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TÜV®

## CDM Executive Board

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Date  
14.01.2010

### Request for Review

"Hebei Chengde Yudaokou Windfarm 48MW project" (2865)

Dear Sir/Madam,

Please find below the response of the TÜV NORD JI/CDM Certification Program to the request for review for the above mentioned project No. 2865.

If you have any questions do not hesitate to contact us.

Yours sincerely,

TÜV NORD JI/CDM Certification Program



Rainer Winter

Request for Review																																			
Issue raised by EB Members / DNA	<p><i>The DOE is requested to further explain how the proposed tariff has been determined for the project activity and provide a quantitatively substantiated assessment as to whether the net return to the investor has been reduced as a result of any reduction in tariffs over recent years, or whether the net return has been unaffected or only partially affected as a result of other changes such as investment costs. This question is relevant since it is noticed that when applying the highest reported tariff of 0.653 RMB/kWh with VAT (which is applicable to CDM project activity 0233) the project IRR crosses the benchmark.</i></p> <p><i>The DOE is requested to further explain how the proposed tariff has been determined for the project activity and provide an assessment as to whether the net return to the investor has been reduced as a result of any reduction in tariffs over recent years, or whether the net return has been unaffected as a result of other changes such as investment costs. (on 2009-12-29 and on 2009-12-30)</i></p>																																		
Response of DOE	<p>TÜV NORD provides clarification as following:</p> <p><b>1. Determination of the tariff in proposed project</b></p> <p>The tariff of 0.54 RMB/kWh (incl. VAT) was firstly indicated in the Feasibility Study Report (hereafter refer to FSR), then it was agreed by authorized tariff approvals for similar projects, and finally, it was approved by Hebei Price Bureau in document No. Ji Jia Guan [2009]69. (Please refer to Table-1)</p> <p><b>Table-1: Timeline with evidences of applied tariff</b></p> <table border="1"> <thead> <tr> <th>Time</th><th>Documentation</th><th>Data source</th><th>Tariff (incl. VAT in unit RMB/kWh)</th></tr> </thead> <tbody> <tr> <td>April 2007</td><td>FSR version I</td><td>Estimated by design institute</td><td>0.54</td></tr> <tr> <td>2007-06-09</td><td>National Development and Reform Commission (hereafter refer to NDRC) No. [2007] 1260</td><td>Approved tariff of other projects in Chengde City, Hebei Province</td><td>0.54</td></tr> <tr> <td>2007-07-22</td><td>CDM management decision meeting records</td><td></td><td>0.54</td></tr> <tr> <td>Oct 2007</td><td>FSR version II</td><td>Estimated by design institute</td><td>0.54</td></tr> <tr> <td>2008-07-23</td><td>NDRC: No [2008] 1876</td><td>Approved tariff of other project in Chengde City, Hebei Province</td><td>0.54</td></tr> <tr> <td>Oct 2008</td><td>China Wind Power Report 2008</td><td>Statistics on approved tariffs in China, including Chengde City, Hebei Province</td><td>0.54</td></tr> <tr> <td>2008-11-06</td><td>GSP PDD of the proposed project</td><td></td><td>0.54</td></tr> </tbody> </table>			Time	Documentation	Data source	Tariff (incl. VAT in unit RMB/kWh)	April 2007	FSR version I	Estimated by design institute	0.54	2007-06-09	National Development and Reform Commission (hereafter refer to NDRC) No. [2007] 1260	Approved tariff of other projects in Chengde City, Hebei Province	0.54	2007-07-22	CDM management decision meeting records		0.54	Oct 2007	FSR version II	Estimated by design institute	0.54	2008-07-23	NDRC: No [2008] 1876	Approved tariff of other project in Chengde City, Hebei Province	0.54	Oct 2008	China Wind Power Report 2008	Statistics on approved tariffs in China, including Chengde City, Hebei Province	0.54	2008-11-06	GSP PDD of the proposed project		0.54
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2009-07-20	NDRC notification	General guideline for tariff in Chengde City, Hebei Province	0.54
2009-07-23	Hebei Price Bureau: No Ji Jia Guan [2009]69	Approved specific tariff of other projects as well as the proposed project in Hebei Province	0.54

Notice: The FSRs were finalized by Hebei Electric Power Design & Research Institute, since the FSR version I suggested single wind turbine with 2MW, which is unlikely to purchase, the design had to be changed to 75kW in the revised FSR version II.

## 2. Tariff used in investment analysis

According to NDRC Documents No. [2007]1260, [2007]3303, and [2008]1876, wind power projects should apply the two-phase tariff, i.e. approved tariff could be applied within 30,000 hours of operation (first phase tariff) and afterwards, the local bus-bar on-grid tariff of coal fired power plants should be applied (second phase tariff). The FSR II calculated the project IRR using the electricity tariff of 0.54 RMB/kWh (incl. VAT) for 30,000 utilization hours and 0.3504 RMB/kWh (incl. VAT) which is local bus-bar on-grid tariff of coal fired power plants after 30,000 utilization hours, the result of IRR is 5.48%.

Even though the input values used in the PDD and IRR calculation spreadsheet are fully consistent with the FSR, the PP chose the electricity tariff of 0.54 RMB/kWh (Incl. VAT) throughout the 20 years of lifetime to stay conservative (compared with the tariff of 0.3504 RMB/kWh which was used after 30,000 utilization hours in the FSR).

In conclusion the DOE has confirmed that the tariff from the FSR is valid and applicable at the time of the investment decision. Documents listed above have been carefully checked to confirm the tariff.

## 3. Comparison with other similar project

3.1. All wind power projects in Hebei Province (both CDM and non CDM projects) are listed in Table-2

**Table-2: Information of total wind power projects in the same region**

Year of commissioning	Item	CDM status	Name of wind power project	Tariff (Incl. VAT) RMB/kWh	Tariff approval
1996.02	1	No carbon fund	Zhangbei Changcheng wind farm	0.65	Ji Jia Ge [2002]242

issued by NDRC in

	2001.11	2	No carbon fund	Chengde Hongsong wind farm phase I		NDRC in Feb 2002 <a href="http://www.fjg.gov.cn/fjwj/jqfw/gjgzc/webinfo/2002/02/1187774415686122.htm">http://www.fjg.gov.cn/fjwj/jqfw/gjgzc/webinfo/2002/02/1187774415686122.htm</a>
	2004.12	3	VER	Chengde Hongsong wind farm phase II <a href="http://www.newsroom.barrclays.com/imagelibrary/default.aspx?SubjectID=587">http://www.newsroom.barrclays.com/imagelibrary/default.aspx?SubjectID=587</a>	0.6	Ji Jia Guan Zi [2006]57 issued by Price Bureau of Hebei province In Jun 2006 <a href="http://www.hebjw.gov.cn/upfiles/xy_co113super_20060703152016007126.htm">http://www.hebjw.gov.cn/upfiles/xy_co113super_20060703152016007126.htm</a>
	2005.09	4	VER	Guohua Shangyi (Damanjing) wind farm <a href="http://cdm.unfccc.int/UseManagement/FileStorage/QJT5M08PEASYLBR3C2GHKVFU7DO49W">http://cdm.unfccc.int/UseManagement/FileStorage/QJT5M08PEASYLBR3C2GHKVFU7DO49W</a>		
	2006.09	5	CDM project 0842, registered	Hebei Shangyi Manjing East Wind Farm <a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1167911701.87">http://cdm.unfccc.int/Projects/DB/DNV-CUK1167911701.87</a>		
	2006.05	6	CDM project 0233, registered	Zhangbei Manjing Wind Farm <a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1136989231.92/view">http://cdm.unfccc.int/Projects/DB/DNV-CUK1136989231.92/view</a>		
	2006.12	7	CDM project 0845, registered	Zhangbei Mijiagou 49.5 MW Wind Farm <a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1167997490.52">http://cdm.unfccc.int/Projects/DB/DNV-CUK1167997490.52</a>		
	2006.10	8	CDM project 0878, registered	Hebei Kangbao Wolongtushan 30 MW Wind project <a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1169559890.44">http://cdm.unfccc.int/Projects/DB/DNV-CUK1169559890.44</a>		
	2008.04	9	CDM project 2170, registered	CECIC HKC Danjinghe Wind Farm Project <a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1218638823.56">http://cdm.unfccc.int/Projects/DB/DNV-CUK1218638823.56</a>	0.5006	China Wind Power Report 2008 published by China Environmental Science Press in Oct. 2008
	2008.04	10	CDM project 2007, registered	Hebei Haixing 49.5MW Wind Farm Project <a href="http://cdm.unfccc.int/Projects/DB/TUEV-">http://cdm.unfccc.int/Projects/DB/TUEV-</a>	0.61	Fa Gai Jia Ge [2007]1260 issued by

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				<a href="#">SUED1218101320.07</a>		
2007.08	11	CDM project 0873, registered	Guyuan 30.6MW Wind-farm Project <a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1169475281.64">http://cdm.unfccc.int/Projects/DB/DNV-CUK1169475281.64</a>	0.54	NDRC in Jun 2007 <a href="http://www.hebwi.gov.cn/upfiles/xy_co132gjc_20070718164220007126.htm">http://www.hebwi.gov.cn/upfiles/xy_co132gjc_20070718164220007126.htm</a>	
2008.05	12	CDM project 2067, registered	Hebei Shirenshan Wind Power Project <a href="http://cdm.unfccc.int/Projects/DB/TUEV-SUED1218467437.87/view">http://cdm.unfccc.int/Projects/DB/TUEV-SUED1218467437.87/view</a>			
2007.02	13	CDM project 0877, registered	Hebei Chengde Songshan Windfarm Project <a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1169551806.17">http://cdm.unfccc.int/Projects/DB/DNV-CUK1169551806.17</a>			
2008.12	14	CDM project 2205, registered	Hebei Wanquan Yulong Wind Power Project <a href="http://cdm.unfccc.int/Projects/DB/TUEV-SUED1218660411.91/view">http://cdm.unfccc.int/Projects/DB/TUEV-SUED1218660411.91/view</a>			
2008.07	15	CDM project 2088, registered	Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project <a href="http://cdm.unfccc.int/Projects/DB/TUEV-SUED1218534453.07">http://cdm.unfccc.int/Projects/DB/TUEV-SUED1218534453.07</a>			
2008.04	16	CDM project 2140, registered	Hebei Chongli Qingsanying 49.3MW Wind Farm Project <a href="http://cdm.unfccc.int/Projects/DB/TUEV-SUED1218616949.73/view">http://cdm.unfccc.int/Projects/DB/TUEV-SUED1218616949.73/view</a>			
2007.10	17	Under Validation	Hebei Shangyi Manjing West Wind Farm Project <a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1218437265.76/view">http://cdm.unfccc.int/Projects/DB/DNV-CUK1218437265.76/view</a>	0.54	Fa Gai Jia Ge [2007]3303 issued by NDRC in Dec 2007 <a href="http://jgs.ndrc.gov.cn/zcfq/t20080218_192021.htm">http://jgs.ndrc.gov.cn/zcfq/t20080218_192021.htm</a>	
N/A	18	Under Validation	Hebei Weichang Zhangjiawan Wind Power Project <a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1218437265.76/view">http://cdm.unfccc.int/Projects/DB/DNV-CUK1218437265.76/view</a>			

	N/A	19	Under Validation	Hebei Weichang Longyuan Construction Investment Shanwanzi Wind Power Project <a href="http://cdm.unfccc.int/Projects/DB/TUEV-SUED1249394051.95/view">http://cdm.unfccc.int/Projects/DB/TUEV-SUED1249394051.95/view</a>		
	2008.12	20	Under Validation	Hebei Shangyi Qijiashan Wind Farm Project <a href="https://cdm.unfccc.int/Projects/DB/BVQI1211944550.47/view">https://cdm.unfccc.int/Projects/DB/BVQI1211944550.47/view</a>	0.5006	China Wind Power Report 2008
	2008.04	21	CDM project 1855, registered	CECIC Zhangbei Dayangzhuang Wind Farm Project <a href="http://cdm.unfccc.int/Projects/DB/BVQI1211950998.53/view">http://cdm.unfccc.int/Projects/DB/BVQI1211950998.53/view</a>	0.54	Fa Gai Jia Ge [2008]1876 issued by NDRC in Jul 2008 <a href="http://jgs.ndrc.gov.cn/zcfq/t20080813_230722.htm">http://jgs.ndrc.gov.cn/zcfq/t20080813_230722.htm</a>
	N/A	22	Under Review	CECIC Zhangbei Gaojialiang Wind farm Project <a href="http://cdm.unfccc.int/Projects/DB/BVQI1214644881.07/view">http://cdm.unfccc.int/Projects/DB/BVQI1214644881.07/view</a>		
	N/A	23	CDM project 1792, Correction	Hebei Shangyi Manjing North Wind Farm Project <a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1207662942.73/view">http://cdm.unfccc.int/Projects/DB/DNV-CUK1207662942.73/view</a>		
	2008.5	24	CDM project 1873, registered	Hebei Chengde Huifeng Windfarm Project <a href="http://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1213672838.89/view">http://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1213672838.89/view</a>	0.54	Ji Jia Guan [2009]69 issued by Price Bureau of Hebei province In Aug 2009 <a href="http://www.hebj.gov.cn/upfiles/xy_co132super_20090901160416124272.htm">http://www.hebj.gov.cn/upfiles/xy_co132super_20090901160416124272.htm</a>
	2008.12	25	CDM project 1715, registered	Hebei Chengde Fengze Windfarm Project <a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1204739837.84/view">http://cdm.unfccc.int/Projects/DB/DNV-CUK1204739837.84/view</a>		
	N/A	26	Under Validation	Hebei Chongli County Qingsanying Second Phase 49.3 MW Wind Power Project <a href="http://cdm.unfccc.int/Projects/Validation/DB/HK71FTXIR6PZZ0KEJBLGDE0DYZYUZJ/view.html">http://cdm.unfccc.int/Projects/Validation/DB/HK71FTXIR6PZZ0KEJBLGDE0DYZYUZJ/view.html</a>		
	N/A	27	Under Validation	Hebei Yuxian Second Phase 49.5MW Wind Power Project <a href="http://cdm.unfccc.int/Projects/Validation/DB/L00Z">http://cdm.unfccc.int/Projects/Validation/DB/L00Z</a>		

				<a href="http://cdm.unfccc.int/Projects/Validation/DB/2MCXQ6561E0T6TU6H7F0XHUYH9V0RI/view.html">NE1FJPOR78IK0PV85N5LB6G9QA/view.html</a>		
N/A	28	Under Validation		Hebei Kangbao Sanxiatian Wind Farm Project <a href="http://cdm.unfccc.int/Projects/Validation/DB/2MCXQ6561E0T6TU6H7F0XHUYH9V0RI/view.html">http://cdm.unfccc.int/Projects/Validation/DB/2MCXQ6561E0T6TU6H7F0XHUYH9V0RI/view.html</a>		
N/A	29	Under Validation		Guyuan Wuhuaping 49.5 MW Wind Power Project <a href="http://cdm.unfccc.int/Projects/Validation/DB/8DNXLPMWY0UT6I6GNF4LSCX5M5TPA35/view.html">http://cdm.unfccc.int/Projects/Validation/DB/8DNXLPMWY0UT6I6GNF4LSCX5M5TPA35/view.html</a>		
N/A	30	CDM project 1423, registered		Dongbaliang 49.5MW Wind Power Project in Weichang County Hebei Province <a href="http://cdm.unfccc.int/Projects/DB/BVQI1194939964.25/view">http://cdm.unfccc.int/Projects/DB/BVQI1194939964.25/view</a>		
N/A	31	CDM project 1464, registered		Yueliangshan 49.5MW Wind Power Project in Weichang County Hebei Province <a href="http://cdm.unfccc.int/Projects/DB/BVQI1197004785.71/view">http://cdm.unfccc.int/Projects/DB/BVQI1197004785.71/view</a>		
N/A	32	Under Validation		Hebei Weichang Guangfayong Wind power project <a href="https://cdm.unfccc.int/Projects/Validation/DB/MQH1BZH76KA36HBVBM829FA45B5RRK/view.html">https://cdm.unfccc.int/Projects/Validation/DB/MQH1BZH76KA36HBVBM829FA45B5RRK/view.html</a>		
N/A	33	Under Validation		Hebei Weichang Zhuzixia Wind power project <a href="http://cdm.unfccc.int/Projects/Validation/DB/ENYEX2E2XWS4BNAGHIMQ5XVLUM75OG/view.html">http://cdm.unfccc.int/Projects/Validation/DB/ENYEX2E2XWS4BNAGHIMQ5XVLUM75OG/view.html</a>		
N/A	34	Under Validation		Hebei Chicheng Stage I Windfarm Project <a href="http://cdm.unfccc.int/Projects/Validation/DB/XTM YXEDED19UVSFPHBOB45AQUQKY5/view.html">http://cdm.unfccc.int/Projects/Validation/DB/XTM YXEDED19UVSFPHBOB45AQUQKY5/view.html</a>		

N/A	35	Under Validation	Hebei Leting 49.5 MW Wind Farm Project Phase I <a href="http://cdm.unfccc.int/Projects/Validation/DB/QALM85JCI8NK64HUT1KPS_T6DSV7I53/view.html">http://cdm.unfccc.int/Projects/Validation/DB/QALM85JCI8NK64HUT1KPS_T6DSV7I53/view.html</a>	0.61	
N/A	36	CDM project 2125, registered	Guohua Hebei Huanghua 49.5 MW Wind farm Project (Phrase I) <a href="http://cdm.unfccc.int/Projects/DB/DNV-CUK1218606836.47/view">http://cdm.unfccc.int/Projects/DB/DNV-CUK1218606836.47/view</a>		
N/A	37	The proposed project	Hebei Chengde Yudaokou Windfarm 48MW project <a href="http://cdm.unfccc.int/Projects/gotoProj?id=RWTVU_V1249387859.68&amp;state=Review">http://cdm.unfccc.int/Projects/gotoProj?id=RWTVU_V1249387859.68&amp;state=Review</a>	0.54	

Notice: The commissioning year refer to the statistics from *Statistics on Installed Capacity of Wind Power Projects 2004~2008*, issued by China Wind Energy Association, authored by Mr. Shi Pengfei, the commissioning date of the projects with N/A is not available.

As listed in Table-2, it is confirmed by DOE that a total of 37 wind power projects have been commissioned in Hebei Province or are currently under construction, some of their commissioning dates is not publicly available. However, the projects are listed in the timeline of tariff approval.

Four different tariffs have been identified:

- **0.65** RMB/kWh in No.1 & 2, only available prior to March 2002. Since the *Notice of Electric Power Sector Reform Programme* was issued by the State Council in March 2002, the tariff of **0.65** RMB/kWh is unavailable. There are three major impacts from the reform: 1.) the former single national power company was divided into regional companies; 2.) generation and distribution responsibilities were separated; and 3.) market force was introduced. The differences between them and the proposed project are:
  1. The projects are demonstration (pilot) projects and therefore benefitting from government support through lower loan rate and higher tariff etc.;
  2. The capacities of the projects are 9MW and 3.6MW (lower than 15MW) while the proposed project is 49.5MW.

To sum up, the projects with tariff of 0.65 RMB/kWh (incl. VAT) are not comparable to the proposed projects.
- There are two projects with a lower tariff of **0.5006** RMB/kWh. However, they are not similar to other projects. Their capacities are much higher than the others, i.e. No. 9 has a capacity of 200MW, and No. 20's is 199.5MW.



- **0.54 RMB/kWh** and **0.61 RMB/kWh**, the difference are based on wind resource. In year 2006 the *Law of the People's Republic of China on Renewable Energies*<sup>1</sup> was implemented, where prescribed relative department to survey wind energy resource. In July 2009, the *Notice on guiding the on-grid tariff for all China land-based wind power project* issued by NDRC in Doc No. [2009] 1906, where classified wind resource with four types and corresponding tariff. Accordingly to the Notice, the tariff of **0.54 RMB/kWh** should be approved to region with wind resource in Class II, including the location of the proposed project. **0.61 RMB/kWh** should be approved to Class IV, including the region of item No. 35, 36. Besides, *Trial Measures for the Administration of Renewable Energy Power Price and Cost-sharing*<sup>2</sup> was implemented in year 2006, where it is clearly prescribed that the tariff of wind farm must be applied according to authorized approval.

### 3.2. Difference between the proposed project and projects with higher tariff

In order to demonstrate the impacts from reduction of tariff to the net return, the projects with tariff higher than the proposed projects are listed in Table-3.

**Table-3 Comparison of the Unit Investment (UI), Rate of O&M cost to Investment, and Tariff**

Year of tariff available	Item	CDM status	Name of wind power project	UI (RMB/kWh)	O&M cost/Investment	Tariff (Incl. VAT)RMB/kWh
Prior to March 2002	1	No carbon fund	Zhangbei Changcheng wind farm	N/A	N/A	0.65
	2	No carbon fund	Chengde Hongsong wind farm phase I	N/A	N/A	
Electric Power Sector Reform in March 2002						
2006	3	VER	Chengde Hongsong wind farm phase II	N/A	N/A	0.6
	4	VER	Guohua Shangyi wind farm phase I	N/A	N/A	
	5	CDM project 0842, registered	Hebei Shangyi Manjing East Wind Farm	9468	4.91%	
	6	CDM project 0233, registered	Zhangbei Manjing Wind Farm	N/A	N/A	
	7	CDM	Zhangbei	9726	2.10%	

project Mijragou 49.5

<sup>1</sup> [http://www.gov.cn/ziliao/flfg/2005-06/21/content\\_8275.htm](http://www.gov.cn/ziliao/flfg/2005-06/21/content_8275.htm)

<sup>2</sup> [http://jgs.ndrc.gov.cn/zcfg/t20060120\\_57585.htm](http://jgs.ndrc.gov.cn/zcfg/t20060120_57585.htm)

		0845, registered	MW Wind Farm			
	8	CDM project 0878, registered	Hebei Kangbao Wolongtushan 30 MW Wind project	9170	2.04%	
2007	10	CDM project 2007, registered	Hebei Haixing 49.5MW Wind Farm Project	10931	1.58%	0.61
2009	36	CDM project 2125, registered	Guohua Hebei Huanghua 49.5 MW Wind farm Project (Phrase I)	9938	2.59%	0.61
	37	The proposed project	Hebei Chengde Yudaokou Windfarm 48MW project	8917	1.75%	0.54

Notice: the investment and O&M cost of the non-CDM projects are not public available

As being demonstrated above, the tariff of 0.65 RMB/kWh (Incl. VAT) only applied for projects prior to March 2002, thus it is not comparable to the proposed project.

Table-3 shows that the unit investment of the proposed project is the lowest one, and the rate of O&M cost to the investment of the proposed project is 0.17% higher than that from the lowest one, but 3.16% lower than the highest one.

According to document provided to the proposed Agenda of EB51, Annex 14, para 15 indicates that the global trend of decreasing investment costs slowed down and that in some situation it has begun to increase again. Paragraph 16 further provides an overview of registered projects from China and points out that the unit investment costs are slightly decreasing, which is also shown in the table above.

According to the information provided above the investment and the O&M costs are slightly decreasing. Hence, the trend to decrease the tariff is reasonable. However, whether the net return has been unaffected or partially affected cannot be clearly determined as it also depends on the wind availability or electricity generation of different projects. The tariff is set by official governmental organisations in China and the assessment above clearly shows that the tariff is well substantiated. Hence, it is assessed as applicable.

### 3.3. Tariff of Wind power industry and its development

According to *China Wind Power Report 2007, 2008* compiled by Chinese Renewable Energy Industries Association (CREIA) together with Greenpeace and Global Wind Energy Council, the following factors were taken into consideration during the tariff determination:

- According to the Electric Power Sector Reform, which started in March 2002, the tariff level of wind power projects was determined by means of bidding mechanism. When the National Development and Reform Commission (NDRC) assumed that the tariff

<sup>3</sup> [http://jgs.ndrc.gov.cn/zcfg/t20060120\\_57585.htm](http://jgs.ndrc.gov.cn/zcfg/t20060120_57585.htm)

level reflected the real situation such as local wind resource, investment cost and grid system condition etc., the tariff has been determined as a standard. In Hebei Province 0.54 and 0.61 RMB/kWh (incl. VAT) have been accepted by NDRC since 2007 as a guiding price. A settled notice classifying wind resource and corresponding tariff was issued by NDRC in year 2009.

- In order to encourage the investment, the State Council issued notification of decreasing the income tax rate (from 33% to 25%) in March 2007, including Wind Power Industry, thus the investment environment has been changed. <http://www.cpasz.com/qiyesuodeshui/xinqiyesuodeshuifa.htm>
- Since *Electric Power Sector Reform*, the local Grid Company should purchase the electricity from the power generation projects, as being prescribed in *Trial Measures for the Administration of Renewable Energy Power Price and Cost-sharing*<sup>3</sup>, the local grid company should pay a tariff premium for wind power projects, i.e. the gap between renewable energy power price and the fossil-fuel power price. However, to encourage local grid company purchasing the renewable energy a renewable energy power premium of 0.001 RMB/kWh to the electricity sale price has been added, from 30<sup>th</sup> June, 2006. In 2008, the renewable energy power premium was adjusted to 0.002 RMB/kWh, and in 2009, it was adjusted again to 0.004 RMB/kWh.
- The wind turbine manufacturing industry is a new emerging industry in China. With the development of the technology and the mature of market the manufacturing costs of wind turbine is decreasing over years. As a result, the investment cost and O&M cost of wind power project are also experiencing a downward trend. It could be concluded that the change of electricity tariff of wind power project during these years has exactly reflected the trend.

The DOE verified that the developer of the FSR has calculated the tariff of the project activity based on the guidance tariff of similar projects in the Hebei Province to assess the financial viability of the proposed project.

To sum up, net return to the investor has not been reduced as a result of reduction in tariffs over recent years, but it is partially affected as a result of investment cost and O&M cost.

#### 4. Justification on the additionality

##### 4.1. Data source of Project Ref No. 0233

**Table-5: Timeline of Ref. No. 0233's tariff**

Time	Date source	Tariff include VAT (RMB/kWh)
2004-08-03	Approved FSR	0.653
2006-03-23	Registered PDD	0.653
2006-06-29	Hebei Price Bureau document No. [2006] 57, please refer to <a href="http://www.hebwj.gov.cn">http://www.hebwj.gov.cn</a>	0.60

According to registered PDD section B.5 (page 11), "the suggested tariff of 0.653 RMB/kWh (incl. VAT) is not possible to be realized during the crediting period". However, since the actual tariff approval was pending when the project was submitted for

registration, the data from FSR was used.

As being listed in Table-4, the actual tariff should be 0.60 RMB/kWh rather than 0.653 RMB/kWh, therefore it is not appropriate to consider 0.653 RMB/kWh for the proposed project under request for review.

#### 4.2. Test IRR with comparable highest tariff

In order to demonstrate the additionality of the proposed project, the highest tariff in recent years has been applied in IRR calculation. The highest tariff applicable is not as indicated in the Request for Review 0.653 RMB/kWh (please refer to justification above), but 0.61 RMB/kWh (as per analysis in table 2). Applied in the proposed project, the IRR changes from 6.18 % into 7.74 %, which remains lower than the benchmark (please refer to Appendix 1).

In conclusion,

1. TÜV NORD has clearly shown how the proposed tariff has been determined and how this has been verified and assessed as appropriate.
2. It has further been shown that the highest tariff as indicated in the request for review is not applicable to projects in the Province. If the highest real tariff is applied the project is still not able to cross the benchmark.

Therefore, the only assessment is that the tariff is applicable and reasonably chosen and the project is additional.

If this information is not sufficient to close the request for review, we appoint Mr. Li Yong Jun as our contact person:

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