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# VALIDATION REPORT

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**Beijing Changjiang River International  
Holding**

**CHINA FUJIAN PUTIAN LNG  
GENERATION PROJECT**

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**SGS Climate Change Programme**  
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China Fujian Putian LNG Generation Project				
<b>Organisation:</b>		<b>Client:</b>		
SGS United Kingdom Limited		Beijing Changjiang River International Holding		
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<b>Summary:</b>				
<p>Beijing Changjiang River International Holding has commissioned SGS to perform the validation of the project: China Fujian Putian LNG Generation Project.</p> <p>Methodology used: AM0029</p> <p>Version and Date: Version 01, 19/05/2006</p> <p>The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.</p> <p>The report is based on the findings of document reviews, the stakeholder consultation process and responses from the project participants to the findings raised in this report.</p> <p>The report and the annexed validation describes a total of 8 findings which include:</p> <ul style="list-style-type: none"> <li>• 1 Corrective Action Requests;</li> <li>• 7 New Information Requests; and</li> </ul> <p>All of the above CARs and NIRs were successfully closed out and the project will be recommended to the CDM Executive Board with a request for registration.</p>				
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CDM Validation				
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## Abbreviations

BM	Build Margin
CAR	Corrective Action Request
CCGT	Combined Cycle Gas Turbine
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CM	Combined Margin
COP/MOP	Conference of Parties / Meeting of Parties
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board of the clean development mechanism
ECPG	East China Power Grid
EIA	Environmental Impact Assessment
EPA	Environmental Protection Authority
FSR	Feasibility Study Report
GHG	Greenhouse gas
IETA	International Emission Trading Association
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
LNG	Liquefied Natural Gas
LoA	Letter of Approval
MP	Monitoring Plan
MW	Mega Watt
NG	Natural Gas
NGO	Non Governmental Organization
NIR	New Information Request
OM	Operating Margin
PDD	Project Design Document
SGS	Société Générale de Surveillance
UNFCCC	United Nations Framework Convention on Climate Change

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## 1. Validation Opinion

SGS United Kingdom Ltd has been contracted by Beijing Changjiang River International Holding to perform a validation of the project: China Fujian Putian LNG Generation Project in P. R. China.

The Validation was performed in accordance with the UNFCCC criteria for the Clean Development Mechanism (CDM) and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

SGS reviewed of the project design documentation, using a risk based approach and conducted follow-up interviews.

By operating this grid connected natural gas based combined cycle gas turbine (CCGT) power plant with the total installed capacity of 1,528 MW (382MW×4), the project activity will result in reductions of greenhouse gas emissions that are real, measurable and give long-term benefits to the mitigation of climate change.

In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project correctly applies methodology AM0029 version 01. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The total emission reductions from the project are estimated to be 19,402,780t of CO<sub>2</sub>e over a 7 year crediting period, averaging 2,771,826t of CO<sub>2</sub>e annually. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given the underlying assumptions do not change.

The project will hence be recommended by SGS for registration with the UNFCCC.

**Signed on Behalf of the Validation Body by Authorized Signatory**



Signature:

Name: Siddharth Yadav

Date: 11<sup>th</sup> November 2008

## 2. Introduction

### 2.1 Objective

Beijing Changjiang River International Holding has commissioned SGS to perform the validation of the project: China Fujian Putian LNG Generation Project with regard to the relevant requirements for CDM project activities. The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, the monitoring plan (MP) and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Certified Emission Reduction (CER). UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities and related decisions by the COP/MOP and the CDM Executive Board.

### 2.2 Scope

The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

### 2.3 GHG Project Description

The project activity proposes to construct a grid connected natural gas based combined cycle gas turbine (CCGT) power plant consisting of 4 generation units. The nominal power of each generating unit is 350MW. However, according to the Feasibility Study Report (FSR), with consideration to local environmental conditions, especially ambient temperature, each unit can reach 382MW as its actual average output power. Thus actually, total installed capacity of this project is 1,528 MW (382MW×4).

The plant is located in Dongzhuang Town, Xiuyu District of Putian City, Fujian Province, People's Republic of China. The expected operational lifetime of the project activity is 21 years. The starting date of the project activity is 15/03/2006, which is the day on which the project construction started..

Baseline Scenario:

According to AM0029 Version 01, the most economically attractive baseline scenario alternative out of all the plausible baseline scenarios can be considered as the most plausible baseline scenario, using the levelized generating cost analysis plus the sensitivity analysis. Thus "Power generation using sub critical coal-fired power technology with installed capacity of 2× 600 MW" is selected as the most plausible baseline scenario.

And in order to address the uncertainty relating to which type of other power generation is substituted by the power generation of the proposed project in a conservative manner, according to AM0029 Version 01, the lowest emission factor among the three appointed options, namely emission factor of Build Margin (0.8672 tCO<sub>2</sub>/MWh), shall be used as the baseline emission factor, and will be ex-post calculated annually.

Project Scenario:

The proposed project consists of 4 generating units, each of which includes one combined cycle, one gas turbine, one heat recovery steam generator, one steam turbine, one power generator, and one 500kV transmission line for power evacuation. Liquefied natural gas (LNG), as the unique fuel consumed in this project, will be imported from Indonesia Tangguh Gas Field. No other startup fuel or auxiliary fuel will be applied in this project.

It is estimated that, being in 4,000 operation hours one year, the project will annually generate about 6,112GWh electricity. After being stepped up to 550kV by Putian Substation, generated electricity will be

delivered to East China Power Grid (ECPG). As a thermal power plant using clean fuel / low carbon intensity fuel, this project can reduce greenhouse gases (GHGs) emissions when compared with emission level of ECPG, the baseline scenario, to about 2,771,826tCO<sub>2</sub>e annually.

#### Leakage:

According to AM0029 Version 01, Leakage may result from fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of fossil fuels outside of the project boundary. This includes:

Fugitive CH<sub>4</sub> emissions associated with fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of natural gas used in the project plant and fossil fuels used in the grid in the absence of the project activity;

CO<sub>2</sub> emissions from fuel combustion/ electricity consumption associated with the liquefaction, transportation, re-gasification and compression into a natural gas transmission or distribution system in the case LNG is used in the project plant.

The calculated result of total net leakage effects is negative. Thus the leakage can be assumed zero, as indicated in AM0029 Version 01.

#### Environmental & Social Impacts:

As required by the Environmental Protection Law of the People's Republic of China, before project construction, an Environment Impact Assessment (EIA) was carried out by a qualified entity, China Global Engineering Company, and was approved by the State Environmental Protection Administration of China on 06/12/2004.

According to the EIA, in the construction phase the project will impact the environment in ecosystem and by releasing wastewater, dust, noise and solid waste, and in the project operation phase, the project will impact the environment in air and by releasing wastewater and noise. And the EIA drew a conclusion that environmental impacts of the proposed project are not considered significant.

## 2.4 The Names and Roles of the Validation Team Members

Name	Role	Affiliate
Elton Chen Wu	Lead Assessor	SGS China
Sarah Ruan Sha	Assessor	SGS China
Niclo Deng Wei	Assessor (Trainee)	SGS China
Simon Zhao Xinguang	Assessor (Trainee)	SGS China

Statement of Competence of team members are attached at Annex 4.

### 3. Methodology

#### 3.1 Review of CDM-PDD and Additional Documentation

The validation is performed primarily as a document review of the publicly available project documents. The assessment is performed by trained assessors using a validation protocol.

A site visit is usually required to verify assumptions in the baseline.

A site visit was performed on 07/06/2007 and the results are summarized in separate checklist as Annex2.

Local staff was also involved to confirm statements in the PDD through direct interview with key stakeholders (including the project developers and representatives of local residents in the host country).

#### 3.2 Use of the Validation Protocol

The validation protocol used for the assessment is partly based on the templates of the IETA / World Bank Validation and Verification Manual and partly on the experience of SGS with the validation of CDM projects. It serves the following purposes:

- it organises, details and clarifies the requirements the project is expected to meet; and
- it documents both how a particular requirement has been validated and the result of the validation.

The validation protocol consists of several tables. The different columns in these tables are described below.

Checklist Question	Ref ID	Means of Verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements are linked to checklist questions the project should meet.	Lists any references and sources used in the validation process. Full details are provided in the table at the bottom of the checklist.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (Y), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). New Information Request (NIR) is used when the validation team has identified a need for further clarification.

The completed validation protocol for this project is attached as Annex A.1 to this report

#### 3.3 Findings

As an outcome of the validation process, the team can raise different types of findings

In general, where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **New Information Request (NIR)** specifying what additional information is required.

Where a non-conformance arises the Assessor shall raise a **Corrective Action Request (CAR)**. A CAR is issued, where:

- mistakes have been made with a direct influence on project results;
- validation protocol requirements have not been met; or
- there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be verified.



The validation process may be halted until this information has been made available to the assessors' satisfaction. Failure to address a NIR may result in a CAR. Information or clarifications provided as a result of an NIR may also lead to a CAR.

**Observations** may be raised which are for the benefit of future projects and future verification or validation actors. These have no impact upon the completion of the validation or verification activity.

Corrective Action Requests and New Information Requests are raised in the draft validation protocol and detailed in a separate form (Annex A.2). In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to NIRs and Observations.

### **3.4 Internal Quality Control**

Following the completion of the assessment process and a recommendation by the Assessment team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

## 4. Validation Findings

### 4.1 Participation Requirements

The host Party for this project is People's Republic of China. P. R. China ratified the Kyoto Protocol on 30/08/2002 and appointed a DNA. A LoA from Chinese DNA was issued on 13/07/2007.

The Annex 1 Party in this project is Japan. Japan ratified the Kyoto Protocol on 04/06/2002 and appointed a DNA. A LoA from Japanese DNA was issued on 27/07/2007.

### 4.2 Project Design

The project activity proposes to construct a grid connected natural gas based combined cycle gas turbine (CCGT) power plant consisting of 4 generation units. The nominal power of each generating unit is 350MW. However, according to the Feasibility Study Report (FSR), with consideration to local environmental conditions, especially ambient temperature, each unit can reach 382MW as its actual average output power. Thus actually, total installed capacity of this project is 1,528 MW (382MW×4).

The timeline of the proposed project activity has been provided in the PDD version 05.

The order to commence the project was issued on 14/03/2006 and the project started construction on 15/03/2006. Following the clarification made at the EB41 meeting about the start date of a CDM project activity, which is the earliest date at which either the implementation or construction or real action of a project activity begins, the day on which the project started construction is regarded as the start date of the project activity.

Before the project started construction, the construction office made a decision to carry out CDM study research on 25/06/2004.

On 16/05/2005, the project owner Commissioned Fujian Electric Power Survey & Design Institute to do the CDM consultation.

The Special Report on the Economic Appraisal of Introducing the CDM to LNG Power Plant(report no.: 35-F086K2-E02) was issued by Fujian Electric Power Survey & Design Institute in October, 2005.

On 24/01/2006, Board of Directors decided to start the CDM project and designated the person and apartment in charge.

The project owner signed the CDM consulting service contract with CRIH on 20/02/2006 (Contract no.: ZHMQD/CON/SER-018).

The PP has demonstrated that CDM was seriously considered in the decision to implement the project activity by providing evidences mentioned above.

After the project started construction, Major Equipment Purchase Contract (Contract No.: 06HT10500000216) was signed between Dongfang Electric Corporation and the project owner on 31/08/2006.

The ERPA was signed between the project owner and the carbon credit buyer on 10/01/2007.

The validation service contract was signed with SGS on 28/04/2007.

The project participants have demonstrated that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation by providing reliable evidences mentioned above.

The proposed project consists of 4 generating units, each of which includes one combined cycle, one gas turbine, one heat recovery steam generator, one steam turbine, one power generator, and one 500kV transmission line for power evacuation. Liquefied natural gas (LNG), as the unique fuel consumed in this project, will be imported from Indonesia Tangguh Gas Field. No other start-up fuel or auxiliary fuel will be applied in this project.

It is estimated that, being in 4,000 operation hours one year, the project will annually generate about 6,112GWh electricity. After being stepped up to 550kV by Putian Substation, generated electricity will be delivered to East China Power Grid (ECPG). As a thermal power plant using clean fuel / low carbon intensity fuel, this project can reduce greenhouse gases (GHGs) emissions when compared with emission level of ECPG, the baseline scenario, to about 2,771,826tCO<sub>2</sub>e annually.

### **4.3 Eligibility as a Small Scale Project**

N/A

### **4.4 Baseline Selection and Additionality**

The project employs the approved baseline methodology AM0029 “Grid Connected Electricity Generation Plants using Natural Gas” (Version 01, dated on 19/05/2006).

To identify the baseline scenario, the project participant (PP) successively followed the two steps prescribed in AM0029 Version 01, they are, step 1 “Identify plausible baseline scenarios”, and step 2 “Identify the economically most attractive baseline scenario alternative”.

In the step 1, the PP identified all realistic and credible alternative scenario(s) to the project activity, and then eliminated those limited by low heat efficiency in technology, those limited by low resource exploitation potential, those cannot deliver comparable outputs, services or function as the proposed project, and those limited by unrealistic high cost. The plausible alternative scenario(s) are identified as follows:

- Alternative 1: The project activity not implemented as a CDM project;
- Alternative 6a: Power generation using sub critical coal-fired power technology with installed capacity of 4×300 MW;
- Alternative 6b: Power generation using sub critical coal-fired power technology with installed capacity of 2×600 MW;
- Alternative 6c: Power generation using super critical coal-fired power technology with installed capacity of 2×600 MW.

Then basic levelized cost methodology in the “Appendix 5 Cost Estimation Methodology of Projected Costs of Generating Electricity, Update 2005 (OECD 2005)” is applied to pick out the alternative which has the lowest levelized cost of electricity production. Being proved always economically most attractive under a sensitivity analysis, alternative 6b “Power generation using sub critical coal-fired power technology with installed capacity of 2× 600 MW” is selected as the baseline scenario to the project activity, as what is directed by AM0029 Version 01. NIR4 was raised to verify whether data used in calculating levelized generating costs are derived from official sources. After related source of those data having been provided by the PP, levelized generating costs were proved to be calculated using authentic official data. Finding of this part in NIR4 was closed out.

The additionality of the project activity has also been properly demonstrated following the steps stated in AM0029 Version 01 as below:

- Step 1: Benchmark investment analysis
- Step 2: Common practice analysis
- Step 3: Impact of CDM registration

According to the Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects, an IRR of 8% of total investment of a project is regarded as the benchmark of total investment in the Power Sector of China. According to the IRR calculating spreadsheet, the total investment IRR without CDM revenue is estimated to 6.69%, while it is 9.14% with CDM revenue. This shows that the project is not financially attractive in absence of CDM benefits.

A sensitivity analysis has been made within the fluctuation range of ±10% of following three crucial parameters:

- Total investment

- Price of natural gas
- Bus-bar tariff

It can be concluded that the bus-bar tariff and the price of natural gas have a stronger impact on project financial performance:

However the PP points out that the bus-bar tariff of the proposed project cannot be increased further. NIR4 was raised to request detailed explanation and related supporting materials from PP. And the PP indicates in the PDD that the bus-bar tariff of the proposed project has to compete in on-grid bidding in power market with all thermal power generation enterprises serving ECPG, without enjoying any preferential price; besides, this bus-bar tariff is already much higher than the pole bus-bar tariff of thermal power and average tariff of coal-fired power within Fujian Province. Nevertheless, a research shows on-grid bidding system depresses power tariff and result in drastic competition in power market; thus the high bus-bar tariff of the proposed project can hardly increase further. Related supporting materials provided by the PP have been reviewed and verified by SGS assessors. Finding of this part in NIR4 was closed out.

The natural gas price of the proposed project is based on the striking price of 25 U.S. dollars per barrel negotiated between China National Offshore Oil Corp Fujian Natural Gas Co., Ltd. and Indonesian Tangguh Gas Field. However a report announced by National Development and Reform Commission (NDRC) indicates that the striking price has already risen to 38 U.S. dollars per barrel in June 2006. Thus fall of the natural gas price of the proposed project can hardly happen due to actual situation. Related supporting materials provided by the PP have been reviewed and verified by SGS assessors.

NIR3 was raised to ask for source of information that can ensure that the IRR calculation in the PDD is reliable. The project participant indicate that except for the income tax rate, all the parameters used in calculating the IRR are derived from the Feasibility Study Report; this Feasibility Study Report was compiled by a qualified entity, namely Electric Power Survey & Design Institute of Fujian Province, in November 2004, and approved by National Development and Reform Commission on 20/12/2005; and the income tax rate of the project is adjusted to 25% since the Fifth Session of the Tenth National People's Congress. All related materials having been submitted by the project participant and checked by SGS assessor, NIR3 was closed out.

In accordance with the guidance of EB38 paragraph 54(c), the following was done to confirm that the input values from the FSR are valid and applicable at the time of the investment decision:

- 1) The fixed asset investment unit cost of the proposed CDM project activity is RMB 3,287.64/KW(fixed asset investment of 5,023.51Million RMB on page 16 of the PDD version 04/installed capacity of 1,528MW on page 19 of the PDD version 04), comparable with the reference fixed asset investment unit cost for installing 2 new 300MW-grade imported Gas-Steam Combined Cycle Units (Grade 9F, one to one), which is RMB 3,289.00/KW with 4.5% for Domestic Reserve Rate on page 122 of the Reference Index of the Limit Design Cost for Thermal Power Generation, Transmission and Transformation Projects authorized by the Electric Power Planning and Design General Institute(Annex 1b) and RMB 3,345/KW with 8% for Domestic Reserve Rate. Therefore, DOE judged that the fixed asset investment unit cost was appropriately estimated and was conservative.
- 2) The estimated price of natural gas including VAT is 1.411RMB/m<sup>3</sup> on page 20 of the PDD. From the document of Price Bureau of Fujian Province dated 04/09/2008, the approved natural gas price for natural gas power plants is 1.661RMB/ m<sup>3</sup>. The price of natural gas used in the IRR calculation in the PDD is more conservative.
- 3) According to the Power Purchase Agreement signed between the project owner and the grid company, the bus-bar tariff will be determined by the local pricing bureau. Considering the FSR has been approved by the NDRC, the bus-bar tariff used in the PDD(FSR) has been accepted by the NDRC and the bus-bar tariff is valid and applicable at the time of the investment decision.
- 4) According to the information by the Bureau of Labour and Social Security of Fujian Province, the actual average enterprise wage was increased by 6~9% in 2004 and in 2006. Therefore, the O&M cost used in the FSR was conservative and applicable as mentioned in the project participant's response.

The FSR for a project is an official document prepared by an independent third party. FSR will be checked by the relevant authorities before it is approved. The NDRC of China approved the FSR for the project on 20/12/2005 and the project started construction on 15/03/2006. It has been validated that the period of time

between the finalization of the FSR and the investment decision is sufficiently short for us to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed and the input values are valid and applicable at the time of the investment decision.

According to the PP, in the ECPG area, there are 8 other CCGT projects. NIR4 was raised to request official information source of these CCGT projects. The PP provided official information reference to SGS assessors and all findings in NIR4 were closed out. At the same time the PP indicates in the PDD that, one of these CCGT power plants is totally foreign invested. According to the Measures for the Management of CDM Project Activities issued by Chinese DNA, this exclusively foreign-owned project cannot apply for CDM registration to conquer the possible barrier. However, it enjoys favourable income tax exemption; tariff exemption and Value Added Tax (VAT) return policy. All the other 7 projects face similar financial barrier as the proposed project and are currently in CDM application process. Related supporting information source about income tax exemption, tariff exemption and Value Added Tax (VAT) return policy have been provided by the PP and was confirmed by the validation team.

The above discussion has been confirmed by the common practice analysis in the PDDs of the four projects that have been registered as CDM project activities (Yuyao Electricity Generation Project using Natural Gas (Ref 1227), Zhejiang Provincial Energy Group Zhenhai Natural Gas Power Generation Co., Ltd's NG Power Generation Project (Ref 1344), Xiaoshan Power Plant's NG Power Generation Project of Zhejiang Southeast Electric Power Co., Ltd. (Ref 1343) and Shanghai Baoshan Grid Connected Natural Gas Combined Cycle Power Plant Project (Ref 1381)).

The above process of verifying the investment analysis indicates that the project is not financially attractive without CDM benefits based on the assumptions in the FSR. And the sensitivity analysis to the IRR shows that with reasonable variations in critical assumptions, the IRR of the project activity remains lower than the benchmark. That is, the result of investment analysis based on the assumptions in the FSR is valid with these variations. And further process of spot check of actual financial cash flow shows that the proposed project has a less financially attractive condition even than what is assumed in the FSR. Besides, the project is an uncommon practice without CDM support. Therefore, this project is not included in baseline scenario and is additional.

#### **4.5 Application of Baseline Methodology and Calculation of Emission Factors**

The project activity meets all the applicability conditions defined in the approved methodology AM0029 Version 01 for the following reasons:

- The project activity is the construction and operation of a new natural gas fired grid-connect electricity generation plant;
- The geographical/physical boundaries of the baseline grid (ECPG) can be clearly identified and information pertaining to the grid and estimating baseline emissions is publicly available;
- Natural gas is sufficiently available in the region where the project is located. NIR1 was raised to request analysis, supporting documents and quantitative information that indicates whether future natural-gas-based power capacity additions, comparable in size to the project activity, will be constrained by the proposed project. Illustration has been made by the Project Participant (PP) in the PDD that the gas supplier, Tangguh gas field has a capacity to produce 7.6 million tons per annual (mtpa) of LNG and will supply 2.6 mtpa of LNG to Fujian Province in current stage; and a long-term "Take or pay" natural gas purchase and sales contract has been signed by the PP and the domestic LNG distributor, which will expand its capacity to supply 7 mtpa LNG to Fujian Province in the near future; thus the natural gas consumed by the proposed project (0.81 mtpa) just accounts for small part of the total natural gas supply capacity; and the project activity doesn't constrain future capacity additions of LNG power plants comparable in size to the project activity in the region. Related supporting materials provided by the PP have been reviewed and verified by SGS assessor. Therefore NIR1 was closed out.

The project is a newly built CCGT Power Plant and will supply generated electricity to ECPG. The boundary of ECPG can be clearly identified in line with ACM0002 Version 06. CAR1 was raised because ACM0002 Version 06 is applied but was not indicated as the approved methodology upon which the PDD is draws. After related modification having been made to the PDD Section B.1, CAR1 was closed out.

According Methodology AM0029 Version 01, in order to address the uncertainty relating to which type of other power generation is substituted by the power generation of the proposed project in a conservative

manner, project participants shall use for baseline CO<sub>2</sub> emission factor ( $EF_{BL, CO_2, y}$ ) the lowest emission factor among the following three options:

For the first crediting period,

- Option 1: The build margin, calculated according to ACM0002 Version 06;
- Option 2: The combined margin, calculated according to ACM0002 Version 06, 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 using following formula:

$$BE_{BL, CO_2}(tCO_2 / MWh) = \frac{COEF_{BL}}{\eta_{BL}} \times 3.6GJ / MWh$$

Where,

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

$\eta_{BL}$  is the energy efficiency of the technology, as estimated in the baseline scenario analysis above.

For Option 1 and 2, Build Margin emission factor ( $EF_{BM}$ ) and Operating Margin emission factor ( $EF_{OM}$ ) were calculated according to ACM0002 Version 06 using the most recent data and relevant notification of Chinese DNA<sup>1, 2</sup>.

$EF_{BM}$  is calculated *ex ante* as the share of thermal power newly added installed capacity to total newly added installed capacity that comprise more than 20% of the year 2005 installed capacity of ECPG; for each fuel type the efficiency level of the best technology commercially available in China, as a conservative proxy, is employed by the PP to estimate the BM.  $EF_{BM}$  of ECPG is calculated as 0.8672tCO<sub>2</sub>/MWh.

$EF_{OM}$  is calculated as the generation-weighted average emissions per electricity unit (tCO<sub>2</sub>/MWh) of all generating sources serving ECPG, excluding those low-operating cost and must-run power plants; simple OM approach is applied due to lack of plant specific dispatch data and minor proportion of low-cost/must-run power sources in ECPG.  $EF_{OM}$  of ECPG is calculated as 0.9421tCO<sub>2</sub>/MWh.

And Combined Margin emission factor ( $EF_{CM}$ ) is calculated as 0.9046 tCO<sub>2</sub>/MWh using a 50:50 weighted average of  $EF_{BM}$  and  $EF_{OM}$ .

For Option 3, the technology (and fuel) that is identified as the most possible baseline scenario of the proposed project is coal. And the most possible baseline emission factor is calculated as 0.9508tCO<sub>2</sub>/MWh, using the data of the most advanced business technology efficiency level of coal- fired plant in China published by Chinese DNA<sup>3</sup>.

Thus the lowest emission factor among the three appointed options, namely emission factor of Build Margin (0.8672 tCO<sub>2</sub>/MWh), shall be used as the baseline emission factor, and will be ex-post calculated and updated annually, as indicated in AM0029 Version 01. Relevant calculating spreadsheet provided by the PP has been reviewed and verified by SGS assessor. NIR2 was raised for absence of the indication that the baseline emission factor is determined ex post and will be updated annually. After related description having been supplemented to the PDD Section B.6.1, NIR2 was closed out.

#### 4.6 Application of Monitoring Methodology and Monitoring Plan

The PDD provides for monitoring of all applicable parameters of project emissions and baseline emissions in accordance with AM0029 Version01 and ACM0002 Version 06. According to Section B.7.1 of the PDD, the data and parameters that will be monitored are as follows:

<sup>1</sup> <http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1374.pdf>

<sup>2</sup> <http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1358.xls>

<sup>3</sup> <http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1374.pdf>



$FC_{NG, y}$ , annual quantity of natural gas consumed by the project activity;

$NCV_{\text{natural gas}}$ , net calorific value of natural gas consumed by the project activity;

$EF_{CO_2, \text{natural gas}, y}$ , emission factor of natural gas consumed by the project activity;

$EG_y$ , electricity supplied to ECPG by the project activity;

$F_{i, j, y}$ , the total amount of fuel  $i$  consumed by Province  $j$  in ECPG for power generation in the year  $y$  in which actual project generation and associated emissions reductions occur;

$EF_{CO_2, i}$ ,  $CO_2$  emission factor per energy unit of fuel  $i$ ;

$NCV_i$ , the net calorific value (energy content) per mass or volume unit of a fuel  $i$ ;

$OXID_i$ , the oxidation factor of the fuel  $i$ ;

$\eta_{\text{Coal}, \text{Adv}}$ , the efficiency level of the best technology for coal fired power plant commercially available in China;

$\eta_{\text{Oil}, \text{Adv}}$ , the efficiency level of the best technology for oil fired power plants commercially available in China;

$\eta_{\text{Gas}, \text{Adv}}$ , the efficiency level of the best technology for gas fired power plants commercially available in China;

Installed Capacity<sub>thermal power, y</sub>, the installed capacity of thermal power in ECPG in year  $y$  in which actual project generation and associated emissions reductions occur;

Installed Capacity<sub>total, y</sub>, the total installed capacity of ECPG in year  $y$  in which actual project generation and associated emissions reductions occur;

$GWP_{CH_4}$ , global warming potential of methane valid for the relevant commitment period; it is fixed for the first commitment period, and shall be updated for the subsequent commitment periods according to any future COP/MOP decisions.

Details about above data and parameters are listed in the PDD Section B.7.1.

NIR5 was raised because installed capacity of thermal power serving ECPG and Global Warming Potential (GWP) of methane were absent in the PDD Section B.7.1. After these parameters having been added in the PDD Section B.7.1, NIR5 was closed out.

NIR6 was raised for the absence of procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions. Later it is described in the PDD Section B.7.2 that, the natural gas Distributed Control System (DSC) will be established with leakage detector, alarm system and safety shut off valve; in the event of emergency, the detector can immediately check out the leakage point, and the alarm system issues alarm signal and reports to control centre; meanwhile, natural gas supply can be automatically shut off by safety shut off valve; after receiving the alarm, operators will immediately arrive, and check the reason and make the solution; besides, the operators responsible for DSC should make daily inspection and repair, record daily operation, and find out and deal with hidden troubles in time. Thus procedures have been clearly identified for emergencies of unintended emissions. NIR6 is closed out.

#### 4.7 Choice of the Crediting Period

The project has selected  $3 \times 7$  years as its renewable crediting period. According to Section C.2.1.1 of the PDD, the starting date of the first crediting period is 01/10/2008.

#### 4.8 Environmental Impacts

As required by the Environmental Protection Law of the People's Republic of China, before project construction, an Environment Impact Assessment (EIA) was carried out by a qualified entity, China Global Engineering Company, and was approved by must be approved by the State Environmental Protection Administration of China on 06/12/2004.

According to the EIA, in the construction phase the project will impact the environment in ecosystem and by releasing wastewater, dust, noise and solid waste, and in the project operation phase, the project will impact the environment in air and by releasing wastewater and noise.

The adverse impact during construction stage on the vegetation and animals inhabiting there can be considered minimal due to the project locating in a wasteland; several dustproof measures will be employed in accordance with Environment Air Quality Standard (GB3095-1996) grade II; main air pollutant in the operation phase, NO<sub>x</sub> emission, will be drastically reduced by adopting dry-type low NO<sub>x</sub> emission combustion system and will meet the requirement of Emission Standard of Air pollutants for fossil power plant (GB13223-1996) and Emission Standard of Air pollutants coal-burning oil-burning gas fired boilers (GB13271-2001); all the wastewater in the two phases will be treated to meet Integrated Wastewater Discharge Standard (GB8978-1996) and Sea Water Standard (GB3097-1997); noise will be strictly controlled in accordance with Standard of Noise at Boundary of Industrial Enterprises (GB12348-90) III and Standard of Environmental Noise of Urban Area (GB3096-1993) III; solid waste will be disposed by designated entity. Thus the EIA drew a conclusion that environmental impacts of the proposed project are not considered significant. Copy of relative pages in EIA was provided by the PP and was reviewed and verified by SGS assessors.

#### **4.9 Local Stakeholder Comments**

According to the PP, notices were put around project site to invite local people to participate in a project specified survey starting from 18/02/2005; in this survey 50 copies of questionnaires were distributed to the local residents who might be affected by the project activity; distributed questionnaires have been received at 100% rate of return; the result shows that all local being surveyed support the proposed project.

NIR7 was raised to request copy of original record of the stakeholder consultation and an attendee list with contact information. The media used to invite comments by local stakeholders was also inquired. Signatures of surveyed locals and their contact information have been provided by the PP. Spot check has been made upon returned questionnaires by SGS assessors during the site visit. The PP indicates in the PDD that way to invite stakeholders' comments is through putting up notice in the village; and the photos at that time were also provided. NIR7 was closed out.



## **5. Comments by Parties, Stakeholders and NGOs**

In accordance with sub-paragraphs 40 (b) and (c) of the CDM modalities and procedures, the project design document of a proposed CDM project activity shall be made publicly available and the DOE shall invite comments on the validation requirements from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available. This chapter describes this process for this project.

### **5.1 Description of How and When the PDD was Made Publicly Available**

The Project Design Document for this project was made available on the SGS website <http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=263> and was open for comments from 01/05/2007 until 30/05/2007. Comments were invited through the UNFCCC CDM homepage.

### **5.2 Compilation of all Comments Received**

No comment is received.

### **5.3 Explanation of How Comments Have Been Taken into Account**

No comment is received.

## 6. List of Persons Interviewed

Date	Name	Position	Short Description of Subject Discussed
07/06/2007	Ms. Xiao Xiaomin	Vice President and Engineer CNOOC Fujian Gas Power Co., Ltd.	for local residents comments
07/06/2007	Mr. Yang Shunhu	Deputy Chief Engineer and Manager of Operation Preparation Dept. CNOOC Fujian Gas Power Co., Ltd.	for local residents comments
07/06/2007	Mr. Xie Liguu	Manager of Engineering Dept. CNOOC Fujian Gas Power Co., Ltd.	for local residents comments
07/06/2007	Mr. Huang Cunwang	HSE Senior Engineer CNOOC Fujian Gas Power Co., Ltd.	for local residents comments
07/06/2007	Mr. Ryutaro Nishio	Assistant Manager, China Emission Reduction Business Unit, New Energy & Environment Business Div., Innovation Business Group Mitsubishi Corporation	
07/06/2007	Mr. Yang Shutong	Environment & Infrastructure Dept., Machinery Business Div. Mitsubishi Corporation China Commerce Co., Ltd.	
07/06/2007	Mr. Kang Zheng	President Beijing Changjiang River International Holding	For all information related to PDD
07/06/2007	Mr. Ge Youchun	Project Coordinator and Professor Beijing Changjiang River International Holding	For all information related to PDD

## 7. Document References

Category 1 Documents (documents provided by the Client that relate directly to the GHG components of the project, (i.e. the CDM Project Design Document, confirmation by the host Party on contribution to sustainable development and written approval of voluntary participation from the designated national authority):

- /1/ PDD, the following versions have been reviewed,
  - Version 01, dated 22/11/2006;
  - Version 02, dated 12/12/2006;
  - Version 03, dated 26/03/2007, published for the international stakeholder consultation;
  - Version 04, dated 18/02/2008;
  - Version 05, dated 09/11/2008..
- /2/ AM0029 Version 01, dated 19/05/2006  
<http://cdm.unfccc.int/methodologies/PAmethodologies/approved.html>
- /3/ ACM0002 Version 06, dated 19/05/2006  
<http://cdm.unfccc.int/methodologies/PAmethodologies/approved.html>
- /4/ Tool for the demonstration and assessment of additionality Version 04  
[http://cdm.unfccc.int/methodologies/PAmethodologies/AdditionalityTools/Additionality\\_tool.pdf](http://cdm.unfccc.int/methodologies/PAmethodologies/AdditionalityTools/Additionality_tool.pdf)
- /5/ Letter of Approval from Chinese DNA issued on 13/07/2007
- /6/ Letter of Approval from Japanese DNA issued on 27/07/2007

Category 2 Documents (background documents used to check project assumptions and confirm the validity of information given in the Category 1 documents and in validation interviews):

- /7/ Emission Reduction Spreadsheet
- /8/ IRR calculation spreadsheet
- /9/ Levelised cost calculation spreadsheet
- /10/ Environmental Impact Assessment (EIA) of China Fujian Putian LNG Generation Project, compiled in September 2003
- /11/ Approval of EIA from State Environmental Protection Administration of China, dated 06/12/2004
- /12/ Feasibility Study Report (FSR) of China Fujian Putian LNG Generation Project, compiled in November 2004
- /13/ Clarification issued by Fujian Development & Reform Commission of construction of the new Fujian Putian LNG Power Plant having been approved by National Development & Reform Commission on 20/12/2005
- /14/ Board Resolution reflecting consideration of CDM benefit, dated 25/06/2004
- /15/ Letter of Approval of Sufficient Gas supply for the project, dated May 2007
- /16/ Statements of local stakeholders consultations
- /17/ Statement on Modalities of Communication with the Executive Board and the UNFCCC Secretariat, dated 30/11/2007
- /18/ Summary Environmental Impact Assessment of Tangguh LNG Project in Indonesia compiled in June 2005
- /19/ <http://www.china5e.com/news/oil/200409/200409200306.html>, dated 20/09/2004
- /20/ Authorised Certificates of Electricity Power Survey & Design Institute of Fujian Province, which is the entity that made FSR of the proposed project

- /21/ Enterprise Income Tax Law of the People's Republic of China, dated 01/01/2008
- /22/ [http://www.ndrc.gov.cn/zcfb/zcfbtz/zcfbtz2005/t20050613\\_6670.htm](http://www.ndrc.gov.cn/zcfb/zcfbtz/zcfbtz2005/t20050613_6670.htm), dated 28/03/2005
- /23/ [http://www.sdpc.gov.cn/xwfb/t20050628\\_27678.htm](http://www.sdpc.gov.cn/xwfb/t20050628_27678.htm), dated 15/04/2004
- /24/ Meng Yuming, Analyses on the Operation Risk and the Corresponding Policy for the Thermal Power Enterprises, Energy of China, Vol. 28 No. 4 Apr. 2006: 18
- /25/ Scan copies of distributed questionnaires in stakeholder consultation
- /26/ Scan copies of signatures on questionnaires in stakeholder consultation
- /27/ Referenced Cost Index of thermal power engineering and design (2005 level), China Institute of Power Planning and Design
- /28/ Start Construction Notice dated 14/03/2006.
- /29/ Reference Index of the Limit Design Cost for Thermal Power Generation, Transmission and Transformation Projects authorized by the Electric Power Planning and Design General Institute
- /30/ Document from Price Bureau of Fujian Province indicating approved price of NG for the project
- /31/ Letter of authorization issued by the pp to Fujian Electric Power Survey & Design Institute to do the CDM consultation
- /32/ The Special Report on the Economic Appraisal of Introducing the CDM to LNG Power Plant
- /33/ Board of Directors meeting minutes decision to start the CDM project and designate the person and apartment in charge
- /34/ CDM consulting service contract signed between the pp and CRIH dated 20/02/2006
- /35/ Major Equipment Purchase Contract(Contract No.: 06HT10500000216) signed between Dongfang Electric Corporation and the project owner dated 31/08/2006
- /36/ ERPA signed between the project owner and the carbon credit buyer dated 10/01/2007

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## A.1 Annex 1: Local Assessment

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
Is all information provided in compliance with actual situation or planning? Is all information provided consistent with details provided in further chapters of the PDD (in particular annex 2)?	Yes. The PDD and IRR spreadsheet were reviewed before site visit. The Feasibility Study Report (FSR) was reviewed and local stakeholder interview was held on site visit. Through document review and site visit, it was confirmed that all information provided, in particular the assumptions and figures related to the baseline, monitoring and projections, is provided in compliance with actual situation and planning and in further chapters of the PDD (in particular annex 2).	Source: PDD, Feasibility Study Report (FSR), IRR spreadsheet Means of Verification: document review, site visit, stakeholder interview	OK

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period? Does the project make provisions for meeting training and maintenance needs?	<p>It was confirmed through site visit that in order to maintain the daily operation of the power plant, all the staff will get technical training for smooth operation before getting into work; the personnel involved in the CDM team will receive sufficient training regarding to monitoring before the project operation; the manager of the CDM team is responsible for organizing the training, which consists of two sections as follows:</p> <p>training on project operation, which includes reading and calibration of meters, recording, adjustment and reporting of the readings, and corresponding solving methods; and training on validation, registration and verification regarding to CDM to ensure the emission reductions generated by the project can be monitored, recorded and reported accurately.</p>	<p>Source: PDD, Feasibility Study Report (FSR)</p> <p>Means of Verification: document review, site visit, stakeholder interview</p>	OK
Is a schedule available on the implementation of the project and are there any risks for delays?	<p>Yes. According to Section C.2.1.1 of the PDD and the discussion with the project participants, the project will start operation and deliver electricity to ECPG on 01/10/2008. It was confirmed through the site visit that there was no sign of any risks for delays.</p>	<p>Source: PDD, Feasibility Study Report (FSR)</p> <p>Means of Verification: document review, site visit, stakeholder interview</p>	OK

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
Does the information on public funding provided conform with the actual situation or planning as presented by the project participants? In case of public funding from Annex I Parties is it confirmed that such funding does not result in a diversion of official development assistance	It was verified through site visit, local stakeholder interviewing and project financial document that there is no indication of public funding from Annex 1 Parties in this project.	Source: PDD, Feasibility Study Report (FSR), IRR spreadsheet Means of Verification: document review, site visit, stakeholder interview	OK
Does the project comply with environmental legislation in the host country? Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved? Will the project create any adverse environmental effects?	Yes. Letter of approval of project construction and Letter of approval of EIA have been verified by SGS assessors. EIA is required by the host Party. And the State Environmental Protection Administration of China approved the EIA report on 06/12/2004. According to the EIA and local stakeholder interview on site, the environmental impacts of the proposed project are not considered to be significant.	Source: PDD, Feasibility Study Report (FSR), Environmental Impact Assessment (EIA) and the approval to EIA Means of Verification: document review, site visit, stakeholder interview	OK

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
Have relevant stakeholders been consulted? Have appropriate media been used to invite comments by local stakeholders?	<p>NIR 7 is raised for requesting:</p> <p>copy of original meeting record with summary of the stakeholder consultation;</p> <p>details of when and what kind of media used to invite comments by local stakeholders</p>	<p>Source: PDD, Feasibility Study Report (FSR), Environmental Impact Assessment (EIA), Scan copies of distributed questionnaires and signatures on questionnaires in stakeholder consultation</p> <p>Means of Verification: document review, site visit, stakeholder interview.</p>	NIR7



## A.2 Annex 2: Validation Protocol

**Table 1 Participation Requirements for Clean Development Mechanism (CDM) Project Activities (Ref PDD, Letters of Approval and UNFCCC website)**

Requirement	Reference	Comments	Conclusion
1. All Parties (listed in Section A3 of the PDD) have ratified the Kyoto protocol and are allowed to participate in CDM projects	Marrakech Accords, CDM Modalities §30	Yes.  China has ratified the Kyoto Protocol on 30 August 2002 and is allowed to participate in CDM projects ( <a href="http://maindb.unfccc.int/public/country.pl?country=CN">http://maindb.unfccc.int/public/country.pl?country=CN</a> ).  Japan has ratified the Kyoto Protocol on 04 June 2002 and is allowed to participate in CDM projects ( <a href="http://maindb.unfccc.int/public/country.pl?country=JP">http://maindb.unfccc.int/public/country.pl?country=JP</a> ).	OK
2. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3 and be entered into voluntarily.	Marrakech Accords, CDM Modalities §29 and §30, Ref. 6	Yes.  The Annex 1 Party involved is Japan, which has nominated a DNA to the UNFCCC ( <a href="http://cdm.unfccc.int/DNA/index.html">http://cdm.unfccc.int/DNA/index.html</a> ). LoA issued by Japanese DNA on 27/07/2007 has been submitted to SGS.	OK

Requirement	Reference	Comments	Conclusion
3. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof, and be entered into voluntarily	Marrakech Accords, CDM Modalities §29 and §30  Kyoto Protocol Art. 12.2, Marrakech Accords, CDM Modalities §40a, Ref. 5	Yes.  The Non-Annex 1 Party involved is China, which is also the host party. China has nominated a DNA to UNFCCC ( <a href="http://cdm.unfccc.int/DNA/index.html">http://cdm.unfccc.int/DNA/index.html</a> ). LoA issued by Chinese DNA on 13/07/2007 has been submitted to SGS.	OK
4. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available	Marrakech Accords, CDM Modalities, §40	Yes.  This project has been made public on UNFCCC website for comments collection from 01/05/2007 to 30/05/2007 ( <a href="http://cdm.unfccc.int/Projects/Validation/D B/7LM64NLFMHQ12O0UCU77KOOAWC 1HU5/view.html">http://cdm.unfccc.int/Projects/Validation/D B/7LM64NLFMHQ12O0UCU77KOOAWC 1HU5/view.html</a> )  No comment was received during this period.	OK
5. The project design document shall be in conformance with the UNFCCC CDM-PDD format	Marrakech Accords, CDM Modalities, Appendix B, EB Decisions, Ref. 1	Yes. The project is in conformance with the current UNFCCC CDM-PDD format	OK
6. The project participants shall submit a letter on the modalities of communication (MoC) before submitting a request for registration	EB-09 F_CDM_REG form, Ref. 17	Yes. The project participants have submitted a letter on the modalities of communication (MoC) before submitting a request for registration.	OK



Requirement	Reference	Comments	Conclusion
7. For AR projects, the host country shall have issued a communication providing a single definition of minimum tree cover, minimum land area value and minimum tree height. Has such a letter been issued and are the definitions consistently applied throughout the PDD?		N/A	N/A

**Table 2 PDD**

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>A. General Description of Project Activity</b>					
<b>A.1. Project Title</b>					
A.1.1. Does the used project title clearly enable to identify the unique CDM activity?	Ref. 1	DR	Yes. The used project title clearly enables to identify the unique CDM activity.	OK	OK
A.1.2. Are there an indication of a revision number and the date of the revision?	Ref. 1	DR	Yes. There is an indication of a revision number and the date of the revision. Final PDD provided: version 04, dated 18/02/2008	OK	OK
A.1.3. Is this in consistency with the time line of the project's history?	Ref. 1	DR	Yes. It is in consistency with the time line of the project's history.	OK	OK
<b>A.2. Description of the Project Activity</b>					
A.2.1. Is the description delivering a transparent overview of the project activities?	Ref. 1	DR	Yes. The description of the project activity in Section A.2. of the PDD is delivering a transparent overview of the project activities.	OK	OK
A.2.2. Is all information provided in compliance with actual situation or planning?	Ref. 1 Ref. 12	DR SV	Yes. Through document review and site visit, it is concluded that all information, in particular the assumptions and figures related to the baseline, monitoring and projections, is provided in compliance with actual situation and planning.	OK	OK
A.2.3. Is all information provided consistent with details provided in further chapters of the PDD?	Ref. 1	DR SV	It will be OK pending all findings being closed out	pending	OK

\* MoV = Means of Verification, DR= Document Review, I= Interview

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>A.3. Project Participants</b>					
A.3.1. Is the table required for the indication of project participants correctly applied?	Ref. 1	DR	Yes. The table required for the indication of project participants in Section A.3 of the PDD is correctly applied.	OK	OK
A.3.2. Is all information provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	Ref. 1	DR	It will be OK pending all findings being closed out	pending	OK
<b>A.4. Technical Description of the Project Activity</b>					
A.4.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)? Are the latitude and longitude of the site indicated (decimal points)	Ref. 1	DR	Yes.  According to Section A.4.1, the proposed project is located in Qianyun Village, Dongzhuang Town, Xiuyu District, Putian City, Fujian Province, P. R, China. This information allows for a clear identification of the site.  According to Section A.4.1, the Putian City has the geographical coordinates of 118°27"-119°56" east longitude, 25°2"-25°46" north latitude.	OK	OK
A.4.2. Do the project participants possess ownership or licenses which will allow the implementation of the project at that site / those sites?	Ref. 1	DR	Yes. Through document review and site visit, it is concluded that the one of the project participants, CNOOC Fujian Gas Power Co., Ltd. possesses ownership which will allow the implementation of the project at that site	OK	OK
A.4.3. Is the category(ies) of the project activity correctly identified?	Ref. 1	DR	Yes. The category of the project activity is correctly identified in the PDD as 1 (Energy industries: grid-connected electricity generating project using non-renewable fuel).	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.4.4. Does the project design engineering reflect current good practices?	Ref. 1 Ref. 12	DR	Yes. The project design engineering, Combined Cycle Gas Turbine (CCGT), reflects current good practices in China.	OK	OK
A.4.5. Does the description of the technology to be applied provide sufficient and transparent input to evaluate its impact on the greenhouse gas balance and is the explanation how the project will reduce greenhouse gas emission transparent and suitable?	Ref. 1	DR	Yes. According to Section A.2 of the PDD, as a power plant using clean fuel, the proposed project can reduce GHGs emissions compared with conventional thermal power plants; and the proposed project is considered as an environmental-friendly project, which will substitute part of thermal power in East China Power Grid (ECPG).	OK	OK
A.4.6. Is all information provided in compliance with actual situation or planning as available by the project participants?	Ref. 1 Ref. 12	DR	It will be OK pending all findings being closed out	Pending	OK
A.4.7. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	Ref. 1	DR Interne t	Yes. The project uses state of the art technology and the technology will result in a significantly better performance than any commonly used technologies in China.	OK	OK
A.4.8. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	Ref. 1 Ref. 12	DR Interne t	No. It is unlikely for the project technology being substituted by other or more efficient technologies within the project period.	OK	OK
A.4.9. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	Ref. 1 Ref.12	DR SV	It needs to be confirmed through site visit.  It can be confirmed through site visit that in order to maintain the daily operation of the power plant, all the staff will get technical training for smooth operation before getting into work	Pending	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.4.10. Does the project make provisions for meeting training and maintenance needs?	Ref. 1 Ref.12	DR SV	It needs to be confirmed through site visit.  It can be confirmed through site visit that The personnel involved in the CDM team will receive sufficient training regarding to monitoring before the project operation. The manager of the CDM team is responsible for organizing the training. The training consists of two sections as follows:  Training on project operation, which includes reading and calibration of meters, recording, adjustment and reporting of the readings, and corresponding solving methods; and  Training on validation, registration and verification regarding to CDM to ensure the emission reductions generated by the project can be monitored, recorded and reported accurately.	Pending	OK
A.4.11. Is a schedule available on the implementation of the project and are there any risks for delays?	Ref. 1	DR SV	Yes. According to Section C.2.1.1 of the PDD and the discussion with the project participants, the project will start operation and deliver electricity to ECPG on 01/10/2008. There is no sign of any risks for delays.	OK	OK
A.4.12. Is the table required for the indication of projected emission reductions correctly applied?	Ref. 1	DR	Yes. According to Section C.2.1.1 of the PDD, the table required for the indication of projected emission reductions is correctly applied.	OK	OK
<b>A.5. Public Funding</b>					
A.5.1. Does the information on public funding provided conform with the actual situation or planning as presented by the project participants?	Ref. 1	DR SV	it is verified through site visit and project financial document that there is no indication of public funding.	Pending	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.5.2. Is all information provided consist with details provided by further chapters of the PDD (in particular annex 2)?	Ref. 1 Ref. 7 Ref. 8 Ref. 9	DR SV	It will be OK pending all findings being closed out	Pending	OK
A.5.3. In case of public funding from Annex I Parties is it confirmed that such funding does not result in a diversion of official development assistance	Ref. 1	DR SV	Through document review and site visit, it is concluded that there is no public funding from Annex 1 Parties in this project.	OK	OK
<b>B. Baseline and Monitoring Methodology</b>					
<b>B.1. Choice and Applicability</b>					
B.1.1. Is the baseline methodology previously approved by the CDM Methodology Panel?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The baseline methodology AM0029 Version 01 and ACM0002 Version 06 was previously approved by the CDM Methodology Panel.  AM0029 Version 01 is valid from 19/05/2006 to 01/11/2007. Requests for registration can be submitted until 01/07/2008.  ACM0002 Version 06 is valid from 19/05/2006 to 13/12/2007. Requests for registration can be submitted until 13/08/2008.  CAR1: Any methodologies or tools which the approved methodology draws upon and their version should be indicated in Section B. 1 in PDD. ACM0002 is applied in this project but not mentioned as required.	CAR1	OK
B.1.2. Is the baseline methodology the one deemed most applicable for this project?	Ref. 1	DR	Yes. The baseline methodology is the one deemed most applicable for this project.	OK	OK



Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.1.3. Is the choice of the methodology correctly justified by the PDD and is the project in conformance with all applicability criteria of the applied methodology?	Ref. 1 Ref. 2 Ref.12 Ref.18 Ref.19	DR	<p>The project activity meets the applicability conditions defined in AM0029 Version 01 as the following reasons:</p> <ul style="list-style-type: none"> <li>● The project activity is the construction and operation of a new natural gas fired grid-connect electricity generation plant (according to PDD page 2, No other startup fuels or auxiliary fuel will be applied by the project activity);</li> <li>● Fujian Province is covered by ECPG, the geographical/physical boundaries of the baseline grid (ECPG) can be clearly identified and information pertaining to the grid and estimating baseline emissions is publicly available;</li> </ul> <p>NIR 1: However, it is not thorough when analyzing the sufficient availability of NG when validating following applicability criteria:</p> <ul style="list-style-type: none"> <li>● Natural gas is sufficiently available in the region where the project is located.</li> </ul>	NIR 1	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>B.2. Project Boundary</b>					
B.2.1. Are all emission sources and gasses related to the baseline scenario, project scenario and leakage clearly identified and described in a complete manner?	Ref. 1 Ref. 3	DR	Yes. According to Section B.3 of the PDD, the spatial extent of the project boundary includes the project site and all power plants connected physically to the baseline grid as defined in ACM0002 (Version 06), and the greenhouse gases included in or excluded from the project boundary are clearly listed. This ensures the selected sources and gases match the ones required in the approved methodology. And the project participants choose whether a source or gas is included with properly justified explanation.	OK	OK
B.2.2. In case of grid connected electricity projects: Is the relevant grid correctly identified in accordance with EB guidance and the underlying methodology?	Ref. 1 Ref. 3	DR	Yes. According to Section B.3 of the PDD, the project is located in Fujian Province and will be connected to ECPG. Thus, ECPG is justified as project boundary of the project, which covers the provinces of Jiangsu, Zhejiang, Anhui, and Fujian and Shanghai City. There is clearly defined spatial and geographical extent of the power plants and transmission system within ECPG, all electricity can be dispatched without significant transmission constraints. Moreover, ECPG is also defined as a regional grid in accordance with the "Explain of confirming baseline emission factors of regional power grid in China" issued by China's DNA.	OK	OK
B.2.3. Are the project's spatial boundaries (geographical) and the project's system boundaries (components and facilities used to mitigate GHGs) clearly defined?	Ref. 1	DR	Yes. There is a Figure 4 in Section B.3 of the PDD clearly shows the project boundary of the proposed project.	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>B.3. Identification of the Baseline Scenario</b>					
B.3.1. Does the PDD discuss the identification of the most likely baseline scenario? Does the PDD follow the steps to determine the baseline scenario required by the methodology and is the application of the methodology and the discussion and determination of the chosen baseline transparent?	Ref. 1 Ref. 3 Ref. 4 Ref. 7	DR	Yes. The PDD discuss the identification of the most likely baseline scenarios in Section B.4 of the PDD, following the steps required by the methodology. Each step is applied and transparently documented	OK	OK
B.3.2. Does the application consider all potential realistic and credible baseline scenarios in the discussion taking into account relevant national and/or sectoral policies, macro-economic trends and political aspirations??	Ref. 1 Ref. 3 Ref. 4 Ref. 7	DR	Yes. The application considers all potential realistic and credible baseline scenarios as follows: 1. The project activity not implemented as a CDM project 2. Natural gas power generation using gas turbine single cycle technology. 3. Power generation using hydropower 4. Power generation using wind power 5. Power generation using nuclear power 6. Power generation using coal-fired power 7. Import of electricity from connected grids	OK	OK
B.3.3. Is the choice of the baseline compatible with the available data?	Ref. 1 Ref. 3 Ref. 4 Ref. 7	DR	Yes. The choice of the baseline is compatible with the available data. All key assumptions are explained and information sources are clearly referenced. Sources are checked to ensure information contained in the PDD is correct.	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.3.4. Is conservativeness addressed in the way of identifying the baseline?	Ref. 1 Ref. 3 Ref. 4 Ref. 7	DR	Yes. The conservativeness is addressed in the way of identifying the baseline.	OK	OK
B.3.5. Does the selected baseline represent the most likely scenario among other possible and/or discussed scenarios?	Ref. 1 Ref. 3 Ref. 4 Ref. 7	DR	It will be OK pending all findings raised in the following B.4 being closed out	Pending	OK
<b>B.4. Additionality</b>					
B.4.1. Does the PDD clearly demonstrate the additionality using the approach as given by the methodology and by following all the required steps?	Ref. 1 Ref. 2	DR	It will be OK pending all findings raised in the following B.4 being closed out	Pending	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<p>B.4.2. In case of using the additionality tool: Is the 'Additionality Tool' used in the PDD latest version? If an earlier version has been used, do the changes impact the discussion in the PDD? Are all steps followed in a transparent manner?</p>	<p>Ref. 1 Ref. 2 Ref. 4</p>	DR	<p>Yes. The steps used to demonstrate the additionality of the proposed project are based on the latest version 4 of the "Tool for the demonstration and assessment of additionality" agreed by the Executive Board.</p> <p>According to AM0029 Version 01, the assessment of additionality comprises the following steps:</p> <p>Step 1: Benchmark investment analysis, including sub-steps of benchmark analysis, calculation and comparison of financial indicators, and sensitivity analysis;</p> <p>Step 2 Common practice analysis, including sub-steps of analyzing other activities similar to the proposed project activity and discussing any similar options that are occurring;</p> <p>Step 3 Impact of CDM Registration.</p> <p>All steps are followed in a transparent manner.</p>	OK	OK
<p>B.4.3. Is the discussion on additionality and the evidence provided consistent with the starting date of the project If the project has started before the validation is it discussed how the CDM was taken into account in the decision to go ahead with the project activity</p>	<p>Ref. 1 Ref. 2 Ref. 4</p>	DR	<p>According to the report of a director conference provided by the project participant, the consideration of CDM in the decision to go ahead with the project was made on 25/06/2004; and the FSR were made on October 2004 and approved on 20/12/2005. The project started the construction on 15/03/2006. Besides, the validation agreement was signed on 28/04/2007. SGS assessor found that the construction was on its earliest stage when the site visit was performed on 07/06/2007.</p>	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.4.4. Is the discussion on additionality consistent with the identification all potential realistic and credible baseline scenarios	Ref. 1 Ref. 2 Ref. 4	DR	It will be OK pending all findings raised in B.4 being closed out	pending	OK
B.4.5. Do the identified alternative include technologies and practices that include outputs (e.g) cement or services comparable with the proposed CDM project activity	Ref. 1 Ref. 2 Ref. 4	DR	<p>Yes. The identified alternative include following technologies and practices that include outputs or services comparable with the proposed CDM project activity:</p> <ul style="list-style-type: none"> <li>● Alternative 6a: Power generation using sub critical coal-fired power technology with installed capacity of 4×300 MW;</li> <li>● Alternative 6b: Power generation using sub critical coal-fired power technology with installed capacity of 2×600 MW;</li> <li>● Alternative 6c: Power generation using super critical coal-fired power technology with installed capacity of 2×600 MW.</li> </ul>	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.4.6. If an investment analysis has been used, has it been shown that the proposed project activity is economically or financially less attractive than at least one other alternative without the revenue from the sale of CERs?	Ref. 1	DR	<p>NIR 3 is raised for requesting materials that can ensure the IRR calculation in the PDD are reliable.</p> <p>Besides, NIR 4 is raise for following requests:</p> <ul style="list-style-type: none"> <li>● The official data source of those parameters indicated in PDD Table 4 for identifying the levelized cost of each alternative.</li> <li>● Please explain why the bus-bar tariff of the proposed project cannot rise further.</li> <li>● For existing and newly planned NG power plants in ECPG mentioned in “Step2 Common practice analysis”, the official data sources or reference link to Table 10 should be supplemented. And please provide copy of related page of the supporting material.</li> </ul>	NIR3	OK
	Ref. 2			NIR4	OK
	Ref. 4				
	Ref. 8				
	Ref.12				
	Ref.13				
	Ref.20				
	Ref.21				
	Ref.23				
	Ref.24				
	Ref.27				
B.4.7. If a barrier analysis has been used, has it been shown that the proposed project activity faces barriers that prevent the implementation of this type of proposed project activity but would not have prevented the implementation of at least one of the alternatives?	Ref. 1 Ref. 2 Ref. 4	DR	According to the applied methodology AM0029 V01, a barrier analysis is not required.	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.4.8. Has it been shown that the project is not common practice?	Ref. 1 Ref. 2 Ref. 4	DR	The analysis has been performed in accordance with the requirements of the tool and methodology and sufficient information has been provided to support the analysis. Similar LNG power projects in ECPG are listed in the PDD. The essential distinctions between them and the proposed project activity have been properly explained. The reliability and creditability of all data, rationales, assumptions, justifications and documentation provided were verified. It has been shown that the project is not common practice	OK	OK
B.4.9. Is it demonstrated/justified that the project activity itself is not a likely baseline scenario	Ref. 1 Ref. 2 Ref. 4	DR	The reliability and creditability of all data, rationales, assumptions, justifications and documentation provided were verified. Based on the information discuss it is justified that the project is not the most likely base line and therefore additional	OK	OK
<b>B.5. Application of the Baseline Methodology</b>					
B.5.1. Has the approved methodology been applied correctly for determining <b>baseline emissions</b> ?	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	NIR 2 is raised for absence of the indication that baseline emission factor is determined ex post.	NIR2	OK
B.5.2. Has the approved methodology been applied correctly for determining <b>project emissions</b> ?	Ref. 1 Ref. 2 Ref. 7	DR	The methodology is applied exactly as defined. The PDD clearly states the equations used in calculating project emission. All the required steps/calculations have been followed	OK	OK



Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.5.3. Has the approved methodology been applied correctly for determining <b>leakage</b> ?	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	The methodology is applied exactly as defined. The PDD clearly states the equations used in calculating leakage. All the required steps/calculations have been followed	OK	OK
B.5.4. Where applicable, has the approved methodology been applied correctly for the <b>direct calculation of emission reductions</b>	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	The methodology is applied exactly as defined for direct calculation of emission reductions. The PDD clearly states which equations will be used. All the required steps/calculations have been followed	OK	OK
B.5.5. Have all the methodological choices been explained, have they been properly justified and are they correct	Ref. 1 Ref. 2 Ref. 3 Ref. 4 Ref. 7	DR	Yes. According to the applied methodology AM0029 V01, all the methodological choices have been explained properly justified.	OK	OK
B.5.6. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	Yes. The calculations and assumptions in the PDD are followed methodology and based on directions from Chinese DNA; all data sources are official. Thus the uncertainties are properly addressed.	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>B.6. Ex-ante Data and Parameters Used</b>					
B.6.1. Are the data provided in compliance with the methodology?	Ref. 1 Ref. 2 Ref. 4 Ref. 7	DR	Yes. All the data available at validation, namely total amount of fuel <i>i</i> consumed by Province <i>j</i> for power generation, the electricity generation by the Province <i>j</i> , the captive power rate by the Province <i>j</i> , the electricity output (MWh) supplied to the grid by the Province <i>j</i> , the installed capacity of Province <i>j</i> in year 2003, 2004 and 2005 in ECPG, the net calorific value of a fuel <i>i</i> , CO <sub>2</sub> emission factor per energy unit of fuel <i>i</i> , the oxidation factor of the fuel, the efficiency level of the best technology for each fuel type commercially available in China, emission factor for upstream fugitive methane emissions of natural gas production, emission factor for upstream fugitive methane emissions from production of coal by underground mining, emission factor for upstream fugitive methane emissions from production of coal by surfacing mining, emission factor for upstream fugitive methane emissions from production of oil, emission factor for upstream CO <sub>2</sub> emission due to energy consumption associated with LNG process, and global warming potential of methane valid for the relevant commitment period, are provided in compliance with the methodology. And there is a correct understanding of these parameters. And according to AM0029 Version 01 the baseline emission factor will be <i>ex post</i> calculated annually,	OK	OK



Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.6.2. Is all the data derived from official data sources or replicable records and have these been correctly quoted?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. All the data sources are from official data sources and have been correctly quoted. Where are these data derived from are listed in Section B.6.2 of the PDD.	OK	OK

\* MoV = Means of Verification, DR= Document Review, I= Interview

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.6.3. Is the vintage of the baseline data correct?	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	Yes. In this PDD, because it is very difficult to obtain the data of five most recently built power plants as these data are considered as confidential business information in China, the power plant capacity additions in the electricity system that comprise 20% of the system generation (in MWh) and that have been built most recently is selected as as the sample group <i>m</i> . The power plants which are CDM projects are not included in sample group <i>m</i> . However, even for those built most recently power plants that comprise 20% of the system generation, it is also difficult to obtain the specific data regarding to fuel consumption and electricity generation additions by each power sources as confidential reason. Considering this situation, the following clarifications are given by EB for deviation in use of methodology AM0005 and AMS-I.D by several project activities in China when estimating BM emission coefficient. The sample <i>m</i> of the proposed project makes accumulation to the year 2004 according to the newly increased installed capacity of ECPG of recent 1~3 years. The newly increased installed capacity occupy 21.55% of the total installed capacity in 2005, which is near to 20% of the newly increased installation in the recent 1~3 years. So the calculation by using the data between the years 2004 and 2005 satisfies the requirements of ACM0002 (Version 06). The data of the most recent 3 years, 2003, 2004 and 2005, are in use and that vintage can be considered as being conservative	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>B.7. Calculation of Emissions Reductions</b>					
B.7.1. Has the approved methodology been applied correctly for determining <b>emission reductions</b> ?	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	How the methodology is applied has been clearly detailed in the PDD, together with all equations. And all required steps / calculations are checked being followed, using the PDD and a calculation spreadsheet. Thus it can be concluded that the methodology is applied exactly as defined; the PDD clearly states the equations used in calculating emission reductions; all the required steps/calculations have been followed	OK	OK
B.7.2. Are the emission reduction calculations documented in a complete and transparent manner?	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	Yes. How the methodology is applied has been clearly detailed in the PDD, together with all equations. And all required steps / calculations are checked being followed, using the PDD and a calculation spreadsheet. Thus it can be concluded that the PDD documents how each equation is applied in a complete and transparent manner, in a manner that enables the reader to reproduce the calculation.	OK	OK
B.7.3. Have conservative assumptions been used to calculate emission reductions?	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	Yes. Conservative assumptions have been used to calculate emission reductions. For example, according Methodology AM0029 (Version 01), in order to address the uncertainty relating to which type of other power generation is substituted by the power generation of the proposed project in a conservative manner, project participants shall use for $EF_{BL, CO_2, y}$ the lowest emission factor among three options.	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.7.4. Is the projection based on provable input parameter?	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	Yes. All the data sources are from official data sources and have been correctly quoted.	OK	OK
B.7.5. Is the projection based on same procedures as used for later monitoring or acceptable alternative models?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The projection is based on same procedures as used for later monitoring or acceptable alternative models	OK	OK
B.7.6. Is the calculation of the emission reduction correct?	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	The application of the formulas to calculate emissions and emission reductions (the spreadsheets) is checked. The methodology is applied exactly as defined. The PDD clearly states the equations used in calculating emission reductions. The calculation of the emission reduction is correct.	OK	OK
<b>B.8. Emission Reductions</b>					
B.8.1. Will the project result in fewer GHG emissions than the baseline scenario?	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	Yes. The project results in reductions of GHG emissions when compared to the baseline; and the project can be reasonably shown to be different from the baseline scenario.	OK	OK
B.8.2. Is the form/table required for the indication of projected emission reductions correctly applied?	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	Yes. The form/table required for the indication of projected emission reductions is correctly applied	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.8.3. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	Ref. 1 Ref. 2 Ref. 3 Ref. 7	DR	Yes. The projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period (starting on 01/10/2008).	OK	OK
<b>B.9. Monitoring Methodology</b>					
B.9.1. Does the monitoring methodology provide a consistent approach in the context of all parameter to be monitored and further information provided by the PDD?  Are all parameters and data that is available at validation consistent with the approved methodology	Ref. 1 Ref. 2 Ref. 3	DR	Yes. According to the monitoring plan and annex 4 of the PDD, The first step is the measurement of the daily electrical energy supplied to ECPG and Natural Gas consumption and reporting of daily operation, which will be carried out by shift supervisor. Secondly, the general shift leader will verify the daily measurement and operation report. Then, the data and report will be submitted to the director of general control office who will be responsible for statistic, analysis and audit the daily and monthly measurement, collection of sales receipts provided by the grid of the power supply, and prepare monitoring report of the project activity including operating periods, power generation, power delivered to the grid, equipment defects, etc. Finally, the plant manager will review the internal audit and monitoring reports. Thus the monitoring methodology provides a consistent approach in the context of all parameters to be monitored All parameters and data that are available at validation are consistent with the approved methodology.	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.9.2. Does the monitoring methodology apply consistently the choice of the option selected for monitoring both of project and baseline emissions?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. Consistency checks have been made to the monitoring plan presented and the annex 4 of the PDD. The monitoring methodology applies consistently the choice of the option selected for monitoring both of project and baseline emissions	OK	OK
<b>B.10. Data and Parameters Monitored</b>					
B.10.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period?	Ref. 1 Ref. 2 Ref. 3	DR	NIR 5 is raised for installed capacity of thermal power and GWP being absent in PDD section B.7.1.	NIR5	OK
B.10.2. Are the choices of project GHG indicators reasonable and in conformance with the requirements set by the approved methodology applied?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The requirements of approved methodology is checked and compared with the text in the PDD.	OK	OK
B.10.3. Will it be possible to determine the specified project GHG indicators?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The specified project GHG indicators can be determined as Annual Natural Gas Consumption. Implementation of monitoring data and its accuracy is feasible.	OK	OK
B.10.4. Is the information given for each monitoring variable by the presented table sufficient to ensure the verification of a proper implementation of the monitoring plan?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The information given for each monitoring variable by the presented table is sufficient to ensure the verification of a proper implementation of the monitoring plan.	OK	OK



Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.10.5. Is the information given for each monitoring variable by the presented table sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The monitoring plan is verifiable of data quality and correctness. The information given for each monitoring variable by the presented table is sufficient to ensure the delivery of high quality data.	OK	OK
B.10.6. Is the monitoring approach in line with current good practice, i.e. will it deliver data in a reliable and reasonably acceptable accuracy?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The monitoring plan is verifiable of high data quality. The monitoring approach is in line with current good practice.	OK	OK
B.10.7. Are all formulae used to determine project emission clearly indicated and in compliance with the monitoring methodology.	Ref. 1 Ref. 2 Ref. 3	DR	Yes. Through checking PDD, methodology and the spreadsheets, all formulae used to determine project emission is clearly indicated and in compliance with the monitoring methodology.	OK	OK
<b>B.11. Quality Control (QC) and Quality Assurance (QA) Procedures</b>					
B.11.1. Is the selection of data undergoing quality control and quality assurance procedures complete?	Ref. 1 Ref. 2 Ref. 3	DR	<p>According to the annex 4 of the PDD, the quality assurance and quality control procedures for recording, maintaining and archiving data shall be improved as part of this CDM project activity.</p> <p>However, NIR 6 is raised for absent of procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions.</p>	NIR6	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.11.2. Is the belonging determination of uncertainty levels done correctly for each ID in a correct and reliable manner?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The uncertainty levels of crucial belonging, NG metering equipment and electricity equipment, are well addressed as low because of regular calibrations.	OK	OK
B.11.3. Are quality control procedures and quality assurance procedures sufficiently described to ensure the delivery of high quality data?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. According to the annex 4 of the PDD, the quality assurance and quality control procedures for recording, maintaining and archiving data is an on-going process, which will be ensured through the CDM mechanism in terms of the need for verification of the emission on an annual basic according to the Project Designed Document and the CDM manual.	OK	OK
B.11.4. Is it ensured that data will be bound to national or internal reference standards?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. All data sources will from official source. Thus the monitoring data is clearly reproducible and comparable and will not be dependent on site-specific adjustments. Thus data will be bound to national or internal reference standards	OK	OK
B.11.5. Is it ensured that data provisions will be free of potential conflicts of interests resulting in a tendency of overestimating emission reductions?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. Intended or unintended data manipulation can be excluded by use of Third Parties, certified data acquisition systems etc. thus data provisions will be free of potential conflicts of interests resulting in a tendency of overestimating emission reductions.	OK	OK
<b>B.12. Operational and Management Structure</b>					
B.12.1. Is the authority and responsibility of project management clearly described?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The project owner has assigned a Monitoring Team to carry out the whole monitoring process. And the authority and responsibility of project management is clearly described.	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.12.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The authority and responsibility for registration, monitoring, measurement and reporting is clearly described.	OK	OK
B.12.3. Are procedures identified for training of monitoring personnel?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. Procedures are identified for training of monitoring personnel in Section B.7.2. of the PDD.	OK	OK
<b>B.13. Monitoring Plan (Annex 4)</b>					
B.13.1. Is the monitoring plan developed in a project specific manner clearly addressing the unique features of the CDM activity?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The monitoring plan developed in a project specific manner is clearly addressing the unique features of the CDM activity	OK	OK
B.13.2. Does the monitoring plan completely describes all measures to be implemented for monitoring all parameter required, including measures to be implemented for ensuring data quality?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The monitoring plan completely describes all measures to be implemented for monitoring all parameter required, including measures to be implemented for ensuring data quality	OK	OK
B.13.3. Does the monitoring plan provide information on monitoring equipment and respective positioning in order to safeguard a proper installation?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The monitoring plan provides information on monitoring equipment and respective positioning in order to safeguard a proper installation	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.13.4. Are procedures identified for calibration of monitoring equipment?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. Procedures are identified for calibration of monitoring equipment in section B.7.2. of the PDD.	OK	OK
B.13.5. Are procedures identified for maintenance of monitoring equipment and installations?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. Procedures are identified for maintenance of monitoring equipment and installations in section B.7.2. of the PDD.	OK	OK
B.13.6. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	Ref. 1 Ref. 2 Ref. 3	DR	Yes. Procedures are identified for records handling in section B.7.2. of the PDD.	OK	OK
B.13.7. Are procedures identified for dealing with possible monitoring data adjustments and missing data allowing redundant reconstruction of data in case of monitoring problems??	Ref. 1 Ref. 2 Ref. 3	DR	Yes. Data handling procedure, internal auditing and calibration of meters can deal with possible monitoring data adjustments and uncertainties.	OK	OK
B.13.8. Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The Director of General Control Office is responsible for audit. And the plant manager will review the internal audit.	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.13.9. Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The data will be submitted to the Director of General Control Office who will be responsible for statistic, analysis and audit the daily and monthly measurement, collection of sales receipts provided by the grid of the power supply, and prepare monitoring report of the project activity including operating periods, power generation, power delivered to the grid, equipment defects, etc.	OK	OK
<b>B.14. Baseline Details</b>					
B.14.1. Is there any indication of a date when determine the baseline?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. It is indicated in section B.8 of the PDD that the baseline study and monitoring plan of the proposed project were conducted by the Beijing Changjiang River International Holding on 18/02/2008.	OK	OK
B.14.2. Is this in consistency with the time line of the PDD history?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. This is in consistency with the time line of the PDD history.	OK	OK
B.14.3. Is all data required provided in a complete manner by annex 3 of the PDD?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. All data required provided is in a complete manner by annex 3 of the PDD.	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>C. Duration of the Project / Crediting Period</b>					
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The project's starting date and operational lifetime is clearly and reasonable defined in section C of the PDD.	OK	OK
C.1.2. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?	Ref. 1 Ref. 2 Ref. 3	DR	Yes. The assumed crediting time is clearly defined and reasonable as renewable crediting period of max 7 years with potential for 2 renewals.	OK	OK
C.1.3. Does the project's operational lifetime exceed the crediting period	Ref. 1 Ref. 2 Ref. 3	DR	No.	OK	OK
<b>D. Environmental Impacts</b>					
D.1.1. Does the project comply with environmental legislation in the host country?	Ref. 1 Ref.10 Ref.11	DR SV	Yes. Letter of approval of project construction and Letter of approval of EIA have been verified by SGS assessors.	OK	OK
D.1.2. Has an analysis of the environmental impacts of the project activity been sufficiently described?	Ref. 1	DR	Yes. Analysis of the environmental impacts of the project activity has been sufficiently described in section D.1.of the PDD.	OK	OK
D.1.3. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	Ref. 1	DR SV	Yes. EIA is required by the host Party. And the <a href="#">State Environmental Protection Administration of China</a> approved the EIA report on 06/12/2004.	OK	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
D.1.4. Will the project create any adverse environmental effects?	Ref. 1	DR SV	According to the EIA, the environmental impacts of the proposed project are not considered to be significant.	OK	OK
D.1.5. Are transboundary environmental impacts considered in the analysis?	Ref. 1	DR	Yes. Trans-boundary environmental impacts, for example, air pollution, wastewater and noise, etc., has been analysed.	OK	OK
D.1.6. Have identified environmental impacts been addressed in the project design?	Ref. 1	DR	Yes. Identified environmental impacts have been addressed in the project design.	OK	OK
<b>E. Stakeholder Comments</b>					
E.1.1. Have relevant stakeholders been consulted?	Ref. 1 Ref.16 Ref.25 Ref.26	DR SV	NIR 7 is raised for requesting copy of original meeting record with summary of the stakeholder consultation.	NIR7	OK
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	Ref. 1 Ref.16 Ref.25 Ref.26	DR SV	NIR 7 is raise for requesting indication of when and what kind of media used to invite comments by local stakeholders	NIR7	OK

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
E.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	Ref. 1 Ref.16	DR	According to the Environmental Protection Law of the People's Republic of China which statements that the Environment Impact Assessment (EIA) must be approved by competent department of environmental protection administration before project construction, the project owner delegated China Global Engineering Company to conduct the required EIA. This Company has qualification for EIA consultancy services certified by State Environmental Protection Administration (SEPA) in 2002 and is independent from the project owner. And the <a href="#">State Environmental Protection Administration of China</a> approved the EIA report on 06/12/2004.	OK	OK
E.1.4. Is the undertaken stakeholder process described in a complete and transparent manner?	Ref. 1	DR	Yes. The undertaken stakeholder process is described in a complete and transparent manner.	OK	OK
E.1.5. Is a summary of the stakeholder comments received provided?	Ref. 1 Ref.16	DR SV	The local residents and authorities are all supportive of the proposed project. There was no comment received.	OK	OK
E.1.6. Has due account been taken of any stakeholder comments received?	Ref. 1	DR SV	The local residents and authorities are all supportive of the proposed project. There was no comment received.	OK	OK



**Table 3 Additional Requirements for AR Projects**

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
3.1 Does the PDD specifically consider impacts on biodiversity and natural ecosystems, in addition to socio-economic and environmental impacts?	N/A	N/A	N/A	N/A	N/A
3.2 Are management activities, including harvesting cycles and verification programmes chosen to avoid a systemic verification of peaks in carbon stocks?	N/A	N/A	N/A	N/A	N/A
3.3 Have the project participants indicated whether they choose to account using ICERs or tCERs as defined in Section K, paras 38 – 60 of Decision 19/CP.9	N/A	N/A	N/A	N/A	N/A
3.4 Has the project undergone international public consultation for a period to 45 days?	N/A	N/A	N/A	N/A	N/A
3.5 Have selected carbon pools been be ignored in accordance with the conditions described in Para 21 of Decision 19/CP.9 and does the project avoid double counting?	N/A	N/A	N/A	N/A	N/A
3.6 Has a project lifetime of 20 years renewable three times or 30 years been selected?	N/A	N/A	N/A	N/A	N/A
3.7 Does the monitoring plan take account of issues related to biodiversity and natural ecosystems identified elsewhere in the PDD?	N/A	N/A	N/A	N/A	N/A
3.8 Is the application of ICERs and tCERs accounting regimes consistent with Sections J and K and Decision 19/CP.9?	N/A	N/A	N/A	N/A	N/A
3.9 Note Appendix B highlighting the differences in the PDD, the PDD template for AR projects and the guidelines, available at <a href="http://cdm.unfccc.int/Reference/Documents">http://cdm.unfccc.int/Reference/Documents</a>	N/A	N/A	N/A	N/A	N/A

\* MoV = Means of Verification, DR= Document Review, I= Interview

## References

Reference ID	Title / Description	Comments
/3/	PDD, the following versions have been reviewed, - Version 01, dated 22/11/2006; - Version 02, dated 12/12/2006; - Version 03, dated 26/03/2007, published for the international stakeholder consultation; - Version 04, dated 18/02/2008.	
/4/	AM0029 Version 01, dated 19/05/2006, <a href="http://cdm.unfccc.int/methodologies/PAmethodologies/approved.html">http://cdm.unfccc.int/methodologies/PAmethodologies/approved.html</a>	
/3/	ACM0002 Version 06, dated 19/05/2006, <a href="http://cdm.unfccc.int/methodologies/PAmethodologies/approved.html">http://cdm.unfccc.int/methodologies/PAmethodologies/approved.html</a>	
/4/	Tool For Demonstration And Assessment Of Additionality Version 04, <a href="http://cdm.unfccc.int/methodologies/PAmethodologies/AdditionalityTools/Additionality_tool.pdf">http://cdm.unfccc.int/methodologies/PAmethodologies/AdditionalityTools/Additionality_tool.pdf</a>	
/5/	Letter of Approval from Chinese DNA issued on 13/07/2007	
/6/	Letter of Approval from Japanese DNA issued on 27/07/2007	
/7/	Emission Reduction Spreadsheet	
/8/	IRR calculation spreadsheet	
/9/	Levelised cost calculation spreadsheet	
/10/	Environmental Impact Assessment (EIA) of China Fujian Putian LNG Generation Project, compiled in September 2003	
/11/	Approval of EIA from State Environmental Protection Administration of China, dated 06/12/2004	
/12/	Feasibility Study Report (FSR) of China Fujian Putian LNG Generation Project, compiled in November 2004	
/13/	Clarification issued by Fujian Development & Reform Commission of construction of the new Fujian Putian LNG Power Plant having been approved by National Development & Reform Commission on 20/12/2005	
/14/	Board Resolution reflecting consideration of CDM benefit, dated 25/06/2004	

Reference ID	Title / Description	Comments
/15/	Letter of Approval of Sufficient Gas supply for the project, dated May 2007	
/16/	Statements of local stakeholders consultations	
/17/	Statement on Modalities of Communication with the Executive Board and the UNFCCC Secretariat, dated 30/11/2007	
/18/	Summary Environmental Impact Assessment of Tangguh LNG Project in Indonesia compiled in June 2005	
/19/	<a href="http://www.china5e.com/news/oil/200409/200409200306.html">http://www.china5e.com/news/oil/200409/200409200306.html</a> , dated 20/09/2004	
/20/	Authorised Certificates of Electricity Power Survey & Design Institute of Fujian Province, which is the entity that made FSR of the proposed project	
/21/	Enterprise Income Tax Law of the People's Republic of China, dated 01/01/2008	
/22/	<a href="http://www.ndrc.gov.cn/zcfb/zcfbtz/zcfbtz2005/t20050613_6670.htm">http://www.ndrc.gov.cn/zcfb/zcfbtz/zcfbtz2005/t20050613_6670.htm</a> , dated 28/03/2005	
/23/	<a href="http://www.sdpc.gov.cn/xwfb/t20050628_27678.htm">http://www.sdpc.gov.cn/xwfb/t20050628_27678.htm</a> , dated 15/04/2004	
/24/	Meng Yuming, Analyses on the Operation Risk and the Corresponding Policy for the Thermal Power Enterprises, Energy of China, Vol. 28 No. 4 Apr. 2006: 18	
/25/	Scan copies of distributed questionnaires in stakeholder consultation	
/26/	Scan copies of signatures on questionnaires in stakeholder consultation	
/27/	Referenced Cost Index of thermal power engineering and design (2005 level), China Institute of Power Planning and Design	
/28/	Start Construction Notice dated 14/03/2006.	

### A.3 Annex 3: Overview of Findings

#### Findings Overview

Findings from validation of China Fujian Putian LNG Generation Project

Each Table below represents a finding from the validation assessment. The findings are numbered consecutively, approximately in the order that they have been identified.

Description of Table:

Type	Findings are either New Information Requests (NIR) or Corrective Action Requests (CAR). CARs are items that must be addressed before a project can receive a recommendation for registration. NIRs may lead to the raising of CARs. Observations are included at the end and may or may not be addressed. They are primarily to act as signposts for the verifying DOE.
Issue	Details the content of the finding
Ref	Refers to the item number in the Validation Protocol
Response	Please insert response to finding, starting with the date of entry.

Rows for comments and further response will be appended to the table until the Findings has been addressed to the satisfaction of the Lead Assessor.

**Please Note:** This is an open list and more findings may be added as validation progresses.

Please Note: This is an open list and more findings may be added as validation progresses.

Date:	13/11/2007	Raised by:	Sarah Ruan, Elton Chen, Robin Wang				
No.:	1	Type:	NIR	Issue:	Choice and applicability of methodology	Ref.:	B.1.3
Lead Assessor Comment:					Date: 13/11/2007		
Please provide analysis, supporting documents and quantitative information that indicates whether future natural-gas-based power capacity additions, comparable in size to the project activity, will be constrained by the proposed project.							
Project Participant Response:					Date: 22/11/2007		
Relevant analysis and supporting documents has been added in the PDD.							
Acceptance and Close out by Lead Assessor:						Date: 18/12/2007	
Information Provided: Data, dates and description  Information Verified: The information provided was verified through reviewing reference documents.						Verified Document Reference: 1. Summary Environmental Impact Assessment of Tangguh LNG Project in Indonesia, compiled in June 2005;  2. <a href="http://www.china5e.com/news/oil/200409/200409200306.html">http://www.china5e.com/news/oil/200409/200409200306.html</a> , dated 20/09/2004;  3. Feasibility Study Report of China Fujian Putian LNG Generation Project, compiled in November 2004.	
Reasoning for not acceptance or acceptance and close out: According to the revised PDD, Tangguh gas field has a capacity to produce 7.6 million tons per annual (mtpa) of LNG and will supply 2.6 mtpa of LNG to Fujian Province in current stage; and a long-term "Take or pay" natural gas purchase and sales contract has been signed by the PP and the domestic LNG distributor, which will expand its capacity to supply 7 mtpa LNG to Fujian Province in the near future; thus the natural gas consumed by the proposed project (0.81 mtpa) just accounts for small part of the total natural gas supply capacity; and the project activity doesn't constrain future capacity additions of LNG power plants comparable in size to the project activity in the region. Related supporting materials provided by the PP have been reviewed and verified by SGS assessor. Therefore NIR was closed out.							

Date:	13/11/2007	Raised by:	Sarah Ruan, Elton, Chen, Robin Wang				
No.:	2	Type:	CAR	Issue:	Choice and applicability of methodology	Ref.:	B.1.1
Lead Assessor Comment:				Date: 13/11/2007			
Any methodologies or tools which the approved methodology draws upon and their version should be indicated in Section B. 1 of the PDD. ACM0002 Version 06 is applied in this project PDD but not mentioned as required.							
Project Participant Response:				Date: 22/11/2007			
The approved methodologies applied in the PDD are added including the latest version number.							
Acceptance and Close out by Lead Assessor:				Date: 03/12/2007			
Information Provided: Descriptions						Verified Document Reference: All 4 versions of PDD of China Fujian Putian LNG Generation Project.	
Information Verified: The information provided was verified through reviewing reference documents.							
Reasoning for not acceptance or acceptance and close out: Version 06 of approved baseline methodology ACM0002 is indicated to be applied in the PDD Section B.1 "Methodology and tool applied by the project". CAR is closed out.							

Date:	13/11/2007	Raised by:	Sarah Ruan, Elton Chen, Robin Wang				
No.:	3	Type:	NIR	Issue:	Application of the Baseline Methodology	Ref.:	B.5.1
Lead Assessor Comment:				Date: 13/11/2007			
NIR is raised for absence of the indication that baseline emission factor is determined ex post and will be updated annually.							
Project Participant Response:				Date: 22/11/2007			
The description of baseline emission factor calculated ex-post and updated annually has been added in the PDD.							
Acceptance and Close out by Lead Assessor:				Date: 03/12/2007			
Information Provided: Directions and descriptions						Verified Document Reference: 1. AM0029 Version 01, dated 19/05/2006; 2. All 4 versions of PDD of China Fujian Putian LNG Generation Project.	
Information Verified: The information provided was verified through reviewing reference documents.							
Reasoning for not acceptance or acceptance and close out: As what is requested, it is clearly narrated in the PDD Section B.6.1 that, according to AM0029 V01, the lowest emission factor among the three options, namely option 1 "emission factor of Build Margin", is used as the baseline emission factor, and will be ex-post calculated annually. NIR is closed out.							

Date:	13/11/2007	Raised by:	Sarah Ruan, Elton Chen, Robin Wang				
No.:	4	Type:	NIR	Issue:	Additionality: investment analysis	Ref.:	B.4.6
Lead Assessor Comment:				Date: 13/11/2007			
Please provide materials that can ensure the IRR calculation in the PDD are reliable.							
Project Participant Response:				Date: 02/04/2008			
IRR calculation spreadsheet, Feasibility Study Report (FSR), Authorised Certificates of the entity that complied the FSR, Approval of China Fujian Putian LNG Generation Project by NDRC and reference link to Enterprise Income Tax Law of the People's Republic of China have been submitted to the DOE.							
Acceptance and Close out by Lead Assessor:				Date: 02/04/2008			

<p>Information Provided: Data, dates and description Information Verified: The information provided was verified through reviewing reference documents.</p>	<p>Verified Document Reference:</p> <ol style="list-style-type: none"> <li>1. Feasibility Study Report of China Fujian Putian LNG Generation Project, compiled in November 2004;</li> <li>2. Authorised Certificates of Electricity Power Survey &amp; Design Institute of Fujian Province, which is the entity that made FSR of the proposed project;</li> <li>3. Clarification issued by Fujian Development &amp; Reform Commission of construction of the new Fujian Putian LNG Power Plant having been approved by National Development &amp; Reform Commission on 20/12/2005;</li> <li>4. Enterprise Income Tax Law of the People's Republic of China, dated 01/01/2008;</li> <li>5. All 4 versions of PDD of China Fujian Putian LNG Generation Project;</li> <li>6. IRR calculation spreadsheet.</li> </ol>
<p>Reasoning for not acceptance or acceptance and close out: The project participant indicate that except for the income tax rate, all the parameters used in calculating the IRR are derived from the Feasibility Study Report; this Feasibility Study Report was compiled by a qualified entity, namely Electric Power Survey &amp; Design Institute of Fujian Province, in November 2004, and approved by National Development and Reform Commission on 20/12/2005; and the income tax rate of the project is adjusted to 25% since the Fifth Session of the Tenth National People's Congress. All related materials having been submitted by the project participant and checked by SGS assessor, NIR was closed out.</p>	

Date:	23/05/2007			Raised by:	Robin Wang, Elton Chen, Sarah Ruan		
No.:	5	Type:	NIR	Issue:	Additionality: investment analysis	Ref.:	B.4.6
Lead Assessor Comment:				Date: 23/05/2007			
<p>Please provide supporting evidences or documents as bellows,</p> <ul style="list-style-type: none"><li>● The official data source of those parameters indicated in PDD Table 4 for identifying the levelized cost of each alternative.</li><li>● Please explain why the bus-bar tariff of the proposed project cannot rise further.</li><li>● For existing and newly planned NG power plants in ECPG mentioned in “Step2 Common practice analysis”, the official data sources or reference link to Table 10 should be supplemented. And please provide copy of related page of the supporting material.</li></ul>							
Project Participant Response:				Date: 22/11/2007			
Please refer to the revised PDD and attached file for PDD finding.							
Acceptance and Close out by Lead Assessor:				Date: 18/12/2007			

<p><b>Information Provided:</b> Data, dates and description</p> <p><b>Information Verified:</b> The information provided was verified through reviewing reference documents.</p>	<p><b>Verified Document Reference:</b></p> <ol style="list-style-type: none"> <li>1. Referenced Cost Index of thermal power engineering and design (2005 level), China Institute of Power Planning and Design;</li> <li>2. <a href="http://www.ndrc.gov.cn/zcfb/zcfbtz/zcfbtz2005/t20050613_6670.htm">http://www.ndrc.gov.cn/zcfb/zcfbtz/zcfbtz2005/t20050613_6670.htm</a>, dated 28/03/2005;</li> <li>3. <a href="http://www.sdpc.gov.cn/xwfb/t20050628_27678.htm">http://www.sdpc.gov.cn/xwfb/t20050628_27678.htm</a>, dated 15/04/2004;</li> <li>4. Meng Yuming, Analyses on the Operation Risk and the Corresponding Policy for the Thermal Power Enterprises, Energy of China, Vol. 28 No. 4 Apr. 2006: 18;</li> <li>5. Feasibility Study Report of China Fujian Putian LNG Generation Project, compiled in November 2004.</li> </ol>
<p><b>Reasoning for not acceptance or acceptance and close out:</b> Official data source of those parameters indicated in PDD Table 4 for identifying the levelized cost of each alternative has been provided and verified OK. PP indicates in the PDD that, the bus-bar tariff of the proposed project has to compete in on-grid bidding in power market with all thermal power generation enterprises serving ECPG, without enjoying any preferential price; besides, this bus-bar tariff is already much higher than the pole bus-bar tariff of thermal power and average tariff of coal-fired power within Fujian Province; nevertheless, a research shows on-grid bidding system depresses power tariff and result in drastic competition in power market; thus the high bus-bar tariff of the proposed project can hardly increase further. Related supporting materials provided by the PP have been reviewed and verified by SGS assessors. The official data source or reference link to Table 10 has been supplemented. Thus this NIR is closed out</p>	

Date:	13/11/2007	Raised by:		Sarah Ruan, Elton Chen, Robin Wang			
No.:	6	Type:	NIR	Issue:	Monitoring plan	Ref.:	B.10.1
Lead Assessor Comment:					Date: 13/11/2007		
Since baseline emission factor is determined ex post, baseline emission parameters should be monitored as what is indicated in AM0029 V01 and ACM0002 V06.							
NIR is raised for installed capacity of thermal power and GWP being absent in PDD section B.7.1.							
Project Participant Response:					Date: 22/11/2007		
Relevant parameters have been added in PDD.							
Acceptance and Close out by Lead Assessor:					Date: 03/12/2007		
Information Provided: Directions and descriptions Information Verified: The information provided was verified through reviewing reference documents.					Verified Document Reference: 1. AM0029 Version 01, dated 19/05/2006;  2. All 4 versions of PDD of China Fujian Putian LNG Generation Project dated 18/02/2008.		
Reasoning for not acceptance or acceptance and close out: The installed capacity of thermal power serving ECPG in year y and the GWP of methane have been added in the PDD Section B.7.1 "Data and parameters monitored". NIR is closed out.							

Date:	13/11/2007			Raised by:	Sarah Ruan, Robin Wang		
No.:	7	Type:	NIR	Issue:	QC/QA procedures	Ref.:	B.11.1
Lead Assessor Comment:					Date: 13/11/2007		
NIR is raised for absent of procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions.							
Project Participant Response:					Date: 22/11/2007		
The emergency disposal has been revised.							
Acceptance and Close out by Lead Assessor:					Date: 03/12/2007		

<p>Information Provided: Directions and descriptions Information Verified: The information provided was verified through reviewing reference documents.</p>	<p>Verified Document Reference: 1. AM0029 Version 01, dated 19/05/2006; 2. All 4 versions of PDD of China Fujian Putian LNG Generation Project.</p>
<p>Reasoning for not acceptance or acceptance and close out: It is described in the PDD Section B.7.2 that, the NG Distributed Control System (DSC) will be established with leakage detector, alarm system and safety shut off valve. In the event of emergency, the detector can immediately check out the leakage point, and the alarm system issues alarm signal and reports to control center; meanwhile, NG supply can be automatically shut off by safety shut off valve; after receiving the alarm, operators will immediately arrive, and check the reason and make the solution. Besides, the operators responsible for DSC should make daily inspection and repair, record daily operation, and find out and deal with hidden troubles in time. Thus procedures have been clearly identified for emergencies of unintended emissions. NIR is closed out.</p>	

Date:	23/05/2007	Raised by:	Robin Wang, Elton Chen				
No.:	8	Type:	NIR	Issue:	Stakeholder consultation	Ref.:	E.1.1 and E.1.2
Lead Assessor Comment:					Date: 23/05/2007		
<p>Please provide copy of original record of the stakeholder consultation. In addition, an attendee list with contact information needs to be provided together.</p> <p>In addition, as PDD described, the consultation in a manner of distributing 50 pieces of questionnaires to local relevant stakeholders but no indication that appropriate media has been used. Please indicate when and what kind of media used to invite comments by local stakeholders.</p>							
Project Participant Response:					Date: 22/11/2007		
<p>The project owner invited the comments of stakeholder regarding the project by distributing questionnaire other than holding meeting. The list of attendee participating in the survey is provided; please refer the attached file.</p> <p>The way to invite comments is through put up notice on the village and the photo as evidence is provided, please also refer the attached file.</p>							
Acceptance and Close out by Lead Assessor:					Date: 03/12/2007		
<p>Information Provided: Data, dates, signatures and descriptions</p> <p>Information Verified: The information provided was verified through reviewing reference documents.</p>					<p>Verified Document Reference:</p> <ol style="list-style-type: none"><li>1. All 4 versions of PDD of China Fujian Putian LNG Generation Project;</li><li>2. Scan copies of distributed questionnaires in stakeholder consultation;</li><li>3. Scan copies of signatures on questionnaires in stakeholder consultation.</li></ol>		
<p>Reasoning for not acceptance or acceptance and close out:</p> <p>The way to invite comments of stakeholders is putting up notice on the village and the photos have been provided. Scan copies of distributed questionnaires have been provided. Scan copies of signatures on questionnaires have been provided. NIR is closed out.</p>							



## A.4 Annex 4: Team Members Statements of Competency

### Statement of Competence

Name: Elton Chen

SGS Affiliate: China

#### Status

- Product Co-ordinator ☒
- Operations Co-ordinator ☐
- Technical Reviewer ☒
- Expert ☐

#### Validation

#### Verification

- Local Assessor ☐
- Lead Assessor ☒
- Assessor ☐
- / Trainee Lead Assessor

#### Scopes of Expertise

- |  |                                     |
|--|-------------------------------------|
| 1. Energy Industries (renewable / non-renewable)   | <input checked="" type="checkbox"/> |
| 2. Energy Distribution   | <input type="checkbox"/>            |
| 3. Energy Demand   | <input checked="" type="checkbox"/> |
| 4. Manufacturing   | <input type="checkbox"/>            |
| 5. Chemical Industry   | <input checked="" type="checkbox"/> |
| 6. Construction  | <input type="checkbox"/>            |
| 7. Transport   | <input type="checkbox"/>            |
| 8. Mining/Mineral Production   | <input type="checkbox"/>            |
| 9. Metal Production  | <input type="checkbox"/>            |
| 10. Fugitive Emissions from Fuels (solid,oil and gas)  | <input type="checkbox"/>            |
| 11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride | <input checked="" type="checkbox"/> |
| 12. Solvent Use  | <input type="checkbox"/>            |
| 13. Waste Handling and Disposal  | <input checked="" type="checkbox"/> |
| 14. Afforestation and Reforestation  | <input type="checkbox"/>            |
| 15. Agriculture  | <input type="checkbox"/>            |

Approved Member of Staff by: Siddharth Yadav Date: 10/06/2007

## Statement of Competence

Name: Sarah Ruan Sha

SGS Affiliate: SGS China

### Status

- Product Co-ordinator ☐
- Operations Co-ordinator ☐
- Technical Reviewer ☐
- Expert ☒

### Validation

### Verification

- |                                       |                                     |                                     |
|---------------------------------------|-------------------------------------|-------------------------------------|
| - Local Assessor                      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| - Lead Assessor                       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| - Assessor<br>/ Trainee Lead Assessor | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

### Scopes of Expertise

- |   |                                     |
|---|-------------------------------------|
| 1. Energy Industries (renewable / non-renewable)  | <input checked="" type="checkbox"/> |
| 2. Energy Distribution  | <input type="checkbox"/>            |
| 3. Energy Demand  | <input type="checkbox"/>            |
| 4. Manufacturing  | <input type="checkbox"/>            |
| 5. Chemical Industry  | <input type="checkbox"/>            |
| 6. Construction   | <input type="checkbox"/>            |
| 7. Transport  | <input type="checkbox"/>            |
| 8. Mining/Mineral Production  | <input type="checkbox"/>            |
| 9. Metal Production   | <input type="checkbox"/>            |
| 10. Fugitive Emissions from Fuels (solid,oil and gas)   | <input type="checkbox"/>            |
| 11. Fugitive Emissions from Production and<br>Consumption of Halocarbons and Sulphur Hexafluoride | <input type="checkbox"/>            |
| 12. Solvent Use   | <input type="checkbox"/>            |
| 13. Waste Handling and Disposal   | <input type="checkbox"/>            |
| 14. Afforestation and Reforestation   | <input type="checkbox"/>            |
| 15. Agriculture   | <input type="checkbox"/>            |

Approved Member of Staff by: Elton Chen

Date: 25/11/2007