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Department of Infrastructure & Energy

GEOTHERMAL RISK MITIGATION FACILITY (GRMF) for Africa



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In 2022, the Geothermal Risk Mitigation Facility (GRMF) was split into two funding programmes.

GRMF POWER provides funding for geothermal projects with the goal of electricity production.

GRMF HEAT provides funding for geothermal projects with the goal of geothermal direct use.

1 BACKGROUND

In the African regions with the highest access to electricity, the share of fossil fuels in the electricity generation mix is above 80%.¹ However, within the East African Rift System (EARS) alone lies an estimated geothermal resource potential of over 20,000 MW_e.² Development of this resource has the potential to provide indigenous, low emission baseload generation, to improve security of supply and reduce the frequency and severity of energy price fluctuations. Reduction of greenhouse gas emissions and adding low-cost power generation capacity constitute further advantages of geothermal energy projects.

Despite this potential, geothermal resources are largely unexploited in Africa primarily due to the high cost and the associated risk of discovering and proving the resource. Geothermal resources within African countries are in general poorly defined with the exception of Kenya. Furthermore, the framework conditions (e.g. regulations together with financial and institutional arrangements) required to encourage geothermal development are insufficiently supportive.

In order to mitigate the high risk of exploration and reservoir confirmation drilling, the African Union Commission (AUC) with the German Federal Ministry for Economic Cooperation and the European Union (EU) -Africa Infrastructure Trust Fund through KfW Entwicklungsbank (KfW), have agreed to establish the GRMF (The Facility).

GRMF POWER is a grant programme designed to cost share exploration work (Surface Studies and Drilling Programmes) of public and private investors acting as geothermal project developers (applicants/eligible entities). The programme provides grants for siting, drilling and testing of wells to assist developers secure financing for subsequent wells and for Field Development Well (see Glossary). Furthermore, grants for infrastructure costs are foreseen. Depending on the availability of funds a contingent Continuation Premium for co-funding further production or confirmation drilling as well as a specified set of additional activities (please refer to chapter 18), may also be accessed.

In order to limit the risk to the GRMF, the grants will be awarded based on quality of the proposed project's geological, technical data and work programme, financial viability and environmental/social sustainability. Next to these, other evaluation criteria relate to the capacity and the experience of the applicants and their partners, as well as the overall coherence of the application.

¹ Source: African Energy Commission (AFREC) (2023): Electricity Generation in Africa from Fossil Fuels

² Source: Teklemariam (2018): Geothermal Outlook in East Africa and Contribution of UNU-GTP in Capacity Building

2 OBJECTIVE OF GRMF POWER

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 by providing grants for two types of activities:

- Surface Studies to determine the optimal location of exploration wells at the most promising geothermal prospects.
- Drilling exploration wells and testing of reservoir by drilling further confirmation wells at the most promising geothermal prospects, to assist developers secure financing for subsequent wells for field development (Field Development Well).

3 FINANCIAL SUPPORT

The upper limits for financial support of the approved eligible costs at the time of proposal submission (as stated in the eligible activities), fixed in the form of a grant contract, to winning Applicants for Surface Studies and exploration drilling and testing programmes are as follows:

- Infrastructure grants: up to 20% of approved eligible costs for infrastructure required for eligible Surface Studies and eligible Drilling Programmes (e.g. access roads, water supply).
- Surface Study grants: up to 80% of approved eligible costs (excluding infrastructure costs).
- Drilling Programme grants: up to 40% of eligible costs for the drilling and testing programme for well fluids (excluding infrastructure costs).
- Contingent grant (Continuation Premium): up to 30% of the approved eligible costs of continuation activities or up to 30% of the developer's share of the eligible costs incurred during the initial drilling and testing programme - whatever is lower - according to certain conditions as defined in chapter 18.

The disbursements will be based on actual costs up to the limits stated above upon reaching of agreed to milestones.

It is to be noted that collaboration between the Facility and other bilateral and multilateral facilities (e.g. NEPAD-IPPF, ARGeo and Development Banks) is strongly encouraged.



4 PURPOSE OF THE DEVELOPER MANUAL

The Developer Manual (the Manual) has two purposes:

- To provide information about the Facility so that developers can decide whether or not to apply to the Facility.
- To assist developers in their understanding of the Facility's main processes (Figure 1). Of particular interest to developers (and hence the main focus of the Manual) are the following processes: pre-qualification phase; application phase; evaluation; grant contract and grant provision.

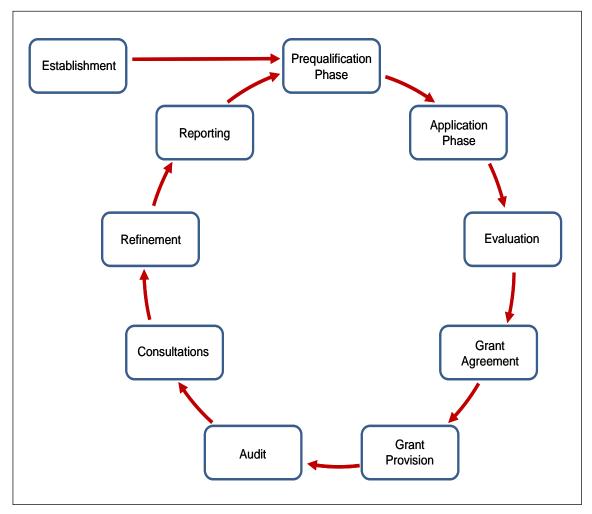


Figure 1: Overview of the main processes of the Facility.

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5 FACILITY EXTENT

The size of the Facility is approx. USD 60 million comprising of contributions by the German Ministry for Economic Cooperation (BMZ) and the EU-Africa Infrastructure Trust Fund (EU-ITF). The Facility is open to contributions from other donors.

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6 PARTIES OF THE FACILITY

The establishment and the implementation of the Facility involve several parties as shown in Figure 2.

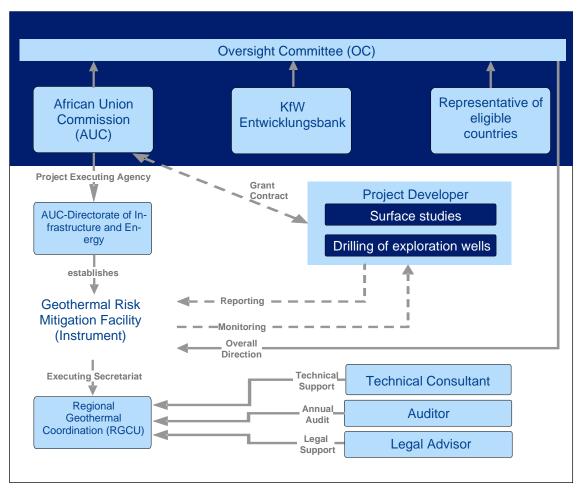


Figure 2: Overview of parties involved in the Facility.

The African Union Commission (AUC), represented by AUC's Directorate of Infrastructure and Energy (AUC-IED), is the Project Executing Agency for the GRMF. An Oversight Committee (OC), with members from the AUC, KfW and a representative from eligible countries as well as additional donors' representative, ensures that the GRMF meets its overall objective and that the activities are consistent with its mandate. The Regional Geothermal Coordination Unit (RGCU) was established by the AUC-IED and acts as GRMF's executing secretariat.

7 ELIGIBILITY

7.1 Eligible Entities

Public or private organisations as well as public private partnerships (eligible entities) are eligible to apply to the Facility.

Limitation is set to provide GRMF grants to a maximum of three **<u>Drilling Programmes</u>** per eligible entity funded under GRMF POWER **and** GRMF HEAT (cumulative).³

No limitation applies to Surface Studies for GRMF POWER and GRMF HEAT.

7.2 Eligible Activities

Activities eligible for support from the Facility comprise the following:

- Surface Studies to determine the optimal sites for exploration wells at geothermal prospects once they have been studied. Surface Studies are geophysical surveys (e.g. seismic, gravity, magnetics or magnetotelluric or other resistivity surveys) including supplementary geological, hydrogeological and/or geochemical surveys and shallow temperature gradient wells if necessary and justifiable for siting exploration wells. In addition, a Surface Study programme may include infrastructure upgrades required for conducting Surface Studies (e.g. for providing access), if applicable. Surface Studies shall include an integrated resource report interpreting and summarising the results of the Surface Studies in terms of a detailed three-dimensional conceptual model of the resource and identification of high priority drill sites and targets at depth.
- Exploration Drilling Programme at geothermal prospects are considered for funding once the optimal locations for exploration wells as well as targets at depth have been determined. An exploration drilling programme for funding by the Facility may comprise:
 - up to three full size reservoir confirmation wells (≥ 5" diameter of the last casing or liner) or
 - \circ a combination of up to three slim hole wells (< 5" diameter of last casing or liner) and one full size reservoir confirmation well or
 - $\circ~$ a combination of up to two slim holes- and two full size reservoir confirmation wells.

In low temperature areas (resource temperature less than 120 °C and/or geothermal gradient is less than 35 °C/km), wells deeper than 3000 m are ineligible.

In addition, a Drilling Programme may include mobilisation and demobilisation of drilling rigs, cutting analyses and well logging; well-testing and completion of a reservoir model. Furthermore, a Drilling Programme may incorporate a feasibility study that has the explicit aim of securing financing for subsequent confirmation (production) wells. As such, it is expected that a feasibility study would combine exploration drilling results and reservoir engineering together with market, regulatory and technical considerations.

³ A developer can submit more than three applications for Drilling Programmes. However, only three Grant Contracts can be signed for Drilling Programmes under GRMF POWER and GRMF HEAT (cumulative).

 Infrastructure costs required for surface exploration or exploration drilling (e.g. access roads, water supply) are covered by an infrastructure grant, which can be applied for in conjunction with the Surface Study / Drilling Programme.

The Facility will <u>not</u> support activities other than those described above. The Facility will therefore not provide grants for activities of a general nature, e.g. concession area reconnaissance, country wide reconnaissance, university research, general project development costs, legal costs, mitigation of political- or legal risk or general eligible entity overheads.

It is allowed to provide multiple applications for eligible activities related to different sites by a single entity. Eligible entities whose Surface Study was awarded a grant in one application round can directly apply for an exploration drilling grant out of the official timeline for GRMF application rounds ("direct DP application") – please refer to chapter 9.5..

Since there may well be multiple promising sites within a large concession, it is permissible to apply for more than one grant as long as evidence is provided that the projects applied for are independent from each other. It will however be important to give clear justification for all requests and to have adequate personnel identified to manage all projects. Separate applications for the different activities must be prepared and submitted accordingly.

Joint funding of a proposed project by public grants from other facilities is allowed, but must be capped in that way that developers need to provide evidence that at least 20% of the eligible costs are covered by own means. Public entities are excluded from this rule.

Eligible entities not being prequalified will be informed accordingly. If rejected in one application round or after submitting a direct drilling application (please refer to chapter 9.5), eligible entities can apply for funding in a possible subsequent application round. Direct drilling applications can be submitted outside of the official timeline for GRMF application rounds.

7.3 Eligible Countries

The countries listed below are eligible for funding by the GRMF.

Burundi	
Comoros	man and a second
Democratic Republic of Congo	Say front
Djibouti	
Eritrea	
Eswatini	front of the
Ethiopia	
Kenya	Carling Contractor
Malawi	
Nigeria	Kan Ka K
Rwanda	1 mil put it
Somalia	
Tanzania	
Uganda	
Zambia	\mathcal{F}

The Facility will not support projects at sites in areas subject to conflicts, or where disputes about borders exist.

For an <u>African</u> country to be added to the list of eligible countries, a formal request must be submitted by the Ministry responsible for geothermal development in the respective country. Further information on the process and the associated requirements can be found in **Annex 5**.

7.4 Eligible Costs

7.4.1 Eligible Costs for Infrastructure

Funds for infrastructure will only be granted on the condition that they are directly associated with an eligible Surface Study or Drilling Programme. Eligible costs for infrastructure comprise the following activities:

- If applicable: access roads and/or access road maintenance
- If applicable: water supply infrastructure (eligible is that part of the water supply system, which is required to operate a single rig)
- If applicable: transport and crew accommodation
- Eligible, reasonable and agreed contingencies

7.4.2 Eligible Costs for Surface Studies

Eligible costs comprise the following activities on the condition that they are directly associated with the Surface Studies:

- Rental or provision of technical equipment (e.g. geophysical signal sources, geophysical sensors, recorders, receiver stations, GPS equipment, gravity equipment, magnetic equipment). By provision it is meant that equipment owned by the applicant can be funded at the rates usually charged for rental, purchase of the equipment is not eligible cost,
- Providers of specialist services (e.g. geological mapping, seismic surveys, electromagnetics, magnetotellurics, gravity, magnetic, microseismics, LiDAR, chemical- and petrological sampling and analyses, soil geochemistry),
- Material and specialist services such as drilling and logging, for shallow temperature gradient well(s),
- Personnel, on-site accommodation and transport including vehicle leasing or rental,
- Purchase of aerial photography, remote sensing data or equivalent,
- Consumables (e.g. fuel, chemicals used during sampling / measurements),
- Environmental / social studies and –assessments as per Applicable Standards (see Chapter 11 below) as part of the Surface Studies (scoping studies) including studies and activities as per the GRMF Human Rights Guidance as appropriate, establishment

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of stakeholder engagement plan and corresponding stakeholder engagement activities including the process of Free, Prior and Informed Consent (FPIC) as appropriate,

- Costs to obtain environmental/social permits and licences (for subsequent drilling).
- Environmental / social studies / –impact assessments and –management plans (including specific plans such as Biodiversity Management Plans or Resettlement Action Plans / Livelihood Restoration Plans or Human Rights Impact Assessments if applicable) and reviews/updates of Stakeholder Engagement Plans and corresponding engagement activities including the process of Free, Prior and Informed Consent (FPIC) as appropriate as per Applicable Standards (see Chapter 11 below) including studies, assessments and activities as per GRMF Human Rights Guidance as appropriate in the course of the preparation of the subsequent drilling phase,
- Well Design and Drilling Programme (for subsequent drilling),
- Documentation and reports preparation costs (except for the Expenditure Verification Report (EVR)),
- Project management costs,
- Mandatory insurances to be taken out and maintained during the entire project period, including but not limited to the following items:
 - General liability including third party liability,
 - All risks (physical loss or damage),
 - Construction,
 - Fire,
 - All medical, cars and housing insurances for the personnel at site,
 - Workers compensation insurance,
 - Relevant insurance so the beneficiary can guarantee that there will not be any liability whatsoever for the contracting authority arising out of or in connection with the grant contract against the contracting authority,
- Eligible, reasonable and agreed contingencies.

7.4.3 Eligible Costs for Drilling Programme

Applicants shall estimate the costs for their proposed Drilling Programme in line with the Anticipated Well Cost (AWC) Guidelines which specify the cost structure for standard drilling cost items, such as casing, cementing, rig hire, necessary services or consumables (so-called AWC items).

The AWC Guidelines outline the maximum allowable total cost for AWC items, per meter drilled, for different types of wells, diameters and depths. Any costs exceeding the maximum values stated in the AWC Guidelines need to be comprehensively justified and will be assessed on a case by case basis during evaluation of the application. The AWC Guidelines will be periodically reviewed for indexation and cost adjustment purposes.

Variable costs for eligible drilling budget items which are not specified in the AWC Guidelines (so-called non-AWC items) need to be separately justified in the technical application forms and priced in the cost estimate.

Eligible costs comprise the following activities on the condition that they are directly associated with the drilling and testing programme:

- Site preparation (well pads and sumps),
- Mobilisation and demobilisation costs,
- Rental or provision of drilling rigs and associated equipment (e.g. pumps)⁴,
- Mandatory insurances to be taken out and maintained during the entire project period including but not limited to the following items:
 - General liability including third party liability
 - All risks (physical loss or damage)
 - Construction
 - Fire
 - All medical, cars, and housing insurances for the personnel at site
 - Workers compensation insurance
 - Relevant insurance so the beneficiary can guarantee that there will not be any liability whatsoever for the contracting authority arising out of or in connection with the grant contract against the contracting authority.
- Mandatory drilling insurances as specified in the Grant Contract, in particular:
 - Drilling (well control, blowout and side-tracking further to a drilling accident)
 - Environmental bonds for environmental damage caused by blowout, soil or water pollution by the geothermal fluid or surface equipment or subsidence of the drilling platform
 - Drilling bonds
 - "Lost-in-hole" insurance coverage has to be requested from and provided by any service or tool provider, when purchasing the particular service or tool. The coverage should comprise at least the tool costs.

In the case that the above requested drilling insurances are not available for the particular project, a confirmation from a specialised insurance company has to be submitted stating this fact.

- Providers of specialist services (e.g. reservoir engineering, well stimulation, directional drilling, tubular inspections, mud logging, H₂S monitoring, cementing, mud engineering, wireline services, geophysical logging, well site geology, petrology, chemical sampling and analysis of coring, underbalanced drilling, environmentally acceptable disposal of waste including hazardous material according to applicable regulations/standards),
- Rig-on, injection, production as well as interference testing and post-drilling downhole surveys and follow-up research on the core or cuttings (e.g. XRD, thin sections),
- Cost of temporary abandonment so as to leave the well in an environmentally safe condition only,

⁴ "Provision" means that equipment owned by the applicant can be funded at the rates usually charged for rental. Purchasing equipment is not an eligible cost.

- Personnel, on-site accommodation and transport including vehicle leasing or rental,
- Purchase of aerial photography, remote sensing data or equivalent, mapping etc.,
- Consumables (e.g. fuel, casing, wellheads, bits, cement, mud),
- Preparation of environmental / social studies / –impact assessments and –management plans (including specific plans such as Biodiversity Management Plans or Resettlement Action Plans / Livelihood Restoration Plans if applicable) and updates of Stakeholder Engagement Plans and the corresponding engagement activities as per Applicable Standards (see Chapter 11 below) in the course of the preparation of the subsequent construction of production facilities,
- Costs to obtain permits and licenses (in preparation of the subsequent construction of power plant).
- For Developers who only join GRMF for the Drilling Phase: Preparation of Environmental / social studies/ –impact assessments and –management plans (including specific plans such as Biodiversity Management Plans or Resettlement Action Plans / Livelihood Restoration Plans and Human Rights Impact Assessments if applicable) and Stakeholder Engagement Plan including engagement activities and including the process of Free, Prior and Informed Consent (FPIC) as appropriate, as per Applicable Standards (see Chapter 11 below) including studies, assessments and activities as per GRMF Human Rights Guidance as appropriate for the drilling phase,
- Environmental and Social Management: Implementation of all Environmental and Social Management Plans including implementation of the Environmental and Social Action Plan (ESAP), excluding implementation of Resettlement Action Plans / Livelihood Restoration Plans up to a maximum of USD 300.000 in total, including monitoring and reporting
- Documentation and reports preparation costs (except for the Expenditure Verification Report (EVR)),
- Project management cost,
- A feasibility study that has the explicit aim of securing financing for subsequent reservoir confirmation and/or well field development wells. (As such, it is expected that a feasibility study would combine exploration drilling results and reservoir engineering together with market, regulatory and technical considerations),
- Eligible, reasonable and agreed contingencies.

7.4.4 Non-Eligible Costs

All costs which are not explicitly mentioned in Sections 7.4.1 to 7.4.3 will not be covered by the Facility. These non-eligible costs have to be covered by the developer, including but not limited to:

- All costs in excess of the amount stated in the grant contract,
- Concession (and other permit/licence related) fees,
- Developer overheads (e.g. office costs, legal costs),

- Costs of permanent abandonment of well(s),
- Third party liability and claims, including claims by the drilling contractor and environmental damage or clean-up costs,
- Debts and provisions for losses or debts,
- Interest and project developer financial obligations owed,
- Financial fees,
- Items already financed by other parties (e.g. governments, donors),
- Purchases of land, buildings or vehicles,
- Currency exchange losses,
- Taxes, including VAT,
- Cost of preparing applications or cost incurred during negotiations of the grant contract,
- Costs for participation at meetings and workshops,
- Training and capacity building,
- Costs incurred prior to grant award (such as costs for studies, concessions and concession related items such as rental payments etc.), except for "early contracting"⁵,
- Costs resulting from tender procedures not following the GRMF procurement regulations,
- Costs for land acquisition and compensation/RAP/LRP implementation,
- Costs for the Expenditure Verification Report (EVR).

⁵ Please refer to document "Conditions for Early Contracting" for specification.





8 WORKSHOPS AND TRAININGS

Before the start of each application round, a pre-application information workshop (kickoff workshop) will be held for potential Applicants and other stakeholders (such as organisations, financiers etc.) to the Facility. The objectives of the information workshop are to promote the GRMF, to present to possible developers the GRMF intention, target, programme and its expectations, to clarify inquiries considering the Request for Expression of Interest and to safeguard the quality of Expressions of Interest and Applications. The introduction into the Applicable Standards (see Chapter 11 below) for environmental and social assessment and management is a part of the information workshop.

Participation at the information workshop for potential Applicants is not mandatory, however it is highly recommended that the Applicants familiarise themselves with the type and scope of services to be supplied. It is, however, understood that any cost incurred in this context has to be borne by the workshop participants and will not be reimbursed. The cost incurred will be at the workshop participants' own expense and risk.

After evaluation of the Expressions of Interest is concluded with a short-list of applicants, a pre-bidding workshop will be organised and held for the above mentioned short-listed developers. The aim is to ensure high-quality applications by clearly explaining the application, evaluation and procurement processes.

Participation at the pre-bidding workshop is mandatory for Applicants wishing to submit an application. It is, however, understood that any cost incurred in this context has to be borne by the Applicants and will not be reimbursed, but are at the Applicants' own expense and risk.

9 APPLICATION PROCEDURE

The Facility will provide grants to developers through competitive, transparent and rigorous two-stage application and evaluation processes divided in two stages:

- The first stage is an open pre-qualification process inviting potential Applicants to submit their Expressions of Interest (EoI) by a specified closing date each year. Based on the evaluation of these EoI, shortlisted developers will be invited to participate in the application stage.
- In the second stage, applications from shortlisted developers will be accepted by a specified closing date each year.

In two exceptional cases developers are exempted from the pre-qualification stage, meaning that they may directly submit a full application after attending the obligatory pre-bidding workshop:

- The project applied for already passed the pre-qualification stage in a preceding application round but either no full application has been submitted or the full application was rejected in a preceding application round. Skipping the pre-qualification stage (submission of Expression of Interest) is only possible if the application refers to the same geothermal prospect and the same site within this prospect as in the previous application round (EoI stage) and the same entity (public, private or PPP) is applying for funding.
- The project already has benefited from GRMF Surface Study grant with significant positive results (approved integrated resource report as final report of Surface Study being prerequisite). Further details can be found in section 9.5 ("Direct Applications of Drilling Programmes").

The following Figure 3 gives a general overview on the different stages, procedures and tools.

All news on the GRMF Facility as well as unrestricted documents for the application rounds will be published on the GRMF website:

www.grmf-eastafrica.org

A Web GIS for the GRMF is also available on the website.





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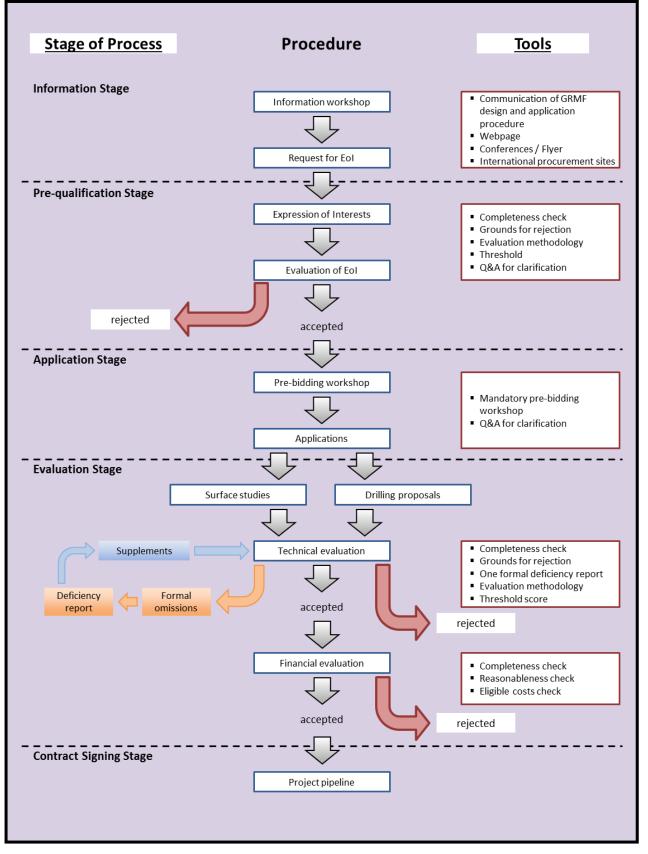


Figure 3: Overview on the stages, procedures and tools of the GRMF POWER application procedure.

9.1 **Pre-qualification Stage**

The pre-qualification process will be repeated annually. EoI will be accepted by a specified closing date each year.

The pre-qualification process comprises the following activities:

- Potential Applicants of the Request for EoI will be informed by means of promotion activities (e.g. the pre-application workshop).
- Request for EoI will be posted on the Facility webpage.
- For inquiries for clarifications regarding the EoI, Applicants shall submit questions via e-mail to the following addresses: <u>grmf@africa-union.org</u> and <u>grmf@roedl.com</u>. The deadline for inquiries is 14 days before the closing date of the Pre-qualification. Inquiries received after the deadline will not be considered. Inquiries will be collected and answers will be published, without eligible entity's or inquirer's details, on the GRMF webpage.
- The deadline for submission of pre-qualification documents may be extended by issuing an amendment or addendum. Also, the content of the Request for EoI might be changed by amendment.
- The Applicant shall send one electronic version (searchable pdf file) of the completed pre-qualification document as well as one signed original hard copy of required declarations and cover letter as specified in the Request for EoI to the tender box within approximately 8 weeks of the Request for EoI being posted on the Facility webpage (the precise date will be indicated in the Request for EoI). The arrival date and time of the document is relevant for consideration of the EoI. EoI received after the deadline or not in the required manner will not be evaluated but will be returned unopened to the Applicant.
- Only complete EoI which are in line with the required submission form will be considered for evaluation.
- Expressions of Interests will be evaluated according to a predefined methodology that will be specified in the Request for EoI.
- Applicants will be provided with the feedback presumably within 12 weeks after the submission deadline for EoI.
- Shortlisted Applicants will be invited to participate in the mandatory pre-bidding workshop and in the application stage.

9.2 Application Stage

The application stage comprises the following activities:

- Access to the Request for Applications and all relevant documents will be provided to Applicants shortlisted during pre-qualification along with the invitation to participate in the mandatory pre-bidding workshop. Applicants will access these documents within the restricted area of the homepage of the Facility, for which an access password will be provided within the feedback letter. Only Applicants who register and thereafter participate in the pre-bidding workshop will be eligible to submit an application.
- For inquiries for clarifications regarding the application, Applicants shall submit an e-mail to the following addresses: grmf@africa-union.org and grmf@roedl.com. The deadline for inquiries is 14 days before the closing date of the applications. Inquiries received after the deadline will not be considered. Inquiries will be collected and answers will be provided to all Applicants without specifying eligible entity's or inquirer's details.
- The deadline for submission of application documents may be extended by issuing an amendment. Also, the content of the Request for application might be changed by amendment.
- Applicants shall send one electronic version (searchable pdf file) of the completed application as well as one signed original hard copy of required declarations and cover letter as specified in the Request for Application to the tender box within 8 to 10 weeks after the pre-bidding workshop (the precise date will be indicated in the Request for Application). The arrival date, time and location of the document are relevant for consideration of the application. Applications received after the deadline, not in the required manner or location will be returned unopened to the Applicant.
- Applications will be evaluated using the predefined methodology described in Section 10.

9.3 Content of Applications

This Section describes the information to be included in the applications and reflects the Evaluation Methodology described in **Annex 1** and **Annex 2**. More details on the content of applications and its submission form will be given in the document "Request for Application". The following information has to be submitted:

- A declaration that developers will accept and adhere to the procurement standards set forth in the Developer Procurement Guidelines.
- A declaration that the Applicant is not in a situation which will lead to a direct rejection as described in Section 9.4.
- Certificate of incorporation as evidence that the Applicant exists as legal entity. In the case of joint ventures, all partners need to submit certificates of incorporation, which needs to be complemented by the joint venture agreement.
- Information on the Geothermal Resource.
- Surface Study Plan (for Surface Studies only).
- Drilling Plan (for Drilling Programmes only).
- Environmental and social permits.

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- For Surface Studies: Environmental and Social Risk Screening Report and Stakeholder Engagement Plan (as per Applicable Standards, including GRMF Human Rights Guidance, see Chapter 11 below), including indication whether process of Free, Prior and Informed Consent with Indigenous Communities would be required.
- For Drilling Programmes: ESIA report, ESMP, Stakeholder Engagement Plan (SEP), any other environmental and social management plans as identified as required and applicable (e.g. Resettlement Action Plan, Livelihood Restoration Plan, Water Resources Management Plan, Biodiversity Action Plan, Indigenous Peoples Plan), (as per Applicable Standards, including GRMF Human Rights Guidance, see Chapter 11 below).
- Infrastructure Plan (if applicable).
- Information on- and evidence of Projects' Concession Agreement and Permits.
- Information on reservoir market viability.
- Financing Plan and Statements on Financial Capabilities.
- Procurement Plan (indicating each component and method).
- Business Plan (for Drilling Programmes only).
- Planned installed Capacity (for Drilling Programmes only).
- Increase in National Generation Capacity (for Drilling Programmes only).
- Combined Heat and Power / Rural Electrification / Community Benefit.
- Applicant's Key Personnel / Staffing Plan.
- Applicant's References.
- Statements on Management and Organisational Capabilities.
- Plans for subsequent reservoir confirmation drilling (for Surface Studies only).
- Anticipated Costs of the project broken down in sub-activities.
- Map indicating the site and GPS information indicating interconnection to grid.
- Information on early contracting activities.

Information on the Geothermal Resource

Available information on the geothermal prospect in question is of major importance. A summary of field's features and characteristics as well as a conceptual model and a resource capacity evaluation is to be provided.

Good evidence of a geothermal resource should be given. Any information describing or predicting the sub-surface conditions of the prospect will be considered. For example, an analysis of geological conditions, geochemistry, surface or airborne geophysical surveys, a conceptual model, reference data from surrounding boreholes, (which allow conclusions on the prospect of the project for support by the Facility) including geophysical logs and/or an evaluation of the possible interaction with adjacent geothermal fields. The quantity and quality of measured data should be presented. References and major reports relating to the proposed project should be provided.

For drilling projects, the interpretation of the results shall include the identification of and the justification for one or more appropriate drill sites in the geothermal prospect. The

justification should include a clear description of connection between measured data and interpreted results.

For the assessment of the application, the interpretation of the results of any previous works as described above, also the underlying geothermal raw data may be requested for a raw data check. On a case by case decision it may be requested to submit specific raw data for re-interpretation and analysis of the geothermal raw data in order to verify the conceptual model and the interpretation of the results provided by the Applicant.

Surface Studies Plan (for Surface Studies only)

The Applicant shall present a work plan for the Surface Studies. This will specify the overall concept, the activities to be carried out, the technical specifications to be followed, all underlying assumptions and the expected results.

The work plan must be in continuity with any previous measurements and studies. The plan shall describe well defined objectives, which are based on interpreted results of previous exploratory works. Choices between several investigation methods must be clearly justified.

The plan shall also include information on any proposed Surface Study contractors. It shall specify the interpretation plan of the expected results. The interpretation of the results shall be the basis for the **siting of any exploration wells**, which could possibly be supported by a drilling grant in the next application round if announced. Therefore, the interpretation plan is especially important.

Surface study plans shall include, but not be limited to the following:

- Survey justification, including topographical base map, percentage of area covered, measurement density/spacing and expected outcomes.
- Survey details including equipment, field techniques, data collection strategy, etc.
- Modelling and interpretation strategy.
- Details on any infrastructure requirements (such as access roads, water and power).
- If applicable: details on custom clearance requirements for any necessary equipment.

The plan shall include a schedule for the survey and specify milestones for completion of major activities.

Regarding environmental and social documentation, an Environmental and Social Risk Screening Report and Stakeholder Engagement Plan (SEP) including activities related to process of Free, Prior and Informed Consent with Indigenous Communities as appropriate (as per Applicable Standards, including GRMF Human Rights Guidance, see Chapter 11 below) are required.

By the completion of Surface Studies, any E&S documentation as required by national legislation, as well an E&S Scoping Report and Updated SEP including documentation of activities in the context of Free, Prior and Informed Consent Process with Indigenous Communities as appropriate are required.

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Milestones / grant disbursement schedule will be included in the grant contract. Achievement of milestones will trigger any grant disbursements. Relevant disbursement schedules shall be communicated during the RfA phase.

Drilling Plan (for Drilling Programmes only)

The Applicant shall present a work plan for exploration drilling and well testing. The work plan shall specify the overall concept, the activities to be carried out, a staffing plan (clear structure with own personnel, consultants, contractors), the technical specifications to be followed, all underlying assumptions and the expected results.

The work programme must be in continuity with any previous studies and with well-defined objectives. Objectives must be reached in a sequenced way with intermediate reviews and go/no go decisions if several phases or more than one well is planned.

The drilling and testing plan shall include the development concept (number and type of wells, well specifications, depth, structural target or aquifer and concept well design). For confirmation wells, the plan shall include information on the anticipated thermal capacity of the wells (e.g. flow rate at specified drawdown and temperature). The plan shall also include information on the proposed drilling contractor, drilling rig and service companies including references and/or technical specifications. Furthermore, an Environmental Protection Plan, an Emergency Response Plan and a Blowout Preventer Inspection Plan are requested.

The drilling plan will include a schedule for the activities and specify milestones for completion of major activities.

Milestones are defined in the grant contract. Achievement of milestones will trigger any grant disbursements. Relevant disbursement schedules shall be communicated during the RfA phase.

Information on Project's Concession Agreement and Permits

Applicants should provide information on the status (i.e. in place or under negotiation) as well as timing of authorisation to carry out exploration activities (e.g. concession agreements, exploration and/or prospecting licences). A minimum requirement is that applicants have submitted their application for the concession before submitting their EoI.

A geo-referenced map showing the area of the authorisation shall be included (if in place) or needs to be provided before signing of the grant contract (if under negotiation).

If the authorisation is in place, a copy needs to be provided as evidence. A letter from the authority granting the authorisation is also requested, stating that all conditions and timelines of the authorisation have been met.

If no authorisation is in place yet, Applicants need to provide a Letter of Support from the government of the target country of their project and a confirmation that the relevant application has been submitted.

Applications without authorisation and without a Letter of Support will be excluded from the application round.

Applicants shall also provide details on any required environmental, drilling and social permits, water rights and the permission to access the land at the geothermal prospect, as well as on any other relevant authorisations. Applicants shall provide evidence of all respective permits or specifications on the plans and timelines to get them.

- Applications need to include evidence that the required environmental and social permits and approvals as per national legislation have been obtained or are in the process of being obtained.
- Applications need to include full ESIA report, ESMP, Stakeholder Engagement Plan (SEP), documentation of the Process of Free, Prior and Informed Consent with Indigenous Groups as appropriate, any other environmental and social management plans as identified as required and applicable (e.g. Resettlement Action Plan, Livelihood Restoration Plan, Water Resources Management Plan, Biodiversity Action Plan, Indigenous Peoples Plan), (as per Applicable Standards, including GRMF Human Rights Guidance, see Chapter 11 below).

Applications not containing the required documentation as per Chapter 11 will be excluded from the application round.

If environmental and social permits are not required, Applicants must provide evidence that they were notified so by the relevant authority.

Information on reservoir market viability

Applicants should provide a plan for successfully and convincingly bringing the potential reservoir at the concession area into sustainable power production. Such a plan shall include but not be limited to:

- A description of the anticipated energy content of reservoir and size of power plant
- A description of the anticipated construction cost of the power plant
- Power transmission infrastructure description and cost
- Information on feed-in tariffs / prices according to off-taker agreement / anticipated power sales prices
- Comparative analysis (LCOE) with other available energy options in the country
- Information on potential electricity customers
- Description of major load centres and power generation activities within a 50 km radius
- Information on potential direct use applications (e.g. cascading usage of waste heat)

The applicant should also provide information about any signed or ongoing discussions related to off-take agreements.

Financing Plan and Statements on Financial Capabilities

The Applicant needs to present a plan for financing the remaining portion of the Surface Study / Drilling Programme budget, as well as for the activities not eligible for funding by the Facility. Financing plan has to include the implementation costs for all Environmental and Social Management Plans including costs for land acquisition, compensation and live-lihood restoration (RAP/LRP implementation).

The financing plan shall include detailed information on all financing sources and streams in place including any other public funding schemes.

Joint funding by GRMF and other public bilateral and multilateral funding schemes or facilities (e.g. NEPAD-IPPF, ARGeo, Development Banks) is allowed. Applicants need to clearly specify which other public funding schemes are applied for, which amounts are applied for and whether or not the asked funds have already been granted. For public entities, a government support letter must be submitted showing that the Applicants' own contribution will be covered. Private Applicants or Private Public Partnerships (PPP) need to provide evidence that the Applicants' own contribution is borne by the Applicant and that the money is readily disbursable.

The Applicant also needs to provide documented proof that the eligible entity is financially capable of conducting Surface Studies / Drilling Programmes and that it has the resources to cover any eventual cost increases.

The required information consists of the following: statements on the capital capacity of the eligible entity, audited annual financial statements of the last three accounting years, a declaration of non-objection from the tax authorities and an external credit rating assessment.

Procurement Plan

The procurement plan needs to show the anticipated services to be contracted, including information on the estimated contract value and scheduled procurement method. The procurement plan needs to be updated through complete project implementation.

Business Plan (for Drilling Programmes only)

For drilling projects, Applicants need to provide information on the business plan for development of the geothermal resource and power plant in a sustainable business environment after completion of the drilling programme, and make transparent how the business plan takes the existing market environment into consideration.

Applications shall include a business plan including but not limited to:

- Description of- and the Applicants' intentions with the potential geothermal reservoir
- Economic assessment of the project addressing the market environment the project is located in, describing the off-taker situation (both power and heat), comparing the current generation costs for different technologies in the country with the anticipated generation costs of the specific project as well as comparing these to the market level of power prices.
- An action plan with the main tasks and work streams
- Overview schedule of the entire project implementation plan

Details shall be given on the regulatory and fiscal framework in which the action plan has to be implemented, including- but not limited to details on visas, treasury, local taxes, custom clearance regimes and the taxation regime for locally employed personnel.



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Installed Capacity (for Drilling Programmes only)

For drilling projects, Applicants shall specify the likely installed capacity of the envisaged geothermal power development at the site in MWe and state how this has been estimated.

Increase in Generation Capacity (for Drilling Programmes only)

For drilling projects, developers shall specify the percentage increase of total installed geothermal power generation capacity (refer to the numbers displayed on the Facility's webpage)⁶ in the target country at the time of application by the likely installed capacity of the envisaged geothermal power development at the site.

Combined Heat and Power / Rural Electrification / Community Benefit

Details on combined heat and power use (e.g. cascade uses), market potential for rural electrification projects and benefits for communities resulting from the project should also be given if applicable. Explicitly in case of applications for low- and medium enthalpy resources, options for heat use need to be clearly addressed to check on the economic viability of such a project type.

Applicant's Key Personnel

The Applicant (including private sector partners and engaged consultants) needs to demonstrate exploration experience and expertise by providing CVs for the Applicant's key personnel designated to work on the proposed project. Experience and expertise should be specifically related to geothermal Surface Studies/geothermal exploration drilling, preferably in the region.

For Surface Studies, CVs of all lead personnel (team lead/key experts) shall be provided.

For drilling projects, CVs of the project manager, drilling supervisor/drilling engineer, reservoir engineer and lead geoscientist/geologist as well as for the ESHS personnel and community liaison personnel shall be provided.

If appropriate, the same person can fill in several positions. This should then be detailed and clearly shown in the application.

A staffing plan (clear structure with own personnel, consultants, contractors) should be provided. An organisational chart for the <u>project</u> should also be provided to clearly indicate roles and responsibilities of all key staff for which the CVs have been provided.

A Memorandum of Understanding or equivalent between the Applicant and any designated consultants, service companies or contractors shall be included.

CVs shall be up to date, include date and signature and follow the given format in the Request for Application.

⁶ The GRMF Facilities' webpage is available at: <u>http://www.grmf-eastafrica.org</u>

Any assignment of consultants, services companies or contracts has to follow the procurement regulations and regarding any assignment prior signing of a grant contract specific attention should be spent on the "Conditions for Early Contracting".

Applicant's References

The Applicant (including private sector partners and engaged consultants) needs to demonstrate exploration experience and expertise by providing relevant references. Experience and expertise should be specifically related to Surface Studies/exploration drilling and testing and will be demonstrated by project references.

References should at least contain information on the project's name, year of execution, client and location of the project, the scope of work, the applicants' role within the project, the project budget and the budget of the work delivered by the Applicant. Only project references from the last 7 years shall be included.

Any assignment of consultants, services companies or contracts has to be included in the procurement plan and follow the GRMF procurement guidelines. Under the scenario that any of these assignments are formalised prior signing of a grant contract the "Conditions for Early Contracting" apply.

Statements on Management and Organisational Capabilities

The Applicant needs to provide documented proof that the eligible entity is organisationally capable of conducting Surface Studies / Drilling Programmes and that it has the management capabilities to mitigate any eventual difficulties. Capacity demonstration shall cover all environmental and social management requirements to prepare and implement activities funded by GRMF.

The required information consists of the following: information on the eligible entity, its legal entity and its core business, including a group organisational chart.

Applicants shall provide evidence that they exist as legal entities and, as part of their application, shall submit a declaration confirming that they are not in any situation which would lead to rejection as specified in Section 9.4.

Each applicant will have to submit information satisfactory to the AUC of the ownership structure fulfilling AUC's "Know-Your-Customer" (KYC) and anti-money laundering requirements.

To allow for a KYC assessment, the following information need to be submitted:

- 1. Name of shareholder entity (e.g. copy of company's registry)
- 2. Beneficiary of shareholders (entities respectively person behind with a share or voting rights of > 25%)
- 3. List of acting persons in the Management
- 4. Place of registry of company
- 5. Full names birthday and nationality for natural persons

Plans for subsequent reservoir confirmation drilling (for Surface Studies only)

For Surface Studies, the Applicant needs to provide information on plans for subsequent reservoir confirmation drilling and testing if the Surface Studies provide good evidence for a promising geothermal resource. Details should be given on plans for obtaining expertise (e.g. identified team and partners), finance (i.e. identified (e.g. pre-committed) funds to cover the Applicant's portion of the financing) and equipment (availability of rig) for subsequent reservoir confirmation drilling at the prospect.

Anticipated Costs

Applications shall include a cost estimate including a detailed breakdown of anticipated costs for Surface Studies / Drilling Programmes which are eligible for support by the Facility as defined in Sections 7.4.1 to 7.4.3. In order to judge the overall project costs, Applicants also need to state any non-eligible costs which need to be borne by the Applicant (e.g. taxes, import duties, overheads).

Applicants shall also clearly state the total grant (only including eligible costs) and percentage of overall eligible costs which they request from the Facility.

Applications shall demonstrate that anticipated costs are reasonable and adequate and that they represent value for money, i.e. that costs and quality of all goods and services are at a minimum consistent with market norms and country standards, and preferably represent a discount compared to market norms and country standards. Applications should include documentation such as quotations or estimates from different suppliers of services and goods as well as costs of previous projects in the region and internationally, or any other justification of costs that substantiate the cost estimate. The reasonableness of the cost will be estimated.

9.4 Grounds for Rejection

If Applicants are in one or more of the following situations, this will lead to rejection of the application:

- They are bankrupt or being wound up, are having their affairs administered by the courts, have entered into an arrangement with creditors, have suspended business activities, are the subject of proceedings concerning those matters, or are in any analogous situation arising from a similar procedure provided for in national legislation or regulations.
- They have been convicted of an offence concerning professional conduct.
- They have been guilty of grave professional misconduct proven by any means which the contracting authority can justify.
- They have not fulfilled obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which they are established or with those of the country of the contracting authority or those of the country where the contract is to be performed.

- They have been the subject of a judgment for fraud, corruption, involvement in a criminal organisation or any other illegal activity detrimental to the country's financial interests.
- They are faced with a conflict of interest.
- They or their subcontractors are subject to UN, EU or AU sanctions.
- They propose project sites in areas subject to conflicts, or where disputes about borders exist.
- They do not declare that they will follow the Developer Procurement Guidelines.
- They do not submit required environmental and social documentation as per Applicable Standards, explained in Chapter 11.
- They do not demonstrate that they will comply with relevant local and national environmental and social legislation as well as with the Applicable International Standards as explained in Chapter 11.
- They do not exist as legal entity.

Furthermore, the following criteria will lead to rejection:

- Expression of Interest / Application refers to a non-eligible activity or country;
- Incompleteness of the submission form of EoI or Application (incompleteness relates to filling all required fields of the template and providing all information in the required standards; also, if any fields are ticked as Not Applicable these must be supported by additional remarks);
- No extensive geological and geochemical studies have yet been undertaken for the proposed project site;
- The necessary concessions/licences/permits are not issued or not in process of being approved (meaning not yet submitted to responsible authorities);
- The full application is found to be non-responsive in respect to the information and request for further clarification provided in the EoI feedback letter;
- The two declarations and the cover letter are not submitted according to the provided format and / or are not signed and / or stamped.
- The Application / EoI is not submitted by the submission deadline to the required location in the requested format (1 searchable electronic version and original hard copy documents regarding declarations and cover letter).
- False statements in the Expression of Interest or in the application will also lead to rejection.

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9.5 Direct Applications of Drilling Programmes

GRMF POWER provides a special treatment for developers that have successfully implemented a GRMF funded Surface Study (HEAT or POWER) with significant positive results: Developers with an approved integrated resource report, feasibility study (only for GRMF HEAT Surface Studies)⁷ and E&S compliance are entitled to submit the application for their subsequent Drilling Programme at the same project site directly ("direct DP application").

The following figure gives an overview regarding the timeline for the required documents, approvals and submissions that are described in detail below.

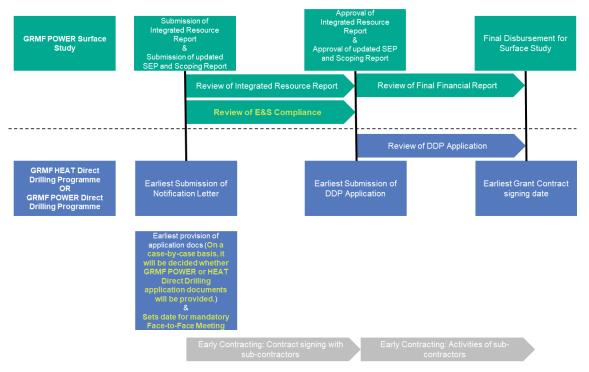


Figure 4: Direct Applications of Drilling Programmes

In case a beneficiary implementing a GRMF funded Surface Study is planning to submit a direct DP application, the following processes and requirements must be considered:

- Once the developer is ready to prepare the DP application, he is obliged to inform the RGCU by the standard form "Notification Letter for Direct DP Application". In this form the developer expresses his interest to apply directly for a DP. The standard form is available on the GRMF website (https://grmf-eastafrica.org/updated-documents/). The Notification Letter can be submitted <u>earliest</u> with the submission of the Integrated Resource Report & Updated SEP and E&S Scoping Report.
- This formal Notification Letter will be reviewed by the RGCU. In case RGCU has no objection for the planned DP application, permission will be sent for the submission of a direct DP application to the developer, so he can start officially to prepare the application. RGCU will decide based on the results of the Surface Study phase,

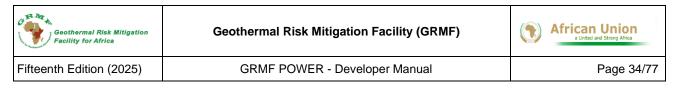
⁷ Please refer to the GRMF HEAT Developer Manual.

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whether GRMF POWER or GRMF HEAT application documents will be provided. The email with the permission will include all modalities (i.a. the Procurement no., to be defined by AUC Procurement), all Application documents, as well as a timeline of six (6) months in which the developer can submit his full DP application.

- The direct DP application can be submitted earliest
 - after the official approval of the Integrated Resource Report by the AUC, and
 - after the official approval of the Feasibility Study Report by the AUC (only for GRMF HEAT Surface Studies)⁸, and
 - after the official approval of the updated SEP and E&S Scoping Report by AUC, and
 - after the submission of the Permission Letter by the AUC to the developer.
- With regards to the two cut-off dates on early contracting, please refer to the latest version of the Conditions for Early Contracting Regulation applying for GRMF POWER or GRMF HEAT.
- Once the full DP application is received by the RGCU, the standard evaluation process of a typical application round will apply.
- Once the direct DP application is awarded for GRMF funding, the related GRMF grant contract can be signed earliest after the approval of the final financial report for the GRMF funded Surface Study, and after the final payment for the GRMF funded Surface Study has been released to the developer.
- In case the direct DP application is rejected, the developer is allowed to submit a new direct DP application. Prior to the new submission a formal Notification Letter has to be submitted, the respective details as stated above apply.

⁸ Please refer to GRMF HEAT Developer Manual.



10 EVALUATION

A general overview on the evaluation procedure for applications is given in **Figure 5** below.

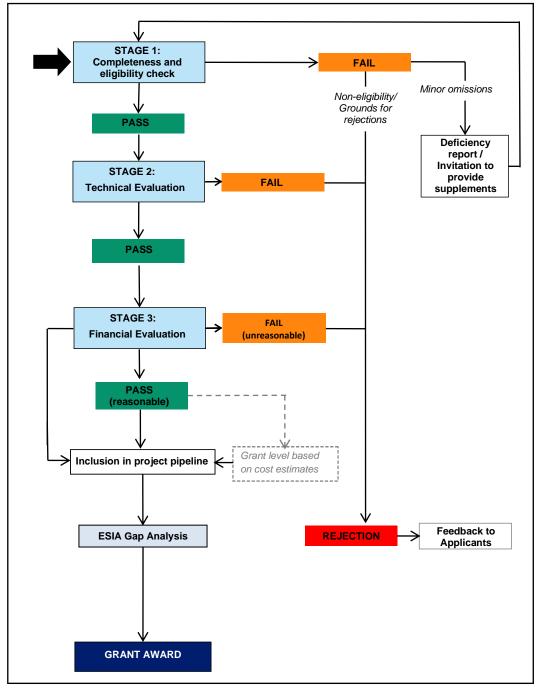


Figure 5: Overview of the evaluation procedure.

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The applications will be evaluated as described below:

- (a) Checking for application completeness as described in Section 9.3.
- (b) Checking of application against the grounds for rejection stated in Section 9.4.
- (c) Check of applications against eligibility as described in Section 7.
- (d) In case of minor, formal omissions, a deficiency report (only one per application and per application round) will be prepared and provided to the respective Applicant. Applicants will have the possibility to correct the formal omissions and can send their supplements within one week of providing of the deficiency report, unless otherwise directed by the AUC. Supplements may only be given with regard to completeness, not with regard to content affecting the evaluation. Supplements shall be sent as one soft copy (as PDF searchable file) via e-mail.
- (e) Written feedback for applications that do not meet the requirements of 10(a), 10(b) and 10(c), and if applicable: do still not meet them after providing the supplements specified in the deficiency report, will be provided to the relevant Applicants. For the sake of clarity, such applications will not further be considered for the respective application round.
- (f) If an application is received for Surface Studies / Drilling Programmes at a geothermal prospect that has already applied to the Facility twice for the same site and by the same Applicant in the previous two years but has not been invited to negotiate the grant contract in either year, then the application will not be further considered for the same site. The relevant Applicants will be informed thereof.
- (g) Applications that meet the requirements of 10(a), 10(b), 10(c) and, if applicable, 10(d) will be evaluated based on the pre-defined evaluation criteria listed in Annex 1 (for Surface Studies) and Annex 2 (for Drilling Programmes). Most criteria have a threshold limit that needs to be reached. The criteria are also weighted based on importance for development of a successful geothermal project. Information on the weighting will be given in the Request for Application.
- (h) The application receives a score for each criterion. The overall score is summed-up and adjusted with the criteria's weights.
- (i) There is an overall threshold that requires the application to score 70% or more of the maximum achievable score.
- (j) During the financial evaluation, the cost estimates from the Applicants will be checked for completeness, eligibility and as of drilling projects, for compliance with the AWC Guidelines. Subsequently, the adequateness and reasonability of the cost estimates based on the justifications given will be determined. All contingencies stated will also be checked for eligibility and reasonableness. Any adjustments necessary as the basis for the grant level offered in the Contract negotiation phase will be proposed. For the sake of clarity, if the cost estimates or contingencies are found to be higher than the actual estimate of the evaluation experts, the grant level will be adjusted to match the estimated costs of the GRMF experts.
- (k) If the budget is unreasonably estimated, the financial evaluation will fail and the application will be rejected.
- (l) All applications that pass the technical and financial evaluation will be included in a project pipeline and subject to availability of funds offered a grant contract as soon as all project information as requested by the Facility is submitted.

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(m)Applicants will be provided with feedback on the evaluation, presumably within 16 weeks from the submission deadline for applications.



11 ENVIRONMENTAL AND SOCIAL SAFEGUARD REQUIREMENTS

11.1 Environmental and Social Safeguard Requirements - The Developer's Responsibilities

(1) <u>Host Country Legislation and Applicable International Standards</u>

It is the Developer's responsibility to carry out its operations at all times in compliance with all applicable <u>national</u> environmental, occupational health & safety, public health and safety, labour and social laws and regulations. International Law including conventions and treaties adopted by the host country and applicable to the Project will be respected.

In addition, compliance with the requirements of KfW's Sustainability Guideline⁹ (including Exclusion List as per Annex 2) and therewith <u>International Environmental and Social</u> <u>Safeguards</u> is required:

- IFC Environmental and Social Performance Standards (PS)¹⁰ including
 - o PS1: Social and Environmental Assessment and Management Systems 1
 - PS2: Labour and Working Conditions
 - PS3: Pollution Prevention and Abatement
 - PS4: Community Health, Safety and Security
 - o PS5: Land Acquisition and Involuntary Resettlement
 - o PS6: Biodiversity Conservation and Sustainable Natural Resource Management
 - PS7: Indigenous Peoples
 - o PS8: Cultural Heritage
- ILO Core Labour Standards
- World Bank Group's Environmental and Health (EHS) and Safety Guidelines¹¹ including:
 - o General EHS Guidelines
 - EHS Guidelines for Geothermal Power Generation
 - EHS Guidelines for Onshore Oil and Gas Development (for the management of naturally occurring radioactive materials (NORM)
 - World Bank Group's EHS Guidelines for Toll Roads (regarding abnormal load transports)
- IFC/WB EHS Guideline on Power Transmission and Distribution,
- For the resettlement aspects, the UN Basic Principles and Guidelines on Developmentbased Evictions and Displacement, namely sections 42, 49, 52, 54 and 60, have to be complied with (in addition to national legislation and IFC PS 5).
- Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGT, FAO 2012)¹²

⁹ KfW's Sustainability Guideline

¹⁰ IFC Environmental and Social Performance Standards (PS)

¹¹ World Bank Group Environmental, Health, and Safety Guidelines

¹² <u>Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGT, FAO 2012)</u>

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Guidance shall be obtained from

- GRMF Human Rights Guidance including guidance for the process of Free, Prior and Informed Consent¹³
- For workers' accommodations, projects should adhere to international standards for worker housing such as "Workers' Accommodation: Processes and Standards: A Guidance Note by IFC and the EBRD"¹⁴
- "Geothermal Exploration Best Practices: A Guide to Resource Data Collection, Analysis, and Presentation for Geothermal Projects" (IFC 2013)¹⁵ and "Best Practices Guide for Geothermal Exploration" (2014 by IGA in cooperation with IFC)¹⁶
- Addressing Gender Based Violence and Harassment; Good Practice Note for the Private Sector (IFC 2019)¹⁷
- Addressing Grievances from Project Affected Communities (ICF, 2009)¹⁸

The Exclusion List as per KfW Sustainability Guideline (2021) and IFC Exclusion List $(2007)^{19}$ will be respected and adhered to.

Host Country Legislation and the International Applicable Standards are together referred to as the **Applicable Standards**. According to the Applicable Standards the following main topics are under the Developer's responsibility:

(2) <u>Environmental and Social Risk Management</u>

The assessment of environmental and social as well as of human rights risks and impacts, including their significance and materiality, as well as the development of adequate management plans and programmes are key tools for achieving sound environmental and social performance for undertakings funded by GRMF. To assess these risks and impacts and design management plans and programmes a comprehensive Environmental and Social Impact Assessment (ESIA) including a human rights impact assessment as appropriate needs to be conducted (see further information below). The central tool to address and manage the specific risks and impacts of geothermal projects is an appropriate environmental and social management system (ESMS) to be established by the Developer, in line with relevant legislation of the host country and compliant with the *Applicable Standards*.

(3) <u>Stakeholder Engagement</u>

The Developer is required to prepare and implement a continuous process of Stakeholder Engagement, to be built into project planning in a way that enables a meaningful information exchange with all identified stakeholder groups at the very outset of the project and at subsequent key decision-making points in its life cycle. Stakeholder engagement activities need to satisfy host country legal requirements, guidelines and formats and have

¹³ <u>GRMF Human Rights Guidance including guidance for the process of Free, Prior and Informed Consent</u>

¹⁴ Processes and Standards: A Guidance Note by IFC and the EBRD

¹⁵ A Guide to Resource Data Collection, Analysis, and Presentation for Geothermal Projects

¹⁶ Best Practices Guide for Geothermal Exploration

¹⁷ Gender Based Violence and Harassment; Good Practice Note for the Private Sector

¹⁸ Addressing Grievances from Project Affected Communities

¹⁹ IFC Exclusion List (2007)

to be compliant with the Applicable Standards. Adequate budgetary resources should be foreseen and dedicated to this activity.

As key element of Stakeholder Engagement, the timely disclosure of relevant project information enables stakeholders to understand the project's risks, impacts and opportunities. The Developer will disclose Information to stakeholders in the local language(s) and in a manner that is timely, accessible and culturally appropriate. Any vulnerable or minority groups will be meaningfully taken into account in order to secure their equitable representation and for due consideration of their rights, views and interests.

Stakeholder Engagement comprises consultation of communities who are, or are likely to be, affected by adverse impacts from a project. The Developer will undertake a process of meaningful consultation in a manner that provides the affected parties with opportunities to identify and express their views on project risks, impacts, and mitigation measures.

The overall frequency and degree of engagement and consultations will depend on the nature and magnitude of risks and current and potential adverse environmental or social impacts arising from the project.

The Developer's responsiveness and the meaningful on-going engagement and consultations with impacted individuals, communities and other relevant stakeholders are key for a meaningful process of Stakeholder Engagement.

Annex 4 provides additional information on Stakeholder Engagement.

(4) Indigenous People, Free Prior and Informed Consent (FPIC)

It is the Developer's responsibility to assess at the very outset of the Project if indigenous communities are present in the wider concession area. Careful probing of on-site communities' qualification will be undertaken, in order to establish if IFC Performance Standard (PS) 7 (Indigenous Peoples) ought to be triggered.

In case IFC PS 7 is triggered, the principle of free, prior and informed consent (FPIC) has to be applied by the Developer. In line with IFC PS 7, FPIC refers to the process whereby an affected community of indigenous peoples arrives at a decision in accordance with their legal provisions, cultural traditions and practices.

The FPIC process should produce a clear endorsement or rejection of the proposed project and a statement of accompanying mitigating measures and/or benefit-sharing agreements. As such, it is the main instrument ensuring to the Developer and the GRMF that at the project level, the indigenous peoples' priorities for economic, social and cultural development and environmental protection are promoted, informed by their traditional cultures, knowledge and practices, and the implementation of their inherent right to self-determination.

FPIC is expected to be established through good faith negotiation between the Developer and the participating indigenous communities and to be fully documented as a mutually accepted process between the parties, carrying evidence of agreement between them as the outcome of the negotiations and clearly outlining benefit- and risk-sharing provisions. Please see GRMF Human Rights Guidance²⁰ and GRMF guidance for FPIC²¹.

(5) Grievance Redress Mechanism (GRM)

The Developer shall establish, operate and document an accessible, transparent and culturally appropriate Grievance Redress Mechanism for the affected public as well as a separate GRM for project workforce, in line with the Applicable Standards.

Further information on the above-described Developer's responsibilities is provided below including required assessments, management plans and essential considerations.

²⁰ <u>GRMF Human Rights Guidance</u>

²¹ <u>GRMF guidance for FPIC</u>

11.2 Surface Study Phase

All activities during the Surface Studies have to be undertaken in line with the relevant national legislation and requirements and compliant with the Applicable Standards.

(1) <u>Environmental and Social Documentation for Application</u>

The Developer will submit:

- a) Environmental and Social Risk Screening Report, containing overall identification
 of environmental and social risks of the planned activities, key environmental and social information on the area to be studied and an initial scoping of environmental and
 social issues, including any human rights risks as per GRMF Human Rights Guidance.
 The Report has to include the Developer's work plan for the acquisition of environmental and social information and related activities during the Surface Study phase.
 The E&S Risk Screening Report is to include the environmental and social risk categorization of planned activities according to IFC standards.
- b) **Stakeholder Engagement Plan (SEP),** describing the overall approach for stakeholder engagement and the stakeholder engagement activities to be undertaken during the Surface Study Phase, explaining how local communities in the survey area will be informed about the activities and consulted during the field work. The SEP will contain an initial grievance mechanism, to be further developed based on information from stakeholder engagement during the Surface Studies.
- c) Environmental & Social Documents / Permits
- d) **In case a temporary drilling pad is needed for a Temperature Gradient Well**, additional documents have to be provided (for TG drilling pads which are intended to remain for later Explorational Drilling, the procedures as outlined in Chapter 11.3 have to be followed):
 - All national permits required to be obtained and other relevant legal requirements to be adhered to.
 - Appropriate Stakeholder Engagement has to be undertaken and to be documented as part of the Stakeholder Engagement Plan. In case Indigenous People's Land would be affected and IFC PS 7 triggered, the process of Free, Prior and Informed Consent has to be taken into account, implemented and documented as well. Regarding the compensation for any impacts from temporary land take for affected landowners and land users, fair and transparent negotiations should be undertaken in order to determine mutually agreed disturbance allowance/compensation for temporary land take to be paid to the landowner/-user. Such agreement should be based on the provisions of national legislation and of IFC PS 5 and should be documented and signed by all parties.

Stakeholder engagement has to include actions to clarify whether IFC PS 7 is triggered by the Project and the SEP has to contain respective provisions to apply the process of Free, Prior Informed Consent in case this would be required.

The E&S Risk Screening Report with work plan and the SEP will be reviewed by GRMF and are subject to "No Objection".

The approved documentation will be part of the Grant Contract.

(2) <u>Completion of Surface Studies: Scoping Report</u>

During the Surface Study phase, based on the E&S Risk Screening Report, initial environmental and social baseline information will be obtained in preparation of the ESIA for the Phases of Exploration Drilling/further project development respectively. The scoping exercise aims at identifying those potential impact areas that need further investigation in the ESIA phase. The result of these investigations, including the initial stakeholder engagement activities, is a Scoping Report, to be submitted by the Developer after the completion of the Surface Study phase. The Scoping Report will cover the physical, biological, socioeconomic and cultural environments within the proposed project area and identify the key issues including any human rights related issues relevant to the Project to be considered in the full ESIA for Exploration Drilling, power plant, transmission lines). The Scoping Report will provide confirmation of the Project's Area of Influence (AoI)²², the Terms of Reference for any additional baseline studies needed and for impact assessment and development of ESMPs and any other safeguard instruments as required in order to comply with the Applicable Standards.

Main contents of the **Scoping Report** are listed in **Annex 3**.

The information obtained during the Surface Study phase will inform the further development/update of the **Updated SEP**, e.g. will provide input on the design of the engagement activities for the forthcoming ESIA phase. As part of the overall stakeholder engagement process, stakeholders should be able to provide input to the SEP and any other scoping document, and receive feedback on how their comments and input have been incorporated and addressed. This process shall be made visible via an Updated SEP comprising a transparent, accessible, culturally appropriate and free of cost grievance mechanism.

By completion of the Surface Study phase and as <u>pre-requisite for final disbursement</u>, the Developer will submit in line with the *Applicable Standards*:

- a) Any E&S documentation as required by national legislation,
- b) Scoping Report and
- c) Updated SEP.
- d) Land lease agreements.
 - In case a temporary drilling pad is needed for a Temperature Gradient Well, additional documents have to be provided upon completion. Upon completion of temporary drilling activities, all equipment, material and waste shall be removed from the drilling site and deposited appropriately. The Developer shall establish and implement a Restoration Plan.

²² The AoI shall be defined consider the relevant physical, biological, and socioeconomic receptors potentially affected by the proposed Project

- Following completion of site restoration, the handover of the land used temporarily back to the original owner/user shall be documented in the format of a Handover Protocol to be signed by both, the land owner/user and the Developer.
- The TG well has to be properly sealed in accordance with best industry practice. This process has to be documented.
- In case the land for TG Wells is returned to the lessor a compensation payment in the amount of the purchase price must be made if one of the following actions is triggered during the preparation of the TG well:
 - Surface levelling, earth works including removal of topsoil, soil compacting and gravel laying.
 - Earthworks and installation of a basin for drilling fluids.

In case IFC PS 7 is triggered, the Developer will provide documented evidence for the application of FPIC and the respective decision made in this context (*see under Section* 11.1 (4) *above*).

The Scoping Report, the updated SEP and any additional documents related to temporary drilling activities will be subject to review and "No Objection" by GRMF.

Reporting during Surface Study Phase

During the Surface Study phase (from GC signing up to submission complete E&S Documentation as required), the Developer will submit monthly status reports, comprising information on stakeholder engagement activities and respective findings as well as on the progress of environmental and social field studies. A template for E&S Reporting will be attached to the grant contract.

11.3 Exploration Drilling Phase

All activities during the Exploration Drilling Phase have to be undertaken in line with the relevant national legislation and requirements and compliant with the Applicable Standards.

(1) Environmental and Social Documentation for Application

For each application, the Developer will submit:

- a) ESIA report including human rights impact assessment as appropriate as per GRMF Human Rights Guidance,
- b) ESMP including all sub-plans as appropriate as result of the ESIA process,
- c) SEP covering all project phases and all relevant national legal requirements regarding public information and disclosure. The SEP will be informed by, but may not be limited to, findings from the Surface Study phase and from any environmental and social studies carried out for the Project so far. The SEP will comprise a transparent, accessible, culturally appropriate and free of cost grievance mechanism.
- d) Any other environmental and social management plans as identified as required and applicable (e.g. Resettlement Action Plan, Livelihood Restoration Plan, Water Resources Management Plan, Biodiversity Action Plan, Indigenous Peoples Plan).

e) Environmental & Social Documents / Permits

The ESIA and SEP process shall indicate whether indigenous people are present in the project area/on the project sites. In this case IFC PS 7 will be triggered and the Developer will apply the process of FPIC and will provide documented evidence for the application of FPIC and the respective decision made in this context. In addition, an Indigenous Peoples Plan may be required or appropriate provisions in line with IFC PS 7 have to be part of the ESMP (respective sub- plans, e.g. community development plans) and of the SEP.

In case drilling was not successful and the property is returned to the lessor, a compensation payment in the amount of the purchase price must be made. The rational for this is that it is deemed unlikely that after drilling a site can be restored to its previous conditions, as preparation of a drilling pad comprises inter alia:

- Surface levelling, earth works including removal of topsoil, soil compacting and gravel laying.
- Earthworks and installation of a basin for drilling fluids.
- Fixed technical installations as a cemented well cellar.

In case of the relocation of drilling pads after preparation of ESIA and related documents the environmental and social documentation (i.e., the ESIA and SEP) needs to be updated to incorporate the potential E&S risks related to the new drilling pad site. Any relocation of a well pad site needs to be communicated to GRMF instantly.

(2) Independent Review of E&S Documentation

All Environmental and Social Documentation will be subject to an independent Environmental and Social Due Diligence (ESDD), comprising, but may not be limited to a gap analysis of the submitted available documentation against the Applicable Standards. Any gaps and respective actions required to close these gaps will be part of a time bound Environmental and Social Action Plan (ESAP). <u>The overall ESAP, comprising the findings</u> of the ESDD, the ESMP, the SEP and any other environmental and social management plans, will become integral parts of the Grant Agreement.

(3) <u>Implementation of ESAP and all E&S Management Plans, Reporting and Independent</u> <u>Monitoring</u>

It is the responsibility of the Developer to implement the ESAP, the ESMP, the SEP and any other environmental and social management plans for the Project diligently and completely. Environmental and social performance of the Developer will be part of the Developer's reporting requirements and will be subject to Independent Monitoring, including reviews of E&S reports and site visits (see reporting template in **Grant Contract Annex VII**).

Disbursements will require diligent and comprehensive implementation of the ESAP actions as well as of the SEP, of all environmental and social management plans, including special plans such as RAP or Livelihood Restoration Plan, Biodiversity Action Plan, Indigenous Peoples Plan (evidenced by Independent Review of Developer's E&S Reports and "No Objection" from GRMF). Documented evidence on diligent E&S management to be provided by the Developer as required in the ESAP and by the reporting procedures for the Drilling Phase

Upon completion of the Exploration Drilling Phase, the Developer will establish a **Final E&S Report**, providing evidence for full implementation of the ESAP including all ESMPs and sub-plans (e.g. RAP, LRPs, BAPs). The Final E&S Report will be subject to Independent Review and to "No Objection" from GRMF.

Reporting during project implementation:

During the drilling programme phase (from GC signing / start of early contracting, up to final E&S Report/Completion Report), the Developer will submit monthly status reports, comprising information on stakeholder engagement activities and respective findings as well as on the progress of environmental and social field studies. A template for E&S Reporting will be attached to the grant contract. In addition, the Developer shall submit ESAP implementation reports as required in the project specific provisions of the ESAP.

Immediate Reporting on serious accidents and incidents:

With regard to environmental and social matters, including occupational and community health & safety and labour issues as well as impacts on adjacent population, the Developer shall notify GRMF promptly of any event, incident or accident in relation to the Project execution, regarding details of (i) any incident of an environmental nature, occupational health and safety nature, public health and safety nature (in particular, but not limited to, any explosion, spill or workplace accident which results in death, serious or multiple injuries or material environmental contamination, accidents of members of the public/local communities, resulting in death or serious or multiple injuries, sexual harassment and - violence involving project workforce); (ii) any incident of a social nature (including without limitation any violent labour unrest or dispute with local communities); (iii) any other incident of an environmental or social nature occurring on or nearby any site, plant, equipment or facility of the Developer, which has, or is likely to have a material adverse effect; or has attracted or is likely to arouse substantial adverse attention of outside parties or to create substantial adverse media/press reports; or gives, or is likely to give rise to material potential liabilities.

Notification will comprise, in each case, (i) a specification of the nature of the Incidents and the on-site and off-site effects of such Incidents and (ii) details of any action the Developer proposes to take in order to remedy the effects of these Incidents. The Developer shall keep GRMF informed about any progress in respect of such remedial action.

(4) <u>Continuation Premium</u>

For Continuation Premium Activities, the Developer is required to submit any additional E&S Documentation as required per national legislation and in compliance with the Applicable Standards. Continuation Premium Activities will be considered / integrated in the overall ESAP as appropriate and are subject to the Developer's E&S Reporting requirements. Additional documentation / plans and E&S Reporting are subject to Independent Review and to No-Objection from GRMF.

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The flowcharts in Figure 6 and Figure 7 below illustrate requirements for environmental and social documentation / plans and – reporting during Surface Studies as well as Exploration Drilling Phase.

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Preparation Pha	ase	Implementation Phase
Evaluation of Application (in- cluding E&S Documentation)	Grant Signing (E&S Risk Screen- ing Report with work Plan and SEP will be part of the	Scoping Report and Update of SEP (for final disbursement) Regular Reporting on Progress regarding implementation of Work Plan and SEP
Application (including Submission of E&S Risk Screening Report with Work Plan, Stakeholder Engagement Plan and any other E&S documentation / permits as per national legal requirements)		

Figure 6: Requirements for environmental and social documentation / plans during the Surface Studies



•	Preparation Phase	Impleme	entation Phase
	Grant Signing (overall ESAP, including ESMPs and any measures to close gaps in E&S Documentation and –Plans identified during Independent Review	Readiness for 1 st disburse- ment (based on fulfilment of ESAP, SEP and other E&S Plans)	Completion Evaluation and Approval of Final E&S Report (for final disbursement)
	as well as SEP and any other separate plans (e.g. RAP) will be part of the grant agreement)	Regular Reporting on Progress and all ESMPs, SEP and other	regarding implementation of ESAI specific plans
(includi	ion of Application ng Independent Re- E&S Documenta-		
complete per nation d applicat ls) docum	(including Submission E&S Documentation nal legal requirements ble international stand- mentation / permits as legal requirements)		

Figure 7: Requirements for environmental and social documentation / plans during the Exploration Drilling Phase



12 PROJECT PIPELINE: PROCESS & REQUIRED DOCUMENTS

Projects passing the 70 points thresholds during the evaluation will be included in a project pipeline. Only these projects will be invited for grant contract signing subject to the condition that the following documents are submitted and approved:

- a) All documents as requested with feedback letters announcing evaluation results of the full application.
- b) Statement by the beneficiary's bank confirming the bank account into which the grant will be paid.
- c) Signed letter by authorised representative of the beneficiary setting forth the name, title and authenticated specimen signature of each person authorised to sign payment requests.
- d) Specimen signature for the person authorised to represent the Beneficiary in signing this Contract.
- e) Specimen signatures for the persons authorised to represent the beneficiary during the implementation of the grant contract.
- f) Legal opinion by a reputable third party lawyer from the beneficiary's country of origin confirming that the beneficiary's legal status legitimates the beneficiary to enter into the grant contract and which persons are authorised to sign the grant contract on behalf of the beneficiary.
- g) Legal opinion by a reputable third party lawyer from the country (meaning the country where the Project Site is based) confirming that all documents provided by the beneficiary such as concessions, Power Purchase Agreement, environmental/social permits, access rights are valid and in compliance with the law of the country as well as that all permits and licenses required by the law of the country to conduct the applied for Surface Study / Drilling Programme are obtained and valid.
- h) Submission of all required monthly / weekly / daily reports in case of early contracting.

13 GRANT CONTRACT

The Applicant will be offered a grant contract by the AUC. A draft will be provided to the applicant as soon as the requirements for grant contract signing are fulfilled. In case a notification of early contracting is submitted to the AUC a draft grant contract will be made available to the applicant to ensure the compliance with all duties and liabilities covered in the grant contract.

- The grant contract will require the developer to take out and maintain during the entire contract period appropriate insurances and bonds, including but not limited to the following items:
 - General liability including third party liability.
 - All risks (physical loss or damage).
 - Construction.
 - Fire.
 - All medical, cars, and housing insurances for the personnel at site.
 - Workers compensation insurance.
 - The beneficiary guarantees that there will not be any liability whatsoever for the contracting authority arising out of or in connection with the grant contract against the contracting authority.
 - The beneficiary shall indemnify and hold harmless the Contracting Authority and Contracting Authorities' affiliates and any of their officers, directors, shareholders, and/or employees from and against any and all losses, liabilities (whether present or future) damages and reasonable costs and expense arising out of or in connection with the Grant Agreement.
- For drilling projects, in addition to what is stated above, developers also need to take out and maintain during the entire contract period the following insurances and bonds:
 - Blowout.
 - Environmental damage caused by blowout, soil or water pollution by the geothermal fluid or surface equipment or subsidence of the drilling platform.
 - Side-tracking further to a drilling accident.
 - "Lost-in-hole" insurance coverage has to be requested from and provided by any service or tool provider, when purchasing the particular service or tool. The coverage should comprise at least the tool costs.
- In the case that the above requested drilling insurances are not available for the particular project, a confirmation from a specialised insurance company has to be submitted stating this fact.
- All insurance policies have to be readily accessible in order for the RGCU to review upon request.
- Full record of all relevant authorisations, all applicable and required drilling and environmental permits, as well as any required social licences for the drilling is compulsory for signing the grant contract between the developer and the AUC.
- Environmental and Social Action Plan (ESAP), including ESMP and any measures to close gaps in E&S Documentation and –Plans identified during Independent Review as well as SEP and any other environmental and social management plans as

identified as required and applicable (e.g. Resettlement Action Plan, Livelihood Restoration Plan, Water Resources Management Plan, Biodiversity Action Plan, Indigenous Peoples Plan).

- If the Applicant needs to select and appoint sub-contractors to carry out all or parts of the Surface Studies or drilling programme, then:
 - The procurement process for all goods and services must follow the Developer Procurement Guidelines and the "Conditions for Early Contracting".
 - If any changes in contractors or key personnel occur between submission of the application and signature of the grant contract, the Applicant has to inform the AUC in due time.
 - Applicants are required to keep a full written record of the awarding procedure for at least ten years, and to allow the AUC and auditors assigned by the AUC or the Oversight Committee at any time full access to any and all documents and records of the awarding procedure. Non-compliance with the procurement criteria shall lead to the termination of the grant contract.
 - As no import duties or any other taxes may be financed from the Facility account, such import duties, if part of the contract value, shall be stated separately in the contracts for the goods and services and in the invoices. They will not be borne by the GRMF.
 - It is to be noted that according to general GRMF rules, the time for commencement of services and sub-contracting shall be according to the agreed time schedule forming a part of the grant contract but no earlier than the effective date of the grant contract. However, the Applicant is allowed to <u>appoint</u> sub-contractors after submission date of the EoI and to <u>commence</u> services after submission deadline of the full application but before signing of the GRMF grant contract but for this case of "Early Contracting" the following conditions shall apply²³:
 - The Applicant has to comply with all duties and liabilities covered in the GRMF grant contract even before signing the grant contract (like following all procurement guidelines, monitoring and reporting requirements and all other guidelines relevant to the Applicant, etc.) and will be excluded from funding if before or after signing of a GRMF grant contract it becomes clear that these haven't been followed in an appropriate way.
 - With the full application, a procurement plan (template provided) has to be submitted, which has to include all early contracted activities.
 - The Applicant takes the full risk that:
 - he will not reach the threshold of 70 points in the application procedure and therefore will not be considered for a GRMF grant,
 - he will not be considered for a GRMF grant due to limited funding even in case of reaching the threshold of 70 points or more,
 - the GRMF grant contract covers only parts of the project that has been applied for,
 - or the GRMF grant contract will not be signed for any other reason.

²³ For a detailed description on "Early Contracting" please refer to the document "Conditions for Early Contracting".

- The grant contract will include but not be limited to the following:
 - Upper limits for all grants expressed in USD.
 - Exchange rate for agreed non-USD currencies will be determined on the basis of the UN Operational Rates of Exchange (https://treasury.un.org/operationalrates/OperationalRates.php) of the date specified in the Request for Application.
 - Milestones for grant disbursements.
 - Requirements for appropriate insurances and bonds.
 - Requirement for approval of the drilling contract.
 - Requirement that Surface Studies commence within 6 months of signing the grant contract and be completed (including an integrated resource report) within 15 months of signing the grant contract. On an exceptional basis, alternative timings can be negotiated.
 - Requirement that drilling activities commence (spud-in of first well) within 12 months of signing the grant contract and be completed (including completion of all related studies and reports) within 24 months.
 - Requirement that developers' set-up GRMF sign boards that will contain at least the following message: "A development Project of the Geothermal Risk Mitigation Facility supported by the African Union Commission and financed by the Federal Republic of Germany and the EU-Africa Infrastructure Trust Fund through KfW".
 - Reporting requirements as stated in Sections 15.1 to 15.2. and in Chapter 11.
 - Requirement that the integrated resource report will be published on the Facility's regional geothermal database of prospects in the region. Confidential data that may cause competitive disadvantage to the developers may be kept confidential for a period of time as agreed upon with the AUC.
 - Requirement for developers to keep accurate and regular records and dedicated, auditable and transparent accounts for a period of ten years following signing of the grant contract.
 - The maximum grant will be stipulated in the grant contract. This will under no circumstances be exceeded. Prices quoted in the cost estimate as part of the application shall specify item costs and contingency separately. Eligible, reasonable and negotiated contingencies will be part of the grant contract amount. Variations in prices are eligible for GRMF funding up to the contingency level without prior notification of the AUC.
 - If the cost estimate is exceeded in regards to one or more cost categories of Tier

 the developer may reallocate a cost saving from any other cost category of Tier
 to the exceeded cost category to cover the overrun, but the reallocation may not
 exceed 15% of the cost estimate of the exceeded cost category.
 - The reallocation of approved costs is not permitted for the cost category "infrastructure" of Tier 1. Therefore, the developer may not use a cost saving from any other cost category of Tier 1 to cover an overrun of the infrastructure cost category and may not use a cost saving from the infrastructure cost category to cover an overrun of any other cost category of Tier 1.
 - The Beneficiary may within one cost category of Tier 1 reallocate costs between the cost categories of Tier 2 and Tier 3.

 On finalisation of the grant contract, the RGCU will dispatch three originals of the signed grant contract to the Applicant. If the Applicant does not deliver the countersigned grant contract to the RGCU within 14 calendar days, the offer to enter into the grant contract will be cancelled.

14 GRANT PROVISION

14.1 Payment process

- Payments will be disbursed against the presentation of a payment request and if applicable an advance payment bank guarantee (for DP) both sent to the AUC address specified in the Request for Application. Such bank guarantee must fulfil the requirements as determined in chapter 14.2 and must follow the standard template as provided on the GRMF website.
- On achievement of milestones in the Surface Studies plan / drilling plan and according to the disbursement schedule included in the grant contract, the developer shall send the payment request and supporting information to the AUC address specified in the Request for Application (one original). Supporting information can be e.g. copies of receipts and/or invoices, reports on milestones reached or pictures of infrastructure established.
- Costs must be recorded in the developer's accounts or tax documents. They shall be accessible, identifiable and verifiable, and must be backed up by original supporting documents. Developers must keep accurate and regular records and dedicated, transparent, auditable and accessible accounts of project implementation for a period of ten years following grant provision by the Facility.
- Payment request and supporting information will be assessed. This will consist of a quality and consistency check, check for errors, costs not covered by grant and costs not substantiated.
- If the payment request is valid:
 - The AUC's Finance department will authorise payment from the Facility Account as per the conditions in the grant contract.
- If the payment request is not valid:
 - $\circ~$ The developer will be informed and will be asked for clarification of the payment request.
 - $\circ\,$ The developer shall in a timely manner correct and re-submit the payment request.
 - If the issue remains unresolved, dispute resolution will take place as per the conditions in the grant contract.
- If fraud (e.g. inflated costs, tasks not performed but invoiced) is detected, the payment request will be rejected for minor issues, dispute resolution will take place as per the conditions in the grant contract. In case of fraud, the grant contract will be cancelled.

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14.2 Bank guarantee requirements

Developers that opt for the disbursement schedule with an advance payment must provide a bank rating (i.e. a "short term credit rating") for the bank that shall issue the related bank guarantee. This bank rating must fulfil the following requirements:

1. Rating agencies

The bank rating must be officially issued by one of the following four (4) rating agencies:

- Moody's
- Fitch
- Standard & Poor's
- Global Credit Ratings (GCR)
- 2. Rating period

The rating must be a "short term credit rating". These are related to financial commitments due within 365 days.

3. Rating scale

The short term credit rating of the bank must be within the "Investment Grade".

The following procedure applies for the submission of the bank rating as well as the bank guarantee:

- (a) For all developers that require an advance payment: They must submit to the RGCU an official short term credit rating of one of the accepted rating agencies (see list above) for the bank that shall issue the bank guarantee, within the Investment Grade.
- (b) In case a developer cannot submit such rating, the disbursement schedule without advance payment applies.
- (c) After the submission of such rating, it will be reviewed internally at the RGCU, and the developer will receive the review results accordingly.
- (d) After the approval of the rating by the RGCU, the respective bank can issue the bank guarantee.
- (e) Once the bank guarantee is issued according to the GRMF standard template, the original version including stamp and signature must be submitted as a hard copy to the RGCU.

15 MONITORING AND REPORTING

Developers need to submit several reports for review and assessment as specified below. In addition, the AUC and Technical Consultant will perform site visits of drilling projects.

15.1 Reporting Requirements for Surface Studies

The developer shall inform the RGCU of Surface Study commencement, update the RGCU of progress in monthly status reports and inform the RGCU of Surface Study completion. A report template for the monthly status reports will be attached to the grant contract. The monthly status report will comprise information on stakeholder engagement activities and respective findings as well as on the progress of environmental and social field studies. A template for E&S Reporting will be attached to the grant contract. Furthermore, an updated procurement plan has to be submitted with each monthly report.

In addition, the developer may be requested to provide raw data files for the first set of surface measurements, which will be checked for quality and informational value. If quality and informational value are not satisfactory, the RGCU will inform the developer and provide feedback. The developer shall immediately start to resolve the issue. This procedure may be repeated a second time if the second measurement is not satisfactory either. If the third measurement is still not satisfactory, the grant contract will be cancelled. All costs accrued due to any non-satisfactory measurement resolution need to be borne by the developer.

Upon completion of the studies all collected data, interpretations, lessons learnt, updates of project documentation, as well as information on the total project costs shall be compiled in an integrated resource report as well as a financial report (including an expenditure verification report) and submitted to the RGCU. A blank report form of the integrated resource report and a guideline for the financial report will form part of the grant contract.

Raw data collected during the Surface Study funded by the Facility also needs to be provided. The raw data shall be annexed in clear tables or graphs for easy consultation (English language, International System of Units (SI)) and also be provided in digital format along with any special programmes necessary to view the raw data.

Failure in complying with the monitoring or reporting requirements will result in a request to rectify the issue. If the issue remains, dispute resolution will take place as per the conditions in the grant contract. If the dispute resolution remains, pertaining failure in complying will result in the cancellation of the grant contract.

Upon completion of the studies and as <u>pre-requisite for final disbursement</u>, the Developer will submit in line with the *Applicable Standards (see Chapter 11)* any E&S documentation as required by national legislation, a Scoping Report and the Updated SEP. The Scoping Report will cover the physical, biological, socioeconomic and cultural environments within the proposed project area and identify the key issues including any human rights issues relevant to the Project to be considered in the full ESIA for Exploration Drilling and in complementary ESIAs for further project developments (i.e. production drilling, power plant, transmission lines).

An overview on GRMF reporting requirements for Surface Studies can be found below.



Surface Studies:

- Notification of milestones (2 weeks in advance):
 - Commencement Date and
 - Completion Date.
- Monthly progress reports consisting of:
 - Narrative report
 - Environmental and social performance progress reports
 - Updated project execution schedule
 - Updated procurement plan
- Final report consisting of:
 - Narrative report being the integrated resource report
 - Financial report including an expenditure verification report
 - Final environmental and social performance report
 - E&S Scoping report
 - Updated Stakeholder Engagement Plan
 - Documentation evidencing the fulfilment of the FPIC-Requirements (if applicable)

15.2 Reporting Requirements for Drilling

The developer shall inform the RGCU of the start of drilling operation (spudding) and inform the RGCU of any well completion. The developer shall submit, before well spud and after well completion, monthly progress reports and from well spud until the end of drilling, daily and weekly drilling reports. All reports shall be made using the relevant GRMF templates.

Environmental and social performance of the Developer is part of the Developer's regular reporting requirements and will be subject to Independent Monitoring, including reviews of E&S reports and site visits. A template for E&S Reporting will be attached to the grant contract. Additional reporting requirements may result from provisions in the ESAP. Furthermore, an updated procurement plan has to be submitted with each monthly report.

All programme data, interpretations, lessons learnt, all updates on the supporting project documentation as well as information on the total project costs accrued shall be compiled in a completion report as well as a financial report (including an expenditure verification report) upon completion of the drilling programme and submitted to the RGCU.

Raw data collected during the drilling programme funded by the Facility also needs to be provided. The raw data shall be annexed in clear tables or graphs for easy consultation (English language, SI units) and also be provided in digital format along with any special programmes necessary to view the raw data.

Blank report forms of the daily and weekly drilling reports and the completion report for drilling and testing as well as a guideline for the financial report will form part of the grant contract.

If two or more wells are planned and the second/third/fourth target may depend on the results of the previous well(s) (this may be the case e.g. when targeting several fractures), then this must be clearly specified in the grant contract. In case developers want to change the second/third/fourth drill site in comparison to the original drilling plan, based on the results of the previous well, developers need to provide an interim report specifying the results of the previous well(s) and reasons for the new drill site(s).

Failure in complying with the monitoring or reporting requirements will result in a request to rectify the issue. If the issue remains, dispute resolution will take place as per the conditions in the grant contract. If the dispute resolution remains, pertaining failure in complying will result in the cancellation of the grant contract.

Upon completion of the Exploration Drilling Phase, the Developer will establish a **Final E&S Report**, referring to the full implementation of the ESAP including all sub-plans. The Final E&S Report will be subject to Independent Review and to "No Objection" from GRMF.

An overview on GRMF reporting requirements for Drilling Programmes can be found below:

Drilling Programmes:

- Notification of milestones (2 weeks in advance):
 - Commencement of first well pad construction;
 - First Well Spud commencement;
 - First Well Completion;
 - Commencement and termination of testing of the first well;
 - Last Well Spud commencement;
 - Last Well Completion and
 - Commencement and termination of testing of the last well.
- Monthly progress reports from start of activities until first well spud and from last well completion until the completion date consisting of:
 - Narrative report
 - Environmental and social performance progress reports
 - Updated project execution schedule
 - Updated procurement plan
- Monthly reports during the drilling period consisting of:
 - Environmental and social performance progress reports



- Updated procurement plan
- Daily and weekly progress reports during the drilling period
- Final report consisting of:
 - Narrative report being the completion report for drilling and testing
 - Financial report including an expenditure verification report
 - Final environmental and social performance report



16 INFORMATION AND COMMUNICATION

Information on the Facility will be disclosed and disseminated to the general public, including governments, civil society organisations and the private sector, unless there is a compelling reason not to do so. For this reason, a Facility website has been established:

www.grmf-eastafrica.org

All relevant information on the Facility (including the Developer Manual) will be published on this website.

After finalisation of the evaluation in each application round, information on the total number of projects potentially funded and the total amount of funds will be published on the Facility webpage. It is to be noted that the amount of grants awarded to a specific developer may be disclosed after grant signing.

As part of their application, Applicants need to submit a project data sheet including information on the developer, the location, size and nature of the resource; type of Surface Studies to be undertaken; type and number of drillings and metadata on information sources. After signing of the grant contract, the project data sheet will be published on the Facility's regional geothermal database of prospects in the region.

Generally, after completion of the Surface Studies / Drilling Programmes, the integrated resource reports / completion reports as well as environmental/social documentation shall be published on the Facility's regional geothermal database of prospects in the region. Confidential data that may cause competitive disadvantage to the developers may be kept confidential for a period of time as agreed upon with the AUC.

For Surface Studies, in addition to what is stated above, the entire integrated resource report will be kept confidential until any potential grant contract for drilling is signed if the same developer applies for a GRMF drilling grant in the next application round. If the developer does not apply for a drilling grant in a potential further application round, the Surface Study report will be released for publishing. In case no further GRMF application round is conducted, the Surface Study reports will be kept confidential for a period of two years starting from handover of the report to AUC. Any delay in handing over the report as defined in chapter 15 will result in a reduction of the confidentiality period accordingly.

17 CONFIDENTIALITY AND DATA PROTECTION

The AUC, BMZ, EU, KfW, and the Technical Consultants will keep confidential the details of any application and any information made available in connection with any further enquiries and/or discussions with the Project developer / Applicant. The details of any application will only be made available to the AUC's and the Technical Consultant's employees and professional advisers which are directly involved in the appraisal of such information.

The application process, the data system and its access will conform to the requirements of confidentiality.

If required and approved in writing by the AUC / KfW the data may also be transferred to internal audit services and/or relevant third parties directly involved in the GRMF.

Any party receiving information or data of any application will be obliged by the AUC / KfW to keep it confidential in accordance with the confidentiality policy of the GRMF.

18 CONTINUATION PREMIUM

18.1 Overview on the Continuation Premium

In case project developers have been awarded GRMF grants for undertaking Drilling Programme activities and decide to further develop their project after the initial successful resource exploration, depending on the availability of funds, the GRMF Facility may provide additional financial support in form of a Continuation Premium (CP) grant.

With the award of the GRMF grant and the successful implementation of the Drilling Programme, developers have proven their financial and management capacities for project development as well as their ability to fulfil additional requirements for achieving the bankability of their project such as business planning and setting-up of a viable project finance structure. The initial Drilling Programme already included eligible activities that served as basis for a feasibility study. Nevertheless, there are several activities required for a geothermal project to be implemented, including a comprehensive feasibility study. The GRMF CP grant provides additional financial assistance for this phase.

This chapter on the Continuation Premium stipulates:

- The eligible activities;
- The respective financial caps;
- The relevant processes (CP Application letter, CP Addendum to the Grant Contract) – including regulations in respect to timing and formal issues.

Geothermal Risk Mitigation Facility for Africa	Geothermal Risk Mitigation Facility (GRMF)	African Union a United and Strong Africa
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18.2 Conditions for the Continuation Premium

In order to be considered for the additional CP funding, project developers must have implemented the activities in the original Grant Contract in a satisfactory manner – including the adherence to relevant reporting requirements, leading to a disbursement of the assigned grant.

As the CP is subject to an Addendum to the Grant Contract, developers must comply with all the regulations stipulated within the original Grant Contract as well as with all the CP specific regulations. The developer has to comply with all duties and liabilities covered in the GRMF Grant Contract for the execution of CP activities and will be excluded from funding if the terms and conditions of the initial Grant Contract are not adhered to. CP grants are paid in arrear after submission of final report as defined in the Addendum to the Grant contract, financial report and invoices.

For Continuation Premium Activities, the Developer is required to submit any additional E&S Documentation as required per national legislation and in compliance with the Applicable Standards. Continuation Premium Activities will be considered / integrated in the overall ESAP as appropriate and are subject to the Developer's E&S Reporting requirements. Additional documentation / plans and E&S Reporting are subject to Independent Review and to No-Objection from GRMF.

18.2.1 Timeline

- The developer must officially inform the African Union Commission (AUC) about their intention to call the Continuation Premium in the Grant Contract with a socalled CP Application letter at **latest** 3 months prior the ending of the implementation period as determined in the Grant Contract. The **earliest** time for applying for a CP is the spud-in of the 1st well of the initial Drilling Programme.
- The developer must sign the CP Grant Contract Addendum **before** starting the CP activities, at **latest** at the end of the implementation period as determined in the Grant Contract.
- For the CP activities, a time period of 12 months after signing of the CP Grant Contract Addendum is permitted. Thereafter, an additional three month period is granted for the delivery of the final report – including the delivery of the expenditure verification report. Any reports or invoices submitted after this period will not be considered for CP disbursement. CP activities must commence no later than six months after the signing of the CP Contract Addendum.
- There is the possibility for an extension of the CP Contract Addendum; the applicant has to apply for it in written form giving in detail the reason for the extension. The AUC reserves the right of disapproval.

The following graph illustrates the entire CP related process – including the timing of all relevant milestones:

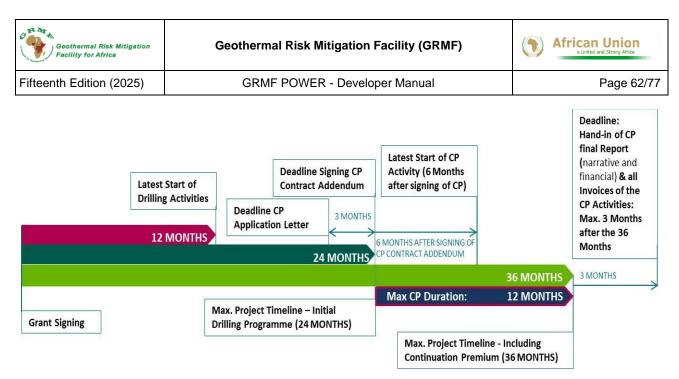


Figure 8: Implementation schedule of Continuation Premium

18.2.2 Eligible Activities

In order to suffice the general aim of the CP, eligible continuation activities are limited to activities related to the risk of discovering, evaluating and proving the geothermal resource in order to contribute towards a comprehensive feasibility study being the basis for the further confirmation drilling and construction phase.

Eligible activities under the CP depend on the chosen initial Drilling Programme. In case the initial Drilling Programme comprises one of the following three possibilities:

- a) 2 full size wells
- b) 3 slim holes
- c) 2 slim holes & 1 full size well

Eligible activities include:

- Additional full size well. AWC-Guidelines according to Grant Contract apply.
- Wellhead unit(s) installation.
- Long term discharge testing (minimum six months).
- Reservoir evaluation update.
- Feasibility Study (after the successful drillings and testing, there is a new informational base, which can lead to an updated, bankable documentation of the projects, required to acquire further financing capped at a maximum eligible costs of USD 100,000.)

In case the initial Drilling Programme comprises one of the further possibilities (already including an additional full size well) being:

- a) 3 full size wells
- b) 3 slim holes & 1 full size well
- c) 2 slim holes & 2 full size well

Eligible activities include:

- Wellhead unit(s) installation.
- Long term discharge testing (minimum six months).
- Reservoir evaluation update.
- Feasibility Study (after the successful drillings and testing, there is a new informational base, which can lead to an updated, bankable documentation of the projects, required to acquire further financing capped at a maximum eligible costs of USD 100,000.)

18.2.3 Restrictions in respect to financial caps

The maximum extent to which financing is provided by the Continuation Premium is restricted according to a double-cap base; **whichever is lower applies**:

- 1. Up to 30% of the approved eligible and expended costs of continuation activities or,
- 2. Up to 30% of the developer's share of the eligible and expended costs incurred during the initial drilling and testing programme (excluding infrastructure upgrades).

18.2.4 Processes relevant to Continuation Premium

Developers have to submit an official application to GRMF applying for grant co-funding for continuation activities. The application documents are accessible for download from the GRMF webpage <u>http://www.grmf-eastafrica.org/application/continuation-premium</u>.

The AUC may request further information, which the applicant has to supply on short notice to enable a fast process. The developer's application must be submitted to the same delivery location at the African Union Commission as required for the initial application documents.

African Union Commission Roosevelt Street, W21K19 P.O. Box 3243 Addis Ababa, Ethiopia





Joseph MWANGI

GRMF Project Manager Infrastructure & Energy Department

Further, a scanned copy of the letter must be sent to the following e-mail addresses: <u>grmf@africa-union.org</u> and <u>grmf@roedl.com</u>.

18.3 Monitoring and Reporting

The developer shall submit monthly progress reports (for drilling activities the daily drilling reports have to be submitted with the monthly reports) using the relevant GRMF templates. In case of drilling activities, the developer shall inform the RGCU of the start of drilling operation (spudding) and inform the RGCU of the well completion.

Environmental and social performance of the Developer is part of the Developer's regular reporting requirements and will be subject to Independent Monitoring, including reviews of E&S reports and potential site visits. A template for E&S Reporting will be attached to the grant contract.

All programme data, interpretations, lessons learnt, all updates on the supporting project documentation as well as information on the total project costs accrued shall be compiled in a completion report upon completion of the CP activities and submitted to the RGCU.

Raw data collected during the Drilling Programme funded by the Facility also needs to be provided. The raw data shall be annexed in clear tables or graphs for easy consultation (English language, SI units) and shall also be provided in digital format along with any special programmes necessary to view the raw data.

Failure in complying with the monitoring or reporting requirements will result in a request to rectify the issue. If the issue remains, dispute resolution will take place as per the conditions in the grant contract. If the dispute resolution remains, pertaining failure in complying will result in the cancellation of the grant contract.

In case a feasibility study is the only funded CP activity, there is no monthly reporting requirement, but GRMF expects due update of all E&S documentation corresponding to the level of information provided in the feasibility study, in line with national legislation and with the Applicable Standards. This includes continuation of stakeholder engagement during field work for the feasibility study.



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ANNEXES

Annex 1 - Evaluation Criteria – Surface Studies

The following table shows an overview of the evaluation criteria for Surface Studies. The criteria may still be subject to slight changes and will be stated more precisely in the Request for Application. The evaluation criteria 1, 2, 3, 5, 6 and 7 are classified as main criteria. Applications which score in these main criteria in the lowest category will therefore not be considered further in the current application round but will be provided with feedback accordingly. The overall minimum score for all criteria is 70%.

	Evaluation Criteria	Status/ Criteria
1	Indication of the existence and nature of ge- othermal resource based on results from previous studies	Well documented, good evidence of the exist- ence and nature of a geothermal resource
		Some evidence of the existence and nature of a geothermal resource
		Limited evidence of the existence and nature of a geothermal resource
2	Robustness of work programme and sched- ules for Surface Studies	Detailed, thoroughly presented and technically feasible as well as appropriate work programme and justification
		Feasible work programme but lacking some de- tail
		Incomplete or unfeasible work programme
3	Appropriate authorisation for exploration activities, environmental, access rights and any other relevant permits/licenses/rights in place or under negotiation	Majority of authorisations and permits/li- censes/rights in place or not required; negotia- tions for missing authorisations/permits/li- censes/rights underway
		Some authorisations/permits/licenses/rights in place or not required; negotiations for missing authorisation and permits/licenses/rights underway
		No/few authorisations/permits/licenses/rights in place; no/few negotiations for missing authorisa- tions/ underway: no details specified
4	Description of market for future power plant	Robust and well thought out market strategy
	output	Feasible market strategy but lacking some detail
		Incomplete or unfeasible market strategy
5	Plan for financing the developer's portion of the Surface Studies budget	Thoroughly presented, robust, feasible and ade- quate financing plan
		Fair financing plan, but lacking some detail



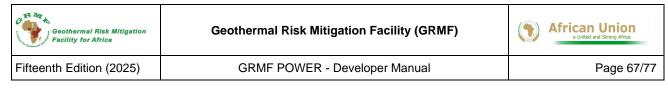


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	Evaluation Criteria	Status/ Criteria
		No or limited financing plan
6	Geothermal exploration experience and ex- pertise of the developer including private sector partners and engaged consultants as demonstrated in the key personnel CVs	Qualified working experience of key personnel in comparable geothermal projects ≥10 years in- cluding experience in Africa
		Qualified working experience of key personnel in comparable geothermal projects ≥ 5 including experience in Africa
		Key personnel inexperienced in comparable ge- othermal projects / no experience in Africa
7	Geothermal exploration experience and ex- pertise of the developer including private sector partners and engaged consultants as	Good track record of successful geothermal exploration and development
	demonstrated in the project references	Some experience but some gaps and/or limited track record
		Unproven or inexperienced eligible entity
8	Financial, management and organisational capabilities	High financing, management and organisational capabilities in place to carry out programme
		Fair financial, management or organisational ca- pabilities, but lacking some detail
		Low financial, management or organisational capabilities
9	Plans for obtaining expertise, finance and equipment for reservoir confirmation drill- ing	Robust and well thought out plans for subse- quent reservoir confirmation drilling
	ing	Fair plans for subsequent reservoir confirmation drilling but lacking some detail
		No or limited plans for subsequent reservoir confirmation drilling
10	Quality of the provided application (includ- ing the E&S risk screening documents)	High quality
	ing the Ecos fisk screening documents)	Fair quality
		Poor quality



Annex 2 - Evaluation Criteria – Drilling Programmes

The following table shows an overview of the evaluation criteria for drilling projects. The criteria can still be slightly changed and will be stated more precisely in the Request for Application. The evaluation criteria 1, 2, 3, 5, 6, 11 and 12 are classified as main criteria. Applications which score in these main criteria in the lowest category will therefore not be considered further in the current application round but will be provided with feedback accordingly. The overall minimum score for all criteria is 70%.

	Evaluation	
	Criteria	Status/ Criteria
1	Indication of appropriate drill sites in geo- thermal resources area selected based on re- sults from all previous studies with empha- sis on geophysics and geological studies es- pecially tectonics.	Very good, well-documented and robust evi- dence from extensive geophysical and geological studies of a geothermal resource / multiple sites identified with good justification for drill site se- lection
		Fair, well-documented evidence from a moderate geophysical and geological resource evaluation programme / fair justification for drill site selection
		Some evidence of a geothermal resource / little or no geophysical and geological studies completed / poor justification for drill site selection
2	Robustness of plans, adequateness of pro- posed equipment and schedules for Drilling Programme for support by the Facility	Thoroughly presented and technically feasible work programme; evidence of ability to source equipment
		Feasible work programme but lacking some de- tail
		Incomplete or unfeasible work programme
3	Appropriate authorisation for exploration activities, environmental, access rights and any other relevant permits/licenses/rights in place or under negotiation	Majority of authorisations and permits/li- censes/rights in place or not required; negotia- tions for missing authorisations/permits/li- censes/rights underway
		Some authorisations/permits/licenses/rights in place or not required; negotiations for missing authorisation and permits/licenses/rights underway
		No/few authorisations/permits/licenses/rights in place; no/few negotiations for missing authorisa- tions/permits/licenses/rights underway: no de- tails specified
4	Description of market for future power plant output / Offtaker agreement or equivalent in	Market strategy / Offtaker agreement in place or not required
	place or under negotiation	Negotiations for offtaker agreement underway





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	Evaluation Criteria	Status/ Criteria
	Criteria	No evidence that offtaker agreement negotiations are underway
5	Plan for financing the developer's portion of the Drilling Programme budget	Thoroughly presented, robust, feasible and ade- quate financing plan
		Fair financing plan, but lacking some detail
		No or limited financing plan
6	Robustness of business plan for develop- ment of geothermal resource and power	Robust and well thought out business plan
	plant after completion of drilling pro- gram. ²⁴	Feasible business plan but lacking some detail
	gram.	Incomplete or unfeasible business plan
7	Likely installed capacity of envisaged geo- thermal power development at the site	Potential geothermal power development at the site $> 100 \text{ MW}_{e}$
		Potential geothermal power development at the site 10-100 MW _e
		Potential geothermal power development at the site $< 10 \text{ MW}_{e}$
8	Monte Carlo Volumetric estimates of the electricity potential of the resource for the	Greater than 90% certainty
	economic potential	50 – 90% certainty
		Less than 50 % certainty
9	Percentage increase of total installed geo- thermal power generation capacity in coun- try at the time of application by likely in- stellad apposity of anyiograph geothermal	Percentage increase by planned plant of total in- stalled geothermal power generation capacity in country > 50 %
	stalled capacity of envisaged geothermal power development at the site	Percentage increase by planned plant of total in- stalled geothermal power generation capacity in country 10-50 %
		Percentage increase by planned plant of total in- stalled geothermal power generation capacity in country < 10 %
10	Combined heat and power / rural electrifi- cation / project benefits for communities	Robust, feasible and adequate plan for CHP or rural electrification or other identified benefits for local community
		Fair plan for CHP or rural electrification or some other benefits identified for local commu- nity but lacking specific detail

²⁴ Reference to the offtaker price has to be submitted such as a power-purchase-agreement, a letter of intent, a letter of relevant Ministry, or if possible an offtaker agreement





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	Evaluation Criteria	Status/ Criteria
		No plans for CHP or rural electrification and no identified benefits for local community
11	Geothermal exploration experience and ex- pertise of the developer including private sector partners and engaged consultants as demonstrated in the key personnel CVs	Qualified working experience of key personnel in comparable geothermal projects ≥10 years in- cluding experience in Africa
		Some experienced staff available, qualified working experience of key personnel in compa- rable geothermal projects but < 10 years includ- ing experience in Africa
		Key personnel inexperienced in comparable ge- othermal projects / no experience in Africa
12	Geothermal exploration experience and ex- pertise of the developer including private sector partners and engaged consultants as	Good track record of successful geothermal exploration and development
	demonstrated in the project references	Some experience but some gaps and/or limited track record
		Unproven or inexperienced developer
13	Management and organisational capabili- ties	High management and organisational capabili- ties in place to carry out the programme
		Fair management or organisational capabilities, but lacking some detail
		Low management or organisational capabilities
14	Quality of the provided application	High quality
		Fair quality
		Poor quality

Annex 3 - Content of a Scoping Report

Topics to be addressed in the **Scoping Report** will comprise, but may not be limited to:

- Overall contextual risk analysis and scoping of human rights risks for the planned project as per GRMF Human Rights Guidance
- Current land use in the area (including information on any existing structures that will need to be removed for the exploration drillings), including settlements and public infrastructure
- Local livelihoods, agriculture and grazing
- Presence of protected/endangered plants or animals
- Presence and/or proximity to wildlife migration corridors
- Proximity to important wildlife habitat areas including Special Protected Areas (SPAs) and statutorily designated or qualifying International or National sites for nature conservation
- Proximity to protected area or area of cultural significance
- Proximity to closest residence/neighbourhood, public health and safety
- Description of procedures for measuring and monitoring noise and potential impact on nearby residents and any controls that will be required on the equipment to minimize noise.
- Water resources (surface water, ground water)
- Heath and disease vectors
- Occupational H&S
- Security implications
- Aesthetics and sense of place
- Traffic flows
- Waste
- Recreation and tourism
- Information regarding physical or economic displacement of population
- Information regarding potential impacts on indigenous peoples
- Information regarding how the land for the Project (exploration drilling and further development) will be acquired
- Any public meetings held with nearby residents and issues that arose.
- Information regarding planned expansion or presence of other geothermal facilities, existing or planned, in the Project area of influence.

Annex 4 - Stakeholder Engagement

For the preparation of the Stakeholder Engagement Plan, guidance may be obtained from <u>IFC's</u> <u>Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging</u> <u>Markets.</u>

Exemplary Content of a Stakeholder Engagement Plan

- (1) Introduction
 - Project Description
 - Public Consultation and Project Design, Construction and Operations
 - Project Purpose and Objectives
 - Total Project Cost and Associated Financiers and Lenders
- (2) Public Consultation Regulations and Requirements
 - National Regulations and Requirements
 - International Standards and International Best Practice
- (3) <u>Previous Public Consultation and Disclosure Activities</u>
 - Summarize all public consultation and information disclosure activities to date. This should include the types of information disseminated, the locations and dates of meetings, descriptions of those individuals/groups involved.
 - An overview of issues discussed, how they were responded to and how they were communicated back to the concerned publics.
- (4) Stakeholders
 - Provide an inventory of key stakeholder groups who will be informed and consulted about the project.
 - Account for inter- and intra- social dynamics across all stakeholders, identifying under-represented and vulnerable groups.
- (5) <u>Stakeholder Engagement Plan</u>
 - Goals of the Plan
 - Methods for Information Dissemination and Public Consultation
 - Information Disclosure and Public Consultation
 - Issues Scoping
 - o ESIA Review
 - o Construction and Operations
- (6) Schedule and Timetable
 - Provide a schedule detailing when public consultation and information disclosure will occur, with which stakeholder groups, at what stages of the project's process/project cycle, and through what formats.

(7) <u>Resources and Responsibilities</u>

- Indicate budgets allocated to the realization of all activities foreseen in the Plan.
- Indicate management and expert staff devoted to, and responsible for, the public consultation and disclosure programme.
- (8) Grievance Mechanism
 - Describe how the operation- affected people can bring their concerns to the project authority and how they will be considered and addressed.
- (9) Monitoring and Reporting
 - Identify where and when the results of public consultation and information disclosure will be reported. This should include at a minimum reporting on the results of consultations at the draft ESIA stage and annual monitoring reports.

Note: in case IFC PS 7 is triggered the SEP has to comprise the provisions for the process of Free, Prior and Informed Consent (FPIC) and any specific engagement provisions for indigenous groups as required. Please also see GRMF Human Rights Guidance and FPIC Guidance.

Annex 5 - Process for Additions to the List of Eligible Countries

The following process must be adhered to in order for a country to be added to the list of eligible countries.

- 1. Official request by the Ministry of the country responsible for geothermal development including the following information:
 - Published data / scientific papers available on geothermal activity in the country.
 - Geothermal confirmation data including:
 - Heat flow maps
 - Heat estimates, if available
 - Active seismicity earthquake maps
 - Geological settings:
 - i. Basement rocks type and age
 - ii. Mountain ranges
 - iii. Sedimentary basins
 - iv. Tectonically active area
 - v. Faults and fissures
 - vi. Eruption history (if any), etc.
 - \circ Drilled wells and available well data often oil/gas wells:
 - i. Temperature measurements
 - ii. Temperature gradient
 - iii. Rock types/rock dating
 - iv. Permeability
 - v. Fluid chemistry, etc.
 - Seismic reflection profiles:
 - i. Layer boundaries
 - ii. Fault zones
 - iii. Correlation with well data, etc.
 - Resistivity (like MT/TEM) and gravity surveys:
 - i. Low resistivity areas
 - ii. Low gravity anomalies
 - Surface manifestations:
 - i. Springs
 - ii. Fumaroles
 - iii. Geothermal grass
 - iv. Alteration zones
 - v. Fluid chemistry and results of geothermometry
 - vi. Geothermal activity in neighbouring countries
 - Information on the market environment with respect to electricity:
 - Overall installed capacity for power generation and share of renewable energy.
 - Installed capacity for power generation from geothermal resources.
 - Levelized Cost of Electricity (LCOE) analysis regarding the competitiveness of geothermal power generation in the country.

- Information on off-take potential for electricity produced from geothermal resources.
- Information on the market environment with respect to heat:
 - Information on off-take potential for heat from geothermal resources in industry, agriculture and tourism etc..
- 2. Review of official request by the Regional Geothermal Coordination Unit.
- 3. Decision on addition to the list of eligible countries by the GRMF Oversight Committee.
- 4. Feedback to the applying Ministry.

Annex 6 - Glossary

This Glossary explains key terms used in the Manual, so to avoid ambiguity and help readers to understand the more technical or Facility specific terms.

Concession Agreement

A concession agreement is a license allowing the developer to conduct surveys or to drill a well in a specific area. In most countries, a concession agreement needs to be in place in order to implement a geothermal project.

Consortium

For the GRMF a "Consortium" is any kind of cooperation with the objective of a joint development of a geothermal project.

For this cooperation, there could be either:

- a) A Special Purpose Vehicle (SPV) especially established for the particular project, with shareholders from participating partners
- b) A Joint Venture agreement between cooperating parties

In case of a), the SPV will be the applicant and finally also the beneficiary. The declarations and the grant contract will have to be signed by the representative(s) of this corporation.

In case of b), the joint venture agreement has to be submitted to AUC with the application. The declarations and grant contract have to be signed by every cooperating party.

Exploration Drilling

An exploration Drilling Programme consists of the drilling and testing of slim hole- and full size wells. Funding by the GRMF Facility may comprise up to three full size wells or a combination of up to three slim hole wells and one full size well, or a combination of two slim hole wells and two full size wells.

Field Development Well

"Field Development Well" is specifically used in the GRMF documentation as a full size well, capable of production, drilled for well field development purposes.

Full Size Well

A full size well has diameter larger than 5" of the last casing or liner. Full size wells may be suitable for production.





Geothermal Resource, Geothermal Prospect, Geothermal Reserve

A **geothermal resource** exists in such a form, quality and quantity that there are reasonable prospects for its eventual economic extraction. The location, quantity, temperature, geological characteristics and extent of a geothermal resource are known, estimated or interpreted from specific geological evidence and knowledge.

As geological evidence and knowledge increases, a **geothermal prospect** may become a geothermal resource but until that time, the prospects for its eventual economic extraction are uncertain.

The essential feature of a **geothermal reserve** as opposed to a geothermal resource is that it takes into account commercial viability. 'Reserves' are defined as the part of the resource that is commercially extractable and 'Resources' as the as yet sub-commercial component.

Initiation/Completion of Field Work (Surface Study)

Initiation of field work means the actual start of field work by geochemical sampling, structural mapping, laying-out and installation of geophysical sensors, etc. Completion of field work means removal of all monitoring equipment or sensors from the exploration site.

Offtaker Agreement

The offtaker agreement is a legal contract signed between the owner of a power plant generating the electricity (provider) and the buyer of the electricity (purchaser). An offtaker agreement plays a key role in the financing of independently (not by a utility) owned electricity generation assets.

Spud(ding)

Well Spud(ding) means the actual start of drilling operations for a well which is the point in time when the drill bit penetrates below the conductor shoe.

Reservoir Confirmation Well

A reservoir confirmation well is a full size well ($\geq 5''$ diameter of the last casing or liner). Reservoir confirmation wells may be used for production or injection.**Slim Hole Well**

A slim hole is a well with smaller than 5" diameter of the last casing or liner. Slim holes are typically not drilled to the same depths as full size wells and are usually not used for production. However, the drilling of slim hole wells is faster and much less expensive than drilling of full size wells.

Fifteenth Edition (2025)



Temperature Gradient Well

Temperature gradient (TG) well is a shallow, narrow well drilled below ground water table for the sole purpose of measuring the temperature and to be able to calculate the temperature gradient (°C/km) in the top part of the expected geothermal area in an attempt to find an anomaly indicative of a deeper geothermal system.

Design, depth and number of temperature gradient wells shall be reasonable and solely for the purpose of measuring the temperature and to be able to calculate the temperature gradient ($^{\circ}C/km$) in the top part of the expected geothermal. The design and depth of the TG wells can depend on the depth of the ground water, lithology, etc. For example, in low temperature areas (like the West – branch of the EAR) with low permeability and a shallow depth to groundwater table, TG wells can be as shallow as 30-60 m deep. Justifications of design should be given with reference to site characteristics.

Prior to drilling TG wells, the regional gradient must be known so anomalous areas can be delineated. In other words, the proposed TG survey should focus on finding anomalously hot areas.

This approach is ideal for facture dominated but hidden geothermal systems. For a TG survey of this nature, the number of wells can vary greatly, from a few up to 15 wells.

For high temperature area (like the East – branch of the EAR), geothermal gradient wells can be applied in the surface study phase. The depth of the wells will depend on the permeability of the surface layers. Gradient drilling in high temperature areas is much more complicated than in low temperature areas.

The suitability in regard to amount and depth of TG wells will be evaluated by looking at relevant justification on a case-by-case basis.

Well Completion

Well completion means the end of the actual drilling of a well, which is the point in time when the drill string is removed from the hole for the final time and the production casing, if applicable, is set (installed).