

**ASIAN DEVELOPMENT BANK**

**TAR: PRC 35429**

**TECHNICAL ASSISTANCE**  
(Financed by the Government of Canada)

**TO THE**

**PEOPLE'S REPUBLIC OF CHINA**

**FOR**

**OPPORTUNITIES FOR THE CLEAN DEVELOPMENT MECHANISM**

**IN THE ENERGY SECTOR**

**March 2002**

## CURRENCY EQUIVALENTS

(as of 12 March 2002)

Currency Unit	–	Yuan (Y)
Y1.00	=	\$0.1208
\$1.00	=	Y8.2766

The exchange rate of the yuan is determined in relation to a weighted basket of currencies of the trading partners of the People's Republic of China. In this report, a rate of \$1.00 = Y8.30 was used.

## ABBREVIATIONS

ADB	–	Asian Development Bank
CDM	–	clean development mechanism
CP	–	cleaner production
CO <sub>2</sub>	–	carbon dioxide
COP	–	Conference of Parties
DMC	–	developing member country
GHG	–	greenhouse gas
GWh	–	gigawatt-hour
MOST	–	Ministry of Science and Technology
MW	–	megawatt
PRC	–	People's Republic of China
PREGA	–	Promotion of Renewable Energy, Energy Efficiency, and Greenhouse Gas Abatement
SDPC	–	State Development Planning Commission
SETC	–	State Economic and Trade Commission
TA	–	technical assistance
UNFCCC	–	United Nations Framework Convention on Climate Change

## NOTE

In this report, "\$" refers to US dollars.

## I. INTRODUCTION

1. During the 2001 Country Programming Mission, the Government of the People's Republic of China (PRC) requested Asian Development Bank's (ADB) assistance for examining opportunities for the clean development mechanism (CDM) in the energy sector. Technical assistance (TA) was included in the PRC Country Assistance Plan for 2002 to explore the policy and institutional requirements for CDM, and to examine the feasibility of developing several pilot projects in different provinces that could be supported by ADB. A Fact-Finding Mission (the Mission) from ADB visited the PRC in December 2001. The Mission held discussions with officials from the Ministry of Science and Technology (MOST), State Development Planning Commission (SDPC), State Economic and Trade Commission (SETC), Tsinghua University, and relevant government agencies regarding the proposed TA<sup>1</sup> on CDM, and solicited the Government's views on the TA objectives, scope, terms of reference, implementation arrangements, and cost estimates. The Mission also had discussion with representatives from the Canadian International Development Agency and the Royal Netherlands Embassy on their activities related to CDM in the PRC, and visited the provinces of Gansu and Guangxi.

## II. ISSUES OR PROBLEMS

2. Over the past two decades, the PRC has made major progress in moving from a planned economy to a market-based one. From 1990 to 2001, gross domestic product grew by about 9 percent annually. Future growth will continue to rely on fossil fuels, particularly coal, as the main source of energy because of its abundance and low cost, and because the infrastructure for its use as an energy source is well developed. Developing member countries' (DMCs) participation in the global effort to reduce greenhouse gases (GHGs) such as carbon dioxide (CO<sub>2</sub>) is somewhat slow due to the fear that such efforts may reduce economic growth. Based on the Asia Least-Cost Greenhouse Gas Abatement Strategy Study (ADB, Global Environment Facility and United Nations Development Programme, 1998), the estimates for the PRC are 1,320 and 1,695 million tons of annual carbon emissions by 2010 and 2020, respectively.<sup>2</sup>

3. ADB's operational strategy for the PRC is designed to assist in (i) improving the efficiency of the economy, (ii) promoting growth to reduce poverty in the poorer interior provinces, and (iii) improving the environment and natural resource management. In the environment sector, the strategy focuses on (i) strengthening the policy and regulatory framework for sustainable environmental management; (ii) supporting capacity-building programs in environmental impact assessment monitoring and enforcement; (iii) supporting the utilization of economic measures (taxes, charges, and fees), supply-side measures (integrated resource planning and fuel switching), and other measures (waste minimization and recycling) to ensure sustainable utilization of natural resources; and (iv) promoting the use of cleaner process technologies for industrial production, renewable energy, and clean energy technologies for power generation. The TA, with its emphasis on energy efficiency, renewable energy and improving environmental quality, is in accord with ADB's PRC Country Operational Strategy to support environmentally sustainable economic growth.

4. With the ratification of the United Nations Framework Convention on Climate Change (UNFCCC) in June 1992, a likely change in climate was accepted as a global environmental

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<sup>1</sup> The TA first appeared in ADB Business Opportunities (Internet Edition) on 14 August 2001.

<sup>2</sup> According to the Energy Information Administration (US Department of Energy), the PRC is expected to produce 1,131 million tons of carbon emissions annually by 2010, and 1,683 million tons by 2020.

challenge. Stabilization of the emission of GHGs was the most important objective of the convention. At the third Conference of Parties to the UNFCCC in 1997, the Kyoto Protocol to the UNFCCC was adopted, wherein the developed countries agreed to reduce their overall emissions by 5.2 percent below 1990 levels in the first commitment period of 2008-2012. The CDM, a market-based mechanism, was introduced under the Kyoto Protocol. The CDM enables developed countries (known as “Annex I parties”) to meet their emission reduction commitments in a flexible and cost-effective manner and assists developing countries in meeting their sustainable development objectives. While investors benefit from CDM projects by obtaining GHG emission reduction credits at lower cost than in their own countries, the gains to the host countries are in the form of investment, access to better technology, and local sustainable development benefits.

5. At the seventh Conference of Parties (COP-7) to the UNFCCC, held in Marrakesh, Morocco in November 2001, the global community moved closer to ratification of the protocol. The basic rules for the functioning of the CDM were agreed upon during COP-7. Projects starting in 2000 are eligible to earn Certified Emissions Reduction Credits if they lead to “real, measurable, and long-term” GHG reductions, which are additional to any that would occur in the absence of the CDM project. An executive board has been set up for CDM with 10 members and 10 alternates. The CDM executive board is authorized to approve methodologies for baselines, monitoring plans, and project boundaries; accredit operational entities; and develop and maintain the CDM registry.

6. At COP-7, it was decided that the following types of projects would qualify for fast-track approval procedures: renewable energy projects with up to 15 megawatts (MW) of output capacity, energy efficiency improvement projects that reduce energy consumption on the supply and/or demand side by up to 15 gigawatt-hours (GWh)/year, and other project activities that both reduce emissions at source and directly emit less than 15 kilotons (kt) of CO<sub>2</sub> equivalent annually. The progress at COP-7 towards ratification and establishment of procedures to operationalize the CDM implies that CDM projects may soon be implemented.

7. ADB has provided TA related to reducing GHG emissions on a regional level. The Asia Least-Cost Greenhouse Gas Abatement Strategy was a major TA for 12 DMCs (including the PRC) designed to assist them to meet their commitments under the UNFCCC.<sup>3</sup> ADB has also provided several other TAs for GHG reduction in the region.<sup>4</sup> The Promotion of Renewable Energy, Energy Efficiency, and Greenhouse Gas Abatement (PREGA) project aims to promote investments in renewable energy and energy-efficient GHG abatement technologies that will increase access to energy services by the poor, realize other strategic development objectives, and help reduce GHG emissions.<sup>5</sup> The PRC has a large potential to use CDM. ADB is pursuing policy dialogue and promoting capacity building in this area under PREGA. In related efforts, ADB has also promoted cleaner production (CP), energy conservation, and environmental improvement. ADB is playing a major role in helping introduce CP through a TA cluster with six subprojects.<sup>6</sup> Subproject 1 developed a policy package for promoting CP, while subprojects 2

<sup>3</sup> TA 5592-REG: *A Study of a Least-Cost Greenhouse Gas Abatement Strategy for Asia*, for \$8,237,000 approved on 4 August 1994; with supplementary TAs for \$492,000, approved on 10 September 1996, and \$133,363, approved on 19 June 1998.

<sup>4</sup> TA 5528-REG: *Acid Rain and Greenhouse Gas Emission Reduction in Asia*, for \$450,000, approved on 16 April 1993; and TA 5585-REG: *Acid Rain and Greenhouse Gas Emission Reduction in Asia Phase II*, for \$600,000, approved on 7 May 1997.

<sup>5</sup> TA 5297-REG: *Promotion of Renewable Energy and Energy Efficiency in Greenhouse Gas Abatement*, for \$5,000,000, approved on 4 January 2001.

<sup>6</sup> TA 3079-PRC: *Promotion of Cleaner Technology (Cluster)*, for \$3.5 million, approved on 29 September 1998, is ADB's first TA cluster.

and 3 are assisting the Government in establishing a national network for CP technology transfer, and in drafting the CP law. The law will provide a legal basis for promoting CP. The other three subprojects (4, 5, and 6) will assist in developing CP technology, environmental management in CP, and a financing mechanism for CP in town and village enterprises. ADB has also provided assistance for establishing successful CP transfer centers,<sup>7</sup> which have spread to two provinces under the TA cluster. ADB has also financed projects for energy conservation and environmental improvement.<sup>8</sup>

8. CDM will allow emission reduction credits to be generated through projects such as cleaner energy and energy efficiency or renewable energy development in developing countries. Such credits can be bought and sold (transferred) to meet the GHG reduction obligations of Annex 1 countries. The major strategies and programs that can be developed for clean energy development and pollution control in the energy sector include promotion of clean energy and cleaner industrial production, methane gas capture, closure of small and inefficient power plants and boilers, replacement of small boilers with centralized district heating systems, and control of key polluting sources. Often these strategies embody win-win situations such as GHG reduction while reducing other environmental pollutants. The PRC has a large potential to benefit from such win-win options. However, lack of technical expertise is a major constraint for the implementation of such projects.

### III. THE TECHNICAL ASSISTANCE

#### A. Purpose and Output

9. The TA's goal is to improve the global environment through reduction of GHGs. The TA will promote reduction of GHGs through examining the opportunities for CDM in the PRC's energy sector, develop a set of guidelines, and propose a strategy to promote such opportunities. The output of the TA will include (i) guidelines for small-scale CDM activities and an action plan detailing strategies to promote them, (ii) four GHG reduction project designs that could be eligible for CDM financing, (iii) an institutional assessment report, and (iv) dissemination materials for TA findings. The framework summarizing the objectives, goals, scope, cost, outputs, and performance targets of the TA is given in Appendix 1.

#### B. Methodology and Key Activities

10. The TA scope will cover four main aspects: (i) review the CDM process and its potential as a source of financing; (ii) develop a set of guidelines to elaborate simplified small-scale CDM methodologies, modalities, rules, and procedures as specified in COP-7 to ensure environmental integrity and lower transaction cost; (iii) propose a strategy to promote such small-scale CDM opportunities; and (iv) develop a set of alternative CDM designs as good practice examples including project design, evaluation, financing, and impact assessment. The first task will provide analytical information on CDM activities to various parties who could potentially use CDM options in their investment activities. These parties will include a wide spectrum of investors such as power producers, industrialists, and nongovernment organizations. Dialogue will be pursued with the Government to examine various policy options and institutional requirements to promote CDM.

<sup>7</sup> TA 2434-PRC: *Establishing a Center for Transfer of Environmentally Sound Technology*, for \$550,000, approved on 31 October 1995.

<sup>8</sup> This includes Loan 1178-PRC: *Industrial Energy Conservation and Environment Improvement*, for \$107 million, approved on 24 September 1992 and Loan 1436-PRC: *Second Industrial Energy Conservation and Environment Improvement Project*, for \$178 million, approved on 9 May 1996.

11. Under the second task, as COP-7 develops, it is important to define the various options that the PRC has with respect to CDM options in order to maximize potential benefits. A set of guidelines to elaborate simplified small-scale CDM methodologies, modalities, rules, and procedures as specified in COP-7 will also be developed under the second task. The third task will cover the strategy formulation for promotion of small-scale CDM opportunities in the PRC. This task will also examine ADBs' role in promoting CDM and other similar options in the PRC. The potential for establishing multilateral CDM activities in the PRC, and ADB's possible involvement, will also be examined. A strategy to promote CDM will be developed based on the findings of this task.

12. The fourth task will use the knowledge gathered and lessons learned during TA implementation to develop four good practice design examples. The four examples will be developed using case materials from the national level and from two provinces. The national level information will focus on how central agencies such as MOST, SDPC, SETC, the State Power Corporation, and the Ministry of Finance can contribute to promoting small-scale CDM options in the energy sector. This could also involve examining institution building and information dissemination, and removing barriers to CDM promotion through policy reforms that require coordination and approval of CDM options.

13. Provincial level projects have been proposed in the Western region to be consistent with the Government's Western Development Strategy. The Government has requested that Gansu and Guangxi provinces be considered for the development of the case studies. Both provinces have significant potential for renewable energy development in rural areas and for energy efficiency improvement and conservation in urban areas. For example rural areas of Gansu and Guangxi have very strong potential for solar and biomass-based energy development, respectively. The Mission visited the two sites and received firm confirmations from the provincial governments. The designs will include various CDM eligibility options such as technology enhancement, energy efficiency improvement, development of renewable energy sources, and off-grid energy options including biomass utilization. The technical and engineering options will be complemented with good practices such as public consultation, nongovernment organization involvement, and women's participation. Each province will select two pilot projects: one energy efficiency and one renewable energy development project.

14. The TA will focus on small projects and their design in the energy sector, for example up to 15 MW renewable energy options, 15 GWh equivalent energy efficiency projects, and other projects resulting in annual reduction of about 15 kilotons of CO<sub>2</sub>. The TA will not focus on carbon sink projects, the transport sector, the iron and steel industry, nor chemical industries. This will avoid overlaps with the work of other agencies, particularly the Canadian International Development Agency, which signified interest in working on carbon sink and transport sector projects, and the Dutch Government, which indicated interest in the iron and steel and chemical industries. The World Bank will work on the methodological aspects of CDM.

15. A series of workshops and public awareness campaigns at the local and provincial levels will be carried out to disseminate the lessons learned from the TA. ADB-supported clean technology dissemination centers,<sup>9</sup> and recognized universities such as Tsinghua University and Renmin University will be used to implement the public awareness campaigns.

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<sup>9</sup> Centers developed through TA 2434-PRC: *Establishing a Center for Transfer of Environmentally Sound Technology*, for \$550,000, approved on 31 October 1995; and TA 3079-PRC: *Promotion of Cleaner Technology (Cluster)*, for \$3.5 million, approved on 29 September 1998.

### **C. Cost and Financing**

16. The TA is estimated to cost \$975,000 equivalent, comprising \$521,000 in foreign exchange and \$454,000 equivalent in local currency. ADB will finance \$775,000 equivalent on a grant basis from the Canadian Cooperation Fund for Climate Change, funded by the Government of Canada. This amount will comprise the entire foreign exchange cost of \$521,000 and \$254,000 equivalent of the local currency cost. The Government will finance the remainder of the local currency cost of \$200,000 equivalent. Detailed cost estimates are presented in Appendix 2.

### **D. Implementation Arrangements**

17. MOST will be the executing agency for the TA. A steering committee with senior level representatives from the Ministry of Finance, SDPC, the Ministry of Foreign Affairs, and MOST will guide the overall policy and general directions of the TA. SETC and the State Environmental Protection Administration will be kept fully involved in the process. A project management office will be established in MOST to carry out the day-to-day operations of the TA. A senior official from MOST will function as the project coordinator, who will be responsible for day-to-day communications and for organizational and operational matters. Two provincial project implementation agencies will be established to assist in developing the small-scale pilot projects; each will be composed of representatives from the provincial department of science and technology, planning commission, environment bureau, and energy authority.

18. International and domestic consultants will be selected in accordance with ADB's *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants. Implementation will require 13 person-months of international and 30 person-months of domestic consultants, to begin in May 2002. The required expertise includes (i) GHG abatement and international protocols including CDM, (ii) energy efficiency, (iii) renewable energy, (iv) GHG abatement policy, (v) environmental policy, (vi) legal issues, (vii) environmental economics, (viii) financial analysis, (ix) institutional analysis, and (x) social development. Indicative terms of reference for the consulting services are given in Appendix 3. Completion of the TA will take 12 months. The consultants will submit an inception report within one month after the commencement of their services, and an interim report 6 months after the submission of the inception report. The draft final report, to be submitted 11 months after the TA's commencement, and will be discussed at a tripartite meeting among MOST, the consultants, and ADB. The consultant will submit the final report in the English and Chinese languages.

## **IV. THE PRESIDENT'S DECISION**

19. The President, acting under the authority delegated by the Board, has approved ADB administering technical assistance to the Government of the People's Republic of China in an amount not exceeding the equivalent of \$775,000 to be financed by the Government of Canada on a grant basis, for the purpose of the Opportunities for the Clean Development Mechanism in the Energy Sector, and hereby reports such action to the Board.

### TECHNICAL ASSISTANCE FRAMEWORK

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
<p><b>A. Goal</b></p> <p>Improve the global environment.</p>	<p>Reduced risk of adverse impacts of global warming, rising sea-level, and other drastic climate changes</p>	<p>Policy dialogue with central and local governments Country, sector, and project review missions</p>	
<p><b>B. Purpose</b></p> <p>Reduce greenhouse gases (GHGs) and reduce risk of global warming.</p>	<p>Design GHG reduction projects eligible for clean development mechanism (CDM) financing.</p> <p>Develop investment and policy strategies that will benefit global community.</p>	<p>Project review missions Environmental reports from central and local environmental protection bureaus, and other agencies</p>	<p>Environmental policies and agreements are fully supported by all levels of government.</p> <p>Efficient and cost-effective policies for GHG reduction.</p> <p>Sufficient capacity exists in provincial and local environmental protection bureaus to help project design preparation.</p> <p>Sufficient counterpart support (staff) can be mobilized in a timely manner.</p>
<p><b>C. Outputs</b></p> <p>Guidelines for CDM activities and action plan with promotional strategies</p> <p>Four GHG reduction project designs eligible for CDM financing and one institutional assessment report</p> <p>Dissemination activities for technical assistance findings</p>	<p>Project designs to reduce carbon emissions or equivalent by minimum 100,000 tons/year. Projects should reflect improved technology and lower GHG emissions</p> <p>Action plan identifying roles of various stakeholders including the Asian Development Bank</p> <p>Provincial at local-level workshops and public awareness campaigns</p>	<p>Project review missions and routine monitoring reports</p> <p>Routine monitoring reports</p> <p>Project review missions and monitoring reports</p>	<p>GHG reduction as a priority in central and local environmental policies</p> <p>Active stakeholder involvement</p>
<p><b>D. Inputs</b></p> <p>Consulting services: 13 person-months international and 30 person-months domestic</p> <p>Office equipment including 3 computers and 3 facsimile machines</p>	<p>Estimated total cost of \$975,000 equivalent, comprising \$521,000 in foreign exchange and \$454,000 equivalent in local currency</p> <p>ADB will finance \$775,000 equivalent from the Canadian Co-operation Fund for Climate Change.</p> <p>Government will finance \$200,000 equivalent local currency cost.</p>	<p>Project review missions and consultants' reports</p>	<p>Competitive bidding and recruitment of good consultants</p> <p>Timely provision of counterpart support</p> <p>Good cooperation and coordination among government agencies</p>

**COST ESTIMATES AND FINANCING PLAN**  
(\$)

Item	Foreign Exchange	Local Currency	Total Cost
<b>A. ADB Financing (Canadian Cooperation Fund on Climate Change)</b>			
1. Consultants			
a. Remuneration and Per Diem			
i. International Consultants	325,000	0	325,000
ii. Domestic Consultants	0	180,000	180,000
b. International and Local Travel	45,000	10,000	55,000
c. Reports and Communications	8,000	2,000	10,000
2. Equipment <sup>a</sup>	10,000	0	10,000
3. Training, Seminars, and Conferences	10,000	10,000	20,000
4. Surveys	0	10,000	10,000
5. Miscellaneous Administration and Support Costs	8,000	7,000	15,000
6. Case Studies	40,000	5,000	45,000
7. Participation in Contract Negotiations	5,000	0	5,000
8. Contingencies	70,000	30,000	100,000
<b>Subtotal (A)</b>	<b>521,000</b>	<b>254,000</b>	<b>775,000</b>
<b>B. Government Financing</b>			
1. Office Accommodation and Transport	0	80,000	80,000
2. Remuneration and Per Diem of Counterpart Staff	0	40,000	40,000
3. Others	0	80,000	80,000
<b>Subtotal (B)</b>	<b>0</b>	<b>200,000</b>	<b>200,000</b>
<b>Total</b>	<b>521,000</b>	<b>454,000</b>	<b>975,000</b>

ADB = Asian Development Bank.

<sup>a</sup> Equipment includes three computers and accessories exclusively for the case studies.

Source: Staff estimates.

## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

### A. International Consultants

1. The international consultants will be responsible for delivering the items listed under para. 3 of these terms of reference. The responsibilities of the international consultants will also include the following:

#### 1. Team Leader with Experience Related to Greenhouse Gas Abatement and International Protocols

- (i) Prepare a framework for the promotion of clean development mechanism (CDM) projects in the energy sector, with special attention to small-scale projects as defined by the seventh Conference of Parties to the United Nations Framework Convention on Climate Change (COP-7). Use the framework and information generated under item (ii) to develop a strategy to overcome market and nonmarket barriers to the development and promotion of CDM projects.
- (ii) Assess the feasibility of implementing CDM policies, rules, and regulations with regard to (a) institutional responsibilities, mechanisms, and resources; and (b) financing issues.
- (iii) Review the criteria (including size, sector, location, and potential for dissemination as good practice) developed by the environmental/energy economist for selecting potential CDM projects. Assess technical aspects of typical projects and funding needs. Apply those criteria to select and recommend investment projects to be further developed and determine ways to stimulate the adoption of cost-effective CDM projects in the People's Republic of China (PRC) that will deliver significant environmental and economic benefits.
- (iv) In line with the Tenth Five-Year Plan targets and in consideration of institutional, financial, economic, technological, and environmental criteria, design pilot projects and initiatives that will help implement and develop government policy regarding industry adoption of CDM projects. Four small-scale pilot projects in Gansu and Guangxi provinces and a policy or institutional mechanism to support small-scale CDM work should be recommended based on outputs from other specialists.

#### 2. Environmental/Energy Economist

- (i) Assess the implications and opportunities for CDM adoption due to globalization and increased international exposure. This should take into account the growing cooperation among international agencies. Assess the economic feasibility of CDM promotion projects and subprojects according to various financing mechanisms. Although small-scale projects as defined in COP-7 must be given special attention, the economist

should look into scale advantages comparing different size CDM options and suggest strategies for different sized projects.

- (ii) Determine the appropriate criteria (including size, sector, location, and potential for dissemination as good practice) for selecting various enterprises as potential areas for CDM promotion. Assess the technical aspects of typical projects and funding needs. Assist the team leader in developing four small-scale pilot projects and other outputs as stated in item 1 (iv).

### **3. Renewable Energy and Energy Efficiency Specialist**

- (i) Design possible CDM projects for the promotion of renewable energy development and energy efficiency improvement options in a sustainable manner. Assess existing and propose new incentives to motivate government, industry, and energy sector enterprises to develop and promote CDM projects.
- (ii) Provide a set of sample CDM project outlines for various stakeholders including the government, industry, and enterprises. Assist the team leader in developing small-scale pilot projects and other outputs as stated in item 1 (iv).

### **4. Social Development Specialist**

- (i) Assess the social and poverty reduction including resettlement impacts of proposed CDM promotion projects and subprojects under various financing mechanisms in accordance with the Asian Development Bank's *Handbook on Poverty and Social Analysis*.
- (ii) Assess other cross-cutting issues such as gender aspects, occupational health, and other social dimensions of proposed CDM promotion projects and subprojects under various financing mechanisms.
- (iii) In consultation with the economist, assess the potential welfare impacts of enterprise reform that are necessary for the promotion of CDM. Assist the team leader in developing small-scale pilot projects and other outputs as stated in item 1 (iv).

### **5. Institutional Analyst**

- (i) Assess the feasibility of implementing CDM projects with regard to (a) institutional responsibilities, mechanisms, and resources; and (b) financing issues. Assess the role of government in promoting CDM projects through private enterprises in the energy sector, and identify barriers for enhancement of their role in CDM promotion.
- (ii) Based on item (i), draft proposals for model CDM rules and regulations.

- (iii) Assess institutional mechanisms for implementing proposed CDM promotion projects and subprojects under various financing mechanisms.
- (iv) Outline a workable institutional mechanism for assessing investment proposals, and identify potential sources of funding, including multilateral and bilateral development organizations. Assist the team leader in developing four small-scale pilot projects and other outputs, as stated in item 1 (iv).

## **B. Domestic Consultants**

2. The domestic consultants will be responsible for delivering the items stated in para. 4 of these terms of reference. They will also assist the international consultants to undertake the following tasks:

### **1. Energy Efficiency Specialist**

- (i) Prior to the fielding of the counterpart international consultant, collect and document all information related to government policies and other relevant initiatives and activities that may influence the development and promotion of CDM. Provide a concise summary including key historic information, with reference to energy efficiency aspects.
- (ii) Provide a write-up of energy efficiency issues related to CDM and globalization, particularly considering circumstances unique to the PRC. Include a discussion of energy efficiency issues related to the expected accession of the PRC to the World Trade Organization and related issues on globalization.

### **2. Renewable Energy Specialist**

- (i) Assist the international consultants in the collection of data and all other relevant information related to CDM that may be required to fulfill their terms of reference.
- (ii) In line with the Tenth Five-Year Plan targets, evaluate the international consultants' design of pilot projects and initiatives that would help implement and develop government policy regarding industry's adoption of CDM, particularly considering renewable energy development in the PRC.

### **3. Policy Expert**

- (i) Assist the international consultants in the collection of data and all other relevant information related to CDM that may be required to fulfill their terms of reference. Provide a critical review of the international consultants' work—paying careful attention to the applicability of all criteria used and all recommendations made for policies, activities, and projects to encourage CDM.

- (ii) Provide a write-up of policy issues related to CDM and globalization, particularly considering circumstances unique to the PRC. Include a discussion of energy issues related to globalization.

#### **4. Economist**

- (i) Assist the international consultants in the collection of data and all other relevant information related to CDM that may be required to fulfill their terms of reference.
- (ii) In line with the Tenth Five-Year Plan targets, evaluate the international consultants' design of pilot projects and initiatives that would help implement and develop government policy regarding industry's adoption of CDM, particularly considering economic issues.

#### **5. Financial Analyst**

- (i) Provide a critical review of international consultants' work—paying careful attention to the applicability of all criteria used and all recommendations made for policies, activities, and projects to encourage CDM.
- (ii) Provide a write-up of financial issues related to CDM and globalization, particularly considering circumstances unique to the PRC. Include a discussion of energy issues related to globalization.

#### **6. Institutional Expert**

- (i) Prior to the fielding of the counterpart international consultant, collect and document all information related to government policies and other relevant initiatives and activities that may influence the development and promotion of CDM. Provide a concise summary including key historic information, with reference to institutional aspects.
- (ii) Provide a critical review of the international consultant's work—paying careful attention to the applicability of all criteria used and all recommendations made for policies, activities, and projects to encourage CDM.
- (iii) In line with the Tenth Five-Year Plan targets, evaluate the international consultants' design of pilot projects and initiatives that would help implement and develop government policy regarding industry's adoption of CDM, particularly considering institutional issues.

## 7. Social Development Specialist

- (i) Provide a critical review of the international consultants' work—paying careful attention to the applicability of all criteria used and all recommendations made for CDM policies, activities, and projects to encourage social development and poverty reduction.
- (ii) Provide a write-up of social/poverty issues related to CDM and globalization, particularly considering circumstances unique to the PRC.

## 8. Legal Expert

- (i) Assist the international consultants in the collection of data and all other relevant information related to the promotion of CDM projects that may be required to fulfill their terms of reference.
- (ii) Provide a critical review of the international consultants' work—paying careful attention to the applicability of all criteria used and all recommendations made for policies, activities, and projects to encourage CDM projects.
- (iii) Review the feasibility of preparation of draft rules and regulations to promote CDM projects with reference to small-scale energy efficiency and renewable energy development options.

## C. Deliverable Outputs

3. **International Consultants:** Produce (i) the CDM development and promotion agenda; (ii) CDM promotion policies; (iii) strategy to implement CDM promotion policies; (iv) action plan for promotion of CDM; (v) draft guidelines for simplified methods for small-scale CDM project preparation; (vi) reviewed and finalized draft designs for four detailed small-scale pilot CDM projects; (vii) potential financing mechanisms for each proposed project; (viii) institutional assessment and recommendations; (ix) social, financial, and economic environmental assessment for each project; (x) a summary of government views on each of the potential projects; and (xi) an action plan and policy dialogue issues that may help international financing organizations such as the Asian Development Bank to further pursue dialogue on the proposed projects.

4. **Domestic Consultants:** Produce or provide (i) summary reports on CDM-related background information and activities prior to the fielding of the international consultants; (ii) documentation of relevant data; (iii) drafts of designs for potential CDM projects—descriptions of stand-alone investment projects including sector development projects, pilot projects, or policy investments; and four detailed small-scale pilot projects; (iv) reviews of counterpart international consultants' work; (v) write-ups on issues related to CDM and globalization; and (vi) written evaluation of finalized pilot project designs and initiatives.