

May 23, 2013

**Comments from Germany on the Revised CTF Investment Plan for MENA
CSP**

Dear Patricia,

as discussed during the CTF meeting, pls find attached detailed comments to the rev
IPs of Mena CSP.

Kind regards
Annette

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General comments

Given Germany's high bilateral engagement we would like to underline that from a development perspective, Germany supports renewable energy sources – foremost - to improve energy access in the region and foster industrial integration/local content. Exports would indeed enhance the economic viability of the plants, and might be necessary for further replication (beyond the MSP) in the long term, if grid parity can be achieved by then.

However, Germany wishes to underline, that we will continue to develop the legal and financial framework necessary to enable the export of solar energy to Europe. During the last year Germany was in close discussion with interested European Member States and Morocco. Although there is at present a certain delay in discussions, we still aim to develop a joint project in Morocco, exporting electricity from renewable sources to Europe through existing interconnections between Morocco and Spain

Specific Comments

For the various reasons pointed out in the investment plan update, the envisaged projects in the different countries have not all developed as foreseen. Against this background, and as already pointed out in the workshop that took place on March 19th in Rabat, Morocco, the investment plan update makes sense. It reflects the preparation process of the projects and the perspective of the individual projects reaching or not reaching investment maturity. This reflection is done in paper in a sensible way focusing on the projects that have reached a certain stage of preparation and eliminating those that have not developed as originally foreseen.

The proposed investment plan update is held rather flexible allowing to promote those projects that will reach maturity until mid-2014, even allowing for the inclusion of new projects that might come up (although this seems not realistic given the short timeframe of the MENA-CTF until mid 2014). We consider this to be a fair and viable approach, appropriately reflecting the agreed terms and conditions under which participation countries may benefit from CTF-support.

GER particularly welcomes:

- the possibility to increase the per-unit-contribution (USD/MW) of the CTF. Given the increased need for government subsidies and/or concessional financing many projects are currently facing (particularly in Tunisia), the increase of the per-unit-contribution is a timely and sensible means to harden the determination of MENA governments to further support the roll-out of CSP technology in the region despite the difficult political circumstances;
- the pragmatic approach of not losing sight of the option to export electricity to Europe, while promoting that in the short term, projects should produce electricity primarily for local markets. So far, Morocco appears to be the only country in the MENA region, where the export of electricity appears attainable in the short-medium term. Within this context, it is important to reiterate that ultimately, revenues from power exports shall replace

subsidies/concessional financing and hence ease the pressure on the budgets of regional government. Consequently, there is a trade-off in delaying necessary investments into transmission infrastructure for export, as any delay is likely to further extend the duration of the financial backing needed to support CSP in the region;

- the assessment of the risk of the MENA CSP Investment Plan as "high" (main components: financial, cost overruns, uncertainty of export, regional grid infrastructure, investment climate);
- the aim of promoting local manufacturing within CSP technology, although opportunities have to be seen realistically. In general, we are concerned the perspective of the technology in the region and its positive impacts (on cost decline, job potential, etc) might be described too optimistically;

Even though we generally agree with the necessity of additional TA, we are concerned that the impact of the USD 10 mio TA-facility to support CSP-projects might be limited. From our experience, the key factor to facilitate projects is to create demand through strong and resilient high-level political commitment and a clear energy strategy. Hence, apart from Morocco, where market demand might already have reached a critical threshold, the impact of providing the proposed start-up grants for CSP manufacturers as one of the proposed activities of the TA-facility, is likely to be limited, since in the initial stages, the development of any domestic CSP industry will mostly depend on existing market demand.

Individual IP components:

1. Akarit project Tunisia:

- Despite the advanced stage of the project, the missing official government approval remains an important obstacle. Amongst other criteria, the approval appears to primarily depend on whether the project's need for state subsidies can be further reduced to better reflect the economic hardship of the country following the Jasmine revolution. Within this context, it might be sensible to examine the possibility of enhancing the CTF contribution to the project;
- Given the budgetary restrictions, an expansion of the 50 MW plant to 100 MW does not appear realistic;
- Given the foreseeable limited scale of the Tunisian CSP projects, the creation of a substantial number of direct and indirect jobs and the development of a local industry does not appear as realistic;

Page 48, #126 (correction): "The feasibility study supported by KFW and financed by EU/NIF has been finalized."

2. Ouarzazate (OZZ) project Morocco / exports to Europe:

Page 14, #17: The replication of OZZ CSP does clearly not depend on power exports to Europe, and the (2,000 MW / USD 9 billion) Moroccan Solar Plan (MSP) will be implemented independent of exports. However, exports would indeed enhance the economic viability of the plants, and might be necessary for further replication (beyond the MSP) in the long term, if grid parity cannot be achieved by then.

- Page 46, table 10 (correction): As far as we are aware, both total indicative funding and potential financing contributions by EIB are significantly higher than presented in table 10. To our knowledge, MASEN's conservative cost estimate amounts to \$ 2,500 million with EIB having expressed interest in financing EUR 300-500 million.

Further comments regarding export Morocco - Germany:

Page 21, #36 (correction): Germany supports the execution of the first reference projects importing power from renewables from North Africa under the Union for the Mediterranean's solar plan. Imports of renewable electricity in general, and from North African CSP/ Scandinavian hydropower plants in particular, are frequently being considered (in the most prominent long-term scenario analyses such as Prognos/EWI, REMix) amongst the 10-12 key options to cost efficiently ensure energy security in the long term.

3. Comments on Kom Ombo project Egypt:

- Germany is planning to contribute in total 180 million € (concessional loans). We very much welcome the increase of CTF funds reflected in the update, especially as it reflects the need for a higher concessionality.
- Page 16, #23 and page 38, #92 (addition): The finalization of the mentioned feasibility study depends on the pending decision by the Government of Egypt regarding a crucial technical set-up question (dry vs. wet cooling and gas firing). A preliminary scenario analysis was delivered Q1-2013 to present several options for stakeholders review. Following the feasibility study, some project development tasks are currently under preparation such as irradiation measurement station and permitting activities. All pre-investment studies are scheduled to be released in Q4-2013.
- Pages 38, #89: Not all experience NREA gained first from the Kureimat ISCC project was positive - e.g. the major delays resulting from the cumbersome split-up of the project into several lots (that then had to be managed by NREA instead of applying a turnkey contract with a single supplier). The split-up and its consequences are prominently stated as lesson learnt in the final WB report for Kureimat. We feel it is crucial for this important lesson to be considered in the design of the implementation scheme for KomOmbo. Given the complexity of Kom Ombo project, a turnkey-contract instead of component-specific tendering appears as a key success factor for the project.
- Page 38, #89 (correction): NREA is the sole owner of the Solar CSP Project (not the main owner as mentioned).
- Page 38, #90: A comparatively high share of local manufacturing is an important potential benefit in CSP-projects. It is however crucial that component-specific tendering is not a prerequisite for local content, and that high overall shares of local manufacturing can also be achieved through turnkey-contracts while significantly streamlining construction and capitalizing on earlier commissioning/start-up of operations.
- Page 40, #99: The IP revision underlines both the potential of the project to be expanded to 150 MW and the interest of the government in this

extension. While we tend to agree with the potential from a technical perspective, we disagree in terms of the supposed government interest: The further need for concessional financing arising from an extension would likely result in a substantial additional burden on the state budget, which given the current budgetary and debt situation, is very unlikely to be a palatable option.

- Page 40, #101 (correction): Estimated GHG avoided should read 6,470 kilo-tons of CO₂ emissions over its 25 years of useful life (not p.a.).

4. Projects in Jordan:

The doubts raised as to whether or not planned private sector projects will materialize appear to be legitimate. Within this context, the CTF-Update paper points out many open questions and risks that we share.