Policy Recommendations
Scaling up Access to Clean Energy Services for the Poor
East Africa

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Proceedings:
http://www.inforse.org/europe/conf11_COP17.htm
http://www.inforse.org/africa/

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Key Energy Challenges: Limited Access

- Rural poor still rely on traditional biomass (wood-energy) used in an inefficient and unhealthy fashion
  - **Kenya: 77%**
  - **Tanzania: 88%**

- Very limited rural access to cleaner energy options – electricity and (bio)gas

Access to Electricty in Eastern Africa - 2008

	Urban	Rural
Eritrea	86.0	5.0
Ethiopia	80.0	2.0
Kenya	51.3	5.0
Tanzania	39.0	2.0
Uganda	42.5	4.0

Source: IEA, 2011, KPLC 2010, Nation. Master.com, 2011, World Bank 2011

Energy Service Unreliable & Expensive

Electricity costs in East Africa are some of the highest in the world

	Power Interruptions per Month	% of Companies where Electricity is Major Constraint
Tanzania in 2006	12	73
Uganda in 2006	11	64
Kenya in 2007	7	11

Population Growth & Rural Electrification

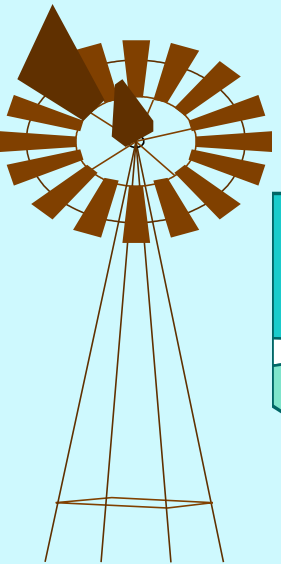
	Annual Population Growth %	Annual Rural Electrification Rate %
Eritrea	3.1	5
Ethiopia	2.2	2
Kenya	2.6	5
Tanzania	2.9	2
Uganda	3.2	4

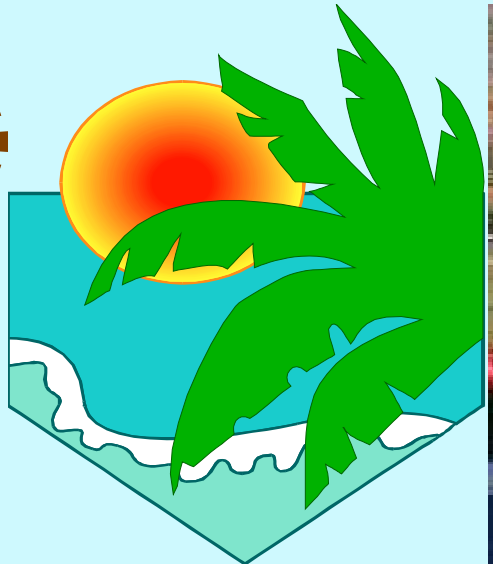
Source: IEA, 2011, World Bank 2011

Limited Use of Renewables

- Huge renewable energy potential
  - **Solar PV, solar water heaters, solar driers, wind-pumps, wind-power, ram-pumps, sustainable biomass, micro/pico hydro**
  - **Estimated 10,000MW small/medium/large-scale geothermal power potential in Kenya could meet all power needs of East Africa**

- Limited use of modern renewables among the rural poor

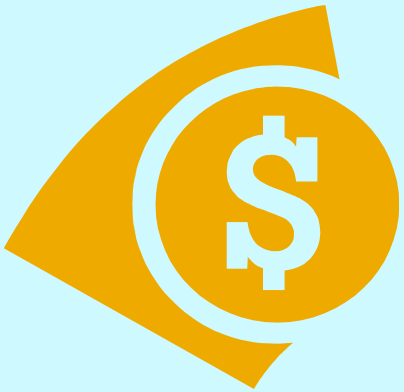




Public Investment in Renewables - Negligible

	% of Fiscal Year Budget	
	2010/11	2009/10
Tanzania	-	2.16
Kenya*	1.67	1.96
Uganda		0.04

Source: *Brown, 2000; Gashie, 2005; GOK, 1994; 1995; 1996; 1997; 1998; 1998; 1999; 2000; 2001; 2002; 2003 ; Karekezi et al, 2008*



Mainly Small-Scale Project Level Success

- East Africa has over **100million people** – mostly rural but few small scale renewables have surpassed **100,000 installations or beneficiaries** in East Africa:
  - Wind-pumps - NO
  - Small scale wind-power installations - NO
  - Ram-pumps - NO
  - Small/micro/pico-hydro - NO
  - Biomass briquetting installations – NO
  - **Solar water heaters - ?**
  - **Solar cookers - ?**
  - **Biogas – Encouraging signs of growth in installations**
  - **Small scale solar PV/rechargeable home systems – YES**
  - **Improved biomass cookstoves – YES**

Small-Scale Project Level Success

- Key success factors for scaling-up renewables such as improved cookstoves:
  - ***Small-scale household-sized renewables are low cost and easy to make & maintain locally***

- Challenge - Scale-up other renewables to break 100,000 mark and move into millions of installations or beneficiaries

Policy Options for Scale-Up

- **Reduce upfront cost** of sustainable energy equipment
  - ✓ ***Subsidies on equipment, reduce import duties, lower taxes or tax rebates, preferential concessionary finance for local manufacturers & distributors of sustainable energy equipment.***

Has contributed to solar home systems success in East Africa

- **Attractive pre-determined feed-in tariffs** for both medium-scale and for smal-scale renewable energy applications

Instrumental in Mauritius cogeneration success story – provides over 50% of national electricity needs

- **Mandate renewable energy targets** in terms of **installations and financing** to reverse & increase public finance allocation

Policy Options for Scale-Up

- **Liberalize establishment of rural mini-grids & removal of monopoly** of national utilities.
  - ***Key factor in Nepal & Sri Lanka micro/pico hydro success***

- Place no limit and **remove/simplify** documentation requirements for **power purchase agreements** of mini-grids of less than 1MW of renewable power.
  - ***Key factor in Nepal & Sri Lanka micro/pico hydro success***

- **Expand mandate of rural electrification authorities** to include support for non-electric options such as wind-pumps, improved cookstoves and solar driers.

THANK YOU VERY MUCH