Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Laos office: October, 2011

Country	The Project on Lao Electric Power Technical Standards Promotion
Laos	

I. Project Outline

Project Cost	About 395 million yen	
Project Period	January 18, 2005 to January 17, 2008 Extension period: January 18, 2008 to March 17, 2008 for 2 months	
Implementing Agency	Department of Electricity (DOE) of Ministry of Energy and Mines (MEM), Electricite du Laos (EDL)	
Cooperation Agency in Japan	Japan Electric Power Information Center, INC.	
Related Projects (if any)	Japanese cooperations: Technical Cooperation Project on Electric Power Technical Standard Establishment (2000-2003) Project on Improvement of Power Sector Management (IPSM or STEPIII) (2010-2013) (On going) Individual Expert: Power Policy Advisor to Support the Department of Electricity, MEM (2009-2012) ODA Loan Mekong Region Electricity Network Planning (Pakxan-Thakek-Pakbo 115kV Power Transmission line)(2006-2011)	
Background	In the electricity sector in Lao PDR, there was no technical standard existed despite the fact that many international donor agencies and power producers developed electric facilities including power plants in the country. Department of Electricity (DOE) under the Ministry of Energy and Mines (MEM), therefore, drafted the power technical standard under a JICA technical cooperation project namely, the Project on Electric Power Technical Standard Establishment (STEPI) for the period of 2001 to 2003. Then, the Lao Electric Power Technical Standard (LETS), which defines and authorizes the technical standard to construct/install the electric power facilities, was completed and adopted into the Ministerial Degree of Electricity law in February, 2004. However, DOE did not have sufficient capacity to promote, utilize and enforce the LETS. Under such circumstances, the government of Lao PDR requested the government of Japan for another technical cooperation, which resulted in the implementation of this project that was thus called STEP II.	
Inputs	Japanese Side	Laos Side
	1. Experts: 3 Long-term experts and Short-term experts (about 50MM) in 8 fields 2. Trainees Received: 11 CPs trained for 6 fields in Japan. 3. Equipment: 19,3 million yen for procurement from Japan and 82,283 US dollar for local procurement 4. Local Cost: 174,076 US dollar	1. Staff allocated : 22 personnel (12 from DOE and 10 from EDL) 2. Buildings and facilities: both at DOE and EDL compounds 3. Local Cost : 22,100 US dollar 4. Equipment: Utilized What was provided by JICA during STEP l
Project Objectives	Overall Goal Power sector's activities and power facilities' safety are improved.	
	Project Purpose The LETS (Lao Electric Power Technical Standard) is enforced within public and private sectors.	
	Outputs Output1: Complementary guideline and manuals relating to the LETS is drawn. Output2: Through on the job training, knowledge and training skills of counterparts of DOE and EDL as trainers are upgraded. Output3-1: DOE staffs obtain necessary knowledge and skills as inspectors and transfer those knowledge and skills to Provincial Department of Industry and Handicraft (PDIH) staff. Output3-2: EDL engineers obtain necessary knowledge and skills in order to apply the LETS to their works. Output4-1: Responsible division for the LETS is established. Output4-2: Mechanism for monitoring and evaluating implementation of the LETS is formulated. Output5: Awareness on the LETS of public and private sectors is increased.	

II. Result of the Evaluation

Summary of the Evaluation
With the supports from foreign donors including Japan, many power plants were constructed throughout Lao PDR. The Electric Power Technical Standards (LETS) developed by the support of Japan's technical cooperation was enacted in 2004. However, there were not sufficient numbers of engineers or technicians to promote and implement the standards in the government sector as well as the private sector. This project has partially achieved its project purpose of enforcing the LETS with public and private sectors as it was observed that the designated power plant projects were inspected in accordance with the LETS but action plans to comply with the LETS have not been prepared as expected. The overall goal of improving power sector's activities and power facilities' safety has also been partially achieved as shown in the fact that some of DOE and EDL power facilities with more than 1MW capacity are inspected in accordance with the LETS but accident database and reporting system have not yet been established. As for sustainability, some problems have been observed

in terms of structural, technical, and financial aspects due to the on-going restructuring of DOE, non-implementation of the training mechanism after the project, and the insufficient budget allocation to continue the activities established by the project.

For relevance, the project has been relevant with Lao development policy, development needs, and Japan's ODA policy. For efficiency, both project cost and project period slightly exceeded the plan.

In the light of above, this project is evaluated to be partially satisfactory. It should also be noted that the achievements and impacts generated by this project have been effectively succeeded by the currently on-going project, "The Project for Improvement of Power Sector Management (IPSM or STEP III)" for the period of 2010 to 2013.

1 Relevance

This project has been highly consistent with the development policy of Lao PDR (the 5th and 6thNational Socio-Economic Development Plans (2001-2005/2006-2010)) to increase rate of electrification and promotion of electric power selling, development needs (human resources development who deal with the promotion/implementation of the LETS), as well as Japan's ODA policy, at the time of both ex-ante evaluation and project completion. Therefore, its relevance is high.

2 Effectiveness/Impact

This project has somewhat achieved the project purpose and overall goal. For the project purpose, designated power plant projects were inspected in accordance with LETS but action plans to comply with LETS have not been prepared for all those designated power plant projects. The overall goal of improving power sector's activities and power facilities' safety has also been partially achieved. After the project completion, the application of the LETS was extended to other power facilities with more than 1MW capacity, which are currently inspected using the LETS, but it is difficult to judge if LETS are compiled by all facilities more than 1MW due to unavailability of data. Accident database are established and analyzed only for the limited number of facilities. For those facilities without accident database, the operational condition has been checked using a check sheet on a daily basis. Therefore, its effectiveness /impact is fair.

Low voltage 22 kV Transformer

3 Efficiency

While inputs were appropriate for producing outputs of this project, the project cost was higher than the plan (ratio against plan: 125%) and the project period is slightly longer than the plan (ratio against plan: 105%). Project period was extended for two months to support the Japanese ODA Loan project constructing transmission lines to maximize the benefit for both projects by providing additional technical trainings for technicians in terms of electric power transmission. The project cost was exceeded due to the project period was extended. Therefore, efficiency of this project is fair.

4 Sustainability

This project is consistent with the power policy of Lao PDR in an ongoing manner as described in the 7th NSEDP. However, the project has some problems in institutional, technical and financial aspects of the implementing agencies. As for the institutional aspect, the structure of implementing agency has been sustained in similar manner with the implementation period. However, the institutional framework such as the training mechanism developed by the project has not been implemented yet. This relates to the problems of technical aspect of which trainers trained and qualified by the project have some difficulties to keep up (or brush up) with their knowledge and skills. Reference documents for the guideline such as the check list are being currently developed by the subsequent project (IPSM or STEP III). Some efforts have been made to finance the operation by collecting examination fee from other source; however, the implementing agency has only limited budget to proceed with the activities, such as organizing OJT for DOE/EDL trainers and produce updated PR material. Therefore the sustainability of this project is fair.

III. Recommendations & Lessons Learned

Recommendations for Implementing agency:

- DOE need to consider the financial supports to conduct the LETS activities.
- To further improve technical knowledge and skills of the LETS's trainers and inspectors, the suitable training program including OJT needs to be developed and conducted.
- Even though the LETS was adopted, distributed and disseminated to the public and private sectors, the practical implementation of the LETS should be seriously monitored by MEM.
- It is recommended DOE and EDL to make further efforts to inspect and make action plan to comply with the LETS by all power facilities.
- It is recommended DOE and EDL should order electric power plant (facility) to establish accident database and submit accident reports for safe operation of power facilities.