



MINISTRY OF REGIONAL DEVELOPMENT

**National Coordination Authority**

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Executive Summary

**Ex-post evaluation  
of the 2007-2013 program period  
in the area of waste management  
and energy savings**

**Energy savings**

November 2018



## Executive Summary

The Report presents an evaluation of the benefits of the cohesion policy focused on energy savings in the 2007 to 2013 programming period. The policy has been implemented through two programmes: the Operational Programme Environment (OPE) - aimed at supporting public entities (such as schools, hospitals) and the Operational Programme Enterprise and Innovation (OPPI) - aimed at supporting energy savings for business entities.

Due to the fact that there is a difference between the two programmes in focus of the interventions and definition of the relevant applicants, each of them had been assessed in a separate way.

In its area of intervention 3.2, the Operational Programme Environment focused primarily on buildings owned by public (or non-profit) entities and on energy savings related to these buildings, through a package of measures to improve thermal and technical parameters of the buildings; the measures were well known and described in advance. The supported group of projects was very homogeneous; it consisted of projects involving thermal insulation of the building's facade and roof (possibly also insulation of the ceiling under unheated attic) and of replacement of facade windows and doors.

Within this area of intervention, almost 5.500 projects were supported, with reported annual energy savings of 3.4 PJ/year. This result has largely exceeded the expected target of the intervention, i.e. 2 PJ/year<sup>1</sup>).

An analysis of the available data revealed that, in case of the OP Environment, 1 GJ of saved energy averaged CZK 13,042 of the total costs, i.e. CZK 7,973 of the expended eligible costs and CZK 7,026 of the subsidy granted from public sources.

The subsidy-based support introduced by the Operational Programme Environment for energy savings at public and non-profit entities was the first massive investment support of its kind in this area. It not only enabled the public and non-profit entities to manage their energy more efficiently but also, as a side effect of subsidy interventions, to increase the value of property that had long been underfunded. Such massive support has logically led to a revival in the construction market in the area of savings in buildings (producers of insulating materials, suppliers of materials and works), including an impact on financial demands of building materials and works. These facts resulted in increased requirements addressed to the Managing Authority of the Operational Programme Environment, which had to respond to these external influences in terms of acceptability and eligibility of project expenditures during the Programme implementation. In particular, it was an adjustment in the implementation document which set limits of the ineligible costs of energy saving measures for roofs, perimeter walls of buildings and windows in buildings exceeding certain total cost per m<sup>2</sup>.

The reduction of energy losses through improved thermal and technical parameters of the building envelope has resulted in a more economical management of energy sources in the public sector and has enabled, among other things, the use of cleaner and more environmentally friendly forms of heating in buildings (e.g. using renewable sources or natural gas instead of previous solid fossil fuels).

Evaluation carried out through a questionnaire confirmed that the overwhelming majority (about 85%) of public entities / unsuccessful applicants have not taken energy savings measures on their buildings in case the subsidy had not been granted to them. It is obvious from the available data that unsuccessful applicants have used other calls to re-submit their subsidy application, and they

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<sup>1</sup> For the sake of completeness, it should be noted that the objective 2 PJ/year was set for the whole of Priority Axis 3, where, however, the section 3.2, evaluated within the project, dominated in relation to the effect

implemented the project only after the subsidy had been granted. Approval of the subsidy clearly shows to be the key aspect of the decision to implement an energy-saving project on a building envelope.

The results of the evaluation confirmed that the intervention logic had been designed correctly and the intervention provided had led to the expected results and positive impacts.

As opposed to the above, the Operational Programme Enterprise and Innovation focused on the support of energy savings in business entities, more specifically, the support was distributed within the EKO-ENERGY project. The programme document has set the goal of achieving a saving of 11 PJ/year.

A total of 953 energy saving projects have been successful within this Programme. Prior to their implementation, these projects committed to achieving energy savings of 10.0 million GJ/year (i.e. 10 PJ/year). So far, they have reported annual savings of 13.7 million GJ/year. This suggests that the energy-saving intervention has been successful; it has managed to overcome the goals it set in the programming document by more than 24%. The value achieved is an important contribution to the fulfilment of strategic goals in the area of reducing energy consumption which the Czech Republic has undertaken to achieve in the context of the European Union.

An analysis of the available data concluded that, in the case of the OPPI program, 1 GJ of saved energy averaged CZK 506, if only the subsidy amount, which averages 40-50% of the eligible cost of implementation, is included (if all eligible costs are included this is CZK 1270 for one GJ). This value is considerably lower compared to the value for the OPE, mainly because of the broader spectrum of the activities supported from the OPEI. As opposed to OPE projects, the vast majority of projects supported through the OPEI included, in addition to building insulation, other activities directly affecting the amount of energy required (modernization of power generation facilities, reconstruction of pipelines, energy efficient lighting, modernization of production technology). In a number of cases, this concerned support to measures with annual savings of tens to hundreds of thousands of GJ per year (the savings per one project amounted to an average of 14,400 GJ/year).

Primarily, accelerated implementation of activities should be considered the most important contribution of these interventions at the project level. It is clear from the findings that rather than resulting in implementation of projects which would not otherwise be implemented by the entities themselves, the subsidy support allowed the supported entities to implement the planned activities immediately without having to distribute them within a longer time period. The key benefit of the subsidies is therefore concentration of planned activities in a significantly shorter period of time than it would have been without their existence. Ultimately, this concentration makes it possible for the supported entities to carry out other investment activities and, in some cases, also other investments in energy savings. There were also situations when the entities used the available funds for accompanying investments already during implementation of the project supported.

The number of supported projects was evenly distributed among small, medium-sized and large enterprises with approximately a third shared by each type of entity. However, according to the amount of financial means, more than a half of the provided funds (56.8 %) went to large enterprises. The average project saving for large enterprises was nearly 11 times higher than that for medium-sized or small enterprises.

Evaluation surveys have also shown other benefits of the implemented activities for the entities supported. These can be divided into environmental and economic benefits and also benefits of "a social" character. Significant environmental benefits can be seen in the reduced amount of emissions into the air, particularly in connection with upgrading of power generation facilities. Possible economic

aspects include increased competitiveness of enterprises which was described in case studies, as well as savings on investment - on one hand by obtaining the subsidy, and on the other by saving on annual payment for energy. The "social" aspects definitely include improved visual presentation of the supported entities, which was perceived by the case study participants as raising prestige and the better impression at business negotiations with domestic and foreign partners in the company's reconstructed premises. In the upshot, visual presentation could have an impact on the company's competitiveness itself. Increased comfort resulting from a significant simplification of room temperature control has often been seen as another social aspect.

Except for the situations where payments for energy increased after the project implementation due to more expensive fuels, no negative aspect (except administrative burdens) which could be generalized for the interventions was mentioned by the business entities. However, even the above-mentioned fact, i.e. a higher price for energy, has been seen positively by a number of entities, primarily due to the environmental benefits of the measure (lower emissions).

The evaluation of energy savings has not revealed any serious problem that would require a fundamental change in the form of implementation. On the contrary, implementation of the supported projects corresponds fully to fulfilment of the objectives which the Czech Republic has committed to within the European Communities.

A certain limit in the programme administration, however, is related to the fact that in addition to the main (i.e. mandatory) annual energy saving indicator (in GJ/year), there was no summarising statistics and complementary information on the results of individual projects (such as savings in the single kinds of energy or change in standardised consumption categories such as consumption in heating, consumption in technological processes, or consumption through losses in distribution systems). Therefore, a more detailed form of projects could be evaluated only by analysing energy audits in a random sample of projects, not all projects.