# Validation Opinion on Changes from the Project Activity as Described in the Registered PDD and Revision in Monitoring Plan

Report Number: BVC/CHINA/8207/08/2011, version 02

The validation of the changes from the registered PDD and revision to the monitoring plan is for the project activity with the following details:

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| **Project reference** | UNFCCC 00001366 CDMP |
| **Title of the project activity** | Biomass generation project, in Sheyang county, Jiangsu province, P.R. China |
| **Methodology** | ACM0006 Version 04 |
| **Date of registration** | 01/04/2008 |
| **Verification period during which change is requested** | From 01/04/2008 onwards |
| **Type of the request** | ☑ Notification of changes from project activity as described in the registered PDD<br>☐ Request for approval of changes from project activity as described in the registered PDD |
| | Revision to the monitoring plan for the project activity |

| **Party** | **Project Participant** |
|---|---|
| China(Host) | National Bio Energy Co., Ltd |
| United Kingdom of Great Britain and Northern Ireland | Climate Change Capital Carbon Managed Account Limited; Climate Change Capital Carbon Fund II s.à r.l. |
| Switzerland | Climate Change Capital Carbon Managed Account Limited |

| **Validation Team** | |
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| Team leader | Cheng Linglin |
| Team member/s | Tony Li Xingtong |
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| **Work Approved By** | Flavio Gomes |

## Description of the changes as compared to the description in the registered PDD

*Biomass generation project, in Sheyang county, Jiangsu province, P.R. China* (hereafter referred to as "**the Project**") was registered on 01/04/2008 under CDM methodology ACM0006 Version 04.
(Refer to: http://cdm.unfccc.int/Projects/DB/TUEV-SUED1190986543.01/view)

During the onsite visit for the 1st periodic verification of the Project on 21/02/2011, Bureau Veritas Certification noticed that:

- The type of turbine and generator, and the capacity of the Project are not consistent with the description in the registered PDD.
- Other types of biomass residue than the defined biomass residue in the registered PDD have been utilized in the Project.
- Annual operation hours and biomass residue consumption have been increased than estimated in the registered PDD.

The detail changes as compared to the registered PDD are summarized in the following table.

**Table 1. The Main changes of the Project**

| Changes Occurred | | Registered PDD or the contracts before registration | Revised PDD |
|---|---|---|---|
| **Model of Major Equipments** | **Steam turbine** | N30-8.83 | N30-8.83-2 |
| | **Generator** | QF-25 | QF-30-2 |
| **Installed Capacity** | | 25MW | 30MW |
| **Biomass residue type** | | Cotton straw | Wood residues, cotton straw, cole straw, maize straw, rice straw, reed, wheat straw |
| **Annual operation Hours** | | 5,500 hours | 7,050 hours |
| **Annual biomass residue consumption** | | 123,100 tons | 268,859 tons |

Bureau Veritas Certification has assessed the identified changes and found that the changes are applicable to the situation of paragraph 7(a) of "Procedures for notifying and requesting approval of changes from the project activity as described in the registered project design

document", which says "the project has never been implemented in accordance with description in the registered PDD". This issue is applicable for the whole crediting period from 01/04/2008 onwards.

## Assessment of the changes

When the changes occurred

The new turbine and generator has been contracted in May.2007 and the change of turbine and generator happened since they have been installed in July.2007.

The other changes occurred after the commissioning since 03/09/2007, after the onsite visit of validation of the Project.

The reasons for these changes taking place

- **The type of turbine and generator, and the capacity of the Project are not consistent with the description in the registered PDD.**

  The Project was put into trial operation in May.2007, but it has failed to pass the debugging due to the quality problems of 25MW Power Generation Unit (PGU) [5] [8]. Subsequently, the PP and Wuhan Steam Turbine Group Corporation signed the *Contract of replace steam turbine generator* in May.2007 [8], and then replaced the 25MW PGU to a new unit of capacity 30MW in July.2007.

- **Other types of biomass residue than the defined biomass residue in the registered PDD have been utilized in the Project.**

  In the project design stage, the PP was not able to confirm the stable fuel supply besides cotton straw. Therefore, in the registered PDD, only the regional major crop, cotton stalk, had been identified as the main biomass residue.

  During the actual implementation stage, PP found that wood residues, cole straw, maize straw, rice straw, reed, wheat straw also have stable and abundance sources, which has been crosschecked with regional biomass resource statistical reports issued by Yancheng Municipal Bureau of Statistics [15]. Therefore, the biomass residues have been utilized for the Project, which have been confirmed in the supplementary FSR [5] issued by Shandong Electric Power Engineering Consulting Institute Corp. Ltd. in Feb.2011.

  By crosschecking the plant daily log [6] and supplementary FSR [5] with the revised PDD, Bureau Veritas Certification is able to confirm that wood residues, cotton straw, cole straw, maize straw, rice straw, reed and wheat straw have been utilized in the Project.

- **Annual operation hour and plant load factor (PLF) have been increased than estimated in the registered PDD.**

  The FSR has been finalized in Mar.2006, when the biomass residue fired power plant

was rare in the region and was still in the starting stage in China. The PP clarified that conservative operation hours of 5,500 have been estimated in the FSR stage due to lack of technical experience for biomass power generation project. After operation of the Project, with the development of biomass power generation project in China, the PP gained more experience to operate the plant well, such as enhancing daily operation management and equipments maintenance. Therefore, the actual operation hours and PLF are higher than the designed values in the FSR. Local abundant biomass residues resource provides stable and plenty fuel for the Project, which is also an important reason for the higher operation hours and PLF.

As per actual power generation in 2009 and 2010 [6], the annual operation hour of the Project has been revised to 7050 hours, the suitability of the parameter change has been confirmed by Bureau Veritas Certification as per the supplementary FSR [5] issued by Shandong Electric Power Engineering Consulting Institute Corp. Ltd. in Feb.2011.

- **Annual biomass residue consumption has been increased than estimated in the registered PDD.**

During the actual implementation stage, PP found that some other local biomass residues also have stable and abundance sources, especially the wood residues. In actual implementation, besides cotton stalk, other new six types of biomass residues were also used as fuel for the Project. The weighted average moisture content of 30.64% is much higher of the value of 10% for cotton straw in the registered PDD. Even the weighted average NCV (dry base) of the seven biomass residues actually used is about 5% higher the NCV of cotton straw in the PDD, with the higher PLF, higher power generation quantity and lower weighted average NCV, the total biomass residues consumption is certainly increased to be much larger consequently.

- ✓ Based on the operation statistics [6] and Biomass NCV and moisture test reports [11] listed in the table below, Bureau Veritas Ceritifcation has calculated the electiricity generation efficiency has changed from 25.5% of the registered PDD to 22.3% of revised PDD, which is caused by the much higher moisture content of the biomass.
- ✓ The Supplementary FSR issued by the Hebei Electric Power Design& Research Institute in Apr.2010 has confirmed the suitability of the parameter changes [6].

Therefore, Bureau Veritas Ceritifcation can conclude the annual biomass residue consumption has been increased than estimated in the registered PDD reasonablely.

| Items | Annual biomass consumption (wet base) (tons) | (Weighted average) Moisture content of the biomass (%) | (Weighted average) NCV of the biomass (TJ/ton) | Annual power generation (MWh) | Electiricty generation efficiency (%) |
|---|---|---|---|---|---|

| | A | B | C | D | E=D×3.6/(A×(1-B)×C×1000) |
|---|---|---|---|---|---|
| Parameters in registered PDD | 123,100 | 10.00 | 0.01754 | 137,500 | 25.5% |
| Parameters in the revised PDD | 268,859 | 30.64 | 0.0184 | 211,500 | 22.3% |

Whether the changes would have been known prior to registration

Bureau Veritas Certification has checked the relevant documents at the validation stage and found that the contracted DOE for validation has performed an onsite visit on 22/03/2007, and the *Contract of replace steam turbine generator* [8] was signed in May.2007, but the capacity and number of the major equipments remained unchanged in the final registered PDD version 3.3 dated 20/07/2007 [2]. The change would have been known prior to registration.

How the changes would impact the overall operation/ability of the project activity to deliver emission reductions as stated in the PDD

The supplementary FSR [5] has been issued in Feb.2011 to confirm the Project can generate 211,500MWh per year with annual utilized hours of 7,050 hours and self electricity consumption rate of 10.88%, and can supply 188,488MWh electricity to the Central China Power Grid (CCPG).

Bureau Veritas Certification has also crosschecked the operation statistics in 2009 and 2010, and the supplementary FSR [5] of the Project [6], and found the value of electricity supplied and biomass residue consumption is credible.

**(1) The emission reductions due to the displacement of electricity ($BE_{electricity,y}$)**

The electricity supplied to the ECPG will be increase from 126,500MWh estimated in the registered PDD to 188,488.80MWh, thus the corresponding emission reductions will be increased to 162,854 $tCO_2e$.

Bureau Veritas Certification has checked the supplementary FSR [5] and operation statistics in 2009 and 2010[6], and found the electricity supplied are reasonable and credible.

**(2) Baseline Emission due to natural decay or uncontrolled burning of anthropogenic sources of biomass residues ($BE_{biomass,y}$)**

For there were additional biomass type applied in the Project, and based on the operation statistics in 2009 and 2010 of the Project, the amount of biomass residues consumed in the Project are 170,194.67tons of wood residues, 25,175.05tons of cotton straw, 1.01tons of cole

straw, 19,386.04tons of maize straw, 27,212.57tons of rice straw, 16,392.39tons of reed and 10,497.07 tons of wheat straw, with the moisture content of 33.84%, 27.06%, 22.89%, 30.57%, 22.81%, 23.38% and 19.18% respectively. Thus the parameter ($BE_{biomass,y}$) is calculated to be 7,718 $tCO_2e$.

Bureau Veritas Certification has checked the operation statistics in 2009 and 2010, and biomass test reports [11], and found the amount of biomass residue and the moisture content are reasonable and credible.

**(3) Project Emission**

- Methane emissions from combustion of biomass residues ($PE_{biomass,CH4,y}$)

  Bureau Veritas Certification has checked the Net Caloric Value (NCV) in the biomass test report [11] and the amount of biomass residues (dry base) in the operation statistics in 2009 and 2010, and confirmed the calculation of parameter ($PE_{biomass,CH4,y}$) of 2,947 $tCO_2e$ is accurate.

- Carbon dioxide emissions from combustion of fossil fuels for transportation of straws ($PET_y$)

  As per the average value of operation statistics in 2009 and 2010 of the Project [5], the Number of truck trips was 186,481. Thus, the parameter increased to 18,854 $tCO_2e$.

- Carbon dioxide emissions from on-site consumption of fossil fuels ($PEFF_{,y}$)

  The only fossil fuel used in the proposed project site is diesel for light up of the boiler, and the emissions have been calculated to be 76 $tCO_2e$.

- Project emission due to electricity consumption at the project site ($PE_{EC,y}$)

  For the electricity consumption by straw crackers have already been deducted in $EG_y$ (Annual electricity delivered to the grid by the proposed project), and there is no straw crackers in the two biomass collection stations. Thus, the $PE_{EC,y}$ =0 in the revised PDD.

Therefore, the annual project emission is assumed to be 21,877 $tCO_2e$.

As per the regional biomass resource statistical reports [15], the biomass resource availability within 50 kilometres around the site of the Project has been summarised as:

**Table 2. Biomass supply/demand status in 50 kilometres around the project site**

| Type | Available Biomass within 50km away around the project site ($10^4$ t) | Biomass that used for other purposes than gird-connected electricity generation ($10^4$ t) | Biomass utilised by the project ($10^4$ t) | Total biomass utilised, including the Project ($10^4$ t) | Available Biomass/Total biomass utilised |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Wood residues | 116.66 | 38.78 | 17.02 | 55.8 | 209% |
| Cotton straws | 57.09 | 19.27 | 2.52 | 21.78 | 262% |
| Cole straw | 19.15 | 4.08 | 0.0001 | 4.08 | 469% |
| Maize straw | 6.91 | 1.56 | 1.94 | 3.5 | 197% |
| Rice straw | 115.82 | 41.34 | 2.72 | 44.06 | 263% |
| Reed | 112.99 | 62.04 | 1.64 | 63.68 | 177% |
| Wheat straw | 66.57 | 20.68 | 1.05 | 21.73 | 307% |

The quantity of available residue in the region is far 25% larger than the quantity of residues that is utilized. The Option L2 in the methodology ACM0006 Version 04 has been applied in the revised PDD, therefore, no leakage emissions would occur due to the Competing uses for the biomass.

In summary, the emission reductions are estimated to be 148,695 $tCO_2e$, which are higher than estimated in the registered PDD.

Assessment on the impact by the changes of the Project

*1. Assessment on the additionality of the project activity;*

The investment analysis has been applied to demonstrate additionality in the registered PDD, and the changed basic parameters have been reviewed by Bureau Veritas Certification and list as follows:

- The total investment of 281 Million Yuan has been sourced from the final accounts of the completed project issued in Jul.2008 [9], which has been checked to be consistent.

- The Annual electricity output of the Project was determined by the operation hours and self-consumption rate.

(1) The operation hours of 7,050 hours is determined by the qualified 3rd party of Shandong Electric Power Engineering Consulting Institute Corp. Ltd. in the supplementary FSR [5]. By crosschecking the operation statistics in 2009 and 2010, Bureau Veritas Certification has confirmed the parameter is reasonable. Bureau Veritas Certification has also checked the registered agricultural biomass residues power generation projects, and found the revised operation hour is larger than any other projects in the region, and is more conservative.

(2) The revised electricity self-consumption rate of 10.88% is also determined by the supplementary FSR and confirmed by the operation statistics in 2009 and 2010 [5].

In summary, the **annual power supply** for the Project is reasonable and conservative.

- The **quantity of biomass combusted** has been determined by the quantity of electricity generation, the revised quantity of biomass combusted of 268,859 ton/year (wet base) is sourced from the supplementary FSR [5].

By checking operation statistics in 2009 and 2010 [6], Bureau Veritas Certification found the revised quantity of each type of biomass residues combusted in Table 2 above is consistent and creditable.

- The **straw price** has been determined by the biomass purchase records in 2009 and 2010, and the weighted average biomass price (Incl.VAT) of 245.1Yuan/ton has been applied. Bureau Veritas Certification has checked the biomass purchase receipts in 2009 and 2010 provided by the financial department of the PP [10], and found it is consistent.

Therefore, taken the modified parameters into the former investment analysis, the NPV of the Project has been calculated to be -9867.98 (million Yuan) [13], which is significantly less than 0, i.e. the Project is still additional based on the modified parameters.

In summary, Bureau Veritas Certification has the opinion that the Project keeps financially unattractive under new circumstances without the CDM revenue, thus the additionality of the Project has not changed.

*2. Assessment on the scale of CDM project activity;*

The capacity of installed turbine generator has been changed from 25MW to 30MW, and the changes has not impact the scale of CDM project activity.

*3. Assessment on the applicability and application of Approved Baseline Methodology under which the project activity has been registered.*

The Project applied the methodology of ACM0006 “Consolidated baseline methodology for grid-connected electricity generation from biomass residues”, version 04, which is applicable to the Project as:

| **Methodology Applicability** | **Assessment on the impact by the changes** |
|---|---|
| The project activity may include: greenfield power projects, power capacity expansion projects, energy efficiency improvement projects, fuel switch projects | The Project is the Greenfield project. |
| The project activity may be based on the | The Project is an independent plant supplied |

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| operation of a power generation unit located in an agro-industrial plant generating the biomass residues or as an independent plant supplied by biomass residues coming from the nearby area or a market. | by biomass residues coming from the nearby area or a market. |
| No other biomass types than *biomass residues*, as defined above, are used in the project plant and these biomass residues are the predominant fuel used in the project plant (some fossil fuels may be co-fired); | No other type of biomass was used in the power plant than wood residues/cotton straw/cole straw/maize straw/rice straw/reed/wheat straw, and the biomass residues are predominant fuel used in the project plant. |
| For projects that use biomass residues from a production process (e.g. production of sugar or wood panel boards), the implementation of the project shall not result in an increase of the processing capacity of raw input (e.g. sugar, rice, logs, etc.) or in other substantial changes (e.g. product change) in this process; | The six types of biomass residues, i.e., cotton straw/cole straw/maize straw/rice straw/reed/wheat straw used by the Project are by-products of agriculture crops, not from a production process (e.g. production of sugar or wood panel boards); only some of the wood residues have been collected from local woodwork factories through agents.<br><br>According to the biomass residues purchase records [10], the wood residues were partly comes from local woodwork factories and sold by 139 agents. All of them have provided statement [12] to prove that all the wood residues supplied by them is the biomass resides and do not result in any increase of processing capacity of raw input or in other substantial changes in the wood plate production process; |
| The biomass residues used by the project facility should not be stored for more than one year; | The biomass residues stored will not exceed the limitation of one year. |
| No significant energy quantities, except from transportation or mechanical treatment of the biomass residues, are required to prepare the biomass residues for fuel combustion, i.e. projects that process the biomass residues prior to combustion (e.g. esterification of waste oils) are not eligible under this | Except from transportation and crash of the biomass residues in the power plant site, the proposed project has no significant consumption of fossil fuels. |

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| methodology. | |
| The methodology is only applicable for the combinations of project activities and baseline scenarios identified in Table 1 in ACM0006 version04. | The baseline scenario of power generation is P4.<br><br>And for all types of biomass residues, the most realistic and credible alternative for use of wood residues/cotton straw/cole straw/maize straw/rice straw/reed/wheat straw is B1 or B3.<br><br>Thus, the baseline scenario remains the same as that in registered PDD, i.e. the Scenario 2 listed in the methodology ACM0006 version 04. |

Therefore, the changes have no impact on this applicability.

In summary, Bureau Veritas Certification concludes that the change does not impact the applicability and application of the baseline and monitoring methodology ACM0006 Version 04 under which the Project has been registered.

## Reason for request for revision in monitoring plan

Comparing with the revised monitoring plan approved by EB on 22/04/2009, the following issues have been changed:

(1) To determine the project emission due to transportation of biomass residues to the project site, the calculation formula has been changed to $PET_y = N_y \times AVD_y \times EF_{km,CO_2,y}$, and then the parameter of Number of truck trips during the year *y (*$N_y$*)* is added in the monitoring plan for the calculation.

(2) The instrument to measure the parameter of moisture content of the biomass residues has been changed from the portable hay moisture tester to the electric blast oven and electric balances.

The PP chose the designated moisture analyzer in the national standard for moisture content monitoring, GB/T211-2007 [14], i.e. combination of an electric oven and an electronic balance, to monitor the moisture content of the biomass residues.

(3) The parameter of on-site electricity consumption attributable to the project activity ($EC_{PJ,y}$)

There is no straw cracker in the two biomass collection stations and the PP planned to monitor the power consumption in the new station(s) with electricity meter(s) with accuracy of no less than class 2.0, which complied with the national standard *Technical Administrative Code of Electric Energy Metering* (DL/T 448-2000).

(4) For the parameter of Average $CO_2$ emission factor for the trucks ($EF_{km,CO2,y}$), its source has been changed to the IPCC data.

In the registered PDD, the parameter of diesel consumption per km for the full load truck in L/km ($DPK_y$) is used to calculate the value of $EF_{km,CO2,y}$, for the monitoring of $DPK_y$ is impracticable for the PP. The alternative of IPCC data applicable for the truck types has been used as per the methodology ACM0006 Version 04. Subsequently, the parameter of diesel consumption per km for the full load truck in L/km ($DPK_y$) has been removed in the revised monitoring plan.

Bureau Veritas Certification checked the reasons above as per the methodology ACM0006 version04, and has the opinion that the measurement for the parameters above should be revised and the monitoring plan has to be improved accordingly.

## Summary of the proposed revisions to the registered monitoring plan

Section B7.1

1. Revised the measurement instrument of moisture content of biomass residues to the electric blast oven and electric balances.

2. Revised the monitoring method of the parameter of on-site electricity consumption attributable to the Project
3. Included the parameter of Number of truck trips during the year *y (*$N_y$*)*
4. Revised the data source of parameter of Average $CO_2$ emission factor for the trucks ($EF_{km,CO2,y}$)
5. Removed the parameter of diesel consumption per km for the full load truck in L/km ($DPK_y$).
6. Add the parameter of density of diesel to be monitored.

Section B7.2

Meter Installation

Electricity Meters:

The electricity generated by the Project has been delivered to the grid via two line connected to the grid (Line-I and Line-II). In case of emergency, the electricity can be imported from the grid via the emergency line.

The electricity delivered to the grid and imported from the grid by the Project was monitored by three electricity meters:

- The meter (M1) was installed at the output of the onsite 6.3kV/110kV substation in Line-I, and can monitor the electricity exported to the grid and electricity imported from the grid via Line-I.
- The meter (M2) was installed at the output of the onsite 6.3kV/110kV substation in Line-II, and can monitor the electricity exported to the grid and electricity imported from the grid via Line-II.
- The meter (M3) was installed at the input of the Project in emergency line, and can monitor the electricity imported from the grid via emergency line.

## Information required as per the "Procedures for Revising Monitoring Plans in Accordance with Paragraph 57 of the Modalities and Procedures for the CDM"

(a) The proposed revision of the monitoring plan ensures that the level of accuracy and completeness in the monitoring and verification process is not reduced as a result of the revision.

- For the monitoring method of moisture, the method sourced from the national standard for moisture content monitoring, GB/T211-2007. Bureau Veritas Certification has checked the GB/T211-2007, specification of electric oven and electronic balance, and can confirm that the accuracy and measuring range are enough to meet the demand of actual

monitoring, which can ensure correct operation and monitor accurate results.

- For the monitoring method of on-site electricity consumption attributable to the project ($EC_{PJ,y}$), the former method to calculated conservatively as the product of the weight of straw smashed (in tons) and the electricity consumption factor is not accurate. And thus, the PP planned to use calibrated electricity meter(s) with accuracy of no less than class 2.0 to monitor it. Bureau Veritas Ceritification has found the accuracy is in line with the national standard *Technical Administrative Code of Electric Energy Metering* (DL/T 448-2000) [16].
- For the parameter of Average $CO_2$ emission factor for the trucks ($EF_{km,CO2,y}$), the source has been changed to the IPCC data. The former method in the registered PDD is impracticable for the PP. The alternative of IPCC data applicable for the truck types has been used as per the methodology ACM0006 Version 04. And comparing the estimated value in the registered PDD (0.000159 $tCO_2$/km) and the IPCC data for US Heavy Duty Diesel Vehicles in proposed revised MP (0.001011 $tCO_2$/km), the value in the revised MP is more conservative. Therefore, the revision for the parameter ($EF_{km,CO2,y}$) is more practicable and conservative than the method describe in the former monitoring plan.

The proposed revision to the monitoring plan mainly relates to the monitoring parameters that are not required by the methodology ACM0006 Version 04 and useless in the calculation of emission reductions.

Bureau Veritas Certification has checked the proposed revision of the monitoring plan, and found it complies with the methodology ACM0006 Version 04, and the emission reductions can be calculated accurately. Thus, the proposed revision can ensure that the level of accuracy and completeness in the monitoring and verification process is not reduced as a result of the revision.

(b) The proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity.

Based on the demonstration above, Bureau Veritas Certification was able to conclude that the proposed revision is in accordance with the methodology applied by the Project

(c) The findings of previous verification reports, if any, have been taken into account.

Not applicable.

## Validation Opinion

Bureau Veritas Certification has performed a validation of changes from the project activity as described in the registered PDD for the CDM project activity “Biomass generation project, in Sheyang county, Jiangsu province, P.R. China” in China, on the basis of the following documents –

/1/ “Procedures for notifying and requesting approval of changes from the project activity as

described in the registered project design document"(Version01 – EB48 Report – Annex66)

/2/ "Guidelines on assessment of different types of changes from the project activity as described in the registered PDD"(Version 01 – EB48 – Annex 67)

/3/ "Validation and Verification Manual" (Version 01.2 – EB51 Annex 3)

The validation consisted of the following three phases –

i) A desk review of the revised PDD and relevant additional information submitted by the PP

ii) Follow-up interviews with project stakeholders

iii) The resolution of issues and the issuance of the final validation report and opinion.

The review of the revised PDD, relevant additional information and the subsequent follow-up interviews has provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria.

In our opinion, the changes do not impact the following aspects –

i) Additionality of the project activity;

ii) Scale of CDM project activity;

iii) Applicability and application of Approved Baseline Methodology under which the project activity has been registered.

Regarding to the proposed revision to the monitoring plan –

i) The proposed revision of the monitoring plan ensures that the level of accuracy, or completeness in the monitoring and verification process is not reduced as a result of the revision;

ii) The proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity whilst ensuring the conservativeness of the emission reductions calculation;

iii) The findings of previous verification reports, if any, have been taken into account.

Bureau Veritas Certification therefore requests the acceptance, from the secretariat of the Board, of proposed notification of changes from the project activity as described in the registered PDD and revised monitoring plan.

## References


[1] Revised PDD of the Project (version 4.0) dated 23/03/2012

[2] Registered PDD (version 3.3) dated 20/07/2007

[3] Validation Report (Revision 5), dated 20/03/2008

[4] Revised monitoring plan, approved by EB on 22/04/2009

[5] Supplementary FSR issued by Shandong Electric Power Engineering Consulting Institute Corp. Ltd. (code No.15124-SJ) in Feb.2011

[6] The operation statistics, and plant daily log of the Project in 2009 and 2010

[7] Nameplates of the boiler, turbine and generator.

[8] Contract of replace steam turbine generator signed with Wuhan Steam Turbine Group Corporation in July.2007

[9] The final accounts of the completed project issued in Jul.2008

[10] Biomass residue purchase receipts in 2009 and 2010

[11] Biomass NCV and moisture test reports issued by Inspection reports from Shandong Taishan institute of mineral resources

[12] Statement provided by the 139 wood residues agents

[13] NPV calculation sheet for the Project

[14] National standard of determination of total moisture in coal (GB/T 211-2007)

[15] regional biomass resource statistical reports in 2010 and 2011 issued by Yancheng Municipal Bureau of Statistics

[16] Technical Administrative Code of Electric Energy Metering (DL/T 448-2000)

## CVs of the validation team members

| | | |
|---|---|---|
| Ms. Cheng Linglin | Bureau Veritas Certification, China | Team Leader, Climate Change Lead Verifier<br>She holds a Master Degree in Environmental Science and Engineering. Before joining BV in 2009, she gained over 2 years of research experience on air pollution control and 2 years of CDM technical experience in energy sector in P.R. China. She obtained the certificate of CDM Verifier, Lead Auditor for ISO 14001 and completed the course assessment for the ISO 14064:2006. |

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| Mr. Robin Wang Jing | Bureau Veritas Certification, China | Technical Reviewer, Climate Change Lead Verifier<br>He holds a Bachelor Degree in Gas & Heating Engineering. He was a Gas Engineer with over 10 years' experiences in oil and gas sector and building technology in P.R. China. Before joining BV in 2007, he gained two years of CDM audit experience in P.R China. He obtained the certificate of CDM Verifier, Lead Auditor for ISO 14001 and completed the course assessment for the ISO 14064:2006. |

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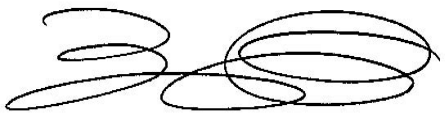

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