

Ethiopia



Population: **102 M**
GDP Growth: **7.6%**
GDP/Cap (PPP): **\$1,608**
Ease of Doing Business: **159**

"[Power Africa] has significantly reduced the cost of equity funding for major energy infrastructure projects in Africa, such as Corbetti, by raising the profile of energy investments in Africa to the institutional investment community in the U.S. and around the world."

- Michael Philipp, Chairman of Reykjavik Geothermal

ENERGY SECTOR OVERVIEW

The Government of Ethiopia (GoE) has set ambitious goals to become a middle-income country by 2025, which includes aggressive power generation and connections targets. The GoE has determined that private investment is critical to achieve new generation targets beyond 2015 as concessional loans for government owned/operated generation facilities have decreased significantly. With Power Africa assistance, the GoE gained experience with Independent Power Producer (IPP) projects the negotiation of the unsolicited Corbetti and Tule Moye Geothermal Projects and the competitively tendered Metahara Solar Project. Power Africa also assisted the GoE with developing the legal and regulatory IPP framework that has lowered financing risks. Major hurdles still exist, namely: the utility must become a creditworthy purchaser of electricity for IPPs; tariff rates must be reformed to allow for full-cost recovery; the dated transmission and distribution system, suffering from high losses and frequent outages, must be rehabilitated; efficient planning and operation/maintenance of the grid must be undertaken as it is expanded and new connections are added to keep up with new generation; and electrification of off-grid populations must be addressed. Power Africa is coordinating all work with other donors and U.S. agencies to address country priorities and leverage resources.

GENERATION CAPACITY



Installed Capacity: 4,206 MW

- Hydroelectric: 3,743 MW (89%)
- Wind: 337 MW (8%)
- Thermal: 126 MW (3%)

Power Africa New MW to date

- Reached Financial Close: 0 MW
- PA 2020 target: 2,880 MW

Power Africa 2030 Pipeline

- 4,640 MW

CONNECTIONS



Current Access Rate: 25%

- Rural: 10% Urban: 85%

Households without Power: 14.6 million

- Target: Universal access by 2030

PA New Grid Connections:

- 2020 Target: 4 Million

PA New Off-Grid Connections:

- 2020 Target: 660,000

INVESTMENT AND ENABLING ENVIRONMENT

Biggest Issues

1. Macroeconomic forces, particularly hard currency shortages needed to pay IPP tariffs
2. Generation planning and procurements synchronized with demand
3. New connections increased to prevent over-generation with take-or-pay IPPs

Power Africa Interventions

1. Transaction advisory assistance, development of IPP tender documents, and improvement of the enabling environment to lower risk for private sector investment
2. Development of the grid code, system integration modeling, and updating the demand forecast
3. Establish a process that reduces distribution commercial losses and increases the rate of meter installation
4. Capacity development for sustainability of the utilities and regulator



POWER AFRICA'S ENGAGEMENT IN ETHIOPIA MW GENERATION

Power Africa supports the generation/transmission utility by updating the demand forecast and developing a generation procurement plan that meets demand and balances intermittent wind and solar generation with base-load hydro and geothermal generation. Power Africa provides capacity building for the transition from unsolicited proposals to competitive tendering of IPP projects through a transparent procurement process. Power Africa also is performing system integration studies that analyze grid states as new generation is added to the grid and developing the grid code.

CONNECTIONS

Power Africa supports the distribution utility to meet their target of installing over 1 million new connections per year through supply chain management and geospatial mapping of rural distribution lines. Power Africa is developing distribution design and construction standards, performing a smart grid study to be followed by a smart grid pilot project, and developing a "meters to cash" process for the utility to reduce commercial losses. Power Africa also supports off-grid electrification solutions for private sector investment.

ENABLING ENVIRONMENT

Power Africa is assisting with key policy and regulatory reforms to strengthen the enabling environment for private investment in the power sector and lower financial risks. It also is strengthening the regulator to perform its functions, including issuance of licenses and permits for IPPs and private sector off-grid electrification, development of accounting standards to meet the needs of private sector investors (International Finance and Reporting Standards) and tariff rate determination (Uniform System of Accounts), and approval of tariff rates.

SUCCESSSTORY

The Government of Ethiopia is committed to transitioning to a middle-income country by 2025, and electrification plays a key role in that plan. Power Africa's support includes increasing installed generation capacity through private sector investment and increasing connections in cooperation with the World Bank's National Electrification Program. According to Dan Waddle, senior vice president of NRECA International, "Past electrification efforts throughout Africa would inevitably fall short or stall for lack of financing and political will. Now, we're seeing the emergence of strong leadership in several African countries where there is increasing understanding of the widespread economic benefits of universal access."

ABOUT POWER AFRICA

Power Africa is comprised of 12 U.S. Government Agencies, 140 private companies, and 16 bilateral and multilateral development partners to support sub-Saharan governments by working together to increase the numbers of people with access to power. Power Africa's goal is to achieve 30,000 MW of new generated power and 60 million new connection by 2030 to reach 300 million Africans.

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