



Power Africa: Sources of Climate Finance

November 2019



The Challenge: Africa's Energy Deficit



- Nearly 60% of population in sub-Saharan Africa without electricity access, compared to 1% or less in North Africa
- Estimated \$835 billion in investment needed to achieve universal access in Africa by 2040, or about \$41 billion / year
- Electricity access affects health, education, economic growth, stability; it is a development and security imperative

Sources: IEA, *Energy Access Outlook 2017*; World Bank Group, *Africa's Infrastructure: A Time for Transformation*, World Bank Group, 2015.

What is Power Africa?

- An all-of-U.S. Government, partnership-based, private-sector-driven energy generation and access initiative
- **U. S. Government:** 12 U.S. agencies working together
- **Partnership:** The largest public-private partnership for development in history. 150+ private sector partners, 19 development partners, working in 40 countries in SSA with African governments and civil society
- **Private Sector-Driven:** Follows and supports private sector projects that advance development outcomes



TOOLS & RESOURCES

Transaction Assistance • Finance • Policy /
Regulatory Design & Reform •
Capacity Building • Legal Assistance

PARTNERSHIPS

Working together to increase energy across
the continent by supporting innovation,
effective and suitable development.



HYDRO



SOLAR



BIOMASS



GAS



GEOTHERMAL



WIND

18,000-21,000 MW

Maximizing Value from Existing Transactions

11,000-14,000 MW

Advancing New Opportunities
for Gas (6,000-7,000 MW)
Solar (3,000-4,000 MW)

Wind & Geothermal (2,000-3,000 MW)

2,000-3,000 MW

Increasing Efficiency of Existing Generation

35-40 MILLION

Scaling Grid Roll-Out Programs
for Urban (24-27 M) and Rural (11-13 M)

25-30 MILLION

Intensifying Beyond the Grid Efforts
with Household Systems (17-20 M)
and Micro-grids (8-10 M)

INCREASE CAPACITY
BY 30,000 MW

CREATE 60 MILLION
NEW CONNECTIONS

How We Work: The Power Africa Toolbox

- Comprehensive suite of tools to facilitate transaction closure
- **Transaction Advisory and Assistance** – private sector and public sector support
- **Financial instruments**
- **Policy / regulatory design and reform**
- **Technical assistance**
- **Capacity building**
- **Legal Assistance**

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?

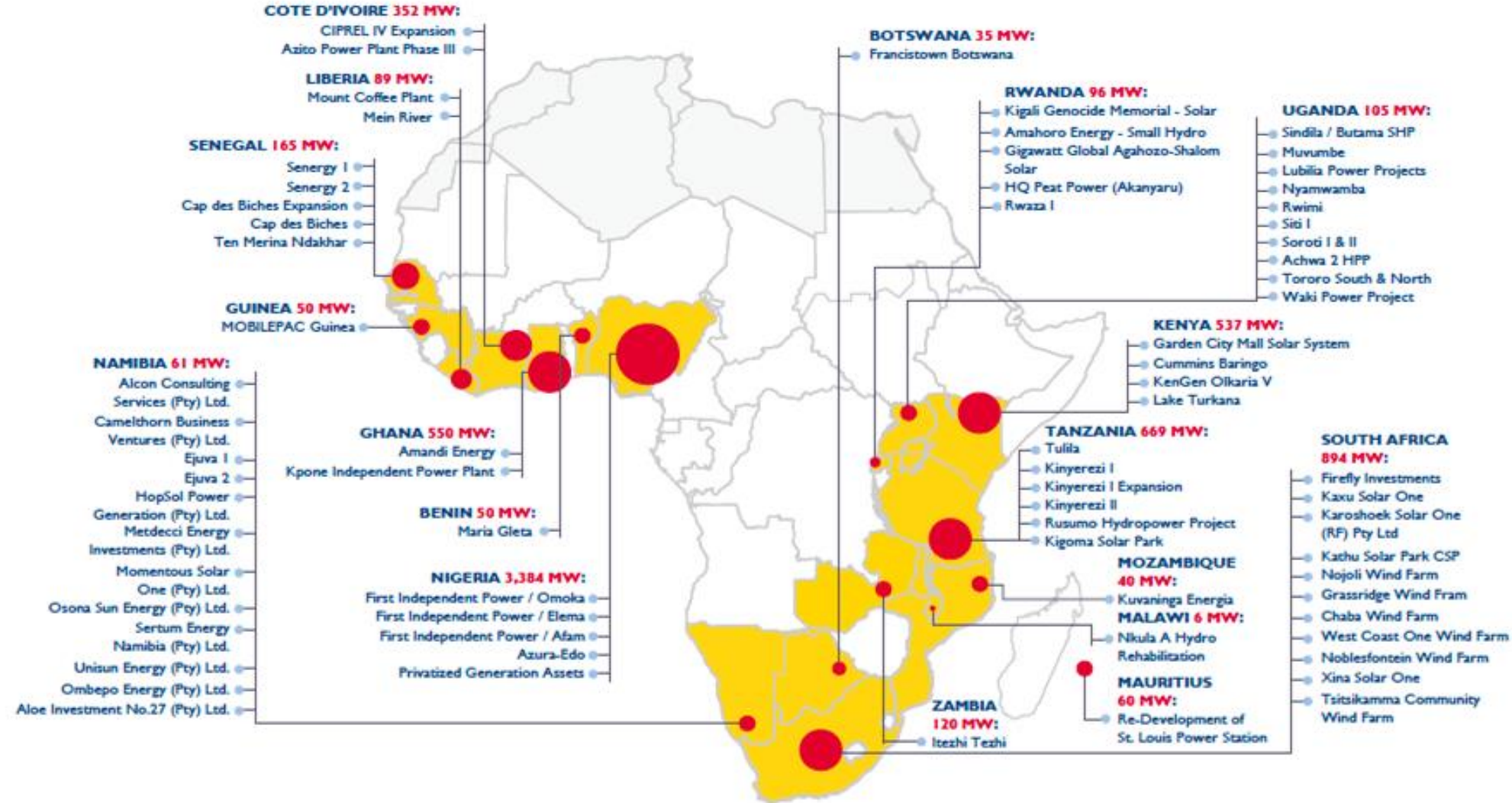
Host-country governments and African utilities

www.usaid.gov/powerafrica/toolbox

Progress Achieved, to date

- 124 projects, comprising more than 10,300 MW in new generation capacity, reached financial close
 - 56 power projects, comprising over 3,400 MW, commissioned and online
 - Over 14.8 million new home and business connections added
 - 2,300 km of transmission lines reached financial closed
 - All-of-the-above approach to technology
 - Two-thirds of projects closed have been renewable energy
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- Leveraged **\$650 million** of U.S. Government support with **\$56 billion** in commitments from partners, with over \$2 billion from OPIC alone

Map of Results



Power Africa's Southern Africa Energy Program (SAEP)

SAEP is Power Africa's primary technical assistance and advisory program in Southern Africa.

OBJECTIVE

Increase investment in electricity supply and access in Southern Africa by strengthening the regional enabling environment and facilitating transactions through technical assistance

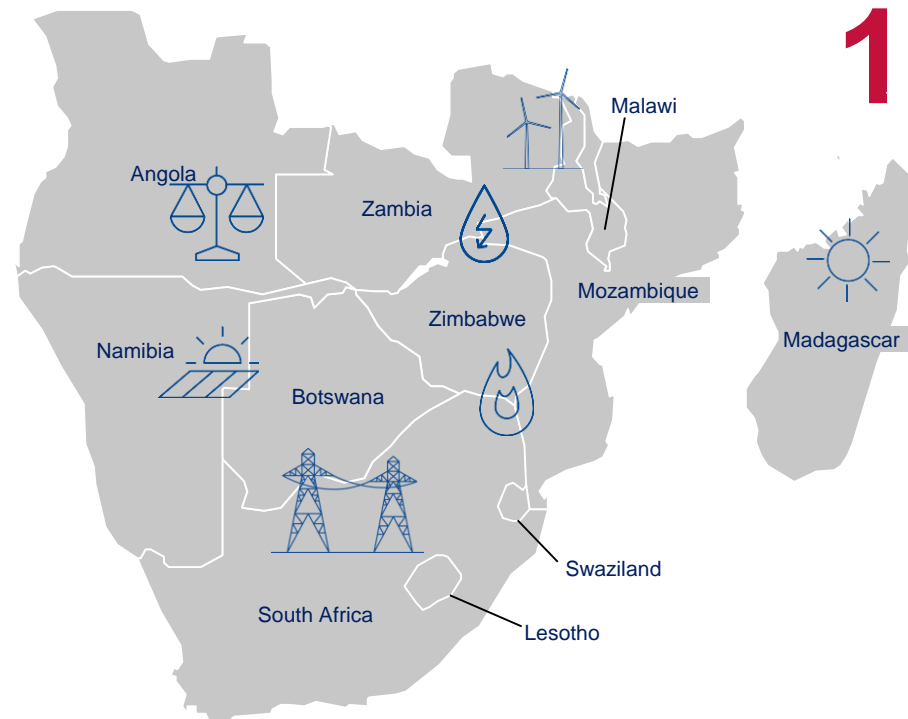
GOALS

Assist in the development of:

1. Generation capacity – 3 000 MW
2. Transmission capacity – 1 000 MW
3. New connections – 3 million

5 Years
ACTIVITY DURATION
March 2017 – March 2022

CURRENTLY IN
YEAR **2.5**



11

TARGET COUNTRIES

Angola, Botswana, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia, Zimbabwe

REGIONAL PARTNERSHIP FOCUS

SADC, SAPP, RERA, SACREEE Implementing in collaboration with Power Africa Partners

SAEP OVERVIEW & RESULTS

PROGRAM OUTCOMES / TASK AREAS



Outcome 1: Improved Regulation, Planning and Procurement for Energy



Outcome 2: Improved Commercial Viability of Utilities



Outcome 3: Improved Regional Harmonization and Cross-Border Trade



Outcome 4: Scaled Renewable Energy (RE), Energy Efficiency (EE) and Access



Outcome 5: Increased Human and Institutional Capacity

Results to date:

- Over **2,100 megawatts (MW)** of new generation in reached financial close
- More than **64,000 new off-grid connections** added

Power Africa in Action: Activities in Zambia

- **Scaling Solar Round 1 (54 MW):** Advisory support to Ministries of Energy and Finance; reviewed PPAs for Government of Zambia; \$2 million from Power Africa to IFC to support its advisory services
- **Beyond the Grid fund for Zambia:** Led by Power Africa partner SIDA. Power Africa on selection committee for awardees of results-based off-grid financing program. To date, 150,000 connections; 1,400 businesses powered; 1,500 jobs created. Expanding to other countries, including Mozambique, with Power Africa funding
- **Project Preparation Funding:** USTDA grants to micro-grid company (Standard Microgrid), wind/solar/storage project (Upepo), wind (Access Power) geothermal project (Kalahari GeoEnergy)
- **Local Empowerment:** Power Africa-funded training of over 250 solar home systems sales agents. 25% increase in sales in next month



Power Africa in Action: Activities in Malawi

- **Mpatamanga 308 MW Hydro Project:** Power Africa's SAEP is lead advisor to Government of Malawi; JDA between Government and IFC Infrastructures signed. Potential to add <50% increase to country's installed capacity
- **Unlocking Power Trade:** Malawi will tap 50MW from Mozambique through the Malawi-Mozambique Interconnector starting in 2022. SAEP advising Governments and providing technical training to Malawi ESCOM on 400kV line operations.
- **MCC Power Compact (\$350 million grant, Sept 2013 - Sept 2018):** T&D upgrades and strengthening; rehabilitation of Nkula A hydro project (36 MW); ESCOM turnaround support; unbundling of sector. Est. 1,000,000 beneficiaries.
- **Project Preparation Funding:** run-of-river hydro (Water Wheel); solar (JCM Power)



Leveraging Funding through Smart Partnership

- Providing funding to African Development Bank's Sustainable Energy Fund for Africa
- Partnered with GET-FIT in Zambia to develop tariff methodology for small-scale hydropower
- Among the first backers of the FMO-backed Climate Investor One fund
- Contributed to the EU's flagship ElectrIFI initiative
- Rather than replicate or compete, Power Africa doubles down on good ideas



Lessons Learned: Climate Finance Strategy for Southern Africa

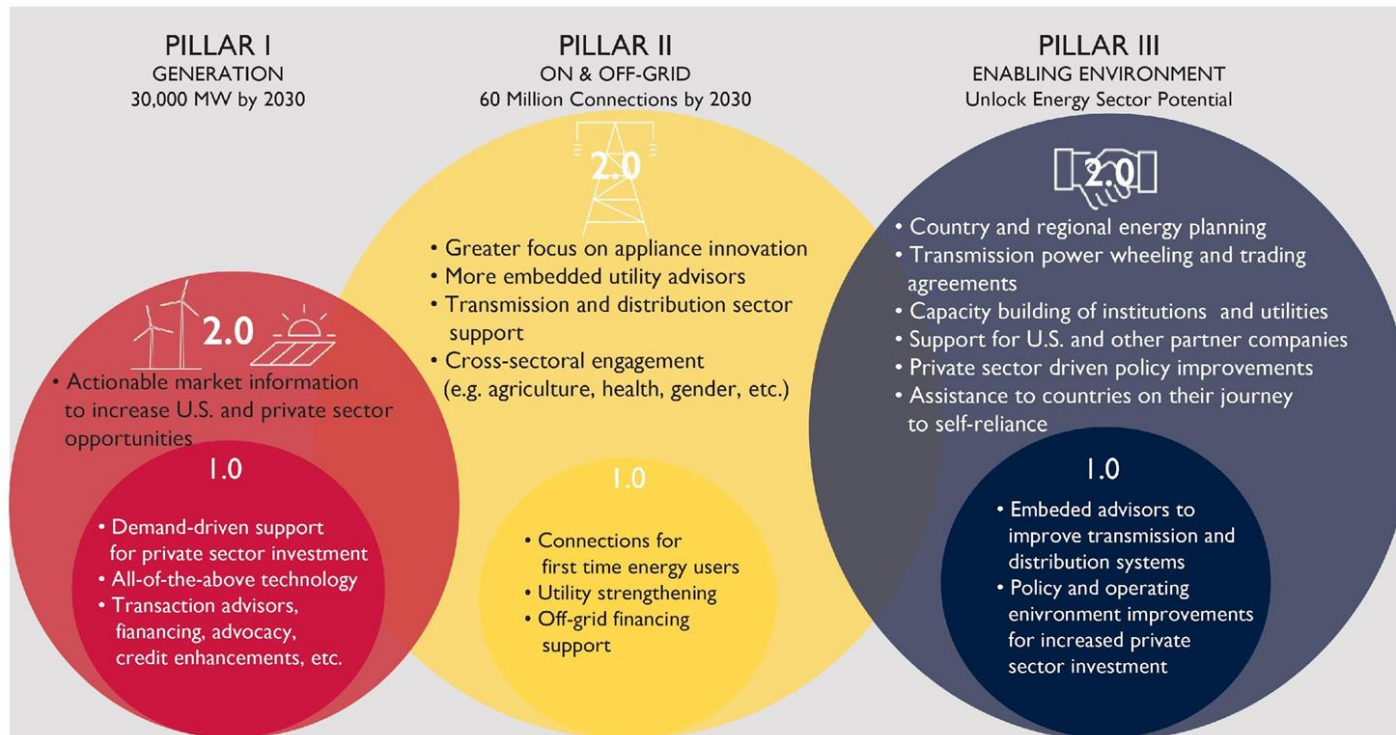
- Couple sources of finance with advisory support to public sector and technical assistance
- Focus on frameworks that enable private sector participation – financing deficit for region's power sector cannot be funded by public sector alone
- Support development sector coordination and partnership not just in words but in action and funding



What's Next for Power Africa: The 2.0 Strategy

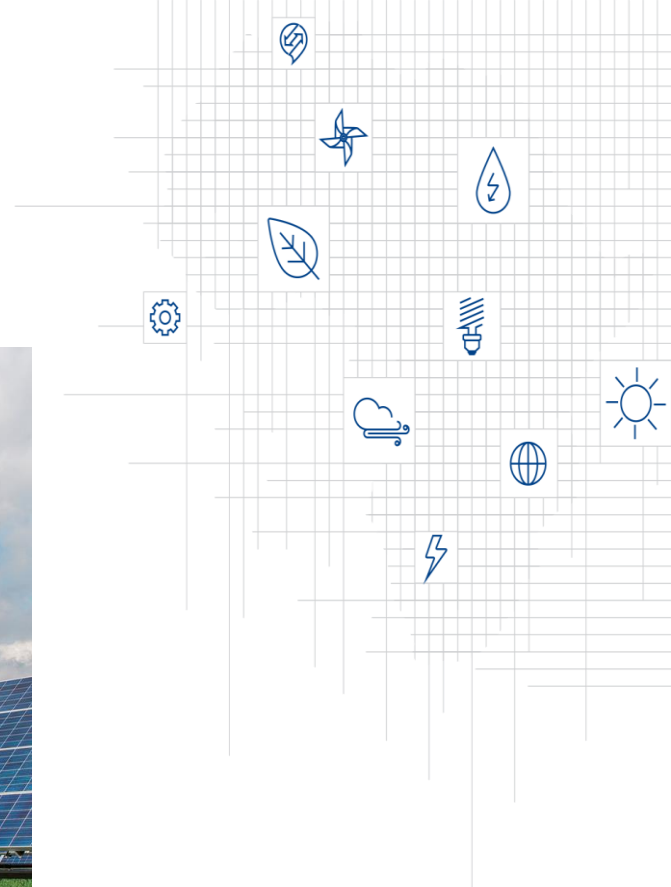
POWER AFRICA 2.0

POWER AFRICA 2.0 PROMOTES MUTUAL ECONOMIC PROSPERITY BETWEEN THE U.S. AND SUB-SAHARAN AFRICA.



- Transmission and unlocking power trade
- US launching new DFI with expanded products, including equity
- Boosting trade & investment links between US & Africa

Thank you!



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