

# MINI GRIDS FOR HALF A BILLION PEOPLE

## Access to Finance for Mini Grids

Subodh Mathur

Adjunct Prof. Johns Hopkins University

[scmathur@gmail.com](mailto:scmathur@gmail.com)

June 2019



# Introduction



- Mini grids need to finance
  - ✓ Pre-investment costs
  - ✓ Investment costs – focus of presentayion
- Lack of investment finance – key barrier for scaling up private mini grids
  - Particularly for local developers
  - International firms tend to have better access
- Lack of affordability – another key barrier
  - Affects most mini grids

# Core messages



- Government & development partners should develop a financial package consisting of:
  - ✓ Equity
  - ✓ Debt
  - ✓ Risk-sharing instruments for debt and equity
  - ✓ Investment and pre-investment subsidies
- Nature of package may vary by:
  - Country and regions
  - Mini grid business model
  - International vs local firms

# Stimulating equity provision

- Needs greater attention than in the past
  - ✓ Important for smaller or start-up firms
  - ✓ Ideally in local currency
- Potential sources of funds
  - ✓ own funds from project developers and associates
  - ✓ commercial investors
  - ✓ Impact investors, including crowdfunding
- Development partners will help develop channels for these sources

Join the conversation on Twitter: [@WBG\\_Energy](#) [#EndEnergyPoverty](#)

# Stimulating debt provision -1



- Being done in many countries – but more is needed
  - ✓ World Bank has helped set up Credit Lines
  - ✓ Local currency loans have long tenor, market interest rate
    - Subsidies provided separately
- Consider alternatives to credit line, such as ‘put option’
  - ✓ Provides funds when needed to lengthen loan tenor, not upfront
  - ✓ Makes better use of local funds

# Stimulating debt provision - 2

- Use other credit channels and instruments
  - ✓ Convertible note – comes at lower interest rates
    - Starts as debt, can become equity
  - ✓ Other ‘fintech’ instruments are being tried out
    - May become mainstream in future
- Peer-to-peer business lending
  - ✓ Suitable for established firms

Join the conversation on Twitter: [@WBG\\_Energy](#) [#EndEnergyPoverty](#)

# Establish risk-sharing instruments



- Primary problem is riskiness of mini grids
  - ✓ Currently addressed partially by capital subsidies
    - Subsidies reduce need for risky debt and risky equity
    - Inefficient way of addressing risk
- Better to address directly – not common today
  - ✓ Use existing and new risk-sharing instruments
  - ✓ Applicable to both debt and equity
  - ✓ Shift some subsidy money to risk-sharing fund
    - Bigger bang for money

Join the conversation on Twitter: [@WBG\\_Energy](#) [#EndEnergyPoverty](#)

# Investment subsidies -1



- In wide use already
  - ✓ Make electricity more affordable
  - ✓ Allow developers to reach financial closure
  - ✓ Allow developers to be financially viable
- Workable design depends on local conditions
  - ✓ Firms without adequate equity and debt need capital cost subsidies
  - ✓ Other firms may find results-based financing adequate



# Subsidies -2

- Capital subsidies have a capital-intensive bias
  - ✓ Try to minimize by using market interest rates
    - Opportunity cost of capital
- Need to start thinking about labor-oriented subsidies
  - ✓ So much money flowing into rural areas should create local incomes and jobs
  - ✓ For example, part-subsidize part of wage bill for some years
    - Form of results-based financing
      - Result is ‘job creation’
      - Job creation big bonus for community

# Broader considerations



- Focus on women
  - ✓ Socially desirable
  - ✓ May bring in additional subsidies
- Focus on income generation
  - ✓ Would increase financial viability of mini grids
  - ✓ Reduce risk perception
  - ✓ Provide assistance/subsidies for firms that would use electricity

Join the conversation on Twitter: [@WBG\\_Energy](#) [#EndEnergyPoverty](#)

## Broader consideration: Focus on income generation



- Would increase daytime demand for electricity
  - ✓ Increase financial viability of mini grids
  - ✓ Reduce risk perception
- Work with Bank colleagues involved in rural development
- Work with bilateral donors
  - ✓ Provide subsidies for firms that would use electricity

Join the conversation on Twitter: [@WBG\\_Energy](#) [#EndEnergyPoverty](#)