Greek experience with deemed savings in EEOS

Policy background: Greece's Energy Efficiency Obligation Scheme

In Greece, the use of deemed savings methods is applied extensively within the framework of the **Energy Efficiency Obligation Scheme (EEOS)** in order to control and verify the energy savings reported by the Obligated Parties. The EEOS is considered as a key policy instrument for achieving the national energy saving target of Article 8 of the Energy Efficiency Directive (EU)2023/1791 (EED).

More specifically, the EEOS, launched in 2017, mandates that both **energy suppliers** (e.g., electricity, natural gas and petroleum products) **and energy distributors** (e.g., electricity and natural gas) should fulfil specific energy savings targets through the implementation of energy efficiency measures at end-users.

Deemed savings methods are used to monitor energy savings from various types of energy efficiency measures, and reported by the Obligated Parties to meet their targets.

A measurement protocol has been prepared by CRES, Greece's Centre for Renewable Energy Sources and Savings, consisting of 48 different bottom-up methodologies in total. Among these, **39 equations** correspond to deemed savings methods, covering **residential, commercial/public and transport sectors**. Deemed savings are not used for actions in the industry sector.

The measurement protocol is in full compliance with the requirements of Annex V of the EED, while the use of the deemed savings methods intends to facilitate the measurement, control and verification of energy savings, to improve the **transparency and accountability** of the energy savings calculations and to **minimize the administrative costs** both for the Obligated Parties and for the administrator of the scheme. Moreover, the use of deemed savings methods enables the further **exploitation of untapped energy saving potentials**, facilitating the achievement of the national energy savings objectives.

The deemed savings methods are updated on annual basis so as to improve their accuracy with the revision of the baseline data and the integration of additional behavioral and operational factors. It should be mentioned that the determination of the baseline energy consumption has been performed, taking into account the criterion of additionality in the case that it is applicable. No ex-post method has been applied yet to assess the reliability of reported energy savings.

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Process to specify and update deemed savings

CRES has been appointed as the administrator of the EEOS for calculating, measuring, controlling and verifying the delivered energy savings. According to the Ministerial Decision (FEK B, YPEN/DEPEA/57295/426/08-06-2022) for the regulatory operation of the EEOS in the period 2021-2030, CRES is responsible for developing the measurement protocol, which must be used by the Obligated Parties. It should be noted that the 48 bottom-up methodologies have been incorporated into the **online information system**, which has been developed in order to carry out all the necessary activities for calculating, measuring, controlling and verifying the energy savings delivered by the energy efficiency measures reported by the obligated parties.

The measurement protocol is **updated annually** according to the Ministerial Decision for the regulatory operation of the EEOS before starting officially the new reference year. Furthermore, obligated parties may propose new bottom-up methodologies, which are examined by CRES, and may then be approved and incorporated into the measurement protocol. CRES may also introduce new standardized bottom-up methodologies for energy efficiency measures implemented in the previous reference years within the framework of the EEOS based on the input data used by obligated parties.

Regarding the procedure for developing the bottom-up methodologies, CRES organizes regularly **targeted consultation** meetings with the obligated parties and specialized technical experts so as to present and discuss the applicability and effectiveness of the methodologies. The Ministry of Environment and Energy, responsible for the overall coordination of the EEOS, also takes part in these consultation meetings.

The development of the deemed savings method in Greece is mainly based on the elaboration of the **available statistical data** both from administrative sources (e.g. Eurostat and Hellenic Statistical Authority) and other studies conducted in Greece (e.g. Household Budget Survey, CRES surveys, cost optimal study for the Energy Performance of Buildings Directive, etc.). The combination of the available statistical data facilitates the development of robust bottom-up methodologies, which can lead to accurate, reliable, and context-specific savings estimates. It should be noted that CRES conducts regularly **targeted surveys** both to validate the assumptions of the current bottom-up methodologies and to develop new ones.

According to the Ministerial Decision (FEK B, YPEN/DEPEA/57295/426/08-06-2022) for the regulatory operation of the EEOS in the period 2021-2030, CRES is responsible for approving and publicizing the bottom-up methodologies in agreement with the Ministry of Environment and Energy.

Experience and feedback

The extensive use of deemed savings methods in Greece within the framework of the EEOS has led to the conclusion that they made possible to facilitate the calculation, measurement, control and verification of energy savings reported by obligated parties, with **decreased administrative costs** for all the involved parties. An evidence of the adoption of the deemed savings methods is that obligated parties have preferred to use alternative input data compared to the respective deemed savings method only in a limited number of cases, when relevant to increase the accuracy of the performed calculations.

Critical aspects for the wide acceptance, reliability and applicability of the deemed savings methods include:

- the actual **involvement of the obligated parties** in the process for developing the bottom-up methodologies,
- the **continuous and regular improvement and adaptation** of the existing deemed savings methods, taking into account both the findings from new surveys and the technological evaluation, and
- the provision of the sources used, for **transparency** and higher credibility levels.

Finally, it is essential to establish a procedure for enhancing the collection of additional data and for **monitoring the effectiveness and accuracy** of the performed energy savings calculations using ex-post methods.