World Bank Support to Geothermal in East Africa
ARGEIO C6, Addis Ababa

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The World Bank continues strong focus on geothermal
  – Underpinned by WB Climate Action Plan (April 2016)
  – Since 2011 ~14% of WB financing for non-hydro renewables has been in geothermal while its proportion of installed capacity is less than 1%

Need for public intervention to absorb some of the resource risk
  – In 2016 18% of MDB financing for exploration drilling compared to 6% in 2011

Global Geothermal Development Plan
  – Collective fundraising effort to scale up geothermal (US$250 million CTF)
  – Concessional financing to leverage private investment in exploration drilling
  – Knowledge dissemination – capacity building

World Bank activities in geothermal in East Africa
  – Traditional approach
  – Iceland – World Bank Compact
  – GGDP
ETHIOPIA

Geothermal Sector Development Project

Sites: Aluto Langano and Alalobeda

Volume of financing: US$218.5 million (IDA and SREP)

Collaboration: Iceland Compact, Japan (downstream development)

Type of intervention:
• Exploration, confirmation and capacity drilling of up to 26 wells
• Procurement of drilling rig/refurbishment of existing rig
• Technical Assistance

Progress/timeline:
• Consumables for 10 wells procured
• Bids for drill rigs received
• Owners Engineer/Supervision Consultant in advanced stage of procurement
• Drilling planned to start in 2017
KENYA

*Electricity Expansion Project Additional Financing*

**Site:** various sites including Olkaria

**Volume of financing:** US$68 million (World Bank along with 7 co-financiers)

**Type of intervention:**
- Access roads and SGS for Olkaria I and IV
- Investments in transmission and distribution

**Progress/timeline:**
- Work is largely completed

**Capacity Building under GGDP**
- Preparation of National Geothermal Strategy and GDC Business Plan”
- Phase 1 (diagnostic) had been completed
- Phase 2 will be launched mid November (consultant being hired)
DJIBOUTI

Geothermal Power Generation Project (GGDP)

Site: Lake Assal

Volume of financing: US$31.2 million (World Bank along with 7 co-financiers)

Type of intervention:
- Exploration drilling of 4 wells
- Technical Assistance

Progress/timeline:
- All tenders for large procurement packages have been launched and are in advanced stages of completion, e.g. steel materials (wellheads and casing) and civil works
- Contract for Drilling Service Company (DSC) under procurement
- Drilling is expected to start by end of 2016.
TANZANIA

Capacity Building under GGDP

Site: Ngozi Geothermal Prospect

Type of capacity building:

- Planning of geothermal exploration drilling projects
- Best Practices in Environmental and Social Safeguards for exploration drilling projects

Progress/timeline:

- Consultant under contract for capacity building on planning geothermal exploration drilling
- Consultant for environmental and social safeguards in advanced stages of procurement
- Both activities to be completed in April 2017
MALAWI

*Energy Sector Support Project*

**Site:** Country wide

**Volume of financing:** US$84.7 million (~1 million for geothermal)

**Type of intervention:**
- Transmission and distribution upgrade and expansion
- Evaluation of generation option (incl. geothermal)
- Energy efficiency

**Geothermal component progress/timeline:**
- Consultants contracted to carry out reconnaissance and surface exploration
- Country wide reconnaissance completed (25 sites)
- Preliminary surface exploration (geology, geochemistry) planned for 6 sites
- Complete surface exploration planned for two most feasible sites
- Technical and economic pre-feasibility of power generation for two sites
- Estimated completion by June 2017
**GGDP Knowledge Dissemination**

**RECENT ACTIVITIES**

- Reducing Drilling Risk course (WGC 2015)
- UNECE – IGA Definition of Global Standards for Geothermal Resource Classification
- Geothermal Resource Risk Mitigation Mechanisms report
- Global Geothermal Development Plan Roundtables (The Hague, Copenhagen, Reykjavik)
Planned Collaboration with Iceland MFA on Geothermal

*CONCEPT UNDER DEVELOPMENT*

- **Best Practices in Geothermal Data Management**
  - Definition of global best practices
  - Pilot TA projects to bring beneficiaries to best-practice levels
  - Preparation of guidelines for incorporation of GDM into WB financed geothermal projects

- **Improving Gender Equality and Social Inclusion in Geothermal Projects**
  - Definition of gender aspects in geothermal projects
  - Preparation of actionable guidelines for addressing gender equality in geothermal projects
  - Pilot TA incorporating gender aspects into an ongoing geothermal project in accord with guidelines
Thank You.

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