The Challenge of Sustainable Energy for All

- 1.4 billion people without electricity
- 2.5 billion people rely on solid biomass for cooking and heating = 2 million deaths/year
- Additional $40-50 billion/year required for universal access to energy by 2030.
- Sept. 2011 – UNSG lays out three ambitious, but achievable goals for 2030

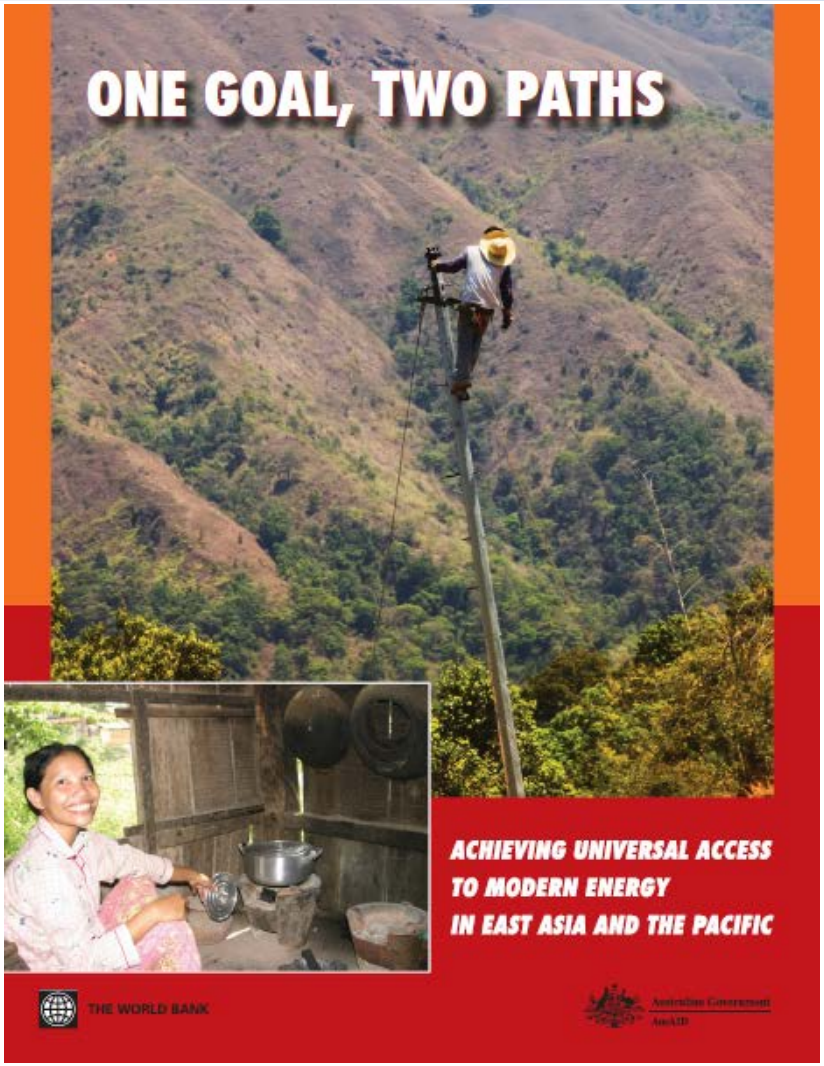
Where are the unconnected?

Country wise people without access (million)			
India	403.7	Myanmar	43.5
Bangladesh	95.7	Kenya	33.4
Indonesia	81.6	Uganda	29.8
Nigeria	76.4	Sudan (undivided)	27.1
Ethiopia	68.7		
Pakistan	68.0	Afghanistan	23.8
DR Congo	58.7	Mozambique	20.2
Tanzania	37.7	Nepal	16.5
Total 1.08 billion			

“One Goal, Two Paths”

Messages from a World Bank Flagship Report

Achieving Universal Access to Modern Energy in the East Asia and Pacific Region



Bali, Indonesia

October 19, 2011

Speaker**: Dr. Dejan Ostojic,**
World Bank, Infrastructure Unit
East Asia and Pacific

Australian Government
AusAID

"One Goal, Two Paths" : Key Messages

- **A new spotlight is shone on the 1 billion people without access to clean cooking fuels …** two paths – *electricity* and *cooking fuels* – must be followed simultaneously to reach Universal Access to modern energy.

- **Universal access by 2030 is affordable …** this is verified in the report. Significant financial support to low income countries will still be required.

- **The electricity path is known and mapped …** country by country, with technical, institutional and financial details benefitting from best practices.

- **The cooking fuel path is sketched** … insufficient attention was paid to it in the past, execution lags behind. The focus is to move rapidly from diagnosis to identification of best practice, to large scale implementation.

- **The World Bank commits to focus on those likely to be left behind** … poor and remote people should not have to wait until all others are served to enjoy the health benefits, and improved quality of life derived from modern energy.

Access to Electricity

Many EAP countries have achieved substantial progress over the last decade.

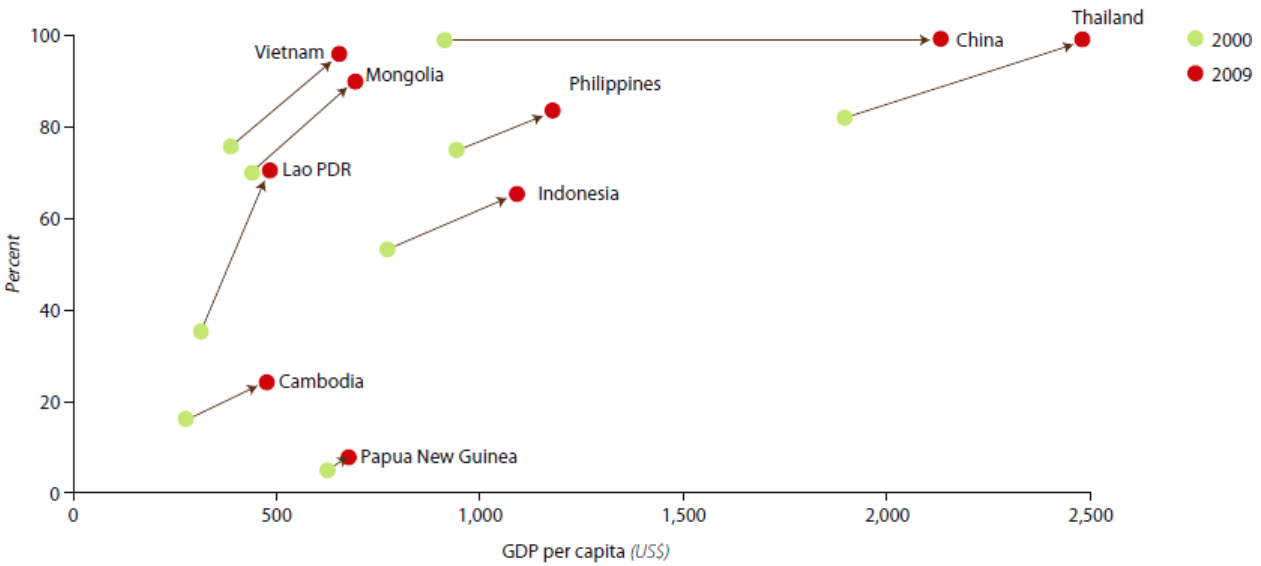
Universal access to electricity by 2030 is within reach of EAP countries
… but low access countries have a steep path to universal access.

Table 1.1 Electricity Access in EAP Region, 2009

Country	Electricity access 2009 (%)	Population without electricity 2009 (mil)
Indonesia	65	81.4
Myanmar	13	43.9
Philippines	84	15.0
China	99	8.0
Cambodia	24	11.4
PNG	7	6.3
Vietnam	96	3.6
Lao PDR	70	1.9
Timor-Leste	22	0.9
Thailand	99	0.7
Mongolia	90	0.3

Sources: IEA 2010; authors' estimates.

Figure 1.5 Growth in Electricity Access versus GDP per Capita in EAP, 2000–09



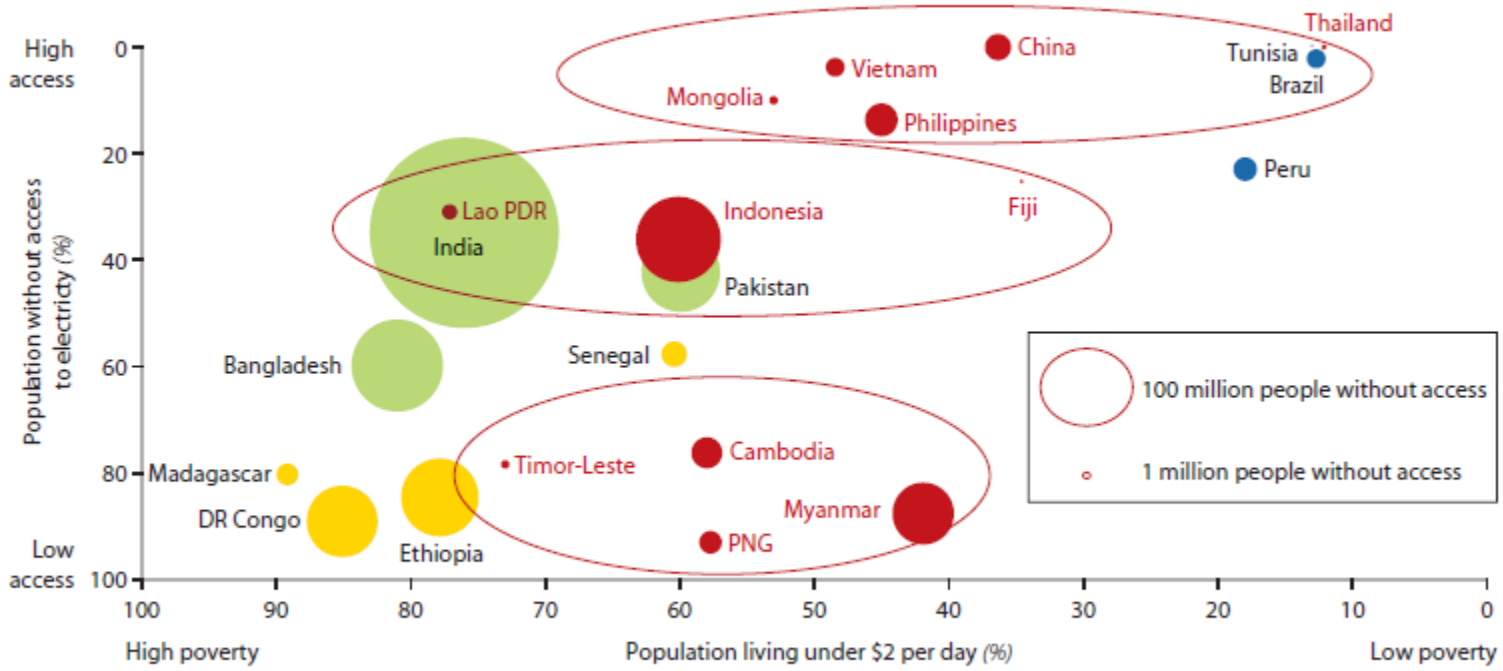
Sources: IEA 2010; World Bank 2010e; authors' calculations.

Access to Electricity

Three countries categories of electricity access: low, medium and high.

Access rates are not always correlated to poverty levels, e.g. Lao PDR.

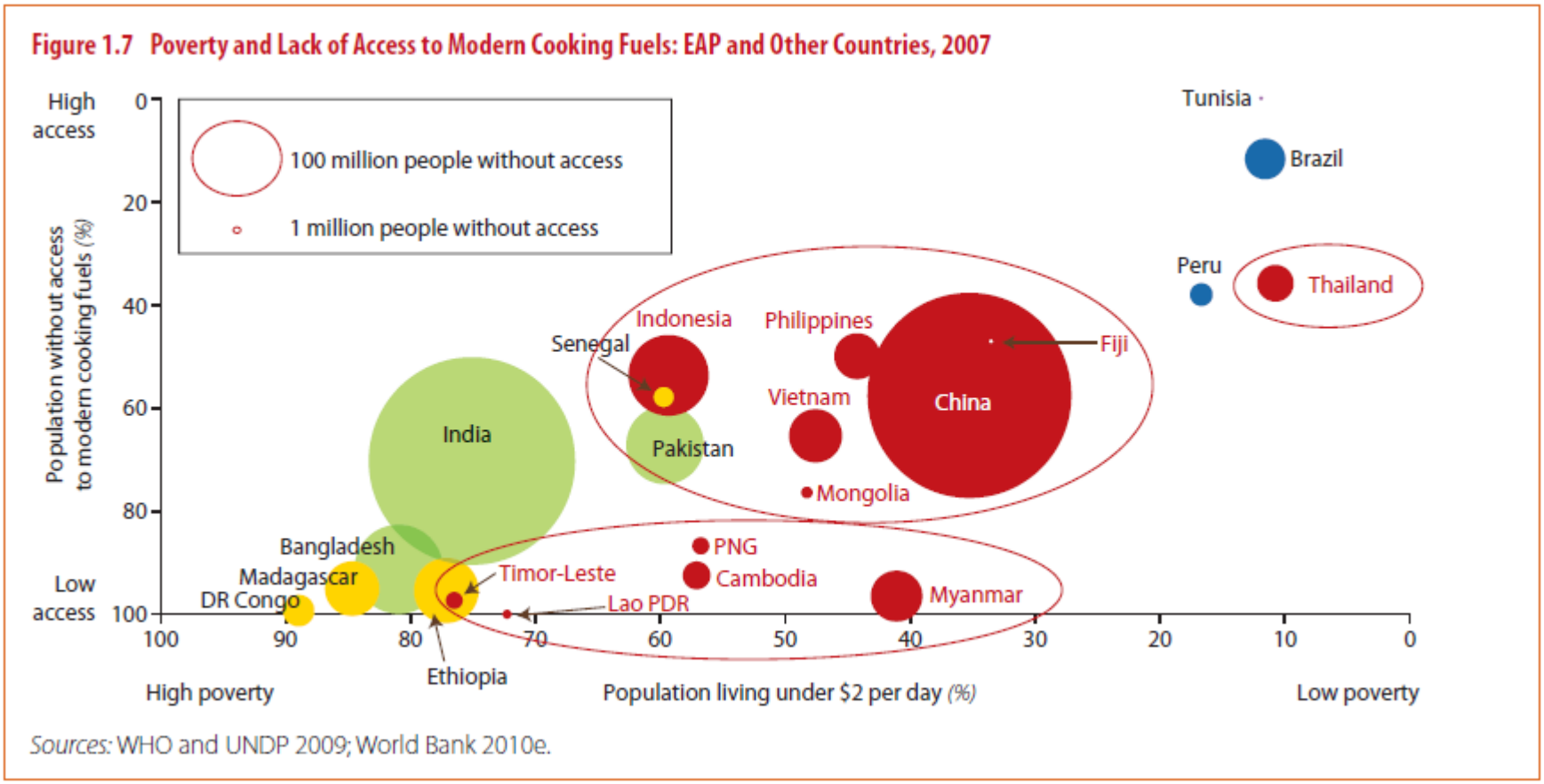
Figure 1.4 Poverty and Lack of Access to Electricity by Country, 2008



Sources: IEA 2010; World Bank 2010e; authors' estimates.

Access to Modern Cooking Fuels

Access to modern cooking fuels remains low, even in countries with high to electricity access rates (China, Thailand).
Populations without access to modern cooking fuel are much higher that for electricity.



The Path Forward in Electricity – A Summary

Level of electricity access *(% HH)*	Grid	Off-Grid
High (>95) *China, Thailand, Vietnam*	Finalize "last-mile" issues	Implement innovating energy solutions for remote HH
Medium (50–95) *Indonesia, Lao PDR, Mongolia, Philippines*	Maintain momentum of effective programs; jumpstart programs that have stagnated.	Solidify existing efforts and commit to pass necessary reforms to serve remote HH and communities.
Low (<50) *Cambodia, Myanmar, most Pacific Island countries (PICs), and Timor-Leste*	Get started and make a serious commitment to expand national grid for HH benefits.	Develop the institutional and regulatory framework for off–grid solutions

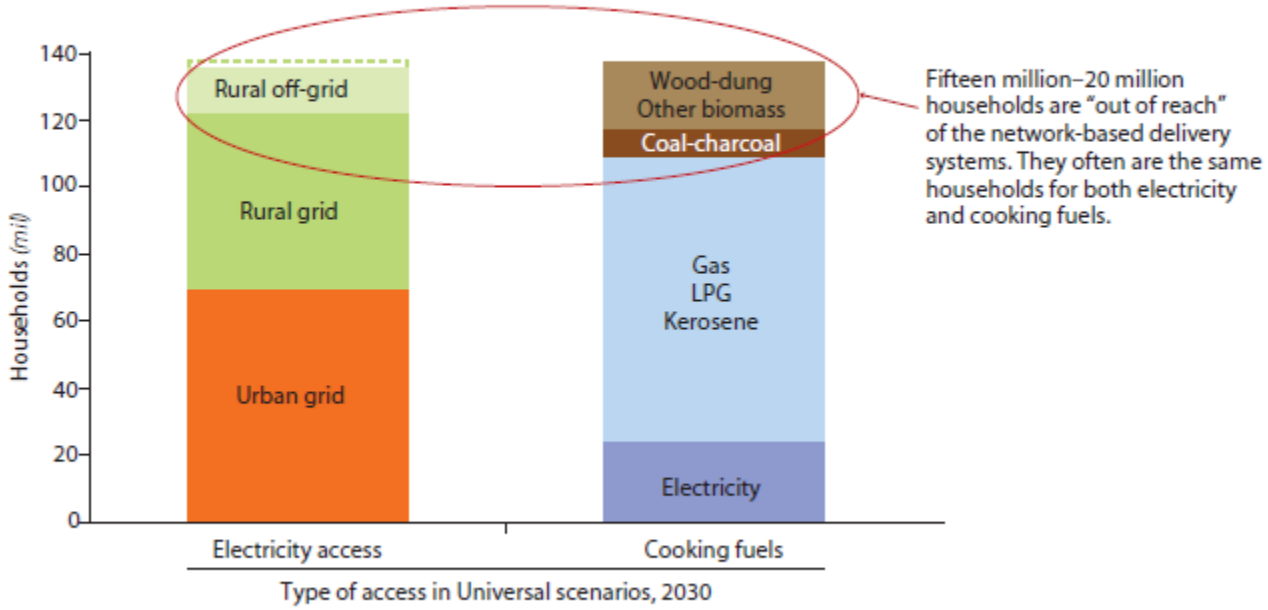
Two "Fronts" to Achieve Universal Access to Modern Energy

The *First Front* is in urban and dense rural areas. These are expected to be covered by network-based solutions and existing utilities and service providers will play key role.

The *Second Front* focuses on people in poor and remote areas outside the reach of network (grid) based delivery solutions.

Both fronts should be pursued *simultaneously* … households in remote areas should not have to wait until all those in easier-to-reach areas have been served.

Figure 6.2 Focusing on the "Second Front": Households beyond Reach of Standard Delivery Mechanisms for Modern Energy Access



Source: Authors.

Way Forward: Promote Clean Cooking Solutions and HES

This will require the cooperation of government, private sector, and NGOs:

- **Institutional focal point in each country** to take charge of this issue across different sectors including energy, environment, health, forestry and gender.

- **Facility for testing and quality control** to provide assurance that the promotion of stoves and household energy systems (HES) actually has development impacts and are clean, efficient, reliable and safe.

- **Incentives for demand-side interventions**. Grants and low-interest financing to encourage the development of businesses or other organizations for selling or retailing stoves and HES.

- **Monitoring and evaluation**. M&E for both improved and advanced stoves and HES is necessary under conditions of actual stove/HES use, and to help link grants or subsidies to program performance (results-based lending, OBA).

- **Raising consumer awareness.** Consumer information campaigns can be created to inform the public of the health and efficiency advantages of the new products. Successful examples (from the sanitation schemes) can be developed with the involvement of NGOs

- **Create a regional forum** for sharing knowledge and experience and facilitate access to clean sources of energy to 'Second Front' households.

Thank You !

Australian Government
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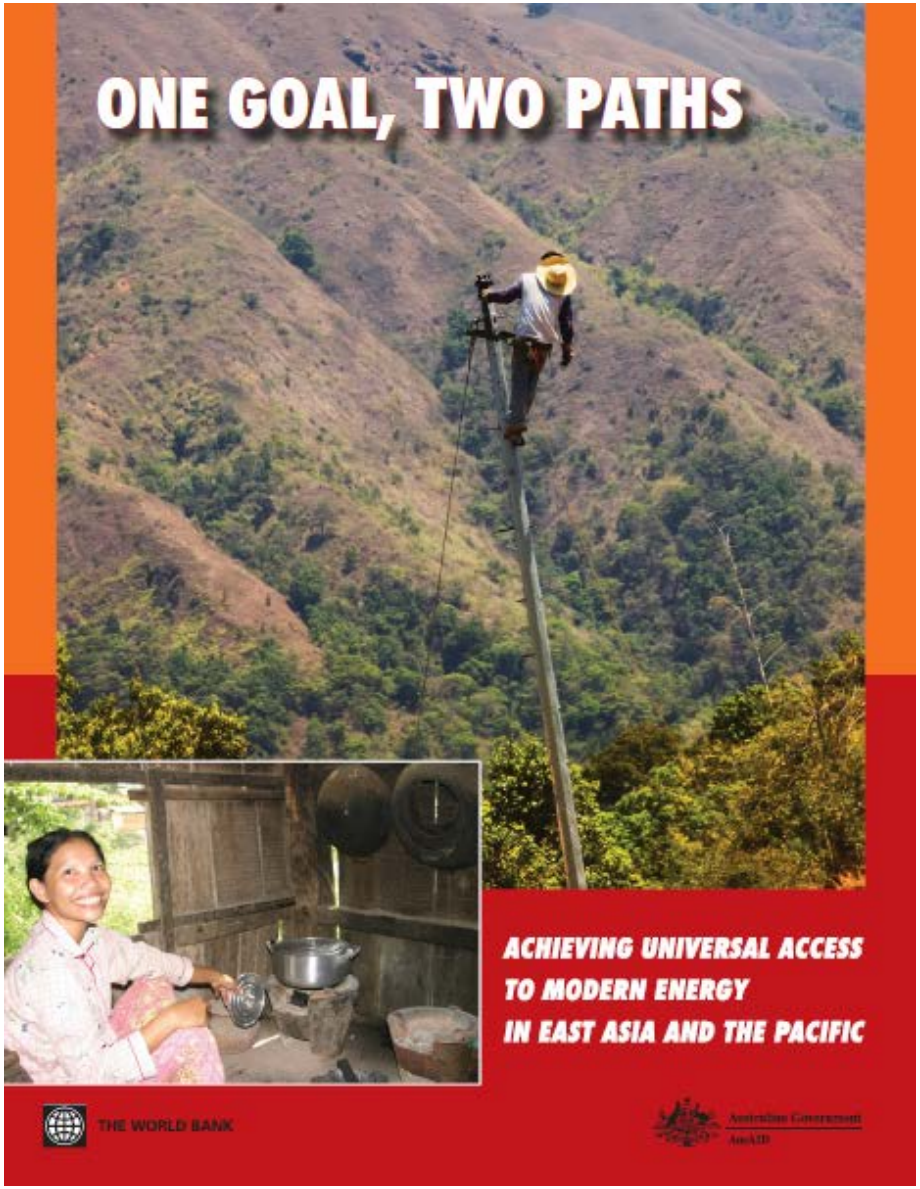


Links to the Report

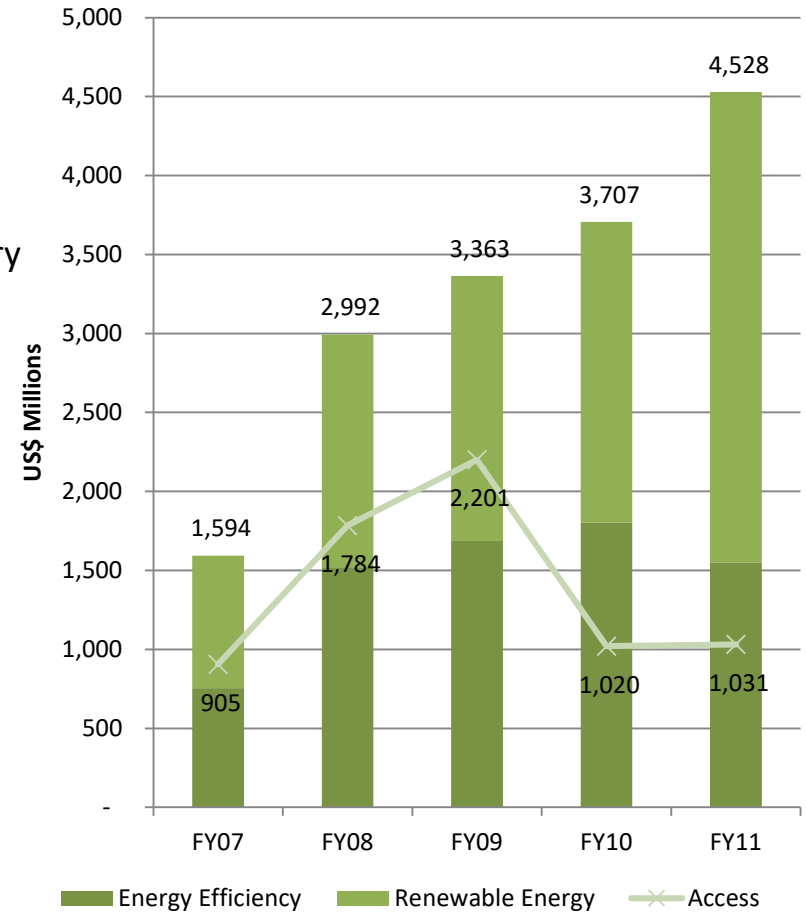
- E-book widget version : *http://issuu.com/world.bank.publications/docs/9780821388372*

- Order page for the print version: *http://publications.worldbank.org/index.php?main_page=product_info&cPath=0&products_id=24197*

- Download pdf version (forthcoming): *http://www.worldbank.org/astae*

World Bank Group Response to Sustainable Energy for All

- WBG's $16.2b of EE/RE, $6.9b of Access financing since FY07:
  - investment projects and policy programs with specific countries;
  - knowledge source, analytical pieces and advisory services; and,
  - catalytic use of long-term concessional resources, incl. climate finance to de-risk projects and leverage private sector capital and other funding
- Kenya 2010 Electricity SIL:
  - $330m WBG leveraging $1.4b other financing.
  - 280MW of geothermal
  - 350,000 people with new access
- Poland 2011 EE/RE DPL:
  - €750 Million single tranche
  - Objectives in conjunction with EU policies
  - EE for 20% reduction in energy cons. by 2020
  - Increase RE share to 15% by 2020



Source: World Bank Energy Anchor database (N), data as of 27 October, 2011.