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Challenges Affecting Procurement Process for Geothermal Projects in Tanzania

Hassan Kapungu Mihayo and Shakiru Idrissa Kajugus

Tanzania Geothermal Development Company Limited (TGDC)

P.O.Box 14801, Dar es Salaam – Tanzania

hassan.kapungu@tanesco.co.tz; shakiru.idrissa@tanesco.co.tz

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ABSTRACT

Geothermal development industry is a new venture in Tanzania that involves a number of development stages with multi-procurement processes in almost every stage of development until the project is realized. Tanzania Geothermal Development Company Limited (TGDC) is the sole company (100% owned by the Government) dedicated to spearhead geothermal development in Tanzania. TGDC since it's establishment has been engaged in different geothermal research projects and other projects for establishment of suitable environment for smoothen and sustainably development of geothermal in the country. Procurement processes have been taking place in almost all the projects implemented. Both Government funds and development partner funds have been used to finance the projects. The first major procurement for geothermal associated activities was registered in 2015, which involved funds from development partner (AfDB) under Scaling-up Renewable Energy Programme (SREP) funds. Since then a number of challenges have been recorded e.g. risk management, procurement time, lack of local service providers, unclear development partners' conditions, and changing of project implementation guidelines, and managing political expectations. This paper discusses the challenges encountered in various procurement processes and pause some mitigation measures taken. Much focus will be on the Ngozi Geothermal Prospect, being the flagship prospect for Tanzania Geothermal Projects Development.

1. INTRODUCTION

Tanzania Geothermal Development Company Limited (TGDC) is 100% owned by the government of Tanzania, and it was incorporated in December 2013 as a subsidiary Company of Tanzania Electric Supply Company Limited (TANESCO) and became operational officially from July 2014. The company's Mandate is to spearhead development of geothermal resources in Tanzania, which is theoretically estimated at 5000 MW electricity potential and several Megawatts thermal.

Since its establishment, TGDC has been working to appraise most of the geothermal prospects to a level of confirming the resources as the measure to de-risking the fields for further investments. Priority prospects include Ngozi (Mbeya), Songwe (Songwe), Kiejo-Mbaka (Mbeya), Luhoi (Coast region), Natron (Arusha), Kisaki (Mororogro), Meru (Arusha) and Ibadakuli (Shinyanga). Four (4) most promising prospects out of them have been selected to flagship the geothermal development in the country to meet the short term target of injecting 200 MW of geothermal power to the national grid by 2025 as well as Megawatt thermal for direct heat uses applications projects.

The four (4) prospects namely, Ngozi (Mbeya), Songwe (Songwe), Kiejo-Mbaka (Mbeya) and Luhoi (Costal region) have now reached to stage of resource confirmation through test drilling programmes. The Ngozi project has been set to commence the test drilling program in the financial year 2019/20 while, preparation works and fund mobilization for undertaking test drilling programs for Songwe and Kiejo-Mbaka prospects are ongoing of which their implementations is set to commence in 2020/21. The resource confirmation involves undertaking of test/exploratory drillings, resources/reservoir assessments and appraisal drilling to understand the resources extensions in terms of quality and quantity. The resource confirmation stage will give the go or no go decision for the next stage of the project development for power generation and direct heat uses applications. If you use figures, place them within the body of the paper, unless they are too large to fit, in which case they should be put at the end of the paper.

TGDC is also continuing to work on preliminary and detail surface exploration studies to other prospects for the purpose of appraising them to a level of resource confirmation for further investment to meet the long term power demand and sustainable use of renewable energy in the country. These prospects include Natron (Arusha) Kisaki (Mororogro), Meru and Ibadakuli (Shinyanga).If you use figures, place them within the body of the paper, unless they are too large to fit, in which case they should be put at the end of the paper.

2. NGOZI GEOTHERMAL PROJECT

The Ngozi geothermal project is located in the Rungwe Volcanic Province in Mbeya region and has been studied up to a detailed surface exploration under the technical collaboration from UNEP/ARGeo and ICEIODA/MFA-Iceland, which was completed in September 2016. The study confirmed the prospect as high temperature volcanic system (232 ± 13 °C). The prospect is potential for the electric generation purposes as well as cascading direct heat uses applications. The study also recommended actions for the next step which among others is confirmation of the resource by undertaking test drilling programme of at least three (3) slim wells near Ngozi caldera in order to confirm the extent of the resource.

After resource confirmation, TGDC intends to develop the Ngozi geothermal project to harness electrical power and utilize the heat found in brine for direct utilizations such as domestic heating, aquaculture, geo-agricultural drying and other uses. Development of Ngozi geothermal project is part of the government efforts toward diversifying power generation mix in the country.

The total estimated geothermal potential for the site is more than 140 MW but in order to mitigate the risks associated with geological uncertainties, the plan is to develop the site in stages starting with construction of the 30MW plant in 2022. The total cost for implementing the Ngozi 30 MW project is 144 MUSD.

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Currently, TGDC is preparing to conduct a test drilling programme for Ngozi project from the financial year 2019/20 to 2020/21 that is co-financed by the government and GRMF. The drilling consultant for planning, designing, managing and supervise the test drilling is now in place. The test drilling programme will be preceded by procurement of various goods and services as shown in **Table 1** below.

Table 1: Procurement of goods and services for Ngozi Drilling Project

S/No.	Activity
1	Procurement of Drilling & Infrastructure Consultant
2	Procurement of Work over drilling rig
3	Procurement of contractor for infrastructure development
4	Procurement of drilling contractor
5	Procurement of consultant for appraisal drilling
6	Procurement of contractor for infrastructure development for appraisal drilling

3. PROCUREMENT REFORM IN TANZANIA

The history of public procurement in Tanzania can be traced back to post independence using old procurement system inherited from the colonial administration. Under this system all procurements were made through the different Government Stores Departments for within the Ministry of Works for all stationery, office supplies, fuel, and lubricants. Various legal frameworks, regulations, rules and procedures were applied in the procurement process in order to control Government funds utilized through the procurement function. For instance, in the Central Government, The Exchequer and Audit Ordinance CAP 439 of 1961 provided for the control and management of Government funds. The procurement process for acquiring goods and works was articulated in the Financial Orders Part III (Stores Regulations), 5th Edition, 1965. These Stores Regulations were used in accordance with Section 7 of the Exchequer and Audit Ordinance, CAP 439 of 1961. The old system focused much on procurement of goods/ supplies and therefore holding, controlling and managing stocks was part and parcel of the old procurement system and the overall in charge was the then Ministry of Works. Procurement of Works on the other hand, was seldom mentioned.

Between 1967 and 2000, the Tanzanian economy was characterized by a heavy dependency of state – owned enterprises/organizations. Public procurement in parastatal enterprises/ organizations was therefore regulated by the specific laws which established the specific parastatal organizations. Each parastatal organization promulgated its own Financial and Procurement Regulations and the overall responsibility was vested to the Ministry of Finance. Nevertheless, the procurement systems had various shortfalls of which among others was inadequacy and fragmentation of the procurement laws. The legal framework indicated major weaknesses in that the procurement laws were scattered in various statutes that had loopholes with no enforceable penalties.

The Government's effort to undertake public procurement reform in Tanzania Mainland started in 1992 when the Government commissioned a consultant to undertake the Public Procurement and Supply Management Study. The study was part of the Government's efforts to improve the public procurement system in the country. The reform also aimed at ensuring the procurement is conducted in a fair, transparent and accountable manner, contribute towards the creation of sound economic climate in Tanzania, increase participation by the Tanzanian private sector and public procurement to be subject to a robust and effective legal and regulatory environment. The study recommended among other thing, the need for establishment of the Procurement Law and its subsequent regulations.

The implementation of the Procurement Reform resulted to the enactment of the Public Procurement Act (PPA) 2001, which came into effect on 1st July 2001 and was applicable to all procurement financed by public funds, with a slight exception to Defense and National Security. However, in 2004 the PPA 2001 was **repealed** and replaced by the **PPA 2004.** In 2011, the PPA 2004 was repealed. The new **PPA 2011 (and its Regulations 2013)** was thus enacted replacing the former PPA 2004. **In 2016**, the **PPA 2011** and its Regulations 2013 were **amended.**

The PPA is applicable to all procurements financed by public funds and sets out a Public Procurement System with objectives of ensuring that procurement is conducted in a fair, transparent, accountable and competitive manner and contributing towards the creation of sound economic climate in Tanzania while increasing participation by the Tanzania private sector.

Key Players of the Procurement System in Tanzania that are expected to work collaboratively with other government departments in procurement of works, goods or services; -

- Procuring Entities (PEs);
- Ministry of Finance and Planning (MoF);
- Public Procurement regulatory Authority (PPRA);
- Public Procurement Appeals Authority (PPAA);
- Government Procurement Services Agency (GPSA)
- Public Procurement Policy Division (PPPD)

4. PROCUREMENT PROCESSES IN TANZANIA

According to the Public Procurement Act, 2011 as amended in 2016, procurement process means the successive stages in the procurement cycle, including planning, choice of procedures, measures to solicit offers from tenderers, examination and evaluation of those offers, award of contract and contract management.

The procurement process starts when user recognizes a need for materials or services, specifies the need by writing technical specifications, terms of references or a statement of requirements. The user then ensures that his/her need is incorporated in the company budget and included in the company's annual procurement plan. When both the budget and the annual procurement plan have been approved, then the user is ready to initiate the procurement for his/her requirements.

5. CHALLENGES AFFECTING PROCUREMENT PROCESS FOR GEOTHERMAL PROJECTS IN TANZANIA

As it has already been stated above, Geothermal is a new venture in Tanzania. It needs to undergo certain level of development to be able to sail smoothly, specifically on the procurement part. Some of the challenges affecting procurement process in Geothermal are discussed below.

5.1 Risk Management

Being a new venture, there are still a number of risks involved in the procurement of geothermal equipment and services that TGDC have to learn and find ways to manage them. For example, lately, the company floated a quotation to procure geo-scientific equipment and as required by the laws the standard quotation documents were used, which among other things requires bidders to submit their valid business license, Tax certificates and a performance guarantee in case of non-performance contract. The bidder is the sole manufacturer of such equipment so not willing to submit the requirements and therefore the tender has not been concluded since then.

5.2 Procurement Time

A smooth procurement transaction for a consultant under international competitive selection takes an estimated time of up to 160 days (5.3 months), national competitive selection takes about 140 days (4.7 months). These includes advertising of the Expression of Interest (EOI), evaluating EOI and approving the shortlist, issuing of the Request for Proposal (RFP), evaluation of the Technical Proposals, approval of the Technical Proposals Evaluation Report, opening of the Financial Proposal, Evaluation of the Financial Proposals and preparation of the Combined Technical and Financial Evaluation report. Approving of the combined report, negotiation with the winning consultant and vetting of the contract by the Attorney General.

It takes about 84 days (2.8 months) for national competitive tendering and about 100 days (3.3 months) for international competitive tendering in the procurement of goods, works and non-consultancy services. When the funds utilised are from the development partners, a number of days have to be added for securing their "No objection" before we can proceed with the next process. Again, the procurement process in not always smooth, number of stoppages for consultations and discussions are always experienced adding up to the normal processing time.

5.3 Lack of local suppliers

The first procurement challenge faced was when we initiated procurement geothermal field equipment. The list included items such as; PH/TDS/EC Meters, Sampling Tools – Amber bottle 100 ml, Sampling Tools – Bottles (1000ml; 250ml; 100ml) @ 100 units, Sampling – Filter membrane, Gas sampling bottles (500ml; 250ml; 100ml) @ 100 units and Thermal couples with an estimated budget of USD 50,000.00 about TZS. 120,000,000.00 at the time. The nature and value of procurement called for national shopping whereby local suppliers were issued request for quotation documents, however we could not find a competent supplier to deliver the items. Hence, we had to request to change the use of funds from procuring geothermal field equipment to procurement of ICT equipment.

5.4 Unclear Development Partners' Conditions

The first major procurement for geothermal associated activities was registered in 2015, which involved funds from the African Development Bank (AfDB) under Scaling-up Renewable Energy Programme (SREP). Funds were issued as a grant to assist the Government in the project preparations and for such it involved procurement of goods estimated at USD 50,000.00 and consultancy services at an estimated budget of USD 450,000.00. On implementing the project, different directive, conditions and limitations were not clear to the beneficially and therefore created some major delays during the implementation procurement.

5.5 Changing of Project Implementation Guidelines

According to SREP Investment Plan for Tanzania, the purpose of SREP PPG was to enable the Government prepare for the bigger projected estimated at USD 21,780,000.00. As such, the breakdown of SREP PPG was as shown in **Table 2** below.

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Table 2: Project Preparation Grant

Expenditures	Amount (USD)
Consultants/technical assistance	450,000.00
Equipment	50,000.00
Workshops/seminars/trainings	70,000.00
Travel/transportation	50,000.00
Others (admin costs/operational costs)	50,000.00
Contingencies	30,000.00
Total Costs	700,000.00

During the implementation there were changes on how to utilize the funds in such away workshops/seminars/trainings could not be implemented.

5.6. Managing Political Expectations

Geothermal in Tanzania has a lot of promises to support the energy mix strategy and minimise the dependence on the hydro and thermal plants as the main sources of electricity. As such, there are lot of expectations from various stakeholders. However, geothermal requires time to study, prepare, drill and finally utilise the steam once found. The major challenge here has been to contain the expectations of the politicians who also happen to be the policy makers, to them geothermal seems a long time preparations, procurement procedures with very high initial investment costs.

6. CONCLUSION

Geothermal Development in Tanzania has a long way to go and TGDC is taking a lot of effort to ensure that it is realized in Tanzania while overcoming or somehow minimizing the challenges patterning to procurement of in the geothermal industry. TGDC has trained staff on procurement under donor-funded projects, especially funded by the World Bank and the African Development Bank. The plan is to equip more staff with the necessary skills to enable them participate effectively in projects involving donor funds. Increase awareness to stakeholders regarding Geothermal and its journey towards development in Tanzania. The stakeholders include both the Government and private sector institutions as well as communities around the project areas.

The previous procurement processes using both donor funds and own source gave TGDC a big lesson to learn especially on contract management. Proper contract management will minimize the risks, identify correct sources for materials and services and procure timely.

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