GUOHUA TONGLIAO KEZUO ZHONGQI PHASE I 49.5 MW WIND FARM PROJECT

Document Prepared by Beijing Ruifang Technology Co., Ltd.

Project Title	Guohua Tongliao Kezuo Zhongqi Phase I 49.5 MW Wind Power Project
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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

Guohua Tongliao Kezuo Zhongqi Phase I 49.5 MW Wind Farm Project (hereinafter referred to as "the project" or project "P") is constructed and operated by Guohua (Tongliao) Wind Power Co., Ltd.

The project generates renewable power electricity by using the wind power resource, and supplies electricity to Northeast China Power Grid (NECPG) replacing fossil fuel consumption and thus reducing GHG (CO_2) emissions. It involves installation and operation of 33 wind turbines with the unit capacity of 1,500 kW and total capacity of 49.5 MW.

North China Grid is dominated by thermal power plants. In the absence of the Project, equivalent amount of annual power output to the Project will be generated and supplied by NCPG. This is the same with the baseline scenario of the Project. It is expected that the Project as a renewable energy source will generate emission reductions of about 111,877 tCO_2e per year by avoiding CO_2 emissions from the same amount of electricity generation from North China Grid, which is mainly composed of traditional thermal power plants.

The construction of the project was started on 10/10/2007. The first wind turbine-generator was put into operation on 16/01/2009, which is the project start date according to its given definition. All generators were put into operation on 13/04/2009.

This monitoring period is from 01/01/2013-31/10/2018 (2130days). The total net electricity supplied to the grid by the project in this monitoring period are 676,386.340MWh and the emission reductions in this monitoring period are 695,322tCO_2.

1.2 Sectoral Scope and Project Type

This category would fall within sectoral scope 1: energy industries (Renewable sources).

Project type: wind power project.

This project is not grouped project.

1.3 Project Proponent

Organization name	Guohua (Tongliao) wind Power Co., Ltd
Contact person	Li Jia
Title	Project Manager

Address	Guohua Investment Building No.3 South Road of Dongzhimen, Chaoyang District Beijing, China
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1.4 Other Entities Involved in the Project

Organization name	Beijing Ruifang Technology Co., Ltd.
Role in the Project	Project participant
Contact person	Teng Haipeng
Title	Manager
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1.5 Project Start Date

16/01/2009 (operation date, which means the date that started to generate GHG emission reductions)

1.6 Project Crediting Period

The first crediting period under VCS is from 16/01/2009 to 15/01/2019 (10 years, renewable). Therefore, the total crediting period under VCS would have been from 16/01/2009 to 15/01/2039(30 years). However, the project was registered under CDM *on 01/05/2011*. And the total crediting period under CDM is from 24/02/2011 to 23/02/2032(21years).

According to VCS standard, the total crediting period under VCS is from 16/01/2009 to 23/02/2032.

1.7 Project Location

The Project is located in the east of Kezuozhong Qi,Tongliao City, Inner Mongolia, P.R. China. The center of the Project has geographical coordinates with east longitude of 122°57′ and north latitude of 41°13′. Figure 1 shows the location of the Project.

Figure 1 the location of project

1.8 Title and Reference of Methodology

The project applies the approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (Version 11.0).

The methodology also refers to the following tools:

Tool to calculate the emission factor for an electricity system (Version 02.1.0);

Tool for the demonstration and assessment of additionality (Version 05.2);

1.9 Participation under other GHG Programs

The Project has been registered as a CDM project on 24/02/2011 with registration number of 4495. It has been issued twice under CDM mechanism, with monitoring period respectively from 24/02/2011 to 31/03/2012 and from 01/04/2012 to 31/12/2012.

1.10 Other Forms of Credit

The project has been registered as a CDM project on 24/02/2011, the first crediting period is from 24/02/2011 to 23/02/2018 (7years, renewable). It has been issued twice under CDM mechanism, with monitoring period respectively from 24/02/2011 to 31/03/2012 and from 01/04/2012 to 31/12/2012.

The emission reductions from 01/01/2013 to 31/10/2018 has not been and will not be counted or claimed under other GHG programs.

The Project has not created another form of environmental credit, and the Project will not create other environmental credit in the future.

1.11 Sustainable Development

The Project will not only supply renewable electricity to the grid, but also contribute to sustainable development of the local community, the host country and the world by means of:

- Being located in a power grid dominated by coal-fired power plants, development of the proposed project will not only reduce GHG emissions but also mitigate local environmental pollution caused by air emissions from coal-fired power plants.
- The proposed project could be helpful to diversify power structure of the NECPG and reduce the dependence on exhaustible fossil fuels for power generation.
- North China where the proposed project is located is facing rapid increase in electricity demand. Development of the proposed project could contribute to meeting local electricity demand, and therefore boosts the economy in the local region.
- For the local population, they can benefit from the compensation for the deserted land

occupation, and the job opportunities due to the construction and operation of the proposed project.

2 SAFEGUARDS

2.1 No Net Harm

The EIA Form was approved by Environmental Protection Bureau of Inner Mongolia Autonomous Region on September, 2006. According to the EIA Form, environmental impacts possibly caused by the Project and treatment measures adopted by the Project Owner are analyzed as follows:

Analysis of environmental impacts during construction duration

Atmospheres
The largest impact scope of dust emission is 420 meters. The closest distance between construction site and local village is 500 meters. Therefore, there is not so much environmental impact on local air quality.

Noise
Noise during construction is mainly caused by equipment installation and operation. Since the closest distance between construction site and local village is 500 meters, the noise is acceptable during the construction.

Solid waste
Few people lives nearby the wind farm site. Solid waste will be reasonably treated, which include clean up the extra earth in time, clam the landscape, recover the previous plants, protect the natural environment with less destruction, so the destruction level of local natural environment by this project implementation is controlled relatively low, therefore the project implementation doesn't have obvious impacts on local natural environment.

Waste water
Waste water is mainly produced by daily water discharged by workers. Minimum amount of waste water will be discharged directly on the earth. There is no surface water at the project site. So the discharged waste water will be absorbed by earth or vaporized. Therefore, surface water will not be polluted.

Ecological impact
There is no endangered species live in this area. The project owner will strictly control the on-site construction scope, take vegetation protection into account; meanwhile, restore vegetation generation based on restoration framework, so it will not influence the ecological environment very much.

Analysis of environmental impacts after put into production

Waste water
The treated waste water of the project site fulfil standard of<water quality standard of agricultural irrigation> (GB5084-1992). The project owner will prepare one pump to treat waste water. After pumped, the waste water will be composted after decomposed by anaerobic bacteria in septic tank, which will cause little impact on surface water quality.

Noise
The proposed project will produce noise to surrounding areas between 37.1-41.0dB (A) after the proposed project put into production. This is acceptable noise level. Consider that there is no other noise source in the villages nearby, the background noise level is relatively low. So the operation noise of the proposed project can be within level I of 'Urban area environmental noise standard'. It will not cause negative impact to local inhabitants.

In conclusion, the proposed project is a renewable energy project without negative impacts on the environment but of great economic, environmental and social benefit.

2.2 Local Stakeholder Consultation

Stakeholders of the Project are identified as local residents possibly impacted by the Project. On 25/03/2007, a survey was conducted on the stakeholders of the Project, through distributing and collecting responses to a questionnaire.

The questionnaire is distributed to the local residents near the Project Site. They are of different ages and occupations, coming from different towns and villages. For the total 27 questionnaires distributed to the stakeholders, 27 returned with a response rate of 100%.

The questionnaires mainly focus on the following issues:
1. Do you know this project?
2. Do you think the proposed project will be helpful to improve the local economy?
3. Will the project impact your livelihood positively or negatively?
4. Do you think the location of the proposed project is reasonable or unreasonable?
5. Will the proposed project impact the environment?

According to the 27 questionnaires received:
- ✧ 89% of the respondents know the proposed project and 11%know a little about it.
- ✧ 100% of the respondents argue that the proposed project will promote the local economic,
- ✧ 100% agree that the proposed project will affect their life positively,
- ✧ 100% think that the proposed project is located reasonably,
- ✧ 100% think that the proposed project has no bad impact on the environment,
- ✧ 100% of the respondents support the proposed project.

Conclusion

From the comments above, it can be concluded most representatives think the proposed project will do good to local environment and economy and all support it.

For on-going communications with local stakeholders, the project owner public its office telephone to local people by bulletins and put a grievance book in the company's office. Anyone who have comments on the project could write on the book or leave message by phone. Besides, since the project has been operated for years, local people all know well about the project and the phone number of the company. No negative comments were received from local people during this monitoring period.

2.3 AFOLU-Specific Safeguards

This project is not an AFOLU project. Therefore, this section is not applicable.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The total installed capacity of the Project is 49.5 MW equipped with 33 sets of wind turbines with a unit installed capacity of 1500 kW. The estimated net electricity supplied to North East China Grid by the Project is 108,830 MWh per year and the plant load factor is 0.251. Electricity generated by the Project is supplied to Northeast China Power Grid via a 220-kV transmission line. The technical parameters of the project are shown in table 1.

Table 1. Main technical parameters of key equipment in the Project

No.	Item	Unit	Value
1	Installed capacity	MW	49.5
2	Rated capacity	kW	1500
3	Annual Operation hour	Hour	2199
4	Annual grid-connected output	MWh	108830
5	Rotor Diameter	m	77
6	Number of blades		3
7	Swept area	m^2	4657
8	Rated Rotation speed of wind wheel	rpm	9.6~17.3 ±10%
9	Cut-in wind speed	m/s	3.5
10	Cut-out wind speed	m/s	20
11	Rated wind speed	m/s	12.5
12	Hub height of the wind turbines	m	70
13	Rated voltage of generator	v	690
14	Lifetime of the wind turbine	Year	21
15	Plant Load Factor	%	25.1

The Project started construction on 10/10/2007 and the first wind turbine-generator was put into operation on 16/01/2009 and all generators started to operation on 13/04/2009. During this monitoring period, the monitoring system of the Project was implemented in line with the monitoring plan.

The wind farm had a good running, no equipment is overhauled or replaced in this monitoring period. No events or emergency occurred during the monitoring period, which may impact the emission reductions and monitoring.

3.2 Deviations

2.3.1 Methodology Deviations

There is no methodology deviation in this monitoring period.

2.3.2 Project Description Deviations

There are three deviations in this monitoring period. The detailed description is in the following table 2:

Table 2. Deviations

No.	Deviation	VCS PD	This monitoring report
1	Crediting period	The crediting period starts from 01/05/2011 or registration date, whichever is later.	According to the VCS regulation, the crediting period could start from 16/01/2009, which is the date that starts generating GHG emissions. As stated in section 1.6, the crediting period is from 16/01/2009 to 23/02/2032.
2	Meter accuracy of M3	0.5	0.5s,which is more accurate than that of PD.
3	Meter accuracy of M4	0.5	0.2s, which is more accurate than that of PD.

3.3 Grouped Projects

Not applicable as this is not a grouped project.

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	$EF_{grid,CM,y}$
Data unit	tCO_2/MWh
Description	Baseline emission factor in the year y
Source of data	Registered PDD
Value applied	1.0280
Justification of choice of data or description of measurement methods and procedures applied	In according with Notification on Determining Baseline Emission Factor of China's Grid issued by China DNA on 06/07/2009, which is based on China Electric Power Yearbook 2006-2008 and China Energy Statistical Yearbook 2006-2008
Purpose of Data	Calculation of baseline emissions
Comments	The emission factor of the project ($EF_{grid,CM,y}$) is ex-ante determined and is fixed during the first crediting period.

4.2 Data and Parameters Monitored

Data / Parameter	$EG_{Total, y}$
Data unit	MWh
Description	The total net electricity supplied to the NECPG by "P" and "X" in year y
Source of data	Measured by the main electricity meter
Description of measurement methods and procedures to be applied	The readings of the electricity meter will be continuously measured and monthly recorded. Data will be archived for 2 years following the end of the crediting period by means of electronic and paper backup. The accuracy of electricity meter is 0.2s, in line with relevant national standard. The calibration frequency is once a year
Frequency of monitoring/recording	Continuously measurement and monthly recording
Value monitored	3,030,597.079
Monitoring equipment	The information of the electricity meter is in the following table.
QA/QC procedures to be applied	Main meter M with the backup meter (bidirectional meters) are installed in the 220kV substation to monitor the value of the electricity of projects "P", "2", "3" and "4" exported to the grid ($EG_{export,y}$) and the value of the electricity of projects "P" , "2" , "3"and "4" imported from the grid ($EG_{import,y}$), details as below:

Information of main meter M;
1. Specific type: Electricity meter ZMD402
2. Accuracy class: 0.2S
3. Serial number: 95173915
4. Calibration frequency: Annually
5. Calibration agency, date of last calibration, and validity:

Calibration Agency	Serial No.	Accuracy	Calibration Date	Valid date
Tongliao Electric Power Bureau Electric Measure Office	95173915	0.2S	06/12/2012	05/12/2013
			29/11/2013	28/11/2014
			24/11/2014	23/11/2015
			17/11/2015	16/11/2016
			10/11/2016	09/11/2017
			02/11/2017	01/11/2018

Information of backup meter of main meter M:
1. Specific type: Electricity mete ZMD402
2. Accuracy class: 0.2S
3. Serial number: 95173914
4. Calibration frequency: Annually
5. Calibration agency, date of last calibration, and validity:

Calibration Agency	Serial No.	Accuracy	Calibration Date	Valid date
Tongliao Electric Power Bureau Electric Measure Office	95173914	0.2S	06/12/2012	05/12/2013
			29/11/2013	28/11/2014
			24/11/2014	23/11/2015
			17/11/2015	16/11/2016
			10/11/2016	09/11/2017
			02/11/2017	01/11/2018

Purpose of the data	Calculation of baseline emissions

Calculation method	$EG_{total,y} = EG_{export,y} - EG_{import,y}$
Comments	/

Data / Parameter	$E_{p,y}$
Data unit	MWh
Description	Electricity generation by project "P" in year y
Source of data	Measured by electricity meter M1
Description of measurement methods and procedures to be applied	Continuously measured by one bi-directional meter installed at the Project Site and monthly recorded.
Frequency of monitoring/recording	Continuously measurement and monthly recording
Value monitored	684,658.968
Monitoring equipment	The information of the electricity meter is in the following table.
QA/QC procedures to be applied	Meter M1 is installed at the project activity site to monitor the value of the electricity generation of project "P" ($E_{P,y}$), details as below: 1. Specific type: Electricity meter DSD331 2. Accuracy class: 0.5 3. Serial number: 09030048740091 4. Calibration frequency: Annually 5. Calibration agency, date of last calibration, and validity:

Calibration Agency	Serial No.	Accuracy	Calibration Date	Valid date
Tongliao Electric Power Bureau Electric Measure Office	09030048740091	0.5	06/12/2012	05/12/2013
			29/11/2013	28/11/2014
			24/11/2014	23/11/2015
			17/11/2015	16/11/2016
			10/11/2016	09/11/2017

				02/11/2017	01/11/2018
Purpose of the data	Calculation of baseline emissions				
Calculation method	/				
Comments	/				

Data / Parameter	$E_{x,y}$
Data unit	MWh
Description	Electricity generation by Project X in the year y, consist of electricity generation by project “2”, “3”and “4”in the year y .
Source of data	Measured by electricity meter installed at each station.
Description of measurement methods and procedures to be applied	Continuously measured by one bi-directional meter installed at the Project Site and monthly recorded. $E_{2,y}$ is the electricity export to the NECPG by the project “2” owned by the same project owner in year y, measured by on-site meter M2; $E_{3,y}$ is the electricity export to the NECPG by the project “3” owned by the same project owner in year y, measured by on-site meter M3; $E_{4,y}$ is the electricity export to the NECPG by the project “4” owned by the same project owner in year y, measured by on-site meter M4.
Frequency of monitoring/recording	Continuously measurement and monthly recording
Value monitored	E_{2y}: 609,993.132 E_{3y}:814,760.646 E_{4y}:956,742.290 E_{Xy}:2,381,496.068
Monitoring equipment	The information of the electricity meters are in the following table.
QA/QC procedures to be applied	Meter M2 is installed at the project activity of site “2 “to monitor the value of the electricity generation of project “2” ($E_{2,y}$), details as below: 1. Specific type: Electricity meter DSD331 2. Accuracy class: 0.5 3. Serial number: 09030048740098 4. Calibration frequency: Annually 5. Calibration agency, date of last calibration, and validity:

Calibration Agency	Serial No.	Accuracy	Calibration Date	Valid date
Tongliao	0903004	0.5	06/12/2012	05/12/2013

Electric Power Bureau Electric Measure Office	8740098		29/11/2013	28/11/2014
			24/11/2014	23/11/2015
			17/11/2015	16/11/2016
			10/11/2016	09/11/2017
			02/11/2017	01/11/2018

Meter M3 is installed at the project activity of site "3 "to monitor the value of the electricity generation of project "3" ($E_{3,y}$), details as below:
1. Specific type: Electricity meter DTSD341
2. Accuracy class: 0.5s
3. Serial number: 10110473910122
4. Calibration frequency: Annually
5. Calibration agency, date of last calibration, and validity:

Calibration Agency	Serial No.	Accuracy	Calibration Date	Valid date
Tongliao Electric Power Bureau Electric Measure Office	10110473910122	0.5s	06/12/2012	05/12/2013
			29/11/2013	28/11/2014
			24/11/2014	23/11/2015
			17/11/2015	16/11/2016
			10/11/2016	09/11/2017
			02/11/2017	01/11/2018

Meter M4 is installed at the project activity of site "4 "to monitor the value of the electricity generation of project "4" ($E_{4,y}$), details as below:
1. Specific type: Electricity meter SD33
2. Accuracy class: 0.2s

<table>
<tr><td></td><td>3. Serial number: 12058075000500
4. Calibration frequency: Annually
5. Calibration agency, date of last calibration, and validity:
<table>
<tr><th>Calibration Agency</th><th>Serial No.</th><th>Accuracy</th><th>Calibration Date</th><th>Valid date</th></tr>
<tr><td rowspan="7">Tongliao Electric Power Bureau Electric Measure Office</td><td rowspan="7">120580 75000500</td><td rowspan="7">0.2s</td><td>28/05/2012</td><td>27/05/2013</td></tr>
<tr><td>23/05/2013</td><td>22/05/2014</td></tr>
<tr><td>15/05/2014</td><td>14/05/2015</td></tr>
<tr><td>09/05/2015</td><td>08/05/2016</td></tr>
<tr><td>02/05/2016</td><td>01/05/2017</td></tr>
<tr><td>23/04/2017</td><td>22/04/2018</td></tr>
<tr><td>07/04/2018</td><td>06/04/2019</td></tr>
</table></td></tr>
<tr><td>Purpose of the data</td><td>Calculation of baseline emissions</td></tr>
<tr><td>Calculation method</td><td>$E_{X,y}=E_{X,2}+E_{X,3}+E_{X,4}$</td></tr>
<tr><td>Comments</td><td>/</td></tr>
</table>

4.3 Monitoring Plan

1. The user---Who use the monitoring plan

   The proposed project owner will use this document as guideline in monitoring of the project emission reduction performance and will adhere to the guidelines set out in this monitoring plan. This plan should be modified according to actual conditions and requirements of DOE in order to ensure that the monitoring is credible, transparent and conservative.

2. Operational and management structure for monitoring

   The monitoring of the emission reductions will be carried out according to Figure below.

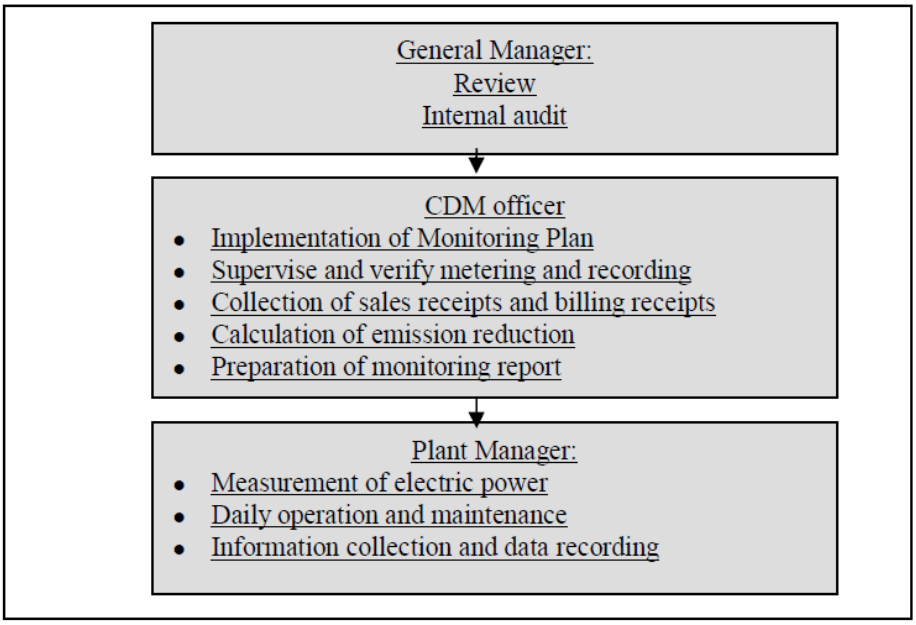

Figure 2 The Personal structure if the project monitoring

Plant manager of wind farm is responsible to record and collect the information and data required by the Monitoring Plan. The required information and data will be documented and sent to the officer monthly. The officer works out the monitoring plan, charges of its implementation and reports to the General Manager of the company. The General Manager of the company will make the confirmations on monitoring calculation data and reports.
The project owner will train relevant staffs of the wind power plant for data monitoring and data management. The training contains operational regulations, quality control (QC) standard, data monitoring and data management etc.

3. Monitoring Equipment

The main meter and back-up meter installed in the substation is bidirectional, recording the electricity of "P" and "X" exported to the grid ($EG_{export,y}$) and imported from the grid ($EG_{import,y}$). They will be owned, operated and maintained by the grid company. The reading records are provided to the project owner by the grid company regularly, and can be cross-checked by sales receipts. The Meter 1 and Meter X are installed at lower side of the on-site 220kV transformers, which are used to monitor the electricity generation of "P"($E_{P,y}$) and "X"($E_{X,y}$). The on-site meters are owned, operated and maintained by the project owner. The location of those meters is presented in following figure

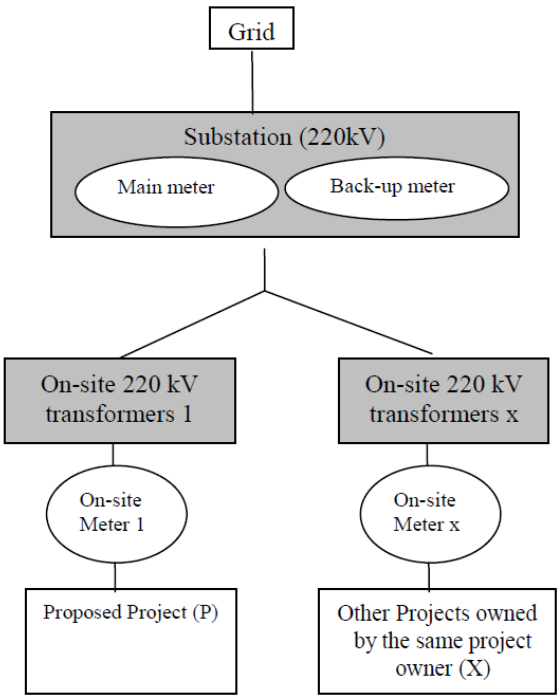

Figure 2 Meter Location

Note: X here stands for different on site meters for the corresponding projects owned by the same project owner. Each project matches with an on-site 220KV transformers.

As mentioned above, $EG_{expoert,y}$ and $EG_{expoert,y}$ were recorded by the main meter installed at the station. The net electricity supply by "P" and "X" ($EG_{total,y}$) is the difference between $EG_{expoert,y}$ and $EG_{expoert,y}$, i.e.

$$EG_{total,y} = EG_{export,y} - EG_{import,y}$$

As demonstrated in the registered monitoring Plan, since the "P" and "X" share the same main meter, the separate net electricity supply for each project cannot be obtained from the main meter; therefore the on-site meters can be used to calculate the share of the net supply to the grid by each project. The net electricity supplied from "P"($EG_{P,y}$) can now be calculated as follows:

$$EG_{p,y} = EG_{Total,y} \times E_{P,y} / (E_{P,y} + E_{X,y})$$

Where:
$EG_{P,y}$ is the calculated net electricity supplied from "P" in year y;
$EG_{total,y}$ is the total net electricity supplied to the NECPG by "P"and "X" in year y, read by the main meter.
$E_{X,y}$ is the electricity exported by the other projects owned by the same project owner in year y, read by on-site meter x;
$E_{P,y}$ is the electricity exported by the project in year y, read by on-site meter 1.

The calculated net electricity supplied from "P" ($EG_{P,y}$) is therefore used for the emission

reduction calculations.
This approach is flexible to accommodate potential future installations which also share the same main meter with "P".

Monitoring Procedures
The project owner and the grid company are responsible for maintenance, calibration and monitoring of the on-site meters and the main meter respectively. The procedures of monitoring the electricity are summarized as follows:
1) At fixed time on a particular day of each month, the gird company should read and record data from the main meter and together with the project owner read and record data form on-site meters installed in each project site and then check the reading of the main meter against the on-site meters.
2) The grid company provides the project owner with the monthly record of $EG_{total\ y.}$
3) The sales receipts will be used for cross check purpose.
4) The project owner carries out an internal audit on the readings, grid data and calculations, and report to DOE for verification.
Should any previous months reading of the main meter be inaccurate by more than the allowable error, or otherwise functioned improperly, the net energy output shall be determined by:
(a) first, by reading backup meter installed, unless a test by either party reveals it is inaccurate;
(b) if the backup system is not within acceptable limits of accuracy or is otherwise performing improperly the developer and grid company shall jointly prepare an estimate of the correct reading;
(c) if the grid company and the developer fail to agree then the matter will be referred for arbitration according to agreed procedures.

4. Calibration of Meters &Metering

An agreement should be signed between the project owner and the grid company that defines the metering arrangements and the required quality control procedures to ensure accuracy. The metering equipment will be properly calibrated and checked annually for accuracy.

1) The metering equipment shall have sufficient accuracy so that error resulting from such equipment shall not exceed +0.5% of full-scale rating.

2) All the meters installed shall be tested within 10 days after:

(a) The detection of a difference larger than the allowable error in the reading of both meters

(b) The repair of all or part of the meter caused by the failure of one or more parts to operate in accordance with the specifications.

Calibration is carried out with the records being provided to the project owner, and these records will be maintained by the project owner.

5. Quality Assurance and Quality Control

The quality assurance and quality control procedures for recording, maintaining and archiving data shall be improved as part of this carbon project activity. This is an on-going process which will be ensured through the VCS mechanism in terms of the need for verification of the emissions on an annual basis according to this PDD.

6. Data Management

This provides information on record keeping of the data collected during monitoring. Record keeping is the most important exercise in relation to the monitoring process. Without accurate and efficient record keeping, project emission reductions cannot be verified. Below follows an outline of how project related records would be managed.

Overall responsibility for monitoring of GHG emissions reduction will rest with the responsible person of the project. The ER monitoring manual sets out the procedures for tracking information from the primary source to the end-data calculations in paper document format. It is the responsibility of the project owner to provide additional necessary data and information for validation and verification requirements of respective DOE.

Data will be archived at the end of each month using electronic spreadsheets and will be stored on hard disk. Physical documentation such as paper-based maps, diagrams and environmental assessment will be collated in a central place, together with this monitoring plan. In order to facilitate the auditor's reference, monitoring results will be indexed. All paper-based information will be stored by the project owner and kept at least one copy. And all data including calibration records is kept until 2 years after the end of the total crediting period of the CDM project.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

According to ACM0002, the baseline emission during this verification period is calculated as

$BEy = EG_y \times EF_{grid,CM,y}$

Where:

BE_y is the baseline emissions (tCO_2e)

EG_y is the net electricity supplied to the grid by the project (MWh)

$EF_{grid, CM,y}$ is the CO_2 emission factor of the grid which is fixed in the first crediting period (tCO_2e/MWh)

According to the registered PDD, $EG_y=EG_{p,y}$.

Where

$$EG_{p,y}=EG_{Total,y}\times E_{P,y}/(E_{P,y}+E_{X,Y})$$

$EG_{P,y}$ is the calculated net electricity supplied from "P" in year y;
$EG_{total,y}$ is the total net electricity supplied to the NECPG by "P"and "X" in year y, read by the main meter.
$E_{X,y}$ is the electricity exported by the other projects owned by the same project owner in year y, read by on-site meter x; in the monitoring period including "2", "3" and "4".
$E_{P,y}$ is the electricity exported by the project in year y, read by on-site meter 1.

The calculated net electricity supplied from "P" ($EG_{P,y}$) is therefore used for the emission reduction calculations.

The yearly electricity volume and baseline emissions are listed in following table 3.

Table 3. Baseline emissions

Period	Electricity generation by project "P"	Electricity generation by project "2"	Electricity generation by project "3"	Electricity generation by project "4"	Electricity generation by project "2" ,"3" and "4"	Conservative Value of $EG_{Total,y}$	The net electricity supplied from project "P"	Baseline emission
	$E_{P,y}$	$E_{2,y}$	$E_{3,y}$	$E_{4,y}$	$E_{X,y}=E_{2,y}+E_{3,y}+E_{4,y}$		$EG_{P,y} = EG_{Total,y} * E_{P,y} / (E_{P,y} + E_{X,y})$	$BEy=EG_{P,y}*EF_y$
01/01/2013-31/01/2013	10,449.096	8,097.012	11,429.838	13,411.286	32,938.136	43,055.285	10,369.152	10,659.488
01/02/2013-28/02/2013	10,370.976	9,784.992	13,812.652	16,207.170	39,804.814	49,894.838	10,312.905	10,601.667
01/03/2013-31/03/2013	12,697.776	10,345.020	14,603.148	17,134.712	42,082.880	54,462.883	12,624.118	12,977.594
01/04/2013-30/04/2013	12,426.624	11,437.944	16,146.046	18,945.080	46,529.070	58,578.432	12,347.105	12,692.824
01/05/2013-31/05/2013	11,671.968	9,827.244	13,872.278	16,277.142	39,976.664	51,218.851	11,574.843	11,898.938
01/06/2013-30/06/2013	10,777.620	7,031.976	9,926.378	11,647.188	28,605.542	39,110.280	10,702.943	11,002.625
01/07/2013-31/07/2013	8,297.520	7,832.496	11,056.514	12,973.240	31,862.250	39,160.070	8,090.969	8,317.516
01/08/2013-31/08/2013	7,641.900	6,563.592	9,265.270	10,871.462	26,700.324	33,949.714	7,554.558	7,766.086
01/09/2013-30/09/2013	8,123.136	6,623.736	9,350.096	10,971.016	26,944.848	34,664.890	8,029.763	8,254.597
01/10/2013-31/10/2013	9,016.392	5,701.752	8,048.670	9,443.966	23,194.388	32,053.771	8,972.442	9,223.671
01/11/2013-30/11/2013	8,512.812	9,377.004	13,236.776	15,531.460	38,145.240	46,142.026	8,418.662	8,654.385
01/12/2013-31/12/2014	9,728.880	8,262.324	11,663.218	13,685.126	33,610.668	42,910.032	9,632.462	9,902.171
Total 2013	119,714.700	100,885.092	142,410.884	167,098.848	410,394.824	525,201.072	118,629.924	121,951
01/01/2014-31/01/2014	9,926.532	8,076.768	10,261.132	12,039.986	30,377.886	40,119.077	9,880.885	10,157.549
01/02/2014-28/02/2014	9,333.912	9,246.888	11,747.652	13,784.190	34,778.730	43,821.413	9,272.290	9,531.914
01/03/2014-31/03/2014	12,316.836	10,536.372	13,385.988	15,706.530	39,628.890	51,448.795	12,199.009	12,540.581
01/04/2014-	10,935.456	10,568.712	13,427.050	15,754.732	39,750.494	50,377.219	10,868.848	11,173.175

30/04/2014								
01/05/2014-31/05/2014	13,189.260	11,659.956	14,813.512	17,381.546	43,855.014	55,754.054	12,890.947	13,251.894
01/06/2014-30/06/2014	10,454.388	7,162.092	9,099.006	10,676.400	26,937.498	37,009.790	10,347.558	10,637.289
01/07/2014-31/07/2014	8,380.512	8,306.340	10,552.906	12,382.314	31,241.560	39,172.531	8,285.429	8,517.421
01/08/2014-31/08/2014	5,349.288	4,824.288	6,128.962	7,191.464	18,144.714	23,315.371	5,308.616	5,457.257
01/09/2014-30/09/2014	8,366.820	7,163.520	9,100.924	10,678.640	26,943.084	34,921.445	8,274.773	8,506.467
01/10/2014-31/10/2014	9,196.740	6,106.548	7,758.114	9,103.038	22,967.700	31,849.910	9,106.807	9,361.797
01/11/2014-30/11/2014	7,406.112	8,565.984	10,882.620	12,769.190	32,217.794	39,242.755	7,334.871	7,540.247
01/12/2014-31/12/2014	9,923.424	8,848.896	11,242.168	13,191.094	33,282.158	42,949.262	9,864.553	10,140.760
Total 2014	114,779.280	101,066.364	128,400.034	150,659.124	380,125.522	489,981.622	113,634.584	116,816
01/01/2015-31/01/2015	10,085.964	8,206.464	10,953.950	12,233.256	31,393.670	41,245.618	10,029.062	10,309.876
01/02/2015-28/02/2015	9,655.380	9,565.332	12,907.944	14,258.986	36,732.262	45,371.885	9,443.955	9,708.385
01/03/2015-31/03/2015	12,257.196	10,485.300	14,134.512	15,630.426	40,250.238	52,068.086	12,154.636	12,494.966
01/04/2015-30/04/2015	11,447.352	11,063.556	14,934.416	16,492.336	42,490.308	53,474.150	11,348.980	11,666.751
01/05/2015-31/05/2015	12,182.100	10,769.472	14,486.318	16,054.080	41,309.870	53,306.827	12,139.936	12,479.854
01/06/2015-30/06/2015	6,470.184	4,432.596	9,607.822	6,607.664	20,648.082	26,844.998	6,404.985	6,584.324
01/07/2015-31/07/2015	8,172.192	8,100.036	10,912.762	12,074.608	31,087.406	38,796.806	8,075.858	8,301.982
01/08/2015-31/08/2015	9,867.900	8,899.212	7,774.088	13,266.064	29,939.364	39,333.941	9,750.567	10,023.583
01/09/2015-30/09/2015	8,080.044	6,917.988	9,317.756	10,312.652	26,548.396	34,306.061	8,004.822	8,228.957
01/10/2015-31/10/2015	8,924.496	5,925.780	7,982.436	8,833.524	22,741.740	31,377.298	8,843.065	9,090.670
01/11/2015-30/11/2015	7,800.240	9,021.852	12,180.294	13,448.750	34,650.896	42,106.258	7,736.870	7,953.502
01/12/2015-31/12/2015	9,629.676	8,586.900	11,567.220	12,800.522	32,954.642	41,691.408	9,427.760	9,691.738
Total 2015	114,572.724	101,974.488	136,759.518	152,012.868	390,746.874	499,923.336	113,360.495	116,534

01/01/2016-31/01/2016	10,248.000	8,338.344	11,129.986	12,461.036	31,929.366	41,672.822	10,125.409	10,408.920
01/02/2016-28/02/2016	9,972.228	9,879.156	13,331.514	14,534.828	37,745.498	46,765.277	9,773.182	10,046.831
01/03/2016-31/03/2016	12,542.376	10,729.404	14,463.456	16,131.178	41,324.038	53,361.158	12,424.731	12,772.624
01/04/2016-30/04/2016	11,855.760	11,458.104	15,467.130	16,748.718	43,673.952	54,322.171	11,597.946	11,922.689
01/05/2016-31/05/2016	10,228.596	9,042.600	12,163.326	16,983.848	38,189.774	52,740.336	11,141.631	11,453.596
01/06/2016-30/06/2016	10,449.096	7,158.396	15,516.214	10,764.194	33,438.804	37,706.064	8,977.287	9,228.651
01/07/2016-31/07/2016	8,320.284	8,246.784	11,110.470	12,544.210	31,901.464	39,555.226	8,182.407	8,411.514
01/08/2016-31/08/2016	9,950.808	8,974.056	7,839.412	8,599.206	25,412.674	31,414.363	8,839.579	9,087.087
01/09/2016-30/09/2016	8,206.212	7,026.012	9,463.300	10,748.038	27,237.350	35,363.962	8,187.782	8,417.040
01/10/2016-31/10/2016	9,074.940	6,025.740	8,117.018	9,191.854	23,334.612	32,187.302	9,012.708	9,265.064
01/11/2016-30/11/2016	8,089.872	9,356.676	12,632.452	13,631.856	35,620.984	42,685.896	7,900.176	8,121.380
01/12/2016-31/12/2016	9,791.964	8,731.716	11,762.268	13,319.754	33,813.738	43,382.381	9,741.816	10,014.587
Total 2016	118,730.136	104,966.988	142,996.546	155,658.720	403,622.254	511,156.958	115,904.654	119,149
01/01/2017-31/01/2017	10,087.392	8,207.556	10,954.062	12,764.542	31,926.160	41,699.803	10,012.061	10,292.399
01/02/2017-28/02/2017	9,653.028	9,562.980	12,964.098	14,999.530	37,526.608	46,818.394	9,579.117	9,847.333
01/03/2017-31/03/2017	12,429.648	10,632.888	14,130.298	16,472.008	41,235.194	53,366.280	12,360.496	12,706.590
01/04/2017-30/04/2017	11,395.524	11,013.492	15,020.138	17,339.448	43,373.078	54,230.510	11,283.565	11,599.505
01/05/2017-31/05/2017	11,708.928	10,351.236	14,106.554	16,980.908	41,438.698	52,734.211	11,617.849	11,943.149
01/06/2017-30/06/2017	10,451.784	7,160.244	10,173.436	10,895.444	28,229.124	37,829.616	10,221.760	10,507.970
01/07/2017-31/07/2017	8,350.356	8,276.604	10,882.088	12,737.158	31,895.850	39,725.347	8,242.287	8,473.071
01/08/2017-31/08/2017	7,650.048	6,899.088	7,883.554	9,301.376	24,084.018	31,353.221	7,558.239	7,769.869
01/09/2017-30/09/2017	8,286.516	7,094.808	9,280.194	10,883.698	27,258.700	35,236.608	8,214.571	8,444.579

01/10/2017-31/10/2017	9,135.924	6,066.144	7,955.094	9,320.458	23,341.696	32,215.656	9,062.234	9,315.976
01/11/2017-30/11/2017	7,747.908	8,961.288	12,258.792	14,135.632	35,355.712	42,671.006	7,670.145	7,884.909
01/12/2017-31/12/2017	9,857.736	8,790.348	11,527.614	13,506.136	33,824.098	43,350.490	9,782.961	10,056.884
Total 2017	116,754.792	103,016.676	137,135.922	159,336.338	399,488.936	511,231.142	115,605.287	118,842
01/01/2018-31/01/2018	10,171.644	8,276.184	11,045.650	14,291.060	33,612.894	43,424.146	10,087.921	10,370.383
01/02/2018-28/02/2018	9,820.692	9,729.048	13,189.218	16,353.400	39,271.666	48,752.035	9,752.612	10,025.685
01/03/2018-31/03/2018	12,484.584	10,679.844	14,192.710	18,371.332	43,243.886	54,448.099	12,197.749	12,539.286
01/04/2018-30/04/2018	11,638.452	11,248.188	15,340.262	18,776.156	45,364.606	56,476.675	11,530.979	11,853.847
01/05/2018-31/05/2018	9,004.716	9,386.076	11,533.732	16,265.354	37,185.162	45,898.037	8,947.822	9,198.361
01/06/2018-30/06/2018	9,159.024	9,535.428	11,854.878	17,482.696	38,873.002	47,692.973	9,094.371	9,349.014
01/07/2018-31/07/2018	9,282.840	9,628.332	12,133.002	17,960.936	39,722.270	48,660.322	9,217.528	9,475.619
01/08/2018-31/08/2018	9,395.232	9,750.300	12,392.296	17,059.196	39,201.792	48,400.440	9,357.227	9,619.229
01/09/2018-30/09/2018	9,519.468	9,872.940	12,577.446	17,177.636	39,628.022	48,905.683	9,472.632	9,737.866
01/10/2018-31/10/2018	9,630.684	9,977.184	12,798.548	18,238.626	41,014.358	50,444.539	9,592.556	9,861.148
Total 2018	100,107.336	98,083.524	127,057.742	171,976.392	397,117.658	493,102.949	99,251.397	102,030
Total for whole monitoring period	684,658.968	609,993.132	814,760.646	956,742.290	2,381,496.068	3,030,597.079	676,386.340	695,322

The monthly data are shown in appendix 1.

5.2 Project Emissions

According to the ACM0002, the emission of wind power project activity is zero, i.e. PEy=0.

5.3 Leakage

According to ACM0002, the leakage of wind power project is no need to be considered.

5.4 Net GHG Emission Reductions and Removals

In accordin to the registered PD

ERy=BEy – PEy

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
01/01/ 2013-31/12/2013	121,951	0.000	0.000	121,951
01/01/2014-31/12/2014	116,816	0.000	0.000	116,816
01/01/2015-31/12/2015	116,534	0.000	0.000	116,534
01/012016-31/12/2016	119,149	0.000	0.000	119,149
01/01/2017-31/12/2017	118,842	0.000	0.000	118,842
01/01/2018 to31/10/2018	102,030	0.000	0.000	102,030
Total	695,322	0.000	0.000	695,322

According to the registered PD, the estimated average emission reductions are 111,877tCO_2. There are 2130 days in this monitoring period, from 01/01/2013 to 31/10/2018. Therefore, the estimated emission reductions for this monitoring period are 111,877/365*2130=652,871tCO_2.
The actual emission reductions in this monitoring period are 695,322tCO_2, which is 6.5% larger than the ex-ante estimation. However, this would not have impact on the additionality. As per the registered PD, when the annual electricity supply increases 12.1%, the IRR could reach the benchmark.
The main reasons for the electricity increasing are that wind resources are rich than the estimation and grid company encourages renewable energy to export to grid.

APPENDIX: < MONTHLY BASELINE EMISSIONS>

Net electricity supplied from project "P" (MWh)						
Period	Electricity generation by project "P"	Electricity generation by project "2"	Electricity generation by project "3"	Electricity generation by project "4"	Electricity generation by project "2" ,"3" and "4"	Conservative Value of $EG_{Total,y}$
	$E_{P,y}$	$E_{2,y}$	$E_{3,y}$	$E_{4,y}$	$E_{X,y}=E_{2,y} + E_{3,y}+ E_{4,y}$	
01/01/2013-31/01/2013	10,449.096	8,097.012	11,429.838	13,411.286	32,938.136	43,055.285
01/02/2013-28/02/2013	10,370.976	9,784.992	13,812.652	16,207.170	39,804.814	49,894.838
01/03/2013-31/03/2013	12,697.776	10,345.020	14,603.148	17,134.712	42,082.880	54,462.883
01/04/2013-30/04/2013	12,426.624	11,437.944	16,146.046	18,945.080	46,529.070	58,578.432
01/05/2013-31/05/2013	11,671.968	9,827.244	13,872.278	16,277.142	39,976.664	51,218.851
01/06/2013-30/06/2013	10,777.620	7,031.976	9,926.378	11,647.188	28,605.542	39,110.280
01/07/2013-31/07/2013	8,297.520	7,832.496	11,056.514	12,973.240	31,862.250	39,160.070
01/08/2013-31/08/2013	7,641.900	6,563.592	9,265.270	10,871.462	26,700.324	33,949.714
01/09/2013-30/09/2013	8,123.136	6,623.736	9,350.096	10,971.016	26,944.848	34,664.890
01/10/2013-31/10/2013	9,016.392	5,701.752	8,048.670	9,443.966	23,194.388	32,053.771
01/11/2013-30/11/2013	8,512.812	9,377.004	13,236.776	15,531.460	38,145.240	46,142.026
01/12/2013-31/12/2014	9,728.880	8,262.324	11,663.218	13,685.126	33,610.668	42,910.032
Total 2013	119,714.700	100,885.092	142,410.884	167,098.848	410,394.824	525,201.072
01/01/2014-31/01/2014	9,926.532	8,076.768	10,261.132	12,039.986	30,377.886	40,119.077
01/02/2014-28/02/2014	9,333.912	9,246.888	11,747.652	13,784.190	34,778.730	43,821.413
01/03/2014-31/03/2014	12,316.836	10,536.372	13,385.988	15,706.530	39,628.890	51,448.795
01/04/2014-30/04/2014	10,935.456	10,568.712	13,427.050	15,754.732	39,750.494	50,377.219
01/05/2014-31/05/2014	13,189.260	11,659.956	14,813.512	17,381.546	43,855.014	55,754.054
01/06/2014-30/06/2014	10,454.388	7,162.092	9,099.006	10,676.400	26,937.498	37,009.790

01/07/2014-31/07/2014	8,380.512	8,306.340	10,552.906	12,382.314	31,241.560	39,172.531
01/08/2014-31/08/2014	5,349.288	4,824.288	6,128.962	7,191.464	18,144.714	23,315.371
01/09/2014-30/09/2014	8,366.820	7,163.520	9,100.924	10,678.640	26,943.084	34,921.445
01/10/2014-31/10/2014	9,196.740	6,106.548	7,758.114	9,103.038	22,967.700	31,849.910
01/11/2014-30/11/2014	7,406.112	8,565.984	10,882.620	12,769.190	32,217.794	39,242.755
01/12/2014-31/12/2014	9,923.424	8,848.896	11,242.168	13,191.094	33,282.158	42,949.262
Total 2014	114,779.280	101,066.364	128,400.034	150,659.124	380,125.522	489,981.622
01/01/2015-31/01/2015	10,085.964	8,206.464	10,953.950	12,233.256	31,393.670	41,245.618
01/02/2015-28/02/2015	9,655.380	9,565.332	12,907.944	14,258.986	36,732.262	45,371.885
01/03/2015-31/03/2015	12,257.196	10,485.300	14,134.512	15,630.426	40,250.238	52,068.086
01/04/2015-30/04/2015	11,447.352	11,063.556	14,934.416	16,492.336	42,490.308	53,474.150
01/05/2015-31/05/2015	12,182.100	10,769.472	14,486.318	16,054.080	41,309.870	53,306.827
01/06/2015-30/06/2015	6,470.184	4,432.596	9,607.822	6,607.664	20,648.082	26,844.998
01/07/2015-31/07/2015	8,172.192	8,100.036	10,912.762	12,074.608	31,087.406	38,796.806
01/08/2015-31/08/2015	9,867.900	8,899.212	7,774.088	13,266.064	29,939.364	39,333.941
01/09/2015-30/09/2015	8,080.044	6,917.988	9,317.756	10,312.652	26,548.396	34,306.061
01/10/2015-31/10/2015	8,924.496	5,925.780	7,982.436	8,833.524	22,741.740	31,377.298
01/11/2015-30/11/2015	7,800.240	9,021.852	12,180.294	13,448.750	34,650.896	42,106.258
01/12/2015-31/12/2015	9,629.676	8,586.900	11,567.220	12,800.522	32,954.642	41,691.408
Total 2015	114,572.724	101,974.488	136,759.518	152,012.868	390,746.874	499,923.336
01/01/2016-31/01/2016	10,248.000	8,338.344	11,129.986	12,461.036	31,929.366	41,672.822
01/02/2016-28/02/2016	9,972.228	9,879.156	13,331.514	14,534.828	37,745.498	46,765.277
01/03/2016-31/03/2016	12,542.376	10,729.404	14,463.456	16,131.178	41,324.038	53,361.158
01/04/2016-30/04/2016	11,855.760	11,458.104	15,467.130	16,748.718	43,673.952	54,322.171
01/05/2016-31/05/2016	10,228.596	9,042.600	12,163.326	16,983.848	38,189.774	52,740.336
01/06/2016-30/06/2016	10,449.096	7,158.396	15,516.214	10,764.194	33,438.804	37,706.064
01/07/2016-31/07/2016	8,320.284	8,246.784	11,110.470	12,544.210	31,901.464	39,555.226
01/08/2016-31/08/2016	9,950.808	8,974.056	7,839.412	8,599.206	25,412.674	31,414.363
01/09/2016-30/09/2016	8,206.212	7,026.012	9,463.300	10,748.038	27,237.350	35,363.962
01/10/2016-31/10/2016	9,074.940	6,025.740	8,117.018	9,191.854	23,334.612	32,187.302

01/11/2016-30/11/2016	8,089.872	9,356.676	12,632.452	13,631.856	35,620.984	42,685.896
01/12/2016-31/12/2016	9,791.964	8,731.716	11,762.268	13,319.754	33,813.738	43,382.381
Total 2016	118,730.136	104,966.988	142,996.546	155,658.720	403,622.254	511,156.958
01/01/2017-31/01/2017	10,087.392	8,207.556	10,954.062	12,764.542	31,926.160	41,699.803
01/02/2017-28/02/2017	9,653.028	9,562.980	12,964.098	14,999.530	37,526.608	46,818.394
01/03/2017-31/03/2017	12,429.648	10,632.888	14,130.298	16,472.008	41,235.194	53,366.280
01/04/2017-30/04/2017	11,395.524	11,013.492	15,020.138	17,339.448	43,373.078	54,230.510
01/05/2017-31/05/2017	11,708.928	10,351.236	14,106.554	16,980.908	41,438.698	52,734.211
01/06/2017-30/06/2017	10,451.784	7,160.244	10,173.436	10,895.444	28,229.124	37,829.616
01/07/2017-31/07/2017	8,350.356	8,276.604	10,882.088	12,737.158	31,895.850	39,725.347
01/08/2017-31/08/2017	7,650.048	6,899.088	7,883.554	9,301.376	24,084.018	31,353.221
01/09/2017-30/09/2017	8,286.516	7,094.808	9,280.194	10,883.698	27,258.700	35,236.608
01/10/2017-31/10/2017	9,135.924	6,066.144	7,955.094	9,320.458	23,341.696	32,215.656
01/11/2017-30/11/2017	7,747.908	8,961.288	12,258.792	14,135.632	35,355.712	42,671.006
01/12/2017-31/12/2017	9,857.736	8,790.348	11,527.614	13,506.136	33,824.098	43,350.490
Total 2017	116,754.792	103,016.676	137,135.922	159,336.338	399,488.936	511,231.142
01/01/2018-31/01/2018	10,171.644	8,276.184	11,045.650	14,291.060	33,612.894	43,424.146
01/02/2018-28/02/2018	9,820.692	9,729.048	13,189.218	16,353.400	39,271.666	48,752.035
01/03/2018-31/03/2018	12,484.584	10,679.844	14,192.710	18,371.332	43,243.886	54,448.099
01/04/2018-30/04/2018	11,638.452	11,248.188	15,340.262	18,776.156	45,364.606	56,476.675
01/05/2018-31/05/2018	9,004.716	9,386.076	11,533.732	16,265.354	37,185.162	45,898.037
01/06/2018-30/06/2018	9,159.024	9,535.428	11,854.878	17,482.696	38,873.002	47,692.973
01/07/2018-31/07/2018	9,282.840	9,628.332	12,133.002	17,960.936	39,722.270	48,660.322
01/08/2018-31/08/2018	9,395.232	9,750.300	12,392.296	17,059.196	39,201.792	48,400.440
01/09/2018-30/09/2018	9,519.468	9,872.940	12,577.446	17,177.636	39,628.022	48,905.683
01/10/2018-31/10/2018	9,630.684	9,977.184	12,798.548	18,238.626	41,014.358	50,444.539
Total 2018	100,107.336	98,083.524	127,057.742	171,976.392	397,117.658	493,102.949
Total	684,658.968	609,993.132	814,760.646	956,742.290	2,381,496.068	3,030,597.079

The conservative value of net electricity supply to the NECPG by project "P", "2","3" and "4" (MWh)					
Period	$EG_{export,y}$ by meter	$EG_{import,y}$ by meter	$EG_{Total,y}=EG_{export,y}-EG_{import,y}$	$EG_{Total,y}$ by sale receipts	Conservative Value of $EG_{Total,y}$
01/01/2013-31/01/2013	43,085.645	30.360	43,055.285	43,055.285	43,055.285
01/02/2013-28/02/2013	49,960.046	65.208	49,894.838	49,894.838	49,894.838
01/03/2013-31/03/2013	54,599.846	136.963	54,462.883	54,462.883	54,462.883
01/04/2013-30/04/2013	58,714.022	135.590	58,578.432	58,578.432	58,578.432
01/05/2013-31/05/2013	51,273.288	54.437	51,218.851	51,218.851	51,218.851
01/06/2013-30/06/2013	39,184.834	74.554	39,110.280	39,110.280	39,110.280
01/07/2013-31/07/2013	39,327.446	167.376	39,160.070	39,160.070	39,160.070
01/08/2013-31/08/2013	34,134.514	184.800	33,949.714	33,949.714	33,949.714
01/09/2013-30/09/2013	34,858.718	193.829	34,664.890	34,664.890	34,664.890
01/10/2013-31/10/2013	32,144.006	90.235	32,053.771	32,053.771	32,053.771
01/11/2013-30/11/2013	46,275.557	133.531	46,142.026	46,142.026	46,142.026
01/12/2013-31/12/2014	43,039.709	129.677	42,910.032	42,910.032	42,910.032
Total 2013	526,597.632	1,396.560	525,201.072	525,201.072	525,201.072
01/01/2014-31/01/2014	40,171.454	52.378	40,119.077	40,119.077	40,119.077
01/02/2014-28/02/2014	43,931.712	110.299	43,821.413	43,821.413	43,821.413
01/03/2014-31/03/2014	51,568.282	119.486	51,448.795	51,448.795	51,448.795
01/04/2014-30/04/2014	50,430.653	53.434	50,377.219	50,377.219	50,377.219

01/05/2014-31/05/2014	55,862.030	107.976	55,754.054	55,754.054	55,754.054
01/06/2014-30/06/2014	37,165.603	155.813	37,009.790	37,009.790	37,009.790
01/07/2014-31/07/2014	39,385.738	213.206	39,172.531	39,172.531	39,172.531
01/08/2014-31/08/2014	23,445.259	129.888	23,315.371	23,315.371	23,315.371
01/09/2014-30/09/2014	35,020.392	98.947	34,921.445	34,921.445	34,921.445
01/10/2014-31/10/2014	31,941.994	92.083	31,849.910	31,849.910	31,849.910
01/11/2014-30/11/2014	39,361.344	118.589	39,242.755	39,242.755	39,242.755
01/12/2014-31/12/2014	43,063.099	113.837	42,949.262	42,949.262	42,949.262
Total 2014	491,347.560	1,365.936	489,981.624	489,981.624	489,981.622
01/01/2015-31/01/2015	41,270.698	25.080	41,245.618	41,245.618	41,245.618
01/02/2015-28/02/2015	45,426.163	54.278	45,371.885	45,371.885	45,371.885
01/03/2015-31/03/2015	52,189.843	121.757	52,068.086	52,068.086	52,068.086
01/04/2015-30/04/2015	53,615.918	141.768	53,474.150	53,474.150	53,474.150
01/05/2015-31/05/2015	53,381.011	74.184	53,306.827	53,306.827	53,306.827
01/06/2015-30/06/2015	26,896.003	51.005	26,844.998	26,844.998	26,844.998
01/07/2015-31/07/2015	38,987.995	191.189	38,796.806	38,796.806	38,796.806
01/08/2015-31/08/2015	39,543.557	209.616	39,333.941	39,333.941	39,333.941
01/09/2015-30/09/2015	34,514.198	208.138	34,306.061	34,306.061	34,306.061
01/10/2015-31/10/2015	31,438.598	61.301	31,377.298	31,377.298	31,377.298

01/11/2015-30/11/2015	42,237.307	131.050	42,106.258	42,106.258	42,106.258
01/12/2015-31/12/2015	41,701.704	10.296	41,691.408	41,691.408	41,691.408
Total 2015	501,202.997	1,279.661	499,923.336	499,923.336	499,923.336
01/01/2016-31/01/2016	41,722.824	50.002	41,672.822	41,672.822	41,672.822
01/02/2016-28/02/2016	46,867.128	101.851	46,765.277	46,765.277	46,765.277
01/03/2016-31/03/2016	53,487.720	126.562	53,361.158	53,361.158	53,361.158
01/04/2016-30/04/2016	54,374.918	52.747	54,322.171	54,322.171	54,322.171
01/05/2016-31/05/2016	52,880.045	139.709	52,740.336	52,740.336	52,740.336
01/06/2016-30/06/2016	37,879.142	173.078	37,706.064	37,706.064	37,706.064
01/07/2016-31/07/2016	39,918.331	363.106	39,555.226	39,555.226	39,555.226
01/08/2016-31/08/2016	31,544.832	130.469	31,414.363	31,414.363	31,414.363
01/09/2016-30/09/2016	35,471.462	107.501	35,363.962	35,363.962	35,363.962
01/10/2016-31/10/2016	32,262.490	75.187	32,187.302	32,187.302	32,187.302
01/11/2016-30/11/2016	42,805.541	119.645	42,685.896	42,685.896	42,685.896
01/12/2016-31/12/2016	43,392.466	10.085	43,382.381	43,382.381	43,382.381
Total 2016	512,606.899	1,449.941	511,156.958	511,156.958	511,156.958
01/01/2017-31/01/2017	41,722.824	23.021	41,699.803	41,699.803	41,699.803
01/02/2017-28/02/2017	46,867.128	48.734	46,818.394	46,818.394	46,818.394
01/03/2017-31/03/2017	53,487.720	121.440	53,366.280	53,366.280	53,366.280
01/04/2017-	54,374.918	144.408	54,230.510	54,230.510	54,230.510

30/04/2017					
01/05/2017-31/05/2017	52,880.045	145.834	52,734.211	52,734.211	52,734.211
01/06/2017-30/06/2017	37,879.142	49.526	37,829.616	37,829.616	37,829.616
01/07/2017-31/07/2017	39,918.331	192.984	39,725.347	39,725.347	39,725.347
01/08/2017-31/08/2017	31,544.832	191.611	31,353.221	31,353.221	31,353.221
01/09/2017-30/09/2017	35,471.462	234.854	35,236.608	35,236.608	35,236.608
01/10/2017-31/10/2017	32,262.490	46.834	32,215.656	32,215.656	32,215.656
01/11/2017-30/11/2017	42,805.541	134.534	42,671.006	42,671.006	42,671.006
01/12/2017-31/12/2017	43,392.466	41.976	43,350.490	43,350.490	43,350.490
Total 2017	512,606.899	1,375.757	511,231.142	511,231.142	511,231.142
01/01/2018-31/01/2018	43,469.818	45.672	43,424.146	43,424.146	43,424.146
01/02/2018-28/02/2018	48,845.122	93.086	48,752.035	48,752.035	48,752.035
01/03/2018-31/03/2018	54,573.341	125.242	54,448.099	54,448.099	54,448.099
01/04/2018-30/04/2018	56,538.662	61.987	56,476.675	56,476.675	56,476.675
01/05/2018-31/05/2018	46,057.334	159.298	45,898.037	45,898.037	45,898.037
01/06/2018-30/06/2018	47,942.189	249.216	47,692.973	47,692.973	47,692.973
01/07/2018-31/07/2018	48,834.245	173.923	48,660.322	48,660.322	48,660.322
01/08/2018-31/08/2018	48,510.158	109.718	48,400.440	48,400.440	48,400.440
01/09/2018-30/09/2018	49,025.275	119.592	48,905.683	48,905.683	48,905.683
01/10/2018-	50,529.230	84.691	50,444.539	50,444.539	50,444.539

31/10/2018					
Total 2018	494,325.374	1,222.426	493,102.949	493,102.949	493,102.949
Total	3,038,687.362	8,090.280	3,030,597.082	3,030,597.082	3,030,597.079