

# HANGJIN YIHEWUSU PHASE I 49.5MW WIND POWER PROJECT



Document Prepared By Climate Bridge Ltd.

Tel: +86 21 6246 2036; Fax: +86 21 2301 9950

|                      |                                                                                       |
|----------------------|---------------------------------------------------------------------------------------|
| <b>Project Title</b> | Hangjin Yihewusu Phase I 49.5MW Wind Power Project                                    |
| <b>Version</b>       | 03                                                                                    |
| <b>Date of Issue</b> | 24/09/2013                                                                            |
| <b>Prepared By</b>   | Ms. Hu Lijiao, Climate Bridge Ltd.                                                    |
| <b>Contact</b>       | Email: <a href="mailto:melinda.hu@climatebridge.com">melinda.hu@climatebridge.com</a> |

## Table of Contents

|        |                                                                       |   |
|--------|-----------------------------------------------------------------------|---|
| 1      | Project Details .....                                                 | 3 |
| 1.1    | Summary Description of the Project .....                              | 3 |
| 1.2    | Sectoral Scope and Project Type .....                                 | 3 |
| 1.3    | Project Proponent .....                                               | 3 |
| 1.4    | Other Entities Involved in the Project.....                           | 3 |
| 1.5    | Project Start Date.....                                               | 3 |
| 1.6    | Project Crediting Period .....                                        | 4 |
| 1.7    | Project Scale and Estimated GHG Emission Reductions or Removals ..... | 4 |
| 1.8    | Description of the Project Activity .....                             | 4 |
| 1.9    | Project Location .....                                                | 4 |
| 1.10   | Conditions Prior to Project Initiation .....                          | 4 |
| 1.11   | Compliance with Laws, Statutes and Other Regulatory Frameworks .....  | 5 |
| 1.12   | Ownership and Other Programs .....                                    | 5 |
| 1.12.1 | Right of Use .....                                                    | 5 |
| 1.12.2 | Emissions Trading Programs and Other Binding Limits.....              | 5 |
| 1.12.3 | Participation under Other GHG Programs.....                           | 5 |
| 1.12.4 | Other Forms of Environmental Credit.....                              | 5 |
| 1.12.5 | Projects Rejected by Other GHG Programs.....                          | 5 |
| 1.13   | Additional Information Relevant to the Project.....                   | 5 |
| 2      | Application of Methodology .....                                      | 6 |
| 2.1    | Title and Reference of Methodology .....                              | 6 |
| 2.2    | Applicability of Methodology .....                                    | 6 |
| 2.3    | Project Boundary .....                                                | 6 |
| 2.4    | Baseline Scenario .....                                               | 6 |
| 2.5    | Additionality.....                                                    | 7 |
| 2.6    | Methodology Deviations.....                                           | 7 |
| 3      | Quantification of GHG Emission Reductions and Removals .....          | 7 |
| 3.1    | Baseline Emissions.....                                               | 7 |
| 3.2    | Project Emissions .....                                               | 7 |
| 3.3    | Leakage .....                                                         | 7 |
| 3.4    | Summary of GHG Emission Reductions and Removals .....                 | 7 |
| 4      | Monitoring.....                                                       | 7 |
| 4.1    | Data and Parameters Available at Validation .....                     | 7 |
| 4.2    | Data and Parameters Monitored.....                                    | 8 |
| 4.3    | Description of the Monitoring Plan.....                               | 8 |
| 5      | Environmental Impact.....                                             | 9 |
| 6      | Stakeholder Comments .....                                            | 9 |

## 1 PROJECT DETAILS

### 1.1 Summary Description of the Project

Please refer to UNFCCC registered CDM project with Ref. No. 7221

### 1.2 Sectoral Scope and Project Type

Sectoral Scope 1: Energy industries (renewable-/non-renewable sources)

The project is not a grouped project.

### 1.3 Project Proponent

|                               |                                                                          |
|-------------------------------|--------------------------------------------------------------------------|
| <b>Roles/Responsibilities</b> | Project Owner                                                            |
| <b>Organization:</b>          | Inner Mongolia Guodian New Energy Co.,Ltd.                               |
| <b>Address:</b>               | Room 2, Guibin Building, Dianli Community, Jinchuan Development District |
| <b>Post fix/ZIP:</b>          | 010000                                                                   |
| <b>Country:</b>               | People's Republic of China                                               |
| <b>Telephone:</b>             | +86 0471 2653 722                                                        |
| <b>Fax:</b>                   | +86 0471 2653 799                                                        |

### 1.4 Other Entities Involved in the Project

|                               |                                                                                          |
|-------------------------------|------------------------------------------------------------------------------------------|
| <b>Roles/Responsibilities</b> | VER buyer                                                                                |
| <b>Organization:</b>          | Climate Bridge Ltd.                                                                      |
| <b>Address:</b>               | Walkers Chambers, 171 Main Street, PO Box 92, Road Town, Tortola, British Virgin Islands |
| <b>Post fix/ZIP:</b>          | VG1110                                                                                   |
| <b>Country:</b>               | UNITED KINGDOM                                                                           |
| <b>Telephone:</b>             | +44 207 821 1603                                                                         |
| <b>FAX:</b>                   | +44 207 100 9963                                                                         |

### 1.5 Project Start Date

The project started on 28/12/2011.

### 1.6 Project Crediting Period

The project crediting period is from 28/12/2011 to 06/09/2012 (both days included). The total crediting period is 254 days.

### 1.7 Project Scale and Estimated GHG Emission Reductions or Removals

|               |   |
|---------------|---|
| Project       | ✓ |
| Large project |   |

| Years                                  | Estimated GHG emission reductions or removals (tCO <sub>2</sub> e) |
|----------------------------------------|--------------------------------------------------------------------|
| Year 2011<br>(28/12/2011~31/12/2011)   | 1,156                                                              |
| Year 2012<br>(01/01/2012~06/09/2012)   | 72,274                                                             |
| <b>Total estimated ERs</b>             | 73,430                                                             |
| <b>Total number of crediting years</b> | 254 days                                                           |
| <b>Average annual ERs</b>              | 105,520                                                            |

### 1.8 Description of the Project Activity

Please refer to UNFCCC registered CDM project with Ref. No. 7221

### 1.9 Project Location

The project is located in Hangjin County, Ordos City, in the western Inner Mongolia of China. The geographical coordinates of the centre of the project area are E 107.5411°, N 40.0589°.

### 1.10 Conditions Prior to Project Initiation

The goal of the project is to generate electricity from wind resources by using wind power generation technology, and to deliver the electricity to the North China Power Grid. In the absence of the project, it would have resulted in equivalent power generation from grid-connected power plants and the addition of new generation sources. Therefore, the baseline scenario of the project is identified as the equivalent electricity service would be provided by the power grid.

The project is a renewable resource based on wind power project without GHG emissions during operation period. Therefore, it was confirmed that the project has not been implemented to generate GHG emissions for the purpose of their subsequent reduction, removal or destruction.

### 1.11 Compliance with Laws, Statutes and Other Regulatory Frameworks

The project complies with all Chinese relevant laws and regulations. It also obtained the approval letters from governmental authorities: Development and Reform Commission (DRC), as well as Environment Protection Agency (EPA) of Inner Mongolia Autonomous Region. The two approvals well demonstrate that local government permits the construction of the project. Consequently, the project is compliance with laws, status and other regulatory frameworks.

### 1.12 Ownership and Other Programs

#### 1.12.1 Right of Use

The business license is the evidence for right of use. The approval of FSR and EIA are evidences for legislative right. Besides, the purchasing contract of wind turbine and the power purchase agreement are the evidences for the ownership of the plant, equipment and process generating.

#### 1.12.2 Emissions Trading Programs and Other Binding Limits

The project has been registered as a CDM project on 07/09/2012, for which a renewable crediting period of  $3 \times 7$  years will be used under the CDM GHG Program. Therefore, CO<sub>2</sub> emission reductions generated by the project during the CDM crediting period will be verified as unique CERs, but not VCUs to avoid double counting. As to the project under VCS (Version.3.3), only emission reductions achieved from 28/12/2011~06/09/2012 will be considered as VCUs.

#### 1.12.3 Participation under Other GHG Programs

The project has been registered as a CDM project on 07/09/2012, and the registration number is 7221.

#### 1.12.4 Other Forms of Environmental Credit

The project participants choose a clear VCS crediting period from 28/12/2011~06/09/2012, which has not created another form of environmental credits.

#### 1.12.5 Projects Rejected by Other GHG Programs

N/A

### 1.13 Additional Information Relevant to the Project

#### Eligibility Criteria

N/A

#### Leakage Management

According to ACM0002 (Version 12.3.0), no leakage is considered.

## Commercially Sensitive Information

N/A

## Further Information

N/A

## 2 APPLICATION OF METHODOLOGY

### 2.1 Title and Reference of Methodology

The CDM consolidated baseline and monitoring methodology:

ACM0002- "Consolidated baseline methodology for grid-connected electricity generation from renewable source" (Version 12.3.0).

<http://cdm.unfccc.int/methodologies/PAMethodologies/approved.html>

### 2.2 Applicability of Methodology

Please refer to UNFCCC registered CDM project with Ref No.7221.

### 2.3 Project Boundary

| Source   |                                                                                                                                        | Gas              | Included? | Justification/Explanation                                       |
|----------|----------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------|-----------------------------------------------------------------|
| Baseline | CO <sub>2</sub> emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity | CO <sub>2</sub>  | Yes       | Main emission source                                            |
|          |                                                                                                                                        | CH <sub>4</sub>  | No        | Excluded for simplicity: This is deemed a conservative measure. |
|          |                                                                                                                                        | N <sub>2</sub> O | No        | Excluded for simplicity: This is deemed a conservative measure. |
|          |                                                                                                                                        | Other            | N/A       | N/A                                                             |
| Project  | CO <sub>2</sub> emissions of the proposed project                                                                                      | CO <sub>2</sub>  | No        | Excluded by the methodology for wind farm projects              |
|          |                                                                                                                                        | CH <sub>4</sub>  | No        | Excluded by the methodology for wind farm projects              |
|          |                                                                                                                                        | N <sub>2</sub> O | No        | Excluded by the methodology for wind farm projects              |
|          |                                                                                                                                        | Other            | N/A       | N/A                                                             |

### 2.4 Baseline Scenario

Please refer to UNFCCC registered CDM project with Ref No.7221.

## 2.5 Additionality

Please refer to UNFCCC registered CDM project with Ref No.7221.

## 2.6 Methodology Deviations

N/A

## 3 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

### 3.1 Baseline Emissions

Please refer to UNFCCC registered CDM project with Ref No.7221.

### 3.2 Project Emissions

Please refer to UNFCCC registered CDM project with Ref No.7221.

### 3.3 Leakage

Please refer to UNFCCC registered CDM project with Ref No.7221.

### 3.4 Summary of GHG Emission Reductions and Removals

| Years                                | Estimated baseline emissions or removals (tCO <sub>2</sub> e) | Estimated project emissions or removals (tCO <sub>2</sub> e) | Estimated leakage emissions (tCO <sub>2</sub> e) | Estimated net GHG emission reductions or removals (tCO <sub>2</sub> e) |
|--------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------|
| Year 2011<br>(28/12/2011~31/12/2011) | 1,156                                                         | 0                                                            | 0                                                | 1,156                                                                  |
| Year 2012<br>(01/01/2012~06/09/2012) | 72,274                                                        | 0                                                            | 0                                                | 72,274                                                                 |
| <b>Total</b>                         | 73,430                                                        | 0                                                            | 0                                                | 73,430                                                                 |

## 4 MONITORING

### 4.1 Data and Parameters Available at Validation

|                        |                                                                                   |
|------------------------|-----------------------------------------------------------------------------------|
| Data Unit / Parameter: | EF <sub>grid,CM,y</sub>                                                           |
| Data unit:             | tCO <sub>2</sub> e/MWh                                                            |
| Description:           | Baseline emission factor                                                          |
| Source of data:        | Calculated according to the procedure outlined in B.6.1 of the registered CDM PDD |

|                                                                                               |                                   |
|-----------------------------------------------------------------------------------------------|-----------------------------------|
| Value applied:                                                                                | 0.8959                            |
| Justification of choice of data or description of measurement methods and procedures applied: | Calculation of baseline emissions |
| Any comment:                                                                                  | N/A                               |

#### 4.2 Data and Parameters Monitored

|                                                                  |                                                                                                                                                            |
|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data Unit / Parameter:                                           | $EG_{facility,y}$                                                                                                                                          |
| Data unit:                                                       | MWh                                                                                                                                                        |
| Description:                                                     | Quantity of net electricity delivered to the grid by the proposed project                                                                                  |
| Source of data:                                                  | Monitoring electricity meter                                                                                                                               |
| Description of measurement methods and procedures to be applied: | Calculated based on $M_s / M_{s'}$ and $M_l$                                                                                                               |
| Frequency of monitoring/recording:                               | Continuous measurement, monthly recording                                                                                                                  |
| Value applied:                                                   | Calculated based on $M_s / M_{s'}$ and $M_l$                                                                                                               |
| Monitoring equipment:                                            | N/A                                                                                                                                                        |
| QA/QC procedures to be applied:                                  | The meters are calibrated annually by the independent qualified party.<br>Cross check measurement results with records for sold and purchased electricity. |
| Calculation method:                                              | $EG_{facility,y} = EG_{net,m_s,y} - EG_{imp,m_l,y}$                                                                                                        |
| Any comment:                                                     | N/A                                                                                                                                                        |

For more details, please refer to UNFCCC registered CDM project with Ref No.7221.

#### 4.3 Description of the Monitoring Plan

Please refer to UNFCCC registered CDM project with Ref No.7221.

However, there are some differences compared with the CDM monitoring plan in the registered PDD.

The name of the substation where the meter  $M_s$  and  $M_{s'}$  actually locate is named Kubuqi Substation, instead of Balagong Substation that was described in the registered PDD. Balagong is the name of the location. The correction does not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

The location of the meter  $M_l$  (unidirectional meter) measured the electricity imported from the 10kV backup power line for emergencies, is located in the on-site substation in the project site, instead of the Yihewusu Substation that was described in the registered PDD. The meter is owned by the grid company and this change of location of meter is beyond project proponents'

control. This change does not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

### **5 ENVIRONMENTAL IMPACT**

Please refer to UNFCCC registered CDM project with Ref No.7221.

### **6 STAKEHOLDER COMMENTS**

Please refer to UNFCCC registered CDM project with Ref No.7221.