REMU Profitability Strategies

How to make Renewable Energy Mini Utilities (REMU) an economic success
REMU components

Minigrid monitoring and support

Minigrid community

Minigrid system
- Solar Strings With MPPT
- Battery Bank
- DC BUS
- Diesel Genset
- AC BUS
- Minigrid manager
- RS232
- Communications Gateway
- Zigbee
- 3G
- Street Lights
- Wi-Fi
- Pre-payment meters

Onsite Prepayment System Manager
- Add meter
- Add customer
- Activate energy credit in real time when prepayment is made
- Maintain energy balance credit
- Synchronize with cloud based server
- Monitor energy system performance

Owner Operator

Tailored software
Influences on Profitability

- Education Promotion
- Location Environment
- Business Model
- Currency Issues
- Tariff Policy
- Technology & Prices
- Energy Prices
- Facilitation Initiatives
What is locally available?

Location
Environment

System Performance - Good Solar Day

Total Load Profile

Insolation and Cleanness Index
What are the main business model decisions?

What are the main economic strategic choices?
(All calculated for each investigated parameter.)

- Maximum capital yield over lifetime
- Shortest possible payback period*
- Highest net capital yield % per year
- Highest possible supply security**
- Leasing model with multiple players

* Lowest initial investment
** Lowest diesel fuel dependency = large storage capacity
Can tariff rates be a tool for success?

- Demand side management
- Can support 24/7 availability
- Profit driver
What are sustainable supportive policies?

A profitable system needs profitable customers created by a supportive environment

- Micro loans for start-ups
- Software based electricity donation system
- Declaration as Special Economic Zone
- Urban enterprise zone
- Export manufacturing
- Public relation
- Cooperate with opinion leaders
- Coordinate support of governmental institutions
How independent is a REMU?

Solar vs Diesel Generator Production

Energy Prices
How to utilize technology for profit?

- Use an agnostic technology approach
- Monitor regularly technology markets
- Invest in intelligence and focus on it
- Use tailored software approach
- High degree of standardization
- Do not just deploy technology: Educate with it!
Is money a threat or an opportunity?
How to communicate profitably?

Low capital approaches:

- Educate locally, nationally & internationally
- Website for REMU installations
- Promote donation feature internationally
- Coordinate: Use ECOWAS as platform
- Create national cultural identity for REMU

Allways remember:
Economic wealth is closely linked to electrification.
That is how 1. world countries started off.
That is how 2. world countries started (Russia, China).
There is a direct link between electrification, free trade and wealth.
Thank You!

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