

UNFCCC Secretariat
Martin-Luther –King-Strasse 8
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Germany

Beijing, China, 2009-11-27

Response to request for review
Liaoning Beipiao Beitazi I Wind Farm Project (2830)

Dear Members of the CDM Executive Board,

We would like to provide below initial response to the request for review raised by three Board members concerning TUV Rheinland's request for registration of the project activity 2830 "Liaoning Beipiao Beitazi I Wind Farm Project":

Questions:

1. The DOE is requested to explain how it has validated that the project is additional when a tariff of 0.61 RMB/kWh for the first 30,000 full-load hours and 0.3621 RMB/kWh for the subsequent operational hours are used, considering that the project IRR crosses the benchmark when these tariffs are applied to the IRR calculation spreadsheet submitted.

PP's response:

The project IRR is 7.18%, which is lower than the benchmark (8%), when a tariff of 0.61 RMB/kWh for the first 30,000 full-load hours and 0.3621 RMB/kWh for the subsequent operational hours are used. The calculation has been provided to the verifier.

2. Further clarification is required how the DOE has validated the identification of similar projects in the common practice analysis, in particular, the upper limit for the capacity range selected.

PP's response:

The pp selects all the wind farm projects in Liaoning Province, which are listed in the *China Wind Farm Installed Capacity Statistic in 2007* by Shi Pengfei to analyze common practice. These projects consist of the built and being built projects until 2007 and the PP does not consider the upper limit for the capacity while selecting the projects. See details in the following table 1. The wind farm projects which have been published on the UNFCCC website for global stakeholder consultation have been added in the revised PDD.

Table 1 Built and Being built Wind farm projects in Liaoning Province until 2007

| Title | Installed Capacity | The date of starting | Note |
|-------|--------------------|----------------------|------|
|-------|--------------------|----------------------|------|

| | | production | |
|---------------------------------|---------|------------|---|
| Liaoning Dalian Hengshan | 7.4MW | 1993 | RMB 0.9/kWh (Incl. VAT) ¹ |
| Liaoning Wafangdian Donggang | 22.45MW | 1994 | RMB 0.9154/kWh (Incl. VAT) ¹ |
| Liaoning Yuji Jinzhou | 3.75MW | 1999 | Small Pilot project |
| Liaoning Xianrendao | 33.66MW | 1999 | RMB 1.00/kWh (Incl. VAT) ² |
| Liaoning Dandong Haiyanghong | 21MW | 2000 | RMB 1.00/kWh (Incl. VAT) ³ |
| Liaoning Changhai Zhangzidao | 3.0MW | 2002 | Small Pilot project supported by National debt ⁴ |
| Liaoning Changhai Xiaochangshan | 3.6MW | 2002 | Small Pilot project supported by National debt ⁴ |
| Liaoning Faku Sijiazi | 9.6MW | 2002 | RMB 0.83/kWh ⁵ |
| Liaoning Changhai Dachangshan | 3.6MW | 2003 | Small Pilot project supported by National debt ⁴ |
| Liaoning Kangping | 24.65MW | 2003 | Registered ⁶ |
| Liaoning Zhangwu | 24.65MW | 2003 | Registered ⁷ |
| Liaoning Huanren Pulepu | 24.65MW | 2006 | Registered ⁸ |
| Liaoning Changtu | 49.5MW | 2006 | Registered ⁹ |
| Liaoning Xingcheng | 49.5MW | 2006 | Registered ¹⁰ |
| Liaoning Diaobingshan | 49.5MW | 2007 | Registered ¹¹ |
| Liaoning Faku Wanghaisi East | 22.1MW | 2007 | At validation ¹² |

¹ <http://www.fenglifadian.com/fengdianzhishi/281GHFFD.html>

² <http://www.wwls.cn/law/32361.html>

³ <http://www.wwls.cn/law/32341.html>

⁴ <http://finance.people.com.cn/GB/1037/6036296.html>

⁵ <http://finance.people.com.cn/GB/1038/59942/59949/6045289.html>

⁶ <http://cdm.unfccc.int/Projects/DB/DNV-CUK1153828094.42/view>

⁷ <http://cdm.unfccc.int/Projects/DB/DNV-CUK1154525743.09/view>

⁸ <http://cdm.unfccc.int/Projects/DB/DNV-CUK1199956532.2/view>

⁹ <http://cdm.unfccc.int/Projects/DB/DNV-CUK1169618157.26/view>

¹⁰ <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1195741055.25/view>

¹¹ <http://cdm.unfccc.int/Projects/DB/DNV-CUK1218622278.09/view>

| | | | |
|-------------------------------------|---------|------|-----------------------------|
| Liaoning Shenyang Faku Wanghaisi | 20.4MW | 2007 | At validation ¹³ |
| Liaoning Changtu Quantou | 49.3MW | 2007 | At validation ¹⁴ |
| Liaoning Fuxin Gaoshanzi | 100.5MW | 2008 | At validation ¹⁵ |

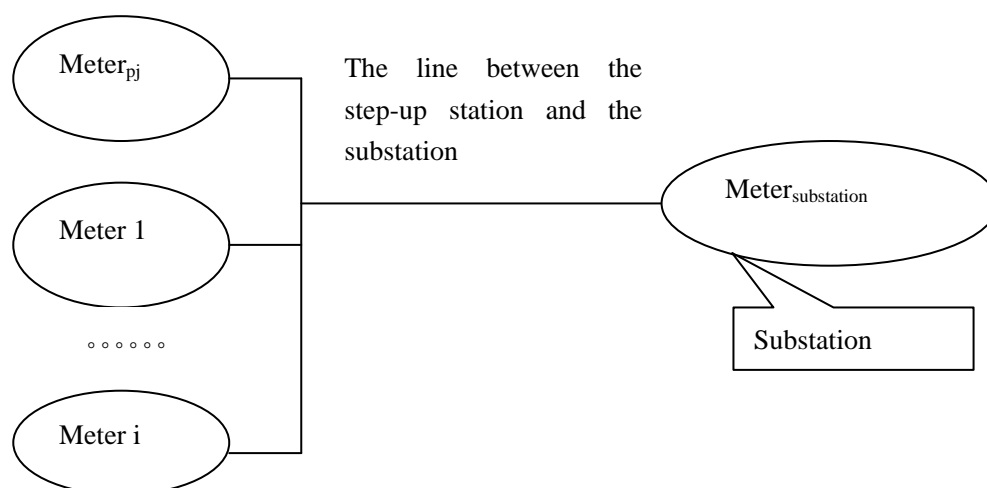
3. The DOE is requested to further clarify how the line losses between the step-up station and the substation will be monitored and to provide a separate table under section B.7.1 of the PDD.

PP's response:

As described in the PDD, the grid company required the project owner to share the line losses between the step-up station and the substation, and the project owner agreed to share it.

According to the Plan of the grid company, there may be wind farms connecting to the NECG through the same line in the future. Therefore, the process of monitoring the line losses between the step-up station and the substation is described as follows, which has been agreed by the grid company and the project owner.

Metering diagram



Meter_{pj} is the meter installed at the 66kV step-up station of the proposed project;
Meter i (i=1,2, ..., i) is installed at the project i and measured the electricity supplied by the project i to the NECG;

Project i is the project used the same transmission line to connect to the NECG.

Meter_{substation} is installed at the substation to measure the electricity supplied to the grid through the same transmission line.

¹² <http://cdm.unfccc.int/Projects/Validation/DB/ZSH8OQVCIFJZEGCZ03FM7TYPYMQC1N/view.html>

¹³ <http://cdm.unfccc.int/Projects/Validation/DB/R9XI9G6HV6GG3CS9RBSHBHLXGEZ7AO/view.html>

¹⁴ <http://cdm.unfccc.int/Projects/Validation/DB/287INEMJOF3XRG05RHSSUI87OCKMMB/view.html>

¹⁵ <http://cdm.unfccc.int/Projects/Validation/DB/3YQQ1BZ8PGNK11YAB4UE9OCKZK0CWM/view.html>

Then the line losses shared by the project

$$L_{pj} = (EG_{pj \text{ to grid}} + EG_1 + \dots + EG_i - EG_{\text{substation}}) * EG_{pj \text{ to grid}} / (EG_{pj \text{ to grid}} + EG_1 + \dots + EG_i)$$

Where:

L_{pj} is the line losses shared by the proposed project;

$EG_{pj \text{ to grid}}$ is the electricity supplied by the proposed project to the NECG;

EG_i is the electricity supplied by the project i to the NECG through the same transmission line and measured by the Meter i;

$EG_{\text{substation}}$ is the electricity supplied to the grid through the same transmission line and recorded by the meter installed at the substation.

So as far, there is no project connect to the NECG through the same transmission line.

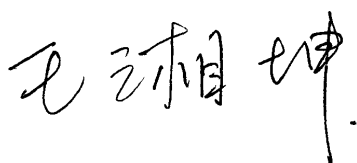
Therefore, the $L_{pj} = EG_{pj \text{ to grid}} - EG_{\text{substation}}$

The grid company supplies the value of $EG_{\text{substation}}$ to the project owner to calculate the line losses between the step-up station and the substation.

If there are other projects connecting to the NECG through the same line in the future, the grid company will supply the value of EG_i and the value of $EG_{\text{substation}}$ to calculate the line losses according to the above formula.

The above description has been added in the B.7 of the PDD.

Yours faithfully



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