

2020 HIGHLIGHTS

Task 59 – Deep Renovation of Historic Buildings Towards Lowest Possible Energy Demand and CO₂ Emission

THE ISSUE

Historic buildings represent a large share of the existing building stock. They are the trademark of numerous cities, and they will only survive if maintained as a living space. In order to preserve this heritage, we need to find conservation compatible energy retrofit approaches and solutions, which allow to maintain the historic and aesthetic values while increasing comfort, lowering energy bills and minimizing environmental impact.

In the last 10 years a shift in paradigm can be observed: during the time of the European Union's first Energy Performance Building Directive strong opposition from conservators and architects could be observed – “don't touch these buildings” – since then there is a growing openness and a much more constructive approach – “let's find the right solutions together”.

Now is an important moment to identify and promote good approaches and solutions for renovating historic buildings.

OUR WORK

Standard energy saving measures are often not compatible with preserving a historic building's character, nevertheless realized examples show that reducing the energy demand by 75% and beyond is possible in historic buildings while preserving their heritage value. While defining a minimum performance for a “standard” building does not make sense when looking at a specific building, the design team should not “stop thinking” too early! A considerable reduction in demand – also thanks to optimization of passive solar use – opens up the possibility to go with active solar contributions towards nZEB.

The expert group of SHC Task 59 is pursuing the above objective three ways 1) by developing a solid knowledge base, documenting, and communicating good practice building retrofits, 2) by supporting the interdisciplinary design process with the collection and appraisal of guidelines, procedures, and tools, and 3) by identifying and assessing replicable technical solutions for a conservation compatible retrofit of historic buildings. And, once this is done the Task experts will transfer this knowledge to architects, decision makers and other stakeholders.

SHC Task 59 is run in collaboration with the IEA Energy in Buildings & Communities Programme, referred to as EBC Annex 76.

Participating Countries

Austria

Belgium

Denmark

France

Ireland

Italy

Spain

Sweden

Turkey

United Kingdom

United States

Task Period

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TASK 59

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KEY RESULTS IN 2020

Solar Academy Webinar

With the **Solar Academy webinar** on January 28th, SHC Task 59 tried a **new format**. Since building owners and design teams have always been central in the Task work, we wanted them to be part of this webinar and to "give them a voice." During this webinar, the needs and concerns of decision-makers involved in the renovation of historic buildings were presented by building owners and architects who worked on several building retrofit projects in South Tyrol, Italy. Video interviews conducted as part of the ITAS award were cut in a way to create a story. The SHC Subtask leader then stepped in at the right points to answer the questions and concerns raised by the owners and architects or to underline, in some cases, their experience. The webinar is still available on the SHC website under Solar Academy and by clicking [here](#).



HiBERAtlas leads to HiBERTool

In Subtask C on **Conservation compatible retrofit solutions and strategies**, the collection, assessment, and documentation of the solutions within the working groups have progressed well: 38 solutions collected for WALLS, 17 for WINDOWS, 43 for HVAC, and 36 for SOLAR systems, adding up **overall to more than 130 solutions**. This information will be presented in a final report but will also be accessible through the HiBERTool. The **Historic Buildings Energy Retrofit guidance tool**, HiBERTool, has in the background a decision tree that guides users with questions to potential solutions for their case. Users can download the results as PDFs, but they are also given links to best practice examples in the HiBERAtlas, where these solutions are implemented. The HiBERTool will be launched in April 2021 at the final conference of SHC Task 59.



Final Conference: SBE21 Sustainable Built Heritage

The final conference will be held on April 14-16 in Bozen/Bolzano as part of the SBE series as a joint conference of SHC Task 59, ATLAS, and Hylab (both projects feeding into SHC Task 59 work). Nearly 90 abstracts were submitted and evaluated by the scientific committee.

SHC Task 59 Blog and Twitter

The **website's blog** is off to a good start with monthly news from Task 59 experts. At the end of 2020, SHC Task 59 had posted **173 tweets** and 78.8K impressions. The plan is to keep this account live after SHC Task 59 ends in April 2021, so follow us at [@HistoricNZEB](#) if you are interested in the topic!