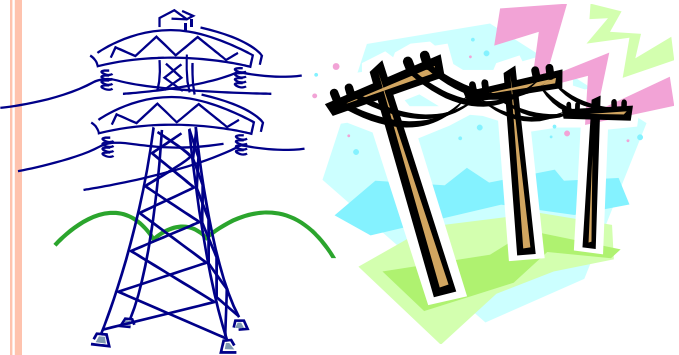




A PROPOSED BUSINESS MODEL TO BUILD ON THE POTENTIAL SYNERGY BETWEEN RURAL TELECOM AND RURAL ELECTRIFICATION

**Presented for Discussion and Comments at
SREP Pilot Countries Meeting
Nairobi, March 5th, 2012**

WE OBSERVE THE FOLLOWING OUTCOMES VERY FREQUENTLY IN RURAL AREAS--BUT WHAT CAN BE DONE ABOUT IT?



**Mostly
does not
happen**



**Frequently
happens**



**Anchor customer:
Mobile Network Operator
(MNO)**

Large, reliable,
credit-worthy
customer
needs power for
mobile tower



Key relationship:
5-7 year
Power Purchase
Agreement



Location-specific
generation:
Solar cells with
back-up generator



**Power Provider:
Energy Service Company
(ESCO)**



Isolated micro-
grid
for rural
community



**Tertiary Customer:
Metered Consumers**



**Secondary Customer:
Public Services**



THREE STEP STRUCTURE OF THE PROPOSED BUSINESS MODEL

Step 1: Identify any possible profitable business opportunity in a rural area and attract a private investor, structuring appropriate risk mitigation as required (e.g. through an “anchor customer” who is creditworthy and has stable and predictable needs)

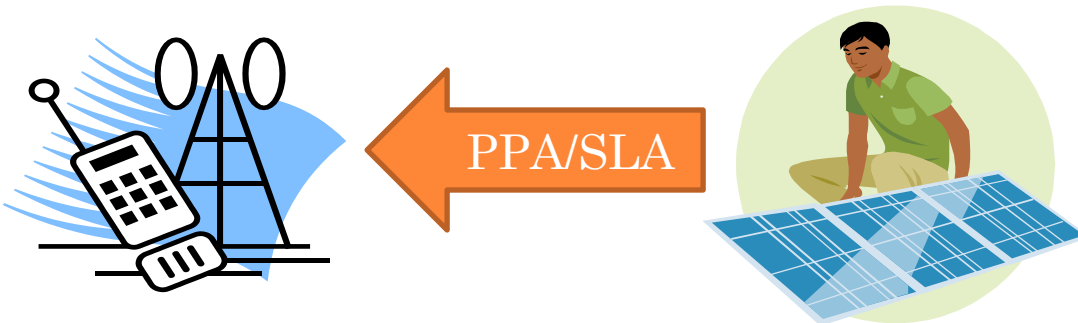
Step 2: Once the investor has established his presence in the rural area, try to incentivize him to do additional things by further mitigating his perceived risks for the additional actions

Step 3: Finally, offer the ESCO even more additional “upside” through potential revenue streams which he may choose to go after, or not, based on his own risk appetite



STEP 1

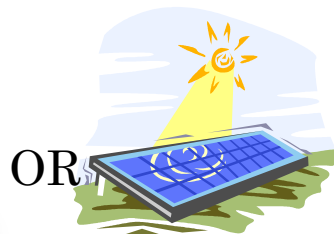
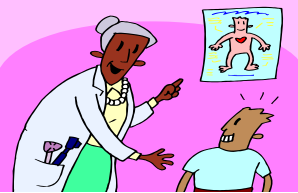
- Mobile Network Operator (MNO) invites offers from small investors (ESCOs) to meet its power requirement for a rural cellular tower or base station through a mini IPP arrangement, instead of high cost self-generation
- Mini-IPP (ESCO) invests in power supply equipment and signs multi-year PPA with creditworthy MNO, with specified service level agreement
- ESCO recovers cost of capital invested plus required return
- Only feasible if ESCO's offer is cheaper than self generation by MNO
- **NOTE: ESCO's offer is sized only to meet MNO's power requirement**
- Strictly bilateral private sector transaction without reference to power requirement of the surrounding community at this stage
- MNO as “anchor customer” has successfully brought ESCO to rural area



Private ESCO invests in equipment to sell power to rural MNO against 5-7 year PPA

STEP 2

- This step looks at the community near the rural cell tower and estimates its power requirement **for lighting communal areas only** e.g school, clinic, street lights, house of worship etc (not for individual houses and businesses)
- World Bank can structure a PPP as follows: (i) WB finances Discom's purchase of solar panels/micro-grid etc, and (ii) **guarantees a Management Contract between Discom and ESCO to assure ESCO that it will receive timely O&M payments**
- ESCO delivers power to public areas using the Discom's assets. Note that ESCO has not invested any capital for rural electrification. Only the Discom has invested in the panels and micro-grid and retains ownership but does not operate them.



OR



Community power source owned by Discom, operated by ESCO, financed and guaranteed by WB to light public areas




STEP 3

- By the end of Step 2 the ESCO had two income streams: from PPA and O&M
- Now in Step 3 there is an opportunity for a potential third income stream from the **individual members** of the rural community for **privately occupied locations**, e.g. microenterprises who need an on-site source of power, or households. The ESCO can be an **equipment vendor for sale or lease of diverse power solutions**, and since he is located in the community, he can also offer affordable payment terms, financing and maintenance services for sustainable, individually procured power solutions.



SUMMARY OF THE MODEL

- ESCO comes in to a rural area as an IPP, based on a PPA with the MNO who is the “anchor customer”
 - ESCO gets hired by the Discom through a PPP arrangement as a management contractor or O&M contractor (for public sector-supplied power generation assets and micro-grid) to deliver power to public locations in the community on behalf of Discom
 - ESCO gets to know the community through the “WB guaranteed arrangement” and then expands this business (without guarantee) as an equipment vendor and power solutions provider to individual members of the rural community based on their ability to pay and customized needs for power
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ROLE OF THE BANK

STEP 1: IPP	NONE	The transaction is between MNO and competitively selected ESCO. The ESCO and MNO are respectively taking commercial risk and performance risk on each other, and the Bank is not directly involved in this purely private sector transaction
STEP 2: O&M contractor	MAXIMUM (PPP structuring)	Bank provides financing to public sector Discom for purchase of power generation assets and construction of micro-grid, plus offers a guarantee to ESCO, if required , to confirm that payments by Discom under O&M contract will be made on time to ESCO
STEP 3: Equipment Vendor	LIMITED OR NONE	Possible support with microcredit, but preferably no involvement to allow for sustainable solutions to develop organically

