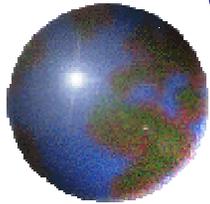




Energy Access in Sub-Saharan Africa – A World Bank Action Plan



***PROGRAMME OF ACTION FOR THE LEAST DEVELOPED
COUNTRIES (2001-2010)***

Geneva, July 18-19, 2006

Africa Energy Unit

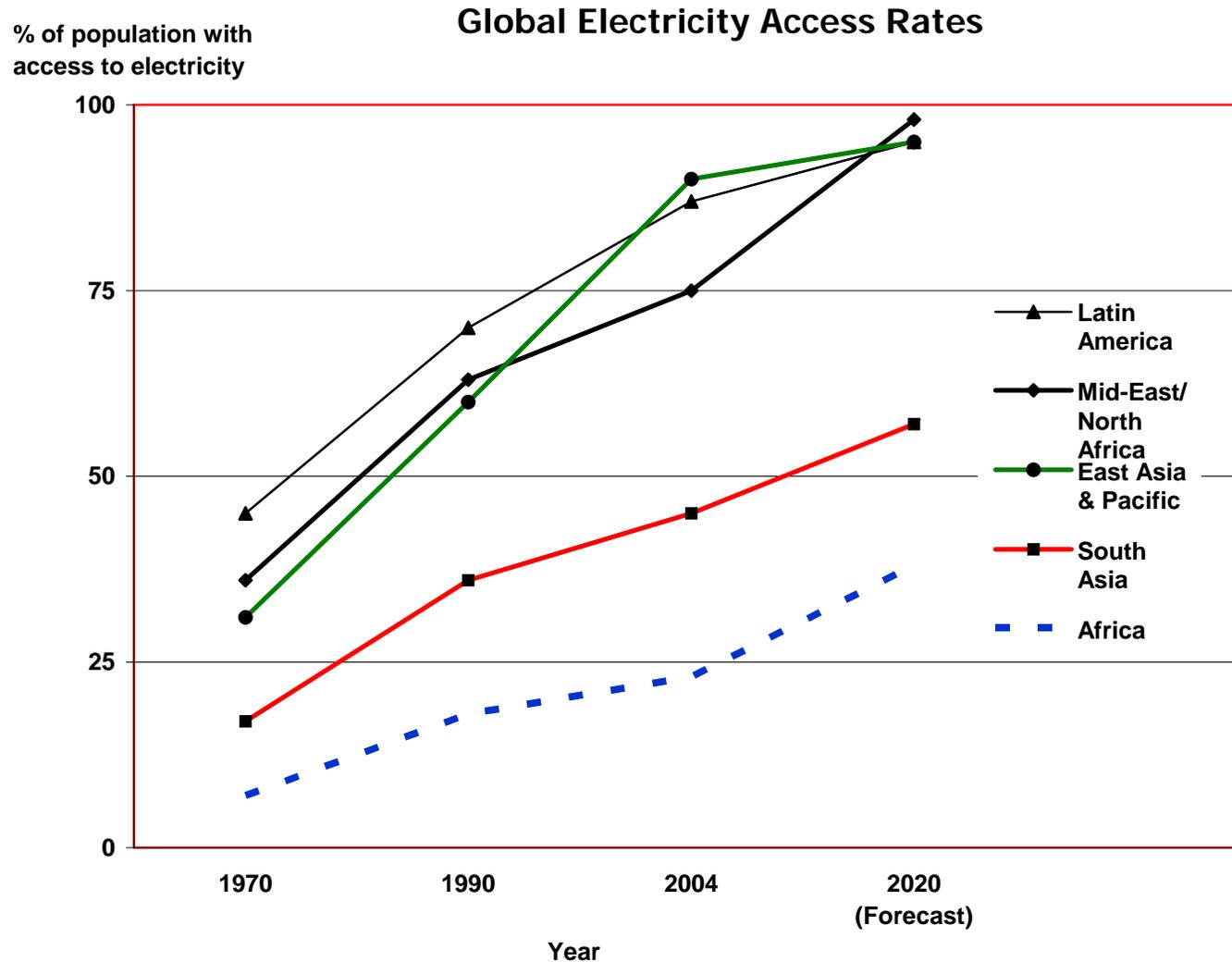
The World Bank

Mac Cosgrove-Davies, Sr. Energy Specialist

Overview

- ✿ Context: Africa Is Lagging Behind
- ✿ Strategic Objective and Country Outcomes
- ✿ The Challenges Ahead: Long and Short-Term
- ✿ Meeting the Challenges: Scaling-Up
- ✿ Towards Action Planning

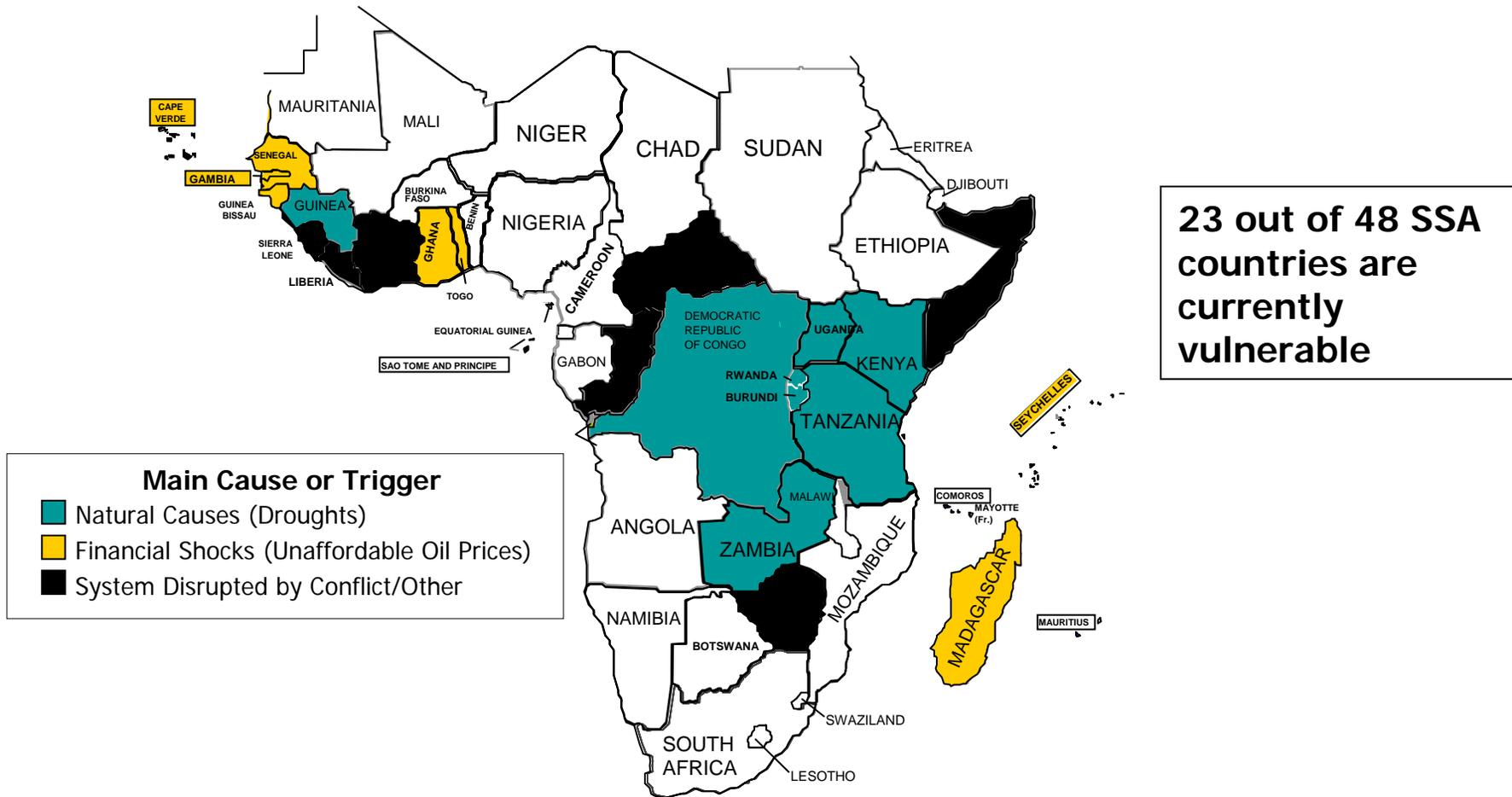
Without Urgent Scaling-Up of Energy Access, Africa Will Continue to Lag



- 500+ million in sub-Saharan Africa lack access to electricity
- Connection rates as low as 5% in rural areas

External Shocks have contributed to deepen Energy Poverty

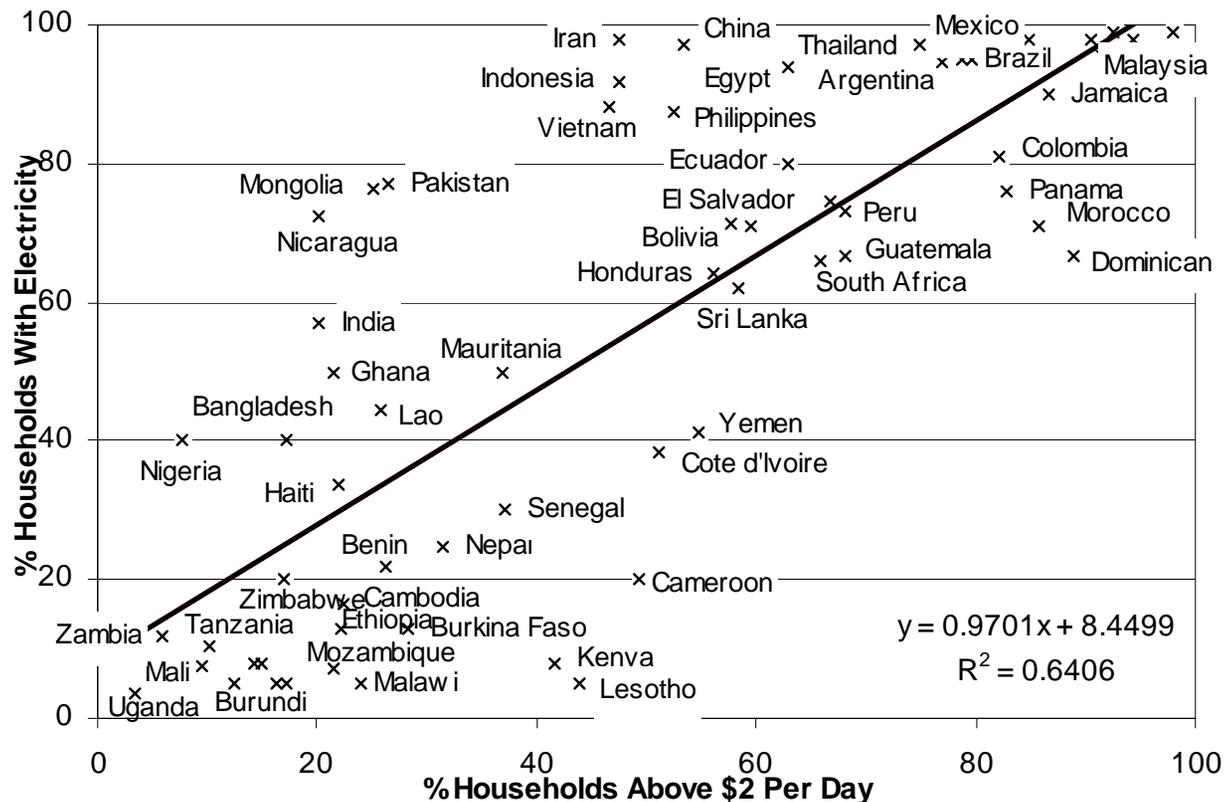
Areas of Ongoing or Imminent Power Shortfalls in SSA



African Access Rates Below International Comparators

- Rates of household electricity access generally mirror income levels, but sub Saharan Africa access levels are well below what would be expected elsewhere.

Figure 2. Poverty Rate & Household Electricity Access



Who is Access For?

- **Households**, who use energy for cooking, lighting, water heating, space heating/cooling, communications, entertainment, etc.;
- **Enterprises**, who use energy for motive power, (e.g., milling and pumping), refrigeration, lighting, etc.;
- **Public facilities/community users**, such as health and educational facilities using energy for various special-purpose equipment as well as end-uses associated with communities including services such as street lighting.

Improving Access to Energy Services Means Overcoming Multiple Challenges (1)

- Weak enabling environment at central government level
 - Energy access strategies lacking (PRSPs e.g.)
 - Limited central funding for sector

- Sub-optimal policy & regulatory frameworks undermine market functioning
 - Inappropriate policy stance leads to access bottlenecks
 - E.g. Power generation and transmission constraints result in wires without electrons
 - Robust & consistent regulatory oversight lacking
 - Minimal private sector operational or capital participation

Improving Access to Energy Services Means Overcoming Multiple Challenges (2)

- Limited management capacity at operational level
 - Utilities lack capability to roll out and operate infrastructure
 - Poor procurement governance

- Utilities in poor financial health
 - Utilities have monopoly position but financially weak, operating in a non-commercial manner
 - E.g. Tariffs fail to cover even O&M costs
 - Subsidies or financing for upgrading assets lacking

- Consumers have limited ability to pay

- Unit costs for network construction and fuel are high

Access to Cooking Fuels Presents Additional Challenges

- Traditional biomass use is widespread
 - 80% of SSA depends on fuel-wood and charcoal for cooking and water heating
- Traditional cooking stoves endanger health
 - Over 95% of households in the poorest countries in SSA cook with biomass on open fires or primitive stoves
 - Smoke from cooking fires is leading cause of acute respiratory disease – a major killer
- Biomass is harvested unsustainably
 - Results in loss of forest cover and river silting

Strategic Objective: the 'Big Picture'

Support Sub-Saharan Africa to scale up "real" access, so as to ensure affordable, reliable and sustainable supplies of energy services, as part of broader efforts to stimulate growth, reduce poverty and promote inclusiveness.

Meeting Africa's Energy Challenges Requires a Radical Scaling-Up of Access

- ✚ By 2015-2020, we need to achieve “stretch” targets:

Electricity for Growth

Increase coverage for households (>35% on average), productive enterprises (100% mostly in urban and peri-urban areas) and rural areas close to the grid

Powering the MDGs

>75% of schools, clinics, community centers & local administration electrified, using grid extensions where least cost and decentralized solutions elsewhere (solar PV, independent grids, small renewables generation)

Meeting Basic Needs

>50% households equipped with at least one modern, affordable light
>75% households use improved cook stove or LPG and fuel-wood supply is sustainable

and Real Access implies increased G&T Capacity...

- Increase generation with a focus on big, cost-effective regional supply projects
 - Hydro, Coal, Gas
- Regional integration to promote energy trade
 - SAPP, WAGP, WAPP
 - Spearheaded by EAC, ECOWAS, SADC and other regional groupings
 - Country push
- Several countries need our support for immediate generation solutions and possibly some “pain relief” for mitigating high energy costs.

...Strategic Approach...

Improved Enabling Environment



- Realistic, costed government strategy (via PRSP)
- Funding commitments

Effective Policy & Regulatory Framework



- Balance between affordability for consumers, suppliers, & governments
- Robust regulation
- Multiple forms of access provision
- Enhanced supplier incentives
- Opportunistic approach to private sector participation

Improved Management Capacity



- Capacity-building for project management & good governance
- Expand use of low-cost approaches & technologies
- Develop energy SMEs

Financially Healthy Utilities



- Cost-recovery for O&M costs at minimum
- Effective subsidy transfer mechanisms for grid scale-up

....scaling-up electricity access - network expansion

Fragmented Approach



Comprehensive Actions

Planning is ad-hoc
driven by donor
priorities each with
different targets

Sequential program of grid
expansion that is long term – 15
years or more

Execution is on
Project by Project basis

Financing strategy for longer term
with program approach

Financing is inadequate
& not predictable

'Syndicated' financing needed.
Getting from 23% to 38% access
in 15 years will cost \$3 billion p.a

... Energy for the MDGs and Lighting for Basic Needs

Energy for the MDGs

Retrofit all essential public service institutions e.g. clinics, hospitals, schools, telecenters

Turnkey private sector or NGO implementation

Government and donor support

Campaign Approach

Sustainable Forestry Program

Lighting for Basic Needs

Minimum lighting package for households and SMEs not connected to the network

Private sector business model features:

- product design
- volume manufacturing for economies of scale
- use of existing consumer product distribution networks and channels

Consumer micro-credit mechanisms for purchase of lighting products – up to \$75 per household

....Next Steps in Access Action Plan

Country Readiness Status for access roll out	Actions
"Ready to go – green light" countries	Preparation of multi-year investment program for access roll out supported by pooled donor financing. Implementation will require <ul style="list-style-type: none"> ⊕ analytical work to identify investments, least cost options, financing options ⊕ capacity building for procurement and supervision of turn-key contracts
"Nearly there – yellow light" countries	Remove critical policy barriers prior to moving to "green light" status for full access scale-up roll-out. <ul style="list-style-type: none"> ⊕ e.g. improving cost recovery to O&M break even level
"More work needed - red light" countries	Improve up-stream governance and macro-economic enablers, in conjunction with sector policy issues to move up the readiness ladder.

At Country Level, the Strategic Objective Translates into a Range of Outcomes

- Enhanced growth, productivity and competitiveness
- Progress towards the MDGs through expanded scope and quality of social services
- Meeting basic consumer needs for electricity
- Reduced vulnerability to shocks - greater security of energy supply including basic household fuels
- Decreased fiscal impact of energy sector
- Reduced environmental impact