



**Response for Request for Review - Installation of Wind power project by
Kilburn Chemicals Ltd (1690)**

1. The DOE is requested to further clarify that prior consideration of benefits from CDM has been made according to EB 41, Annex 45 paragraphs 5 and 6. In particular, the DOE shall clarify how the project can be commissioned within 1.5 month after signing of the turbine purchase agreement.

PP Response: The complete chronology of events has been listed below:

1.	Board Approval – CDM evidence	25 July 2005	Annexure 1
2.	Purchase Order placed by KCL	01 August 2005	Annexure 2
3.	Communication related to Operation and Maintenance from SEL to KCL	03 August 2005	Annexure 3
4.	Status on project & schedule of project material supply (Communication from SEL to KCL)	05 August 2005	Annexure 4
5.	Revised schedule for WTG erection & commissioning (Communication from KCL to SEL)	06 August 2005	Annexure 5
6.	Payment request by SEL after supplying all the materials	29 August 2005	Annexure 6
7.	Payment made by KCL for supply items	02 September 2005	Annexure 7
8.	Status of NOC from TNEB (Communication from KCL to SEL)	02 September 2005	Annexure 8
9.	Request for commissioning of WTG (Communication from KCL to SEL)	03 September 2005	Annexure 9
10.	Safety certificate (Communication from SEL to KCL)	09 September 2005	Annexure 10
11.	WTG commissioning (Communication	16 September	Annexure 11



	from SEL to KCL)	2005	
12.	Correspondence with M/s Suzlon Energy Ltd (SEL)	13 December 2005	Annexure 13
13.	SEL reply to Kilburn Chemicals Ltd (KCL) on Carbon Credit benefits	16 December 2005	Annexure 14
14.	Proposal for CDM assistance by Synergy Global	22 December 2005	Annexure 15
15.	KCL had written to Synergy Global on observations in proposal letter	28 December 2005	Annexure 16
16.	Synergy Global communication on accepting terms for CDM project	22 February 2006	Annexure 17
17.	Minutes of Meeting held for CDM Wind Project	10 April 2006	Annexure 18
18.	Minutes of Meeting held on Status of Wind CDM Project at Kilburn Chemicals Ltd	17 May 2006	Annexure 19
19.	Communication between KCL and CDM Consultant 2	12 August 2006	Annexure 20
20.	Mail from CDM Consultant 2 to KCL replying to queries raised by KCL earlier	06 September 2006	Annexure 21
21.	Mail from KCL to CDM Consultant 2	27 September 2006	Annexure 22
22.	Mail from CDM Consultant 2 to KCL on CDM projects and few queries for project other than Wind	08 November 2006	Annexure 23
23.	Mail from CDM Consultant 2 to KCL on Engagement letter and scope of services	10 November 2006	Annexure 23
24.	Mail from KCL to CDM Consultant 2 on information sent	13 November 2006	Annexure 24



25.	Mail from CDM Consultant 2 to KCL on Wind CDM Project credential	13 November 2006	Annexure 24
26.	Mail from CDM Consultant 2 to KCL on providing contact details of client for whom they had provided services	01 December 2006	Annexure 24
27.	Mail from CDM Consultant 2 to KCL on sending Engagement letter and contract information	18 December 2006	Annexure 25
28.	Contract for CDM project with CDM consultant 2	21 December 2006	Annexure 26
29.	Communication on site visit by CDM Consultant 2	18 January 2007	Annexure 27
30.	Receipt of PDD from CDM Consultant 2	02 April 2007	Annexure 28
31.	Application for HCA Approval	07 May 2007	Annexure 29
32.	Proposal from DOE	08 May 2007	Annexure 30
33.	Invitation letter from HCA for meeting	20 June 2007	Annexure 31
34.	Change of Vice President at Kilburn	21 June 2007	Annexure 32
36.	HCA Approval received	11 July 2007	Annexure 33
37.	Work Order of DOE	25 August 2007	Annexure 34
38.	Webhosting of PDD for Global Stakeholder Consultation	11 October 2007	Annexure 35

PP had stated in the PDD that they were unaware about the modalities and procedures of availing carbon credits. The same had also been discussed in the Board approval submitted to DOE during validation (Attached as Annexure 1). PP was in touch with the Suzlon Energy Ltd (SEL) - technology supplier on availing benefits. The purchase order (Attached as Annexure 2) had a clause¹ with respect to share of CDM benefits through SEL's Associate Company Synergy Global. There were many communication between PP and Synergy Global (sister

¹ Page 5 of Annexure 2



concern company of SEL) dated 13th, 16th, 22nd, and 28th December 2005 (Attached as Annexure 13, 14, 15 and 16) which have also been listed in the above chronology and copies have now been submitted to DOE. All these communications were with respect to finalizing the terms and conditions for CDM process. The final terms between Synergy Global and PP was finalized on 22 February 2006 to avail carbon credits benefits (attached as Annexure 17). The work on CDM process was moving slow and no major milestone was achieved by Synergy Global which caused considerable delay for the PP. PP had discussed this issue of CDM project not moving ahead within them also the exact progress on the project on 10 April 2006 (attached as Annexure 18). This same document shows how serious and eager the PP was in getting the CDM benefits and the pace of CDM process. There was one more meeting held on 17 May 2006 (attached as Annexure 19) on status of Wind CDM project where finally the PP had arrived at conclusion of appointing CDM Consultant 2 because of no major progress happened with the first consultant. The same document also justify why PP had appointed CDM consultant 2 as they were also planning other CDM project – use of biomass in Boiler at their facility.

PP had initiated process of identifying competent CDM consultant this time around and thus took substantial time in identifying a consultant. There were series of communication between PP and CDM Consultant 2 between August and December 2006. These communication details are discussed further in the section of response. There was a communication from CDM Consultant 2 and PP on 12 August 2006 (attached as Annexure 20) which was related to receipt of information related to two CDM projects at KCL. Annexure 20 also shows the request made by CDM consultant 2 in assessing additionality aspect of Wind Project before going ahead with the work. There was a mail providing responding to queries by CDM Consultant 2 to PP dated 06 September 2006 (attached as Annexure 21). In meantime PP had written to CDM Consultant 2 on receipt of response to queries on 27 September 2006 (attached as Annexure 22). There was one more mail sent by CDM Consultant 2 on taking up CDM project with KCL dated 08 November 2006 (attached as Annexure 23). This mail had



also reference to other CDM project at KCL ie; the biomass usage in boiler project. There was a communication from CDM Consultant 2 to PP dated on 10 November 2006 (attached as Annexure 23). This communication refers to Engagement letter sent to the PP discussing scope of services, timelines and costs aspects. It also discusses about the negotiation happened on the terms and conditions on the engagement terms. There was mail from PP to CDM Consultant 2 on the information sent to them dated 13 November 2006 (attached as Annexure 24). There was a mail by CDM Consultant 2 to PP on providing credential of working on large CDM wind project dated 13 November 2006 (attached as Annexure 24). There was a mail where CDM Consultant 2 had provided contact detail of client based out in Chennai to the PP dated 01 December 2006 (attached as Annexure 24). There a mail dated 18 December 2006 (attached as Annexure 25) from CDM Consultant 2 to the PP informing that terms and conditions were fine and also attached copy of final engagement letter. Thus it is evident that lot of time was lost in understanding the capability of the CDM Consultant 2 and negotiation on final terms and condition of engagement.

PP had finally appointed second consultant for the wind CDM project on 21 December 2006 (attached as Annexure 26). The process of CDM project cycle moved on as per expectation of the PP since appointment of CDM consultant 2. The CDM consultant 2 had made site visit on 23 -25 January 2007 and intimation of the same was made to the PP via mail dated 18 January 2007 (attached as Annexure 27). After the site visit CDM Consultant started working on development of project documentation. CDM Consultant 2 submitted the PDD to PP on 02 April 2007 via mail dated 02 April 2007 (attached as Annexure 28). After internal review of documents the PP had made the HCA submission on 07 May 2007 (copy of letter attached as Annexure 29). PP received the invitation letter for presentation from DNA on 20 June 2007 (invitation letter attached as Annexure 31). The HCA meeting was held on 28 June 2007 and the HCA approval was received on 11 July 2007 (approval copy attached as Annexure 32).



After receipt of applying for HCA PP had already started the process of appointing DOE in parallel and PP had received proposal from DOE on 08 May 2007 (copy of mail attached as Annexure 30). In meantime there was change in person (Mr Krishnan) handling the project related work (document attached as Annexure 33). This caused considerable delay in appointment of DOE for the project. There were some other delay in negotiating terms for validation contract and finally the work order of DOE was placed on 25 August 2007 (document attached as Annexure 34). The PDD was webhosted for Global Stakeholder Consultation on 11 October 2007 (evidence attached as Annexure 35).

Thus PP had made continual efforts to achieve the benefits of carbon credits since approval of project as CDM project.

The purchase order of the first WTG was placed on 01 August 2005 (attached as Annexure 2) and the implementation schedule of WTG has been listed below:

After placement of purchase order there was communication from SEL with respect to O&M contract on 03 August 2005 (attached as Annexure 3). SEL had sent the schedule of supply of project material and commissioning on 05 August 2005 (attached as Annexure 4). The document gave proposed commissioning date between 25th - 28th September 2005. PP had written back to SEL asking for revised schedule on 06 August 2005 (attached as Annexure 5) and PP had asked for commissioning by 10 September 2005. PP had strong intent of commissioning the WTG before 15th September 2005.

SEL had made payment request against erection of WTG on 29 August 2005 (attached as Annexure 6) and the same document had stated that commissioning of WTG by 10 September 2005. The payment request against availability and erection of tower materials, availability and erection of nacelle and blades at site. Thus by 29 August 2005 the erection of tower, nacelle and blades had happened at the site. PP had released the payment of the request on 02 September 2005



(attached as Annexure 7) and PP had again made request to make necessary arrangements to commission the WTG on or before 10 September 2005 in the same communication. SEL had replied to PP on status of NOC dated 02 September 2005 (attached as Annexure 8) and that NOC was expected by 03 September 2005. There was one communication from PP to SEL with regard to status of NOC for the WTG on 03 September 2005 (attached as Annexure 9) and where again inquired about confirmation of commissioning before 10 September 2005.

SEL had communicated on 09 September 2005 (attached as Annexure 10) that safety certificate would be arranged to PP on Monday - 12 September 2005. SEL confirmed that commissioning of the WTG happened on 15 September 2005 by email sent on 16 September 2005 (attached as Annexure 11). A separate undertaking by SEL has been submitted confirming to commissioning of WTG within 1.5 months since purchase order date of 01 August 2005 (attached as Annexure 12).

Thus the evidences of milestones between purchase order and commissioning is given above and it evident that the commissioning happened within 1.5 months from the date of placement of purchase order.

2. The DOE is requested to further clarify why the sensitivity analysis was carried out for the generated power only, but not for other key input values.

PP Response: As already discussed in section B.5 (pg 23) of the PDD the two most important parameter were generation and power cost.

As per para 16 of Guidance of the Assessment of Investment Analysis (version 02, EB 41) – *“Only variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation (all parameters varied need not necessarily be subjected to both negative and positive variations of the same magnitude), and the*



results of this variation should be presented in the PDD and be reproducible in the associated spreadsheets.”

The variation of power cost had already been built in the financials as per the PPA. The only other remaining parameter which could have affected the financials was generation and which was varied for $\pm 10\%$ as per para 17 (Annex 45, EB 41) and the IRR did not cross the benchmark for the project. In actual condition the generation has in fact been much lower than the guaranteed generation value. Thus the PP had been most conservative in conducting sensitivity analysis for the guaranteed generation value.

The only other parameters which the PP foresee is the capital cost and O&M cost. The O & M charges were INR 21.32 lacs and which is just 2% of total project cost. Therefore O & M charges were not varied for sensitivity analysis. Thus the other parameter for which sensitivity had to be done was capital cost. The IRR reduces when the capital cost is increased to 10% whereas when capital cost is decreased by 10% even than the IRR (14.76%) does not cross the benchmark of 14.88%.

The results of sensitivity analysis has been provided in table below:

Key Parameter	Variations	IRR without CDM
Generation	-10%	11.22%
	-5%	12.16%
	0%	13.08%
	+5%	13.97%
	+10%	14.84%
Capital Cost	-10%	14.76%
	-5%	13.89%
	0%	13.08%



3. The DOE is requested to further clarify how the prevailing practice barrier is validated and confirmed.

PP Response: PP wishes to remove the prevailing practice barrier from the PDD.

4. The DOE shall explain why the ex-ante grid baseline emission factor (0.92864 tCO₂/MWh, 0.75 OM: 0.25 BM) is different from the one in the PDD submitted for validation, noting that the factor should be based on the latest available data at the date of validation.

PP Response: The PDD webhosted for global stakeholder consultation did not refer to tool for calculation grid emission factor. The PDD used weights as 50:50 ie; $w_{OM} = 0.5$ and $w_{BM} = 0.5$ to arrive at combined margin emission factor. Also the data was referred from Central Electricity Authority (CEA) – CO₂ Baseline database version 02 which was available during webhosting. Therefore the Combined Margin Emission factor for Southern Regional Grid was 0.85934 kg CO₂/kWh.

The PDD submitted for request for registration had referred to latest “Tool to calculate the emission factor for an electricity system”. And as per page 15 of the tool: “Wind and solar power generation project activities: $w_{OM} = 0.75$ and $w_{BM} = 0.25$ (owing to their intermittent and non-dispatchable nature) for the first crediting period and for subsequent crediting periods”, therefore PP had referred to latest tool and used the weights as referred in the tool. The data referred for grid emission factor was referred from Central Electricity Authority (CEA) – CO₂ Baseline database version 03 which was available request for registration stage.

The calculation of ex-ante grid baseline emission factor is given below:

$$EF = 0.75 * 1.003 + 0.25 * 0.705 = 0.92864 \text{ tCO}_2/\text{MWh}$$



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Kindly accept our above reply to your queries and request you to register our Project.

Thanking you,

For **KILBURN CHEMICALS LTD.,**

K. S. Gnanaraja

K. SURESH GNANARAJA

DY. GEN. MANAGER-DEVELOPMENT