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1. 要請書

APPLICATION FORM FOR JAPAN'S DEVELOPMENT STUDY PROGRAM

Date of entry: Month July Year 2006

Applicant: the Government of the Socialist Republic of Vietnam

1. Project digest

(1) Project Title: Master Plan for Energy Conservation and Effective Use

*Enter the project title in English (Spanish or French).

(2) Location: (province/country name): Hanoi/Vietnam

(city/town/village name): Hanoi

from the metropolis : about _____ hours' ride/flight

(3) Implementing Agency

Name of the Agency: Ministry of Industry, Dept. of Science & Technology

Number of Staff of the Agency: 10

(on a category basis)

Budget allocated to the Agency: 300 Million VND

(4) Justification of the Project

- *Present conditions of the sector:*

The final energy consumption in Vietnam increased at an annual growth rate of 11% for the period of 1990 to 2004, about 1.5 times greater than the GDP growth rate for the same period. Outlook of future energy demand shows that the total final energy consumption will increase an average 8.1% per year toward 2020. In order to meet the rapidly increasing demand of energy, it is indispensable to establish strategies in terms of both sides of demand and supply. As for supply side, the Government of Vietnam (GOV) has implemented new development projects of energy such as exploitation of gas/coal and electric power plants. On the other hand, in 2003, GOV had issued a decree on "Effective Utilization of Energy and Energy Conservation". Subsequently in 2004, the Ministry of Industry (MOI) issued a circular providing guidance for implementing energy conservation in all enterprises. In 2005, MOI prepared "National Targeted Program on Energy Efficiency and Conservation (hereinafter referred to as EE&C) for the Period 2006-2015", which has been approved and enforced since 14 April 2006. The National Program calls for

a collaborated efforts in improving energy efficiency, reducing energy losses and implementing stronger measures for energy conservation. MOI is authorized to administer the implementation of the National Program, and the Energy Efficiency and Conservation Office has been established within MOI since 04 April 2006.

- *Sectoral development policy of the national/local government:*

In order to meet the increasing energy demand stated above, a national energy policy of Vietnam is being drafted, in which nine (9) orientations are raised including: 1) National energy security, 2) Energy conservation and effective use, 3) Environmental protection in energy activities, 4) Energy sector reform and gradual establishment of competitive energy market, 5) Investment capital mobilization for energy development, 6) Energy price, 7) New and renewable energy development, 8) Scientific-energy technology development, and 9) International cooperation and energy import-export.

Energy conservation and effective use is one of the draft national energy policies, and then “National Targeted Program on Energy Efficiency and Conservation (EE&C) for the Period 2006-2015” has been approved by the Prime Minister of Vietnam on April, 2006. This Program is aiming specific targets to reduce the energy consumption by 3% to 5% for 2006-2010 and by 5% to 8% for 2011-2015.

- *Problems to be solved in the sector:*

At present, energy efficiency and conservation in Vietnam can be characterized by;

- 1) High losses and low efficiency due to obsolete technology and equipment
- 2) Lack of demand side management (DSM) practice
- 3) Unawareness of the public for social benefits of energy conservation
- 4) Lack of detail comprehensive national plans on energy efficiency and conservation

“National Targeted Program on Energy Efficiency and Conservation (EE&C) for the Period 2006-2015” is the first comprehensive national program of setting up of necessary institutional mechanism for sustainable operation of energy efficiency and conservation in Vietnam. The Program includes six (6) components for specific solutions as below.

- A) Enhance government control on economical and effective use of energy, and organize management system for energy efficiency and conservation
- B) Enhance education and information dissemination, mobilize communities, and improve public awareness

- C) Popularize high-productivity facilities for energy saving, and eliminate low-productivity facilities
- D) Promote energy efficiency and conservation activities in industrial sector
- E) Promote energy efficiency and conservation activities in buildings
- F) Promote energy efficiency and conservation activities in transportation sector

- *Outline of the Project:*

In order to implement "National Targeted Program on Energy Efficiency and Conservation in the Period of 2006-2015" with clearly defined components as well as time-bound targets, MOI has an urgent and crucial mission to prepare short-term, medium-term and long-term EE&C plans related to legal system, institutional mechanism, energy management system, trainings for energy managers, and so on. The Study aims at assisting MOI to prepare and establish "Master Plan on Energy Efficiency and Conservation" covering the above issues on EE&C.

- *Purpose (short-term objective) of the Project:*

Establishing the entire management system for "National Targeted Program on EE&C for the Period 2006-2015" including legal system, organization structure, financial system, dissemination of public awareness and enterprises' incentives.

- *Goal (long-term objective) of the Project:*

To achieve the target of total energy saving, cut down investment for energy development, and bring socio-economic benefits.

- *Prospective beneficiaries:*

The beneficiaries from the Project will be about 80 million people of Vietnam who would use various types of energy for agriculture and fishery, construction and industry, transportation, commercial and service, and households.

- *The Project's priority in the National Development Plan / Public Investment Program:*

High Priority

(5) Desirable or Scheduled time of the commencement of the Project:

(From) month April year 2007

(6) Expected funding source and/or assistance (including external origin) for the Project:

It is expected that the Study could be covered by the technical assistance grant from the Japanese Government. The Vietnamese Government will provide available data and information necessary to implement the Study. It will also organize a steering committee and working groups, which would consist of Japanese consultants assigned for the Study and the Vietnamese stakeholders such as Ministry of Industry, relevant Ministries, Electricity of Vietnam, Petrovietnam, Vinacomin and other relevant authorities, for encouraging smooth implementation of the Study.

(7) Other relevant projects, if any.

- World Bank/Sida “DSM Phase I Project (1999-2002)”
- World Bank/GEF “EVN Phase II DSM Program (2005-)
- World Bank/GEF “Commercial Energy Efficiency Pilot Program (2005-)”
- UNDP/GEF “EEC promotion in SMEs of Vietnam (2005-)”

(8) Any relevant information of the project from gender perspective:

None

2. Terms of Reference of the proposed Study

(1) Necessity/Justification of the Study:

Energy is one of the most important components for Vietnam to develop the national socio-economy steadily and effectively. Viewing that both energy and financial sources are limited, the improvement of energy efficiency and conservation is an urgent issue for the Government of Vietnam. Following “National Targeted Program on Energy Efficiency and Conservation for the Period of 2006-2015”, which was approved by Prime Minister on April 2006, the Study on “Master Plan on Energy Efficiency and Conservation” will facilitate the reliable and effective implementation of the National Program.

(2) Necessity/Justification of the Japanese Technical Cooperation:

Japan is one of the most successful countries to have achieved energy efficiency and conservation to a considerable extent through establishing legal/institutional mechanism, developing new technology on EE&C, improving the public awareness on EE&C, and so on. By utilizing these experiences and expertise, the Government of Japan has provided a variety

of technical cooperation projects on EE&C so far. In consideration of the above situation, the Government of Vietnam would like to request the Government of Japan and the Japan International Cooperation Agency (JICA) to provide the Japanese technical cooperation for the Study.

(3) Objectives of the Study:

The objective of the Study is to advance “National Targeted Program on EE&C for the Period of 2006-2015”, and the Study is anticipated to provide to the whole people in Vietnam with the benefit such as convenient and comfortable life based on sustainable energy supply, international competitiveness of domestic industries and global environmental preservation.

(4) Area to be covered by the Study:

The Study will cover the whole country of Vietnam.

(5) Scope of the Study:

① To review current situation of socio-economic activities and energy consumption in all sectors, and historical EE&C projects, and then identify anticipated barriers to EE&C. Followings are considered as current barriers to EE&C

- Lack of policy framework for promoting energy efficiency and conservation
- Insufficient and Inadequate information on EE&C
- Lack of technical expertise by end-users, manufacturers, suppliers, and potential service providers
- High initial investment cost of EE&C equipment
- High project development cost of technical studies and designs on EE&C
- Lack of affordable financing for EE&C equipment
- Limited interest of end-users to EE&C
- Limited local EE&C equipment

② To review and assess “National Targeted Program on EE&C in the period of 2006-2015” and current EE&C projects, and then study the measures and solutions to overcome the identified barriers.

③ To review and assess existing action plans and detail programs of MOI for EE&C, and

then recommend roadmaps of eleven (11) projects provided in “National Targeted Program on EE&C in the period of 2006-2015”

- ④ To review legal systems including law and decrees on EE&C in the neighboring countries and developed countries, and recommend drafts of legal framework of law and decrees in consideration of Vietnamese local conditions.
- ⑤ To review and assess the organization structures and capacities of governmental authorities, local authorities, sectors and enterprises, and prepare a framework of energy management system on EE&C at three levels- governmental level, enterprise level and public services and society as a whole.
- ⑥ To design a framework of “Training Centers for Energy Managers” and prepare an implementation program of the Center based on the above assessment.
- ⑦ To design a framework of “Energy Conservation Centers” including their duties, responsibilities and activities in the entire energy management system
- ⑧ To design and create a database system of EE&C in consideration of data collection mechanism in Vietnam
- ⑨ To provide data and information on advanced technology on EE&C through seminars, workshops, and so on.
- ⑩ To improve the capacity development of the bodies under Ministry of Industry in the process of the Project

(6) Study Schedule:

Total period of the Study will be one and half (1.5) years.

(7) Expected Major Outputs of the Study:

To establish the road maps for EE&C projects provided in “National Targeted Program on Energy Efficiency and Conservation (EE&C) for the Period 2006-2015”

(8) Possibility to be implemented / expected funding resources:

It is expected that the Study could be covered by the technical assistance grant from the Japanese Government.

1) The Study requires expatriate personnel of main fields of energy efficiency and conservation and total 80 man month (MM) as follows. One of those is concurrent with a team leader.

- Energy economist: 12 MM
- Energy saving expert 12 MM
- Legal expert: 12 MM
- Electrical expert: 12 MM
- Mechanical expert: 12 MM
- Building expert: 6 MM
- Financial expert: 8 MM
- Database expert: 6 MM

2) The counterpart training in Japan would be required for the following subjects;

- Basic and advanced technology of EE&C
- Good practices of EE&C

(9) Environmental and Social Considerations

Please see the attached screening format.

(10) Request of the Study to other donor agencies, if any:

There has been no request to other donor agencies.

3. Facilities and information for the Study

(1) Assignment of counterpart personnel of the implementing agency for the Study:

(number, academic background, etc.)

Implementing Agency: Dept. of Science and Technology, MOI

Cooperating Agency: Some related Departments and Institutes of MOI, Vinacoal, EVN, Petrovietnam, Institute of Energy

Total number of counterpart personnel of the implementing agency for the Study will be 10 persons including;

- Economist: 2 persons
- Energy economist: 3 persons
- Electric power expert: 4 persons
- Financial expert: 1 persons

(2) Available data, information, documents, maps, etc. related to the Study:

All of the data, information, documents, maps, etc. related to the Study will be provided by MOI, and coordinated bodies.

Current information related to the Study is attached.

(3) Information on the security conditions in the Study Area:

No serious problem on security is observed in the whole area of Vietnam.

4. Global-Issues (Gender, Poverty, etc.)

The Project will not affect significantly to any of the Global Issues.

5. Undertaking of Vietnam

(1) To facilitate the smooth conduct of the Study; the Government of Vietnam shall take necessary measures:

- 1) To permit the members of the Team to enter, leave and sojourn in Vietnam for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees;
- 2) To exempt the members of the Team from taxes, duties and any other charges on equipment, machinery and other material brought into Vietnam for the implementation of the Study;
- 3) To exempt the members of the Team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the team for their services in connection with the implementation of the Study;
- 4) To provide necessary facilities to the Team for the remittance as well as utilization of funds introduced into Vietnam from Japan in connection with the implementation of the Study;

(2) The Government of Vietnam shall bear claims, if any arises, against the members of the Team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the team.

(3) Energy Efficiency and Conservation Office of MOI shall act as counterpart agency to the Japanese Study Team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

(4) Energy Efficiency and Conservation Office of MOI shall, at its Vietnam's expense, provide the Team with the following, in cooperation with other organizations concerned:

- 1) Security-related information on as well as measures to ensure the safety of the Team;
- 2) Information on as well as support in obtaining medical service;
- 3) Available data and information related to the Study;
- 4) Counterpart personnel;
- 5) Suitable office space with necessary office equipment and furniture;
- 6) Credentials or identification cards; and
- 7) Vehicles with drivers.

(5) Energy Efficiency and Conservation Office of MOI will, as the implementing agency of the project, take responsibilities that may arise from the products of the Study.

The Government of Vietnam assures that the matters referred to in this form will be ensured for the smooth conduct of the Development Study by the Japanese Study Team.



Title: Mr. Nguyen Dinh Hiep

Vice Director of Science and Technology Department

Requesting Agency: Ministry of Industry

Date:

2. 事業事前評価表

事業事前評価表（開発調査）（案）

作成日：平成19年12月20日

担当グループ：経済開発部 第二グループ

1. 案件名
ベトナム国省エネルギー促進マスタープラン調査
2. 協力概要
(1) 事業の目的 ア. 「2006-2015年におけるエネルギー効率及び省エネルギーに関する国家目標プログラム（The National Target Program on Energy Efficiency and Conservation for the Period 2006-2015）」を促進させるためのロードマップ及びアクションプランを策定する。 イ. 商工省（MOIT: Ministry of Industry and Trade）が策定を計画している「省エネルギーマスタープラン（Master Plan on Energy Efficiency and Conservation）」（以下、「省エネマスタープラン」）にかかる支援を実施する。 ウ. 本調査の実施を通じて、MOIT及び関連機関の関係者の計画策定及び実施能力の強化を図る。
(2) 調査期間 2008年6月～2009年12月
(3) 総調査費用 約2.5億円
(4) 協力相手先機関 商工省 科学技術局 省エネルギー室 Ministry of Industry and Trade (MOIT) Department of Science and Technology (DOST) Energy Efficiency and Conservation Office (EE&C of MOIT)
(5) 計画の対象（対象分野、対象規模等） 対象分野：産業及び商業部門 対象地域：ベトナム国全土
3. 協力の必要性・位置付け
(1) 現状及び問題点 ベトナム国（以下、「ベ」国）は、2003年9月に「エネルギーの効率的利用及び省エネルギーに関する政府議定書（以下、「省エネ議定書」）」（Government Decree No.102 on Energy Efficiency and Conservation）を制定し、引き続き2004年7月に工業省(MOI)（当時）は、同議定書を実施するためガイダンス（MOI's Circular on Guidance for Implementation of the Government Decree on Energy Efficiency and Conservation）を作成し、2006年4月には「2006-2015年におけるエネルギー効率及び省エネルギーに関する国家目標プログラム」（以下、「省エネ国家目標プログラム」）（The National Targeted Program on Energy Efficiency and Conservation for the Period 2006-2015）を作成し、首相の承認を得て施行された。

しかし、上述のような省エネルギー（以下、省エネ）促進策が制定されてはいるものの、体系的かつ包括的なものではないため実効性に乏しく、「ベ」国における省エネは、これまで十分促進されてきたとは言い難い状況にある。

このような背景の下、「ベ」国政府は省エネ分野の最先進国である我が国に対し、効果的な省エネ政策を推進するための協力を要請した。

（２）相手国政府国家政策上の位置づけ

本調査は「ベ」国が制定した「省エネ国家目標プログラム」を促進させる具体的な方策の策定を目的として位置づけられている。また同プログラムは、「省エネ議定書」に基づき実施されている。

（３）他国機関の関連事業との整合性

UNDP及びGEF（Global Environment Facility）が、科学技術省（MOST：Ministry of Science and Technology）と共に、中小企業を対象としたプロジェクト（PECSME：Promoting Energy Conservation in Small and Medium Scale Enterprises）を実施している。

また、世界銀行が、ベトナム電力公社（EVN：Vietnam Electricity）への支援を通じて、白熱電灯からCFL（Compact Fluorescent Lamp）等への変更、及び時間別電力料金制度の導入等の支援を実施している。

上記は試行的かつ限定的な取組みであるが、本調査は、「ベ」国が国家的プログラムとして取り組んでいる「省エネ国家目標プログラム」の促進を支援するものであり、整合性において問題はない。

（４）我が国援助政策との関連、JICA国別事業実施計画上の位置づけ

我が国の「新・国家エネルギー戦略」においては、「アジア・省エネルギー・プログラム」に基づき、省エネ普及協力、支援を実施するとなっている。

また本調査は、JICAの「ベ」国国別事業実施計画における「電力システム効率化プログラム」の中に位置し、省エネ促進によるエネルギー需要の伸びの減少に伴い、エネルギー効率化を図る重要な位置づけにある。

4. 協力の枠組み

（１）調査項目

ア. 省エネ促進に必要となる情報の収集、阻害要因、要改善項目の整理

（ア）社会経済状況、エネルギー需給状況、省エネに対する意識

（イ）過去に実施された関連プロジェクト

（ウ）現場レベルにおける省エネ取組み状況

（エ）「省エネ国家目標プログラム」全般の活動状況

（オ）「ベ」国及び日本、他国における省エネ関連政策、法制度

（カ）「ベ」国及び日本、他国におけるエネルギー使用量等の情報収集メカニズム

（キ）中央及び地方政府レベルにおける省エネ促進実施体制

イ. 「省エネ国家目標プログラム」のロードマップ及びアクションプランの策定

（ア）エネルギー使用量等の情報収集メカニズムの策定、及び省エネデータベースシステムの構築

（イ）省エネ促進政策、及び法制度にかかる改善案の策定

（ウ）MOIT傘下の既存大学、専門学校等を活用した「エネルギー管理者育成センター」設

立及び人材育成計画（案）の策定

(エ) 各地域における「省エネセンター」の役割、責任範囲等、効果的な省エネ促進体制（案）の策定

(オ) 「省エネ国家目標プログラム」のロードマップ及び上記イ. (ア) ～ (エ) を中心としたアクションプランの策定

ウ. 「省エネマスタープラン」策定への支援

エ. MOIT及び関連機関の関係者の計画策定及び実施能力の強化

オ. 省エネに対する意識向上への支援

(2) アウトプット（成果）

ア. 「省エネ国家目標プログラム」を促進させるためのロードマップ及びアクションプランの策定

イ. 「省エネマスタープラン」策定への支援

ウ. 共同作業を通じてのC/Pの能力強化

(3) インプット（投入）：以下の投入による調査の実施

ア. コンサルタント

(ア) 総括／省エネルギー政策

(イ) 省エネルギー普及促進計画

(ウ) 省エネルギー普及促進制度（エネルギー管理報告メカニズム）

(エ) 省エネルギー普及促進制度（エネルギー管理者資格制度）

(オ) 省エネルギー普及促進制度（法制度）

(カ) 省エネルギー普及促進制度（人材育成計画）

(キ) 省エネルギー普及促進制度（普及促進組織体制）

(ク) 経済財務分析

(ケ) エネルギー管理技術（産業・熱）

(コ) エネルギー管理技術（産業・電気）

(サ) エネルギー管理技術（商業施設）

イ. その他

研修員受入れ4名

5. 協力終了後に達成が期待される目標

(1) 提案計画の活用目標

ア. 「ベ」国において、本調査により提言されたアクションプランが実施され、同国において省エネ施策が進展する体制が整う。

イ. 本調査により策定された提言内容が、実施機関であるMOIT等関係機関にて実施され、また、各分野における省エネ活動が積極的に促進される。

(2) 活用による達成目標

ア. 「ベ」国のエネルギー資源が効率的に利用され、国民生活及び産業育成に必要なエネルギーが持続的に供給される。

6. 外部要因

(1) 協力相手国内の事情

- ア. 政策的要因：開発政策の変更による提案事業の優先度の低下等
- イ. 行政的要因：行政機関間の調整の不備等
- ウ. 経済的要因：「ベ」国内外の経済状況の悪化等

(2) 関連プロジェクトの遅れ
特に該当なし。

7. 貧困・ジェンダー・環境等への配慮（注）

省エネ普及促進手段の一つであるエネルギー価格制度の改善に伴う急激なエネルギー価格の高騰は、低所得者層への影響が大きいため、それに対する十分な配慮が必要になる。

また、本件は省エネ政策・制度の普及促進計画を策定するプロジェクトであるため、環境への大きな負の影響はほとんどないと考えられる。

8. 過去の類似案件からの教訓の活用（注）

「ベ」国は省エネに対する意識がこれまで高い状態にはなかったため、これまでの我が国における省エネ対策のための知見及び技術を移転するのみならず、省エネ政策の実現能力、及び「ベ」国国民の省エネに対する意識を向上させ、省エネ普及促進の重要性を根付かせることが重要である。

9. 今後の評価計画

(1) 事後評価に用いる指標

ア. 活用の進捗度

調査により策定された提言内容の国家政策としての採用に向けた進捗状況

イ. 活用による達成目標の指標

策定された提言内容の「ベ」国の省エネ政策、制度への反映状況とその実現の状況

(2) 上記ア及びイを評価する方法および時期

ア. フォローアップによる進捗確認（適宜）

(注) 調査にあたっての配慮事項

3. 合意したM/M

MINUTES OF MEETING
FOR
MASTER PLAN FOR ENERGY CONSERVATION AND EFFECTIVE USE
IN VIETNAM

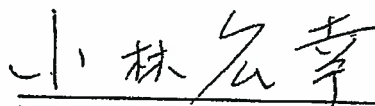
AGREED UPON BETWEEN

MINISTRY OF INDUSTRY AND TRADE

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

Hanoi, November 14, 2007



Mr. Hiroyuki Kobayashi
Leader of the Preparatory Study Team
Japan International Cooperation Agency



Mr. Nguyen Dinh Hiep
Deputy General Director
Department of Science and Technology
Executive Director
Energy Efficiency and Conservation Office
Ministry of Industry and Trade

The Government of the Socialist Republic of Vietnam (hereinafter referred to as "the Government of Vietnam") officially requested the Government of Japan to implement the study named "Master Plan for Energy Conservation and Effective Use" (hereinafter referred to as "the Study") in July 2006. In response to the request, the preparatory study team (hereinafter referred to as "the Team") organized by Japan International Cooperation Agency (hereinafter referred to as "JICA") was dispatched and had a series of discussions with Energy Efficiency and Conservation Office, Ministry of Industry and Trade (hereinafter referred to as "EE&C of MOIT"), from November 4 to November 16, 2007. (Main attendance list is shown in Annex 1.)

The discussions were conducted in a friendly and cordial atmosphere and both parties agreed to record the following points as summarized conclusions of the discussions.

1. Signing the Scope of Work Agreed

Both sides have reached an agreement on the Draft of Scope of Work as shown in Annex 2. Both sides have confirmed that JICA Head Office will make the final decision on the Study plan based on the agreement, before signing the Scope of Work.

2. Institutional Frame Work for the Study

EE&C of MOIT shall act as a counterpart agency to the JICA study team and as a coordinating body for the authorities concerned, such as Energy Efficiency and Conservation National Target Program's Steering Committee (hereinafter referred to as "NRP STC"), relevant ministries, Electricity Vietnam, Petrovietnam, Vinacomin and other relevant authorities to conduct smooth implementation of the Study.

1) Project Steering Committee

To review and comment on draft outputs of the Study, Project Steering Committee (hereinafter referred to as "PSC") shall be held by EE&C of MOIT in a timely manner. PSC shall be composed of selected representatives from NRP STC including MOIT, relevant organizations.

2) Working Group

To conduct smooth implementation of the Study, EE&C of MOIT shall organize Working Group. The Working Group shall be composed of representatives from MOIT, relevant ministries, relevant organizations and the JICA study team. The progress and results of the Study shall be reported at PSC by the representative of the Working Group.

3. Workshop

Both parties have agreed that the workshop shall be held three (3) times: Inception workshop will be held in Hanoi, the Interim workshop will be organized in 3 regions (Hanoi, Danang, Ho Chi Minh city) and the workshop for Final Report will be organized in Hanoi and Ho Chi Minh City. These workshops are organized in order to confirm the progress of the Study among stakeholders. All the arrangement of the workshops shall be made by EE&C of MOIT. JICA will closely cooperate with EE&C of MOIT by preparing the necessary documents and presentation, and by providing necessary expenses except for travel cost, daily allowance and accommodation fee of Vietnamese participants.

4. Budget allocation

The Vietnamese side stated that budget for implementation of the Study for the Vietnamese's side would be prepared by themselves before commencement of the Study.

5. Training in Japan

The Team has agreed to carry out relevant technical training, which will be carried out in Japan and funded by JICA. The official request shall be made by the government of Vietnam for administering the procedure.

6. Others

- 1) The Team explained that the JICA study team can not purchase equipments and software for implementation of the Study and the Vietnamese side understood this.
- 2) Because of some data collected from enterprises in the Study will never be opened to the public without the consensus among MOIT, JICA and the enterprises, the both sides agreed to mention on the "disclosure of information" in the article of [X.OTHERS] of the draft of Scope of Work".

Main Attendance List

**Energy Efficiency and Conservation Office, Department of Science and Technology,
Ministry of Industry and Trade**

Mr. Nguyen Dinh Hiep, Executive Director, Deputy General Director
Mr. Phuong Hoang Kim, Expert Energy Sector
Mr. Dang Hai Dzung, Officer
Mr. Uong Ngoc Hai, Expert
Mr. Yutaka Ogura, (The Energy Conservation Center, Japan Expert of MOIT)

Ministry of Planning and Investment

Mr. Nguyen Quang Dung, General Director, Department of Industrial Economy
Mr. Pham Minh Hung, Expert, Department of Industry

Hanoi Energy Conservation Center, Hanoi Industrial Department

Mr. Dao Hong Thai, Main Expert, Head of Energy Conservation Center
Mr. Hoa Thai Thanh, Chief of Division of Technical-Application

People's Committee of Ho Chi Minh City

Mr. Nguyen Thanh Tai, Standing Vice Chairman
Dr. Phan Minh Tan, Director, Department of Science and Technology
Mr. Pham Van Than, Chief of ODA Project Management Division

The Energy Conservation Center, Ho Chi Minh City

Mr. Huynh Kim Tuoc, Director
Ms. Mai To Nga, Project Manager
Mr. Truong Quang Vu, Manager, Renewable Energy Division
Mr. Phan Nguyen Vinh, Specialist, R&D Department

Vietnam Electricity

Mr. Trinh Ngoc Khanh, Vice Director, Business and Rural Electrification Department
Mr. Phan Sy Binh Minh, DSM activities, Business and Rural Electrification Department

JICA Preparatory Study Team

Mr. Hiroyuki Kobayashi, Team Leader

Mr. Atsunori Kadoya, Study Planning

Mr. Hidehito Wakabayashi, Energy Efficiency and Conservation Policy / System

Mr. Katsuo Urano, Energy Sector Analysis

JICA Vietnam Office

Mr. Masayuki Hayashi, Deputy Resident Representative

Ms. Do Kim Diep, Assistant Program Officer



**DRAFT SCOPE OF WORK
FOR
MASTER PLAN FOR
ENERGY CONSERVATION AND EFFECTIVE USE
IN VIETNAM**

**AGREED UPON BETWEEN
MINISTRY OF INDUSTRY AND TRADE
AND
JAPAN INTERNATIONAL COOPERATION AGENCY**

Ha Noi , XXX XX, 2007

Mr. Hiroaki Nakagawa
Resident Representative, Vietnam Office
Japan International Cooperation Agency

Mr. Nguyen Dinh Hiep
Deputy General Director
Department of Science and Technology
Executive Director
Energy Efficiency and Conservation Office
Ministry of Industry and Trade

Witnessed by:

Director General, Foreign Economic
Relations Department,
Ministry of Planning and Investment

I. INTRODUCTION

In response to the official request of the Government of Socialist Republic of Vietnam (herein after referred to as "the Government of Vietnam"), the Government of Japan decided to conduct the Study on "Master Plan for Energy Conservation and Effective Use" (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations as part of the technical cooperation program of the Government of Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, will jointly undertake the Study with the authorities concerned of the Government of Vietnam.

The present document sets forth the Scope of Work with regard to the Study.

II. OBJECTIVES OF THE STUDY

The main objectives of the Study are to:

1. Formulate a roadmap and action plans for the advance of "National Targeted Program on Energy Efficiency and Conservation (hereinafter referred to as "EE&C") for the period of 2006-2015"
2. Assist in the formulation of " Master Plan on EE&C "
3. Enhance the capacity of staff of the Ministry of Industry and Trade (hereinafter referred to as "MOIT") and staff of relevant organizations through conducting the Study

III. STUDY AREA

The Study will cover entire area of Vietnam.

IV. SCOPE OF THE STUDY

In order to achieve the objectives mentioned above, the Scope of Work for the Study shall cover the following items:

1. Make clear issue and bottle neck of EE&C
 - 1.1 Review a current situation of socio-economic activities, energy supply and

- consumption mainly in industrial and commercial sectors.
- 1.2 Review historical EE&C projects, and identify anticipated barriers to EE&C.
 - 1.3 Collect the information of on-site EE&C activities through the projects of "National Targeted Program on EE&C for the period of 2006-2015"
 - 1.4 Review and assess existing activities and situations of "National Targeted Program on EE&C for the period of 2006-2015"
 - 1.5 Review legal system including law and decrees on EE&C in Vietnam and the neighboring countries and developed countries in industrial and commercial sectors.
 - 1.6 Investigate the data collection mechanism of other countries to advance EE&C.
 - 1.7 Review and assess the organization structures and capacities of governmental authorities, local authorities, sector and enterprises.
2. Formulate and create a roadmap, action plans, and necessary frameworks for the advance of "National Targeted Program on EE&C for the period of 2006-2015"
 - 2.1 Design and create a database system of EE&C and data collection mechanism which will enable enterprises to report on the energy consumption and energy efficiency measure to the relevant governmental bodies and will improve the available data on energy consumption in the sector which are needed for the energy planning and further policy making in Vietnam.
 - 2.2 Recommend drafts of legal framework of law and decrees in consideration of Vietnamese local conditions.
 - 2.3 Design a framework of "Training Centers for Energy Managers" and prepare implementation program of the Center in consideration of licensing for the future energy managers as well as defining the roles and responsibilities of relevant institutions.
 - 2.4 Design a framework of "Energy Conservation Centers" including their duties, responsibilities and activities in the entire energy management system.
 - 2.5 Formulate a roadmap and action plans with time schedules and the responsibilities of relevant institutions for the advance of "National Targeted Program on EE&C for the period of 2006-2015" mainly in components of No.1, 3, 4 of 6 components (mainly in industrial sector and commercial sector).
 3. Assist in the formulation of " Master Plan on EE&C "

- 3.1 Assist MOIT to prepare and establish "Master Plan on EE&C".
4. Capacity development of MOIT and relevant organizations Personnel
 - 4.1 Enhance the capacity of staff of MOIT and staff of relevant organizations through conducting the Study.

V. SCHEDULE OF THE STUDY

The Study will be carried out in accordance with the tentative schedule as attached in the Appendix I. The schedule is tentative and subject to be modified when both parties agree upon any necessity that will arise during the course of the Study.

VI. REPORTS

JICA shall prepare and submit following reports to the Government of Vietnam.

1. Inception Report:
Ten (10) copies of English version
2. Progress Report:
Ten (10) copies of English version
3. Interim Report:
Ten (10) copies of English version
4. Draft Final Report:
Twenty (20) copies of both English and Vietnamese version
The Government of Vietnam shall submit its comments within one (1) month after the receipt of the Draft Final Report.
5. Final Report:
Thirty (30) copies of both English and Vietnamese version will be submitted within two (2) month after the receipt of the comments on the Draft Final Report.

VII. DIVISION OF TECHNICAL UNDERTAKINGS

The division of technical undertakings by JICA, MOIT is detailed in Appendix II

attached herewith.

VIII. UNDERTAKINGS OF THE GOVERNMENT OF VIETNAM

1. The Government of Vietnam shall accord privileges, exemptions and other benefits to the Japanese study team (hereinafter referred to as "the Team") in accordance with the Agreement on technical cooperation between the Government of Japan and the Government of Vietnam signed on October 20, 1998.
2. The Government of Vietnam shall bear claims, if any arises, against the members of the Team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Team.
3. MOIT shall act as the counterpart agency to the Team and also as the coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.
4. MOIT shall, at its own expense, provide the Team with the following in cooperation with other agencies concerned:
 - (1) Security-related information on as well as measures to ensure the safety of the Team;
 - (2) Information on as well as support in obtaining medical service;
 - (3) Available data (including maps and photographs) and information related to the Study;
 - (4) Counterpart personnel;
 - (5) Office space with necessary equipment; and
 - (6) Credentials or identification cards.

IX. UNDERTAKING OF JICA

For the implementation of the Study, JICA shall take the following measures:

- (1) To dispatch, at its own expense, the Team to Vietnam.
- (2) To pursue technology transfer to the Vietnamese counterpart personnel in the course of

the Study.

X. **OTHERS**

JICA and MOIT shall consult with each other in respect of any matter including disclosure of information that may arise from or in connection with the Study.

Tentative Time Schedule

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Make a clear issue and bottle neck of EE&C																		
1.1 Review a current situation of socio-economic activities																		
1.2 Review historical EE&C projects																		
1.3 Collect the information of on-site EE&C activities.																		
1.4 Review "National Targeted Program on EE&C "																		
1.5 Review legal system including law and decrees on EE&C																		
1.6 Investigate the data collection mechanism																		
1.7 Review and assess the organization structures																		
2. Roadmap and action plan of "National Targeted Program on EE&C"																		
2.1 Design a database and data collection mechanism of EE&C																		
2.2 Recommend of legal framework																		
2.3 Design a framework of "Training Centers for Energy Managers"																		
2.4 Design a framework of "Energy Conservation Centers"																		
2.5 Formulate a roadmap and action plans of "National Targeted Program on EE&C"																		
3. Assist in the formulation of " Master Plan on EE&C "																		
3.1 Assist MOIT to prepare and establish "Master Plan on EE&C".																		
4. Capacity development of MOIT Personnel																		
4.1 Enhance the capacity of staff of MOIT and relevant organizations																		
Reports																		
Work Shop																		

Legend : Work in Japan Work in Vietnam

Reports: Ic/R: Inception Report
 Pr/R: Progress Report
 Iu/R: Interim Report
 Df/R: Draft Final Report

APPENDIX II
 Division of Technical Undertaking

	JICA	MOIT
1. Make a clear issue and bottle neck of EE&C		
1.1 Review a current situation of socio-economic activities	to carry out the Study	to provide data and information
1.2 Review historical EE&C projects	to carry out the Study	to provide data and information
1.3 Collect the information of on-site EE&C activities.	to carry out the Study	to assist the study team
1.4 Review "National Targeted Program on EE&C "	to carry out the Study	to assist the study team
1.5 Review legal system including law and decrees on EE&C	to carry out the Study	to assist the study team
1.6 Investigate the data collection mechanism	to carry out the Study	to assist the study team
1.7 Review and assess the organization structures	to carry out the Study	to assist the study team
2. Roadmap and action plan of "National Targeted Program on EE&C"		
2.1 Design a database and data collection mechanism of EE&C	to carry out the Study	to assist the study team
2.2 Recommend of legal framework	to carry out the Study	to assist the study team
2.3 Design a framework of "Training Centers for Energy Managers"	to carry out the Study	to assist the study team
2.4 Design a framework of "Energy Conservation Centers"	to carry out the Study	to assist the study team
2.5 Formulate a roadmap and action plans of "National Targeted Program on EE&C"	to carry out the Study	to assist the study team
3. Assist in the formulation of " Master Plan on EE&C "	to carry out the Study	to assist the study team
3.1 Assist MOIT to prepare and establish "Master Plan on EE&C".		
4. Capacity development of MOIT Personnel	to carry out the Study	to assist the study team
4.1 Enhance the capacity of staff of MOIT and relevant organizations	to carry out the Study	to assist the study team