Case study

Efficient Use of Energy and Good Lighting Quality

Country: Sweden

Level: National

SDG Addressed: SDG7 – Affordable and Clean Energy

Summary

Approximately around 2013, the Swedish Standards Body (SIS) started discussions with the Swedish Energy Agency to secure their interest and involvement in the standardization work in the field of application for light and lighting. The main objective was to gain their understanding of the potential energy savings that the use of standards can bring to the society. Gradually their interest and participation grew from interested listeners to keen and engaged stakeholders with, among others, active representation in the SIS standardization committee for light and lighting. The partnership and cooperation escalated to another level in 2018 when SIS was awarded financing from the Swedish Energy Agency to run the project: “The application of research and science with standardization in the field of light and lighting for more efficient use of energy and good lighting quality”.

Background

The project – which is still ongoing - aims to increase and strengthen Sweden's commitment and participation in the development of a new edition of the European Standard "Lighting of work places - Indoor work places" to ensure that research and science for sound energy efficiency and energy efficiency are used optimally, as well as that information about standardization work is disseminated to relevant stakeholders in the widest and most efficient manner. This project application focuses on one of the Swedish Energy Agency's priority areas, namely "Projects with clear link to standardization", within the framework of one of its programs.

Strategy

The standard in focus for the project is SS-EN 12464-1 Light and lighting - Lighting of work places - Part 1: Indoor work places.

Results and Impact

- to ensure that the latest results in research and science on energy use and energy efficiency issues in light and lighting are brought into the work with the new edition of the standard for indoor workplaces;
- to strengthen Sweden's role and influence within the work on the new edition of the standard for indoor workplaces on energy use and energy efficiency issues in light and lighting;
- to strengthen the link between eco-design / energy labelling and the work on the new edition of the standard for indoor workplaces;
- that the development of the new edition of the work on the new edition of the standard for indoor workplaces leads to increased energy savings. Implementation of LEDs and increased controlled lighting is expected to lead to an energy saving of 5 TWh within the next three years after the end of the project
- that the development of the new edition of the work on the new edition of the standard for workplaces indoors, means that 90% of the design processes that are done three years after the completion of the project will follow the requirements / recommendations contained in the standards;
- that, through the development of the new edition of the standard for indoor workplaces, requirements have been established for reporting the annual energy use and a planned maintenance of our lighting facilities, which will thus create the conditions for a significantly lower energy

consumption over time, the application of the requirements of the new edition of the standard for indoor workplaces becomes a contributing factor to the fulfilment of the Energy Commission's objectives (in the final report of January 2017) on a 50% more efficient energy use in 2030 compared with 2005, that the project contributes to the following of national energy and climate policy goals:

a) 100 per cent renewable electricity production in 2040
b) that Sweden should not have any net emissions of greenhouse gases to the atmosphere in 2045 to subsequently achieve negative emissions.

Challenges and Lessons Learned

At this point, the project has yet not ended, and it is too early to present such lessons learned. What the project can report though at this early stage is, due to the support from the Swedish Energy Agency, SIS has been able to engage and inform other stakeholders with much more strength and force than if support from the Agency had not been in place.

Potential for Replication

The project can surely be replicated as the key success factor is based on a close cooperation and relationship building with a key stakeholder.

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