

Investment Brief for the Energy Sector in Ethiopia

Overview

Ethiopia has registered impressive GDP growth in recent years, ranging between 6% and 12% per year depending on the data source. The World Bank and IMF forecast average growth of 7% over the next three years. In addition to boasting strong economic performance, Ethiopia ranks as Sub-Saharan Africa’s second-most populous country, with over 90 million people. Investments in renewable energy resources and hydropower in particular have been key drivers of economic growth in recent years. Ethiopia’s existing generation capacity totals 2,145 MWs, up more than 200% since 2008. Projections suggest the total demand for power will grow by 30% per year. In 2012/13, hydropower comprised 90% of the electricity supplied in Ethiopia.

Despite strong overall growth, Ethiopia remains one of the poorest countries in Africa. To address the remaining challenges, the government has created ambitious economic development targets. The country’s five-year (2010 – 2015) economic strategy, the Growth and Transformation Plan (GTP), seeks to achieve the Millennium Development Goals and middle-income status by 2025.

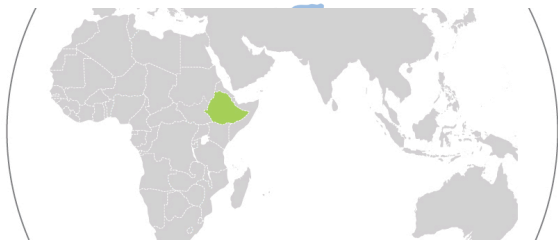
In the energy sector, the Ethiopian government’s main stated objective is to use a carbon-neutral growth pathway to improve the living conditions of its population. The GTP includes an aggressive energy policy framework designed to expand installed electricity capacity from approximately 2,000 MWs to 8,000 MWs, build 132,000 kms of new distribution lines, and increase the number of customers from two million to four million by 2015. Renewable energy capacity, primarily hydro, and energy efficiency will play major roles in this growth by 2015.

Although Ethiopia has crafted ambitious energy targets, access challenges remain. Over half of the population is located geographically close to the electricity grid, but actual interconnection rates are just 25%. Per capita domestic electricity consumption is less than 100 kWh per year. Traditional biomass for household cooking also accounts for 89% of total domestic energy consumption.

A new Energy Law, Proclamation 810/2013, came into force in January 2014. The law broadly expands upon the previous policies governing the sector, including a specific focus on independent Power Purchase Agreements (PPAs), fully off-grid systems, and on-grid energy efficiency policies as well as standards. This new legal framework further reinforces the government’s stated commitment to sustainable development practices as outlined in its Climate Resilient Green Economy Strategy and the ambitious renewable energy goals of the GTP.

Energy Demand & Supply Balance

Sources of Electric Power Generation, 2014		Installed Capacity	
		(MWs)	Percentage of Total
Renewable Energy	Hydro	1890	88.1%
	Geothermal	5	0.2%
	Wind	171	8.0%
	Cogeneration	0	0%
	Imports	0	0%
	Total	2066	96.3%
Fossil Fuels	MSD	0	0%
	Gas Turbines	79	3.7%
	HSD	0	0%
	Emergency Power Plants	0	0%
	Total	79	3.7%
Installed Capacity and Units Generated		2,145 MWs	



While Ethiopia's total endowment of hydropower and geothermal power is estimated to be 45,000 MWs and 10,000 MWs, respectively, the potential resource bases are largely untapped. Developers have also exploited less than one percent of Ethiopia's solar, wind, and geothermal resources. In order to realize Ethiopia's energy sector potential, significant private investment will be required.

Successful projects have already begun to produce electricity. Power generation capacity improved by 230% (1,359 MWs) between 2008 and 2012, with six hydroelectric and wind power projects coming online:

- Tekeze (2009, hydroelectric, 300 MWs)
- Gibe II (2010, hydroelectric, 420 MWs)
- Tana Beles (2010, hydroelectric, 460 MWs)
- Amerti Nesha (2011, hydroelectric, 98 MWs)
- Ashegoda (2013, wind, 30 MWs)
- Adama I (2012, wind, 51 MWs)

In addition, three more projects—Gibe III, Adama II, and the Grand Ethiopian Renaissance Dam—are under construction. Their combined planned output is 8,060 MWs. In 2013, the Ashegoda wind farm expanded to 120 MWs in total, making it Africa's largest wind project that year.

The Ministry of Water, Irrigation and Energy (MOWIE) is actively seeking additional investments in Ethiopia's energy sector to meet rapidly growing domestic needs and to fulfill ambitious plans to export electricity to neighboring countries. Ethiopia currently exports 60 MWs to Djibouti and another 100 MWs to Sudan. In addition, financing is in place for construction of a 500 kv transmission link to Kenya as part of a larger East African Electricity Highway project funded by the World Bank and African Development Bank. Development of renewable energy sources is a basic tenet of the government's energy policy, and private investment will be required to meet non-hydro renewable energy targets.

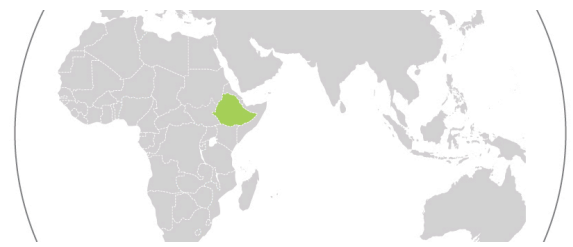
Economic Development Policies

The GTP's main goals (covering the 2010-2015 five-year period) include:

- Rapid economic growth, targeted for 11% per year at worst and, at best, to double the size of the economy by 2015, with GDP per capita expected to reach \$698 by 2015.
- Doubled agricultural production to ensure food security in Ethiopia for the first time.
- Increased contributions from the industrial sector, particularly focused on increased production in sugar, textiles, leather products and cement.
- Foreign exchange reserves projected to increase and the Birr is expected to appreciate by five percent against the dollar each year.
- Planned expansion of the roads network, from 49,000 km in 2010 to 64,500 km by 2015.
- Power generation capacity to increase from the current 2,000 MWs to 8,000 MWs, and the number of customers from the current two million to four million by 2015.
- Construction of 2,395 km of railway line.
- Achievement of all Millennium Development Goals.

Please note: The GTP serves as an important roadmap of investment priorities. It includes ambitious targets which are unlikely to be met in their entirety by 2015, however significant progress has been made in many areas.

Energy Potential	
Hydropower potential	45,000 MWs
Geothermal potential	10,000 MWs
Solar energy potential	5.5 kWh /sq. m/day – annual average daily irradiation
Average wind speed	>7 meter/second at 50 m above ground level
Wood	1,120 million tons (annually exploitable)
Agro-waste	15 to 20 million tons (annually exploitable)
Natural gas	4 TCF (113 billion m3)
Coal	> 300 million tons
Oil shale	253 million tons



Investment Climate

The 2012 amendment to Ethiopia's investment proclamation introduced provisions for the establishment of industrial development zones, both state-run and private, with favorable investment, tax, and infrastructure incentives. The amendment also raised the minimum capital requirement to US\$ 200,000 per project for wholly-owned foreign investments and US\$ 150,000 for joint investments with domestic investors. A foreign investor reinvesting profits/dividends may not be required to allocate minimum capital. Ethiopian Government officials have also stated that World Trade Organization accession is a priority.

Inflation, while still elevated, stabilized over 2012 and 2013. The government of Ethiopia has taken an active role in managing inflation through a series of measures including strict monetary and fiscal policies limiting the growth of broad money, resulting in steady year-on-declines in inflation. Ethiopia does not have discriminatory or excessively onerous visa, residence, or work permit requirements for foreign investors; however, investors may face bureaucratic delays in obtaining these documents.

The World Bank's 2014 Doing Business report ranked Ethiopia at 125 out of 185 countries. The primary reasons for the low ranking related to: i) relatively low levels of investor protection, ii) low levels of tax payments by tax payers, iii) poor trade logistics, iv) barriers to accessing credit, and v) limited ability to resolve insolvencies.

In May 2014, Moody's rated Ethiopia's credit worthiness a 'B+', while S&P and Fitch gave it a 'B'. The ratings reflect Ethiopia's stable outlook and prospects for continued economic growth in the short- and medium-term.

Energy Sector Institutions

The key public sector institutions and entities involved in Ethiopia's electricity sector are:

Ministry of Water, Irrigation and Energy (MOWIE) – The MOWIE plans, leads, coordinates, and monitors overall energy development. It is also responsible for capacity building in the sector, research, development and dissemination of renewable energy technologies and improved energy technologies. For more information visit: www.mowr.gov.et

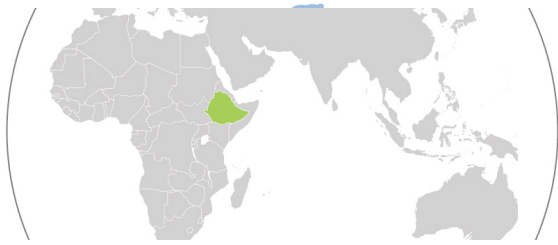
Ethiopian Electric Power (EEP) – In November 2013 as part of an institutional reform process, the government of Ethiopia split the public utility, the Ethiopian Electric Power Corporation (EEPCo), into Ethiopian Electric Power (EEP) and Ethiopian Electric Services (EES). EEP focuses on project development (hydropower, in particular) and the construction of new transmission lines across the country. For more information visit: <http://www.eepco.gov.et/>

Ethiopian Electric Services (EES) – Ethiopian Electric Services (EES) is tasked with managing the distribution, sales, and operations of electricity in Ethiopia. In 2013, India's Power Grid Corporation won a two year management contract for EES. For more information visit: <http://www.eepco.gov.et/>

Ethiopian Energy Authority (EEA) – The Ethiopian Energy Agency (EEA), established as an autonomous government entity in 1998 and operational since 2000, uses rules, regulations, directives and standards to regulate energy efficiency, conservation, safety, and quality. The EEA also issues licenses, determines tariffs, and sets performance standards. As established in the new energy law, Proclamation 810/2013, EEA is also responsible for negotiation of tariffs for fully off-grid independent power projects (IPPs). The EEA is accountable to the Ministry of Water, Irrigation and Energy. For more information visit: <http://www.mowr.gov.et/EEA/Index.php?Itemid=0>

Potential for Private Sector Investment

According to the 2014 Investment Climate Statement by the U.S. State Department's Bureau of Economic and Business Affairs (<http://www.state.gov/e/eb/rls/othr/ics/2014/index.htm>), the government of Ethiopia is in the process of reviewing its 1960 commercial code in an effort to facilitate investment and ease of operations. Areas of focus include clarifying regulations for potential investors, standardizing appropriate accounting practices to more accurately assess tax and other operating liabilities, increasing protection for shareholders and provisions for bankruptcy filings as well as modernization of trade and registration processes. Further, the revised Investment Code of 1996 and the Investment Proclamation provide incentives for development-related investments, and have gradually removed most of the sector-specific restrictions on investment. However, Ethiopia's investment code still prohibits foreign investment in banking, insurance, and financial



services. The remaining state-owned sectors include telecommunications, power transmission and distribution, and postal services with the exception of courier services.

For more information on Power Africa visit: www.usaid.gov/powerafrica

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