

Perspectives for Establishing an ESCO in Estonia

Aarne Leisalu
AS Estivo, Estonia

1. Synopsis

The paper describes the possibilities to launch economically feasible energy conservation activities on more wide basis in Estonia and analyses the economic aspects of that.

1. Abstract

The concept to launch economically feasible energy conservation activities in Estonia on more wide basis is outlined. The principles of operation and financial background in Estonian conditions for establishing ESCO is presented..

2. Introduction

Despite of the energy utilisation intensity in Estonia being about three times higher than western countries and large energy conservation potential - it is complicated to activate the energy consumers to greater conservation in the conditions of transition to market economy and society's impoverishment. At same time it is necessary to speed up the process of arranging the energy use on economically more thrifty basis.

3. Energy conservation in Estonia

Energy conservation has been declared as one of the main priorities of Estonian energy policy. Several energy conservation programmes have been carried out in Estonia with financial aid from Scandinavian countries or state loans from international banks - energy conservation programmes for industry and dwellings, reconstruction of boiler houses and heating substations etc. The constantly growing expenses on energy have increased the local authorities' and industry's interest in energy efficiency, but no considerable wide range actions can be noticed. At the same time it is difficult to evaluate the economical effect of already implemented projects. Ning samal ajal pole siiani teostatud energiasäästu projektide majanduslikku tasuvust kuigi hästi võimalik määrata. Besides the insufficient financing there is also lack of know-how, experience and trained staff for the extension of energy conservation.

4. The process getting started

The principles of Energy Service Company (ESCO) - encouraging the economically feasible energy conservation, have been successful in numerous EU countries as well as in Hungary and Csezh Republic. The introduction of ESCOs would help in launching economically feasible energy conservation activities also to Estonia.

4.1. Description of activities

The general idea of introducing ESCO in Estonia would be the promotion of energy conservation through carrying along to the process besides the very limited state funds aimed for energy conservation also private capital,

loans and financial aid from abroad. The client will be offered the whole package where ESCO will provide a judicially cognisant agreement, financing, feasibility study, implementation, supervision and maintenance. The client will repay the investment through the cost of saved energy during longer period of time.

ESCOs have to perform business in the whole Estonia. At present the main sector of activities would be heat utilisation. The potential target groups are municipal and industrial energy enterprises; owners of boiler houses, district heating networks and substations; housing co-operatives and private dwellings. After the normalization of electricity prices more attention should be paid also to electricity utilisation.

4.2. Business concept

The business idea of ESCO is to perform as an economically profitable company through capital leasing and procurement of large scale long-term financing for implementation of economically feasible energy conservation measures. The business concept is to help the clients in carrying out the cost effective conservation means by offering them a full service agreement. After the approved operation test of the energy conservation measure the client will repay to ESCO a monthly payment during a contract period what have to cover all costs from the energy audit to the installation as well as ESCOs operating costs. The payment is a share of the client's gross savings while the client will get a net profit starting from the first month. The contract period should be optimal and taking into account the available financing, Estonia's changeable economical and juridical conditions, the profitability of each project and risks. Usually ESCO will be the owner of the installations during the contract period.

The main business of ESCO will be "whole package services" while for covering cash flow gaps other services like implementation of energy conservation measures; procurement of financing for the implementation of energy conservation means; consulting on energy matters; energy investment projects preparation, management and supervision; market and price studies in the energy field; educating energy specialists etc will be offered.

4.3. Financial background

For getting started ESCO needs considerable amount of capital in the beginning before it can survive on its own base. It is estimated that for establishing an office with necessary equipment minimum ECU 40 000 and additionally minimum ECU 50 000 annually is needed for running the ESCO.

In Estonian conditions with estimated ca 3500 full load hours yearly in average ca 8% energy savings can be accomplished requiring ca 17 ECU/MW investment. Presuming that ESCO will invest yearly ca ECU 650 000 to energy conservation projects financed mainly through foreign loans (interest rate 8% and loan period 10 years), 6% from the investment will be spent on preparing the project and during the contracting period (in average 6 years) 80% of savings will be used to repay the investment - ESCO can operate without external financing after 4th year. It should be noted that procuring financing for energy conservation projects from Estonian financial institutions (interest rate 14% for 7 years) institutions ESCO can not survive without financial assistance.

In Estonian conditions the conservation projects should exceed ECU 10 000 otherwise it will not be economically feasible for ESCO. Smaller scale projects should be carried out within the frames of governmental energy conservation programme or there is need to create special pre-conditions for energy conservation.

4.4. Foreign assistance

As the experience about the economically feasible energy conservation and for establishing and getting started ESCOs in Estonia is very small some foreign aid at the beginning of activities might be of high importance e.g. consulting in financial matters and assistance in finding long term financing, assistance in establishing ESCO's financial management, training of local specialists technical-economical and social matters of the energy conservation, consulting in legal aspects and contracting, assistance and supervision of pilot projects to be started.

5. Conclusions

To carry out energy conservation in Estonia on economically more feasible base it is necessary to promote energy conservation through carrying along private capital, special funds and also loans and financial aid from Estonia and abroad through ESCO. Minimum ECU 90 000 is needed for establishing ESCO in Estonia and with ECU 10 million annual western financing after fourth year ESCO can manage on its own.

6. Acknowledgements

Author would like to thank colleagues from AS Estivo for their cooperation. Special thanks belong to Mr Ülo Mets for the kind help in estimation of financial background of ESCO and to IVO Power Engineering Oy, Finland for the support in participation at ECEEE 1997 Summer Study.

7. References

Information note, 1996. *Workshop on Financing Energy Efficiency Projects* (Tikka Hotel, 16-17 October 1996)

Leisalu, A., Hedenström, C. "The Energy Efficiency Challenge in Estonia: A Framework to Get Started with Energy Conservation. *Proceedings of the 1993 ECEEE Summer Study: The Energy Efficient Challenge for Europe* 1, 1993, pp. 67-79