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**GEF GRANT NUMBER TF094204-CN**

# **Global Environment Facility Grant Agreement**

**(Thermal Power Efficiency Project)**

**between**

**PEOPLE'S REPUBLIC OF CHINA**

**and**

**INTERNATIONAL BANK FOR RECONSTRUCTION  
AND DEVELOPMENT  
(acting as an Implementing Agency of the Global Environment Facility)**

**Dated June 21, 2009**

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**GEF GRANT NUMBER TF094204-CN**

**GLOBAL ENVIRONMENT FACILITY GRANT AGREEMENT**

AGREEMENT dated June 21, 2009, entered into between PEOPLE'S REPUBLIC OF CHINA (the Recipient); and INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT (the World Bank) acting as an implementing agency of the Global Environment Facility (GEF) in respect of grant funds provided to the GEF Trust Fund by certain members of the Bank as participants of the GEF.

The Recipient and the World Bank hereby agree as follows:

**Article I  
Standard Conditions; Definitions**

- 1.01. The Standard Conditions for Grants Made by the World Bank Out of various Funds, dated July 1, 2008 ("Standard Conditions") constitute an integral part of this Agreement.
- 1.02. Unless the context requires otherwise, the capitalized terms used in this Agreement have the meanings ascribed to them in the Standard Conditions or in this Agreement.

**Article II  
The Project**

- 2.01. The Recipient declares its commitment to the objectives of the project described in Schedule 1 to this Agreement ("Project"). To this end, the Recipient shall: (i) carry out through MOF with participation of NDRC and SERC, its Respective Parts of the Project in accordance with the provisions of Article II of the Standard Conditions and the Anti-Corruption Guidelines; and (ii) cause the Project Implementing Entities to carry out their Respective Parts of the Project in accordance with the provisions of the Project Agreement.
- 2.02. Without limitation upon the provisions of Section 2.01 of this Agreement, and except as the Recipient and the World Bank shall otherwise agree, the Recipient shall ensure that the Project is carried out in accordance with the provisions of Schedule 2 to this Agreement.

**Article III  
The Grant**

- 3.01. The World Bank agrees to extend to the Recipient, on the terms and conditions set forth or referred to in this Agreement, a grant in an amount equal to nineteen million seven hundred thousand United States Dollars (\$19,700,000) (“Grant”) to assist in financing the Project.
- 3.02. The Recipient may withdraw the proceeds of the Grant in accordance with Section IV of Schedule 2 to this Agreement.

**Article IV  
Additional Remedies**

- 4.01. The Additional Events of Suspension referred to in Section 4.02(i) of the Standard Conditions consist of the following:
- (a) The Recipient has taken or permitted to be taken any action which would prevent or interfere with the performance by any Project Implementing Entity of its obligations under the Project Agreement.
  - (b) Any Project Implementing Entity has failed to perform any obligation under the Project Agreement.
  - (c) The World Bank has declared any Project Implementing Entity ineligible to receive proceeds of any financing made by it, or otherwise to participate in the preparation or implementation of any project financed in whole or in part by the World Bank (including as administrator of funds provided by another financier), as a result of a determination by the World Bank that the Project Implementing Entity has engaged in fraudulent, corrupt, coercive or collusive practices in connection with the use of the proceeds of any financing made by the World Bank.
  - (d) As a result of events which have occurred after the date of this Agreement, an extraordinary situation has arisen which makes it improbable that any Project Implementing Entity will be able to perform its obligations under the Project Agreement.
  - (e) GDPG’s Charter has been amended, suspended, abrogated, repealed or waived so as to affect materially and adversely the ability of GDPG to perform any of its obligations under the Project Agreement.

**Article V**  
**Effectiveness**

- 5.01. This Agreement shall not become effective until evidence satisfactory to the World Bank has been furnished to the World Bank that the conditions specified below have been satisfied:
- (a) the execution and delivery of this Agreement on behalf of the Recipient has been duly authorized or ratified by all necessary governmental action; and
  - (b) the execution and delivery of the Project Agreement on behalf of each Project Implementing Entity has been duly authorized or ratified by all necessary governmental action.
- 5.02. (a) As part of the evidence to be furnished pursuant to Section 5.01(a), there shall be furnished to the World Bank an opinion or opinions satisfactory to the World Bank of counsel acceptable to the World Bank, showing on behalf of the Recipient, that this Agreement has been duly authorized or ratified by, and executed and delivered on its behalf and is legally binding upon it in accordance with its terms.
- (b) As part of the evidence to be furnished pursuant to Section 5.01(b), there shall be furnished to the World Bank an opinion or opinions satisfactory to the World Bank of counsel acceptable to the World Bank, showing on behalf of each Project Implementing Entity, that the Project Agreement has been duly authorized or ratified by, and executed and delivered on its behalf and is legally binding upon it in accordance with its terms.
- 5.03. Except as the Recipient and the World Bank shall otherwise agree, this Agreement shall enter into effect on the date upon which the World Bank dispatches to the Recipient notice of its acceptance of the evidence required pursuant to Sections 5.01 and 5.02 (“Effective Date”). If, before the Effective Date, any event has occurred which would have entitled the World Bank to suspend the right of the Recipient to make withdrawals from the Grant Account if this Agreement had been effective, the World Bank may postpone the dispatch of the notice referred to in this Section until such event (or events) has (or have) ceased to exist.
- 5.04. This Agreement and all obligations of the parties under it shall terminate if it has not entered into effect by the date ninety (90) days after the date of this Agreement, unless the World Bank, after consideration of the reasons for the delay, establishes a later date for the purpose of this Section. The World Bank shall promptly notify the Recipient of such later date.

**Article VI**  
**Recipient's Representative; Addresses**

6.01. The Recipient's Representative referred to in Section 7.02 of the Standard Conditions is the Minister of Finance.

6.02. The Recipient's Address referred to in Section 7.01 of the Standard Conditions is:

Ministry of Finance  
Sanlihe, Beijing 100820  
People's Republic of China

Facsimile:

(86-10) 68551125

6.03. The World Bank's Address referred to in Section 7.01 of the Standard Conditions is:

International Bank for Reconstruction and Development  
1818 H Street, N.W.  
Washington, D.C. 20433  
United States of America

Cable address:

INTBAFRAD  
Washington, D.C.

Telex:

248423 (MCI)  
64145 (MCI)

Facsimile:

(202) 477-6391

AGREED at Beijing, People's Republic of China, as of the day and year first above written.

PEOPLE'S REPUBLIC OF CHINA

By /s/ Zheng Xiaosong  
Authorized Representative

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT  
(as an Implementing Agency of the Global Environment Facility)

By /s/ David Dollar  
Authorized Representative

## **SCHEDULE 1**

### **Project Description**

The objective of the Project is to reduce coal consumption and greenhouse gas emissions (GHG) per unit of electricity production in Shanxi Province, Shandong Province, and Guangdong Province.

The Project consists of the following parts:

#### **Part A: Closure of Inefficient Small Coal-fired Generation Units in Shandong Province and Shanxi Province**

1. (a) Establishing a transparent and effective financial incentive mechanism for the closure of small coal-fired generation units (MCSU); and (b) supporting the implementation of MCSU pilots in Shandong Province and Shanxi Province for the closure of small coal-fired generation units through provision of MCSU Grants.
2. Establishing on-line heat supply monitoring systems for combined heat and power (CHP) units to assist in verifying compliance with relevant government regulations concerning CHP unit operation.
3. Establishing provincial-wide electronic bulletin systems to facilitate the trading of emission allowances of small generation units closed or to be closed according to a closure schedule set by their respective provincial government.
4. Monitoring and evaluating outputs and impacts of the activities under this Part A of the Project.

#### **Part B: Demonstration of Power Plant Efficiency Improvement**

1. Converting mid-sized power generation only units into CHP units at Huangtai Thermal Power Plant in Shandong Province.
2. Retrofitting Jinan Beijiao Thermal Power Plant in Shandong Province to recover waste heat for district heating.
3. Retrofitting Yangguang Thermal Power Plant in Shanxi Province to improve its power generation efficiency following independent energy audit recommendations.
4. Monitoring and evaluating the effectiveness of the activities under this Part B of the Project, and supporting knowledge and experience sharing with other provinces.

5. Developing procedures and processes at the national level, based on international best practices, to provide guidance to thermal power plants in carrying out energy audits, operation and maintenance.

### **Part C: Transition to Efficient Generation Dispatch**

1. Provision of technical assistance to SERC and GDPG to support an efficient fuel saving dispatch (ESD) pilot program within the Guangdong provincial electricity grid to improve overall power system efficiency, increase fossil fuel savings and reduce emissions in power generation, including:
  - (a) developing relevant regulations and procedures for the implementation of the ESD pilot program; and
  - (b) developing dispatch simulation systems at the Guangdong Provincial Grid Dispatch Center to identify further dispatch improvements; and providing support for the implementation of said dispatch simulation systems in parallel to the ESD pilot operation.
2. Evaluating the results of the pilot ESD program in the provinces of Henan, Jiangsu, Guangdong, Sichuan and Guizhou; and providing recommendations to improve the Recipient's regulations on generation dispatch.
3. Assisting NDRC in undertaking studies for generation pricing and tariff reform in line with efficient generation dispatch practices.

### **Part D: Project Implementation Support**

Strengthening the capacity of the National PMO, the Shanxi Provincial PEO, the Shandong Provincial PMO, and the GDPG Project Team in carrying out the Project through provision of technical assistance and operational support.



**SCHEDULE 2****Project Execution****Section I. Institutional and Other Arrangements****Financing Arrangements**

1. For the purpose of carrying out Shandong and Shanxi's Respective Parts of the Project, the Recipient shall make a portion of the proceeds of the Grant allocated to Categories 3 and 4 of the table in paragraph A.2 of Section IV of Schedule 2 to this Agreement Shandong and Shanxi, on a non-reimbursable grant basis.
2.
  - (a) For the purpose of carrying out GDPG's Respective Part of the Project, the Recipient shall make a portion of the proceeds of the Grant allocated to it under Category 2 of the table in paragraph A.2 of Section IV of Schedule 2 to this Agreement available to GDPG under a subsidiary grant agreement ("Subsidiary Grant Agreement") between the Recipient and GDPG, under terms and conditions approved by the World Bank, which shall include the provisions set out in Annex 2 to this Schedule.
  - (b) No activities under GDPG's Respective Part of the Project to be carried out by GDPG shall be eligible for financing under a Subsidiary Grant, unless GDPG has entered into a Subsidiary Grant Agreement with the Recipient satisfactory to the World Bank, for carrying out its activities.
  - (c) The Recipient shall exercise its rights under the Subsidiary Grant Agreement in such manner as to protect the interests of the Recipient and the World Bank and to accomplish the purposes of the Grant. Except as the World Bank shall otherwise agree, the Recipient shall not assign, amend, abrogate or waive the Subsidiary Grant Agreement or any of its provisions.

**Institutional Arrangements**

3. For purposes of carrying out the Project, the Recipient through MOF shall:
  - (a) maintain throughout the period of implementation of the Project, the National Advisory and Coordination Committee, with terms of reference, composition, and other resources acceptable to the World Bank, to be responsible for strategic decision making and coordination as needed during the Project implementation; and

- (b) maintain throughout the period of implementation of the Project, the National Project Management Office (National PMO), with terms of reference, staffing and other resources acceptable to the World Bank, to be responsible for the overall coordination, monitoring, supervision, and reporting for the Project.

### **MCSU Operational Manual**

- 4. The Recipient shall adopt and apply the MCSU Operational Manual satisfactory to the World Bank in carrying out Part A.1(b) of the Project. Except as the World Bank shall otherwise agree, the Recipient shall not amend, waive or fail to enforce the MCSU Operational Manual or any provision thereof. In case of any conflict between the provisions of this Agreement and those of the MCSU Operational Manual, this Agreement shall prevail.
- 5. The MCSU Operational Manual shall include provisions detailing procedures and guidelines for the carrying out of Part A.1(b) of the Project, including, *inter alia*: (i) selection process and criteria for a proposed MCSU Grant Beneficiary to participate in Part A.1(b) of the Project; (ii) MCSU Grant disbursement conditions and verification process to check the compliance of such MCSU grant disbursement conditions; (iii) implementation and institutional arrangements; (iv) the Recipient's counterpart's contributions for the implementation of Part A.1(b) of the Project; (v) financial reporting and auditing requirements; and (vi) supervision, monitoring, evaluation and reporting procedures.
- 6. The MCSU Operational Manual shall be reviewed annually by the Recipient and the World Bank, and adjusted as necessary to reflect the results of such review.

### **Financial Management Manual**

- 7. The Recipient shall implement its Respective Parts of the Project in accordance with the provisions of the Financial Management Manual and shall not amend, abrogate or waive said Manual or any of its provisions without the approval of the World Bank.

### **Anti-Corruption**

- 8. The Recipient shall ensure that the Project is carried out in accordance with the provisions of the Anti-Corruption Guidelines.

**Section II. Project Monitoring, Reporting and Evaluation****A. Project Reports; Completion Report**

1. The Recipient shall monitor and evaluate the progress of the Project and prepare Project Reports in accordance with the provisions of Section 2.06 of the Standard Conditions and on the basis of the indicators in Annex 1 to this Schedule. Each Project Report shall cover the period of one (1) calendar semester, and shall be furnished to the World Bank not later than one (1) month after the end of the period covered by such report.
2. The Recipient shall prepare the Completion Report in accordance with the provisions of Section 2.06 of the Standard Conditions. The Completion Report shall be furnished to the World Bank not later than six (6) months after the Closing Date.
3. The Recipient shall, no later than March 31 and September 30 of each calendar year during the implementation of the Project, commencing September 30, 2009, carry out a semi-annual review of progress in implementing the Project under terms of reference satisfactory to the World Bank, furnish the results of said review to the World Bank, and, based on the World Bank's recommendations, adopt measures satisfactory to the World Bank for the efficient and effective implementation of the Project.
4. The Recipient shall, no later than March 31, 2011, carry out a mid-term review of progress in implementing the Project under terms of reference satisfactory to the World Bank, furnish the results of the review to the World Bank, and, based on the World Bank's recommendations, adopt measures satisfactory to the World Bank for the efficient and effective implementation of the Project and the achievement of its objectives.

**B. Financial Management; Financial Reports; Audits**

1. The Recipient shall ensure that a financial management system is maintained in accordance with the provisions of Section 2.07 of the Standard Conditions.
2. The Recipient shall ensure that interim unaudited financial reports for the Project are prepared and furnished to the World Bank as part of the Project Report not later than March 31 and September 30 of each calendar year, commencing September 30, 2009, covering the semester, in form and substance satisfactory to the World Bank.
3. The Recipient shall have its Financial Statements for the Project audited in accordance with the provisions of Section 2.07(b) of the Standard Conditions. Each such audit of the Financial Statements shall cover the period of one (1)

fiscal year of the Recipient. The audited Financial Statements for each such period shall be furnished to the World Bank not later than six (6) months after the end of such period.

### **Section III. Procurement**

#### **A. General**

1. **Procurement and Consultant Guidelines.** All goods and services required for the Project and to be financed out of the proceeds of the Grant shall be procured in accordance with the requirements set forth or referred to in:
  - (a) Section I of the “Guidelines: Procurement under IBRD Loans and IDA Credits” published by the World Bank in May 2004 and revised in October 2006 (“Procurement Guidelines”) in the case of goods and works, and Sections I and IV of the “Guidelines: Selection and Employment of Consultants by World Bank Borrowers” published by the World Bank in May 2004 and revised in October 2006 (“Consultant Guidelines”) in the case of consultants’ services; and
  - (b) the provisions of this Section III, as the same shall be elaborated in the procurement plan prepared and updated from time to time by the Recipient for the Project in accordance with paragraph 1.16 of the Procurement Guidelines and paragraph 1.24 of the Consultant Guidelines (“Procurement Plan”).
2. **Definitions.** The capitalized terms used below in this Section to describe particular procurement methods or methods of review by the World Bank of particular contracts, refer to the corresponding method described in the Procurement Guidelines, or Consultant Guidelines, as the case may be.

#### **B. Particular Methods of Procurement of Goods**

1. **International Competitive Bidding.** Except as otherwise provided in paragraph 2 below, goods shall be procured under contracts awarded on the basis of International Competitive Bidding. The provisions of paragraphs 2.55 and 2.56 of the Guidelines and Appendix 2 thereto shall apply to goods manufactured in the territory of the Recipient (other than goods manufactured in the Hong Kong Special Administrative Region or the Macau Special Administrative Region of the Recipient).
2. **Other Methods of Procurement of Goods.** The following table specifies the methods of procurement, other than International Competitive Bidding, which may be used for goods. The Procurement Plan shall specify the circumstances under which such methods may be used.

**Procurement Method**

## (a) National Competitive Bidding:

In addition, the procedures to be followed for National Competitive Bidding shall be those set forth in the Law on Tendering and Bidding of the People's Republic of China promulgated by Order No.21 of the President of the People's Republic of China on August 30, 1999, with the following clarifications required for compliance with the Procurement Guidelines:

- (i) All invitations to prequalify or to bid shall be advertised in a newspaper of national circulation in the Recipient's country, except for civil works contracts that are estimated cost less than \$2,000,000 equivalent each and for goods contracts that are estimated to cost less than \$300,000 equivalent each, which may be advertised in a provincial daily newspaper. Such advertisement shall be made in sufficient time for prospective bidders to obtain prequalification or bidding documents and prepare and submit their responses. In any event, a minimum of thirty (30) days shall be given to bidders between the date of advertisement in such newspaper and the deadline for submission of bids, and the advertisement and bidding documents shall specify the deadline for such submission.
- (ii) Qualification requirements of bidders and the method of evaluating the qualification of each bidder shall be specified in detail in the bidding documents.
- (iii) All bidders that meet the qualification criteria set out in the pre-qualification document shall be allowed to bid and there shall be no limit on the number of pre-qualified bidders.
- (iv) All bidders shall be required to provide security in an amount sufficient to protect the Recipient or the Project Implementing Entity, as the case may be, in case of breach of contract by the contractor, and the bidding documents shall specify the required form and amount of such security.
- (v) Bidders will be allowed to submit bids by mail or by hand. The time for opening of all bids shall be the same as the deadline for receipt of such bids.

	<ul style="list-style-type: none"> <li>(vi) All bids shall be opened in public; all bidders shall be offered an opportunity to be present (either in person or through their representatives) at the time of bid opening, but bidders shall not be required to be present at the bid opening.</li> <li>(vii) All bid evaluation criteria shall be disclosed in the bidding documents and quantified in monetary terms or expressed in the form of pass/fail requirements.</li> <li>(viii) No bid may be rejected solely on the basis that the bid price falls outside any standard contract estimate, or margin or bracket of average bids established by the Recipient or the Project Implementing Entity, as the case may be.</li> <li>(ix) Each contract shall be awarded to the lowest evaluated responsive bidder, that is, the bidder who meets the appropriate standards of capability and resources and whose bid has been determined: (A) to be substantially responsive to the bidding documents; and (B) to offer the lowest evaluated cost. The winning bidder shall not be required, as a condition of award, to undertake responsibilities for work not stipulated in the bidding documents or otherwise to modify the bid as originally submitted.</li> <li>(x) Each contract financed with the proceeds of the Grant shall provide that the suppliers and contractors shall permit the World Bank, at its request, to inspect their accounts and records relating to the performance of the contract and to have said accounts and records audited by auditors appointed by the World Bank.</li> <li>(xi) Government owned enterprises in the Recipient's country may be permitted to bid or submit a proposal of goods and works if they can establish that they: (A) are legally and financially autonomous; (B) operate under commercial law; and (C) are not a dependent agency of the agency conducting the procurement.</li> <li>(xii) Re-bidding should not be allowed solely because the number of bids is less than three (3).</li> </ul>
(b)	Shopping
(c)	Direct Contracting

**C. Particular Methods of Procurement of Consultants' Services**

1. **Quality- and Cost-based Selection.** Except as otherwise provided in paragraph 2 below, consultants' services shall be procured under contracts awarded on the basis of Quality- and Cost-based Selection. For purposes of paragraph 2.7 of the Consultant Guidelines, the short list of consultants for services estimated to cost less than \$300,000 equivalent per contract may comprise entirely national consultants.
2. **Other Methods of Procurement of Consultants' Services.** The following methods, other than Quality- and Cost-based Selection, may be used for procurement of consultants' services for those assignments which are specified in the Procurement Plan: (a) Quality-based Selection; (b) Selection based on Consultants' Qualifications; (c) Single-source Selection; and (d) Selection of Individual Consultants.

**D. Review by the World Bank of Procurement Decisions**

Except as the World Bank shall otherwise determine by notice to the Recipient, the following contracts shall be subject to Prior Review by the World Bank: (a) each contract for goods estimated to cost the equivalent of \$200,000 or more procured based on International and National Competitive Bidding; and all contracts to be procured based on Direct Contracting; (b) each contract for consultants' services provided by a firm estimated to cost the equivalent of \$100,000 or more; and all contracts for consultants' services provided by a firm selected based on single-source basis; and (c) the first contract procured by either the Shandong Provincial PMO or the Shanxi Provincial PEO, regardless of procurement method or contract value. In addition, the terms of reference for consulting services, regardless of their contract value or procurement method, will be subject to the World Bank's prior review. All other contracts shall be subject to Post Review by the World Bank.

**Section IV. Withdrawal of Grant Proceeds**

**A. General**

1. The Recipient may withdraw the proceeds of the Grant in accordance with the provisions of: (a) Article III of the Standard Conditions; (b) this Section; and (c) such additional instructions as the World Bank may specify by notice to the Recipient (including the "World Bank Disbursement Guidelines for Projects" dated May 2006, as revised from time to time by the World Bank and as made applicable to this Agreement pursuant to such instructions), to finance Eligible Expenditures as set forth in the table in paragraph 2 below.

2. The following table specifies the categories of Eligible Expenditures that may be financed out of the proceeds of the Grant (“Category”), the allocations of the amounts of the Grant to each Category, and the percentage of expenditures to be financed for Eligible Expenditures in each Category:

<b>Category</b>	<b>Amount of the Grant Allocated (expressed in USD)</b>	<b>Percentage of Expenditures to be Financed (inclusive of Taxes)</b>
1. Under Recipient’s Respective Parts of the Project:		100%
(a) Goods (including installation), consulting services, and training	2,856,543	
(b) Operating Costs	205,000	
2. Under GDPG’s Respective Parts of the Project:		100%
(a) Goods (including installation), consulting services, and training	2,770,000	
3. Under Shandong’s Respective Parts of the Project:		
(a) Goods (including installation), consulting services, and training	4,489,715	100%
(b) Operating Costs	101,714	100%
(c) MCSU Grant	2,000,000	100% of MCSU Grant amount disbursed
4. Under Shanxi’s Respective Parts of the Project:		
(a) Goods (including installation), consulting services, and training	3,315,429	100%



(b) Operating Costs	101,714	100%
(c) MCSU Grant	3,000,000	100% of MCSU Grant amount disbursed
5. Unallocated	859,885	
<b>TOTAL AMOUNT</b>	<b>19,700,000</b>	

**B. Withdrawal Conditions; Withdrawal Period**

1. Notwithstanding the provisions of Part A of this Section no withdrawal shall be made:
  - (a) for payments made prior to the date of this Agreement, except that withdrawals up to an aggregate amount not to exceed \$3,524,000 equivalent may be made for payments made prior to this date but on or after April 30, 2008, for Eligible Expenditures under Categories 1(a), 2(a), 3(a), and 4(a); or
  - (b) in respect of expenditures under Categories 3(c) and 4(c), until, as the case may be:
    - (i) the Recipient, through National PMO, Shandong through its Provincial PMO, and Shanxi through its Provincial PCO, as the case may be, have each adopted the MCSU Operational Manual, acceptable to the World Bank, in accordance with the provisions of paragraph 4 of Section I of Schedule 2 to this Agreement and the provisions of paragraph 9 of Section I of the Schedule to the Project Agreement respectively;
    - (ii) in respect of payment of each MCSU Grant, Shandong through Shandong PMO, or Shanxi through Shanxi PEO, as the case may be, on the basis of reports issued by an independent consultant or consulting firm acceptable to the World Bank, has certified the following:
      - (A) the amount of megawatt generation capacity closed by a MCSU Grant Beneficiary under Part A.1(b) of the Project (hereinafter called "Output" and collectively "Outputs");
      - (B) full compliance with the provisions of the MCSU Operational Manual, including MCSU Grant Beneficiary selection criteria, MCSU Grant eligibility criteria, the

Environmental Management Framework, and the Recipient's applicable policies and regulations at the central, provincial, and municipal levels for settlement of affected power plant works; and

- (C) the said Output or Outputs have not already been claimed by the Recipient to support previous withdrawal applications from the Grant Account.

2. The amount to be so withdrawn with respect of expenditures under Categories 3(c) and 4(c) is equal to the amount resulting from multiplying the Output or Outputs times the following established unit costs, or such other output unit costs as may be established by the World Bank in consultation with, and notification to the Recipient, Shandong Province, and Shanxi Province.

<b>Project Implementing Entities</b>	<b>Unit Cost</b>
Shandong	US\$6,800 to a MCSU Beneficiary for activities under Part A.1(b) of the Project
Shanxi	US\$6,800 to a MCSU Beneficiary for activities under Part A.1(b) of the Project

3. The Closing Date referred to in Section 3.06(c) of the Standard Conditions is December 31, 2012.

## ANNEX 1 to SCHEDULE 2

## Performance Monitoring Indicators

Project Development Objective	Project Outcome Indicators
<ul style="list-style-type: none"> <li>Reduce coal consumption and GHG emission per unit of coal-fired electricity production in Shandong Province, Shanxi Province and Guangdong Province</li> </ul>	<ul style="list-style-type: none"> <li>Average coal consumption and GHG emission per unit of coal-fired electricity output (gce/kWh) in Shandong Province, Shanxi Province and Guangdong Province</li> </ul>
Outcomes by Components	Outcome Indicators
<p><b>Part A of the Project</b></p> <ul style="list-style-type: none"> <li>Reduced share of generation capacity by less efficient coal-fired units in Shanxi Province and Shandong Province.</li> </ul>	<ul style="list-style-type: none"> <li>Cumulative capacity of small thermal unit closed down in Shanxi Province and Shandong Province</li> <li>Operation of CHP On-line Monitoring Systems in Shanxi Province and Shandong Province.</li> </ul>
<p><b>Part B of the Project</b></p> <ul style="list-style-type: none"> <li>Improved efficiency of coal-fired power and heat supply at Participating Power Plants</li> </ul>	<ul style="list-style-type: none"> <li>Thermal efficiency of Participating Power Plants</li> <li>Annual coal savings and GHG emission reduction from Participating Power Plants</li> </ul>
<p><b>Part C of the Project</b></p> <ul style="list-style-type: none"> <li>Changed from existing dispatch practices to fuel efficient generation dispatch in Guangdong Provincial Power Grid</li> </ul>	<ul style="list-style-type: none"> <li>Pilot operation of ESD</li> <li>Operation of simulation system</li> <li>Report on assessment of ESD pilots</li> </ul>

**ANNEX 2 to SCHEDULE 2****Terms and Conditions of Subsidiary Grant Agreement**

The terms and conditions of the Subsidiary Grant Agreement referred to in paragraph 2(a) of Section I of Schedule 2 to this Agreement shall include the following:

1. The principal amount of the Subsidiary Grant to be made available by the Recipient to GDPG, pursuant to paragraph 2(a) of Section I of Schedule 2 to this Agreement shall be the amount in Dollars estimated to be required for the activities to be carried out by GDPG under its Respective Part of the Project. Such amount shall be made available by the Recipient to GDPG on a non-reimbursable grant basis.
2. GDPG shall undertake to carry out its Respective Part of the Project with due diligence and efficiency and in accordance with appropriate management, financial, engineering and public utility practices acceptable to the World Bank and provide, promptly as needed, the funds, facilities and other resources required for the purpose.
3. GDPG shall undertake to procure the goods and consultants' services to be financed out of the proceeds of the Subsidiary Grant in accordance with the provisions of Section III of Schedule 2 to the Grant Agreement, and utilize such goods and consultants' services exclusively in the carrying out of its Respective Part of the Project.
4. GDPG shall undertake to enable the World Bank and the Recipient to inspect such goods and the sites included in its Respective Part of the Project, the operation thereof, and any relevant records and documents.
5. GDPG shall undertake to take out and maintain with responsible insurers such insurance, against such risks and in such amounts, as shall be consistent with sound business practice, including, without limitation, such insurance to cover hazards incident to the acquisition, transportation and delivery of goods financed out of the proceeds of the Subsidiary Grant to the place of use or installation, any indemnity thereunder to be made payable in a currency freely usable to replace or repair such goods.
6. GDPG shall undertake:
  - (a) maintain a financial management system and prepare financial statements in accordance with consistently applied accounting standards acceptable to the World Bank, both in a manner adequate to reflect the operations, resources and expenditures related to its Respective Part of the Project;

- (b) at the World Bank's or the Recipient's request, have its financial statements referred to above audited by independent auditors acceptable to the World Bank, in accordance with consistently applied auditing standards acceptable to the World Bank and promptly furnish the statements as so audited to the Recipient and the World Bank;
  - (c) enable the Recipient and the World Bank to inspect its Respective Part of the Project, its operation and any relevant records and documents; and
  - (d) prepare and furnish to the Recipient and the World Bank all such information as the Recipient or the World Bank shall reasonably request relating to the foregoing.
7. GDPG shall undertake to:
- (a) monitor and evaluate the progress of its Respective Part of the Project and prepare Project Reports for said activities in accordance with the provisions of Section 2.06 of the Standard Conditions and on the basis of the indicators set forth in Annex 1 to Schedule 2 to this Agreement. Each such Project Report shall cover the period of one (1) calendar semester, and shall be furnished to the Recipient not later than March 15 and September 15 of each calendar year, commencing September 15, 2009 for incorporation and forwarding by the Recipient to the World Bank of the overall Project Report;
  - (b) provide to the Recipient not later than three (3) months after the Closing Date, for incorporation in the report referred to in Section 2.06 of the Standard Conditions all such information as the Recipient or the World Bank shall reasonably request for the purpose of such Section; and
  - (c) provide such other information and reports the Recipient or the World Bank may request in order to enable the Recipient to fulfill its obligations under the Grant Agreement.
8. GDPG shall undertake to ensure that its Respective Part of the Project is carried out in accordance with the Anti-Corruption Guidelines.
9. The Recipient shall have the right to suspend or terminate the right of GDPG to the use of the proceeds of the Subsidiary Grant made available under the Subsidiary Grant Agreement or to obtain a refund of all or any part of the amount of said proceeds then withdrawn upon failure by GDPG to perform its obligations under the Subsidiary Grant Agreement.

## APPENDIX

### Section I. Definitions

- (a) “Anti-Corruption Guidelines” means the “Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants”, dated October 15, 2006.
- (b) “Category” means a category set forth in the table in Section IV of Schedule 2 to this Agreement.
- (c) “CHP” means combined heat and power.
- (d) “Consultant Guidelines” means the “Guidelines: Selection and Employment of Consultants by World Bank Borrowers” published by the Bank in May 2004 and revised in October 2006.
- (e) “Displaced Persons” means persons who, on account of the execution of the Project have experienced or would experience direct economic and social impacts caused by: (i) the involuntary taking of land, resulting in: (A) relocation or loss of shelter; (B) loss of assets or access to assets; or (C) loss of income sources or means of livelihood, whether or not such persons must move to another location; or (ii) the involuntary restriction of access to legally designated parks and protected areas, resulting in adverse impacts on the livelihood of such persons; and a “Displaced Person” means any of such Displaced Persons.
- (f) “Environmental Management Framework” means the framework, dated November 17, 2008, satisfactory to the World Bank, describing procedures, principles, and guidelines for: (i) the mitigation of the potential environmental impact of Part A.1(b) of the Project; and (ii) the preparation of a site specific environmental management plan, if required for carrying out any activities under Part A.1 of the Project; as the same may be amended from time to time with the prior agreement of the World Bank.
- (g) “Environmental Management Plans” and the acronym “EMPs” mean, collectively, the following plans, which set out the environmental protection measures in respect of Part B of the Project, as well as administrative and monitoring arrangements to ensure the implementation of said plans, as said plans may be revised from time to time with the agreement of the World Bank:
  - (i) the environmental management plan dated October 2007 prepared for Part B.1 of the Project;
  - (ii) the environmental management plan dated October 2007 prepared for Part B.2 of the Project; and

- (iii) the environmental management plan dated November 2007 prepared for Part B.3 of the Project.

The acronym “EMP” means, individually, any such plan.

- (h) “ESD” means efficient fuel savings dispatch.
- (i) “Financial Management Manual” means the manual dated December 29, 2008, referred to in paragraph 7 of Section I of Schedule 2 to this Agreement, as such manual may be revised from time to time with the prior agreement of the World Bank.
- (j) “Fiscal Year” means the fiscal year of GDPG and the Participating Power Plants starting from January 1 and ending on December 31.
- (k) “GDPG” means Guangdong Power Grid Corporation, the limited liability company established and operating pursuant to its Charter effective as of March 29, 2005 and Business License No.4400001009928 dated March 29, 2005, issued by Guangdong Provincial Industry and Commerce Administrative Bureau, and any successor thereto.
- (l) “MCSU Grant Beneficiary” means a small electricity generation plant selected to participate in Part A.1(b) of the Project and receive a MCSU Grant pursuant to the selection and eligibility criteria set out in the MCSU Operational Manual; and “MCSU Grant Beneficiaries” means, collectively, the plural thereof.
- (m) “MCSU Grant” means a grant made by Shandong or Shanxi, as the case may be, to a MCSU Beneficiary out of the proceeds of the Grant to a MCSU Beneficiary pursuant to the relevant provisions of this Agreement and the MCSU Operational Manual for carrying out activities under Part A.1(b) of the Project, and “MCSU Grants” means, collectively, the plural thereof.
- (n) “MCSU Operational Manual” means the manual referred to in paragraph 4 of Section I of Schedule 2 to this Agreement, as such Manual may be amended from time to time with the prior approval by the World Bank.
- (o) “MCSU” means the financial incentive mechanism for closure of small thermal power units piloted under Part A.1 of the Project.
- (p) “MOF” means the Recipient’s Ministry of Finance, and any successor thereto.
- (q) “National Advisory and Coordination Committee” means the committee referred to in paragraph 3(a) of Section I of Schedule 2 to this Agreement.

- (r) “National Project Management Office” and its acronym “National PMO” mean the project management office referred to in paragraph 3(b) of Section I of Schedule 2 to this Agreement.
- (s) “NDRC” means the Recipient’s National Development and Reform Commission, and any successor thereto.
- (t) “Operating Costs” means the reasonable expenditures directly related to the Project incurred by National PMO, Shandong Provincial PMO, and Shanxi Provincial PCO/PEO, on account of Project implementation, management, coordination, and monitoring and evaluation, in respect of travel costs, vehicle and equipment maintenance and repair, office supplies, communications costs, logistics and translation services, production and reproduction of documents required for Project implementation, including training materials, but excluding the salaries and salary supplements of the Recipient’s civil servants.
- (u) “Participating Power Plants” means collectively, the Huangtai Thermal Power Plant and the Jinan Beijiao Thermal Power Plant in Shandong Province, and the Yangguang Thermal Power Plant in Shanxi Province, all of which are established in accordance with Recipient’s relevant laws, and “Participating Power Plant” means any of the Participating Power Plants.
- (v) “Procurement Guidelines” means the “Guidelines: Procurement under IBRD Loans and IDA Credits” published by the Bank in May 2004 and revised in October 2006.
- (w) “Procurement Plan” means the Recipient’s procurement plan for the Project, dated December 29, 2008 and referred to in paragraph 1.16 of the Procurement Guidelines and paragraph 1.24 of the Consultant Guidelines, as the same shall be updated from time to time in accordance with the provisions of said paragraphs.
- (x) “Project Agreement” means the agreement between the World Bank and the Project Implementing Entities of even date herewith, as the same may be amended from time to time; and such term includes all schedules and agreements supplemental to the Project Agreement.
- (y) “Project Coordination and Leading Group” means the group referred to in paragraph 1(a) of Section I of the Schedule to the Project Agreement.
- (z) “Project Coordination Office” (PCO) means the project coordination unit in Shanxi Province referred to in paragraph 2(a) of Section I of the Schedule to the Project Agreement.



- (aa) “Project Executive Office” and its acronym “PEO” mean the project executive office in Shanxi Province referred to in paragraph 2(b) of Section I of the Schedule to the Project Agreement.
- (bb) “Project Implementing Entities” means Recipient’s Shanxi Province and Shandong Province and GDPG, or any successors thereto, and “Project Implementing Entity” means any of said Project Implementing Entities.
- (cc) “Project Provinces” means, collectively, Shandong Province and Shanxi Province, and “Project Province” means either of the Project Provinces.
- (dd) “Project Steering Committee” means the project steering committee in Shanxi Province referred to in paragraph 2(a) of Section I of the Schedule to the Project Agreement.
- (ee) “Project Team” means GDPG’s project team referred to in paragraph 3 of Section I of the Schedule to the Project Agreement.
- (ff) “Provincial PMO” means the Shandong provincial project management office referred to in paragraph 1(b) of Section I of the Schedule to the Project Agreement.
- (gg) “Resettlement Plan” means the resettlement plan, dated October 2007 prepared for heat supply pipeline works under Part B.1 of the Project, which sets out the principles and procedures governing the acquisition of land and other assets, and the resettlement, compensation and rehabilitation of Displaced Persons on account of said works under Part B.1 of the Project, as well as monitoring and reporting arrangements to ensure compliance with said plan, as the same may be revised from time to time with the prior agreement of the World Bank.
- (hh) “Resettlement Policy Frameworks” and its acronym “RPFs” mean, collectively, (i) the resettlement policy framework dated October 2007 prepared for heat supply pipeline works under Part B.2 of the Project; and (ii) resettlement policy framework, dated October 2007 prepared for branch pipeline works under Part B.1 of the Project; which set out policies and procedures for acquisition, compensation and rehabilitation of Displaced Persons, and guidelines for the preparation of resettlement action plans if necessary, as said policy frameworks may be amended from time to time with the prior agreement of the World Bank; and “Resettlement Policy Framework” means either of the Resettlement Policy Frameworks.
- (ii) “Respective Parts of the Project” means in respect of: (i) the Recipient through MOF with participation of NDRC, and SERC, Parts A.1(a), A.4, B.4, B.5, C.1(a), C.2, and D of the Project within their respective responsibilities; (ii) Shandong Province, Parts A.1(b), A.2, A.3, B.1, B.2, and D of the Project within its

jurisdiction; (iii) Shanxi Province, Parts A.1(b), A.2, A.3, B.3, and D of the Project within its jurisdiction; and (iv) GDPG, Part C.1 of the Project, except for Part C.1(a); all as described in Schedule 1 of this Agreement.

- (jj) “SERC” means the Recipient’s State Electricity Regulatory Commission, any successor thereto.
- (kk) “Standard Conditions” means the Standard Conditions for Grants Made by the World Bank Out of Various Funds, dated July 1, 2008.
- (ll) “Subsidiary Grant Agreements” means, collectively, (i) the agreement to be entered into between the Recipient and GDPG, and (ii) the agreements to be entered into between each Project Province with its respective Participating Power Plants, pursuant to paragraph 2(a) of Section I of Schedule 2 to this Agreement and paragraph 8(a) of Section I of the Schedule to the Project Agreement respectively, as the same may be amended from time to time, and such term includes all schedules and supplements to said agreements; and “Subsidiary Grant Agreement” means any of Subsidiary Grant Agreements.
- (mm) “Subsidiary Grant” means a grant to be made by: (i) the Recipient out of the proceeds of the Grant to GDPG; or (ii) a Project Province out of the proceeds of the Grant to each of its Participating Power Plants, each pursuant to the provisions of the respective Subsidiary Grant Agreement; and “Subsidiary Grants” means the plural thereof.