



**TMGO**

TULU MOYE GEOTHERMAL



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EthiopiaTMGO



## Message

Aynalem Getachew, E&S manager

Welcome to the February edition of our newsletter. In this edition we want to feature our environmental and social ways.

We, at TMGO take an interdisciplinary and collaborative approach to working with our implementing partners to integrate internationally accepted principles of environmental and social sustainability into the design and implementation of our project. Good environmental and social management is a key element of TMGO's model. Our investments aim to maximize the benefits of the project while minimizing potential negative social and environmental impacts.

We recognize that environmental and social (E&S) sustainability is central to the attainment of geothermal energy development, hence the need to be mainstreamed into our core activities. TMGO's Environment and Social management System/ ESMS/ have been developed to underpin our commitment to reduce and/or avoid negative E&S impacts of our activities and to ensure sustainable development outcomes. TMGO's ESMS is designed to ensure that potential negative E&S impacts are minimized, while the positive effects on communities and the environment are enhanced. We follow the guidance of International Finance Corporation (IFC) Performance Standards and international best practices.

We regularly report our E&S performance to regulatory body, project sponsors, and to our board of directors. We undertake independent external assurance of our approach and outcomes for our project. The 2020 E&S performance audit completed in January 2021 by an external consultant and the audit concludes that our project implemented generally in compliance with IFC performance standards and international best practice. The audit also identified a few partial compliances for which an action plan developed to bring these gaps into a full compliance stage. The Audit is completed against IFC performance standards and TMGO commitment towards environmental and social impact management and mitigation strategy and our environmental and social policy.

We are committed to working with our stakeholders to understand their legitimate needs and concerns and integrate these into our business to create an organization that is sustainable and shares the value generated. From the beginning, we have been meaningfully engaging with our community. We have functioning community engagement designed by the community to meet and discuss project progress. We continually monitor the quality of our engagement, structures, and communication channels in place, especially at community level, to ensure these are effective.

We are committed to increasing levels of trust and improve our standing in the project communities. Our social license to operate depends on our ability to ensure our stakeholders participate in the economic benefits we generate. The fact that we are a major energy company raises expectations. We work in managing expectation and through our core activities, we employ local community members, provide training and apprentices, pay taxes to the national and regional government, and procure from project communities and we also put forward significant investment in infrastructure; road upgrade, improved access to clean water, and access to electricity for our community, we avoid physical displacement; provided generous compensation for economic displacement; we respect the social, cultural and religious wishes of our community; and quickly addressed any social or environmental issues that developed.

We opened different channels of communication to receive concerns and grievance related to our project implementation at the local and national level. We encourage all our stakeholders to use our toll-free number 7428 for any issues of concern related to our activities.

A yellow excavator is visible behind a chain-link fence. The excavator's arm and bucket are partially visible, and it appears to be in a construction or maintenance area. The background shows some greenery and a clear sky.

## Site Update Summary

The month of February has been a month focused on the Geothermal drilling and water supply system however drill pad expansion works for GA and GB have been in preparation phase in the background. Design works for new drill PADs, GC and GD is also being expedited with the hope of starting construction very soon.

## Geothermal Drilling

On Thursday 4<sup>th</sup> February 2021, at around 11.40 a serious incident took place while drilling exploration well GA-2 in Tulu Moyo. Currently, scheduled deviation survey was ongoing. The top drive was pulled up to height of approximately 19 m above the drill rig rotary table and the deviation survey tool was lowered into the well. In a span of about three minutes a partial hydraulic braking system failure occurred resulting in the top drive started sliding down the torque tube. Emergency braking system, the eddy brakes, was engaged and significantly slowed the movement of the top drive. So instead of the top drive falling directly down it took the top drive about 18 seconds to fall to the drill rig rotary table. The top drive moved out of the torque tube track and landed on the rig floor. Because of Contractor's experienced drilling crew no one was hurt as this happened. We would like to use this opportunity to give our warm gratitude to the KenGen crew, the Drilling Supervisors, TMGO Team on how well they have handled the situation after the incident. We are also happy to announce that after a detailed root cause analysis, repair works and Non-Destructive-Testing of key metallic components, the Top-Drive was commissioned to be in operation again.

During this waiting time, a series of meetings was conducted with our Lenders Technical Advisors, our International Scientific and Technical Committee (ISTAC), our geoscience team in coordination with Reykjavik Geothermal science team and our external advisors in order to re-evaluate our drilling targets for the current well that is being drilled – GA-2. A deliberation was given on the 19th of February, by the Technical Team of TMGO in consultation with the CEO: change the well path of GA-2 from South West direction to North West direction in order to be closer to the deep conductor zone. Important to note that at this stage, valuable geothermal indicators have been provided on the south-west direction by studies of surface manifestation. This decision to drill to North West is not excluding going to South West at later stages.

After a waiting time of 19 days following the incident, we started drilling again. Current depth of drilling has reached 671 m (as of 26 February), we are getting full returns. We are all excited on what lays ahead.

## Water Supply System

**Water Well 03 and 04:** Water Well 04 pump installation has been successfully completed and been pumping water since past week. This will bring us additional 8 to 10 liters per second. Well 03 has been bringing an average of 14 liters per second since November 2020. This will definitely give good support for our geothermal drilling.

Water Well 03



Water Well 04



Water Well 04



Water Well 04



**Water Well 05:** Drilling was in progress with ECC, despite technical challenges in relation to the formation and major circulation loss (collar with bit stuck in the well). Current depth 268 m. Decision was made to move the rig used to well 2 location and replacing it, to bring a new bigger rig (owned and operated by ECC). Additional land acquisition to accommodate the new rig has been finalized and mobilization has started.

**Water Well 02:** After agreement has been reached with ECC Energy, they moved the rig from well 5 and currently setting up to start the fishing works at well 2. Fishing trials are in progress and despite challenges, KenGen, MGM, ECC Energy are working hard in order to recover the dropped pump and have Water Well 02 up and running again.

**Fishing works at Water Well 02:** The Technical team has new additional water source strategies and with that, a new water well location, well 06, has been introduced. This is located in close vicinity of Well 02.

**Gravity Monitoring:** The gravity monitoring team Led by Professor Elias Lewi successfully accomplished the first field campaign which is the establishment of GNSS reference stations, which will be used for the main gravity survey.

Water Well 05



Water Well 02





# TMGO receives the first disbursement of \$1.9M from GRMF

The Geothermal Risk Mitigation Facility (GRMF) was established to fund, facilitate, and accelerate geothermal development in Eastern Africa. The overall objective of the GRMF is to encourage public and private sector investment into geothermal power generation. The GRMF therefore acts as a catalyst in establishing geothermal energy as a strategic option for power generation capacity expansion in eleven partner countries in the Eastern African Rift region (Burundi, Democratic Republic of Congo, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Tanzania, Uganda, Union of Comoros, Zambia).

The African Union Commission (AUC) on the one side and the German Federal Ministry for Economic Cooperation and Development (BMZ) and the EU-Africa Infrastructure Trust Fund (EU ITF) via KfW Entwicklungsbank (KfW) on the other side established the Geothermal Risk Mitigation Facility (GRMF) to fund geothermal development in Eastern Africa. In addition, the UK Department for International Development (DFID) is contributing to the GRMF.

The GRMF was launched in April 2012 and is implemented in a series of application rounds. The programme co-finances surface studies and drilling programmes aimed at developing geothermal energy projects – being a largely untapped indigenous and renewable energy resource. The GRMF programme comprises approximately 122 million USD available for funding.

The objective of the Facility is to encourage public and private investors as well as public private partnerships to develop geothermal prospects for power generation in Eastern Africa by providing grants for two types of activity:

- Surface studies to determine the optimal location of reservoir confirmation wells at the most promising geothermal prospects.
- Drilling and testing of reservoir confirmation wells at the most promising geothermal prospects to assist Developers secure financing for subsequent reservoir confirmation and/or well field development wells.

Herewith GRMF will provide financial support to assist in mitigating the geothermal exploration risk. It is thus expected to improve access to equity or other funding source and thus play a catalytic role in establishing geothermal energy as a strategic option in power expansion planning of the participating countries of Eastern Africa. As a result, reduced risks and costs for early-stage geothermal development are expected to encourage the development of further geothermal investments.

Winning Applicants for surface studies and exploration drilling and testing programmes, benefit from financial supports as below:

- Infrastructure grants: 20% of approved allowable costs for infrastructure required for eligible surface studies and eligible drilling programmes (e.g., access roads, water supply, etc.)
- Surface studies grants: 80% of approved allowable costs (excluding infrastructure costs)
- Drilling grants: 40% of approved allowable costs for the exploration drilling and testing programme for reservoir confirmation wells (excluding infrastructure costs)
- Continuation Premium: up to 30% of the approved eligible and expended costs of continuation activities, or up to 30% of the developer's share of the eligible and expended costs incurred during the initial drilling and testing programme – whichever is lower.



## Awarded projects

from Application Round 1 to 5:



TMGO also applied to the Geothermal Risk Mitigation Fund in Jun 2018 and has been awarded \$10M worth of grant from GRMF within the same year. Following that is to be recalled that the grant contract was signed in October 2020 and application to the payment instalment for 20% of the Drilling and Testing Grant was made in December 2020. Accordingly, TMGO is delighted to have received the first disbursement of \$1.9M in February 2021.

# Spotlight on Logistics

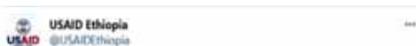
In the last five or take 10 years, logistics in Ethiopia has improved significantly. Logistics officer's expertise and their efficiency keeps increasing notably along both the Eastern side of the country towards Djibouti corridor, on our dry ports and on the southern corridor in Moyale towards Kenya.

For example, TMGO's partner KenGen requested mandatory tools and suggested to use its Moyale (Kenyan) border / corridor to import heavy machineries that were critical for drilling operations. There were hundreds of trucks that needed to transport the equipment from Kenya to Ethiopia. With minimal glitches those trucks were able to move the needed rigging materials to TMGO's site. That in return helped TMGO & KenGen reduce their overhead and procurement / contract costs tremendously.

Given the type of business structure, which is one of the first PPP's in energy, the joint effort by the Ethiopian government bodies, KenGen and TMGO is commendable in handling all the logistics policies and regulations. On top of that, this was handled amid Covid-19. Ethiopia's Logistics officers on the ground were admirable for adapting new protocols and making sure those heavy machineries were transported to site in a reasonable time manner.

Senior managements of TMGO would like to express their appreciation for the Ethiopian Ministries for their constant support and cooperation on TMGO's various requests, ranging from various duty-free privileges to other special critical needs.

## USAID led US Embassy Team Visits Tulu Moye Geothermal Operations Project



Thanks to @EthiopiaTMGO for inviting us to observe progress on their geothermal power site, which is one of Ethiopia's first independent power projects that will generate 150 megawatts, garnering \$800 million in total investments. #PowerOfPartnership @PowerAfrica @USEmbassyAddis



TMGO are very honored to host a team of USAID & U.S. Embassy visitors at project site which is found in the Arsi Zone of the Oromia regional state. The team from the Embassy and USAID was followed by senior energy advisors and professionals from the Ministry of Water, Energy and Irrigation & observed the progress on drilling operations on 5th of February 2021.

The esteemed Embassy in Addis Ababa wrote on their Facebook page.

“With support from the American people, TMGO has successfully facilitated agreements with the Government of Ethiopia to secure private investments to launch the project. It is one of Ethiopia’s first independent power projects with an estimated generation capacity of 150 megawatts, and a total investment of \$800 million U.S. dollars. Phase one is expected to be completed in early 2023 and to generate 50 megawatts, with phase two operations coming online by 2025 to generate an additional 100 megawatts”.



## Meet Rufus Maina

Who was given a new Oromo name Gadaa by local KenGen staffs.

Rufus Maina who has been KenGen site manager for the past two months, was celebrated by local KenGen staffs for the knowledge he shared and a good time they had with him. To show their appreciation each of them contributed some money and bought a nice Oromo cultural clothes as a gift for him and named him an Oromo named called GADAA.



# TMGO welcomes

Baby Noah (Geo 5)

Give a "hear, hear" your little boy is here!

TMGO congratulates Hayat Sied, our Chief Commercial Officer, for the amazing gift of baby Noah (we usually call newborn at TMGO "baby Geo") to their family.



## MEET OUR STAFF

**Betelehim Gurmessa, Senior Accountant**

Betelehim Gurmessa has over 10 years of experiences in finance. Among others, she worked for Ethiopian Revenue and Customs Authority (ERCA) as tax adviser. She worked for construction, manufacturing & power generation company in Ethiopia. For the past eight years, she worked with Alstom Grid SAS Ethiopia Branch acquired by General Electric International. As Sr. Accountant of TMGO, Betelehim is responsible for the organization's adherence to the tax laws of the company, providing timely monthly and annual reports to the government as well as the senior leadership team and following the accounting principles in keeping the organization's books accurate and up to date.

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