REGIONAL MEETING ON SUSTAINABLE ENERGY FOR ASIA-PACIFIC LEAST DEVELOPED COUNTRIES

SESSION 2: FINANCING INITIATIVES AND BUSINESS PLANS THAT WORK

ELMAR ELBLING
Senior Energy Access Specialist
Asian Development Bank

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THE ASIAN DEVELOPMENT BANK’s MISSION

To help our developing member countries reduce poverty and improve quality of life.
Prioritizes sustainable energy and low-carbon development

Three main pillars:

**Promoting clean energy development:**
Renewable Energy & Energy Efficiency

**Maximizing access to energy** for all especially the rural poor

**Policy reform in energy sector** to support low-carbon development
ADB's ELECTRIFICATION ACTIVITIES

On-grid

• Grid expansion remains as priority investment

• Between 2010 and 2015:
  • Installed 8,895 km of transmission lines
  • Installed or upgraded 71,817 km of distribution lines
  • Connected 2.5 million new households (rural and urban) to electricity
Off-grid: Energy for All

- **Established** in 2008
- **Increase ADB’s investment in energy access (EA) projects** to scale up access to affordable, modern, and clean energy through renewable energy technologies
- **Develop partnerships** with other stakeholders to reach 200mio by 2020 – **Energy for All Partnership**
ADB’s ENERGY ACCESS INVESTMENT (2008-2016)

- **$7.2B** ADB investment in EA
- **110.3M** beneficiaries from ADB’s EA investments
Power Transmission and Distribution Project: USD 50mio loan/ grant

- In line with governments least-cost power sector development plan
- Construction of 110kV transmission network & substations and low-voltage distribution systems in secondary towns
- To increase grid power access to new consumers, mostly the poor
- Complex project design & geographically scattered & limited accessibility
- Delays and cost increase due to security concerns and non-availability of benchmark cost and limited bidders
ON-GRID ELECTRIFICATION: CAMBODIA

Innovative Pro-Poor Financing Schemes:

Output-based aid program to promote access to grid electricity

- Grid extension projects focus on medium voltage sub-transmission/low voltage distribution lines
- Connection costs (utility fees, in-house wiring, etc.) prohibitive for rural HH
ON-GRID ELECTRIFICATION: CAMBODIA

Innovative Pro-Poor Financing Schemes:

Output-based aid program to promote access to grid electricity

• OBA program partially subsidizes cost
• Beneficiaries are 10,000 poor and vulnerable HHs
• Identification of beneficiaries through Poor HH Program (ID) Poor led by Ministry of Planning
ON-GRID ELECTRIFICATION: PHILIPPINES

Innovative Business Model - Community-Based (CB) Net Metering Scheme

CB Micro Hydro Power Project (MHPP) for Livelihood Development

- 2 MHPPs with 25kW and 30kW in Mindanao
- Excess electricity sold to electric cooperative – Net metering
- Establishment and capacity building of CBOs and locals for MHPP operation and maintenance
CB Micro Hydro Power Project (MHPP) for Livelihood Development

- Women: 50% of CBO members and 26% of MHPP operating staff
- Livelihood enterprises: installation, operation of a multipurpose corn mill
ENERGY ACCESS SITUATION: ASIA-PACIFIC

4.4B
Population in Asia

2B
NO ACCESS to clean cooking

426M
NO ACCESS to electricity
Increasing investment in EA through:

- **Knowledge Management**
- **Capacity Building**
- **Project Development**
  - Piloting/testing of business models
  - Structuring of pilot transactions
- **Investment Facilitation**

**PROJECT DEVELOPMENT FACILITY:**

- Incubate energy access business models from start-up to sustainability &
- Help to refine start-ups into bankable investment opportunities
Piloting Innovative Business Models

Solar Mini-Grids in Rural Communities

- **Strong business model:**
  - Private Sector
  - Community
  - Local bank

- **Strong partnership:** Alternative Energy Promotion Centre (AEPC)

- **Clean Energy:** 35kW solar power to 83 households, 25 businesses with extension to power telecom towers
Piloting Innovative Business Models

Solar Mini-Grids in Rural Communities

- **Aggregation:** 3 dispersed, remote villages combined into one larger project for viability
- **Sustainability:** Locals trained for operations & maintenance in case of power supply emergencies
- **Innovative Technologies:** Pre-paid metering/mobile payment for regular payment collection and data collection
Pakistan: Access to Clean Energy Investment Program: $325M loan for Khyber Pakhtunkhwa Province (KPP) and Punjab approved

- RE power plants including 1,000 MHPPs in off-grid KPP
- Will provide and install rooftop solar plants for 23,000 schools and over 2,500 healthcare facilities in Punjab
Simpa Networks: pay-as-you-go business model using SMS credits in solar home systems

ADB’s Role
• 2012: $2.0M equity investment
• 2015: $6M ADB CTF debt financing

Key Features
• Recurring energy expenditure is transformed into an asset purchase
• Positive impacts on health, education and communications
BRIDGING THE ENERGY ACCESS GAP

- **$49B** needed annually to meet universal EA target by 2030
- **$9B current** annually spending

FINANCING GAP: USD 40billion

NEED FOR MORE PRIVATE SECTOR INVESTMENT

Source: SE4All Advisory Board’s Finance Committee Report 2015