



## POWER AFRICA

Increase access to electricity in sub-Saharan Africa.

• 60 million new household and business connections.

• 30,000 Megawatts of additional capacity.

Impact = Reduce <u>energy</u> <u>poverty</u>, increase <u>economic</u> <u>opportunity and growth</u>, and create <u>energy security</u>.





"Unlocking the substantial wind, solar, hydropower, natural gas, biomass, and geothermal resources in sub-Saharan Africa."

Transaction Focused On-grid + mini-grid + off-grid.

• Transaction advisors working alongside African Governments across the continent.





THE POWEROF PARTNERSHIPS

"Putting the **we** back into Power."

**\$30 + billion** in commitments from **100 +** Private Sector Partners.

**\$9 billion** from three partners: the World Bank (\$5b), African Development Bank (\$3b), Government of Sweden (\$1b).





## Beyond the Grid Initiative

- 40+Partners, \$1billion committed in investment into off-grid and small-scale solutions;
- Transactions & Reforms Accelerate transactions & drive systemic regulatory reforms;
- Mobilize Finance
   Facilitate future investment
   specifically relating to off-grid
   and small-scale energy
   solutions.

### POWER AFRICA TOOLBOX

Tools & Resources to Unlock the Power of Sub-Saharan Africa



The Power Africa Toolbox provides a quick yet comprehensive view of the tools & resources Power Africa uses to drive deals & facilitate investment. These tools fall into five major categories:



#### Transaction Assistance

- Early-stage support for innovative energy solutions, resource evaluations, feasibility and grid impact studies, social and environmental impact studies, project appraisal and costing, engineering designs, public private partnerships, and other project preparation activities
- · Late-stage expert technical, regulatory, and financial assistance to host country governments to advance power transactions to financial close and beyond

#### Who is it for?

Project developers, investors, host-country governments, entrepreneurs, African-owned and operated enterprises



#### Finance

· Equity, mezzanine financing, senior and sub-senior loans, guarantees, export credits, grants, and insurance programs

#### Who is it for?

Project developers, financing institutions, entrepreneurs, host-country governments, U.S. lenders and exporters



#### Policy/Regulatory Design & Reform

 Technical assistance to improve the enabling environment for private sector investment in the power sector through policy, legal, regulatory and utility reforms, improved procurement practices and power sector planning, and the adoption of financial incentives and risk mitigation schemes

#### Who is it for?

Host-country governments, utilities, regulators, and other stakeholders



#### Capacity Building

- . Technical assistance to support institutional strengthening, technical and regulatory skill development, and project development and management activities
- . Trade missions to the U.S. and to sub-Saharan Africa

#### Who is it for?

Host country governments, utilities, energy regulators, public procurement agencies



#### Legal Assistance

Legal assistance to strengthen host country government expertise and negotiating capacity in structuring, financing and closing power transactions

#### Who is it for?

Host-country governments and African utilities

www.usaid.gov/powerafrica/toolbox

# Reliable access to electricity

# better health car

AMREF /11/THT.



- **Remember:** More than 600 million people in sub-Saharan Africa lack access to electricity, which means limited access to quality health care.
- Thousands of health facilities across Africa lack even the most basic energy services:
  - Lighting for child delivery and emergency night-time care
  - Refrigeration of vaccines
  - Electricity for simple medical and diagnostic equipment

Despite billions spent on vertical & horizontal health programs...



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#### Technology

- Batteries and Battery Management
- Cold Chain and Refrigeration
- · Design and Installation
- Efficient Lighting and LEDs
- Energy Efficiency
- Generators
- Grid Extension
- Inverters
- Photovoltaic (PV) Systems
- Remote Performance Monitoring Systems
- Solar Disinfection
- Uninterruptible Power Supplies

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- Water Pumping
- Wind Turbines

#### Management

- Best Practices and Lessons Learned
- · Blood Banks and Blood Safety
- Energy Management
- Institutional Support
- Load Analysis and Example Calculations
- Maintenance Logs and Checklists
- Medical Waste Management
- Standards and Technical Specifications
- Theft Prevention
- Wiring and the NEC

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#### HOMER Energy Tool



This exclusive online version of the HOMER energy optimization tool evaluates hybrid power systems to determine the most cost effective options for delivering continuous electricity to health facilities.

Tagged under HOMER load energy system optimization hybrid system cost solar solar resource PV generator batteries

#### Energy Audit



A spreadsheet tool and guide designed to be an overall off-grid energy information package to help energy experts and procurement officers collect and analyze information, plan PV and generator systems in off-grid health centers, and develop specifications and bidding documents.

Tagged under audit Excel cost energy system energy

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www.poweringhealth.org/index.php/resources/tools



## POWER AFRICA

## Kerosene $\rightarrow$ Renewables



- This is Paris Wanjiru, a 17year-old student in Muranga, Kenya.
- She used to study using kerosene lamps, but the fumes were toxic.
- She now uses a solarpowered light created by Power Africa partner M-Kopa.

# $Kerosene \rightarrow Renewables$



POWER

**AFRICA** 

- Nearly 90 million Nigerians
   have no connection to the electric grid, leading to
   dependence on kerosene and diesel.
- Power Africa partner Nova-Lumos is bringing renewable and reliable power to Nigerians who live and work beyond the grid.
- Lumos' business model will positively impact millions with new, affordable electricity access in homes, businesses, schools & medical facilities

# EBOLA OUTBREAK IN LIBERIA



POWER

**AFRICA** 

- 17 generators for Ebola Treatment Units
- Supported life-saving treatment, and reduced the risk of disease transmission
- Hybrid solar-diesel units as longer-term solutions for healthcare facilities



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