To: **UNFCCC Secretariat** Martin-Luther-King-Strasse 8 D-53153 Bonn Germany

Feb. 02, 2009

Dear Members of the CDM Executive Board,

Please find below our response to the issue raised by request for review of the **"Heilongjiang Yilan Hezuolinchang Wind Power Project"** (UNFCCC Ref. No. 2062).

1. The DOE should further clarify the change in the project start date, as in the PDD made available for public consultation it was stated that construction had started on May 25, 2007 and in the validated PDD the project start date refers to June 10, 2007 (construction permit).

Re: The change in the project start date is derived from the different understandings on the start date of the project construction activity.

For a wind farm, the project construction activity may include several steps: construction application, construction permission, and actual construction started. Therefore, the start date of the project construction activity may be understood as the date of construction application, or the date of construction permission, or the date of actual construction started, which is confusing sometimes.

For the proposed Project, May 25, 2007 is the date of construction application, and June 10, 2007 is the date of construction permission, while the date of actual construction started is June 15, 2007.

When the PDD is made available for public consultation, the PP understood the start date of the project construction activity as the date of construction application (May 25, 2007), trying to be conservative. However, after communication with the DOE in the validation process, it is agreed that the date of construction permission (June 10, 2007) is a more correct understand and a better definition of the start date of the project construction activity. That's why the project start date is changed from May 25, 2007 to June 10, 2007.

For more information, the proposed Project was approved by Heilongjiang DRC on May 22, 2007. After that the project owner made the construction application on May 25, got the construction permission on June 10, and started the actual construction on June 15, which as a process logically took some time.

The relevant evidences have been provided to the DOE.

2. The DOE should clarify how the investment analysis was validated as appropriate, in particular: (The PP should further substantiate and the DOE should clarify how the investment analysis was validated as credible and appropriate, in particular regarding two issues: )

a) the basis for the assumed tariff in the FSR and whether the change in tariff is not considered to be an E+ policy, according to EB 22, Annex 3, para. 6. Or the sudden change of the assumed tariff in the FSR (as conducted in March 2007, showing a tariff of 0.6028 RMB/kWh, resulting in an IRR of 8.76%) into a reduced tariff of 0.5622 RMB/kWh as specified in the propositional letter of the local DRC, which was issued on 14 April 2007, making the project financially unattractive, forcing the project developer to apply for CDM.

Re: The input values used in the investment analysis in the PDD are all sourced from the officially approved FSR except the tariff, which is from the propositional tariff issued by the local DRC. The appropriateness of the investment analysis had been seriously validated by DOE. Particularly, the four major factors for investment analysis, i.e., total investment, annual electricity generation, tariff, and O&M cost have all been crosschecked with other independent evidences. Specifically, the total investment and annual electricity are crosschecked with the Expert Panel Opinion on Heilongjiang Yilan Hezuolinchang Wind Power Project, which is issued by a panel of wind power experts examining the proposed Project. The tariff is crosschecked with the Tariff Approval for Some Renewable Energy Projects, in which the proposed Project is included. The O&M cost is crosschecked with other wind power projects in the same province.

Particularly regarding the basis of tariff in the FSR, it is highlighted that the tariff in the FSR, i.e., 0.6028 RMB/kWh (excl. VAT) is not an approved or implied tariff in any official sense. Instead it is only a price estimated by the FSR designer based on the local economic development, national regulations and the specific circumstances of the proposed project. The FSR is prepared by Xinjiang Wind Power Design & Study Institution, which is a qualified, competent, experienced, and professional wind power designer. Furthermore, the tariff must be able to cover the cost and ensure a certain level of profit taking into account the investment, and power output, etc. It is the tariff that the Project owner hopes to apply for and to be approved by the government, which was 0.6028 RMB/kWh (0.2978 RMB/kWh higher than the thermal power tariff in Heilongjiang grid as 0.305 RMB/kWh (excl. VAT)<sup>1</sup>).

When waiting for the Project approval, the Project owner prepared to apply for the tariff<sup>2</sup> for the proposed Project and informed the local DRC of the details. The local DRC is in the position to supervise the local wind power projects, which can make suggestions on the development of local wind power projects, including the application of the tariff. As part of

<sup>&</sup>lt;sup>1</sup> Notice on Tariff of Northeast China Power Grid issued by NDRC in 2006 (<u>http://china.findlaw.cn/fagui/jj/26/104270.html</u>)

<sup>&</sup>lt;sup>2</sup> It is noted that tariff application and approval is a separate path independent of project approval.

the regulation structure of wind power tariff, the local DRC was aware that the proposed Project would not be able to obtain a tariff as high as the desired level in the FSR. Accordingly, it issued a propositional letter on the tariff of the proposed Project on April 15, 2007, instructing the Project owner to apply for a tariff no higher than 0.5622 RMB/kWh (excl. VAT), a level it deemed more possible. This tariff was still 0.2572 RMB/kWh higher than the thermal power tariff in Heilongjiang grid as 0.305 RMB/kWh (excl. VAT). The Project owner seriously took it into consideration and made a recalculation using the proposed tariff, which showed that the proposed Project would be financially unattractive without other remedies made. As a result, the Project owner was motivated to apply for CDM support to improve the financial attractiveness, and make possible the continuation, of the proposed project.

The change in tariff is not considered to be an E+ policy, for the following reasons. First, the final tariff of the proposed Project is 0.5622 RMB/kWh (excl. VAT), 84% higher than the benchmark thermal power tariff in Heilongjiang grid 0.305 RMB/kWh (excl. VAT). It gives a significant comparative advantage to the low-emission wind farm project over more emission intensive technologies, as it effectively grants a premium of 0.2572 RMB/kWh for the wind farm above the electricity tariff for thermal power plants. Second, the change in tariff is basically not a policy, as the initial tariff was nothing more than a calculated and desired valued by the Project owner and was not a tariff in any official sense, while the later tariff was a proposed value by local DRC, which was of instructive sense but no approval sense. The fact that both the initial tariff 0.6028 RMB/kWh and the final tariff 0.5622 RMB/kWh were of no approval sense means that the change itself in tariff has little official sense either, and should not be regarded as a policy. Third, the change in tariff showed in this case is only for the proposed project. It is case-specific and inapplicable to other projects. Therefore, from this perspective it should not be regarded as a policy either. Therefore, the change in tariff has no E+ effect either. With the three points above combined, the change in tariff is not considered as an E+ policy.

The relevant evidences have been provided to the DOE.

## b) as replication of the calculations in the spreadsheet provided indicates that applying the tariff used in the FSR yields an IRR that is different from what was obtained in the same document.

Re: When replicating the project IRR in the spreadsheet provided using the tariff in the FSR, i.e., 0.6028 RMB/kWh, the resulted IRR is 7.64%, which is different from the value in the FSR, i.e., 8.76%. The difference is solely caused by the treatment of loan interests in the calculation of Project IRR.

Specifically, a comparison between the replicated Project IRR cashflow table using the tariff in the FSR (Referred to as "Replicated Cashflow Table") and the Project IRR cashflow table in the FSR (Referred to as "FSR Cashflow Table") shows that the difference in the project IRR is derived from the different values of three factors, i.e., Fix Assets Residual Value, Operating Cost, and Income Tax, of which the differences are all solely caused by the treatment of loan interests. In more detail, loan interests are excluded in the Replicated Cashflow Table, but are included in the FSR Cashflow Table.

As is known to all, project IRR as a pre-financing analysis should exclude the loan interests from the calculation, as required by the Methodology and Parameters of Economic Evaluation on Construction Projects (third edition) and consistent with the Guidance on the Assessment of Investment Analysis provided by CDM EB. Therefore, the Replicated Cashflow Table is done excluding the loan interests.

In summary, the exclusion of the loan interests in the Replicated Cashflow Table, against their inclusion in the FSR Cashflow Table, caused the differences in the three factors, i.e., Fix Assets Residual Value, Operating Cost, and Income tax, and in turn caused the difference in the Replicated project IRR and FSR project IRR. Below is the specification of how the treatment of loan interests impacts the three factors, and thus impacts IRR.

	Replicated Cashflow Table	FSR Cashflow Table
Fix Assets	original value of fixed assets $\times$ rate of fixed assets residual	(original value of fixed assets + loan interest in the construction period)
Residual Value	value	$\times$ rate of fixed assets residual value
Operating Cost	annual salary per capita × employee population × $(1 + rate of$	annual salary per capita × employee population × (1+ rate of welfarism)
	welfarism) + original value of fixed assets× (rate of	+ (original value of fixed assets + loan interest in the construction
	maintenance + rate of insurance premium) + (fixed amount	<u>period</u> ) $\times$ (rate of maintenance + rate of insurance premium) + (fixed
	of material cost+ fixed amount of other costs) $\times$ installed	amount of material cost+ fixed amount of other costs) $\times$ installed
	capacity	capacity
Income Tax	(sales revenue- sales tax and extra charges - operating cost -	(sales revenue- sales tax and extra charges - operating cost – (original
	original value of fixed assets $\times$ (1- expected rate of residual	value of fixed assets + $\frac{1}{1}$ loan interest in the construction period)× (1-
	value) $\div$ expected depreciable life) $\times$ rate of income tax	expected rate of residual value) ÷ expected depreciable life) – <u>loan</u>
		interest expenses) × rate of income tax

The different calculation between the Replicated Cashflow Table and the FSR Cashflow Table

For more clarity, an example is provided below for calculating the Fix Assets Residual Value, Operating Cost, and Income Tax for the 2<sup>nd</sup> year of the proposed project, both for the Replicated Cashflow Table and the FSR Cashflow Table (with 10,000 RMB as unit).

	Replicated Cashflow Table	FSR Cashflow Table
Fix Assets	$22243 \times 10\% = 2224$	$(22243 + \frac{504}{504}) \times 10\% = 2275$
Residual Value		
Operating Cost	$4.1 \times 16 \times (1 + 41\%) + 22243 \times (1.6\% + 0.405\%) + (0 + 40)$	$4.1 \times 16 \times (1 + 41\%) + (22243 + 504) \times (1.6\% + 0.405\%) + (0 + 40) \times$
	× 2.465	2.465
	= 92.496 + 445.97215 + 98.6	= 92.496 + 456.07735 + 98.6
	= 637	= 647
Income Tax	(3378 - 23 - 637 - 22243 × (1-10%)÷15) × 33%	(3378 - 23 - <mark>647</mark> − (22243 + <mark>504</mark> ) × (1-10%)÷15 - <mark>1049</mark> ) × 33%
	= (3378 -23 -637 - 1334.58) × 33%	= (3378 -23 -647 - 1364.82 - 1049) × 33%
	$= 1383.42 \times 33\%$	$= 294.18 \times 33\%$
	= 457	= 97

The relevant evidences have been provided to the DOE.

Best regards,

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