

September 11, 2012

**Comments from Germany on Approval by mail: CTF funding for Chile:
Concentrated Solar Power Project (IDB)**

Dear all,

Thank you very much for sending us this project proposal. We welcome the project proposal and congratulate the government of Chile and the IDB for a well prepared document. We have no major objections and can approve this proposal.

Please find enclosed some more detailed comments on which we would like to receive some clarification, and recommendations that could be taken into account within further project design.

Thank you very much,

kind regards

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Ministry for Economic Cooperation and Development*

Comments on CTF Chile CTF-IDB Concentrated Solar Power Project

Summary

We welcome the project proposal and congratulate the government of Chile and the IDB for a well prepared document. The investment proposal rightly argues that the northern region of Chile has one of the highest solar irradiations worldwide. Ongoing irradiation measures conducted by the German development institution GIZ are confirming the high solar potential in this region. Furthermore, the proposal also rightly argues that CSP technology would be more suited than PV to supply the around-the-clock base-load power that is being demanded by the large industries in the SING, mainly the mining industry. 90% of electricity demand in the SING grid comes from large industries, mainly the mining sector. Therefore it is important to promote a solar technology in this region, which indeed can meet the energy demand of the main consumers adequately. We have some more detailed comments on which we would like to receive some clarification, and recommendations that could be taken into account within further project design.

Additional comments regarding the project:

Concessional funding from the CTF will cover up to 16 % of the investment needs of a project. USD 46M of the CTF financing will be subordinated to the IDB (eventually KfW and IFC) loans.

This high degree of concessionality, blended with IDB (eventually KfW and IFC) conditions, are certainly attractive to the private sector which has to overcome big administrative and institutional hurdles. There remains still a **risk, that the provided financial package will not be sufficient to reduce the high capital costs of the CSP technology sufficiently.**

Comment 1:

Figure 14 and 15 demonstrate the impact of concessional finance on the CSP power price. If the CTF resources will be priced at 1% they will have a significant impact on lowering the project's PPA price and therefore will contribute significant to the closing of the existing pricing gap. We would like to understand in more detail **how the CTF tranches (senior and sub-ordinated) will be priced and what happens, when the offered CTF will be priced significantly above 1%.**

Comment 2:

The investment proposal furthermore outlines some of the major barriers that currently hinder the implementation of the first CSP plant in Chile (compare p. 15ff). The proposal however is not discussing some points that will have a crucial impact on the success or

failure of the project and will have to be further analysed in the framework of the forthcoming feasibility of the project: :

1. Availability of water required for the normal operation of the plant;

The plant will most likely be situated in the Atacama dessert due to its high irradiation. However, water supply is scare in the Atacama dessert. Supplying water from the coast might be costly.

2. Connection to and availability of space in the grid by the time the project is awarded;

Grid connectivity might also be one of the major barriers for the successful integration of the first CSP plant in the Northern SING grid.

The investment proposal mentions that both, proof of availability of water as well as proof of connectivity, will be minimum technical requirements that successful proposals in the public tendering process have to demonstrate.

Comment 3:

As there are rather substantial scale effects with the CSP technology we agree with the investment proposal that the target size of the plant should be at least 50MW, which is the minimum size currently seen as being economically viable. However, we would like to understand better, **what would happen, if the winning bid would offer the construction of a plant that has less than 50MW in installed capacity.**

Comment 4:

The investment proposal argues rightly, that CSP technology would be more suited than PV to supply the around-the-clock base-load power that is being demanded by the large industries in the SING. This however would require that sufficient thermal storage capacity is installed as well. We would **recommend that there is a requirement for a minimum thermal storage capacity** included in the public tendering of the CSP plant and would like to understand whether there exists such a requirement.

Project risks:

From the current perspective the mentioned risks indicated in Table 21 (page 29) are considered to be relevant. Furthermore from a current perspective there is a risk given, that the proposed bid does not meet the interests of project developers and investors, or that the project is not economically feasible despite favorable financial conditions. On the other hand, the project has long been known to specialized CSP companies and enjoys a high international interest. Also potential buyers in the mining sector have high interest.