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THIRD STORE4HUC NEWSLETTER

About Store4HUC

Welcome to the third edition of the Store4HUC Newsletter. The European project Store4HUC develops solutions for renewable energy sources and their storage in historical city centers. Due to strict regulations to protect historical buildings, it is difficult to supply and store renewable energy in listed monuments.

Store4HUC addresses this challenge by providing solutions for adaptation of low-carbon energy supply and storage in historical urban centers and providing tailor-made tools to assess both the impact of energy storage and energy independence. The project pilots its tools in 4 historical urban buildings in Croatia, Italy, Slovenia and Austria.

Visit our website to learn more: [Store4HUC website](#)



Neo-Baroque Villa Receives Renewable Energy Upgrade - The Lendava Pilot, Slovenia

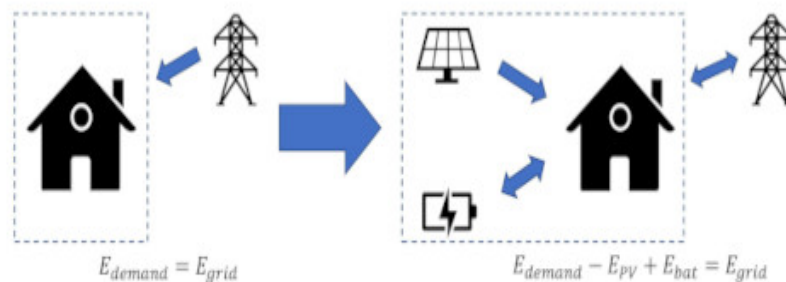
The building, listed as cultural heritage, was built in 1906 in neo-baroque style as the villa of the notary Oskar Laubhaimer presenting an example of holistic concept architecture of the time. The building is still heated by fossil fuel – residual fuel oil, a heating system, that is now planned to be replaced by a system connected to the existing geothermal district heating network combined with paraffin-based energy storing system.

In order to preserve the special characteristics of this building, several partial renovations were undertaken during the years: the roof structure was replaced and a 15 cm thick thermal roof insulation was added in 1996, the basement was completely renovated in 2000, and the windows were upgraded to wooden, boxed style newly insulated windows. Due to the regulations for monument protection, renovation possibilities on the building however are strictly limited.

Read the description of the pilot: [Store4HUC website](#)

Optimal parameterization of a PV and a battery system add-on for a consumer

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Scientific Paper about the Optimal Parameterization of a PV and a Battery System

In the course of the Store4HUC project, a scientific paper was published by Filip Rukavina and Mario Vašak from the University of Zagreb discussing the best optimization of battery storage and PV.

Photovoltaic systems are widespread renewable energy sources that can be installed at a variety of locations. Because of their sun dependence, they can provide more than enough energy during the day, but no energy during the night. Having a battery energy storage system can ensure that the excess of energy is stored and used later to avoid selling electricity at low price and then buying it at higher price.

The paper presentation can be read in detail [here](#).

Technical Constraints for Establishing Energy Storages

The technical constraints are strongly varying between the pilots, because they are using completely different technologies.

In Slovenia for example, where a paraffin-based latent heat storage is used, finding a suitable product on the market as well as finding a suitable investment construction works contractor was challenging.

In Italy, where an electrical storage in combination with a photovoltaic system will be installed, there was no problem finding suitable products on the market, but it was complicated to study for their application to the pilot due to the peculiarity of the plant itself (slope elevator) and its location.

In Croatia, a carport PV solution combined with an in-house battery fulfilling the fire safety regulation have been identified and will serve as good practice example.

The both pilots in Austria and Slovenia, which are connected to the district heating system have to deal with specifications based on this but also between these two pilots there are major differences related to the used storage type, the location of the storage and so on.

Read more: [Store4HUC website](#)

Summary of the Zukunftsforum Energie & Klima

On 17.11.2020 between 9.00 and 10.30am an online event took place hosted by the Store4HUC partner Climate Alliance and entitled with "Zukunftsforum Energie & Klima, F7: Energiespeicherung in historischen urbanen Gebäuden", presented in German language.

Responses on the following queries have been given by the presenters: "What potential do energy storage systems in buildings or urban districts offer and how can energy efficiency measures be implemented in listed buildings of historical value?"

Read more: [Store4HUC Website](#)

STORE4HUC - ENERGY STORAGES AT HISTORICAL URBAN CENTRES

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