IFC International Finance Corporation World Bank Group

IFC support for Clean Energy in South Asia

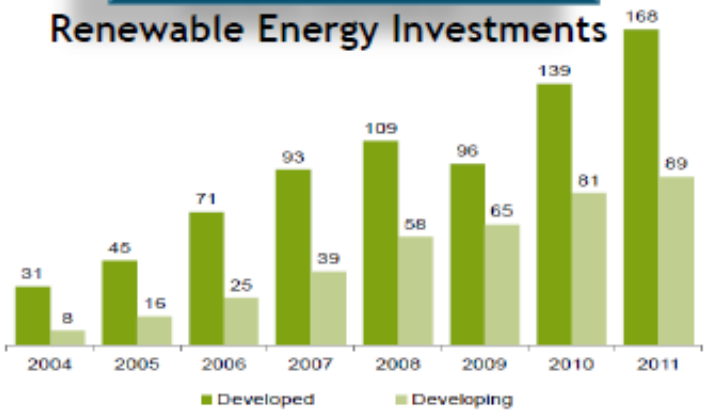
Chandra Govindarajalu

Green Power for Mobile: Bangladesh Working Group

Dhaka
May2013

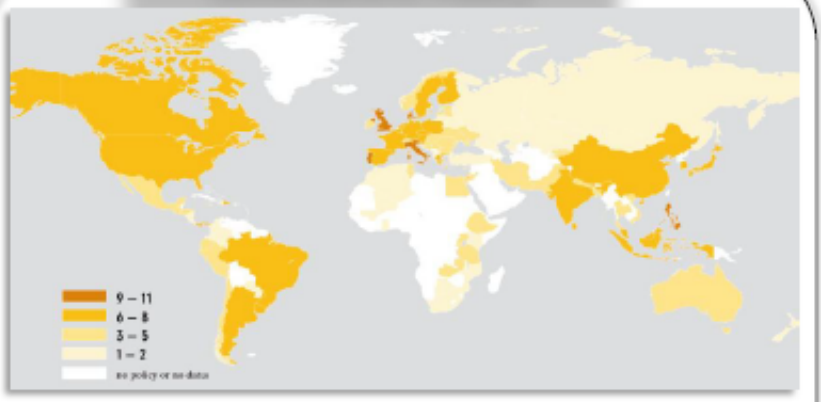
Clean energy presents growth opportunities

Market Demand



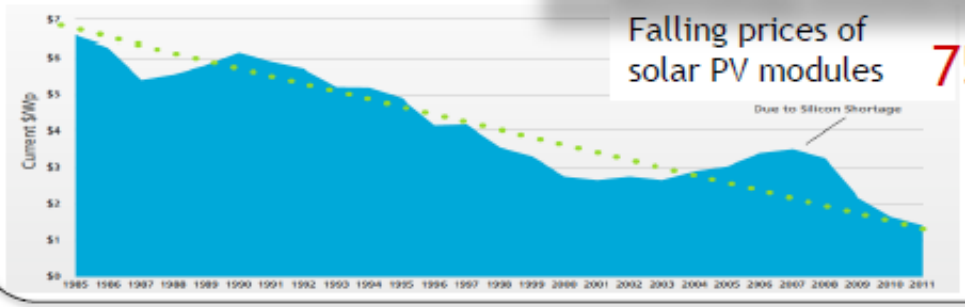
US$89bn 2011 RE investments in developing world[1]

Government Policy



74 countries with RE policies in 2012[2]

Technology Innovation

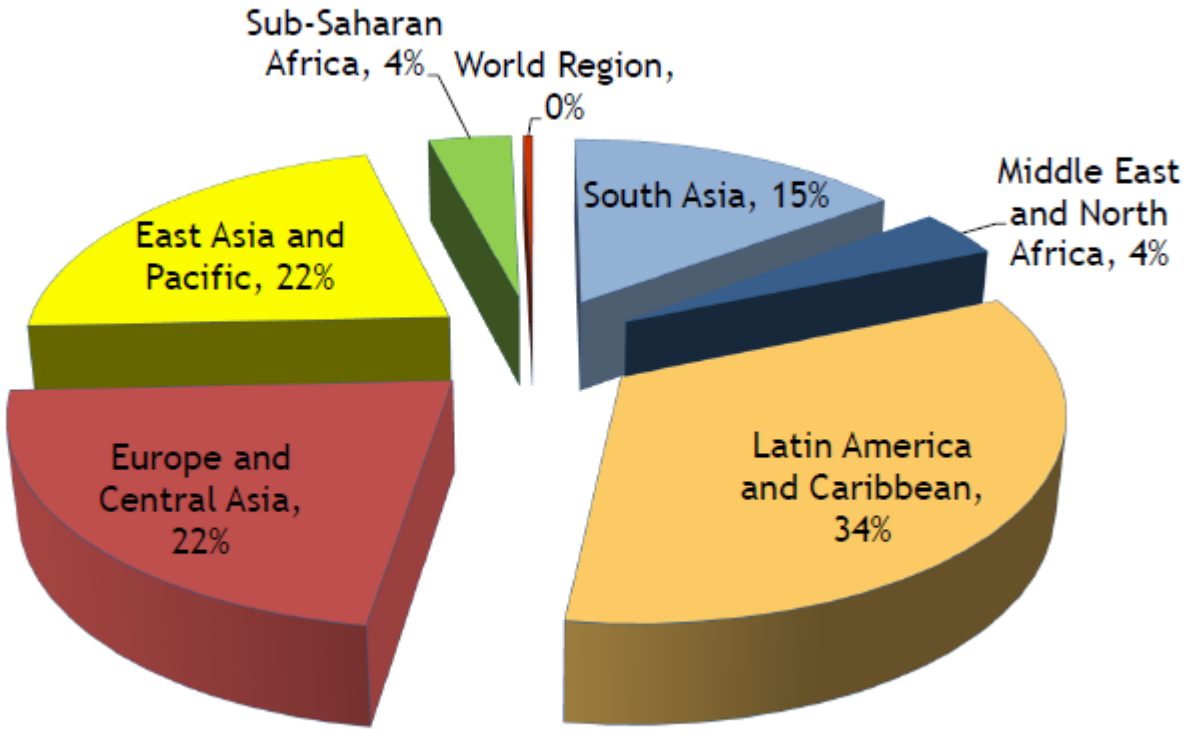


Falling prices of solar PV modules

75% Price drop for PV modules in last 25 years[3]

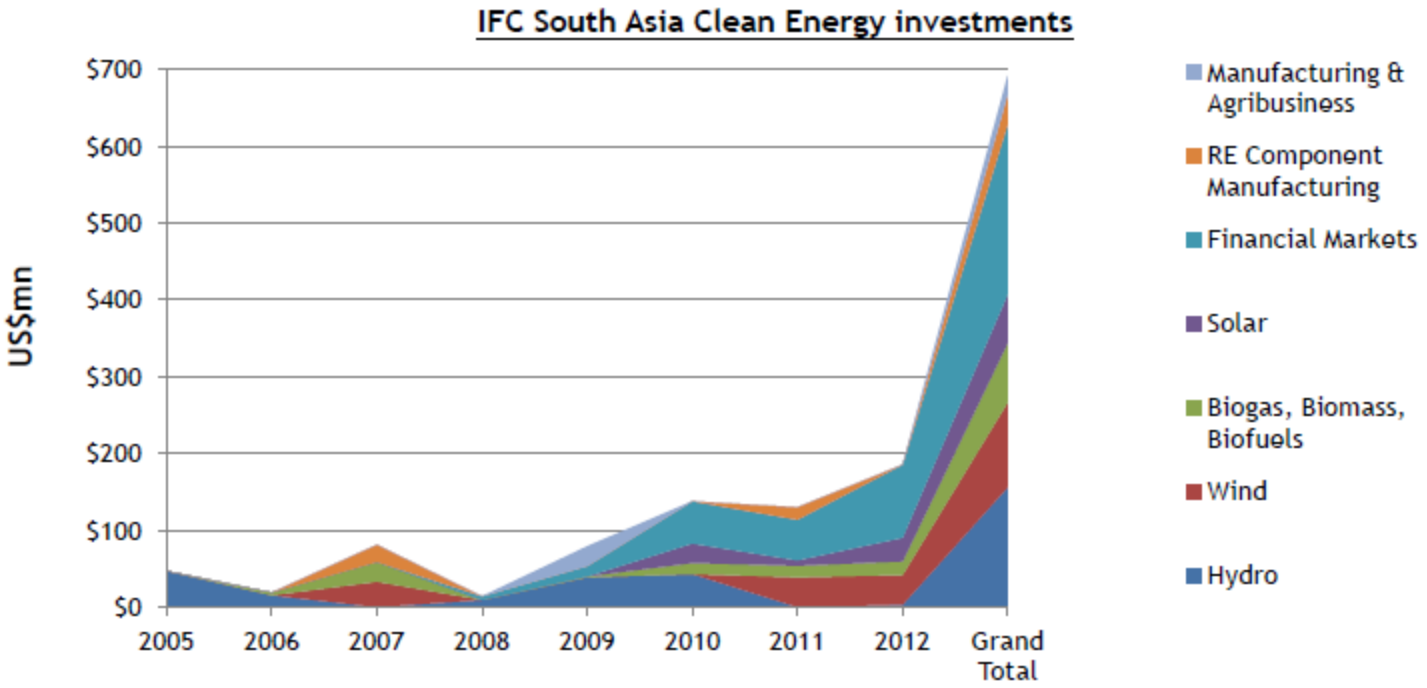
Sources:
1. UNEP: "Global trends in renewable energy investments"
2. REN21 "Renewables Global Status Report 2012"
3. Climate Progress

Clean Energy Investment Portfolio 2005-12 (US$4.6 billion)



South Asia accounts for 15% of IFC's clean energy investment portfolio

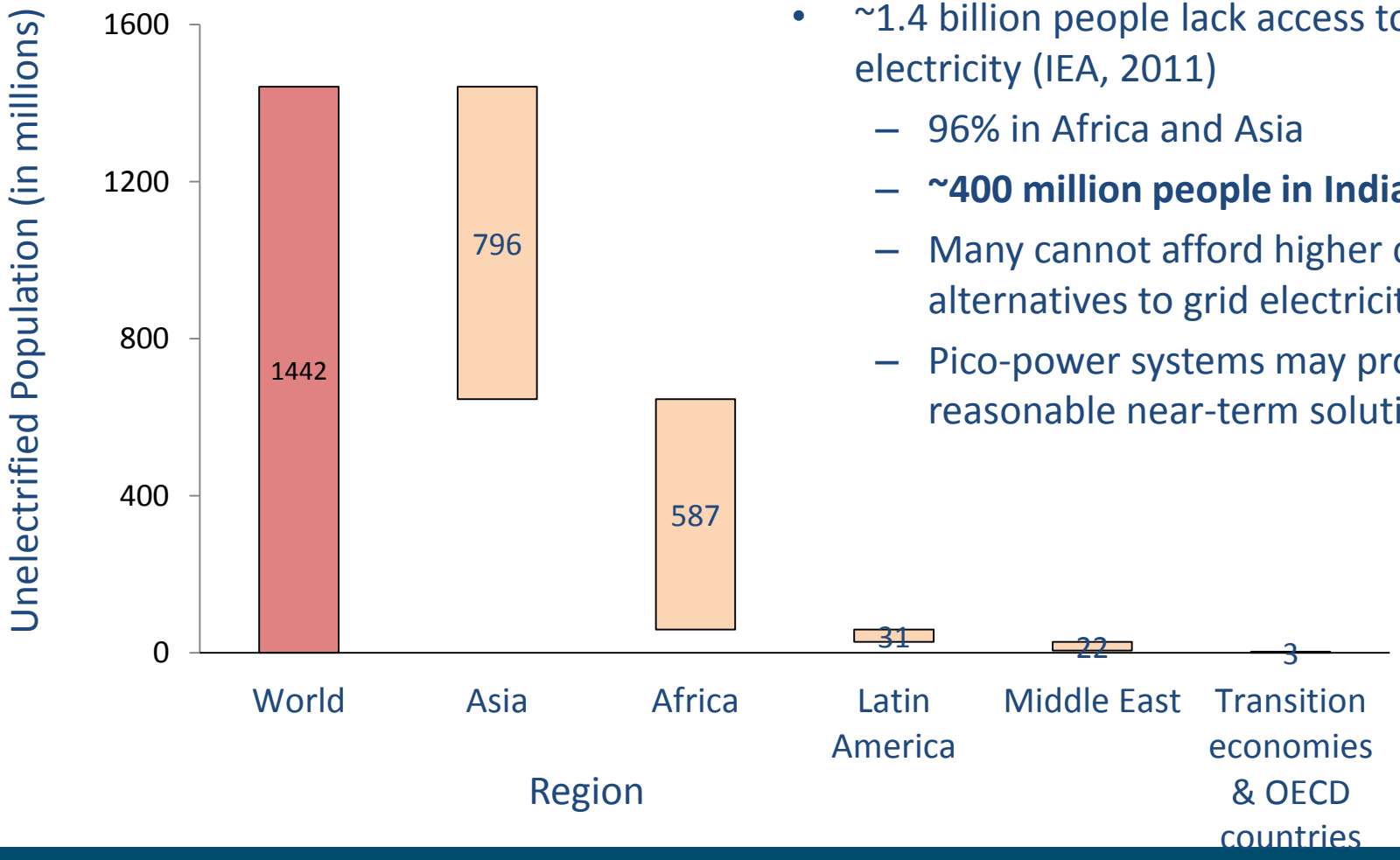
IFC South Asia Clean Energy Investments



IFC's current committed Portfolio in Clean Energy in South Asia is US$600 mm

Large Potential Demand for Modern Off-Grid Lighting

People without Access to Electricity (2009)



- ~1.4 billion people lack access to grid electricity (IEA, 2011)
  - 96% in Africa and Asia
  - **~400 million people in India alone**
  - Many cannot afford higher cost alternatives to grid electricity
  - Pico-power systems may provide a reasonable near-term solution

Range of Financial Products and Services

- **Commercial Finance (Equity, Debt and Mezzanine)**
  - Renewable energy generation and supply chains
  - Resource efficiency (Energy, Waste, Water)
  - Credit lines and guarantees for Financial Institutions to on-lend to SMEs
  - Climate Change Private Equity Funds
  - Cleantech Early Stage Equity investments
- **Blended Concessional Finance**
  - Concessional funds for investment and advisory services
- **Advisory Services**
- **Convening industry players for research / standard setting**

IFC offers a wide range of financial products and services

Cleantech Early Stage Investments

IFC's Clean Technologies Investment Group provides venture/growth capital to cleantech companies with the potential to lead in technology and business model innovation, and produce high development impact in emerging markets.

17 investments, totaling US$170 million since August 2010
Investment focus sectors include: clean energy, energy efficiency, water, agri-tech, recycling, storage, green building materials, micro-grid, and waste-to-energy.

- Recent investments include a number of "firsts" such as:
  - Azure Power, India's first private solar IPP;
  - Applied Solar Technologies, India's first green telecom power provider;
  - Husk Power, biomass-based rural electrification;
  - RenewGen, first waste-to-energy project in Sri Lanka;
  - Nereus India Alternative Energy Fund, India's first dedicated renewable-energy fund; and
  - INFUSE Capital, India's first sustainable energy and cleantech-focused incubation and early-stage fund.

10 investments, totaling US$60 million in South Asia

Key IFC Clean EnergyInterventions

Large-scale Power

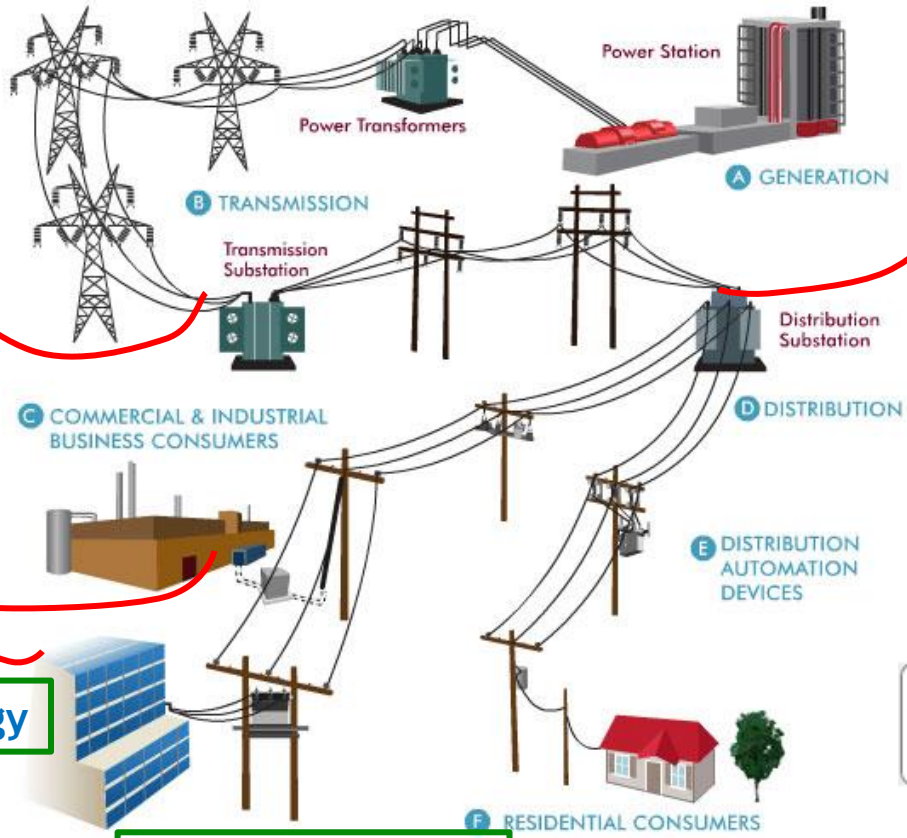
Projects: Azure, Green-Infra, Kalkitech

Energy Efficiency in Industries

Project: CP for CSA

Captive Power/Energy

Projects: Green Telcom, AST, Ecolibrium



Distributed Power

(large/medium scale)

Projects: Gujarat Rooftop, Kalkitech

Mini/Off-Grid Power

Project: Lighting Asia - MINDA

Energy Efficiency in Street Lighting

Project: JV with C3P - PSL in Bhubaneshwar and Jaipur

Water Purification Productive Uses

G RURAL COMMUNITIES

** In addition, there could be non-power interventions for commercial, industrial consumers as well as rural communities*

Existing Portfolio – Clean Energy Team South Asia

Projects

Green Power Telecom India

- Pilot/Demonstration projects - RE/Hybrid options to power Base Telecom Stations; Technical Assistance to assess and pilot viable business models; Agreement with GSM Association as implementing partner

Lighting Asia-India Program

- Develop off-grid renewable energy market (solar appliances & mini-grids) ; Address barriers, e.g. pricing, quality, consumer awareness, access to finance, regulatory

Gujarat Rooftop Solar Project (5 cities)

- Assist Government of Gujarat in introducing PPP in solar rooftop based power generation in Gujarat through an innovative business model for replication and scale up







New Business – Clean Energy Team South Asia

Projects

Lighting Asia: Bangladesh

- Support business models for off-grid clean energy appliances and renewable energy mini-grids (scalable/replicable). Umbrella PDS-ER under which child projects are being created (Lighting India and Lighting Bangladesh)

Waste to Energy: Bangladesh

- Improve access to clean energy from biomass (poultry and dairy) by overcoming technological and financial barriers

Rooftop Solar Extension (Indian States)

- Replicate Gujarat Solar rooftop program but also expand it to focus on individual rooftop owners







Thank You !

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