Powering local development

Micro-grids: Best Practices Around Technology Challenges
The two big challenges about electricity access

Make electricity cheaper

Have people pay for it

Technology challenges

Business model challenges
Tech challenges? What tech challenges?

Fun fact 1

System optimization has marginal impact on kWh cost

Very limited impact compared to exogenous factors:

- Cost decline of RE Tech
- In hybrid systems: Diesel fuel price fluctuations
- Discount factor used for calculations

Fun fact 2

Energy in off-grid areas is already extremely expensive

Ex: Phone charging is a very costly service

In Benin: ₣0.3/charge (FCFA 150)

For 3-5Wh batteries

This is over $100/kWh
Let’s look at this the other way around

The real problem

Is to prevent what was heard in a previous webinar: “Users stopped paying as soon as they heard a mere rumor of a future grid connection”

The actual challenge

Is to keep users happy over time

The solution

Is to shift focus from the supply side to the demand side
BoP is the opportunity to leapfrog to the next tech generation

Tech challenges are not about existing tech, but on tech to be developed to address this user challenge

Make the service easy to use
Go beyond what people are used to
Make something they will love
...

➔ Add customer value

The hardware is already available:
mobile phones and smart meters
Power:On’s take on this: user apps

- Your contract
- Your consumption
  - 70%
  - 2 days left until expiration
- Your payments
  - Last payment: 17/11/14
  - Recharge now:
    - #1*AMOUNT*

Prepayment
Monitoring and control
Automatic alerts

!!SPECIAL OFFERS!!

-50%
-70%

Special offers
Customized efficiency tips
Deals with efficient appliances retailers
Impact back on system’s efficiency

Demand Spike occurring!
!!Special Offer!!

Turn off your and get
1 hours free tomorrow!

Quick responses to reduce stress on the systems
Data analysis and forecasting to improve the systems controls
Looking ahead and beyond: open questions

**Business transformation**

What will energy supply be like tomorrow?

**Disruption potential**

How innovations at the BoP will affect developed countries?
The pain point: innovation needs funding

**Funding mismatch**

Seed funding is too scarce to fund start ups

Most organizations want to fund scale ups, through multi millions $ tickets in debt or equity investment

Most start ups in this field are barely past the pilot phase and only need a few hundred k$

**Grants inadequacy**

Foundations seek to fund proven models

There are no proven models

If a company had a proven model, it should be able to attract regular funding

If a company needs grant funding to scale up, then its model is not good enough - and it shouldn’t be funded
Thank you!

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