

Case study

Energy Audits and Accreditation of Energy Services

Country: Spain

Level: National

SDG Addressed: SDG7 – Affordable and Clean Energy

Summary

Spanish Royal Decree (RD) 56/2016 on energy audits and accreditation of energy service providers and energy audits partially transposes the European Directive 2012/27/UE on energy efficiency. This RD makes use of the European Standards EN 16247 series on energy audits in a similar way as in the “new approach” legislation. If an energy audit proves that standards have been complied with, it is considered that the service provider fulfil the requirements of the RD. The RD also includes the family of standards EN 16247 as a content of the training course for energy auditors.

Background

Energy audits are key tools that allow organizations to know their situation regarding their use of energy. These audits allow detecting operations inside the operational procedures that can contribute to saving energy, increasing the energy efficiency and to optimize the energy demand. As those audits might follow different procedures in different companies, sectors and countries, standardization is required in order to make results comparable.

Strategy

The RD is divided in chapters about:

- i) definitions
- ii) energy audits
- iii) accreditation of energy service providers and energy audits
- iv) promotion of energy efficiency and use of heat and cold
- v) sanctions.

The RD makes it compulsory to perform energy audits for companies, excluding SMEs, every four years. Energy audits shall follow several requirements, such as being based on updated and verifiable data on energy consumption, providing an assessment of consumption profiles of all premises especially transport, including profitability criteria on the whole life cycle and being representative of the whole activity. Besides the criteria for energy audits, there are criteria for energy auditors, who need to have proper knowledge on the topic as well.

As seen from the complexities of these requirements, energy audits are quite complex and not always comparable. Following the EN 12647, standards make the audits comparable and simplify the accreditation procedure for auditing organizations and individual auditors themselves. The recognition of an energy auditor can be achieved in two ways, either by university studies (MSc or equivalent) covering energy related topics or by following a specific training course. RD establishes that EN 16247 standards shall also be part of the training course of energy auditors.

Results and Impact

In Spain, 5,000 energy audits have been performed as a result of RD 56/2016 and it is estimated that around 40% of them have been done following the standards EN 16247.

There is also a market of “verified audits”, which is purely voluntary and consists on the verification that an energetic audit, usually performed by the company itself, fulfils the requirement of EN 16247. This kind of verifications is usually done by big companies as a way to show the public authorities the rigour of the energy audit. The verified energy audits cover over 400 premises from around 40 big companies.

Several entities offer training courses for energy auditors, but the recognition of those courses is done by the authorities of each “Comunidad Autonoma”, the Spanish regional division. Therefore, it is not easy to access data on the number of courses or auditors following those courses; some stakeholders estimate around 200 auditors are trained each year following the curriculum. The index of the course is defined in RD 56/2016, but there is no indication on the duration or specific content of each unit, and therefore there is a wide heterogeneity on the existing courses.

Challenges and Lessons Learned

The citation of the standards is very positive and has been done in the way recommended by most relevant entities; European Commission, ISO, CEN-CENELEC, etc. Nevertheless, since the follow-up of this legislation is done at regional level, there is not reliable data on the implementation of the RD. This dilemma is also extended to the energy auditors. A more intensive use of the other components of quality infrastructure (conformity assessment and accreditation in particular) is desirable. A common database for all Spain in order to register the implementation of the legislation is also desirable.

Potential for Replication

This experience is fully replicable in other countries.