


KEMENTERIAN ENERGI DAN SUMBERDAYA MINERAL
Ministry of Energy and Mineral Resources Republic of Indonesia
U P 3 K N
Unit Pelaksana Program Pembangunan Ketenagalistrikan Nasional
Program Management Office for the 35 GW Electricity

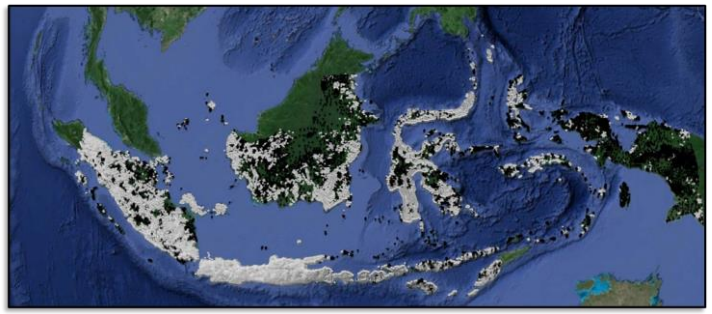
Synergizing Energy Access Solutions to National Plans

PPP based approach for energy access under 35 GW program

35.000 MW UNTUK INDONESIA

Problem Statements

10.1 million households without electricity*



Rooftop tagging analysis

Local resources – Renewable Energy

1. PLN's grid expansion whenever financially least-cost
2. Micro-utility service based on PPP for multi-household settlements
3. *Solar Home System* service for distributed and scattered households
4. Community Empowerment

*from any source at the end of 2014

Why Rooftop Tagging? Supported by ADB

Being done with publicly available satellite imagery, e.g. Google Earth, Bing Satellite, Nokia Maps/HERE, etc

To provide a current and more accurate representation of settlement patterns and locations, since BIG data is about 20 years old

To provide a detailed geospatial baseline of recent household and facility locations that can be used later by government for tender preparation and by suppliers for implementation planning and budgeting

Implementation Option

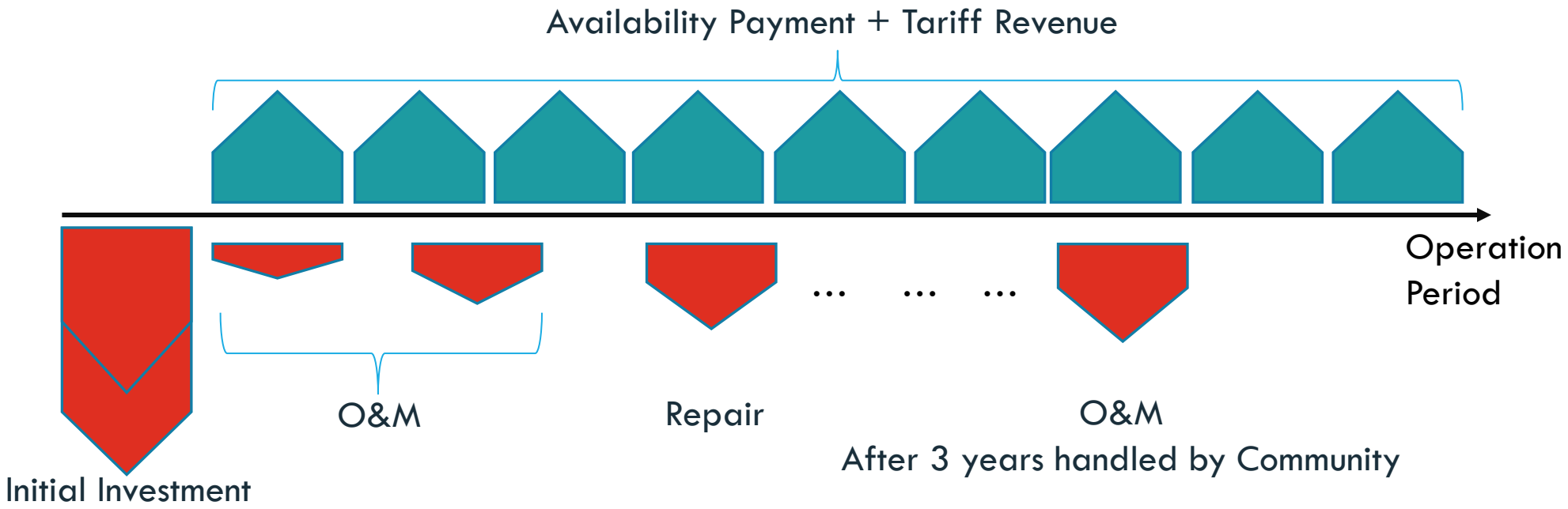
Status Quo:

1. Government to build micro hydro/solar panel, then transfer to local government
2. Local government to establish a cooperation which has members from the residents who receive the electricity service
3. The cooperation to collect payment from customers / non-standard tariff
4. The cooperation has not enough fund to pay the O&M, especially when it needs repair and the availability of replacement parts
5. Lack of support from equipment supplier/project developer/system integrator after implementation

Implementation Option

New approach:

1. IPP, by PPP model, to perform investment and O&M of *micro-utility*
2. IPP gets paid by GOI through national budget
3. Indonesia Infrastructure Guarantee Fund (IIGF) to secure the monthly payment to IPP



Challenges

1. The economical scale of micro-utility, e.g. 10 MW for each concession
2. Access to location
3. Permit simplification, regulatory clarity, i.e. condition precedent approach
4. Chosen Technology, i.e. solar panel
5. Sustainability: technical and financial
6. Supervision of any government financial support
7. Tariff for customer, e.g. national based tariff
8. Quota per Household, i.e. 1 kWh per day
9. Autonomy duration, i.e. 48 hours/reliability measurement means

35.000 MW UNTUK INDONESIA
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Closing Remarks

1. GOI has established a special unit for this Indonesia Terang program
2. RFP and Market Sounding will be held soon, inviting domestic and foreign developers with some requirements:
   - localization of components,
   - human resource development and
   - technology transfer
3. Target - 1 demo pilot project in Q4 2016