

Energy Efficiency Center Project



Project Sites Sofia

1. Background of Project

Recently, energy import has imposed a heavy burden on the Bulgarian economy. The accumulation of energy-saving technology and information has been poor in Bulgaria, as rich energy from the former Russian bloc was supplied cheaply before the collapse of the COMECON system. Inefficient use of energy was obstructing industry activation.

Based on such conditions, the Government of Bulgaria planned to establish the Energy Efficiency Center (EEC) to promote efficient use of energy by policy proposals to the government and technological guidance to industry. The Bulgarian government requested a Project-Type Technical Cooperation from the Japanese Government since Japan has been at the top level in the world in these techniques.

2. Project Overview

(1) Period of Cooperation

1 November 1995 – 31 October 2000

(2) Type of Cooperation

Project-type Technical Cooperation

(3) Partner Country's Implementing Organization

Ministry of Industry (up to December 1999)

Ministry of Economy (after December 1999)

(4) Narrative Summary

1) Overall Goal

Energy consumption within industries in Bulgaria is improved.

2) Project Purpose

The function of the EEC is intensified so that it can effectively recommend national policies, and give guidance to industry regarding energy conservation by itself.

3) Outputs

- EEC's administration and management structure are established.
- The staffs of EEC are able to operate and maintain equipments, and to carry out proper factory audits and consultations independently on energy consumption improvement.

- Practical utilization of information system is established.
- Public information system is established.
- EEC's ability to recommend national policies is to be developed.

4) Inputs

Japanese Side

Long-term experts	5
Short-term experts	33
Trainees received	8
Equipment	110 million yen
Local cost	22 million yen

Bulgarian Side

Counterparts	6
Facilities and equipment	
Local cost	5 million yen

3. Members of Evaluation Team

Team Leader:

Kazuo TANIGAWA, Special Technical Advisor, JICA

Technical Cooperation Planning:

Kenichiro KOREEDA, International Affairs Office, Coal and New Energy Department, Agency of Natural Resources and Energy Cooperation Planning, Ministry of International Trade and Industry

Technology Transfer Planning:

Mitsutoshi SUZUKI, Toyo Engineering Corporation

Energy Conservation Technology:

Takeshi SEKIYAMA, The Energy Conservation Center Japan (ECCJ)

Evaluation Management:

Hisae OSHIKANE, Second Technical Cooperation Division, Mining and Individual Development Department, JICA

Data Compilation and Analysis:

Tomoyuki YAMASHITA, Tokyo Electric Power Services Co., Ltd.

4. Period of Evaluation

18 June 2000 – 6 July 2000

5. Results of Evaluation

(1) Relevance

In Bulgaria, there has been an increasing interest in energy saving, to strengthen international competitiveness of domestic industries and to preserve its environment. Hence, energy saving has been positioned as one of the important policies. It is, therefore, highly relevant to foster an organization that can give the guidance to promote energy saving to industry.

(2) Effectiveness

As a result of the project, the Center for Energy Saving grew to be an organization that can give guidance to industries. The number of diagnosed companies increased steadily, and energy reduction proposals were submitted to 95 companies. Besides, the Center has made contracts with five companies as model factories including the two that were the most energy consuming companies. In one of the companies, the energy reduction effect worth of 88 million yen was achieved in the first year.

However, in the middle of the project, the mechanism was changed, and the income from the Center's service, once paid directly to the Center, came to be collected by the Ministry of Economy. This made the cash flow on factory diagnosis unclear, and thus, the establishment of the management system was not fully achieved.

Regarding the establishment of the Center's ability to propose policy measures for energy saving, the external conditions changed during the project period. The State Agency on Energy and Energy Resources was newly established as the national policy development and execution organization, and considering the new mandate of the Center, it became difficult to achieve the project objective to propose policy options at the national level. However, when the energy saving law was enacted in 1999, the purpose could be partly attained through reflecting the Center's opinion to the law.

(3) Efficiency

The equipment provided was used frequently and effectively. Furthermore, the training in Japan, which put emphasis on the practice, gave results, and staff with satisfactory technical level were fostered. This led to the smooth technology transfer of the factory diagnosis. One staff member left the Center, this was due to unsatisfactory treatment and the lack of transparency of the organization.

(4) Impact

In July 1999, "laws on energy and energy saving" were implemented, and energy saving diagnosis became mandatory for factories beyond a certain scale. This is partly because the Center of Energy Saving reflected its opinion in the bill, by exchanging opinion and information with the State Agency on Energy and Energy Resources.

Meanwhile, based on the diagnosis of the Center, foreign-affiliated private enterprises started programs to invest in factories that try to save energy. If this takes root, without the factories raising a large sum of capital investment by themselves, it enables to promote energy saving. Therefore, it may have the potential to have a major impact on Bulgarian industry.



A long-term expert giving lecture to the counterparts

(5) Sustainability

The Center has acquired enough technology to continue and develop the activities initiated by the project, and its services has been highly valued, as seen in the actual performance. By energy saving law, energy saving diagnosis has become mandatory. Thus, the needs of the private sector for the Center's service, such as measurement, the diagnosis, and the analysis technology, continue to be high.

Financially, the assistance from the government is assured. Furthermore, the prospects for the source of income there are, such as the factory diagnosis fees, and contract fees from the model factories. If it attempts to work towards sound management and to prevent of staff turnovers, project activities can be expected to continue.

6. Lessons Learned and Recommendations

(1) Lessons Learned

The relations among the related organizations and companies were extremely effective. For instance, Japanese private companies introduced factories applicable for diagnosis to the project. For future projects of similar nature, active approaches should be made to various public and private institutions and organizations.

(2) Recommendations

It is necessary to reinforce the Center's management in terms of finance by making the income and costs clear, and to promote sound management and preventing turnover of staff. Regarding sources of income such as factory diagnosis and consultations, the proper settlement of prices would be necessary for covering the operation cost and giving staff incentives.

Furthermore, in order that an enterprise may continue energy saving efforts, the Center should strengthen its alliance with the State Agency on Energy and Energy Resources. Furthermore, it is necessary to support preferential treatment for the companies that are making such efforts.

¹⁾ By the reorganization of the ministries and agencies of the Government of Bulgaria, the Ministry of Industry was integrated with the Ministry of Trade and Tourism and became the Ministry of Economy.