

2024 HIGHLIGHTS

Task 71 – Life Cycle and Cost Assessment for Heating and Cooling Technologies

THE ISSUE

In response to the growing urgency of environmental challenges such as climate change, biodiversity loss, and resource scarcity, governments worldwide are intensifying efforts to regulate and standardise products to mitigate environmental impact. Among the promising avenues within clean energy, solar heating and cooling systems stand out for their potential to contribute significantly to sustainable energy solutions. However, as advancements are made to increase their efficiency and affordability, it is necessary to ensure that these developments do not inadvertently introduce new environmental burdens. The heating and cooling sector, particularly air-conditioning, is witnessing rapid expansion propelled by technological innovations and increased efficiency. With this expansion comes an increased emphasis on environmental labelling tools, both compulsory and voluntary, aimed at ensuring product quality while supporting business opportunities for producers. Central to this effort is the need for standardised and reliable certification, which is essential for ensuring consumer trust.

OUR WORK

Task 71 addresses this by focusing on ecological and economic assessments and a comprehensive examination of regulatory landscapes. As countries adopt diverse approaches, including financial incentives and efficiency standards, to bolster renewable energy adoption and optimise ecological utilisation, this task aims to equip stakeholders with the insights needed to promote suitable heating and cooling solutions, both from sustainability and economically points of views.

By providing a transparent methodology to compare heating and cooling options over time, Task 71 will support international collaboration between industry and research, promoting renewable heating technologies' sustainability and ensuring a cleaner, more sustainable future for all.

Participating Countries

Australia
Austria
China
Denmark
France
Germany
Italy
Netherlands
Norway
Portugal
Spain
Sweden
Switzerland
United Kingdom

Task Period 2022 – 2025
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TASK71

KEY RESULTS IN 2024

Regulations for heating systems

A report giving an overview of both national and international regulations on heating and cooling systems has been prepared: "Regulations for heating systems. National situation and international". Present as well as planned future regulations are included in the report. The report is useful for stakeholders in the field.

The report contains an overview of the specific regulations in 11 countries, with the participation of 17 contributors from the different countries analyzed. The report also summarizes international and multinational regulations and provides an update on current political initiatives such as the international Environment Product Declaration system.

The preparation of this report has highlighted the dynamism of regulations related to energy production systems, energy consumption, renewable energy, sustainability and climate change in Europe, which consequently translates into intense regulatory activity in the different countries studied. This report is therefore a photograph of the current situation that aims to show the framework of the regulatory system in the heating sector but does not contain detailed information on specific regulations.

Due to the fact that the presentation of the current regulations is only a photograph of the current situation it would make sense to keep this overview up to date in the coming years.

The report is currently under review and will be published shortly.

Methodology adaptation regarding LCA

A first review round of the established methodology guidelines for environmental life cycle assessment of SHC systems was successfully completed. The feedback received in the review round served to further concretize and harmonize the methodology guidelines. In parallel, specifications for the economic assessment of SHC systems were developed and integrated in the guidelines. A second review round among the Task 71 experts is scheduled for 2025.

2nd workshop held in Kgs. Lyngby, Denmark in October 2024

In October 2024, in connection with the Task meeting the second workshop of Task 71 was held in Kgs. Lyngby, Denmark. 80 participants from consulting engineering firms, manufacturers, authorities, agencies, research institutes and universities including students attended the workshop to learn about the status on LCOH and LCA for heating and cooling technologies for buildings and to give input and recommendations for the ongoing Task. The recommendations are valuable in connection with the finalization of the Task.



Workshop and Task meeting in Kgs. Lyngby. October 2024.