

Poland

Ex-Post Evaluation of Japanese Technical Cooperation Project
“The Project on the Poland-Japan Energy Conservation Technology Centre”

External Evaluator : Koichiro Ishimori, Value Frontier Co., Ltd.

0. Summary

The project intended to establish the structure for promoting energy conservation activities at Energy Conservation Technology Centre (ECTC) within Polish National Energy Conservation Agency (KAPE) by developing training courses and disseminating information on energy conservation, and thereby contribute to the energy conservation in industrial sectors. The objective of the project was relevant to the development policies and needs of Poland, as well as to the development policies of Japan. Therefore, relevance of the project is high. Although the project established the structure for promoting them at ECTC to some degree by developing training courses and disseminating information and appears to make contributions to the energy conservation in industrial sectors, implementations of training courses were partial. Therefore, effectiveness and impacts of the project are fair. While the project period of cooperation was within the plan, the project cost exceeded the plan. Therefore, efficiency of the project is fair. While ECTC still carries out energy conservation activities, it is unclear that ECTC can play a role under the energy conservation law and there is a concern about its financial aspects of KAPE. Therefore, sustainability of the project effects is fair.

In light of the above, this project is evaluated to be partially satisfactory.

1. Project Description



Project location



Pump unit

1.1 Background

Poland developed into an energy-importing country after 1986 because its consumption of oil and gas were increasing due to its economic growth. Under such circumstances, in 1991, the Polish congress passed a resolution to establish a governmental agency for promoting energy conservation

activities. It then established KAPE in 1994. The congress passed an energy law in 1997 and enforced policies aimed at energy security, industrial competitiveness, and environmental protection. In parallel, the government of Poland requested that Japan implement the master plan on energy conservation. The plan indicated that energy conservation measures were lagging, particularly in large-scale establishments like factories. Therefore, the plan recommended an energy conservation law that would regulate those establishments and establish a governmental structure to promote energy conservation activities by them. Based on the recommendations, the Polish government decided in 2002 to establish the ECTC within the KAPE, which had been established to promote energy conservation activities for houses and buildings. However, since ECTC lacked capabilities in training energy conservation experts and disseminating information on energy conservation the Polish government requested that Japan implement this project.

1.2 Project Outline

Overall Goal		Energy conservation is promoted in industrial sectors.
Project Objective		ECTC is established as the governmental structure for promoting energy conservation in industrial sectors.
Output	Output 1	Administrative and managerial structures are established at ECTC.
	Output 2	ECTC is able to implement training courses.
	Output 3	ECTC is able to follow up energy conservation activities by the trained trainees.
	Output 4	ECTC is able to support companies in terms of energy conservation.
	Output 5	ECTC is able to disseminate information on energy conservation.
Inputs		<p>Japanese Side:</p> <ol style="list-style-type: none"> 1. Experts: 23 experts 4 expert for Long-Term, 19 experts for Short-Term 2. 10 Trainees received (10 for Japan) 3. Third Country Training Programs for counterparts (2 for Turkey) 4. Equipment 136.62 million yen 5. Local Cost 34.38 million yen 6. Others (incl. dispatch of related missions) Mid-term evaluation, Terminal evaluation, etc <p>Polish Side:</p> <ol style="list-style-type: none"> 1. 27 Counterparts 2. Land, Facilities, and Equipment 3. Local Cost 1.2 million USD
Total Cost		617.68 million yen
Period of Cooperation		July, 2004 – June, 2008
Implementing Agency		Energy Conservation Technology Centre (ECTC) within Polish National Energy Conservation Agency (KAPE)
Cooperation Agency in Japan		The Energy Conservation Center, Japan (ECCJ)
Related Projects		The master plan on energy conservation (1996-1997)

1.3 Outline of the Terminal Evaluation

1.3.1 Achievement of Overall Goal

It was expected that the project would play a big role in energy conservation in Poland. However, it was judged difficult to articulate the contributions of the project to the overall goal of efficient energy consumption at the national level.

1.3.2 Achievement of Project Objective

ECTC staff were able to implement training courses on energy conservation by themselves, and trainees' satisfaction with the courses was high. Therefore, it was judged that the project objective could be achieved during the rest of the project period.

1.3.3 Recommendations

The following recommendations were made in the terminal evaluation: 1) ECTC should diversify training courses so that it can meet various customers' needs. For that purpose, it is necessary for ECTC to get feedback from regular monitoring and questionnaires completed by course trainees and to continuously improve the contents of its courses. It is also necessary for ECTC to ascertain new needs and develop appropriate training courses. 2) ECTC must maintain financial independence as much as possible so that it can meet various customers' needs in the future. However, the Polish government should consider paying the costs necessary for ECTC to achieve its mission—in particular, some operational costs.

2. Outline of the Evaluation Study

2.1 External Evaluator

Mr. Koichiro Ishimori, Value Frontier Co., Ltd

2.2 Duration of Evaluation Study

The Ex-Post Evaluation Study was implemented according to the following schedule:

Duration of the Study: August, 2011 - June, 2012

Duration of the Field Study: October 23-November 6, 2011, and January 29-February 5, 2012

2.3 Constraints during the Evaluation Study

Due to the non-disclosure agreement, the external evaluator was not able to provide some financial data and customer information. Since there was no clear understanding or definition of the project's objective and the future prospects of ECTC in the project-related documents, it was necessary for the external evaluator to pull pieces of information together.

3. Results of the Evaluation (Overall Rating: C¹)

3.1 Relevance (Rating: ③²)

3.1.1 Relevance with the Development Plan of Poland

The National Development Plan (2004-2006) prioritized strengthening industrial competitiveness through rational use of energy (and consequent reductions in energy costs) as one of the five priorities, which was “strengthening industries.” The energy law in 1997 promoted the rational use of energy (energy conservation) by producers and suppliers of electricity, gas, and heat to attain both sustainable growth and energy security for Poland. Besides, the master plan on energy conservation in 1997 pointed out that energy conservation measures were lagging, particularly in large-scale establishments like factories, and therefore, it recommended that the country should promote energy conservation activities, such as training energy conservation experts and disseminating information on energy conservation, particularly in large-scale establishments.

The National Strategic Reference Framework (2007-2013) at the time of the project’s completion prioritized strengthening industrial competitiveness through the promotion of environmentally-friendly instruments as one of the six priorities, which was the “development and modernization of infrastructures.” While there was no change in the energy law or the master plan in 1997, the national energy conservation action plan based on the previous law as well as the plan was newly made in 2007. This new plan intended to reduce energy consumption by 9% by 2016, compared to the average from 2001 to 2005.

Therefore, both the development plan and the sector plan in Poland, at the time of the project’s planning and completion, prioritized energy conservation, and the project is judged to be relevant to the national plans of Poland.

3.1.2 Relevance with the Development Needs of Poland

After developing into an energy importing country in 1986, Poland was promoting policies that aimed at both industrial competitiveness and environmental protection. However, energy conservation activities in industries were lagging because of a lack of a structure and human resources supporting the activities. In addition, since the country joined the EU in May 2004, right before the start of the project, it needed to comply with the EU’s energy standards. Therefore, the project that was intended to establish the structure and develop the human resources for supporting energy conservation in industries met the development needs of Poland at that time, and the need for the project was judged to be high.

Even after completion of the project, the importance of energy conservation continued to grow, given the EU energy standards, the recent energy price hike, and global warming. Therefore, the project targeting the industries where energy use was greatest and its conservation was demanded

¹ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

² ③: High, ②: Fair, ①: Low

still met the development needs of Poland even after the project's completion, and the need for the project was judged to be high.

3.1.3 Relevance with Japan's ODA Policy

The Charter on Official Development Assistance (ODA) (2003) before the implementation of the project highlighted the importance of "infrastructure development and structure development" to promote sustainable growth as one of its four priorities. The Mid-term Policy on ODA (1999) before the implementation of the project highlighted the importance of "energy conservation" to promote sustainable growth as one of its seven priorities. In addition, the basic policy on ODA to Poland emphasized human resources development in energy conservation for promoting the environment and the transition to the market economy.

Therefore, the project that was intended to establish the structure for supporting energy conservation activities in industries met the Japan's ODA policy at that time.

In sum, the project has been highly relevant with the Polish development plans, development needs, as well as Japan's ODA policy. Therefore, its relevance is high.

3.2 Effectiveness and Impact (Rating: ②)

3.2.1 Project Outputs

3.2.1.1 Project Output

1) Output 1: Administrative and managerial structures are established at ECTC

The terminal evaluation confirmed that output 1 was achieved since indicators 1-1 to 1-4 were achieved by the end of the project. The ex-post evaluation also confirmed that output 1 was achieved since indicators 1-1, 1-2, and 1-4 were achieved, and indicator 1-3 was mostly achieved by the end of the project.

Indicator 1-1: Necessary number of counterparts (31) are deployed at ECTC

Twenty-seven counterparts were deployed for the administration and management of ECTC. Four counterparts (i.e., one project manager, two energy conservation experts, and one marketing expert), worked full-time, while the remaining 23 (i.e., one KAPE president, one KAPE vice-president, fifteen energy conservation experts, four administrators, and two IT technicians) worked on a part-time basis. The deployment of counterparts was judged appropriate to efficiently operate the project with a limited budget.

Indicator 1-2: Necessary government budget (USD 1.2 million) is allocated and settlement report is annually submitted.

During the period of project cooperation from 2004 to 2008, PLN 3.7 million (equivalent to

USD 1.2 million) was allocated. ECTC submitted annual settlement reports to KAPE and the supervisory bodies, that is, the Ministry of the Economy and the Ministry of the State Treasury.³

Indicator 1-3: ECTC operates its activities within the budget

From the beginning of project planning, the Ministry of the Economy and the Ministry of the State Treasury expected that ECTC would be self-sustaining after completion of the project. Therefore, it expected that ECTC would operate its activities within the budget during the project period. The total expenses slightly exceeded the total revenues until 2006 but came within the total revenue after 2007.

Table 1: P/L of ECTC

(Unit: PLN million)

		2004	2005	2006	2007	2008
Revenue	Govt. Budget ⁴	0.26	0.76	0.94	0.79	0.95
	Operational Revenue	0.01	0.02	0.20	0.13	0.07
	Total	0.27	0.78	1.14	0.92	1.02
Expense	Human Expenses	0.19	0.51	0.47	0.61	0.52
	O & M Expenses, etc.	0.17	0.45	0.77	0.31	0.42
	Total	0.36	0.96	1.24	0.92	0.94
Net		-0.09	-0.18	-0.10	0	0.08

Source: KAPE

Indicator 1-4: Monitoring reports are made every half year

ECTC monitored the training courses every half year and then reported the results to KAPE, the Ministry of the Economy, and the Ministry of the State Treasury. ECTC took appropriate measures including modifying the contents of the training courses in accordance with comments on the evaluation.

In sum, it is judged that output1 was achieved since administrative and managerial structures were established at ECTC through deployment of counterparts (indicator 1-1), execution and management of the budget (indicators 1-2 and 1-3), and establishment of monitoring systems (indicator 1-4).

2) Output 2: ECTC is able to implement training courses

The terminal evaluation confirmed that output 2 was mostly achieved, though all indicators except indicator 2-4 were not sufficiently achieved by the end of the project. However, the ex-post evaluation confirmed that output 2 was partially achieved since indicators 2-1 and 2-2

³ The Ministry of the Economy oversees energy policy and supervises KAPE's operations. The Ministry of the State Treasury owns 52% of KAPE's shares and supervises its assets.

⁴ The government budgets in 2004 and 2005 were from the counterpart fund. In 2006, PLN 440,000 million came from the counterpart fund while the remaining PLN 500,000 million came from the budget of energy conservation activities entrusted by the Ministry of the Economy. The government budgets in 2007 and 2008 were all taken from the same budget by the Ministry of the Economy.

were just barely achieved. Indicator 2-3 was not achieved at all, although indicator 2-4 was well achieved.

Indicator 2-1: Number of participants in the executive manager course exceeds 120

The number of participants in the executive manager course—the duration and cost of which were two days and PLN 1,240—was 86, which was approximately 70% of the number according to the plan. Since executive managers preferred letting their staff learn specific skills and techniques of energy conservation rather than acquiring general conservation knowledge for themselves, it was difficult to gather the planned number of participants. Therefore, indicator 2-1 was not achieved.

Indicator 2-2: Number of participants in the auditor course⁵ exceeds 120

The number of participants in the auditor course was 23, which was approximately 20% of the number according to the plan. It was difficult to gather the planned number of participants because the duration of the course was as long as five days, the cost was as high as PLN 2,970, and the realization of the energy auditor system under the energy conservation law was delayed.⁶ Therefore, indicator 2-2 was not achieved.

Indicator 2-3: Number of participants in the senior auditor course⁷ exceeds 40

The senior auditor course, which was going to last 10 days, was not developed by the end of the project, since it was difficult to gather the planned number of participants for the auditor course even though its duration and cost were shorter and cheaper than the senior auditor course, and the realization of energy auditor system under the energy conservation law was delayed.

Indicator 2-4: Number of participants in ad-hoc courses exceeds 240

The number of participants in 11 different ad-hoc courses⁸ was 433, which was approximately 180% of the number according to the plan. Unlike the executive management and the auditor course, it was possible to enroll a much greater number of participants than the plan

⁵ The auditor course targeted those who had no experience in energy management and aimed to enable them to manage energy use at their facilities after completion of the project.

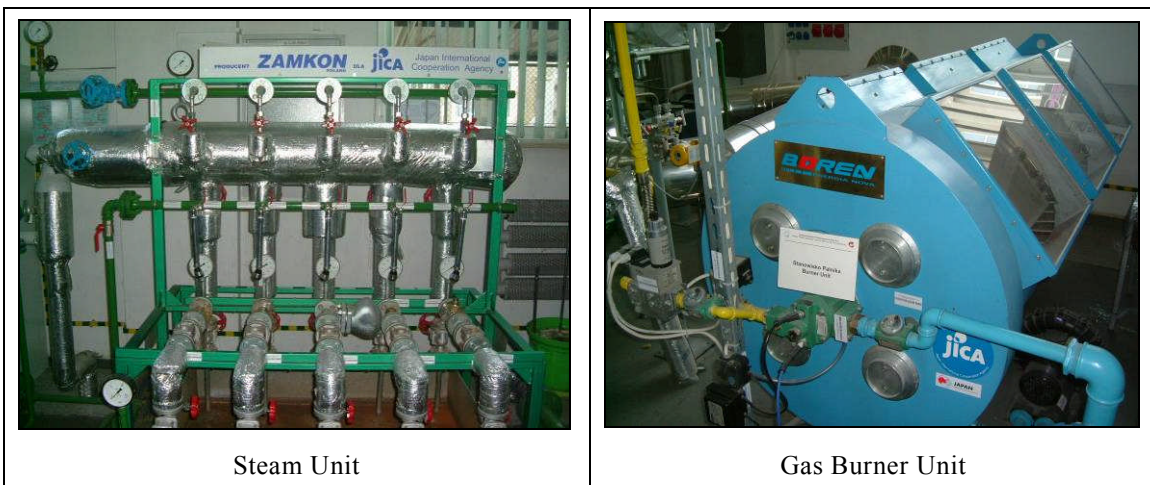
⁶ It was expected in 2006 during the project period that the Polish government would pass an energy conservation law on January 1, 2008. However, in the end it was passed in 2011.

⁷ The senior auditor course targeted those with experience in energy management and aimed to enable them not only to manage energy use at their own facilities but also to inspect energy use at other facilities after completion of the project.

⁸ The 11 courses were as follows: 1) Compensation of reactive power, 2) Efficient use of compressed air systems, 3) Efficient ventilation and air conditioning systems, 4) Condensate removal from steam distribution networks, 5) Energy conservation in electric motors, 6) Energy-saving operations in industrial boilers, 7) Efficient use of industrial equipment, 8) Energy conservation in lighting, 9) Effective operation and modernization of heat distribution networks, 10) Efficient use of pump systems, and 11) Efficient use of compressed air systems (advanced).

target of 240. This was because the ad-hoc courses were technically more specific and in high demand and because their duration and cost were shorter and cheaper, unlike the executive management course that was about general knowledge on energy conservation and the auditor course that was about the whole of energy management.

In sum, although indicator 2-4 was well achieved, indicators 2-1 and 2-2 were barely achieved and indicator 2-3 was not achieved at all, therefore it is judged that output 2 was partially achieved.



3) Output 3: ECTC is able to follow up energy conservation activities by the trained trainees

The terminal evaluation confirmed that output 3 was achieved by the end of the project since the project developed the database on the trainees. The ex-post evaluation also confirmed that output 3 was achieved since indicator 3 below was achieved.

Indicator 3: ECTC is able to follow up energy conservation activities by the trainees

The project developed the database on 575 trainees' information, including e-mail addresses, and was able to follow up on their energy conservation activities by the end of the project.

In sum, ECTC was able to follow up the trainees' energy conservation activities through development of the database, and therefore it is judged that output 3 was achieved.

4) Output 4: ECTC is able to support companies in terms of energy conservation

The terminal evaluation confirmed that output 4 was achieved by the end of the project since ECTC became able to inspect energy use at 13 energy facilities in food, chemical, metal, and other industries and to answer by telephone and e-mail questions about energy conservation asked by about 80 companies. The ex-post evaluation also confirmed through checking on the

customers' lists, including information on past support for the companies and feedback from counterparts that indicator 4 was achieved, and therefore it is judged that output 4 was achieved by the end of the project.

Indicator 4: Support services are provided for over 100 companies

ECTC conducted energy inspections on 32 factories⁹ by the end of the project. Without official records, the ex-post evaluation took for granted the confirmation by the terminal evaluation on answering questions raised by about 80 companies.

In sum, ECTC became able to support companies through conducting energy inspections and answering questions raised about energy conservation, and therefore it is judged that output 4 was achieved.

5) Output 5: ECTC is able to disseminate information on energy conservation.

The terminal evaluation confirmed that output 5 was achieved by the end of the project by the fact that there were 16,000 page views of ECTC's website and contributions to journals. The ex-post evaluation also confirmed through checking on the documents related to the project and feedback from counterparts that indicators 5-1 and 5-2 below were achieved, and therefore output 5 was achieved by the end of the project.

Indicator 5-1: Number of access to ECTC's homepage exceeds 10,000 page views

There were 20,043 page viewings of ECTC's website by the end of the project. ECTC also disseminated information on energy conservation through e-mails and pamphlets.

Indicator 5-2: Publications of technical reports for Polish industries

ECTC issued technical reports on energy conservation and contributed several articles to "Mega Industry" and "Energia & Przemysł (Energy & Industry)." It also held conferences and seminars to promote energy conservation technologies in Polish industries every year after 2004.

In sum, ECTC became able to disseminate information on energy conservation through its website and publications of technical reports, and therefore it is judged that output 5 was achieved.

3.2.1.2 Achievement of Project Objective

Project objective: ECTC is established as the governmental structure for promoting energy conservation in industrial sectors; that is, ECTC is established under the initiatives of the Ministry

⁹ There were 32 factories in such industries as food, chemical, and automobile industries.

of the Economy for promoting energy conservation in the industrial sector.¹⁰

1) ECTC is established under the initiatives of the Ministry of the Economy for promoting energy conservation in industrial sectors

The Polish government established ECTC within KAPE in 2002 based on recommendations made by the master plan on energy conservation. The Ministry of the Economy in charge of energy policies sent its senior staff to chair the supervisory board that was the highest decision-making body of KAPE. The ministry used the counterpart funds and its own budget. By doing so, the project established administrative and managerial structures at ECTC (output 1), and ECTC became able to implement training courses, albeit partial (output 2), do follow-ups (output 3), provide support services (output 4), and disseminate information on energy conservation (output 5). Therefore, it is judged that the governmental structure for promoting energy conservation in industrial sectors, that is, ECTC, was established under the initiatives of the Ministry of the Economy.

2) Indicator 1: Factories that received ECTC services carry out energy conservation activities by 2008

ECTC became able to implement its own training courses by 2008 (output 2), though the degree of achievement in the actual number of participants varied from one course to another. It also became able to do various follow-ups on trainees (outputs 3, 4, 5). Consequently, according to the beneficiary survey done from January to February in 2008, 81 (approximately 60%) out of 135 persons trained at ECTC said that their courses were helpful in improving energy conservation at the facilities they managed.

In sum, because outputs 1, 3, 4, and 5 were achieved and output 2 was partially achieved, ECTC was established under the initiatives of the Ministry of the Economy for promoting energy conservation in the industrial sector; thus, indicator 1 of the project objective was achieved. However, output 2 resulted in partial achievement due to the reasons mentioned above. Therefore, it is judged that project objective was partially achieved.

3.2.2 Impact

3.2.2.1 Achievement of Overall Goal

Overall Goal: Energy conservation is promoted in industrial sectors.

1) ECTC continues energy conservation activities after completion of the project

ECTC continues to carry out energy conservation activities after completion of the project.

¹⁰ The interpretation of the project objective was cited from "Project Document."

Regarding training courses implemented,¹¹ the number of participants for three years and five months after completion of the project exceeded the number for the four years of the project period (see Table 2 below). It also continues to disseminate information through its website and other channels, not only on planned training courses at ECTC but also on events related to and loans applied to energy conservation outside of ECTC. These do not have enough impacts to positively affect the macro indicator below as indicator 1. However, according to the beneficiary survey done at the time of the ex-post evaluation,¹² 69 out of 95 trainees at ECTC after completion of the project said that the training courses were helpful in improving energy conservation at their facilities. Therefore, it is believed that the project has been having some degree of impact on improving the energy efficiency in Polish industries and contributing to the overall goal that energy conservation is promoted in industrial sectors.

Table 2: Comparisons of the number of trained trainees

	During project period 4 years from July, 2004 - June, 2008	1st year after project (July, 2008 - June, 2009)	2nd year after project (July, 2009 - June, 2010)	3rd year after project (July, 2010 - June, 2011)	4th year after project* (July, 2011 - November, 2011)	(Unit: person(s)) After project period 3 years & 5 months July, 2008 - November, 2011
Executive management course	86	0	0	0	0	0
Auditor course	23	8	5	16	8	37
Ad-hoc course	433	183	164	144	94	585

Source: KAPE

2) Indicator 1: Efficiency in energy consumption is improved at the national level by 2010, compared to the level in 2004

Efficiency in energy consumption in relation to GDP was improved from 0.271 kg/Euro in 2004 to 0.231 kg/Euro in 2009.¹³ According to the Central Statistical Office¹⁴ in Poland, however, the major reason for the improvement was the increasing value of the GDP rather than decreasing energy consumption. Meanwhile, it is not appropriate to use this macro indicator to measure the impact of the project, since, as the terminal evaluation pointed out, it is not realistic to consider that the project alone could contribute to improving efficiency in energy consumption in relation to GDP. Therefore, the ex-post evaluation does not consider the level of achievement in this indicator.

In sum, ECTC has been continuously carrying out energy conservation activities even after completion of the project. It is believed that the project has been having some degree of impacts on improving energy conservation in Polish industries and making contributions to achieving the overall

¹¹ The executive manager course was planned even after completion of the project but was not implemented because of a lack of participants.

¹² Of the 622 persons trained at ECTC, 100 were randomly selected after completion of the project. Of those, 95 were valid and 5 were invalid.

¹³ The data in 2009 was used since there was no data in 2010.

¹⁴ "Energy Efficiency in Poland in Years 1999-2009," Central Statistical Office, 2011.

goal of promoting energy conservation in the industrial sector. Therefore, it is judged that impacts of the project are realized.

3.3.2.2 Other Impacts

1) Impacts on the natural environment

There is no particular air and liquid waste resulting from usage of the procured equipment, and therefore there is no negative impact on the natural environment.

2) Relocation and land acquisition

Equipment was installed at the existing facility without relocation and land acquisition.

In sum, regarding the project objective that ECTC is established as the governmental structure for promoting energy conservation in industrial sectors, implementation of training courses was not satisfactory. Since auditor courses and ad-hoc courses continue to produce experts on energy conservation, the overall goal that energy conservation is promoted in industrial sectors is believed to have been achieved. Therefore, effectiveness and impacts of the project are fair.

3.3 Efficiency (Rating: ②)

3.3.1 Inputs

Table 3: Planned and actual performance of inputs

	Plan	Actual Performance
Japanese Side		
Total Cost	440 million yen	617.68 million yen
Period of Cooperation	July, 2004- June, 2008	July, 2004- June, 2008
Experts	Long-Term: 4, Short-Term: 12	Long-Term: 4, Short-Term: 19
Trainees received	10	10
Third Country Training Programs	NA	2
Equipment	NA	136.62 million yen
Operational Cost	NA	34.38 million yen
Polish Side		
Counterpart	31	27
Land, Facilities & Equipment	Offices and facilities, etc	Offices and facilities, etc
Total Local Cost	1.2 million yen	1.2 million yen

Source: KAPE, JICA

3.3.1.1 Elements of Inputs

< Japanese side >

The number of long-term experts dispatched was within the plan, but that of short-term experts dispatched had to be increased because of high demands in the field of heat control. The number of trainees received was within the plan. Two counterparts were sent to the third-country training program and observed the implementing agency, National Energy Conservation Center, of the precedent technical cooperation project on energy conservation in Turkey. It was not

possible to make comparisons in other items because of a lack of data at the time of project planning.

< Polish side >

Counterparts were deployed almost as planned. Land, facilities, equipment, and local cost were provided almost as planned.

3.3.1.2 Project Cost

The project cost was increased from 440 million yen to 617.68 million yen (140% increase of the plan) due to the increased number of short-term experts dispatched and the third-country training program, which was not planned.

3.3.1.3 Period of Cooperation

The period of cooperation was 48 months total, as planned.

In sum, though the period of cooperation was within the plan, the project cost exceeded the plan, and therefore efficiency of the project is fair.

3.4 Sustainability (Rating: ②)

3.4.1 Related Policy towards the Project

The Ministry of the Economy passed the energy conservation law in 2011. The law required public organizations and large-scale establishments using more than 400 GWh per year, as well as the producers and suppliers of electricity, gas, and heat, to replace old energy facilities with energy conservation ones, introduce energy conservation equipment, and receive energy inspections. The law also instituted the energy auditor system and required those who wanted to become publicly certified energy auditors to receive 160 hours of training on management of energy. In the execution of the energy conservation law, ECTC should be able to play a certain role in energy inspections and provision of training. However, ECTC needs to commercially compete with private companies¹⁵ for provision of such services. Therefore, it is not certain that ECTC can play such an executive role.

The Ministry of the Economy expected that KAPE would be self-sustaining after completion of the project since KAPE was the joint-stock company established based on the commercial law, even though it was a governmental agency.¹⁶ However, JICA pointed out that it would be difficult for ECTC to sustain itself and that it would therefore be important for the Ministry of the Economy

¹⁵ There are at least 12 consulting companies on energy conservation in the country.

¹⁶ KAPE is a state-owned governmental agency. The shareholders of KAPE are the Ministry of the State Treasury (52%), the National Fund for Environmental Protection and Water Management (16%), the National Bank of the Economy (16%), and the Industrial Development Agency (16%).

to provide policy and financial support for ECTC. For instance, the ex-ante evaluation in 2004 noted that it would be difficult for ECTC to sustain itself after the project, and the mid-term evaluation in 2006 suggested that the Ministry of the Economy and KAPE discuss policy and financial support for ECTC after the project. However, after the project, the Ministry of the Economy got its senior staff back from the advisory board and suspended the budget for the energy conservation activities by ECTC. Consequently, ECTC now has to operate as a self-sustaining entity, as the Ministry of the Economy expected.

3.4.2 Institutional and Operational Aspects of the Implementing Agency

During the project period, 27 counterparts were deployed at ECTC, but there remain only four full-time experts on energy conservation and one full-time ECTC director who joined ECTC after the project. However, counterparts who have left KAPE or still work in different sections of KAPE help energy conservation activities at ECTC on an as-needed basis. Therefore, ECTC is still able to carry out energy conservation activities.

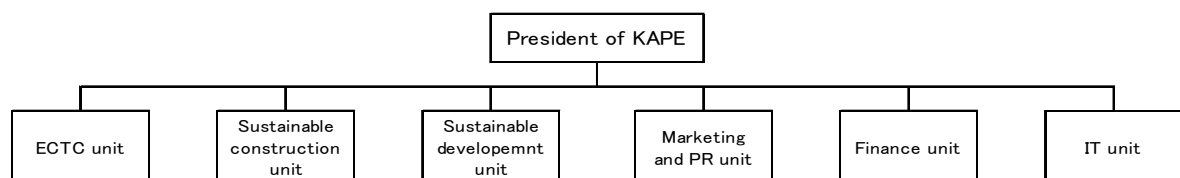


Chart 1: Organigram of KAPE

3.4.3 Technical Aspects of the Implementing Agency

Counterparts at ECTC still have techniques and know-how on energy conservation acquired through the project, though most counterparts have left KAPE. Counterparts who have left KAPE or still work at different sections of KAPE help energy conservation activities at ECTC on an as-needed basis. Therefore, ECTC is still able to conduct energy conservation activities. According to the beneficiary survey done at the ex-post evaluation, 92 out of 95 persons trained at ECTC expressed either satisfaction or high satisfaction with the training. Therefore, it is judged that ECTC retains enough technology to implement training courses developed by the project.

3.4.4 Financial Aspects of the Implementing Agency

The ex-ante, the mid-term, and the terminal evaluations all stated that it would be difficult for ECTC to be self-sustaining in financial terms after the project. However, the Ministry of the Economy suspended the budget for energy conservation activities by ECTC since it expected ECTC to be self-sustaining after the project. Consequently, the annual net balance of KAPE¹⁷ turned negative in 2009.

¹⁷ KAPE did not take financial accounting at ECTC after completion of the project, and therefore the annual net balance of ECTC is not certain.

Table 3: P/L of KAPE

(Unit: PLN million)

		2009	2010	2011
Revenue	Govt. Budget	0	0	0
	Operational Revenue	4.2	2.9	3.6
	Total	4.2	2.9	3.6
Expense	Human Expenses	2.2	2.3	2.3
	O & M Expenses, etc.	2.3	1.5	1.5
	Total	4.5	3.8	3.8
Net		-0.3	-0.9	-0.2

Source: KAPE

3.4.5 Likelihood of Continuation of Project Effects

ECTC is still able to carry out energy conservation activities. However, considering that the annual net balance of KAPE has been negative for the past three years and that it may negatively affect continuation of energy conservation activities, the future of ECTC is uncertain. Therefore, the likelihood that the project's effects will continue is fair.

In sum, although ECTC still conducts energy conservation activities, it is not certain that ECTC is able to play a role under the energy conservation law, and there is a concern about the financial aspects of KAPE, and therefore, sustainability of the project effects is fair.

4. Conclusion, Lessons Learned, and Recommendations

4.1 Conclusion

The project intended to establish the structure for promoting energy conservation activities at ECTC within KAPE by developing training courses and disseminating information on energy conservation, and thereby contribute to the energy conservation in industrial sectors. The objective of the project was relevant to the development policies and needs of Poland, as well as to the development policies of Japan. Therefore, relevance of the project is high. Although the project established the structure for promoting them at ECTC to some degree by developing training courses and disseminating information and appears to make contributions to the energy conservation in industrial sectors, implementations of training courses were partial. Therefore, effectiveness and impacts of the project are fair. While the project period of cooperation was within the plan, the project cost exceeded the plan. Therefore, efficiency of the project is fair. While ECTC still carries out energy conservation activities, it is unclear that ECTC can play a role under the energy conservation law and there is a concern about its financial aspects of KAPE. Therefore, sustainability of the project effects is fair.

In light of the above, this project is evaluated to be partially satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Implementing Agency

Concerning the energy conservation law in 2011, ECTC should market the sale of energy inspections and 160 hours of training on energy management. By doing so, it is expected that it will improve its financial balance.

4.2.2 Recommendations to JICA

Since the Ministry of the Economy got its senior staff back from the supervisory board and suspended the budget for energy conservation activities by ECTC after the project, ECTC has to be operated as a self-sustaining entity. It is expected that JICA will discuss with the Polish government the way that ECTC is operated and monitor operations of ECTC in the future.

4.3 Lessons Learned

There was no clear understanding or definition of the project objective and the future prospects of ECTC in the project-related documents. Consequently, it seems that the project was implemented without having shared a clear understanding among the Ministry of Economy, KAPE (ECTC), and JICA. When it comes to implementing a project, it is important to share clear understandings among relevant parties throughout the project.