



Geothermal Risk Mitigation Facility for Eastern Africa



PROGRAMME INFORMATION

With financial support from the



Federal Ministry
for Economic Cooperation
and Development

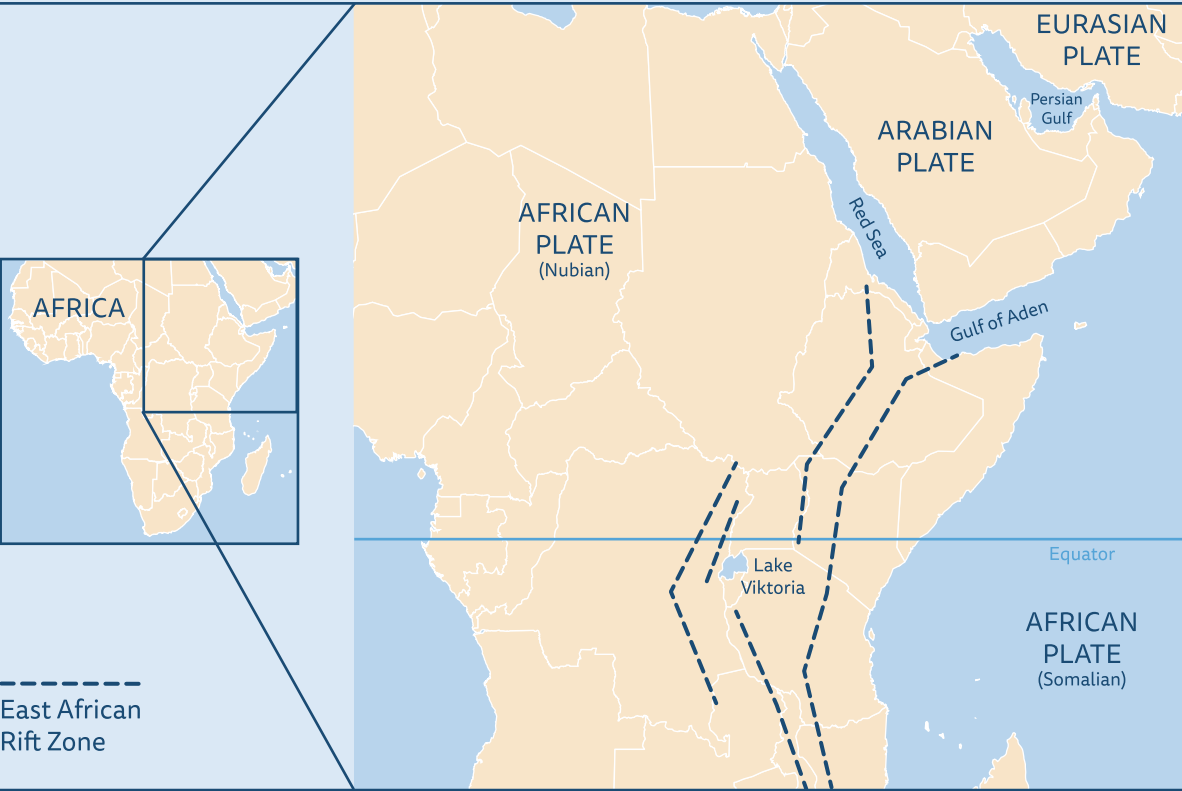


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OBJECTIVE

The Geothermal Risk Mitigation Facility (GRMF) was launched in 2012 to fund, facilitate, and accelerate geothermal development in eleven partner countries in the Eastern African Rift region. The GRMF is managed by the Regional Geothermal Coordination Unit (RGCU) within the Department of Infrastructure and Energy of the African Union Commission (AUC-DIE).

The Rift Valley's abundant geothermal resources can contribute to energy independence in the region and satisfy an ever growing demand for electricity as the region's economy grows and the standard of living increases. The GRMF is only active in Eastern Africa and provides funding for projects within the region exclusively.



Geothermal power is distinct from other established sources of renewable energy as it offers base load capacity. It is therefore an important component of the renewable energy mix and helps fuel Eastern Africa's development in a sustainable fashion.

ACTIVITIES

The GRMF offers information, capacity building, and funding to developers of geothermal power plants. These activities all tie into the application process for GRMF funding.

Information

The GRMF is present at regional events to inform about the potential of geothermal power in the Rift Valley and communicates the availability of financial assistance for geothermal power projects in Eastern Africa internationally.

Interested and pre-qualified developers participate in pre-bidding workshops to inform themselves about the GRMF's established processes, outlined in this publication, and the formal requirements to obtain funding, as well as the most crucial factors for successful project implementation.

The GRMF also maintains a geothermal database on its website (www.grmf-eastafrica.org), which is available to the general public.

Capacity Building

In the course of the structured application process, the GRMF experts communicate shortcomings of the application materials and provide constructive feedback to improve project quality.

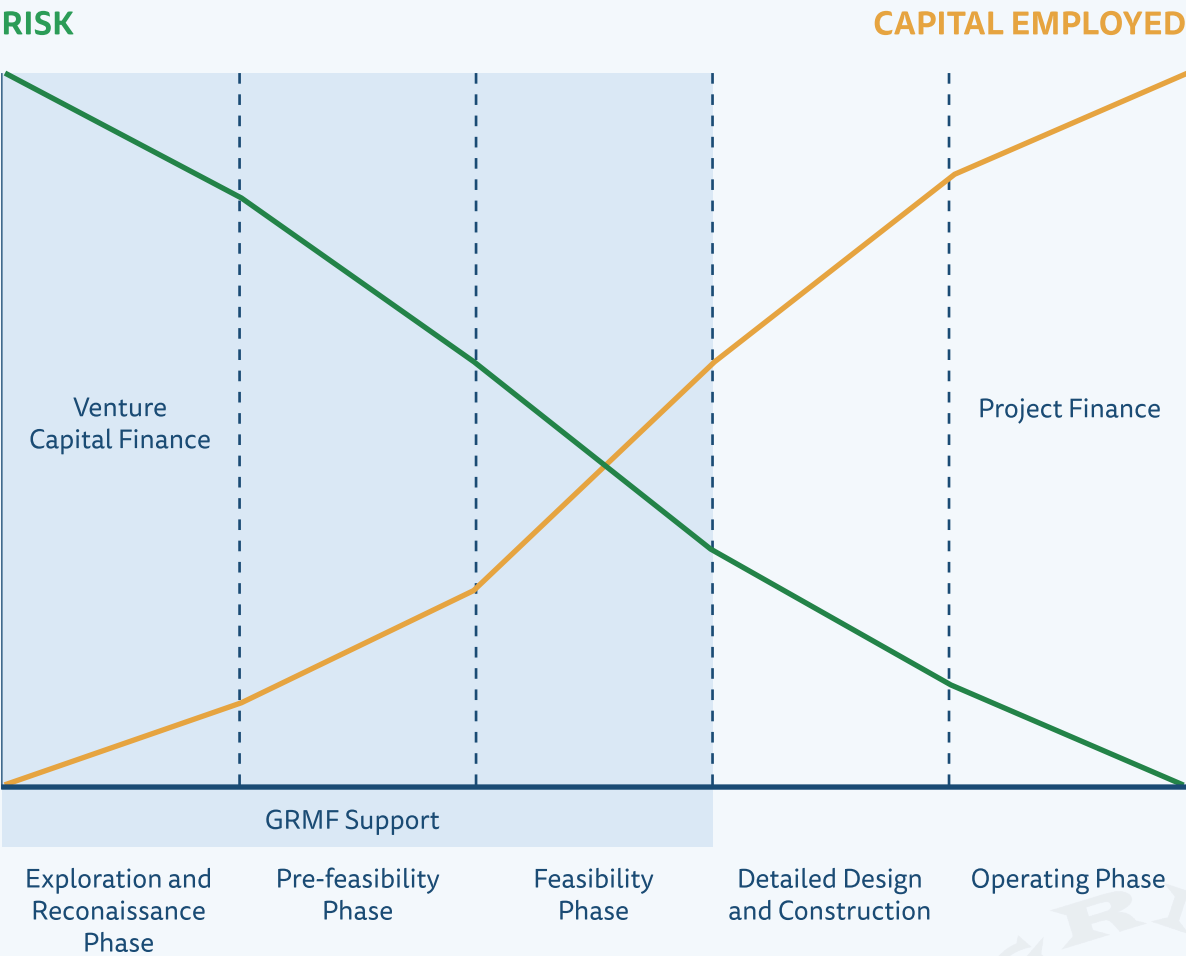
The documentation requirements during the application process, and the reporting requirements during project implementation, follow international standards and increase investor confidence in both the project and its developers, which helps to acquire external financing.

The structured approach leads to coherent planning and aids in effective project management.

Funding

The GRMF funds three different types of expenses: Surface studies, drilling programmes, and necessary infrastructure upgrades. Details regarding the funding levels and eligible expenses are described later in this publication.

Of course, the funding provided by the GRMF is the central tool to accomplish the facility’s mission. GRMF funding is intended to bridge the financing gap in the early stages of project development. As the relatively high risk stages of project development overlap with relatively high funding needs, financing for geothermal power projects is difficult to obtain at reasonable cost. This is where the GRMF steps in to promote the project, mobilise further private sector and governmental funds, and increase bankability of the project.

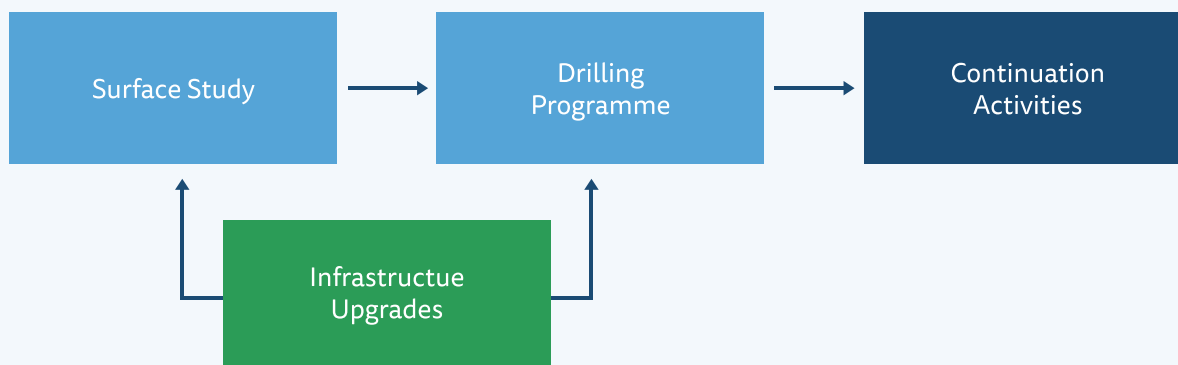


FUNDING

The GRMF itself has received funding in the amount of approximately 115 million U.S. dollars to date*. The sponsors are the German Ministry of Economic Co-operation and Development (BMZ), the EU-Africa Infrastructure Trust Fund (EU-Africa ITF), and the UK Department for International Development (DFID), all via KfW Development Bank (KfW)..

As mentioned, there are three areas of geothermal development supported by the GRMF: Surface studies, drilling programmes, and infrastructure upgrades.

Continuation activities are related to the ongoing development of a project after successful initial drilling and cover a wide range of activities, wherefore they are treated separately.



Surface Studies

The GRMF funds surface studies in areas where previous research indicates the existence of important geothermal resources. Up to 80 % of eligible cost is covered by a GRMF grant. Eligibility is outlined below.

Drilling Programmes

After the completion of surface studies, with or without prior GRMF support, the GRMF will fund drilling for reservoir confirmation. There are upper limits as to the number of drillings supported by the GRMF:

- Two full-size confirmation wells
- Three slim-hole confirmation wells
- One full-size and two slim-hole confirmation wells

The GRMF grant will cover up to 40 % of eligible cost.

The **Continuation Premium** may be applied for during the initial drilling programme, and continuation activities must begin shortly after the initial drilling is completed.

The continuation premium level is subject to a double cap system and limited to the lower of the two values:

- Up to 30 % of approved eligible and expended cost of the continuation activities
- Up to 30 % of the developer's share of approved eligible and expended cost of the initial drilling programme (excluding infrastructure upgrades)

Infrastructure Upgrades

Infrastructure upgrades that are required to implement the drilling programme or surface study are treated separately from the drilling programme or surface study itself as their benefit often extends beyond the drilling programme or surface study. Infrastructure upgrades are therefore covered up to an amount of 20 % of eligible cost.

* Amount is subject to exchange rate fluctuations.

ELIGIBILITY

Eligibility is determined in three categories:

- Developer eligibility
- Project eligibility
- Activity/ Cost eligibility

In the application process described in detail later on in this brochure, basic developer and project eligibility are determined early on in the process. The criteria are very straightforward. Eligible developers are both private and public entities as well as public -private partnerships. The project must be located in one of the countries in the project region:



- Burundi
- Comoros
- Djibouti
- DR Congo
- Eritrea
- Ethiopia
- Kenya
- Rwanda
- Tanzania
- Uganda
- Zambia

The developer also needs to furnish evidence of being financially and operationally capable of carrying out the proposed surface study or drilling programme.

Eligibility of cost to be partially funded by the GRMF is principally determined based on the direct association of the respective expense with the surface study or drilling programme.

APPLICATION

The GRMF application process is competitive and transparent. It is in alignment with project development, covering all relevant areas in terms of business planning, implementation, and the respective documentation. The applicant will receive feedback from the GRMF technical and financial experts throughout the process. The successful applicant will be well prepared for implementation as a result.

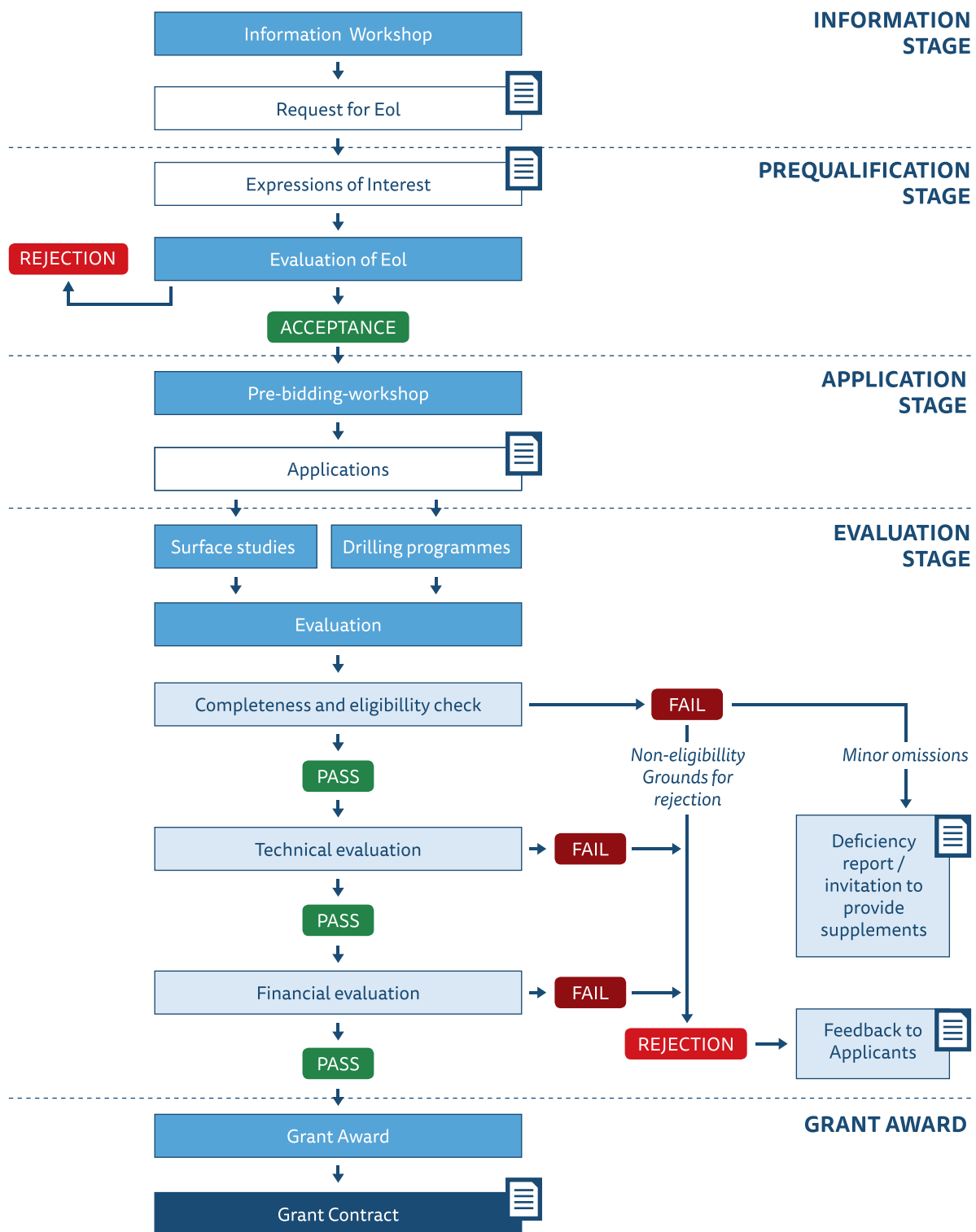
The evaluation criteria for **surface studies** are:

- Geo-scientific
 - Resource
 - Work plan
- Financing plan and permits
 - Appropriate authorisation for exploration
 - Financing plan for developer’s contribution
- Experience
 - Experience of key personnel
 - Experience of the applicant and contractors

The evaluation criteria for **drilling programmes** are:

- Geo-scientific
 - Status of geological and geochemical studies
 - Status of geophysical studies
 - Robustness of the proposed plan for drilling and testing
- Financial, technical, permits
 - Financing plan for applicants cost share
 - Concessions, licences, environmental permits
 - Access to power market, direct heat use
- Experience
 - Experience of key personnel
 - Experience of the applicant and contractors

Both the collection of the required information and the evaluation of the application are time-consuming. The application process is therefore split into a pre-qualification stage and an application stage.



Pre-Qualification

Before preparing and submitting an expression of interest to the facility, potential applicants are encouraged to participate in an information workshop hosted by the GRMF.

Full Application

Those applicants who successfully pre-qualify are then invited to attend a mandatory pre-bidding workshop prior to submitting their full application. Applicants can present all their existing technical and financial documents to the GRMF for an initial screening at that point.

The feedback received during the pre-bidding workshop will help the applicant to gather missing information early on and increases the applicant's chances of winning a grant contract.

The GRMF also gives feedback during the evaluation of applications so that applicants have the chance to improve the quality of their applications. The facility's goal is to promote geothermal development in Eastern Africa. Therefore, the process is designed to help applicants accomplish the successful implementation of the project.

Evaluation

The evaluation of applications is based on a points system. Different criteria carry different weights. Ultimately, the points achieved are expressed as a percentage of the maximum achievable points. Applicants who score above 70 % will be offered a grant contract.

The categories of the evaluation criteria for **surface studies** are:

- **Evidence of geothermal resources based on previous studies**
- **Robustness of the work programme**
- **Possession of, or application for all relevant permits**
 - Market viability of the future power plant
- **Financing for developer's share of project cost**
- **Experience and expertise of (key) staff – CVs**
- **Experience and expertise of the applicant's organisation – references**
 - Financial, managerial, and organisational capability
 - Planning for subsequent confirmation drilling (financial, technical, operational)
- Overall quality of the application

The categories of the evaluation criteria for **drilling programmes** are:

- **Appropriate, evidence-based drill site selection**
- **Robustness of the work programme**
- **Possession of, or application for all relevant permits**
 - Market viability of the future power plant
- **Financing for developer's share of project cost**
- **Robustness of business plan, financial sustainability**
 - Planned power plant capacity
 - Certainty of volumetric estimates of the electricity potential
 - Impact on geothermal power production levels in the project country
 - Community benefits, contribution to rural electrification, and combined heat and power generation
- **Experience and expertise of (key) staff – CVs**
- **Experience and expertise of the applicant's organisation – references**
 - Managerial and organisational capability
- Overall quality of the application

Applications with low scores regarding the **main criteria** in bold print are excluded from further consideration, regardless of the total score they could reach if all criteria were taken into account.

PROJECT COST AND PROCUREMENT

The subject of project cost and procurement ties closely into the application process as cost influences project viability and only eligible cost is considered when the grant amount is determined. Procurement according to GRMF guidelines and the verification of expense are relevant for the disbursement of funds, which is discussed in the next chapter.

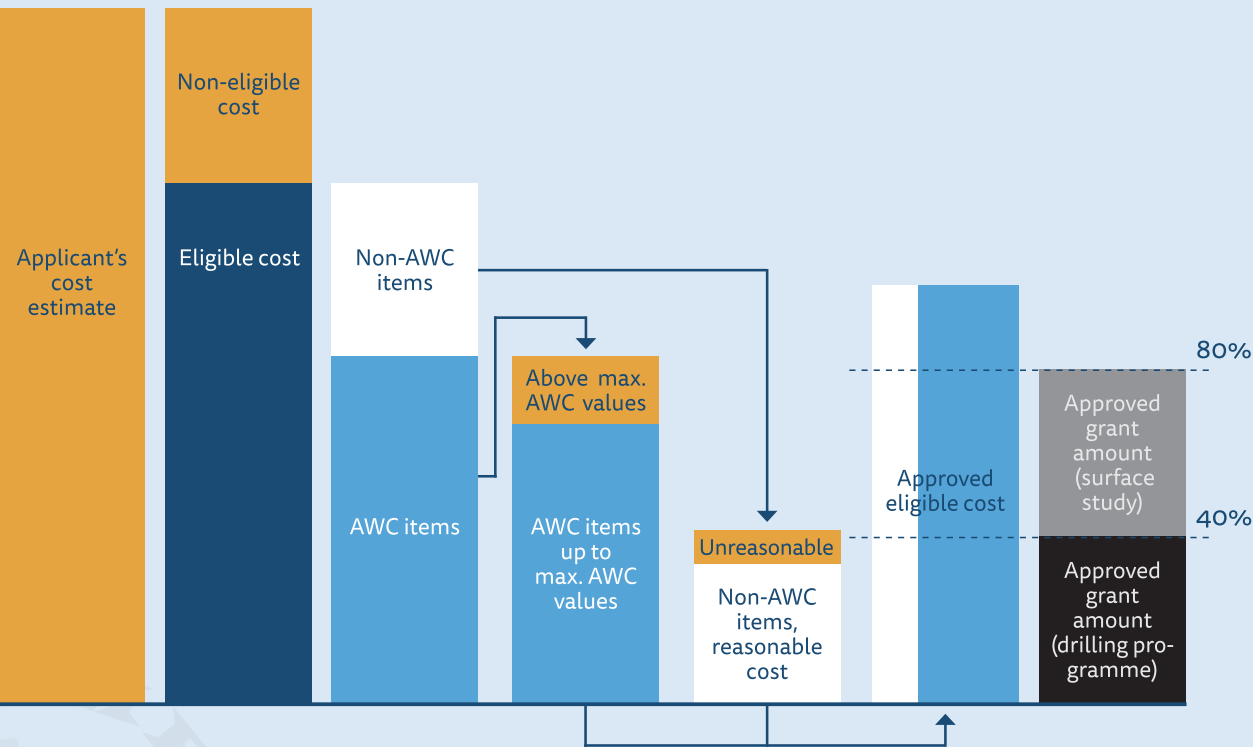
The GRMF uses public funds to promote geothermal development in Eastern Africa. Therefore, ensuring the proper and intended use of these public funds is of primary concern to the facility’s administrators. Developers should be well aware of cost and procurement guidelines.

Anticipated Well Cost Guidelines

The GRMF has developed Anticipated Well Cost Guidelines (AWC Guidelines) that stipulate maximum values for goods and services required for drilling to prevent budget inflation. The AWC Guidelines serve as a cap on drilling expenses. If cost items covered in the AWC Guidelines surpass the levels specified in the AWC Guidelines, the maximum funding available from the GRMF for such items is lowered to 40 % of the amount specified in the AWC Guidelines.

Approval of Proposed Project Budget

The GRMF experts will always assess whether the proposed project budgets are plausible and reasonably priced. This also extends to cost items not formally covered by the AWC Guidelines and applies to both surface studies and drilling programmes. Consequently, the funding levels – 80 % for surface studies, 40% for drilling programmes, and 20 % for infrastructure upgrades – refer to cost that is both eligible and reasonable according to the GRMF experts.



Procurement

The GRMF has procurement guidelines in place. These stipulate thresholds above which certain procurement procedures must be followed:

- Direct procurement
- Request for quotations
- Restricted tendering
- International competitive bidding

The current thresholds are published in the current Developer Procurement Guidelines of the facility. In-house services may be eligible if quoted at or below market prices.

Early Contracting

The GRMF takes practical considerations regarding project development into account. In order not to delay project planning or implementation, the facility allows for early procurement of the required goods and services under certain conditions.

The developer bears the financial risks associated with such early contracts in case of an unsuccessful application for GRMF funding, however. Also, goods and services already procured and quoted will be treated equal to estimated costs in the application process. This means that cost arising from early contracting which is deemed disproportionate, or is above the values stated in the AWC Guidelines, will only enter into the total grant amount up to the amount ultimately approved by the facility. Any early contracting procurement must be in accordance with the Developer Procurement Guidelines.

Procurement starting before the submission of the expression of interest will not be considered for GRMF funding. The applicant must inform the GRMF of early contracting activity and include information that allows the GRMF to judge whether the proposed procurement process is in line with the procurement guidelines.

The goods and services procured early may only be delivered after the submission of the full application, unless there is prior approval by the GRMF.



GRANT CONTRACT AND MONITORING

The grant contract, in conjunction with several annexes and the general conditions, details the obligations of the beneficiary and stipulates milestones for the payment of funds by the GRMF.

Payments are always tied to specific milestones. Whether the milestones are reached is determined by means of the reports submitted by the beneficiary. Statements in the reports are verified by the GRMF experts during monitoring visits to the site, and by plausibility checks of the data submitted in the beneficiary’s report.

Milestones usually are:

Surface Study	Drilling Programme
Provision of a bank guarantee to obtain an advance payment	
Initiation of field work	First well spud
Completion of field work	Completion of first well
	Completion of last well
Submission of final reports	

The grant contract also specifies maximum permissible implementation periods:

For surface studies:

- Initiation of field work: 6 months after grant contract signing
- Submission of final report: 15 months after grant signing

For drilling programmes:

- Construction of well pad: 12 months after grant contract signing
- Submission of final report: 24 months after grant contract signing

Monitoring is both financial and technical. It is based both on site visits and on the evaluation of reports submitted by the beneficiary.





The reporting requirements for **surface studies** are:

- Monthly status reports
- For final disbursement: Integrated resource report, financial report, expenditure verification report

The reporting requirements for **drilling programmes** are:

- Weekly/ daily progress reports (daily reports only required during drilling)
- For final disbursement: Completion report on drilling and testing, financial report, expenditure verification report

The final disbursement will consequently be based on the submitted financial information, invoices and receipts, as well as audited accounts and the technical reports.



Geothermal Risk Mitigation Facility for Eastern Africa

For more information and updates
please visit the GRMF online:
www.grmf-eastafrika.org

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