

Introduction to the GeoFutures Facility

A New Power Africa-Sponsored Risk Mitigation Instrument for East Africa

Drawing on best practice from other geothermal support mechanisms, the GeoFutures Facility has been designed to complement existing regional facilities and provide support in a variety of ways. It comprises three flexible pillars that will support the progression of projects from start to finish, and a funding scheme that allows for a high leverage of private capital relative to public capital.

Pillar 1	Pillar 2	Pillar 3
Technical Assistance	Direct Finance	Risk Mitigation
Public and Private sectors eligible 100% of eligible costs covered as Non-Recoverable Grant Activities covered include: <ul style="list-style-type: none"> • Human capacity development • New technology review • Well targeting support • Community engagement • License issuance process • Mini-grid studies specific to geothermal • Wellhead generation technology transfer • Contract development (e.g., PPA) • Data Centers for data sharing 	Public and Private sectors eligible 40% of eligible costs covered Activities covered include: <ul style="list-style-type: none"> • Focused surface exploration (non-recoverable grant) • Infrastructure development (convertible loan to be repaid if a project is developed, otherwise non-recoverable grant) • Initial exploration drilling (non-recoverable grant) 	Private sector and Public Private Partnerships eligible Well productivity insurance coverage for ~6 appraisal wells or a campaign of up to 10 wells that includes initial exploration wells and appraisal wells 60% of eligible costs covered as convertible loans to be repaid by developer (if project is developed) or insurer (if project is unsuccessful) Elements include: <ul style="list-style-type: none"> • Due Diligence costs for bankability and insurability report • Premium payment mechanism (premium costs included in insurance coverage)

The Technical Assistance pillar addresses the need for a more robust enabling and implementing environment by providing technical support in a variety of ways, filling gaps that are not covered by existing programs. To ensure complementarity and avoid overlap with existing facilities, access to this pillar will be contingent on confirmation that existing facilities are not able to support the requested TA. Activities in this area are pre-commercial and therefore rely heavily on public funding.

The Direct Finance pillar supports projects at critical development points in a streamlined manner, increasing the ability for projects to rely on this flow of funds, and in turn increasing the ability to move further private sector investment. It also covers a wider spectrum of activities than existing facilities.

The Risk Mitigation pillar provides access to an innovative private-sector insurance mechanism that targets resource risk, which is one of the key barriers to geothermal investment. The proposed solution principally addresses the risk of lower-than-expected well productivity. Rather than have the public sector assume all the risk, public funds would be used to cover due

diligence costs and 60% of the insurance premium payments. This effectively leverages public-sector funds for private-sector involvement in the geothermal industry; engages the domestic insurance market and facilitates local capacity building and knowledge transfer. Opportunities to replicate this mechanism for other risks (e.g., pure drilling risk) also exist within this pillar.

One of the important aspects of this element of the GeoFutures Facility is the high leverage of private capital relative to public capital. The table below shows typical costs and risk assumed by the public and private sectors under the GeoFutures Facility. Although direct financing of appraisal drilling is not proposed as part of the GeoFutures Facility, it has been included for comparison purposes. The right-hand column illustrates that for a relatively small commitment by the public sector to cover 60% of the insurance premium payments, significant risk is transferred to the private sector.

Cost Element	Surface Studies	Exploration Drilling	Appraisal Drilling (if Direct Financed)*	Appraisal Drilling (Due Diligence cost only)	Appraisal Drilling (Premium Payment only)
Typical Cost (\$)	\$1 million	3 wells @ \$7 million	6 wells @ \$7 million	\$150,000	\$3 million
Total Cost	\$1 million	\$21 million	\$42 million	\$150,000	\$3 million
Geofutures Commitment (%)	40%	40%	60%	60%	60%
GeoFutures Commitment (\$)	\$400,000	\$8.4 million	\$25.2 million	\$90,000	\$1.8 million
Recoverable?	N	N	N	N	Y
Risk Assumed by Private Sector (\$)	\$600,000	\$12.6 million	\$16.8 million	\$60,000	\$45 million**

Notes:

* Not being proposed as a Direct Finance option for GeoFutures (included herein for illustration purposes only)

** Private sector pays total loss plus insurance premium (i.e., premium costs are covered by the insurance)

The total funding requirement is estimated to be \$ 75.25 million, comprised of:

- \$ 8 million for the Technical Assistance facility for various types of TA
- For the Direct Finance facility:
 - \$ 4 million in grant funding for Focused Exploration
 - \$ 8 million as convertible loans for Infrastructure
 - \$ 28 million in grant funding for Deep Exploration Drilling
- For the Risk Mitigation Facility:
 - \$ 2.25 million for the Due Diligence Facility, covering 15-20 projects
 - \$ 25 million for the Premium Payment Facility, based on 5 projects requiring an average premium financing of \$ 5 million at any one time

Funding would be sourced from donor countries who have already demonstrated their commitment to the geothermal sector (US, UK, Germany, France, Sweden, the EU and Japan). Other countries and financial institutions with an appetite to support sustainable development should also be considered. CIF and GCF could also be targeted if a suitable and willing entity that is accredited by CIF and GCF can be engaged without adding significant complexity and

costs to the implementation of the GeoFutures Facility. The facility could be managed entirely by a private-sector facility manager, or by an entity such as Africa Trade Insurance (ATI).

Stakeholder discussions have revealed at a number of projects that are near-ready for implementation and could benefit from participation in the GeoFutures Facility, including several Pillar 1 projects related to capacity building for public-sector and private-sector entities in specific areas, and 3 or 4 projects that could benefit from drilling under Pillars 2 and 3.

A summary of the features of the GeoFutures is provided in the graphic below.

Activity Addressed	Pillar 1 - Technical Assistance			Pillar 2 - Direct Finance			Pillar 3 - Risk Mitigation		
	Coverage	Type	Sectors	Coverage	Type	Sectors	Coverage	Type	Sectors
Enabling Environment	✓	100% NRG	Any	✗	N/A	N/A	✗	N/A	N/A
Surface Studies	✓	100% NRG	Any	✗	N/A	N/A	✗	N/A	N/A
Focused Exploration	✗	N/A	N/A	✓	40% NRG	Any	✗	N/A	N/A
Infrastructure	✗	N/A	N/A	✓	40% CL	Any	✗	N/A	N/A
Exploratory Drilling	✗	N/A	N/A	✓	40% NRG	Any	✓	60% CL	Pri + PPP
Appraisal Drilling	✗	N/A	N/A	✗	N/A	N/A	✓	60% CL	Pri + PPP

Intervention Type Key
NRG Non-Recoverable Grant
CL Convertible Loan
N/A Not Applicable

Sector Key
Any Any sector (public, private or PPP) eligible
Pri Private Sector Eligible
PPP Public Private Partnership Eligible

Feedback from Stakeholders is a critical element of this study, and we will be pleased to hear your reaction to and suggestions for the proposed GeoFutures Facility at the Stakeholder Workshop on Thursday, 23 March 2017.