



Small Hydropower in Rwanda

DR. WILFRED MUKASHEMA

Chairman, Energy Private
Developers (EPD)

Rwanda Private Sector Federation
(PSF)



- Dr Ivan (37 years) is a PhD holder in Industrial Chemistry and Catalysis from the University of Science and Technology in Lille -France and has 2 Master's Degrees, one in Physico-Chemistry and another one in Pharmacy (drug design).
- Dr Ivan is the Executive Director of Rwanda Investment Group Ltd (Energy/Cement), and he managed key companies in private sector: Managing Director of Ngali Institute (projects incubator/engineering reference), CEO of RIG; Managing Director of Rwanda Energy Company Ltd (methane gas extraction, peat mining).
- Dr Ivan is the Chairman of Energy Sector Skills Council, Non Executive Director of Cimerwa (cement business), Chairman of Energy Private Developers (EPD) and Chairman of the Chamber of Industry.



RWANDA

Fast Facts



- ▶ Size: **26,338** sq.km
- ▶ GDP Growth: **8%** (2012)
- ▶ GDP per capita: **\$650**
- ▶ Population: **10,5** M
- ▶ Languages:
 - ☐ English 3
 - ☐ French
 - ☐ Swahili

RWANDA



Fast Facts

1. Rwanda is growing fast:

- Sustained average GDP growth rate of 8% p.a.
- Among top 25 fastest growing economies in the world
- One of five hottest countries for investment

2. Untapped business opportunities in:

- Knowledge based sectors of ICT, BPO & Financial services
- Real estate & construction
- Energy



RWANDA

Top Reformer

Top Business Environment



- ▶ **1st Best global reformer** (Doing Business Report 2014)
- ▶ **Most competitive** place to do business in East Africa and **2nd in Africa** (Doing Business Report 2014)
- ▶ **32nd out of 189 countries** (Doing Business Report 2014)
- ▶ **Country credit rating** upgraded to a “**B**” with a positive outlook by Fitch ratings
- ▶ **8th in Registering property** (Doing Business Report 2014)
- ▶ **22nd in Protecting Investors** (Doing Business Report 2014)
- ▶ **13th in Getting Credit** (Doing Business Report 2014)



RWANDA

The Way Ahead,

ENERGY

Energy

Installed generation capacity of 11
MW



- Power generation set to grow to 563 MW by 2017 and over 1000 MW by 2020
- Connectivity rate from 16% to 75%

Opportunities in:

- Methane gas
- Geothermal (4 Sites)
- **Micro Hydropower (333+ sites)**
- Solar power
- Peat to power generation

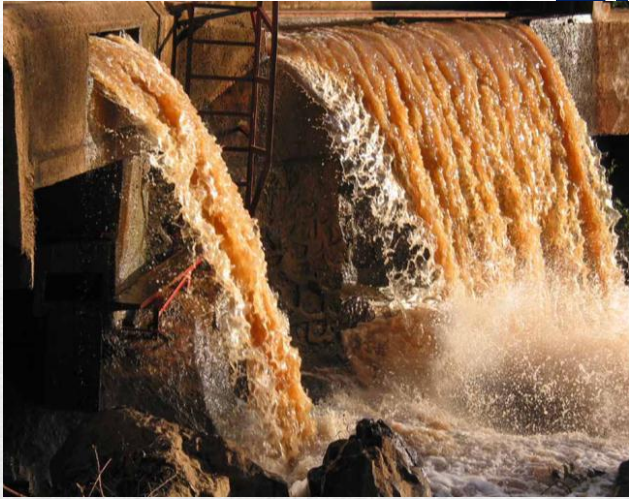


Energy – Micro Hydropower



- 333 hydro sites have been identified among which 21 totaling 20.9 MW are being constructed, 20 other mini-hydro projects totaling 9 MW expected for 2014-15.
- 2 solutions: On-grid near the transmission lines, off-grid for villages (imidugudu) in remote areas.
- Mini and Micro Hydro considered in a large program for Rural Electrification using Renewable Energy Resources (hydro, solar home systems, off-grid solar power plants)

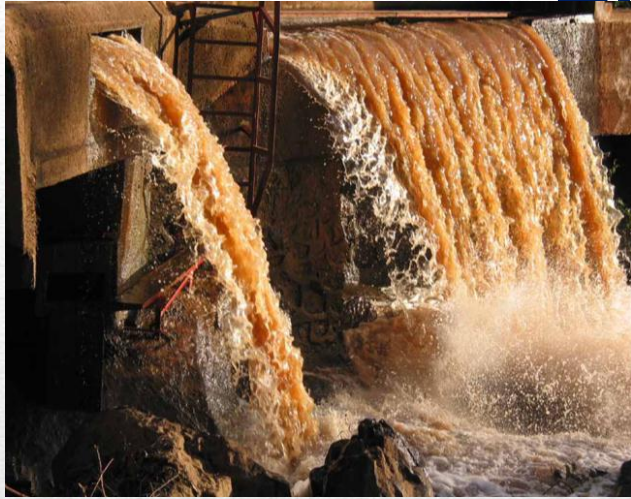
Energy – Micro Hydropower



- Government of Rwanda created an enabling environment for renewable electricity power generation (Feed In Tariff); established a guaranteed price for electricity generated from renewable for a fixed time that provides a stable income stream and adequate return on investment; provide access to the grid and an obligation to purchase power generated.



Energy – Micro Hydropower



- With a such good business environment, the Private Sector plays and will play an important role in the implantation of the Rural electrification.
- **Challenges:** access to early-stage financing for local private investor, lack of technical skills on the local market, the end beneficiary of the carbon credits Government versus Private Investor.





Thank You!

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