation of the Millennium Challenge Corporation’s Energy Sector project. I’d like to talk with you about the Millennium Challenge Account electricity project including the implementation and the sustainability of the electrical grid and lines. We are trying to learn more about the impacts of electricity on living standards, poverty, and economic development and the operations of the MCA project. Thank you for your interest and for contributing your time.

We have been collecting information about electricity in Tanzania for several years. We are here today to conduct an interview with you, which will last for about an hour. I would like to assure you that your name will not be linked to your comments in reports or other materials. I hope you will feel comfortable sharing your opinions and experiences. There is no right or wrong answer to my questions, just sincere responses.

I would like to tape-record our discussion. I am taping our discussion so our team can listen to it later when we write up our notes. No one besides our research team will listen to the tape. If you want to say anything that you don’t want taped, please let me know and I will be glad to pause the tape recorder. The tapes will be destroyed after transcription and transcripts will be stored electronically with password protection such that only the research team can gain access to them. Do you have any objections to being part of this discussion or to my taping our discussion?

Once again, thank you for participating in this interview. Do you have any questions before we get started?

Implementation and Sustainability of T&D Activity

1. Can you please describe MCA-T M&E’s role in the design and implementation of the T&D activity?
 - a. Design
 - b. Implementation

2. What do you think were the strengths and weaknesses of the design and implementation of the T&D Activity?
 - a. Design
 - b. Implementation

3. Were there significant changes to the design or planned implementation of the T&D Activity? What were some of the reasons for the changes and how were these handled?
 - a. Design
 - b. Implementation
4. Can you please describe MCA-T M&E's relationship with other stakeholders. For example, what is the relationship with MCA-T Energy, Mathematica, TANESCO, local government and others?
 - a. How would you characterize the working relationship with these stakeholders? Have these relationships evolved over time? *Probe to see if MCA-T sees the relationship as positive or if there were challenges.*
5. How would you assess the communication between M&E and Energy teams at MCA-T throughout the design and implementation of the T&D Activity?
6. What do you see as the key challenges to the implementation of the T&D activities?
 - a. How did these challenges affect the implementation?
7. What are your suggestions for how the implementation of the T&D activity could have improved?
8. Is the number of connections that have been completed thus far more or less than what you would have expected?
9. Why do you think the number is more/less and does it vary by region?
10. In your opinion, are there significant barriers for households and businesses wishing to connect to the new lines? Please describe.
11. To the best of your knowledge what is the demand for ready-boards and the extent to which TANESCO informs customers about them?
12. In your view, what is the impact of the tariff changes (implemented at the start of this year) on connections?
13. In order to meet the goals for new connections set at the outset of the project, what needs to happen?
14. Do you think the new lines are sustainable over the long term? Why or why not?
15. What are the biggest threats to sustainability in your opinion?
 - a. Does TANESCO have sufficient resources to maintain the lines? Can you please explain? Can you please explain?

- b. Will the quality of the power be high enough to meet customer expectations? Can you please explain? Can you please explain?

Implementation of Financing Scheme Initiative

16. Can you please describe MCA-T M&E's role in the design and implementation of the financing scheme activity?
 - a. Design
 - b. Implementation
17. Can you please describe MCA-T M&E's relationship with the other contractors, specifically MCC, TANESCO, Camco, and Mathematica?
18. How would you characterize the working relationship with these contractors? *Probe to see if MCA-T sees the relationship as positive or if there were challenges.*
19. What is your perceived effectiveness of the outreach work done by Camco?
20. What do you see as the key challenges to the implementation of the FS activities?
Probe to see if the following were challenges:
 - a. Moving the payment location from the community to the district TANESCO office
 - b. Availability of ancillary materials (e.g. application forms, brackers)
 - c. Delays in the energization of the new lines
 - d. Transportation at the district level
 - e. Communication amongst contractors (Camco, Mathematica, TANESCO, MCA-T, MCC)
21. How did these challenges affect the implementation?
22. What are your suggestions for how the implementation of the FS could have improved?

Other Comments

23. Is there anything I haven't asked about that you feel is important for me to know?

TANESCO DISTRICT STAFF INTERVIEW PROTOCOL

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Evaluation of the Millennium Challenge Account (MCA-) Tanzania Energy Sector Project
Guide for Interview with TANESCO District Office Staff

INTRODUCTION – CONSENT STATEMENT

Thank you for taking time to talk with me today. My name is _____, and I am a representative of (local research group). We are working with Mathematica Policy Research from the United States. We are conducting an evaluation of the Millennium Challenge Corporation’s Energy Sector project. I’d like to talk with you about the Millennium Challenge Account electricity project including the implementation and the sustainability of the electrical grid and lines. We are trying to learn more about the impacts of electricity on living standards, poverty, and economic development and the operations of the MCA project. Thank you for your interest and for contributing your time.

We have been collecting information about electricity in Tanzania for several years. We are here today to conduct an interview with you, which will last for about an hour. I would like to assure you that your name will not be linked to your comments in reports or other materials. I hope you will feel comfortable sharing your opinions and experiences. There is no right or wrong answer to my questions, just sincere responses.

I would like to tape-record our discussion. I am taping our discussion so our team can listen to it later when we write up our notes. No one besides our research team will listen to the tape. If you want to say anything that you don’t want taped, please let me know and I will be glad to pause the tape recorder. The tapes will be destroyed after transcription and transcripts will be stored electronically with password protection such that only the research team can gain access to them. Do you have any objections to being part of this discussion or to my taping our discussion?

Once again, thank you for participating in this interview. Do you have any questions before we get started?

Respondent Position and Responsibilities

1. Please tell me your current position or title. How long have you been in this position? How long have you worked for TANESCO?
2. What has been your involvement with the MCA-T-funded transmission and distribution project?

Implementation and Sustainability of T&D Activity

3. Can you please describe TANESCO HQ's role in the design and implementation of the T&D activity?
 - a. Design
 - b. Implementation
4. To what extent did you work with TANESCO headquarters in the design and implementation of the T&D activity?
 - a. Design
 - b. Implementation
5. What do you think were the strengths and weaknesses of the design and implementation of the T&D Activity?
 - a. Design
 - b. Implementation
6. As far as you understand, what was the ultimate goal of the MCA-T T&D project? What was the project aiming to achieve?
7. Were there significant changes to the design or planned construction of the MCA-T T&D work in your district? What were some of the reasons for the changes and how were these handled?
 - a. Design
 - b. Implementation
8. Can you please describe the relationship between the TANESCO district offices and the other contractors, specifically TANESCO HQ, Pike, Symbion, Africare, and ESBI?
 - a. *Probe:* How would you characterize the working relationship with these contractors?
 - b. *Probe to see if TANESCO sees the relationship as positive or if there were challenges.*
9. Could you describe how the layout of the grid expansion was determined? By this we mean, the location of the poles and transformers.
 - a. What was your role in determining the layout of the grid expansion?
 - b. Did the poles ever have to be moved from their originally planned location? What were some of the reasons for the changes and how were these handled?

- c. How were community members consulted during the development of the plans to expand the grid?
10. How would you assess the communication by TANESCO and contractors to community members regarding the construction schedule and technical requirements for households to connect?
11. What do you see as the key challenges to the implementation of the T&D activities? *Probe to see if the following were challenges:*
 - a. Availability of materials (e.g. poles, transformers, cable)
 - b. Availability of ancillary materials (e.g. application forms, brackets)
 - c. Communication among contractors
 - d. Transportation
 - e. Other
12. How did these challenges affect the implementation?
13. What are your suggestions for how the implementation of the construction of the new lines could have improved?
14. Were the lines ultimately constructed in the right way to facilitate an increase in customer connections?
15. Is the number of connections that have been completed thus far more or less than what you would have expected?
16. Why do you think the number is more/less and does it vary by region?
17. In your opinion, are there significant barriers for households and businesses wishing to connect to the new lines? Please describe.
18. Can you describe the demand for ready-boards? Are they generally available for customers to purchase?
19. In your view what is the impact of the January 2013 tariff decreases on connections?
20. In order to meet the goals for new connections set at the outset of the project, what needs to happen?
21. Do you think the new lines are sustainable over the long term? Why or why not?
22. What are the challenges to sustainability?
 - a. Does TANESCO have sufficient resources to maintain the lines? Can you please explain?

- b. Will the quality of the power be high enough to meet customer expectations? Can you please explain?
23. How does the cost of maintaining the new lines compare with maintaining existing lines? Please describe.

Implementation of Financing Scheme Initiative

24. Can you please describe the TANESCO district office's role in the implementation of the FS initiative?
25. Can you please describe the TANESCO headquarters' relationship with the other contractors -- specifically MCA-T, MCC, Camco, and Mathematica -- in the design and implementation of the FS initiative?
- a. How would you characterize the working relationship with these contractors?
Probe to see if TANESCO sees the relationship as positive or if there were challenges.
26. Can you describe the communication and outreach work that Camco did? Do you think it was effective in communicating:
- a. Knowledge about benefits of electricity?
 - b. FS procedures
 - c. TANESCO application procedures
27. Can you describe what you did to inform customers about the FS?
28. What do you see as the key challenges to the implementation of the FS activities? *Probe to see if the following were challenges:*
- a. Moving the payment location from the community to the district TANESCO office
 - b. Availability of ancillary materials (e.g. application forms, brackets)
 - c. Delays in the construction of the new lines.
 - d. Transportation
 - e. Communication amongst contractors (Camco, Mathematica, TANESCO, MCA-T, MCC).
29. How did these challenges affect the implementation?
30. Do you see offering low-cost connections on a large scale as a financially viable option for TANESCO? Can you please explain why or why not?
31. What are your suggestions for how the implementation of the FS could have improved?

Other Comments

32. Is there anything I haven't asked about that you feel is important for me to know?

TANESCO HEADQUARTERS STAFF INTERVIEW PROTOCOL

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Evaluation of the Millennium Challenge Account (MCA-) Tanzania Energy Sector Project

Guide for Interview with TANESCO Headquarters Staff

INTRODUCTION – CONSENT STATEMENT

Thank you for taking time to talk with me today. My name is _____, and I am a representative of (local research group). We are working with Mathematica Policy Research from the United States. We are conducting an evaluation of the Millennium Challenge Corporation’s Energy Sector project. I’d like to talk with you about the Millennium Challenge Account electricity project including the implementation and the sustainability of the electrical grid and lines. We are trying to learn more about the impacts of electricity on living standards, poverty, and economic development and the operations of the MCA project. Thank you for your interest and for contributing your time.

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I would like to tape-record our discussion. I am taping our discussion so our team can listen to it later when we write up our notes. No one besides our research team will listen to the tape. If you want to say anything that you don’t want taped, please let me know and I will be glad to pause the tape recorder. The tapes will be destroyed after transcription and transcripts will be stored electronically with password protection such that only the research team can gain access to them. Do you have any objections to being part of this discussion or to my taping our discussion?

Once again, thank you for participating in this interview. Do you have any questions before we get started?

Respondent Position and Responsibilities

1. Please tell me your current position or title. How long have you been in this position? How long have you worked for TANESCO?
2. What has been your involvement with the MCA-T-funded transmission and distribution project?

Implementation and Sustainability of T&D Activity

3. Can you please describe TANESCO HQ’s role in the design and implementation of the T&D activity?
 - a. Design
 - b. Implementation

4. What was the role of the TANESCO district offices in the implementation?
 - a. Design
 - b. Implementation
5. What do you think were the strengths and weaknesses of the design and implementation of the T&D Activity?
 - a. Design
 - b. Implementation
6. What was the ultimate goal of the MCA-T T&D project? What was the project aiming to achieve?
7. Were there significant changes to the design or planned implementation of the T&D Activity? What were some of the reasons for the changes and how were these handled?
 - a. Design
 - b. Implementation
8. Can you please describe TANESCO HQ's relationship with the other contractors, specifically MCA-T, Pike, Symbion, Africare, and ESBI?
 - a. How would you characterize the working relationship with these contractors? *Probe to see if TANESCO sees the relationship as positive or if there were challenges.*
9. Could you describe how the layout of the grid expansion was determined? By this we mean, the location of the poles and transformers.
 - a. What was your role in determining the layout of the grid expansion?
 - b. Did the poles ever have to be moved from their originally planned location? What were some of the reasons for the changes and how were these handled?
 - c. How were community members consulted during the development of the plans to expand the grid?
10. The two engineering firms, Pike and Symbion, used different models in the construction of the new lines. What is your opinion about the suitability of one model or the other for this project?
 - a. What is your opinion about which model will be better suited to long-term expansion?

11. How would you assess the communication by TANESCO and contractors to community members regarding the construction schedule and technical requirements for households to connect?
12. Did the implementation go as planned? Why or why not?
13. What do you see as the key challenges to the implementation of the T&D activities? *Probe to see if the following were challenges.*
 - a. Availability of materials (e.g. poles, transformers, cable)
 - b. Availability of ancillary materials (e.g. application forms, brackets)
 - c. Communication among contractors
 - d. Transportation
 - e. Resettlement
 - f. Other
14. How did these challenges affect the implementation?
15. What are your suggestions for how the implementation of the T&D expansion could have improved?
16. What are your impressions about the rate of new customer connections in communities where the Compact built distribution lines? Have connections been slower, the same, or faster than expected? What is the expectation for connections in rural vs. urban communities?
 - a. Is the number of connections that have been completed thus far more or less than what you would have expected?
 - b. Why do you think the number is more/less and does it vary by region?
17. In your opinion, are there significant barriers for households and businesses wishing to connect to the new lines? Please describe.
18. Can you describe the demand for ready-boards? Are they generally available for customers to purchase?
19. In your view what is the impact of the January 2013 tariff decreases on connections?
20. In order to meet the goals for new connections set at the outset of the project, what needs to happen?
21. Do you think the new lines are sustainable over the long term? Why or why not?
22. What are the challenges to sustainability?
 - a. Does TANESCO have sufficient resources to maintain the lines? Can you please explain?
 - b. Will the quality of the power be high enough to meet customer expectations? Can you please explain?

23. How does the cost of maintaining the new lines compare with maintaining existing lines?
 - a. Are there any differences by region? Please describe.

Implementation of Financing Scheme Initiative

24. Can you please describe the TANESCO headquarters' role in the implementation of the FS initiative?
25. Can you please describe the TANESCO headquarters' relationship with the other contractors -- specifically MCA-T, MCC, Camco, and Mathematica -- in the design and implementation of the FS initiative?
 - a. How would you characterize the working relationship with these contractors?
Probe to see if TANESCO HQ sees the relationship as positive or if there were challenges.
26. What do you see as the key challenges to the implementation of the FS initiative?
Probe to see if the following were challenges:
 - a. Moving the payment location from the community to the district TANESCO office
 - b. Availability of ancillary materials (e.g. application forms, brackets)
 - c. Delays in the energization of the new lines
 - d. Transportation at the district level
 - e. Communication amongst contractors (Camco, Mathematica, TANESCO, MCA-T, MCC)
27. How did these challenges affect the implementation?
28. What is your opinion about the effect of connection subsidies, if they were to be implemented on a larger scale, on connection rates?
29. Do you see offering low-cost connections on a large scale as a financially viable option for TANESCO? Why or why not?
30. What are your suggestions for how the implementation of the financing scheme could have improved?

Other Comments

31. Is there anything I haven't asked about that you feel is important for me to know?

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