

Subsidies for energy audits as an efficient policy instrument: Lessons learnt from the evaluation of an audit program for SMEs in Germany

Edelgard Gruber, IREES, Karlsruhe, Germany
Tobias Fleiter, Fraunhofer ISI, Karlsruhe, Germany

Background and objectives

In Germany an audit grant program was launched in 2008 in order to initiate energy efficiency measures in SMEs and to overcome obstacles such as lack of know-how, lack of time, and high transaction costs for the managers. The program is managed by the KfW, the German Promotional Bank. It offers grants for energy audits in SMEs up to 250 employees carried out by independent consultants listed in the KfW's online database. "Regional partners", e.g. chambers of trade and commerce or energy agencies, are involved for the communication with the applicants and give support to them. There are two types of audits: an "initial" or screening audit of one or two days with a grant of 80 % of the cost, and a "detailed" or comprehensive audit of up to 10 days subsidized with 60 %. The consultants have to submit a final report for each audit based on a mandatory standardized form.

Methodological approach

Two years after its start-up the program was evaluated by IREES and Fraunhofer ISI in 2010.¹ A large scope of empirical research methods were used in this study: evaluation of application data, detailed check of more than 100 audit reports, surveys of regional partners (52 cases), consultants (321), companies audited (542), and a control group (40), followed by an assessment of energy savings, CO₂ reductions and investments induced, and an expert workshop.

Results and discussion

The study revealed a very good image of the program. The consultants found substantial energy efficiency potentials in the companies and the managers followed many of the recommendations given by the consultants. The program costs in relation to the impact in terms of energy savings and reduced CO₂ emissions were relatively low: about 0.5–0.7 €/per MWh energy saved and between 1.6 and 2.1 € per ton CO₂. The program promotes the diffusion of energy efficiency technologies and contributes to establishing a pool of qualified energy efficiency consultants in Germany. However the program was not yet sufficiently known in the target group of SMEs.

The evaluation of the program was faced with some methodological challenges because effects can only be measured indirectly through the statements of the responding companies. The grants are paid as soon as the reports were sent to the KfW and checked by it. It is not required to prove that energy-saving measures were actually taken or savings achieved. Therefore a very complex questionnaire was required which brought about a relatively low response rate concerning issues of type of measures, investments and energy savings achieved. It was difficult to assess the outcome of the program based on the available data, but finally thanks to a combination of the answers of the survey, the evaluation of audit reports, and a cross-checking with the total number of audits in the KfW statistics a result of high significance and reliability was obtained.

¹ Gruber, E. et al.: Efficiency of an Energy Audit Programme for SMEs in Germany - Results of an Evaluation Study. ECEEE Summer Study. Belambra Presqu'île de Giens 2011.