

## Summary of Evaluation Report

<b>I. Outline of the Project</b>		
<b>Country : Vietnam</b>		<b>Project title : Electric Power Technical Standards Promotion Project</b>
<b>Issue/Sector : Power</b>		<b>Cooperation scheme : Technical Cooperation Project</b>
<b>Division in charge : Energy and Mining Division I, Energy and Mining Group, Industrial Development and Public Policy Dept.</b>		<b>Total cost : 585 million JPY</b>
<b>Period of Cooperation</b>	<b>(R/D): March, 2010 to March, 2013</b>	<b>Partner Country's Implementing Organization : Ministry of Industry and Trade (MOIT), Ministry of Construction (MOC), Electricity of Vietnam (EVN)</b>
	<b>(Extension): March, 2013 to June, 2013</b> <b>(F/U) :</b> <b>(E/N) ( Grant Aid )</b>	
<b>Related Cooperation :</b>		
<b>1 Background of the Project</b> Since the power demand in Vietnam has been rapidly growing, it was projected to increase by 6.6 times during the period from 2000 to 2020. In order to cope with the growing power demand, the government of Vietnam stipulated a strategy for the power sector reform, including liberalization of the power market. Also, construction of power facilities, including power plants, has been promoted through encouragement of Independent Power Producers (IPPs). Under those situations, it has been essential for stable power supply to development and upgrade of unified and practical technical standards for construction, operation and maintenance of power facilities. JICA supported revisions of the Volume 5 – 7 of the Electric Power Technical Regulations, which had been stipulated by support of the former Soviet Union, through the Development Study (from May, 2006 to July, 2007), one of the technical cooperation schemes of JICA. The revised technical standards were promulgated by MOIT in December, 2009. However, there was no guideline to apply the technical regulations at power facilities. Also, the existing technical standards did not include regulations for the large-scale thermal power plants. Therefore, the government of Vietnam requested the government of Japan to provide technical guidance for adequate applications of the electric power technical standards to the power industry of Vietnam.		
<b>2 Project Overview</b> The Project targets the power industry of Vietnam and aims to support MOIT, MOC and EVN for development and promulgation of the electric power technical standards and guidelines in order to contribute to improvement of reliability and stability of power supply in Vietnam.		
<b>(1) Overall Goal</b> The Electric Power Standards* and Guidelines shall be enforced to ensure improvement of reliability and safety of power supply in Vietnam.		

\*According to the Law on Technical Regulations and Standards, the name of the technical documents to be promulgated should be the Electric Power Technical Regulations (QCVN) instead of “the Technical Standards”. Hereinafter referred to as “the Technical Regulations”.

## **(2) Project Purpose**

Electric Power Technical Regulations and Guidelines are authorized by the Vietnamese authorities.

## **(3) Outputs**

1. Report of review on existing Technical Regulations will be developed.
2. Drafts of the Technical Regulations are developed.
3. Drafts for the Guidelines for Technical Regulations are developed.

## **(4) Inputs**

### **Japanese side :**

<b>Long-term Expert</b>	<b>1 expert</b>	<b>Equipment</b>	<b>0.572 million Yen (for foreign currency)</b> <b>42.439 million VND (for local currency)</b>
<b>Short-term Expert</b>	<b>13 experts</b>	<b>Local cost</b>	<b>64.985 million Yen</b>
<b>Trainees received</b>	<b>21 trainees</b>		

### **Vietnamese Side :**

<b>Counterpart</b>	<b>54 persons</b>	<b>Equipment</b>	<b>2 PCs</b>
<b>Land and Facilities</b>	<b>Project office in MOIT</b>		
<b>Local Cost</b>	<b>Costs for site surveys, administrative costs for meeting or workshops of the Working Groups, cost for reviewing of drafts of the Technical Regulations</b>		
<b>Others</b>			

## **II. Evaluation Team**

<b>Members of Evaluation Team</b>	Team Leader: Mr. Teruyuki ITO (Director, Energy and Mining Division I, Energy and Mining Group, Industrial Development and Public Policy Department, JICA) Cooperation Planning: Mr. Hidetaka KOSEKI (Officer, Director, Energy and Mining Division I, Energy and Mining Group, Industrial Development and Public Policy Department, JICA) Evaluation Analysis: Ms. Hisami NAKAMURA (Deputy General Manager, Business Promotion Department, OPMAC Corporation)	
<b>Period of Evaluation</b>	<b>14/March/2013~ 25/April/2013</b>	<b>Type of Evaluation : Terminal Evaluation</b>

## **III. Results of Evaluation**

### **3-1 Current Achievement of the Project**

#### **(1) Likelihood of Achievement of the Project Purpose**

According to the recommendation of the Mid-term Review, the Project Purpose was revised to “authorization of the Electric Power Technical Standards and Guidelines by the Vietnamese Authorities”. Despite of the delay of the scheduled activities, it is expected that the final drafts of

the Technical Regulations and Guidelines of the both of MOIT and MOC scopes will be accepted by the Joint Coordination Committee (JCC) of the Project. Therefore, the Project Purpose is likely to be achieved by the end of the Project.

## **(2) Current Achievement of the Outputs**

The Output 1 to develop a review report on the existing Technical Regulations was achieved since the review report was approved by the Joint management Committee (JMC) for the Project. The Output 2 to revise and develop the Technical Regulations has been mostly achieved and is likely to be achieved by May, 2013. In terms of the MOC scope, the finalization works for the Technical Regulations has been delayed since provoked discussions about safety of dams by some accidents at the existing dam for hydropower plant required to reflect the results of the discussion in the Technical Regulations. The final draft of the MOC scope will be completed by May, 2013. In terms of the Output 3, the final drafts of the Guidelines for the Technical Regulations of the MOIT and MOC scopes will be accepted by JMC in June, 2013 despite that the Vietnamese side needs to conduct further refining works after the completion of the Project in order to make them usable on site of the power facilities.

## **3-2 Summary of Evaluation Results**

### **(1) Relevance**

Relevance of the Project is high and it is expected to keep the relevance until the end of the Project. In Vietnam, while the power demand has been rapidly growing, stable and safe supply of electricity is one of the key issues for the Vietnamese power sector in the power Development Master Plan 7 (PDP 7) which has been under implementation. Therefore, the revision and development of the Technical Regulations and Guidelines is consistent with the development policy and needs of Vietnam to improve reliability and safety of power supply through compliance of appropriate technical regulations. In addition, the approach of the Project was appropriate: it aims at support for necessary revision and development of additional regulations and guidelines after the technical cooperation to revise the technical regulations by the Development Study. Also, the Project is consistent with the Japan's ODA policy since "stable supplies for resource of energy" is one of the priority areas in the County Assistance Program for Vietnam.

### **(2) Effectiveness**

At the time of the Terminal Evaluation, effectiveness of the Project is fair.

The planned outputs and the Project Purpose are likely to be mostly achieved by June, 2013. However, improvement of the drafts of the Guidelines was not sufficient to increase usability of the Guidelines for the operators of the power facilities during the project period. Therefore, the Vietnamese side pointed out that effectiveness was decreased due to the situation where the Vietnamese side needs to continue revision and refining works of the drafts of the Guidelines.

### **(3) Efficiency**

The efficiency is fair.

In order to achieve the planned outputs and the Project Purpose, the inputs by the Japanese side, including the Japanese experts and the expenses to cover the cost of local consultants, increased from

the plan at the beginning of the Project. Also, the project period was extended from the original schedule ending March, 2013 to June, 2013. Although the limited linguistic interface and the limited involvement of the Vietnamese side constrained effective and efficient review and refinement works, the employment of local consultant improved the implementation arrangement and facilitated the finalization works of the Technical Regulations and the Guidelines.

#### **(4) Impact**

The revised overall of “the Electric Power Technical Regulations and Guidelines shall be enforced to ensure improvement of reliability and safety of power supply in Vietnam” is likely to be achieved by the end of 2014. The verifiable indicators for the Overall Goal were also modified in order to ensure feasibility of data collection. Since there are some opinions that the Guidelines should not be enforceable documents but reference for the Technical Regulations, it is preferable that the achievement will be verified by utilization of the Guidelines on site of the power facilities instead of promulgation of the Guidelines. In addition, it is necessary to set realistic indicator to verify compliance of the Technical Regulations based on the monitoring system for the existing regulations.

At the time of the Terminal Evaluation, any positive or negative impacts were not observed.

#### **(5) Sustainability**

Sustainability of the expected project effects can be ensured by compliance of the Technical Regulations, dissemination and utilization of the Guidelines and timely updates of the Technical Regulations and Guidelines.

Since the Technical Regulations will be enforceable documents, the relevant ministries should promulgate them and the power operators should comply with them. In terms of the Guidelines, it is expected that the power operators will utilize them in order to apply the Technical Regulations on site in the case that the Guidelines will not be promulgated. The monitoring of compliance of the Technical Regulations, the project owners and the power operators have obligation to report to MOIT and MOC. Also, MOIT, MOC and other relevant ministries conduct inspections. However, it is difficult for MOIT and MOC to conduct detail monitoring for all the project owners and the power operators. In terms of update of the Technical Regulations and Guidelines, MOIT and MOC can mobilize necessary human resources for expert team from the other stakeholders and other institutions despite that the ministries do not have enough technical experts. Also, they have sufficient knowledge and experience for updates of the technical regulations. In addition, EVN can have enough capacity to comply the Technical Regulations on site of the power facilities since they elaborated their own internal operational regulations by themselves according to the international technical regulations. In terms of the financial aspect, it is expected that MOIT and MOC can allocate enough budget to disseminated and to update the Technical Regulations because they have carried out and promulgations of other technical regulations.

### **3-3 Factors that promoted realization of effects**

#### **(1) Factors concerning to Planning**

There is no specific factor.

## **(2) Factors concerning to the Implementation Process**

In the MOIT scope, the part of Network required huge volume of work load for drafting of the Technical Regulations and Guidelines due to the variety of facilities. However, the local consultant employed since the second stage facilitated to collect and coordinate comments from the Vietnamese side and gave adequate advices for the Japanese experts. As a result, the project activities were implemented more efficiently and productively.

### **3-4 Factors that impeded realization of effects**

#### **(1) Factors concerning to Planning**

In this Project, it was planned that the Technical Regulations and Guidelines were drafted by the Japanese experts. Such implementation arrangement limited the ownership and the involvement of the Vietnamese side which affected the progress of the project activities. Consequently, the delay of the project activities required the extension of the project period and the expansion of the inputs from the Japanese side.

#### **(2) Factors concerning to the Implementation Process**

It was planned that the Vietnamese side and the Japanese side were going to review and discuss about the English version drafts which were prepared by the Japanese experts. However, the Vietnamese version drafts were required for technical reviews since some working group members of the Vietnamese side could not understand English. The translation works consumed time and induced problems caused by the limited vocabularies of technical terms in Vietnamese language. As a result, the effectiveness of the Project reduced by more revision works by the Vietnamese side after the project completion.

### **3-5 Conclusion**

Since the Project has been consistent with development needs of Vietnam and the Japanese ODA policy, the Project keeps high relevance. The improvement of implementation arrangement of the Project enables to mostly achieve the planned outputs and the Project purpose, and increase effectiveness of the Project. On the other hand, the increased workload by the limited interface of languages brought about the extension of the project period. The promulgation of the revised Technical Regulations, dissemination of the sustainability of the intended effects and benefits of the Project. Therefore, it is expected that the Project may be satisfactory at the end of the Project.

### **3-6 Recommendations**

#### **(1) Revision of PDM Ver.2 to specify verifiable indicators for the Overall Goal**

As mentioned above, it is necessary to set specific and practical indicators to verify the Overall Goal at a time of ex-post evaluation, which will be conducted by JICA within 2-4 years after the project completion. The indicators can be useful for MOIT and MOC to assess effects of the revised Technical Regulations and the Guidelines. Considering difficulty of quantitative information collection, the indicators should be based on qualitative data. Quantification of qualitative data is preferable to ensure objectivity of verification.

#### **(2) Promulgation of the Technical Regulations**

In order to ensure effectiveness and sustainability of the Project, promulgation of the revised Technical Regulations by MOIT and MOC is essential. MOIT and MOC need to complete necessary procedures

and process for promulgation according to the target schedule.

### **(3) Activities for Dissemination of the Guidelines**

Since it is a key issue to make project owners and power operators to apply the revised Technical Regulations without any troubles, effective dissemination measures should be taken by MOIT and MOC. It is required for the Vietnamese side to conduct refining works of the drafted Technical Guidelines in order to increase their usability. Also, more detail explanations and advices through workshops or trainings can help and facilitate project owners and power operators use the Guidelines effectively in order to apply the Technical Regulations. Elaboration of supplemental reference, such as explanatory notes on the Technical Regulations and the Guidelines, also may be a useful device of dissemination. In addition, in order to increase usability and usefulness of the Guidelines, the timely revisions based on feedbacks from the users are essential.

### **(4) Monitoring of Compliance of the Technical Regulations**

It is recommended to enhance the institutional arrangement for monitoring compliance of the Technical Regulations.

In terms of the power facilities managed by EVN, it is recommended that EVN is responsible to monitor compliance of the Technical Regulations by their subsidiaries and facilities. For the facilities constructed and operated by other project owners or operators, MOIT or MOC needs to directly check them. It can be based on the existing reporting system for large-scale projects and power operators. For effective utilization of data and information to be collected by the reporting system, it is necessary to establish a system to compile and classify data and information collected in order to analyze the situation, such as the number of cases of violation within the total number of the power operators. In addition, a feedback system or regular meeting with project owners and power operators on applications of the Technical Regulations and utilization of the Technical Guidelines can be useful for future update and revision of the Technical Regulations and the Technical Guidelines.

## **3-7 Lessons Learned**

### **Necessity of Ownership-Based Approach to by Technical Cooperation for Legal System, including Technical Regulations**

In the case that the target country has sufficient human resources with appropriate technical level, it is essential to mobilize and utilize capable local human resources in order to implement a project effectively. Also, in a country such as Vietnam, legal documents are required to be elaborated in their official language, it is difficult for JICA to assign Japanese expert with sufficient ability of Vietnamese to elaborate legal documents. On the other hand, local experts do not have technical knowledge and experiences to introduce new technologies and system, it is preferable that JICA experts to play an advisory role from technical aspect and local experts including local consultants take responsibility to draft of legal documents. More effective mobilization of local human resource can enable maximize effectiveness of technical cooperation project and sustainability of their benefits through more effective technical transfer from Japanese experts and enhanced ownership of counterpart side.