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CDM Team



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Your reference/letter of	Our reference/name	Tel. extension/E-mail	Fax extension	Date/Document	Page
	IS-CMS-MUC/Mu	+49 89 5791-2170	+49 89 5791-2756	2008-01-11	1 of 6
	Werner Betzenbichler	werner.betzenbichler@tuev-sued.de			

Response to Request for Review

Dear Sirs,

Please find below the response to the request for review formulated for the CDM project with the registration number 1313. While responding, we noticed that the spreadsheet uploaded in the UNFCCC website is corrupted. Thus calculation sheets are re-submitted as pdf and excel file. In case you have any further inquiries please let us know as we kindly assist you.

Your sincerely,

Werner Betzenbichler
Certification Body Climate and Energy

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Comment No.1:

Further clarification is required on how the evidence of prior consideration of the CDM has been validated and considered satisfactory.

Response by TÜV SÜD:

The project's start date is assumed to be 16th of October 2006 signifying the date when the project proponent, PT Manunggal Energi Nusantara (MEN), entered serious engagement with the major technology provider, GE Jenbacher. The signed agreement of GE's technical proposal was submitted to the DOE at the time of validation.

In addition to the first project study dated in April 2006 that indicates CDM has been included as a source of income, the project proponent demonstrated that it has taken serious measure to include CDM by engaging CDM professionals prior to 16 October 2006.

The discussion to engage Mitsubishi UFJ Securities Co. Ltd. as CDM consultant to the project started as early as 19th of August 2006 (Document 1, published with PDD), with a first commercial proposal submitted in September 4, 2006. The final proposal was approved on 29 September 2006 and contract negotiation based on this proposal commenced immediately. Final agreement was signed in November 2006. These documents were shown to the DOE during the on-site visit.

Thus all in all the project proponent convincingly demonstrated prior consideration of the CDM.

Comment No.2:

Investment analysis has been undertaken to demonstrate additionality. The project IRR of 10.67 % is less than the benchmark of 16.75% (lending rate + 4% premium "normally" charged by the bank, PDD, pg. 12). The DOE shall further clarify how the benchmark constructed has been assessed and verified and how the resulting IRR was validated.

Response by TÜV SÜD:

Validation of benchmark. The benchmark used in the PDD is constructed based on 2 components: (A) the inter-bank interest rate ("Suku Bunga Bank Indonesia" or BI-rate) of 12.75% (first quarter 2006- since this with time of investment decision) and (B) 4% bank spread for private bank lending, totaled to 16.75%. BI is issued by Bank of Indonesia which is the Central Bank of Indonesia and not a lending bank. The total of 16.75% thus represents commercial lending rate applicable in Indonesia at the time of project preparation. An analysis of the Indonesian financial market published in the national newspaper "Jakarta Post" has been submitted supporting the approach (document 2). The article indicates that the central banks benchmark BI rate is used as reference for commercial lending rates in Indonesia and substantiates a rate of 12.75% in the first quarter of 2006 as well as average bank spreads of 3-5 %, calculated as the difference between BI rate and investment lending rate (page 3, table 2).

Validation of IRR Calculation Project IRR calculations have been submitted as Excel file to the audit team and substantiated in a transparent manner. The resulting project IRR is 10,67 % and improves to 15.90 % considering CDM income, which is still below the benchmark set, however taking into consideration the high volatility of the Indonesian currency the foreign de-

nominated revenue from the CER is deemed to be an additional value to the project proponent, which however is difficult to quantify, same as the fact that the project activity represents the proponents 1st “third-party-cogeneration” project expected to become a “lighthouse” for further activities. In addition it has been considered that the economic analysis applies a conservative CER price of USD12, which seemed to be a safer value for MEN to assume at the time of project planning, without having a real offer. If USD15 is applied, which is more realistic, the project IRR with CDM is 17.15 %, thus exceeding the benchmark. Moreover the sensitivity analysis shows that in case a 95 % load can be obtained an IRR of 15,2 % without CDM income and approximately 20 % with CDM revenue is possible, and thus demonstrates that CDM is an important part of the project.

Comment No.3:

A sensitivity analysis varying exchange rate (since the gas price is pegged to the USD) and tariff by $\pm 5\%$ shows an IRR of 15.2% and 14.7%. The tariff has been fixed at 3% below the PT Pelayanan Listrik Nasional (Center for Electricity Control and Dispatch)-PLN rate “to attract industrial users” (PDD, pg.13). The DOE shall further clarify the sensitivity analysis was assessed and validated, in particular in regard to the level of fluctuations for the relevant variables included in the analysis and the inclusion of cross subsidies that might artificially diminish the IRR.

Response by TÜV SÜD:

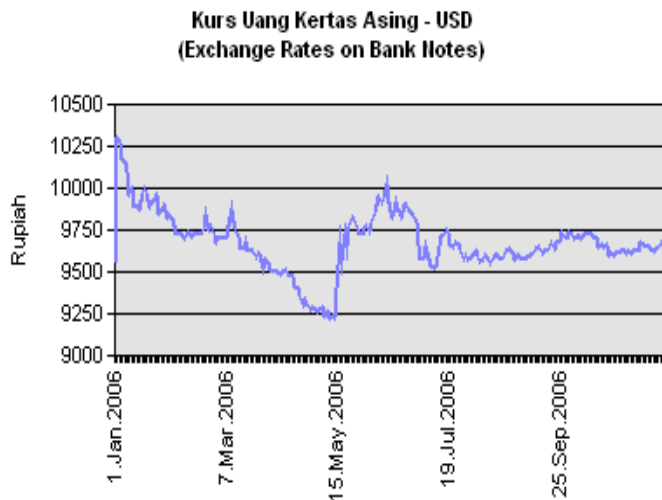
The sensitivity analysis analyses different parameters influencing the projects IRR which have been assessed and validated as follows:

1) Exchange rate

The project proponent demonstrated that the exchange rate is a relevant parameter as the gas price is pegged to the dollar as indicated in the gas contract between MEN and PGN (gas supplier), which refers to PGN gas price circular. The project proponent also demonstrated convincingly that the Rupiah rate of IDR9,500 per USD is a reasonable assumption as it is consistent with exchange rate quoted by official sources (Bank of Indonesia).

The sensitivity analysis margin of 5% were also deemed reasonable as it was demonstrated by way of official statistic that the average exchange rate between 2002 to 2006 is IDR 9,140 per USD and thus within the 5% margin from the assumed exchange rate.

In addition to this, Rupiah was shown to be highly fluctuative in the first quarter of 2006 (as demonstrated in the following chart sourced from Bank of Indonesia). As such, sensitivity margin of +5% was perceived to be as likely to happen as -5% in April 2006. For sake of argument, the current exchange rate on January 4th 2008 is IDR 9,454 per USD.



Source : Bank Indonesia

2) Electricity Tariff

The chosen sensitivity margin of 5% sufficiently covers the scenario of eventually higher projects income from power sales. The supply contract between MEN and its customers shown during the validation meeting clearly outlined that the customers will be charged 3% below the tariff that is applicable to them if they would continue using PLN, but as a maximum the PLN rate can be charged.

The IRR calculation already projected revenue growth from electricity of average 5% per year to take into account the possibility that PLN might introduce a step-change increase of tariff. As the electricity tariff in Indonesia is fixed by the government a further increase is not likely.

3) Steam tariff

Similar to the electricity tariff, the contract between the project proponent and its customers shown during validation meeting outlines that the rate of steam sales would be Rp60/kg, which is agreed based on the production cost of steam if produced using coal boiler. Similar to the electricity tariff, the financial analysis embodied a 2.5% annual increase of steam cost, and the sensitivity analysis demonstrated that this parameter does not have a major impact on the return of investment.

4) Load factor

Finally the load factor for the projects electrical output was increased from 90% of the theoretical gross electrical output to 95% which is deemed a reasonable range of variation. In total a minimum delivery rate of 90 % has been agreed in the energy supply contracts.

All in all it has been reasonably demonstrated that the financial assumptions are robust not involving cross-subsidies. This is concluded amongst considering the following fact discussed during the validation meeting:

- (a) Subsidy on end-product. The project proponent does not sell electricity via government grid. Instead it sells electricity to industrial users via private grid. Thus, it is unlikely to receive government subsidy. Electricity tariffs are likely to stay below PLN tariff, as it is unlikely that the users will extend the contract if the offered rate is increased above PLN tariff, as they have the possibility to switch to PLN in this case. PLN is the state electricity company, the only electricity provider, and the only institution with right to distribute electricity via government grid.
Similarly, the steam tariff has been negotiated to be below the operational costs previously incurred by the consumer by operating its coal boiler.
- (b) Subsidy on fuel. The project is not classified as priority industry and hence the normal applicable gas rate applies. During validation meeting, the following documents have been presented to the audit team:
 - i. Gas purchase contract between PGN (state gas company) and MEN. The contract is signed in 27 November 2006 referring to gas price applicable for consumer type K2 with arbitrary rate. The document did not indicate any discounting or special rate. The "K2" rate refers to rate applicable to customer type K2 defined as those with usage rate between 301,000m3 to 5million m3 per month, which is applicable to the project.
 - ii. General price rate announcement issued in September 2005 addressed to all consumer of PGN, applicable at the time of contract signing. Rate of USD5.0/MMBTU applied to customer with appropriate usage corresponds to K2. This rate is assumed as the gas rate for financial analysis.

PGN is currently the only gas pipeline operator in Indonesia, and thus alternative rate is not applicable.

Comment No.4:

The DOE shall further clarify how the emission factor applied was validated.

Response by TÜV SÜD:

The spreadsheet submitted for the emission factor calculation - which was uploaded along with the PDD- has been presented transparently with traceable formula and data. During the validation process, this spreadsheet has been checked for correctness and was found to be appropriate and in accordance with data presented in the PDD. The audit team verified that the emission factor calculation is in accordance with AMS-ID, version 10, which refers to ACM0002 (version 06 applicable at time of validation). Ex-post approach will be applied. The set of data provided is based on combination of officially published PLN statistics (for vintage 2005 and earlier) and data requested directly from PLN P3B Jawa Bali or Center for Electricity Control and Dispatch for Bali Jawa region (for vintage data 2006). In order to validate the data obtained directly from PLN P3B Jawa Bali, the audit team interviewed Mr. Teguh Dwi Rahmansyah from PLN P3B Jawa Bali confirming the information provided.