Policy Brief No2

Farm Energy Audits

What is the challenge?

Nowadays, most of EU farms do not conduct energy audits as farmers are not familiar both with the procedure and the profits gained from it. On the other hand, energy audits are mandatory for residential and commercial buildings to determine their energy efficiency.

Today, the energy audits provide a complete electricity consumption and energy efficiency assessment, obtaining important information regarding the building's energy usage and Energy Star rating from the audit report. Based on this information, any energy usage issues are identified and can then be corrected to cut electricity costs. The results of this procedure are evident in the report "**A Study on Energy Efficiency in Enterprises: Energy Audits and Energy Management Systems"** published by the EC in 2016. In this document it can be seen that SME's who have created networks, identified energy saving measures and then implemented them, succeeded the minimization of their energy needs. **For example, the 30 Pilot Networks project, which is a part of the Learning Energy Efficiency Networks (LEEN), identified 7030 measures out of which 3580 were profitable, resulting in energy saving potential of 2670 MWh/year**. As the project is still ongoing, **for the time being 207 measures have been applied and 98.5 MWh/year energy savings have been achieved**.

For the case of **farmers, such networks and measures have not been set yet**. Farms have specific characteristics on the way they operate and setting a unified methodology is not as easy as for residential and commercial buildings. For example, they may use different energy carriers and have multiple energy use categories both in open-field categories and buildings. This is an issue that has not been yet properly addressed in the CAP, however based on the CAP funded advice the necessary knowledge exchange is expected to increase.

Therefore, **the challenge is to create a universal system in which energy audits for farms will be easily conducted**. At the same time a complete methodology will have to be set in order to help farmers realise the privileges gained from conducting such procedure as the cost of maintenance of their farms will decrease, dependence of fossil fuels in agriculture will be reduced and at the same time it will contribute to the adaptation and mitigation of climate change.

Policy Recommendations

EU Level:

- **Promote the advantages of conducting farm energy audits** on national level towards minimization of the energy consumption combined with farm operational cost reductions.
- **Create a uniform methodology** that will be followed for conducting energy audits across EU.

Member States Level:

- Create a platform where farmers and their advisors can easily customize to their needs and **do the energy audit effortlessly**.
- Ensure that the existing energy audit processes for commercial, industrial, and residential buildings are adapted and followed for farms of all types. Initially, **keep the audit procedure optional and then move to mandatory certificate of completion** for farms to be able to operate.
- Farmers who have done an energy audit on their farm could be **eligible for financing aid programs** that will help with upgrading their energy consuming equipment based on the results of the audit.
- Promote farmers who conduct energy audits in their farms and apply energy efficiency measures by **increasing the product's price towards the buyer**. These products could be promoted as eco-friendly and greener (see Policy Brief "European Low Carbon Label of Agricultural Products").
- In Poland there is a need to create a concrete methodology first, and then it will become possible to promote

audits.

- Support farmers in conducting energy audits as, for instance, is done in Ireland where a €2,000 Energy Audit voucher is available to all businesses including agriculture who have an annual energy spend more than €10,000.
- Farm energy audits in Greece are regulated by the national law 4342/2015, which transposes the EU Energy Efficiency Directive (EED) into the Greek legislative framework. The law requires large industrial consumers, including farms, to either conduct an energy audit every four years or implement an energy or environmental management system. The law also provides a framework for promoting energy efficiency measures and sets the institutional framework for carrying out energy audits. The law also includes the criteria based on which an audit is obligatory or not. Energy audits include a physical inspection of agricultural buildings and equipment, as well as a measurement and analysis of the energy flows and performance indicators and conclude with recommendations for implementing the most cost-effective and technically viable measures. Certified energy auditors are registered in a national registry of the Ministry of Environment and Energy.
- In Italy, the Guidelines for the energy certification of buildings, introduced by the Ministry of Economic Development with effect from 1 October 2015 (Ministerial Decree of 26 June 2015), do not concern agricultural or rural non-residential buildings, **without air conditioning systems**, being excluded from the obligation to supply the energy performance certificate (Ape).

Expected Impacts

- **Reduction of energy consumption and related emissions in agriculture** through changes to be applied by farmers for the energy optimization of their farms (expected savings up to 35% of the total energy consumption).
- Increased farm profitability, as **costs related to energy use will be significantly reduced** while maintaining the same incomes per production, favouring rural population maintenance or increase.
- **Possibility for the conduction of targeted research** in areas required since the results of all farm energy audits will be gathered to create a unified database.
- Acquisition of the knowledge regarding the EU farms energy status by **creating a registry that will provide to policy makers the information to focus their policies** for energy consumption reduction in the agricultural domain.

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