

Africa Renewable Energy and Access Program (AFREA)

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ESMAP Knowledge Exchange Forum

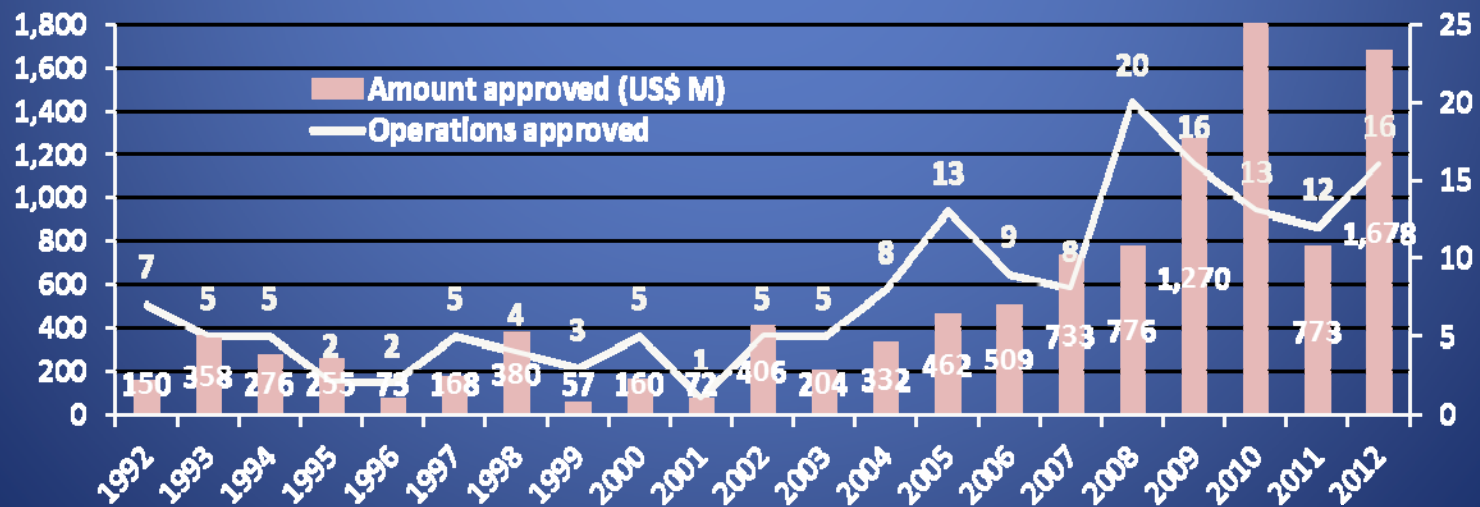
November 2013

Outline

- **World Bank's Response to Africa's Energy Challenges**
- **AFREA Background and Transition from AFREA I to AFREA II**
- **Focus on 3 AFREA I Success Stories and Likely Future Paths**
- **Concluding Thoughts**

World Bank's Response to Africa's Energy Challenges

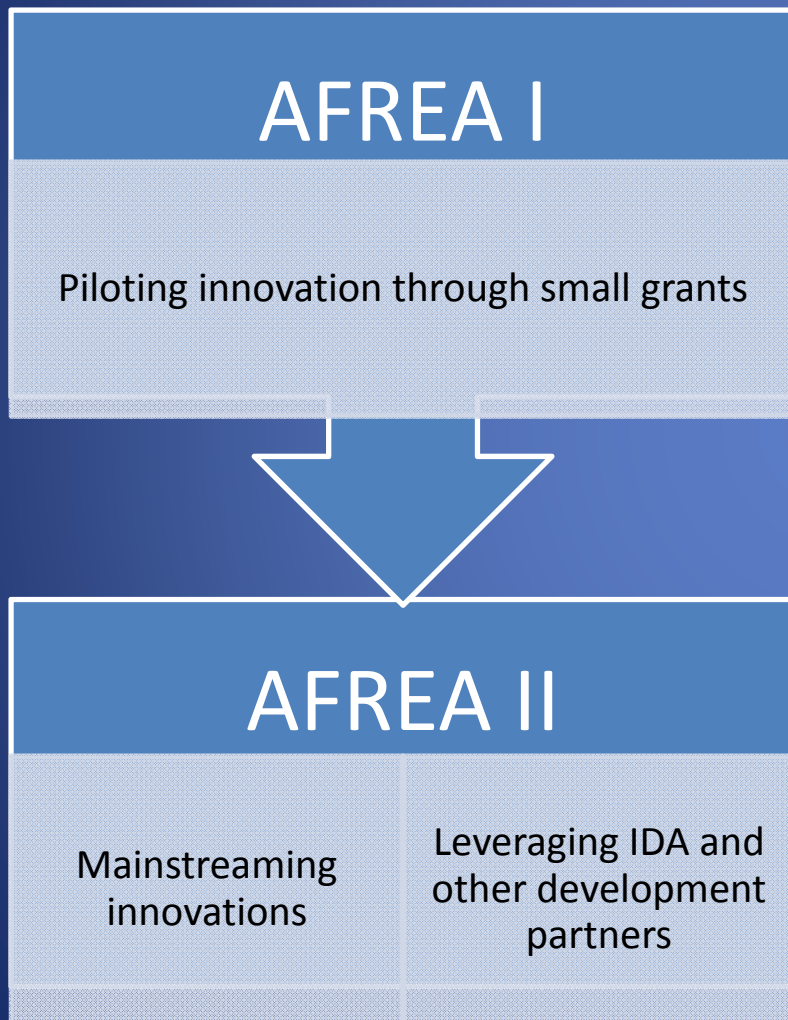
- Africa's Energy Sector Challenges
 - 600 m people without access to electricity
 - 80% of the population cooks with biomass fuels
 - Electricity consumption p.c. = 1% of OECD Average
- WB's Response
 - Increase support for energy sector in Africa (~\$12b portfolio)
 - Expand the portfolio share on Energy Access: Both On-Grid and Off-grid



AFREA background

- AFREA established in 2008 as a special ESMAP program for Africa with a contribution of US\$29 million, financed by the Dutch government
- AFREA has provided additional support to help Bank improve the focus and effectiveness of its renewable energy and energy access work in Africa
- AFREA supports:
 - Strategically Important Regional Activities
 - Analytical Work
 - Support Country-specific Implementation Activities
- Includes cross-cutting foci on
 - Post-conflict and Fragile states
 - Gender and Productive Uses
- Complement, not replace or duplicate, what can be done with IDA

AFREA I to AFREA II: From piloting to mainstreaming



Successes of AFREA 1

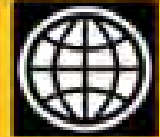
- **Africa Electrification Initiative (AEI)**
 - Network of > 200 participants
 - Workshops, blogs, publications on relevant topics
 - Solar workshop in Sahel
- **Lighting Africa**
 - Creating & transforming market for PV lamps & LEDs
 - Quality Standards & Promotion
- **Biomass Energy Initiative**
 - Modernization of Biomass
 - Stimulated Work on Clean Cooking in Africa (ACCES)
- **Gender and Energy**
 - “Gender informed Operations”
 - Pilot activities in Senegal, Mali, Benin, Kenya, & Tanzania

LIGHTING AFRICA

Catalyzing Markets for Modern Lighting

AN INNOVATION OF

IFC
International
Finance
Corporation
World Bank Group



THE WORLD BANK

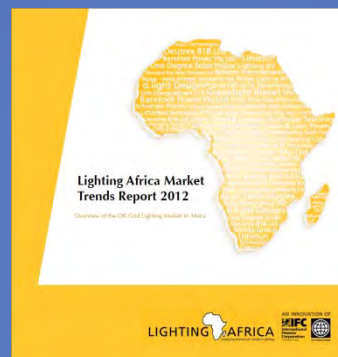


Activities

Quality Assurance



Market Intelligence



Consumer Education



Business Development Support



Access to Finance



Products

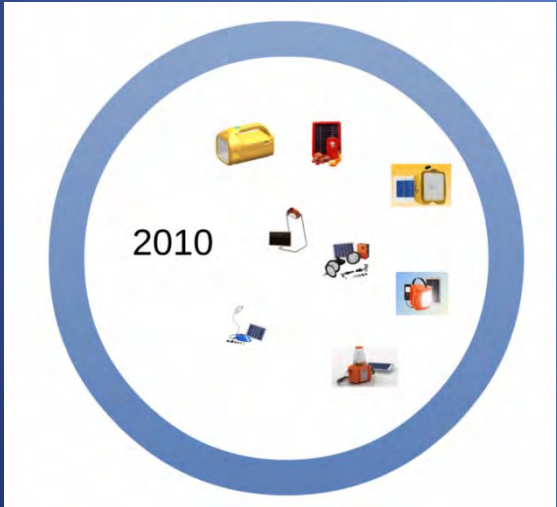
~ \$10



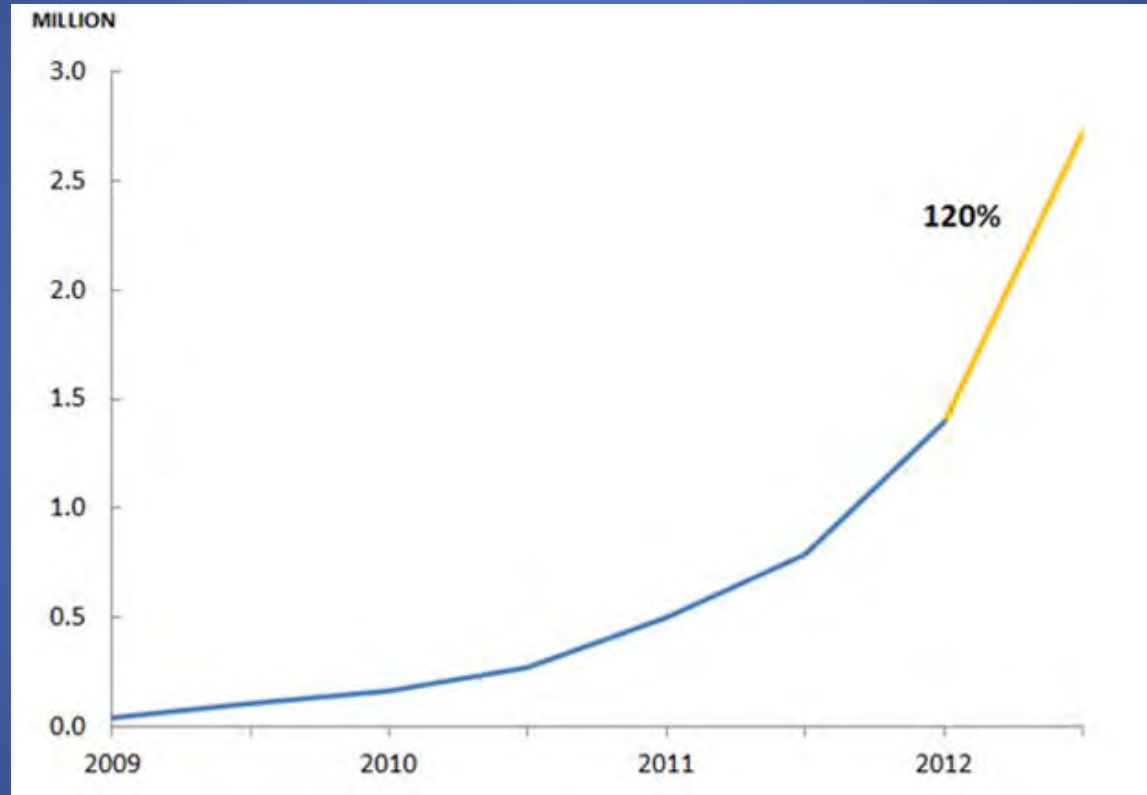
~ \$40



~ \$150



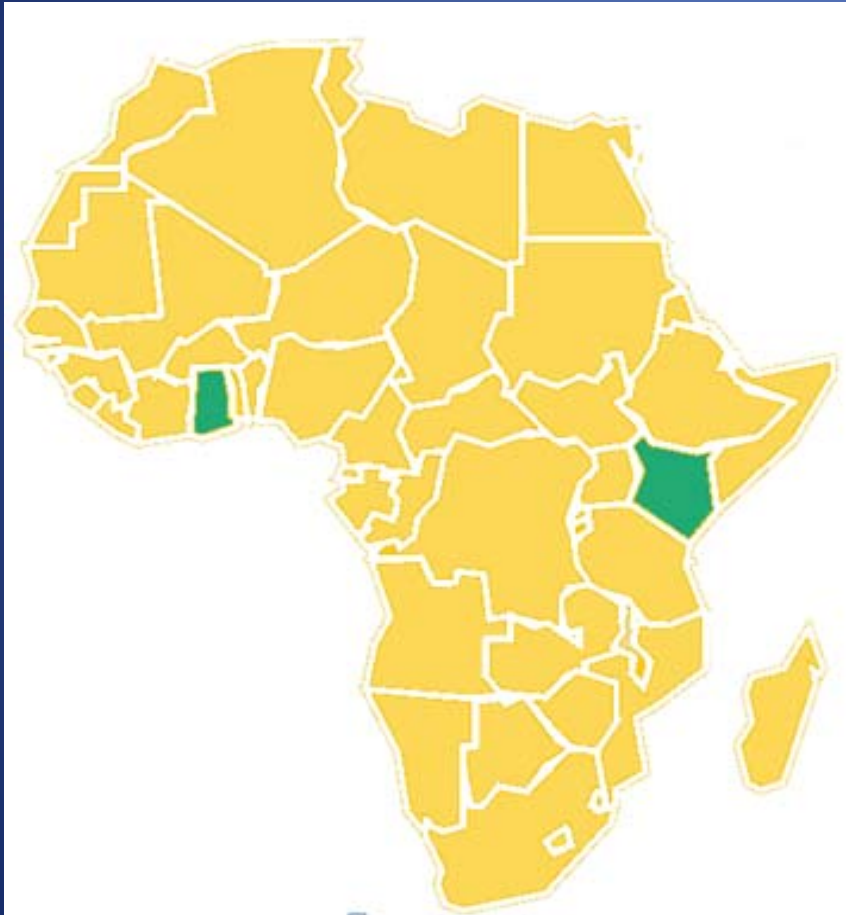
Sales



Market penetration ~ 3%

Coverage

2010



2013





Africa Clean Cooking Energy Solutions Initiative



Phase I: ACCES framework and selection of pilot countries

AFREA I Develop an adaptive, flexible, open platform – learn by doing



Quality Assurance

Standards, testing
Technology improvement
User-centered design for stoves..



Consumer Awareness

Awareness raising and education on cleaner fuels and appliances
Demos/marketplaces to promote adoption..



Business Dev't

MSME capacity building & training
Business development support
Technology partnerships..



Access to Finance

Vendor finance & working capital,
Consumer financing
Capacity bldg for financial intermediaries



Policy & Regulation

Sector policy
Regulatory environment
Sustainable fuel supply programs

Knowledge Management

ACCES Roadmap: Phased activity towards regional & national programs

➤ Adaptive, flexible, open platform – learn by doing

➤ Phase I: 2011-2012

➤ Consultations and Sector Landscape Report to inform the broad framework and selection of 2-4 pilot countries

➤ Phase II & III 2012-2014

➤ Testing and quality program completed; pilot programs begun (Senegal)

➤ Phase IV: 2014 –

➤ Regional and national expansion of the initiative

➤ Uganda, DRC, others

Stakeholder **consultations** and **landscape study** to inform design of ACCI platform and selection of pilots

Launch ACCES in 4Q-2013 as a multi-country, multi-year program

Design **country programs** – identify priorities, partners, and implementation mechanisms

Iterate on the ACCES design from lessons learned from the pilots, changes in the sector, etc and **scale the program regionally**

GENDER & ENERGY

Operational Pilots - Africa Renewable Energy Access (AFREA I)

- Country Pilots – Senegal, Mali, Benin; then Kenya, Tanzania and Zambia
- Integration into ongoing initiatives – Africa Clean Cooking Energy Solutions Program (ACCES); Lighting Africa; Africa Electrification Initiative

Knowledge, Research and Training

- Briefing Note and Online Resources developed to support *Integrating Gender into Energy Operations* www.ESMAP.org

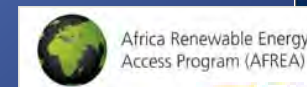
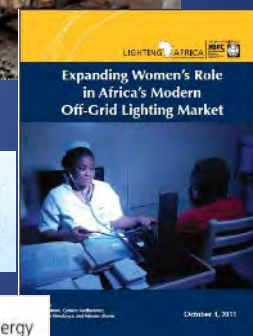
Step 1: Gender Assessment

Step 2: Gender Action Plan

Step 3: Implementation and Monitoring

Step 4: Completion and Evaluation

- Case Studies, Country level workshops and WB/ESMAP internal knowledge events
- Video: Energy to Change Women's Lives in Africa http://www.youtube.com/watch?v=f_On6SaFbY&feature=youtu.be



HIGHLIGHTS OF EMERGING RESULTS

Institutional Development and Client Capacity

Mali and Tanzania: Rural Energy Agencies (REAs) have integrated gender into their organizational structures and business dealings

Kenya: Gender and Energy training conducted by REA for MoE & KPLC

Results on the Ground

Senegal: Women involved as decision makers and local managers in charcoal value chain

Benin: The number of women in income-generating activities tripled, rising from 14 (11.6%) to 105 (37.5%)

Mali: Partnership with UNWomen focusing on 2 village level pilots to strengthen basic social services benefiting women; Centers for local processing of crops (solar/gas driers); Training on improved stoves and multi-functional platforms (MFPs)

Energy Operations and Policies are Gender-informed

Senegal: Gender impact assessment conducted on PROGEDE I contributed to re-design of PROGEDE II;

Mali: Gender activities in HEURA integrated into SREP program;

Liberia and Tanzania: SREP Investment Plans integrate gender;

Benin: National Energy Policy being gender sensitized;

Zambia: GPOBA activity on subsidized connections includes direct outreach to women

Moving Forward

AFREA 2 Gender and Energy Program being developed

- US\$1.4 million Bank Executed TA Program to complement IDA
- New program will focus on scaling-up and mainstreaming existing pilots across energy portfolio
- Goals:
 - To reach 100% gender informed AFTEG operations and
 - To 'learn by doing' in newer topics such as gender in renewable energy, policy reforms and infrastructure

Concluding Remarks

- Africa's energy sector needs remain daunting
- WB has increased its African energy sector engagement
- But the nature of the challenges requires knowledge, experience and financing that extend beyond the WB's reach
- AFREA is playing a major role in helping the WB address the challenges of energy access and renewables in newer and more effective ways

Food for thought....

Discussing the challenges faced and the World Bank's comparative advantages leads to an awareness of its limitations—financing, knowledge, human resources, business models, etc.

- What are the roles that the WB should not seek to play in the fields of access and renewables in Africa?
- How can WB utilize partnerships to more effectively and efficiently meet the needs of our client countries?

Thank you very much

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ANNEX: List of approved activities for AFREA-2 (June 2013)

Special Regional Initiatives

Title	TTL	Amount
Africa Electrification Initiative (AEI)	Jenny Hasselsten	800,000
Africa Clean Cooking Energy Solutions (ACCES)	Zayra Romo (interim TTL)	1,700,000
Gender and Energy Program	Awa Seck	1,400,000
Lighting Africa Expansion	Dan Murphy	2,500,000
TOTAL		6,400,000

Country Specific Bank-Executed Grants

Title	TTL	Amount
Kenya: Hybrid Mini-Grids Development Support	Mits Motohashi	200,000
Malawi: Energy Efficiency and Addressing Peak Power Deficit	Anders Pedersen	200,000
Nigeria: Access Expansion Program Development	Erik Fernstrom/ Rahul Kitchlu	800,000
South Sudan: Energy Sector Program	Rahul Kitchlu	400,000
Ethiopia: Isolated Mini-Grids	Issa Diaw	150,000
Mali: Support to Energy Services Access Expansion	Fabrice Bertholet	150,000
DRC: Enabling Transformational Rural Electrification	Jose Perez Caceres	400,000
Somalia: Power Sector Development	Raihan Elahi/ Anders Pedersen	200,000
Niger: Electricity Access Expansion	Clemencia Torres	300,000
TOTAL		2,800,000

Regional Bank-Executed Grants

Title	TTL	Amount
Role of Subsidies: Financing Electricity Supply and Providing Affordable Access	Masami Kojima / Chris Trimble	400,000
Electrification programs in Sub-Saharan Africa: Lessons Learned	Dick Hosier	700,000
Roadmap for Energy Access Program-for-Results (PforR)	Manuel Berlengiero	150,000
Creating Synergies between Rural Electrification and Agriculture	Sudeshna Banerjee	400,000
Geothermal Strategy	Raihan Elahi	300,000
Photo-Voltaic (PV) Strategy	Dan Murphy	250,000
Reforming Power Markets in Africa	Elvira Morela / Pedro Antmann	500,000
Review of Hydropower Development in Africa	Jean Michel Devernay/Frederic Louis	200,000
TOTAL		2,900,000

African Energy Expert Team

Title	TTL	Amount
African Energy Expert Team	Bobak Rezaian (interim TTL)	800,000