

# Nanjing Jinling Grid Connected Natural Gas Combined Cycle Power Plant Project

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Project Title</b> | Nanjing Jinling Grid Connected Natural Gas Combined Cycle Power Plant Project                                                                                                                                                                                                                                                                                                                                                              |
| <b>Version</b>       | 01                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Date of Issue</b> | 11-05-2015                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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This document reports the emission reductions generated by Nanjing Jinling Grid Connected Natural Gas Combined Cycle Power Plant Project (hereafter referred to as the Project) which has been registered successfully as a CDM project on August 05th, 2010 with registration number of 3008. However, the project owner decided to issue emission reductions during 01/04/2011-31/21/2012 as Verified Emission Units (VCUs) under the Voluntary Carbon Standard (VCS version 3.5) after being verified.

The Project Descriptions according to VCS criteria are provided below:

## PROJECT DETAILS

### 1.1 Summary Description of the Project

### 1.2 Sectoral Scope and Project Type

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

The Project is not a Grouped project.

### 1.3 Project Proponent

*Provide contact information for the project proponent(s). Copy and paste the table as needed.*

|                   |                                                                                                 |
|-------------------|-------------------------------------------------------------------------------------------------|
| Organization name | Huaneng Nanjing Jinling Power Generation Co., Ltd                                               |
| Contact person    | Wan Yong                                                                                        |
| Title             | Assistant General Manager                                                                       |
| Address           | 8 QiXia Economy and Technique Development District<br>210034 Nanjing, Jiangsu Province<br>China |
| Telephone         | +86 (0)25 8572-8007                                                                             |
| Email             | wanyong@hpijl.com.cn                                                                            |

### 1.4 Other Entities Involved in the Project

*Provide contact information and roles/responsibilities for any other entities involved in the development of the project. Copy and paste the table as needed.*

|                     |                                                                                                                  |
|---------------------|------------------------------------------------------------------------------------------------------------------|
| Organization name   | Goldchina Consultancy International Co., Ltd.                                                                    |
| Role in the project | The buyer                                                                                                        |
| Contact person      | Dr. Zheng Zhaoning                                                                                               |
| Title               | Technical director                                                                                               |
| Address             | Room 3103, Unit 3, Building 1, Tangning One, No.16,<br>Zhongguancun East Road, Haidian District, Beijing, 100083 |
| Telephone           | 86-18010121386                                                                                                   |
| Email               | zzn@gcci-carbon.com                                                                                              |

## 1.5 Project Start Date

31/12/2006 (First 390 MW unit put into operation)

## 1.6 Project Crediting Period

The starting date of the first crediting period is 05/08/2010. Renewable crediting period (7yrs×3) is adopted by the project, so the first 7-year renewable crediting period is from 05/08/2010 to 04/08/2017.

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

The total installed capacity of the Project is 780MW. It is expected that the project activity will generate emission reductions for 1,044,328tCO<sub>2</sub>e annually in accordance with the registered CDM-PDD, which is more than 1,000,000 t tCO<sub>2</sub>e per year.

*Indicate the scale of the project (project or large project) and the estimated annual GHG emission reductions or removals for the project crediting period.*

| Project Scale |                                                         |
|---------------|---------------------------------------------------------|
| Project       |                                                         |
| Large project | Large Project<br>(1,044,328tCO <sub>2</sub> e annually) |

| Year                                   | Estimated GHG emission reductions or removals (tCO <sub>2</sub> e) |
|----------------------------------------|--------------------------------------------------------------------|
| 01/01/2010 – 31/12/2010                | 1,044,328                                                          |
| 01/01/2011 – 31/12/2011                | 1,044,328                                                          |
| 01/01/2012 – 31/12/2012                | 1,044,328                                                          |
| 01/01/2013 – 31/12/2013                | 1,044,328                                                          |
| 01/01/2014– 31/12/2014                 | 1,044,328                                                          |
| 01/01/2015 – 31/12/2015                | 1,044,328                                                          |
| 01/01/2016 – 31/12/2016                | 1,044,328                                                          |
| <b>Total estimated ERs</b>             | 7,310,296                                                          |
| <b>Total number of crediting years</b> | 7                                                                  |
| <b>Average annual ERs</b>              | 1,044,328                                                          |

## 1.8 Description of the Project Activity

## 1.9 Project Location

The Proposed Project is located at Longtan County, Qixia district of Nanjing City within Jiangsu Province, the geographical coordinates are 119°00'45" east longitude and 32°10'17" north latitude as show in the Figure 1. Close to the Yangtse River, the Proposed Project lies to the north, approximately 30 km away from the centre of Nanjing City, as shown in the figure below.

Figure 1: Geography Location of the Project



### 1.10 Conditions Prior to Project Initiation

The project is a green field project and there was no activity prior to the project initiation.

Electricity delivered to the grid by the project activity would have otherwise been generated by a 600MW sub-critical power plant. As per AM0029 “Baseline Methodology for Grid Connected Electricity Generation Plants using Natural Gas” version 03,

In order to address this uncertainty in a conservative manner, project participants shall use for  $EF_{BL,CO_2,y}$  the lowest emission factor among the following three options:

For the first crediting period:

Option 1 The build margin, calculated according to “Tool to calculate emission factor for an electricity system”; and

Option 2 The combined margin, calculated according to “Tool to calculate emission factor for an electricity system”, using a 50/50 OM/BM weight;

Option 3 The emission factor of the technology (and fuel) identified as the most likely baseline scenario under “Identification of the baseline scenario” above, and calculated as follows:

$$EF_{BL,CO_2}(tCO_2 / Mwh) = \frac{COEF_{BL} * 3.6GJ / MWh}{\eta_{BL}}$$

Where:

$COEF_{BL}$  : = The fuel emission coefficient (tCO<sub>2</sub>e/GJ), based on national average fuel data, if available, otherwise IPCC defaults can be used

$\eta_{BL}$  : = The energy efficiency of the technology, as estimated in the baseline scenario analysis above

This determination will be made once at the validation stage based on an ex ante assessment, once again at the start of each subsequent crediting period (if applicable). If either option 1 (BM) or option 2 (CM) are selected, they will be estimated ex post, as described in “Tool to calculate emission factor for an electricity system”.

The baseline CO<sub>2</sub> emission factor was calculated according the options mentioned above is as following:

| Option   | Baseline CO <sub>2</sub> Emission Factor (tCO <sub>2</sub> e/MWh) |
|----------|-------------------------------------------------------------------|
| Option 1 | 0.8030                                                            |
| Option 2 | 0.8809                                                            |
| Option 3 | 0.9322                                                            |

According to AM0029, the Project shall use the lowest  $E_{FBL,CO_2,y}$  among these three Options, thus the Option 1(BM) is selected as the  $EF_{BL,CO_2,y}$ , will be estimated ex post, as described in “Tool to calculate emission factor for an electricity system”.

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

## 1.12 Ownership and Other Programs

### 1.12.1 Right of Use

The project activity is registered as a CDM project activity under UNFCCC (Reference Number 3008) and the same title has been used for the VCS program. LOA for this project activity also gives the same title.

### 1.12.2 Emissions Trading Programs and Other Binding Limits

The project has been registered as a CDM project on 05/08/2010, for which a renewable crediting period of  $3 \times 7$  years will be used under the CDM GHG Program. The project proponent confirmed that, once emission reductions generate during 01/04/2011-31/12/2012 are issued under VCS rules, those credits will not be claimed as CERs. For the period 01/04/2011-31/07/2011, two monitoring report were published in UNFCCC website but will not be issued forever. For the period 01/08/2011-31/12/2012, CERs will be claimed as zero in the possible future CER monitoring report. And issued VCUs will be sold only once to one particular buyer.

China is Non-annex I country and there is no compliance with an emission trading program or to meet binding limits on GHG emissions for this project activity.

### 1.12.3 Other Forms of Environmental Credit

The project does not result in creation of any other form of GHG related environmental credit during the period for which VCUs are claimed.

### 1.12.4 Participation under Other GHG Programs

The Project has been registered as a CDM project with registration number 3008

### 1.12.5 Projects Rejected by Other GHG Programs

## 1.13 Additional Information Relevant to the Project

### Eligibility Criteria

No applicable

### **Leakage Management**

No applicable

### **Commercially Sensitive Information**

No applicable.

### **Further Information**