

Evaluation of the competitive tenders for electricity efficiency measures

Swiss Federal Office of Energy

Key facts

With the "competitive tenders for electricity efficiency measures" (ProKilowatt), the Confederation promotes measures to reduce electricity consumption in companies, public bodies and private households. The Swiss Federal Office of Energy (SFOE) is responsible for implementing ProKilowatt. The tenders have been taking place since 2010. Since then, the funding has risen to around CHF 50 million per year. In auctions, the funding is awarded to those measures within the framework of individual projects and programmes¹ that have applied for the lowest promotion funding per kilowatt hour (kWh) saved.

The Swiss Federal Audit Office (SFAO) evaluated the competitive tenders. The aim of the evaluation was to assess the functioning, effectiveness and economic viability of ProKilowatt. It also aimed to examine whether the distribution of funds between energy efficiency and renewable energies can be optimised.

The SFAO assesses auctions conducted according to the criterion of cost-effectiveness as fundamentally meaningful for the promotion of efficiency measures. However, there are difficulties in estimating electricity savings. The SFAO notes that deadweight effects were not taken into account and that the savings were therefore overestimated. However, these difficulties do not call the ProKilowatt instrument itself into question.

Deadweight effects reduce the effectiveness of ProKilowatt

The ProKilowatt funding programme is fundamentally well designed. The SFAO considers the examination of subsidy applications and monitoring to be appropriate. The SFOE reports total electricity savings of 6.2 terawatt hours (TWh) due to the promotion of projects and programmes from 2010 to 2016. The SFAO questions the SFOE's statement because no deadweight effects were taken into account.

Deadweight effects occur if a measure subsidised by ProKilowatt (e.g. the replacement of existing motors by new, more energy-efficient ones in a company) would have been implemented even without the programme's support. According to the Energy Ordinance, ProKilowatt may only support projects and programmes that would not be realised without funding. While deadweight effects are the most important reason for overestimating savings, the SFAO has identified other individual causes within the framework of case studies.

Survey data from project and programme promoters showed deadweight effects of 25-30% for projects and 23% for programmes. The total savings from the projects and programmes from 2010 to 2016 would be around 4.7 TWh in view of this data.

¹ Programmes bundle numerous, similar, individual measures for external third parties, the programme participants.

The SFAO also surveyed participants in three selected programmes. These reported deadweight effects which were around twice as high as the corresponding three programme promoters. The SFAO considers the information provided by the participants who effectively implement the individual measures to be much more accurate and independent than that provided by the programme promoters, who demonstrate a certain bias with regard to their programme. However, this sample of three programmes does not allow any statistically significant conclusions to be drawn about all of the programmes.

Competition is rather weak and is artificially created

Competition for ProKilowatt's funding is currently rather weak. As a rule, the demand for funding does not exceed the funds offered, or only slightly. In order to ensure minimal competition, the SFOE regularly cuts funding if the sum of the requested funds does not exceed 120% of the available funds.

The SFAO regards the introduction of this practice as essential in order to ensure sufficient competition for funding. The risk of being eliminated from the auction is one of several reasons for the low participation in ProKilowatt, the most important being that other investments are considered more important, especially by companies.

Compared to a situation without auctions, the existing competition at ProKilowatt leads to a more economical use of the available funds. Estimates for some of the measures supported are based on savings of just under a quarter.

Funds for energy efficiency and renewable energies can be used more economically

A more economical use of funds is achieved through the allocation of funds by means of auctions. The rather weak intensity of competition at ProKilowatt is already bringing about certain efficiency gains.

In view of the energy policy objectives in the electricity sector, the SFAO considers it important to gear the distribution of funds for measures in favour of electricity efficiency and renewable electricity production more closely to the cost efficiency of the measure. This is still too rarely the case today, partly because there is a lack of valid and comparable information on the efficiency of measures.

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