

DPSP II: Kenya Concessional Finance Program for Geothermal Generation

#	Comment / Issue	Made by	Answer
1	Of the USD 29 million of CTF funding, USD 15 million will go to be for long term concessional debt. What will the USD 14.65 million be used for (is this for a second geothermal project- it's unclear to us)?	UK	The program aims at supporting at least two of the three selected projects under the Request for Proposal issued by the Government of Kenya (GoK). An indicative allocation of USD 15 million (minus preparation, monitoring and supervision) for each project is envisaged.
2	How many projects will the facility cover? Paragraph 2.2 mentions <i>"two geothermal generation projects"</i> . In paragraph 2.3 it says <i>"The three projects are expected to have a combined installed capacity of 105MW"</i> . In paragraph 2.4 it says <i>"Following a preliminary assessment of the two projects..."</i> Paragraph 2.9 mentions 2 transactions over an investment period of one year. Paragraph 5.12 mentions <i>"AfDB will aim at supporting one to two projects with this program"</i> .	UK	The program aims at supporting at least two projects. Paragraph 2.3 makes reference to the Request for Proposal itself that selected a total of three private companies to deploy a total installed capacity of 105 MW. The revised version of the document makes this clearer.
3	On GHG emissions, page 2 of the Cover Sheet mentions 11,528,160 tCO ₂ as the GHG emissions savings over the lifetime of the project in section 12. Under the Core Indicators it mentions 8,646,120 tCO ₂ over the lifetime of the project. Can the project team please clarify?	UK	This was a mistake that was not updated between iterations of the proposal. In the previous version, the correct amount was 8,646,120 tCO ₂ over the lifetime (20 years) of two projects with a capacity of 35MW each. Following the revision of the grid emission factor from 0.75 to 0.594 (Please see answer to issue 4), the numbers have changed. The Annual Emission Reduction is now 342,386 tCO ₂ and the Project Life Emission Reduction (tCO ₂ / 20 years) is now 6,487,727. The program document was revised accordingly.
4	On the emissions reductions calculations (in Annex 2), could you explain the 0.8tCO ₂ / MWh Grid Emissions Factor – what is the marginal supply source assumed? In the calculations it looks like a Grid Emission Factor of 0.75 was actually used instead of 0.8: (432306 tCO ₂) / (576408 MWh/year) = 0.75	UK	This figure has been revised following discussions with AfDB's local energy expert. The grid emission factor is now 0.594 tCO ₂ / MWh as stated in a document by KenGen titled <i>"KenGen Geothermal Energy Carbon Credit Projects: Status, Benefits, Challenges, Lessons Learnt and Post-2012 Plans"</i> which can be found here . In the previous version the value used was 0.75 despite appearing 0.8 as Microsoft Excel has rounded up the number automatically.
5	Paragraph 2.4 mentions factors that would need to be improved for projects to reach financial close. It mentions <i>"insufficient cash-flows to ensure an appropriate risk-return profile to investors"</i> . Does	UK	This is determined through the project evaluation process in addition to discussions between AfDB and Project Sponsors. There are no formal guidelines; however, this can be ascertained through market knowledge

	the AfDB have any guidelines as to what it regards as an acceptable risk-return profile or is this determined solely through the competitive process?		<p>and observations based upon technology employed, local market risks, and returns available from alternative investments opportunities..</p> <p>At the time the companies were selected, it was unclear to them what the actual costs associated with raising the required debt for the projects would be. From preliminary discussions with the two sponsors, commercial viability might be at risk if CTF resources are not used to buy down the projects' total costs as estimated revenues resulting from the sale of electricity may be insufficient to cover the levelized costs.</p>
6	What are the reasons for the Government of Kenya not providing a Sovereign Guarantee? Short of a Sovereign Guarantee, what comfort can the GoK provide to investors?	UK	<p>This was a strategic decision made by the GoK and announced with the launch of the Request for Proposals. Historically, KPLC has never defaulted on any payment to electricity suppliers which adds to its credibility for future projects. Nevertheless, this is a hurdle to raising the needed debt financing for the projects.</p> <p>At the moment, AfDB and other lenders are discussing with the GoK ways to address this risk which may include: (i) a GoK letter of comfort, and possibly (ii) political risk insurance to be sourced from MIGA.</p>
7	Regarding the apportionment of risk and the difference in what is expected from the CTF funds vs. the AfDB funds, it would be useful to have an idea of the expected pricing gap between the CTF funding and the AfDB funding, and more generally some further details on the additionality of the CTF investment (e.g. how was minimum concessionality determined in practice? Who will make the final decision on pricing? How has the appropriate level of CTF funding (USD 15 million) been determined? If this is too high it will crowd out private investment.)	UK	<p>AfDB's pricing will be established in accordance with the AfDB's rules for private sector operations. This will be a combination of: (i) the Kenyan sovereign risk as determined by AfDB's credit committee, (ii) interest margin (difference between AfDB's borrowing costs and interest rate provided), and (iii) the internal credit rating of each specific project as determined by AfDB's credit committee. The final pricing will be determined later in AfDB's internal review and due diligence process for each transaction.</p> <p>It is still too early to establish the minimum concessionality of CTF resources. It will depend on the outcomes of further negotiations with each sponsor and other lenders and only once all the costs for each project are final. In the end, AfDB will propose CTF terms that will respect the principle of minimum concessionality and avoid market distortions. This will be a key aspect of the projects' due diligence and appraisal phases.</p> <p>The proposed amount for each transaction is indicative and results from a preliminary assessment. Final amounts and terms will be established during appraisal and may vary per transaction.</p> <p>A key objective is to avoid crowding-out of other potential financiers.</p>

8	<p>Separately from the interest rate differential it seems as though other concessions will be required from the CTF funding, namely a grace period and potential interest capitalization during the grace period.</p> <ul style="list-style-type: none"> - I wasn't clear whether the grace period would be for interest payments, principal repayments or both? - Is the AfDB prepared to also offer a grace period and consider a capitalization of their interest during the grace period? 	UK	<p>In general terms, the CTF loan will have the same seniority as AfDB's loan. An extension in the grace period and potential interest capitalization during the grace period will only be considered if really required and key to the projects' commercial viability.</p> <p>Grace periods are usually implemented during the construction phase of infrastructure projects – a period during which the project does not generate revenues and in which loan repayments are not required.</p> <p>AfDB offers a grace period during the construction phase of private-sector led projects but it is not allowed to capitalize interest payments, hence interest payments are required during the grace period.</p>
9	<p>Regarding the credit worthiness of GDC and KPLC, it would be useful to have more information on the financial profile of these companies, including their ownership structure (who are the shareholders, are they publically or privately owned) the size of their balance sheet and their degree of leverage (i.e. how much corporate debt they already have).</p>	UK	<p>The GoK has a controlling stake at 50.1% of KPLC's shareholding with private investors at 49.9%. The company is listed on the Nairobi Securities Exchange Market. The Geothermal Development Company is a 100% state-owned company, formed by the Government of Kenya as a Special Purpose Vehicle.</p> <p>KPLC discloses publicly its audited financial statements (see here for 2015). As of FYE June 30, 2015, KPLC reported total assets of USD 2.7 billion and total debt of USD 2.1 billion. As of FYE 2015, the company reported leverage of 3.5x (debt/equity).</p> <p>Since GDC is not a publicly traded entity, information on the company's financials is very limited. During appraisal, AfDB will seek to obtain further financial information on GDC.</p>
	<p>Regarding GHG emissions savings, how are these calculated? What is the counterfactual – is it based on the existing mix of technologies in the Kenyan power market?</p>	UK	<p>The GHG emission savings were calculated having in mind the values utilized in the SREP Kenya Investment Plan. Since the plan is nationally-owned, AfDB is of the view that it should use the values contained in the document as a good proxy for this program. The figure may change following analyses from the lenders' technical advisors, and in that case, each project document will clearly mention it.</p>
10	<p>Can useful lessons be learned from existing projects? Paragraph 1.7 mentions that <i>"the Olkaria field is already under operations"</i>. How was this project funded? Who supplies the steam to this project and how is the production of electricity remunerated? Is the project proving viable financially at that level of remuneration?</p>	UK	<p>The existing IPP in Olkaria geothermal field is not a good comparator for these projects for a number of reasons. These are: (i) project was fully funded by the project owner with recourse to equity, (ii) the steam is managed and supplied by the company itself.</p>

			<p>The project entered into a Power Purchase Agreement with KPLC which is responsible for remunerating the electricity. So far, the project has proven to be financially viable with the level of remuneration (not public available information) agreed between parties.</p> <p>PLEASE SEE ANSWER #32 THAT SUPERSEDES THIS ONE.</p>
11	Which criteria has AfDB used to assess the requirement of concessional funding?	Germany	The need for concessionality was established pursuant to discussions between AfDB's investment officers and AfDB's CIF Secretariat as a follow up on discussions and preliminary assessments on two of three selected projects under the RFP. The need for concessional resources is based on the availability of funding for the projects with sufficient tenor and required pricing sustained by projected cash flows of the projects.
12	Are the projects currently bankable? In our view, an enhancement of the project's bankability is not acceptable as criterion for concessional financing.	Germany	Due diligence on the projects is ongoing; however, the projects identified by the AfDB have experienced, quality Sponsors and commercially viable project structures. In many cases, concessional financing can enhance the commercial viability of projects as barriers and risks are addressed. This is common to the entire private sector portfolio of the CTF.
13	Please clarify how many projects are going to be financed. As this is unclear, we assume that the above mentioned assessment does not correspond to a due diligence.	Germany	Please see answer to Issue #1.
14	Please indicate the internal rate of return (IRR) and return over equity (ROE) for each project to be financed under two scenarios: without and with CTF-Funds (with the proposed concessionality). What are minimum figures for these indicators to have a bankable project?	Germany	<p>The bankability of a project is not only limited to an assessment of the IRR and ROE. Debt Service Coverage Ratios (DCSRs) are widely used to determine the capacity of a project to support needed debt financing.</p> <p>Due diligence on the projects is ongoing; however, minimum equity IRR in the 15%-16% range would be considered a reasonable target. It is still too early to undertake the requested assessment but this analysis will be central to the appraisal stage as we move forward to finalize CTF financing terms. Again, AfDB's commitment to treat CTF funds with the same degree of care of its own funds means that the Bank will work to limit shareholders' return to commensurate levels with perceived risk.</p>
15	Please clarify how the electrification rate will be improved with this program, compared to investments in grid-connected projects.	Germany	The projects under consideration will add 70 MW of reliable base load power to the grid, exploiting the under-utilized geothermal resource in Kenya. This additional capacity will feed power into the grid and provide sufficient electricity to power around 125,000 households helping to improve the country's electrification rate which is currently approximately 23%.

16	How is cost-effectiveness and fair competition granted among the private sector stakeholders, given that the approach seems to have been developed by manufacturers? Under this project developers' situation, how is it expected to ensure value-for-money?	Germany	Cost effectiveness and fair competition was ensured by the Request for Proposal issued by the Government of Kenya and the competitive selection process that followed. This selection process will be reviewed in detail by our procurement department but competitive tender processes are seen as best practice to ensure value-for-money.
17	How is the AfDB PRG going to be implemented in structuring these projects?	Germany	<p>The Partial Risk Guarantee (AfDB PRG) was requested by the GoK to help mitigate the liquidity risk of payment obligations under off-taker agreement (PPA) with KPLC and supply agreement with GDC, to the IPP projects.</p> <p>Under the PRG structure a letter of credit (LC) will be issued by a commercial bank for the benefit of the Project company. AfDB will guarantee payment of any funding under the LC by the commercial bank that is not replenished by GDC/KPLC. The AfDB will also enter into a counter-indemnity agreement with the GoK which would require the government to repay the AfDB in the case its guarantee is called. The amount of the PRG will be equivalent to three months of financial obligations under the Supply Agreement and the PPA.</p>
18	Is the participation of any other guarantee mechanism foreseen, in addition to AfDB PRG??	Germany	The need for political risk insurance coverage will be evaluated and required, if deemed appropriate.
19	How do you justify a pricing of 75 bps (standard pricing for public sector loans) for a private sector project with no government guarantee?	Germany	<p>The pricing of 75 bps is presented as a floor pricing. The principle of minimum concessionality will still apply and the final interest rate will be established in a way to ensure that this principle is respected.</p> <p>75 bps is widely known in the CTF as the minimum interest rate that can be granted to a private sector project.</p>
20	Please provide Levelized Cost of Electricity (LCoE) and payback period for the options proposed in Figure II (page 5). What is the gap in terms of cost of capital (base points) between both scenarios?	Germany	The Levelized Cost of Electricity is not yet fully determined as all cost components are not final (e.g. quotes required for political insurance, debt interest rate from co-financiers, etc.)
21	What contribution from the capital expenditure is expected to come from equity shareholders? At which cost?	Germany	The equity contribution from shareholders is expected to be no less than 25% of the project's total costs. The cost of capital varies among project Sponsors depending upon their sources of funding.
22	As a pricing floor is indicated, there should also be a pricing cap for the CTF-Funds.	Germany	A pricing cap on the CTF funding does not appear to be warranted. The reason is that if pricing reaches the same level requested by other lenders participating in the project, then concessionality would not be required.

23	How will it be possible for AfDB to minimize concessionality through longer term conditions, instead of pricing directly?	Germany	If one expands the duration of the tenor, for example, this would mean that scheduled principal repayment amounts would be reduced when compared to the base case scenario. This can be seen as a form of concessionality as you extend principal repayments over a longer period.
24	Please review GHG emissions reductions calculations and indicate a single figure in the document. There seem to be some inconsistencies.	Germany	These have been reviewed and revised. See answer #3 above.
25	What kind of additional guarantees are included in financial covenants to reduce, mitigate or eliminate the contract termination risk? Why does GoK not provide a Sovereign Guarantee?	Germany	No additional guarantees will be included in the financial covenants to cover termination risk as the Credit Agreement will be entered between the IPPs and the lenders. On the issue of the Sovereign Guarantee please refer to answer #6.
26	Based on current GDC operation, its creditworthiness will depend on their revenues and debt service. Please indicate how this factor is going to be secured for 20 years of operation? How many Project Implementation and Steam Supply Agreements (PISSA) have been signed and under which regulatory framework have they been structured?	Germany	Discussions are ongoing with the GoK, Project Sponsors, and among lenders regarding an appropriate measure to mitigate risks related to GDC. The PRG referenced in question number 17 above addresses short-term payment risks; however, other mitigants will be explored and required to the satisfaction of lenders. There are three PISSA signed by GDC.
27	Has the route for the transmission line and the interconnection scheme been determined? Is it under construction or operation? What is the timeline for the interconnection of the projects in Menegai?	Germany	The projects will transmit power only 500 meters to the on-site substation for delivery to KPLC. KETRACO, 100% owned by GoK, will be responsible for constructing and maintaining the transmission line and substation. The transmission line and sub-station are still under construction but at an advanced stage. The completion date is estimated for Q2 2016.
28	Are all power evacuation infrastructures, such as transmission lines and substations, in place? These are typically a bottleneck in terms of project implementation in Kenya. If they are not in place, how is this going to be covered by the financial contracts?	Germany	This is noted. Please see answer #27.
29	Please list all permits, licenses and concessions that are expected to be available prior to the financial close.	Germany	These items are expected to include: (i) generation license from ERC, (ii) official registration as Kenyan companies, (iii) permit for electricity generation, (iv) official adherence to national E&S standards (in addition to those from AfDB), (v) other operational, legal and regulatory requirements that would be normally expected for the operation of a power plant in Kenya.

			As customary during project due diligence and prior to closing, the lenders along with their legal and technical advisors will ensure all required licenses and permits have been obtained and that all the relevant regulatory and other compliance matters are in proper order.
30	What is the status of the property where the project will be installed?	Germany	The project is on Government's land under the custody of Kenya Forest Service. GDC has acquired a thirty (30) year Special-Use License for the Menengai Geothermal Project site.
31	Regarding question 6, the response provided doesn't answer our question. What is the reason underlying the GoK's strategic decision not to provide a Sovereign Guarantee? If the Letter of Comfort is unable to provide a guarantee, what purpose does it serve?	UK	<p>Although a blanket sovereign guarantee of all project risks is impossible to obtain in any project finance transaction, many of the legal/regulatory and political risks typically encountered in an infrastructure project are within the host government's sphere of control and are best allocated to this stakeholder.</p> <p>As stated in answer #6, the "strategic" decision of not providing a sovereign guarantee to cover the responsibilities and obligations of GDC and KPLC is most likely linked to the government's perception that the market will bear this risk.</p> <p>Even though Sovereign Guarantees (contingent liability) are not reflected in the guarantor's balance sheet, rating agencies often take note of these liabilities when substantial. As such, and given the significant participation of private investors in Kenya's energy sector, the GoK may be unwilling to overexpose its public accounts to these instruments. Moody's currently gives Kenya a B1 credit rating.</p> <p>The GoK is however willing to execute a "softer document" that indicates an initial willingness to respect contractual obligations of nationally owned enterprises without elements of a legally enforceable contract. The objective is to create a morally binding but not legally binding assurance.</p>
32	In response to our question 10 "Can useful lessons be learned from existing projects?" The answer provided was that the Olkaria geothermal project was fully funded by the project owner with recourse to equity only. Given this, we'd be interested to know why the current projects require concessional finance (e.g. how it differs from the Olkaria project which didn't require it).	UK	<p>Note: THIS ANSWER SUPERSEDES THE ONE PROVIDED IN ANSWER #10</p> <p>The fundamentals of the Olkaria III project - including risks and barriers - are quite distinct from the ones being faced by the Menengai projects and therefore we advise caution when using the Olkaria III project as a comparator.</p> <p>Given current expectations on the revenue generation profile of the proposed projects, if CAPEX are not brought down with the utilization of concessional funding, AfDB will most likely not be able to finance any of</p>

the projects as DSCRs are not sufficiently strong which poses a great deal of credit risks for AfDB.

The Climate Policy Initiative (CPI) has published in 2015 a publication entitled ["Using Public Finance to Attract Private Investment in Geothermal: Olkaria III Case Study, Kenya"](#). It clearly shows the differences and challenges it faced over a period of 11 years to reach financial close, namely:

1. The project had a total cost of around USD 445 million that was initially financed by equity in the late 1990s. The project only reached financial close in 2009 with the required debt finance after a renegotiation of the power purchase agreement and the inclusion of a sovereign guarantee to back stop the payments of KPLC as off-taker.
2. The project is the only geothermal project in operation in Kenya with private participation from field development through construction, operation and maintenance. At that time, GDC did not exist.
3. A total of USD 150 million in equity financing was committed between 1998 and 2006. The sponsor had to extend its equity commitment for longer than originally expected in order to advance project development. The current project finance structure relies heavily on debt from Development Finance Institutions, which now accounts for 85% of overall investment costs. Germany's DEG (together with KfW) headed a financing consortium that refinanced the sponsor's equity in Phase I with a USD 105 million loan. The U.S.'s OPIC provided a senior loan of USD 310 million to finance Phase II and Phase III development and refinance part of the equity and debt provided earlier.
4. The OPIC loan had a tenor of 19 years, which is not available in most of the cases and is seen as a clear provision of concessionality. For example, AfDB's rules only allow tenors of up to 15 years for private sector operations.

			<p>5. The project was not the result of a competitive tender process but rather a direct engagement between the Project Sponsor and the GoK under a 20-years renegotiable PPA for which financial terms are not publicly available.</p> <p>In summary, the project only reached financial close following the refinancing of the equity 11 years after the first equity drawdown to the project. A combination of concessional funding and credit enhancement was vital to ensure the viability of the project. In addition, it is worth mentioning that following this experience, the GoK decided to develop Olkaria IV with recourse to public resources only.</p>
33	The proposal notes that the first project will be approved in June 2016. What environmental assessments, if any, have been conducted on this project? Will the ESIA for the project be completed 120 days before it is brought forward for approval?	USA	<p>AfDB's Integrated Safeguards System (2013) rules will apply. The E&S requirements are dependent on the internal categorization as determined by AfDB's safeguards specialist. Since these projects will most likely be tabled as Category 1 projects, the sponsor will have to provide AfDB, in an acceptable format, the following studies: (i) an Environmental and Social Impact Assessment, (ii) an Environmental and Social Management Plan, (iii) and a Resettlement Action Plan (if required).</p> <p>As per AfDB's internal rules, <i>"category 1 private sector projects are disclosed at least 60 days before Board consideration"</i> and not 120 days as it is the norm with public sector projects.</p>
34	Are any of the potential projects classified as Category A or B?	USA	<p>AfDB's E&S categories include: (i) category 1 for Bank operations likely to cause significant environmental and social impacts, (ii) category 2 for Bank operations likely to cause less adverse environmental and social impacts than Category 1, (iii) category 3 for Bank operations with negligible adverse environmental and social risks, and (iv) category 4 for Bank operations involving lending to financial intermediaries. As stated in answer #34 above, the projects included in the program are likely to be categorized 1.</p>
35	The emissions reduction cost effectiveness ratio of \$3.43 per tCO ₂ for the proposal is higher than other geothermal projects recently developed with CIF resources. How does this program compare to other CIF geothermal programs in terms of costs and what factors may have contributed to a higher cost effectiveness ratio?	USA	<p>The cost effectiveness ratio of USD 3.43 per tCO₂ was revised upwards to USD 4.38 following delivery of the first set of answers to questions raised by the UK. This figure is based on the assumptions that each project will have (i) a total estimated cost of USD 78 million, (ii) a grid emission factor 0.594, (iii) a power plant lifetime of 20 years, (iv) an availability factor or 94% and (v) up to USD 15 million in CTF concessional funding.</p> <p>The main reason for the higher cost effectiveness ratio relates to the estimated lifetime of the projects, which we assume to be 20 years</p>

			(matching the duration of the PPA). This is a very conservative assumption as the life of these power plants can be considerably higher. For example, by using an estimate of 30 years as assumed by laDB in the " <i>DPSP I: Utility-Scale Geothermal – Colombia: Financing and Risk</i> ", the cost effectiveness ratio would equal USD 2.92 per tCO ₂ .
36	Several allegations of corruption have emerged concerning GDC's operations relating to the loss of billions of Kenyan shillings through irregular tendering processes. There are several cases pending in court relating to the same. Accordingly, could the GDC clarify on the measures it has put in place to ensure that such losses are not incurred in the future? How have they streamlined the tendering and procurement process to ensure transparency and accountability?	TI	<p>Please see letter submitted by the Government of Kenya to its Development Partners back in November 2015 (please treat it as confidential).</p> <p>The allegations touch on some senior management staff of GDC and involve procurement of Rig Move Services that were undertaken in 2012. These and other allegations are being handled by Kenya's judiciary system.</p> <p>The tendering process was done in accordance with international best practices. All documents issued can be consulted in detail on GDC's webpage.</p>
37	There also have been accusations of staff mismanagement with some staff accusing the CEO of forcing them to give false information about the achievements of GDC in relation of drilling of wells for geothermal power. How have these been addressed? Are the achievements claimed by the GDC credible and verifiable?	TI	<p>Please see letter submitted by the Government of Kenya to its Development Partners back in November 2015 (please treat it as confidential).</p> <p>These and other allegations are being handled by Kenya's judiciary system.</p> <p>The potential beneficiaries of the CTF resources requested under this program shall be channeled to private entities and not GDC. Drilling achievements claimed by GDC will be assessed as part of the independent technical due diligence of the projects.</p>
38	We are happy with the revised calculation of the GHG emissions savings as 6,847,727tCO ₂ / 20 years. However there is a typo in Annex 2 – it is listed as 6,487,727.	UK	This has been corrected.
39	We do not think that the Cost Effectiveness of total Funds is correct. In Annex 2 it says it is 43.81 USD per tCO ₂ . However, $157 / 6.847727 = 24.20$ USD per tCO ₂ .	UK	This has been corrected. Please note that USD 157,000,000 / 6,847,727 tCO ₂ = USD 22.9 per tCO ₂ .