

Challenges and successes of energy governance in off-grid rural communities in Bangladesh

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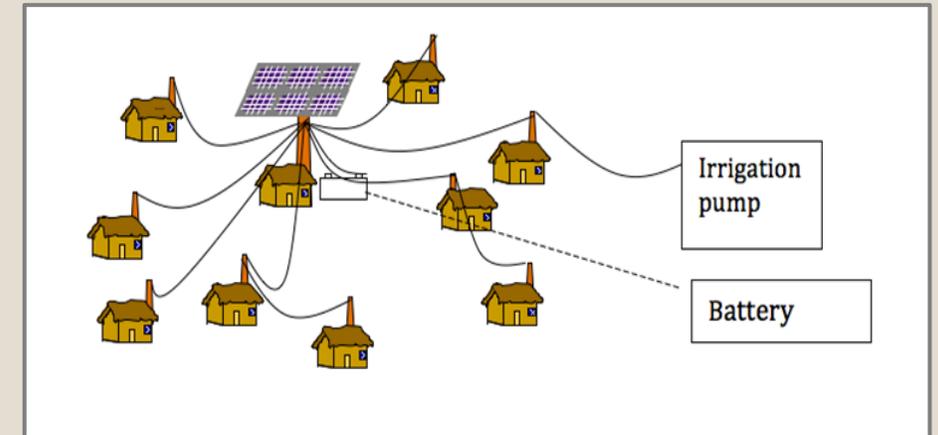
Solar energy in Bangladesh

- Annual average solar radiation of 1900 kWh/m²
- About 40% of the total population are living in off-grid areas
- Mini-grid solar energy project – Large scale
 - First implemented in 1996
 - 7 operational mini-grids with 11 more under construction
 - High establishment, transmission and distribution costs
- Solar home system (SHS) – Individual scale
 - Very popular – About 4.12 million SHSs have been installed
 - SHS is more money extracting, provides lighting with little socio-economic benefit
- Solar nano-grid (SONG) – Community scale
 - Aims to overcome the limitations of previous off-grid solar energy models

Solar Nano Grid (SONG) project

■ Project aims

- Concept of 'a service not a product'
- Meeting the demand of 20-50 households
- Energy for productive household uses
- Energy for community businesses or services



■ Stakeholders

- Loughborough University (LU), UK – Project leader, project funded by EPSRC
- United International University (UIU), Bangladesh – Research partner
- Grameen Shakti – NGO which run the nano grids
- Two off-grid communities – Faitang (refugee camp) and Baroihati (village)

Energy governance

- Effective management and coordination of efforts promoting:
 - Energy access
 - Social equality
 - Economic activity
 - Sustainable energy solution for off-grid communities
- Cooperation is essential between two interdependent governing bodies:
 1. An organisation with managerial and technical capacity to run the nano grid.
 - For example: Grameen Shakti in Bangladesh and SCODE in Kenya.
 2. A community committee deciding fair and efficient use of the nano grid.
 - For example: Village Energy Committee (VEC) or Panchayat.



Challenges in establishing energy governance

- Grameen Shakti:
 - Lack of understanding the main essence of the SONG project
 - The nature and the profit-orientation of the project is new to them
 - SHS has established a rigid 'product selling' mindset
 - Restriction, Influence and constant intervention from UIU and LU
 - Miscommunication with UIU and LU
 - Lack of managerial and technical capacity
 - No investment from Grameen Shakti yet, so lack of motivation
- VEC:
 - Panchayat normally deals with social issues, not business
 - Private entrepreneurship is more common for business
 - Grameen Shakti feels VEC could rival their authority



Challenges caused by present energy governance

- Social challenges

- Lack of communal feel in both communities
- Theft from the system (panels in Faitang, energy in Baroihati)
- Exploitation by existing power structures (politicians, informal groups)
- Difficulties of including women

- Technical challenges

- Supply of faulty meters
- Lack of maintenance
- Experimentation with inappropriate appliances
- Calibration of meters/Wrong tariff

Challenges caused by present energy governance

■ Financial Challenges

- Community businesses or services are missing in both communities
- Community fund is non-existent
- No platform to initiate finance for community services

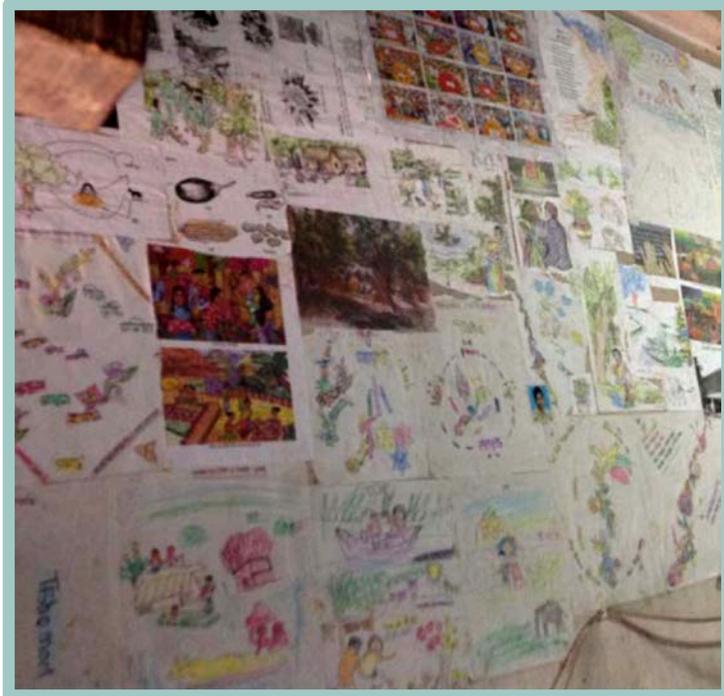
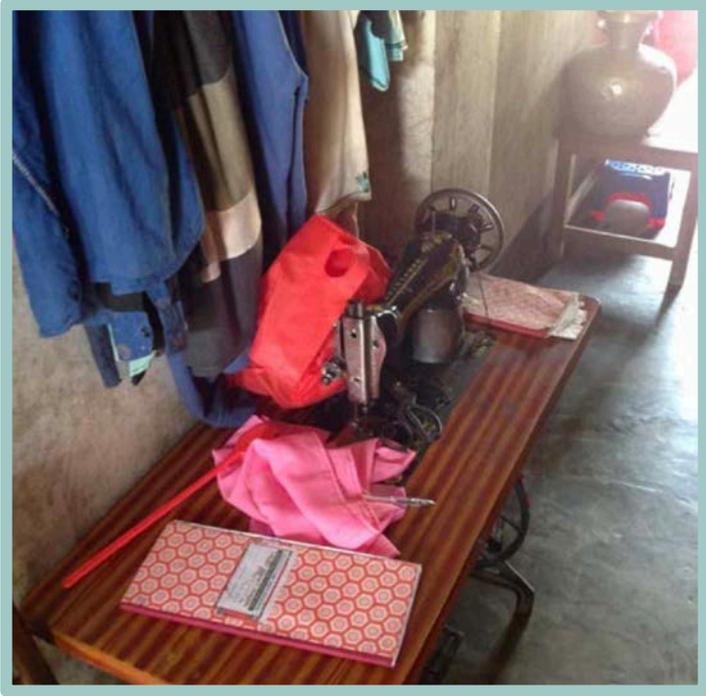
■ Managerial Challenges

- Misunderstandings between Grameen Shakti and Community
- Poor cooperation from the local vendor
- No project progress evaluation



Successes of present energy governance

- Capacity building in progress
 - Grameen Shakti is building both their technical and managerial capacity
 - UIU is also building their capacity in project governance
 - Both Grameen Shakti and UIU is now planning for initiating VEC
- Access to energy from SONG
 - In Faitang 60% and in Baroihati 50% of the households have energy access
 - In Baroihati the community is trying a water pump for irrigation
 - Clothes making and children's paintings are taking place



PHOTOGRAPHS



PHOTOGRAPHS

Lessons and questions from the project

▪ Lessons:

- There is a need for continuous evaluation of the project
- Everyone needs to know what they are doing and how they fit into the larger picture
- Researchers have to recognise the importance of existing socio-political dynamics within the community at an early stage
- here is a big need to conduct regular visits and assessments

▪ Questions:

- Would the Bangladesh projects have been more successful with a proper VEC/Panchayat?
- What are the alternatives energy governing structures?
- How to overcome the reluctance about VECs/Panchayats in Bangladesh?
- How can governance be improved in the Bangladesh projects?

Thank you

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