INCLUSIVE COMMUNITY ENERGY RESILIENCE IN BANGLADESH

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Outline

- Introduction
- ADB Energy Sector Operations
- Innovative projects
- Financing
- Final Remarks

Energy Sector in Asia: Directions

- Overall energy consumption shifting away from OECD countries to Asia dominated by PRC, India and Southeast Asia
  - Increasing emissions

- Yet, a large number in Asia
  - remain without access to electricity and modern fuels

Energy Sector in Asia: Access

- Without access to electricity
  - Estimated over 400 million in Asia
  - 300 million in South Asia
  - Many more with lower quality of supply
- Overall energy poverty remains high
  - Rural areas and marginalized communities
  - Affects mostly women and children

Energy and Climate Change

- Paris Agreement
  - Almost all ADB countries with operations committed
  - Expand renewable energy and energy efficiency programs
- Opportunity to leapfrog
  - into a low-carbon economy
  - new and high-level technologies

ADB Operations …

- Deployment of new and advanced technologies
  - help achieve energy access and climate mitigation finance targets
- Energy for All by 2030
- Climate financing $80 billion by 2030 and 75% of projects addressing climate change

ADB Energy Sector Projects

- To be aligned with Nationally Determined Contributions
- contribute to achieve SDG 7
  - universal energy for all by 2030
- contribute to climate financing

Innovative Projects

- Introduce advanced low emission and emission reduction technologies in major polluting sources
  - industries, transport, urban energy and utilities, agriculture waste

- Use of high temperature low sag conductors in transmission lines
  - High power transfer capacity with low adverse social impact

Innovative Projects …

- Mobile technology based solar PV systems for small rural households
- Solar-diesel hybrid grids with storage
- Wind farm with controls to respond to bird movements and facilities to dispatch
- Floating solar PV systems coupled with hydro power plants

Innovative Projects …

- Private sector loan to a company using zinc-air battery technology
  - low-cost, long-duration storage and integrated smart-grid features
- Energy access projects
  - utilizing solar rooftops/ micro/ mini-grid solutions coupled energy storage

Expected technological trends

- Power generation
  - Distributed renewable energy/floating solar PV
  - Energy storage for smoothing energy intermittency
- Transmission and distribution
  - Smart grids/mini-micro grid systems with energy storage for frequency regulation
- End use efficiency and demand-side response
  - Smart meters and Internet of Things in the power sector; energy efficiencies in industry, buildings; energy storage for self consumption (behind the meter)
- Trends in transport and other sectors with huge implications in energy sector
  - Electric Vehicles

Inclusive Development

- Increasing energy access
  - Support for community based systems
  - Electrification along transmission lines/ at generating stations
- Awareness/capacity building
  - Efficient use of energy
  - Scholarship schemes
- Employment opportunities
  - Support for income generation opportunities
  - Encouraging more recruitment

ADB Financing

- ADB accredited to tap Green Climate Fund
  - Central global investment vehicle for climate finance
- Clean Energy Financing Partnership Facility
  - Asian Clean Energy Fund - Gov of Japan
  - Clean Energy Fund - Gov of Australia, Norway, Spain, Sweden and the United Kingdom
  - CEFPF highly effective at leveraging additional financing

ADB Financing …….

- ADB High Level Technology (HLT) Fund
  - To improve project impact and technological capacity of DMCs
- HLT includes
  - smart grids, mass energy storage, energy efficiency, renewable energy,
  - smart cities, waste-to-energy technology, desalination, and remote sensing technology.

ADB Financing …….

- ADB Japan Fund for Joint Credit Mechanism
  - Provides financial incentives for the adoption of advanced low carbon technologies in ADB Projects

Challenges

- Resistance for change
  - Cost of technologies
  - Prefers to got through the same path others followed
  - Perceived risks
- Lack of awareness
  - Technologies
  - Applications in similar environments

Overcoming Challenges

- Capacity and awareness building events
- Pilot projects
  - Solar diesel hybrids in Maldives with Kansai Electric
  - Wind/solar diesel hybrids in Bangladesh, Maldives, Nepal, Pakistan, Sri Lanka
  - Carbon Capture and Storage in China, Indonesia
  - Remote mini-grids in Nepal, Maldives, Philippines, Sri Lanka
  - Urban mini-grids in Sri Lanka
  - Solar streetlighting in Nepal
  - Capacity building support for startups based on innovative technologies

Final remarks

- ADB energy sector investments continue to rise
  - About $6 billion a year
  - Significant level of co-financing with other DPs
- Continues its efforts in introducing new technologies
  - Along with investments in clean energy and energy access improvement
- Provide soft support to create an enabling environment
  - Increase awareness on new and high level technologies
  - Experience sharing
  - Encourage new policies/regulations

Thank You

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