Abstract

Interreg CENTRAL EUROPE “Store4HUC”

Integration and smart management of energy storages at historical urban centers

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Up to 80% of total energy consumption in the EU is attributed to urban areas, mostly with historical urban centres. At the same time, low carbon energy supplies in the style of energy storages, especially in historical urban centres, is a rarity in central Europe. This is mainly because of strict architectural protection constraints, higher implementation costs and often also conflicts with town planning policies.

The Store4HUC project aims to improve territorially based low-carbon energy planning strategies. It will enrich policies that support climate change mitigation in historical city centres by focusing on improved urban and spatial planning for integrating energy storage systems to enhance the public institutional and utility capabilities. It is challenging to provide a low carbon energy supply in cities in a style of energy storages. Especially in historical urban centres it is very difficult to achieve these results, because interventions in this specific area meet strict architectural protection constraints, involve higher implementation costs that often come in conflict with town planning policies. Therefore, the main objective is to improve and enrich energy and spatial planning strategies targeting historical city centres by focusing on integration of energy storage systems to enhance the public institutional and utility capabilities in pilot actions.

The pilot actions implemented in specific sites will demonstrate the various energy storages that can be adapted and transferred to other local or regional environments. The storages will provide good show cases to the local authorities which can benefit in sense of improved energy efficiency and increase usage of renewable energy sources and lower costs for energy. The transnational strategy will provide the recommendations for improving the energy and spatial planning. The energy management tool will enable to monitor all features that proof the effectiveness of the pilot installations. Additionally, the autarky rate tool will indicate the economic and reasonable utilisation of storages. By establishing the stakeholder deployment desk Store4HUC will reach the relevant players to share the knowledge and also transfer it to other additional audience. It will enable to gain wider consensus of the pilot instalment and further tool usage, especially with the signed memorandums of the future tool utilisation. The project approach foresees also peer review actions, mutual learning within project consortium and exchange of experiences and knowledge with target groups what can enhance the transnational added value. Innovative energy storage installation and storing of renewable energy sources determines the innovative aspect of Store4HUC.

The partners will develop policy recommendations and identify suitable integrated technological solutions to overcome low carbon development barriers in historic centres. They will also facilitate the development of open energy and load management systems for energy efficiency and use of renewables. With its concepts and pilot systems, STORE4HUC will provide smart city test beds, where technique will be reconciled with historical and architectural values.