



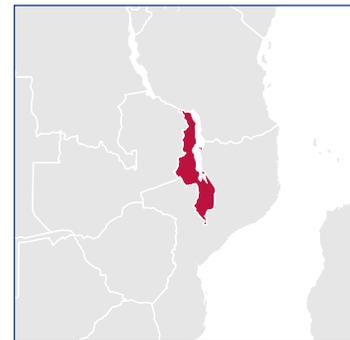
Business Opportunities in the Malawi Power Sector

The compact between MCC and the Government of Malawi was signed in April 2011, and entered into force in September 2013¹. The compact focuses on power infrastructure, power sector reform and environmental and natural resource management. The in-country implementing entity is the Millennium Challenge Account–Malawi (MCA-Malawi).

Companies can explore opportunities presented by the Malawi compact through:

- ★ Investment in independent electricity generation opportunities through power purchase agreements and other possible outsourcing opportunities with ESCOM, the national power utility, to complement compact investments;
- ★ Investment to capitalize a payment for ecosystems services trust mechanism; or
- ★ Compact procurement opportunities.

Malawi at a Glance



Population: 16.4 million
GDP Annual Growth: 5%
GNI Per Capita, PPP: \$750
Net FDI Inflows: \$118 million
Population Growth Rate: 3%
Population Below \$1.25/day: 62%
Source: World Bank 2013

Why Invest in Malawi?

Malawi presents investment opportunities in energy as well as in other sectors prioritized by the government, such as agriculture, mining, infrastructure, and tourism.

- ★ Annual GDP growth in Malawi has averaged 5.4 percent over the last decade. It is anticipated that increased investment in power and other sectors will further propel Malawi on its upward trajectory.
- ★ Unmet demand for electrification, combined with a strengthened power utility and regulatory framework for private sector participation as a result of the MCC compact, make Malawi an attractive location.

Malawi is Primed for Power Investment—Demand Substantially Exceeds Supply

With an electrification rate of only around 8 percent, Malawi has one of the most severely constrained power sectors in sub-Saharan Africa. Total system capacity stands at just 351 MW, nearly 20 percent of which was added only in 2013 with the commissioning of the 64 MW Kapichira II hydro project. This represents the first new generation supply in over 13 years. Peak demand presently exceeds supply by almost 100 MW, and demand forecasts by the Government of Malawi's Department of Energy indicate that this gap will grow significantly between now and 2030. While the vast majority of Malawi's power is hydro-based, efforts are underway to diversify generation sources.

¹ Compact signing commits funds to a country for purposes outlined in the compact; entry into force starts a five-year implementation period for the compact.

Year (all figures in MW) ²	2014	2018	2022	2026	2030
Peak Demand Forecast	378	720	1,300	1,950	2,550
Reserve Margin	69	104	162	227	287
Total Capacity Requirement	447	824	1,462	2,177	2,837
ESCOM (Utility) Supply ³	351	429	429	429	429
Capacity Supply Shortfall	-96	-395	-1,022	-1,748	-2,408

2 According to Government of Malawi, Department of Energy reports
3 Includes only projects for which funding commitments have already been secured: Tedzani IV (21 MW), Nkula A refurbishment (12 MW) and ESCOM-funded diesel generators (45 MW).

Investment Opportunities

Based on joint due diligence and constraints analysis, MCC and the Malawian government identified opportunities for businesses to co-invest or build on MCC investments in the country's power sector.

Malawi's **\$350.7 million MCC compact** consists of **three components** that can provide the private sector with the needed platform to engage in the Malawian power market:

- 1. Infrastructure Development Project (\$257.1 million)** – Expanding the national power system by improving reliability and stability:
 - * Rehabilitating, upgrading and adding generation, transmission and distribution assets (see map below).
- 2. Environmental and Natural Resource Management Project (\$27.9 million)** – Strengthening watershed management and reducing costly outages at hydropower plants along the Shire River:
 - * Reducing sediment loads and weed infestation on the Shire River for increased hydropower efficiency.
 - * Establishing a Natural Resources Management Trust which would be funded through a market-based mechanism using a payment for ecosystem services approach (see below for details).
- 3. Power Sector Reform Project (\$25.7 million)** – Creating an enabling environment for the future expansion of the power sector by strengthening key institutions and enhancing the sector's regulation and governance:
 - * Strengthening ESCOM's financial and operational performance and governance in order to make it a sustainable, more creditworthy utility.
 - * Restructuring the national power market, including by establishing cost-reflective tariffs.
 - * Supporting the Malawi Energy Regulatory Authority and the Ministry of Natural Resources, Energy and Mines in promoting independent power producer investments facilitated by the development of grid codes and a stronger enabling framework for power purchase agreements.

MCC encourages the private sector to co-invest or build upon these investments in order to create an improved platform, increased generation and wider access to power for Malawi's rapidly growing population.

Upcoming Generation Projects

Between now and 2018, the Malawian government has firm plans to add over 78 MW of power via three projects, increasing total capacity to 429 MW. These include:

1. MCC compact-funded refurbishment of the existing run-of-river hydropower plant, Nkula A. This project is expected to be completed in 2018, adding up to 12 MW, on top of an existing 24 MW of power.
2. Expansion of the existing Tedzani hydropower station, adding 21 MW of power. This project, which is being funded with a grant from the Japan International Cooperation Agency, is expected to be completed in 2018.
3. Procurement of three diesel generators will add 45 MW for peak power management.

Gaps and Opportunities to Enter the Market

Despite these various efforts, a power shortfall of nearly 400 MW remains projected for 2018. As Malawi lacks the capital to fully meet this gap on its own, it is considering new generation projects based on proposals from independent power producers, further grant funding, soft loans, and bilateral borrowing.

Priority government-developed projects. The government is seriously considering two projects:

1. Kam'mwamba: 300 MW coal-fired project financed with loans from the Chinese government. This project is slated for completion between 2018 and 2020.
2. Kaphicira III: 50 MW hydropower plant expansion project funded by ESCOM. This project is currently at the pre-feasibility stage and is slated for completion in 2020.

Independent power producers. Independent power producers, together with the government, are considering at least four projects that, combined, could provide up to an additional 242 MW of power.

1. Proposed 120 MW coal-fired project at Pamodzi with Australian company IntraEnergy in partnership with U.S.-based Endeavor Energy. There have been negotiations for a term sheet and implementation agreement.
2. Proposed 40 MW hydropower project on Bua River at Mbongozi with local firm HE Power. A feasibility study and environmental impact assessment already exist.
3. Proposed 30 MW solar energy project with Canadian firm JCM Capital. This is in the early stages of discussion with the government.
4. Proposed 52 MW hydropower plant in the Mulanje Mountain Massif led by Kuwale Power Generating Company. The pre-feasibility study has been completed, and a feasibility study and business plan are currently under development.

These independent power producer projects may also represent potential opportunities for debt and/or equity investors. More information about these project opportunities is available from the Ministry of Natural Resources, Energy and Environment (see contact information at the end of this document).

Additional near-term opportunities. Six hydropower projects exist with completed feasibility studies or with feasibility studies currently underway with donor support.

1. A 50 MW hydropower project called Chizuma, with an existing government-funded feasibility study.
2. A 50 MW hydropower project called Chasombo, with an existing government-funded feasibility study.
3. The 100-280 MW Mpatamanga project, now under feasibility study by the World Bank.
4. The 100-150 MW Lower Fufu project, now under feasibility study by the World Bank.
5. The 20-50 MW Chingonda project, now under feasibility study by the World Bank.
6. The 140-280 MW Kholombidzo Project, for which the African Development Bank is carrying out a feasibility study.

With existing or soon-to-be-completed feasibility studies, these six projects represent several potential, near-term investment opportunities for public-private partnerships and/or for independent power producers.

Longer-term opportunities. Two additional hydropower projects and a handful of solar, geothermal and biomass projects provide other potential opportunities. These projects are at various stages of development and consideration by the government and could eventually become prime for public-private partnerships and/or for independent power producers.

1. The 20 MW Zoa Falls hydropower project.
2. The 80 MW Songwe Falls hydropower project.
3. The 60 MW biomass project proposed by Symbion Power.

Generation projects are expected to benefit from possible trading and export opportunities when cross-border transmission projects are in place with Mozambique and Zambia.

Payment for Ecosystem Services. As part of the Environmental and Natural Resource Management Project, MCC is working to establish a Shire River Watershed Management Trust that may be financed through a Payment for Ecosystem Services (PES) mechanism. The trust uses a sustainable, market-based approach to improve the agriculture and land management practices of smallholder farmers and thereby reduce erosion, sedimentation and nutrient loads that contribute to weed infestation on the Shire River. As such, the trust is a partnership between local communities upstream and companies whose costs and production are affected by electricity outages because of aquatic weeds and siltation.

Through the trust and the related PES mechanism, downstream companies impacted by the sediment and weeds would fund training programs implemented by nongovernmental organizations and community

groups. The trust's grants would support improved soil conditions through conservation agriculture, improved cropping patterns, use of agroforestry techniques, and afforestation/re-forestation efforts. The grants are intended to incentivize farmers to improve soil management practices, crop production and ways of maintaining soil structure and fertility. All this is expected to reduce sediment loads into the Shire River. Downstream trustees could benefit over time by reducing the cost of managing the sediments.

MCC seeks impact investors and downstream-affected companies to help capitalize the trust.

For additional information:

MCA-Malawi

Susan Banda, CEO, MCA-Malawi: susan.banda@mca-m.gov.mw

MCC

Oliver Pierson, Resident Country Director, Lilongwe, Malawi: piersono@mcc.gov

Jenner Edelman, Deputy Resident Country Director, Lilongwe, Malawi: edelmanjb@mcc.gov

Himesh Dhungel, Practice Lead/Senior Director, Energy, Washington, D.C.: dhungelh@mcc.gov

Stephen Gaull, Senior Operations Advisor, Finance, Investment and Trade, Washington D.C.: gaullsb@mcc.gov

Independent Power Producers

Lewis Mhango, Deputy Director for Energy, Department of Energy, Ministry of Natural Resources, Energy and Environment: lewismhango@yahoo.co.uk

Procurement information

MCC Procurement: <http://www.mcc.gov/pages/business/compactprocurements>

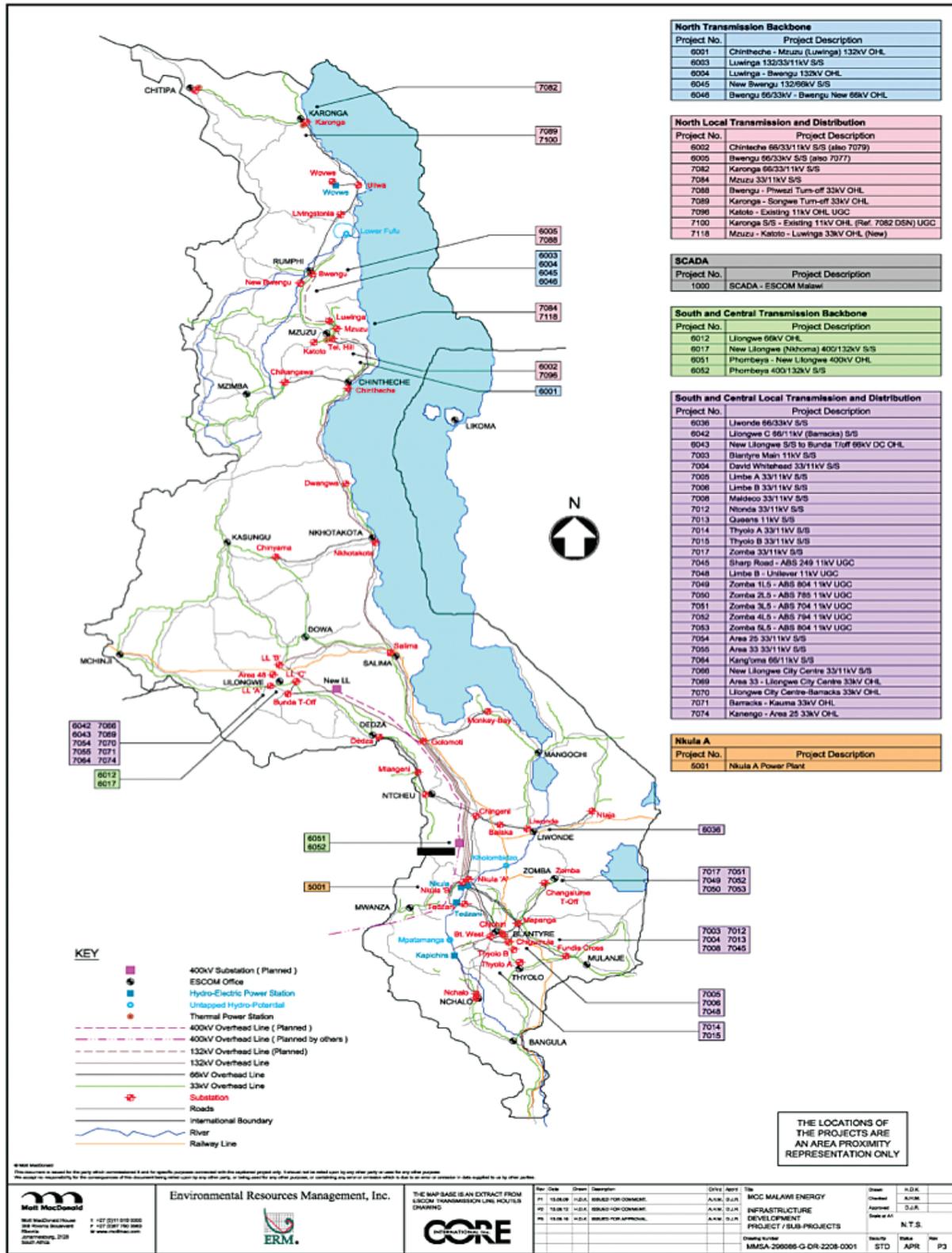
MCA Procurement: <http://www.mca-m.gov.mw/index.php/procurement>

Malawi's MCC compact

MCC Compact Page: <http://www.mcc.gov/pages/countries/program/malawi-compact>

MCA Website: <http://www.mca-m.gov.mw/>

Annex 1: Map of Malawi's MCC Compact Infrastructure Project Investments



Annex 2: Malawi FY15 Scorecard

Malawi FY15

Population: 16,363,000

GNI/Cap: \$270 (LIC)

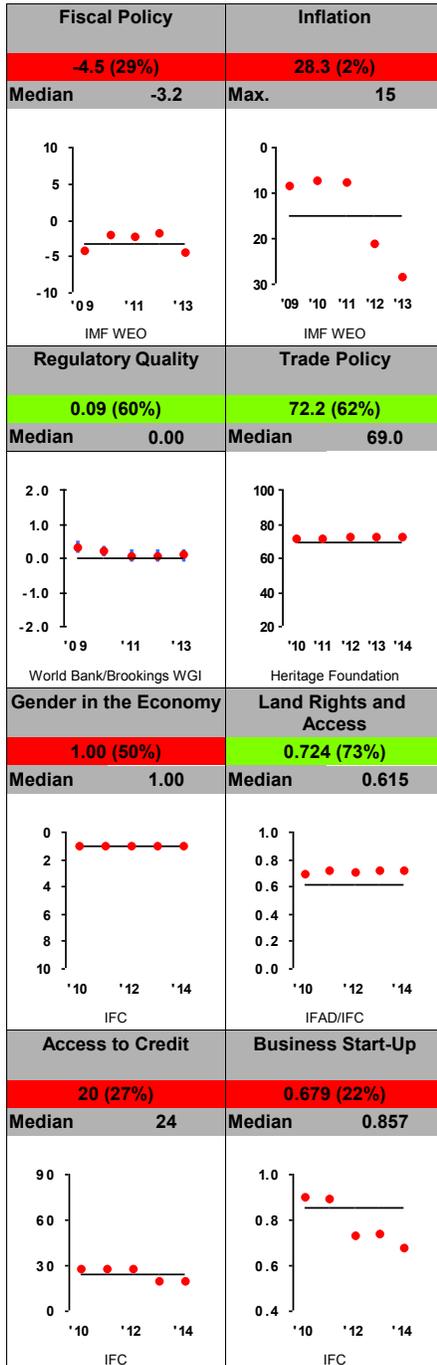
Control of Corruption

Democratic Rights

Pass Half Overall

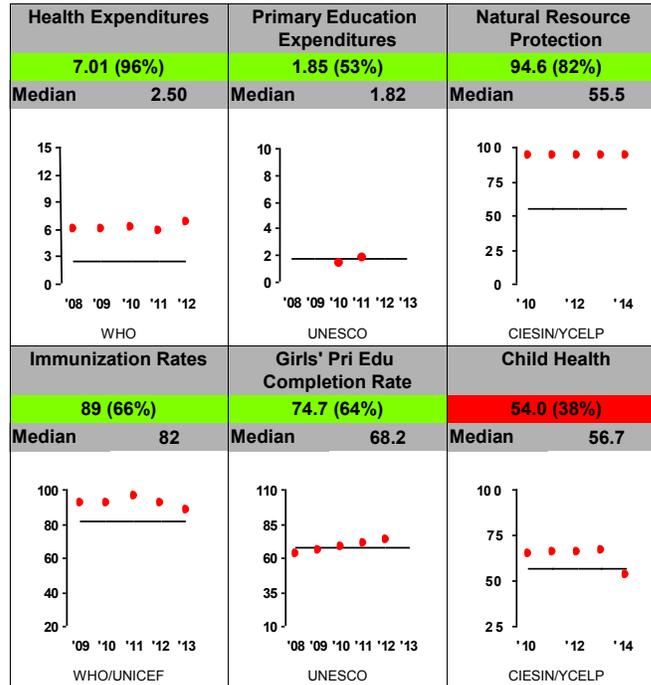


Economic Freedom



For more information regarding the Millennium Challenge Account Selection Process and these indicators, please consult MCC's website: www.mcc.gov/selection

Investing in People



Ruling Justly

