UNFCCC Secretariat
Attn. CDM Executive Board
Martin-Luther-King-Strasse 8
D – 53153 Bonn
Germany

Response to the request for review for the CDM project activity "Hebei Chengde Peifeng Wind Farm Project" (Ref. no.: 3079)

2010-04-27

Dear Members of the Executive Board,

The DOE TÜV Rheinland Japan Ltd. was informed on 13th April 2010 that the CDM project "Hebei Chengde Peifeng Wind Farm Project" (Ref. no. 3079) is under request for review because three requests for review have been received from members of the board.

All of these requests for review contain the same one issue. We would like to provide our response to that issue raised on the following pages.

In summary, we understand the issue raised in the "Request for review" and regret if the previous Validation Report did not reflect and describe the validation results in sufficient detail. However, we hope that the input by the project participants and this explanation will find acceptance among the members of the Executive Board.

Sincerely yours,

Dr. Manfred Brinkmann
CDM Program Manager
TÜV Rheinland Japan Ltd.

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Issue 1:

The DOE is requested to further explain how the proposed tariff has been determined for the project activity and provide an opinion as to whether the net return to the investor has been reduced as a result of the reduction in tariffs over the years, or whether the net return has been unaffected as a result of other changes such as investment costs. When responding to this issue, the DOE is requested to refer to EB 53, Annex 32.

TÜV Rheinland's response:

The issue raised consists of two main questions to be clarified: (a) how has the proposed tariff been determined for the project activity? (b) whether the investor's incentives have been reduced due to the reduction in tariffs over the years, or whether the net return has been unaffected due to changes of other factors such as investment costs.

A. How has the proposed tariff been determined for the project activity?

The validation team has assessed the validity of the tariff used for the financial analysis of the 3079 Hebei Chengde Peifeng Wind Farm Project (herein after referred to as the proposed project) in the validation report as per the para. 111 of the VVM(version 01). Further explanation on how the proposed tariff was determined for the project is substantiated as follows:

Hebei province covers two different wind resource areas, Wind Resource Area II: Chengde City and Zhangjiakou City, and Wind Resource Area IV: the remaining regions of Hebei.[1] As the proposed project is located in Chengde City, it belongs to the Wind Resource Area II. Projects in Wind Resource Area IV of Hebei thus should not be considered in the tariff analysis.

The tariff of 0.54 RMB/kWh set in the FSR refers to the latest approved tariff of a nearby wind farm projects in Hebei province at the time of FSR preparation. On 9 June 2007 and 3 December 2007, the National Development and Reform Committee (NDRC) issued two "Notification of electricity tariff for wind power projects" (Fa Gai Jia Ge [2007]1260 and (Fa Gai Jia Ge [2007]3303). According to these notifications, the on-grid tariffs were approved as 0.54 RMB/kWh (incl. VAT) for most wind projects in Hebei province and 0.61 RMB/kWh (incl. VAT) for one particular project, namely Cangzhou Haixing wind project. For the projects receiving a tariff of 0.61 RMB/kWh located in wind resource area IV, which has a lesser wind resource, and therefore receives higher tariff. These tariffs are awarded for the first 30,000 full operating hours, after which the local average tariff - based on a mixture of power plants including fossil fuel power plants - shall be applied. The FSR of the proposed project was completed in December 2007 and it can be concluded that these two notifications were the most recent official tariff documents available at that time. By reviewing the FSR, it was found that the proposed tariff of 0.54 RMB/kWh (incl. VAT) had

[1] According to the "Information on the policy of wind farm on-grid tariff" (Fa Gai Jia Ge 2009(1906)), the on-grid tariff of wind farm projects will be approved dependent on the wind resource area where the wind farm project is located.

been applied for the whole lifetime of the project. Considering that the tariff after 30,000 operation hours (i.e. the average local in-grid tariff) is less than the proposed tariff, the application of the proposed tariff of 0.54 RMB/kWh (incl. VAT) in the FSR is considered conservative.

In addition, tariffs of wind farm projects in the **same wind resource area II** (i.e. including Chengde City and Zhangjiakou City) in Hebei province have been maintained at the same level of 0.54 RMB/kWh based on the subsequent tariff notification issued by NDRC on 23 July 2008 (Fa Gai Jia Ge [2008]1876). Aproved tariffs of wind farm projects in the same region had therefore been stable between 2007 and the time of investment decision, 20 March 2009, and the tariff of 0.54 RMB/kWh used for investment analysis in the FSR/PDD is thus considered appropriate.

After the investment decision on 20 March 2009, it was confirmed again by the tariff notification issued by NDRC on 20 July 2009 (Fa Gai Jia Ge [2009]1906) that the tariffs of wind farm projects in the **same wind resource area II** (i.e. Chengde City and Zhangjiakou City) in Hebei province have been maintained at the same level of 0.54 RMB/kWh. The Notification with ref. [2009]1906 also regulates that unless a new notification is issued, the tariffs for different wind resource areas will be adopted in tariff approvals of all newly constructed wind farm projects after August 1st 2009, except for offshore wind projects. Furthermore, the tariff notification issued by Price Bureau of Hebei province in December 2009 (Ji Jia Guan [2009]108), which was based on the NDRC notification (Fa Gai Jia Ge [2009]1906), also indicated 0.54 RMB/kWh (Inc. VAT) as tariff approved for the project.

The validation team therefore concluded that the applied tariff of 0.54RMB/kWh for investment analysis in the FSR/PDD is appropriate, conservative and is considered to be in line with para. 111 of the VVM.

B. whether the investor's incentives have been reduced due to the reduction in tariffs over the years or whether the net return has been unaffected due to changes of other factors such as investment costs.

Referring to the Information Note on the implementation of E+/E- (EB 53 Annex 32), the validating team is requested to assess the suitability of the tariffs in these cases by:

(a) Determining whether there have been any changes in the policies which impact the tariff applicable to the project activity, after 11 December 1997 or after 11 November 2001;

(b) Quantitatively assess for each policy change the impact of the policy change on the comparative advantage of less carbon intensive sources of electricity; and/or

(c) In addition if the lower tariff cannot be fully attributed to policy changes in (b) above, the DOE is expected to explain the differences in tariffs in a quantitative manner with reference to other factors.

(a) ***Determining whether there have been any changes in the policies which impact the tariff applicable to the project activity, after 11 December 1997 or after 11 November 2001.***

Based on the China Wind Power Report 2007, published by China Environmental Science Press, the Chinese grid-connected wind power sector has experienced three development phases, which include the experimentation and demonstration (pilot) stage

(1986-1993), initial industrialisation stage (1994-2003) and scale-up and wind turbines localization stage (from 2003).

Wind farms constructed in the experimentation and demonstration (pilot) stage (1986-1993) are mainly tested and demonstrated for wind power development.

In the initial industrialisation stage (1994-2003), China started to develop domestic equipment manufacturing to promote wind power development. The Chengfeng Plan and Double Increase Plan were introduced as special measures to encourage domestic manufacturing of equipments. The implementation of these plans and programmes played an important role in cultivating China's embryonic-stage wind industry. Due to wind technological barriers and policy uncertainty, the Chinese wind industry had been developing slowly until 2003 when the annual new installed capacity was still below 100MW.

By the end of 2003, total installed capacity in China was only 568.4 MW and a wide range of tariffs had been adopted. Based on case by case basis and project developers' negotiation with the local governments, tariffs had been granted at higher level that that for conventional power sources.

Policies issued for the Chinese renewable energy industry since 2006 are listed below:

- Law of the People's Republic of China on Renewable Energies in 2006.
- The Tentative Management Measures for Price and Sharing of Expenses for Electricity Generation from Renewable Energy were issued by the Chinese NDRC on 5 Jan. 2006 aiming to stimulate the development of renewable power project including wind power project. It is stated that the tariff of wind power should be guided by the government and adjusted on the basis of experience from the concession programme.
- In Nov. 2006, the Notice for Stimulate Wind Power Development was issued by NDRC, (Fa Gai Jia Ge [2006]2535) to regulating the industrialization of wind power project in order to enhance the evaluation of wind source and encourage equipment manufacturing for the wind power sector.
- In Jan. 2007, China issued Temporary Measures of Tariff Additional Income regulation of Renewable Energy Power, to guarantee that tariff for renewable energy project can be implemented smoothly.

- In Mar. 2007, the State Council issued new tax regulation [No.63] with a decrease of the income tax rate for wind projects from 33% to 25%.
- In July 2009, National Development and Reform Commission (NDRC) released the "Circular on Improving Wind Power On-grid Tariff Policy" (Fagaijiage [2009]1906), which clarified the policy for wind farm tariffs. Four different wind resource regions were defined based on wind resource status and project construction conditions with corresponding guiding tariffs.

It is only the Tentative Management Measures for Price and Sharing of Expenses for Electricity Generation from Renewable Energy, Temporary Measures of Tariff Additional Income regulation of Renewable Energy and Circular on Improving Wind Power On-grid Tariff Policy which are relevant policies for tariff till now.

Regarding the renewable energy tariff, it is stated in the Tentative Management Measures for Price and Sharing of Expenses for Electricity Generation from Renewable Energy issued by China NDRC on 5 Jan. 2006, the tariff difference between the electricity generated with renewable energy and that with coal favouring renewable energy is shared by the nationwide electricity sales of the grids at the provincial and higher level.(Clause 5); the on-grid tariff of wind farms is regulated by the government as the guiding tariff.

The Temporary Measures of Tariff Additional Income Regulation of Renewable Energy issued on 26 Jan. 2007 further regulated how the tariff difference favouring renewable energy is shared by the nationwide electricity sales.

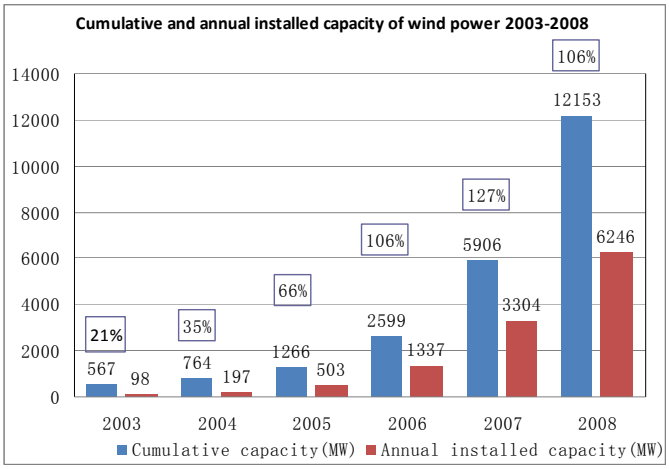
In addition, it was stated in the Information on the policy of wind farm on-grid tariff" (Fa Gai Jia Ge 2009(1906)) that four wind resource regions are to be determined over the whole country and a guiding tariff for each region is to be determined as 0.51, 0.54, 0.58 and 0.61RMB/kWh (VAT incl.) for wind recourse area I/II/III/IV, respectively.

Since policies for renewable energy were uncertain before 2003 and the above stated three policies regarding the tariff of renewable energy were all issued after 11 November 2001(or 11 December 1997), there had been no exact policy for the wind power prior to 11 November 2001 and wind power projects had received higher tariffs or other preferential treatment in comparison to conventional power generation sources.

Under the implementation of early government initiatives and later policies listed above, the Chinese wind industry has experienced rapid growth. The annual growth of installed

capacity of wind power had been over 100% for three consecutive years since 2006[2]. Figure 1 below shows the cumulative and annual installed capacity of wind power in China over the last few years. Such rapid expansion of the market is concrete evidence that the incentives for investment in renewable energy are not reduced.

Figure 1 Cumulative and annual installed capacity of wind power 2003-2007



Source: China wind power report 2008, by Professor Li Junfeng, Shi Pengfei, etc., China environmental press.

(b) How is the suitability of the tariff applied in the investment analysis determined, assessing for each policy change the impact of the policy change on the comparative advantage of less carbon intensive sources of electricity and/or if the lower tariff cannot be fully attributed to policy changes, explaining the differences in tariffs in a quantitative manner with reference to other factors? (i.e. whether the incentives of investor has been reduced due to the reduction in tariffs over the years or whether the net return has been unaffected due to other factor changes such as investment costs)

As stated above, there were no clear and stable national and sectoral policies for the wind power industry prior to 11 November 2001.

The trend of the approved tariffs of all the wind farms in Hebei province

Since the power sector reform in March 2002, a total of 43 wind farm projects in Hebei province connected to the NCPG, including three concessional projects. The list of all the wind farm projects in Hebei and their tariffs are listed in Table 1 below. The Hebei province has covered two distinct wind resource areas, Wind Resource Area II, i.e. Chengde City and Zhangjiakou City, and Wind Resource Area IV, i.e. other regions of Hebei. According to the "Information on the policy of wind farm on-grid tariff" (Fa Gai Jia

[2] The statistics for 2009 installed capacity show that this feat is extended for a fourth year.

Ge 2009(1906)), the on-grid tariff of wind farm projects will be approved dependent on the wind resource area where the wind farm project is located. Therefore, the projects in Wind Resource Area IV of Hebei should not be considered in the tariff analysis since the proposed project is not located in Wind Resource Area IV.

Table 1: The actual approved electricity tariff of all wind farms in Hebei Province

No	Time	Project	Feed-in tariff (RMB/kWh, incl VAT)	Reference	CDM
Prior to the Power Sector Reform (March 2002)					
	Construction finished in 1998[3]	Zhangbei Changcheng 9MW wind farm	0.65	JiJiaGe [2002]242 issued by NDRC in Feb 2002[4]	No carbon fund.
	construction finished in 2001[5]	Chengde Hongsong 3.6MW wind farm	0.65		
The Electric Power Sector Reform Programme (March 2002): the projects in north of Hebei (Wind Resource Area II)					
1	2005.11	Chengde Hongsong wind farm	0.6	Ji Jia Guan Zi [2006]57 issued by Price Bureau of Hebei province in Jun 2006	VER
2	2005.7	Guohua Shangyi Manjing wind farm	0.6		VER
3	2006.11	Hebei Shangyi Manjing East Wind Farm	0.6		Ref No.0842
4	2006.5	Zhangbei Manjing Wind Farm	0.6		Ref No.0233
5	2006.12	Zhangbei Mijiagou 49.5 MW Wind Farm	0.6		Ref No.0845
6	2006.1	Hebei Kangbao Wolongtushan 30 MW Wind farm	0.6		Ref No.0878
7	2007	CECIC HKC Danjinghe Wind Farm	0.5006	Fa Gai neng yuan[2007]654 issued by NDRC in Jun 2007	Ref No.2170
8	2007.8	Guyuan 30.6MW Wind farm	0.54	Fa Gai Jia Ge [2007]1260 issued by NDRC in Jun 2007	Ref No.0873
9	2005.11	Hebei Chengde Songshan Wind farm	0.54		Ref No.0877
10	2007.12	Hebei Chongli Qingsanying 49.3MW Wind Farm	0.54		Ref No.2140
11	after 2007.12.31	Hebei Shirenshan Wind farm	0.54		Ref No.2067
12		Hebei Wanquan Yulong Wind	0.54		Ref No.2205

3 http://www.wp-forum.cn/ArticleShow.asp?nid=2713E111-173F-4C22-A6FF-CEB7719F4ABB

4 http://www.fjjg.gov.cn/fjwjj/jgfw/gjjgzc/webinfo/2002/02/1187774415686122.htm

5 http://hbrb.hebnews.cn/20050617/ca503582.htm

		farm			
13		Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project	0.54		Ref No.2088
14	2007.10	Hebei Shangyi Manjing West Wind Farm	0.54	Fa Gai Jia Ge [2007]3303 issued by NDRC in Dec 2007	Ref No.2040
15	after 2007.12.31	Hebei Weichang Zhangjiawan Wind farm	0.54		under validation
16		Hebei Weichang Longyuan Construction Investment Shanwanzi Wind farm	0.54		Ref No.2870
17	2007	Hebei Shangyi Qijiashan Wind Farm	0.5006	Fa Gai neng yuan [2008]1812issued by NDRC in July 2008	Ref No.1854
18	2007	Hebei Chengde Yudaokou	0.551	NDRC[6]	Ref No.3467
19	2007.12	CECIC Zhangbei Dayangzhuang Wind Farm	0.54	Fa Gai Jia Ge [2008]1876 issued by NDRC in July 2008	Ref No.1855
20	after 2007.12.31	Hebei Huifeng	0.54	Ji Jia Guan [2009]69 issued by Price Bureau of Hebei province in Aug 2009 based on the Fagaijiage [2009]1906	Ref No. 1873
21		Hebei Fengze	0.54		Ref No. 1715
22		Hebei Chongli Qingsanying Phase II	0.54		under validation
23		Hebei Yuxian Kongzhongcaoyuan phase II	0.54		under validation
24		Hebei Kangbao Sanxiatian	0.54		under validation
25		Hebei Guyuan Wuhuaping	0.54		under validation
26		CECIC Zhangbei phase IIII	0.54		Ref No. 1895
27		Longyuan Baimiaotan	0.54		under validation
28		Longyuan Shangyi Shirenfeng	0.54		under validation
29		Guohua Hebei Chicheng	0.54		under validation
30		Zhangbei Bode Longxiaoertai wind farm	0.54		applying CDM

[6] http://www.hebei.gov.cn/article/20080201/930352.htm

31		Guohua Shangyi Manjing North	0.54		Ref No. 1792
32		Huarun Weichang Yudaokou	0.54		Ref No. 2865
33		Huarun Yueliangshan	0.54		Ref No 1464
34		Huarun Dongbaliang	0.54		Ref No 1423
35		Hebei Zhuzixia	0.54		under validation
36		Hebei Guangfayong	0.54		under validation
37		Hebei Dehe Zhangbei phase 1	0.54	Ji Jia Guan [2009]98 issued by Price Bureau of Hebei province in November 2009 according to the NDRC Fagaijiage [2009]1906[7]	under validation
38		Hebei Chengde Peifeng	0.54	Ji Jia Guan [2009]108 issued by Price Bureau of Hebei province in December 2009 according to the NDRC Fagaijiage [2009]1906	3079
39		Hebei Chengde Runfeng	0.54		under validation
The projects in south of Hebei (Wind Resource Area IV)*					
40	after 2007.12.31	Hebei Haixing 49.5MW Wind Farm	0.61	Fa Gai Jia Ge [2007]1260 issued by NDRC in Jun 2007	Ref No.2007
41	after 2007.12.31	Huaneng Leting	0.61	Ji Jia Guan [2009]69 issued by Price Bureau of Hebei province In Aug 2009 based on the Fagaijiage [2009]1906	Ref No. 3160
42		Guohua Huahua phase I	0.61		Ref No. 2125
43		Guohua Huahua phase II	0.61	Ji Jia Guan [2010] 4 issued by Price Bureau of Hebei province In Jan	Ref No.3021

[7] http://www.hebwj.gov.cn/

				2010 based on the Fagaijiage [2009]1906	

From the above table it is confirmed that five groups of tariff are included for the wind projects in Hebei province as follow:

Group 1: 0.65 RMB/kWh was excluded because it was not be comparable to the tariff used for the proposed project.

Before the Electric Power Sector Reform Programme in March 2002, there were two experimental, small scale wind farms constructed with small turbines, Zhangbei Changcheng 9 MW Wind Farm (13*300kW+9*600kW+2*275kW) [8] and Chengde Hongsong 3.6MW Wind Farm (6*600kW) [9]. The approval of the tariff have been for these two projects was dated February 2002[10], but the Zhangbei Changcheng wind farm first started to operate in 1998 and the Chengde Hongsong project started operation in 2001. Zhangbei Changcheng 9MW wind farm phase I (4.5MW) received foreign aid from the Danish government, phase II was a Double Increase project which was supported by a grant from the Chinese government. Chengde Hongsong 3.6MW wind farm project introduced experimental 600kW wind turbines which were produced by Goldwind Science & Technology Ltd, the first domestic wind turbine supplier. The objective of these two projects was to stimulate wind power development in China and stimulate the local manufacture of components, so these two early non-commercial projects received a high tariff of 0.65 RMB/kWh (incl. VAT) approved by the provincial administration bureau. The Zhangbei project received ODA from Denmark and government grants from China, and is less than one-fifth of the size of the proposed project, and therefore is not comparable. The Chengde project used experimental equipment, and is less than one-tenth the size of the proposed project, and therefore is not comparable. Both projects were implemented before the Power Sector Reform when the electricity market was not competitive and wind technology not mature in China. Therefore, the tariffs awarded to these two projects can not be compared to the tariff awarded to the proposed project.

Group 2: 0.61RMB/kWh for four projects (40-43) are located in Wind Resource Area IV of Hebei province, which has a lesser wind resource, and therefore receives higher tariffs to compensate. As stated above the “Information on the policy of wind farm on-grid tariff” (Fa Gai Jia Ge 2009(1906)) clarified that the on-grid tariff of wind farm projects depends on the wind resource area where the wind farm project is located. Therefore, the tariffs

8 http://www.wp-forum.cn/ArticleShow.asp?nid=2713E111-173F-4C22-A6FF-CEB7719F4ABB

9 http://hbrb.hebnews.cn/20050617/ca503582.htm

10 The approval letter of Zhangbei Changcheng wind farm, Jijiawai (1995)No1021

The approval letter of Chengde Hongsong wind farm, Jijiaziyuan (2000)No1028

awarded to the project in Wind Resource Area IV of Hebei are not comparable to the proposed project, which is not located in Wind Resource Area IV of Hebei.

Group 3:0.5006RMB/kWh for two projects (7,17) and 0.551 RMB/kWh for Hebei Chengde Yudaokou (18) are excluded in the tariff analysis of the proposed project.

CECIC HKC Danjinghe Wind Farm (No.7) and Hebei Shangyi Qijiashan Wind Farm(No 17) and Hebei Chengde Yudaokou wind farm (No.18) were large scale concession projects (more than 150MW). The tariff was determined via a tendering process[11]. Since the proposed project is not tendering project, thus the tariff of 0.5006RMB/kWh and 0.551 RMB/kWh are excluded in the tariff analysis of the proposed project.

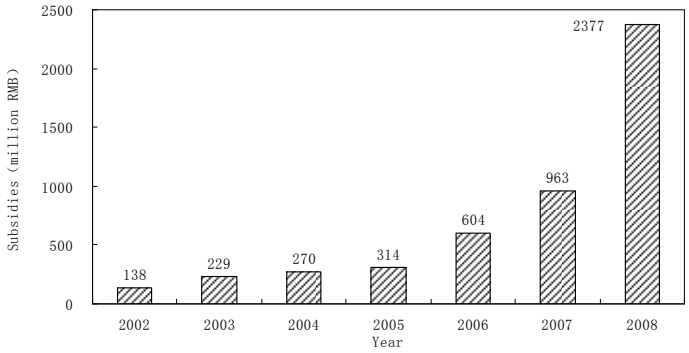
Group 4:0.60RMB/kWh for six projects (1-6) which is approved by Price Bureau of Hebei province in June 2006 and located in the wind resource area II (Chengde and Zhangjiakou).

Group 5:0.54RMB/kWh for other projects including the proposed project is approved by NDRC from June 2007 and located in the wind resource area II (Chengde and Zhangjiakou). The tariff of 0.54RMB/kWh was maintained stable since 2007.

It can be concluded by the validation team that the highest approved tariffs for wind farm projects which are located in same wind resource area II in Hebei (Chengde city and Zhangjikou city regions) should be 0.60 RMB/kWh, which was awarded to the first six projects implemented after the Power Sector Reform in 2002.

The validation team also verified that the Chinese government has been supportive of the development of the wind power industry and provides feed in tariffs for wind farm projects that are significantly higher than the prices that thermal power plant receive. Total subsidies provided to wind farms in China have increased dramatically, from 138 million RMB in 2002 to 2.377 billion RMB in 2008, as shown in Figure 2.

Figure 2 Subsidies provided to the wind industry in China, 2002-2008



Source: Study report of wind and feed in tariff of Chinese project, by Sino-Danish wind energy development program, and Chinese Renewable Energy Industries Association

[11] http://www.cwpc.cn/cwpc/en/node/4

(CREIA), November 2009.

In conclusion, no consistent and effective policies were in place as of 11 November 2001 and the tariffs that were awarded at the time were only awarded on a case by case basis with no security or certainty for project developers. Only after the Power Sector Reform of 2002 did the wind sector start to grow substantially, in particular during the development of and after the entry into force of the Renewable Energy Law on 1 January 2006. The support from the Chinese government for feed in tariffs has increased by 20-fold which has led to rapid growth of installed capacity. The rapid growth of the sector provides clear evidence that the economic incentive has not been reduced for the developer.

(c) Assessing the impact of the each policy change on the comparative advantage of less carbon intensive sources of electricity and/or if the lower tariff cannot be fully attributed to policy changes, explaining the differences in tariffs in a quantitative manner with reference to other factors

It is not possible for validation team to quantitatively assess the impact of the Chinese government's policy changes for the development of a domestic wind power industry due to no availability of data.

The validation team clarified the impact of the tariff on the incentives to the project owner as follows:

Firstly, according to the tariff trend analysis above, the highest approved tariffs for wind farm projects located in same wind resource area II of Hebei (Chengde city and Zhangjikou city) should be 0.60 RMB/kWh after the Power Sector Reform in 2002. The financial data of the projects with highest tariff of 0.60 RMB /kWh and the proposed project is summarized in below.

Table 2 financial data of the projects with highest tariff and the proposed project

	CDM Ref No	*Project*	*approved tariff (yuan/kWh)*	*annual o&m costs per MWh*	*Annual net electricity*	*Load factor*	*static investment (million yuan)*	*installed capacity (MW)*	*O&M cost (million yuan)*	*O&M cost per KW*	*Income tax*	*investment /KW*	*irr in PDD*
1	VER	Chengde Hongsong wind farm project	0.6	NA									
2	VER	Guohua Shangyi Manjing wind farm	0.6										
3	0842	Hebei Shangyi Manjing East Wind Farm	0.6	187	116820	26.94%	468.66	49.5	21.83	441	33.00%	9468	7.04%
4	0233	Zhangbei Manjing Wind Farm	0.6	38	108000	27.40%	NA	45	4.1	91	33.00%	NA	7.39%
5	0845	Zhangbei Mijiagou 49.5 MW Wind Farm	0.6	95	105800	24.40%	481.42	49.5	10.1	204	33.00%	9726	6.80%
6	0878	Hebei Kangbao Wolongtushan 30 MW Wind farm	0.6	97	57946	22.05%	275.09	30	5.62	187	33.00%	9170	7.47%
		average value	0.6	104		25.20%		43.5			33.00%	9454	7.18%
		the proposed project	0.54	106	115560	26.65%	489.55	49.5	12.21	247	25.00%	9890	6.12%

Validation team has calculated reference tariff using two steps below to quantitatively demonstrate whether the net return to the investor has been reduced or not, two calculations were made as follows:

1) *Calculate the hypothetical IRR of the project, facing the same situation as the projects with the above stated highest tariffs;*

By introducing the average financial data from in Table 2 (i.e. the tariff, the specific investment cost per kW, annual O&M cost per MWh, load factor, and income tax.) into the IRR spreadsheet of the proposed project, the hypothetical IRR of the project facing the same situation as the projects with the highest approved tariffs is calculated as 7.03%, which is still lower than the benchmark of 8% (see attached I_cell “using average value”).

2) Calculate the reference highest tariff at which that make the IRR of the proposed project equals to the hypothetical IRR;

The hypothetical IRR is calculated as 7.03%. According to the calculation in the spreadsheet of proposed project, when tariff reaches 0.5845 RMB/kWh (Incl. VAT), the IRR can reach to the hypothetical IRR of 7.03% (see attached I_cell “reference tariff”). This reference tariff is 2.5% lower than the average highest tariff of 0.60 RMB/kWh (Incl. VAT) in Table 2, shows that the proposed project is still additional.

Secondly even if the highest tariff of 0.60 RMB/kWh was used in the investment analysis in whole project life, the IRR is calculated as 7.76%, lower than the benchmark of 8%. (see attached I-cell “one phase tariff 0.60”)

Conclusion

It is shown above that the relevant highest historical tariff for the proposed project activity is 0.60 RMB/kWh. Applying this tariff directly, the proposed project activity does not reach the benchmark 8% and therefore is additional.

Using the average financial parameters of the projects receiving the highest tariff which are located in the wind resource area same as the proposed project, a reference tariff can be calculated as 0.5845 RMB/kWh, at which level the proposed project activity does not reach the benchmark 8%.

Therefore, the validation team can conclude that the tariff used in the FSR and PDD is appropriate and conservative and the incentives of investors have not been reduced due to the reduction in tariffs.