

2023 Kicks Off With Two New Projects

Two new Tasks were approved at the December SHC Executive Committee Meeting. Both Tasks, one on lighting and the other on life cycle and cost assessment, highlight the breadth of work undertaken by the IEA SHC Programme.

Low Carbon, High Comfort Integrated Lighting

The overall objective of this new SHC Task is to identify and support implementing lighting (electric, façade: daylighting and passive solar) in the decarbonization on a global perspective while aligning the new integrative understanding of humans' light needs with digitized lighting on a building and a building related urban scale. Jan de Boer of Fraunhofer IBP in Germany will lead the Task.

Appropriate energy efficient and sustainable lighting is driven and orchestrated by architecture and building design practice and employs technologies from three relevant industry sectors: façade, electric lighting, and building automation.

The Task work is divided into four subtasks:

- Subtask A: Low Carbon Lighting and Passive Solar: Scenarios, Strategies, Roadmaps
- Subtask B: Visual and Non-visual User Requirements
- Subtask C: Digitized Lighting Solutions (Technology & Design Tools/Process)
- Subtask D: Application and Case Studies

Interested in learning more or would like to join this Task, contact Jan de Boer at jan.deboer@ibp.fraunhofer.de.

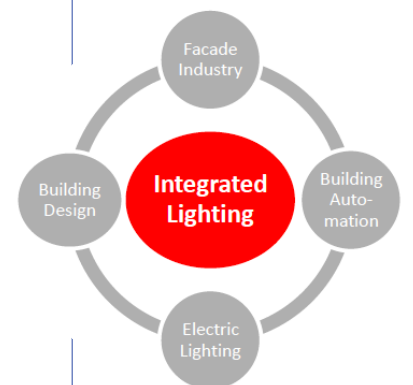
Life Cycle and Cost Assessment for Solar Heating and Cooling Technologies

This cross-sectoral research Task on life cycle assessment (LCA) and Levelized Cost of Heat (LCOH) aims to develop methodology guidelines and define the parameters for location and system-specific ecological and economic evaluation assessment. Karl-Anders Weiss of Fraunhofer ISE in Germany will lead the Task.

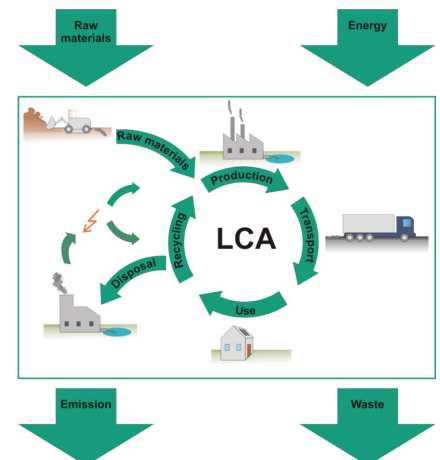
Because life cycle assessment is cross-sectoral by nature, the Task will collaborate with other heating and cooling-related projects within the IEA Technology Collaboration Programme. For example,

the results of Task 12 within the IEA Photovoltaic Power Systems Programme are particularly relevant as they include methodology guidelines on LCA of photovoltaics and life cycle inventories.

And another relevant project that just ended is IEA Energy in Buildings and Communities Programme's Annex 72: Assessing Life-cycle-related Environmental Impacts Caused by Buildings and its work on methods for developing specific environmental benchmarks for different types of buildings.



Efficient lighting driven by building design and technologies from three industry sectors: façade, electric lighting, and building automation



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New Work *from page 6*

The Task work is divided into five subtasks:

- Subtask A: Cooperation with ongoing or upcoming SHC Tasks and related Tasks from other programs
- Subtask B: Methodology adaption
- Subtask C: Data of different technologies and components (Identify, compile, and analyze existing inventories and other input data for Life Cycle Assessment and costing for SHC technologies and components)
- Subtask D: Reference systems and their requirements, scenarios, and optimization
- Subtask E: Dissemination, networking, and policy involvement

Interested in learning more or would like to join this Task, contact Karl-Anders Weiss at karl-anders.weiss@ise.fraunhofer.de.