



# Noor-Midelt Phase 1 Concentrated Solar Power Project

Country / Region: **MENA Region** | Project Id: **XCTFMB107A** | Fund Name: **CTF** |

MDB : **African Development Bank**

Comment Type	Commenter Name	Commenter Profile	Comment	Date
Comment 1	Katharina Stepping	Germany	<p>Thank you for the submission of and the opportunity to comment on the joint WB / AfDB "Morocco: Noor-Midelt Phase I CSP Project" proposal, which Germany is happy to approve.</p> <p>The efforts of the GoM to substantially increase the share of RE (to add at least 6,000 MW of RE capacity / to reach 52% RE capacity share until 2030) and to significantly reduce GHG emissions (according to the conditional NDC 42% compared to BAU scenario until 2030) are outstanding. The hybrid approach - PV / CSP with thermal storage - is interesting and promising. The CTF contribution - though relatively small, but highly concessional - is an important element of the financing structure and helps to mobilize private capital in the project equity at scale (345 M\$).</p>	May 30, 2017
Comment 2	Douglas Gibb	United Kingdom	<p>Dear Mafalda,</p> <p>Thank you to the World Bank project team for this proposal.</p> <p>Overall, we are very supportive of the project's aim to further develop renewable energy in Morocco through the hybrid CPS/PV plan at Noor-Midelt. We are content to approve the project, subject to some conditions to ensure that results are consistent and justified.</p> <p>In the economic analysis and subsequent reporting, can the project team ensure that only those benefits that can be clearly justified attributable to the CTF finance are reported as such. Currently all benefits from the PV component are also attributed to the CTF finance even though it will only be used for the CSP element. If PV enhances the performance of CSP is it possible to count only the proportion of PV benefits that this accounts for rather than the benefits in full? It would also be useful to clarify in the appraisal what is represented by the benefit listed as 'LNG terminal' and how this is arrived at.</p> <p>We would also request that when reporting the results the project team include an indicator for employment with beneficiaries disaggregated by gender.</p> <p>If the team are content with these conditions, then the UK is happy to approve the proposed Morocco: Noor-Midelt Phase I Concentrated Solar Power Project.</p> <p>Many thanks Zoe</p>	Jun 06, 2017
Response 1	Leesle Hong	IBRD	<p><i>All the comments will be addressed at Appraisal prior to the World Bank Board submission.</i></p> <p><i>[Comment #1]</i> <i>In the economic analysis and subsequent reporting, can the project team ensure that only those benefits that can be clearly justified attributable to the CTF finance are reported as such. Currently all benefits from the PV component are also attributed to the CTF finance even though it will only be used for the CSP element. If PV enhances the performance of CSP is it possible to count only the proportion of PV benefits that this accounts for rather than the benefits in full?</i></p> <p><i>[Response #1]</i> <i>In the PAD, a separate indicator to track CSP generation will be introduced.</i></p> <p><i>[Comments #2]</i> <i>It would also be useful to clarify in the appraisal what is represented by the benefit listed as 'LNG terminal' and how this is arrived at.</i></p> <p><i>[Response #2]</i> <i>This comment will be reflected in the appraisal.</i></p> <p><i>[Comment #3]</i> <i>We would also request that when reporting the results the project team include an indicator for employment with beneficiaries disaggregated by gender.</i></p> <p><i>[Response #3]</i> <i>Yes, indicator to track employment (mainly during construction phase) will be introduced, with a percentage for females. However, it is expected to be very low.</i></p>	Jun 13, 2017



Comment 3	Daniel Morris	United States	<p>Following up on my previous email, here are out questions on this project. In addition, we are attaching a table that we would like the respondents to fill out, as it will help us to better review the proposal. Thanks for your assistance.</p> <ol style="list-style-type: none"><li>1. Can staff provide more detail on Morocco (MASEN) local content policy? We note references in the paper that MASEN anticipates that procurement will meet a 35% local content level. Is this a voluntary or mandatory requirement for solar projects?</li><li>2. Can staff also provide additional detail and explanation if the LCR is <i>component-specific</i> or a <i>feed-in tariff</i>, as those tend to be more likely to impact procurement decisions?</li><li>3. If applicable, can staff explain with a detailed breakdown of why the expected local content is higher than the requirement?</li><li>4. Will any advanced manufactured imports be impacted by the proposed LCR?</li></ol> <p>Attachment detail:</p> <p>Example of information to be included to make a determination if an LCR is not trade distorting:</p> <p>Please provide additional detail and explanation if an LCR is component-specific or a feed-in tariff, as those tend to be more likely to impact procurement decisions.</p> <p>X% of total EPC procurement is expected to be procured domestically, even in the absence of LCRs.</p> <p>This is lower (or higher) than the general LCR on EPC, therefore the impact of LCR on this project is (or is not) expected to distort procurement decisions or potential trade. Then provide some additional context on</p> <p>Please provide a brief list of the items included in each of the level 3 of the procurement categories.</p>	Jun 07, 2017
Response 1	Leesle Hong	IBRD	<ol style="list-style-type: none"><li>1. Masen has adopted a voluntary industrial integration policy in its request for proposal, similar to the approach adopted for and accepted by the Bank and other International Financial Institutions in NOOR-Ouarzazate. In this respect, the NOOR-Midelt RfP only provides that "Masen anticipates that NOOR Midelt Phase I Projects would generate in the renewable energy field in Morocco increasing activities as the Moroccan Solar Plan is being implemented," noting that "NOORo I has achieved an Industrial Integration Rate of thirty[-]two percent (32%) and the Successful Bidders of NOORo II and III projects have committed on (sic) an Industrial Integration Rate of thirty[-]five percent (35%)." Nonetheless, the RfP also makes clear that "Bidders' proposal of any such investment in the first stage of the Tender Procedure is discretionary and voluntary," (emphasis added) and that "the nature and level of the investment, as reflected in the Industrial Integration Proposal, is left to the complete discretion of the Bidder." Once a Bidder voluntarily proposes an investment in the Industrial Integration Proposal and such proposal is agreed with Masen as part of the first stage of the Tender Procedure, the proposal becomes an Industrial Integration Undertaking. In other words, Bidders are not obligated to make a proposal, but, once they voluntarily make one in the first stage of the RfP, they are expected to fulfill this proposal, if awarded one of the plants. Evaluation of this proposal in the final bid is "limited to a pass/fail review as to whether it is substantially aligned with the agreement reached with Masen" following the Bidder's voluntary first stage submission.</li><li>2. At the outset, it is important to note that Masen's industrial integration approach is not a local content requirement. As noted above, the approach is discretionary and voluntary, and the nature and level of any investments proposed is left to the complete discretion of Bidders. Masen's industrial integration approach is not tied to any specific component. Industrial Integration Proposals could include Indirect Industrial Integration Measures or Direct Industrial Integration Measures. Indirect measures can be achieved through "investments for the creation of new generation capacity, a maintenance activity, engineering or a research and development center." Direct measures "correspond to (i) the acquisition of equipment produced in Morocco with a minimum Added Value of 50% in Morocco in relation to the construction of the Plant and (ii) the contracting of services in relation to the construction of the Plant, to be performed locally, with companies incorporated in Morocco[.]" As civil works and certain piping and steel structures are likely to be undertaken by local companies for competitive purposes anyway, it seems logical to expect Bidders to propose some level of at least Direct Industrial Integration Measures. As for the tariff, Morocco has not adopted a feed-in tariff structure. Instead, tariffs for renewable energy projects, including solar energy projects undertaken by Masen,</li></ol>	Jun 13, 2017



are determined by competitive bidding.

3. Based on the draft RfP received from Masen thus far, there are no specific anticipated levels for industrial integration proposals for the NOOR Midelt Phase I Projects. Masen instead elected to highlight what bidders on the NOOR Ouarzazate projects have either been able to achieve (in respect of NOOR Ouarzazate Phase I that was commission in 2016) or have committed to achieve (in respect of NOOR Ouarzazate Phase II that is currently under construction) as indicative of achievable levels of local content within a competitive environment on similar projects in Morocco.

4. Regarding advanced manufactured imports, as explained above, Masen’s industrial integration policy is not component-specific.

**Noor-Ouarzazate (Noor) Local Content by EPC Component**

Noor I and II use parabolic trough (PT) technology, whereas Noor III uses tower technology. These are two types of concentrated solar power (CSP) technologies.

**For a Tower Project (NOOR III) :**

Please note that the construction of NOOR III is still ongoing, and that the final figures for the industrial integration are not available yet. However, the Project Company committed to an industrial integration level of 35% of the construction costs, whose current breakdown is the following:

	% of Industrial Integration	% of Construction Costs <sup>[1]</sup> (based on the current breakdown and subject to confirmation after the end of the construction period)
<b>CONSTRUCTION AND ERECTION SERVICES</b>	54%	19%
<b>HELIOSTATS STRUCTURES</b>	30%	10%
<b>PIPING AND ELECTRICAL EQUIPMENT</b>	6%	2%
<b>RECEIVER</b>	1%	0,5%
<b>SALT TANKS, WATER TANKS AND RESERVOIRS</b>	8%	3%
<b>STUDIES</b>	1%	0,5%

Please note that such level has been suggested by the Project Company on a voluntary and discretionary basis.

**For a PT Project:**

For NOOR I project, the final level that has been achieved corresponds to 32% of the construction costs, whose breakdown is the following:

	% of Industrial Integration	% of Construction Costs
<b>SOLAR FIELD COLLECTORS</b>	24%	8%



<b>SALTS AND WATER TANKS AND RESERVOIRS</b>	7%	2%
<b>PIPING AND CABLES</b>	10%	3%
<b>PILING AND CIVIL WORKS</b>	33%	11%
<b>MECHANICAL AND ELECTRICAL ERECTION</b>	26%	8%

Please note that the 32% has been achieved by the Project Company on a voluntary and discretionary basis.  
 For NOOR II Project, the committed industrial integration level is 35% (set by the Project Company on a voluntary and discretionary basis).

[1] This column adds up to the industrial integration level, in this case 35%.

Response 2 Daniel Morris United States Jun 15, 2017

Thanks to the World Bank and AfDB teams for answering our previous questions. We have a few additional questions. First, it is important for us to understand how the industry integration policy impacts the procurement decisions of the project and in what ways and what proportions of procurement it may swing procurement decisions away from international bidders or suppliers of international products to domestic bidders or domestic products. What percentage of each component of the project would be expected to be sourced domestically if the industry integration policy were not in place? How do those projections compare to the proportions of project elements expected to be procured domestically? We understand that much of the civil works in a concentrated solar project may be likely to be procured domestically even in the absence of the industry integration policy, as domestic bidders for many of these services would likely be the lowest cost for domestic suppliers, or would be sub-contracted to a local supplier even in the absence of the industry integration policy. We'd also appreciate some additional explanation of the heliostats structures referenced in the table. Could these structures be considered advanced technology that might face competition from international bidders and suppliers? How much would we expect them to be procured domestically absent the industry integration policy? What types of renewable energy technology is produced in Morocco that qualifies for the industry integration policy? We are happy to have a phone call with Bank staff to further discuss our concerns if that would be helpful. Thank you. danny

Response 3 Leesle Hong IBRD Jun 23, 2017

(Comment #1)  
 Has the policy evolved over time?  
 (Response #1)  
 RE program has been structured within the framework of this policy. To our knowledge, the policy has not changed.

(Comment #2)  
 How does the industry integration policy impact the procurement decisions of the project and in what ways and what proportions of procurement could it swing procurement decisions away from international bidders or suppliers of international products to domestic bidders or domestic products?  
 (Response #2)

Since industrial integration is voluntary and discretionary, it does not impose a requirement that constrains bidders' proposals. In any case, the scope and extend of any industrial integration proposal does not impact the procurement's evaluation criteria, and there are no bonuses offered as part of a feed-in tariff structure for industrial integration offers. Based on the information available to date, there are no preferences of any kind in any stage of bid evaluation for any level of domestic content.

(Comment #3)  
 What percentage of each component of the project would be expected to be



sourced domestically if the industry integration policy were not in place?  
(Response #3)

It is difficult to answer this question with any measure of certainty. One would expect bidders who are more familiar with the Moroccan market and have better established domestic supply chains to source more of their supplies and services locally. Typically, one would expect civil works, piping and steel works (inc. thermal storage tanks), site-related services, etc. to be sourced domestically for competitive purposes, irrespective of any industrial integration policies. More advanced equipment (e.g., mirrors, tracking systems, control systems, steam turbines, transformers, etc.) are likely to be imported, with or without the voluntary integration policy.

(Comment #4)

How do those projections compare to the proportions of project elements expected to be procured domestically?

(Response #4)

The procurement process is currently ongoing so there is no factual basis on which to base an answer. Ostensibly, based on prior experience, the equivalent of up to 35% of total project costs would be expected to be procured domestically, as was done on NOOR-Ouarzazate. The choice of technology proposed could also have an influence, with tower CSP requiring more civil works so likely to include higher domestic content as a result when compared to parabolic trough, though sponsors of NOOR-Ouarzazate II (which uses parabolic trough technology) are currently also expected to achieve 35% by the time construction is completed.

Response 4	Daniel Morris	United States	We thank the World Bank for its thorough answers to our questions. We are pleased to support the project at this stage. danny	Jun 28, 2017
Comment 4	Douglas Gibb	United Kingdom	Dear Mafalda, Thank you to the World Bank project team for this proposal, and for the opportunity to comment on the proposal Morocco: Noor-Midelt Phase I Concentrated Solar Power Project. Overall, we are supportive of the project aim to further develop renewable energy in Morocco through the hybrid CPS/PV plant at Noor-Midelt. There are a couple of conditions that the project team have agreed to prior to approval to ensure that results are consistent and justified. In the economic analysis and subsequent reporting, the project team have agreed to ensure that only those benefits that can be clearly justified attributable to the CTF finance are reported as such (i.e. CTF-attributable results should not include the full benefits of the PV component as included in the current project document). The project team have also agreed to make certain that when reporting the results they will include indicators around employment and beneficiaries that are disaggregated by gender. As these comments have already been addressed by the project team, the UK is happy to approve the proposed Morocco: Noor-Midelt Phase I Concentrated Solar Power Project. Many thanks Doug	Jun 16, 2017
Response 1	Leesle Hong	IBRD	We appreciate your comment and the issue will be addressed in consultation with the client prior to submission for World Bank Board approval.	Jun 23, 2017