# **Jesse Eckert**

# Studying the concept of RPT in developing electricity supply to rural areas of Tanzania 2010

Jesse Eckert from Canada studied the concept of RPT (Rural Premium feed-in Tariff) in developing electricity supply to rural areas of Tanzania. Jesse studied at the University of British Colombia and was a MESPOM student based in Lund. In Tanzania he worked with UNEP.

Below is Jesse's PowerPoint presentation on his research whilst in Tanzania.

# Adapting Organizational Models for Tanzania's Rural Communities : An exploration of meeting Tanzania's rural communities energy needs with community energy



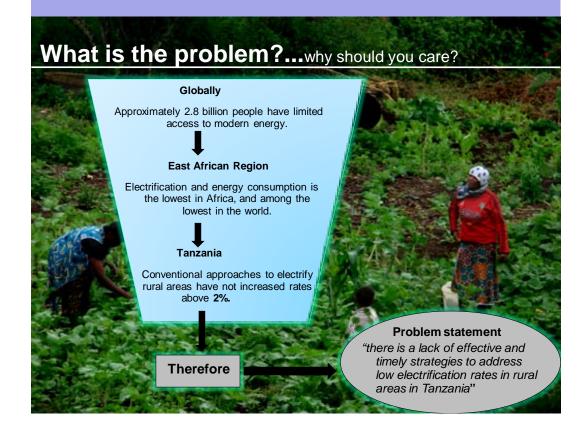




Funding Report
By: Jesse Eckert
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# **Outline**

- 1. Introduction
- Justification and "problem statement"
- Why Community Energy?
- Research Questions
- Aim, Objective, and Scope
- 2. Methodology
- Literature Review and Field Work
- "Conceptual framework"
- 3. Analysis
- 5. Summary of Results
- 6. Recommendations
- 7. Conclusions
- 8. Future Research



# Aim, Objective, and Scope

<u>Aim</u> Help improve rural electrification rates in rural Tanzania and potentially other developing countries

## **Research Objective**

Is to contribute to an increased knowledge of alternative organizational models for rural electrification

Identify organizational models for community involvement in rural electrification programs in Tanzania.

# Community Energy - a possible solution?

### **Developing Countries**

- Studies have called for involvement of the poor in rural electrification (GNESD)

#### **Tanzania Specifically**

- 2 studies in Tanzania have identified community participation as a potential alternative to increase/stimulate rural electrification.





There is limited information in the literature discussing how community energy projects can be organized to be successful.

# **Research Questions**

## Research Question #1



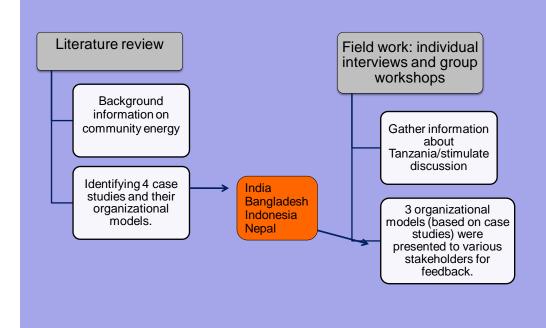
"How can **organizational models**, with strong links to communities, be designed to increase access to modern energy services?"

# **Research Question #2**



"How could these models be adapted and implemented in Tanzania?"

# **Methodology...**how did I try to answer the research questions?



# Field Work

Interviews with representatives of the local power authority (TANESCO), Rural Energy Agency (Government), TATEDO (National NGO), Private Company, Local Development Office (Mafia Island), and representatives of the Catholic Church in the Iringa Region.

2 village workshops were also held on Mafia Island, and the other in Mavanga in the Iringa Region.

Staff from the Development Office/UNDP on Mafia who supported the workshop.



# Photos from workshop on Mafia Island: Chloe community



Photos from the workshop on Mafia Island: Chole community



# Workshop with Mavanga's Community Hydro Committee: Supported by local Catholic Church



# More photos of Mavanga workshop



# Tours to see various projects with the Catholic Church in Iringa: Hyrdo Project



# Tours to see various projects with the Catholic Church in Iringa: Tea Plantations



# **Summary of findings for research question 1** "how can community energy projects be organized..."

## **Capacity building**

Allows communities to undertaking: project planning, minor aspects of construction, operation and management, and ownership of rural energy projects.

#### **Rural Energy Service Companies**

Needed in order to undertake major construction activities and repairs.

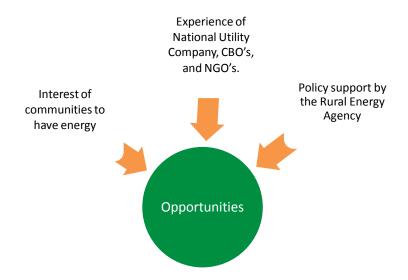
#### **Funding**

Can come from a variety of sources: communities themselves, governments, banks, and international funders.

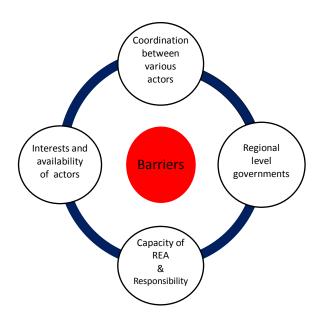
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**Summary of findings for research question 2** "how can they be adapted and implemented in Tanzania"



# Summary of findings for research question 2 continued...



# Recommendations part 1...

## "Business as Usual Model"

Describes how a community energy project could be organized under the current system.

However, it is limited by a number of barriers and can only be implemented in certain regions.

# "Building Energy Regions Model"

Aims to create a more broad scale rural energy program by increasing responsibility for the regional governments.

#### **Building an Energy Region**

- 1. Increase resources and responsibility for regional governments.
- 2. Establish local NGOs and RESCOS in each region.
- 3. Secure loan agreements with banks for rural energy projects.

#### **Government Specific Recommendations**

- 4. Set targets and time-lines for rural electrification.
- 5. Increase capacity and funding for Rural Energy Agency and increase its promotional activities.

#### Recommendations for all stakeholders

6. Increase coordination between various actors.



# Conclusions on opportunities for community energy in Tanzania.

It does not appear that the government, private companies, NGO's, or CBOs will/can take full responsibility to ensure that rural communities have access to energy.

If given support, communities are capable of filling this gap and take greater responsibility for energy delivery and management in their communities, however, this can occur only in areas with a proper support network currently exists.

In order to implement a large scale community energy program in Tanzania, such as the proposed "Building Energy Regions Model", a number of actions must be taken to build on current opportunities and knowledge, and create a new support network throughout the country.



# THANK YOU!

