

### III. Energy efficient renovation of public buildings in cities

This topic is related to SO 2.1 “To develop and implement solutions for increasing energy efficiency and renewable energy usage in public infrastructures”.

<b>THEMATIC FOCUS</b>	<p>The fourth call thematically focuses within SO 2.1 on <b>energy efficient renovation of public buildings in cities</b>. Energy renovation of public buildings in city centres is important because of its impact on citizens since these buildings can, in many cases, be presented as role model buildings. The potential of deep retrofit of such buildings is, however, not yet fully used and the refurbishment proves often to be complicated. Therefore, the aim is to enrich, improve and exploit the outputs and results developed and achieved within projects of the first and second call in order to:</p> <ul style="list-style-type: none"> <li>&gt; Provide better support to the refurbishment of existing building stock in central European city centres;</li> <li>&gt; Foster the creation of new and innovative financing models for energy retrofit; and</li> <li>&gt; Improve the overall policy and support framework of the energy retrofit of building sector.</li> </ul> <p>As a starting point for the fourth call, five Interreg CE projects with direct and relevant contributions to this topic were identified. They focus on the public and private building sector, on introducing innovative financing models for deep retrofit of buildings, on the implementation of energy efficiency and renewable energy measures to achieve nearly zero energy buildings by managing the demand side energy management, and on developing methods and tools to facilitate the implementation of energy efficiency strategies and action plans of central European cities.</p>
<b>CHALLENGES</b>	<p>Most central European regions show high energy consumption and a low degree of energy efficiency of buildings and infrastructure. Taken together these are the main contributors to greenhouse gas emissions. The efficient use of energy can make an important contribution to achieving a low-carbon economy and combating climate change. It will also contribute to decreasing central Europe’s energy import dependence and will in many cases imply positive effects on air quality.</p> <p>Increasing energy efficiency and renewable energy usage in public infrastructures (i.e. infrastructure owned by the public and/or for public use) is a priority given the large potential for fossil fuel energy savings. It will also help spreading approaches to other sectors and have a multiplying effect.</p> <p>Despite some central European regions being quite advanced in terms of energy saving technologies, there is the need for increasing the overall capacity of the public sector for implementing measures to reduce CO2 emissions of public infrastructure. In particular, public infrastructure owners and operators often lack the necessary expertise (i.e. methods and technologies) for reducing energy consumption or replacing the consumption of fossil fuels with renewable energy sources.</p>
<b>POLICY FRAMEWORK</b>	<p>Buildings are responsible for approximately 40 % of energy consumption and 36 % of CO2 emissions in the EU. On 30 November 2016, as part of the Clean Energy for All Europeans package, the EU Commission proposed an update of the Energy Performance of Buildings Directive to promote the use of smart technology in buildings, to streamline existing rules and accelerate building renovation.<sup>9</sup> Part of the Energy Performance of Buildings Directive (EPBD)<sup>10</sup> requires EU Member states that all new buildings must be nearly zero-energy buildings by 31 December 2020 (public buildings since 31 December 2018). The new and revised Energy Performance of Buildings Directive requires a common European scheme for rating the smart readiness of buildings. Smart technologies will be further promoted, for instance through requirements on the installation of building automation and control systems and on devices that regulate temperature at room level. These requirements are especially challenging for central Europe, since in most cities the buildings belong to sites of (partly protected) national and cultural heritage where not so many measures on energy efficiency and renewable system integration can be implemented.</p>
<b>EXPECTED RESULTS</b>	<p>Transnational cooperation will help to reduce know-how disparities and increase capacities of the public sector and related entities for improving the energy efficiency of public infrastructures. It will ultimately reduce their energy consumption and CO2 emissions. This shall be achieved through strengthening competences as well as developing and implementing strategies, management approaches and financing schemes, which will serve as seedbed for higher energy efficiency. This will consequently leverage further investment such as the renovation and upgrading of the energy efficiency level of public infrastructure. Furthermore, the usage of renewable energy in public infrastructures will be fostered through identifying potentials, testing innovative solutions and preparing follow-up investments.</p> <p>The main result envisaged can be summarised as: <i>“Improved capacities of the public sector and related entities for increased energy efficiency and renewable energy use in public infrastructures in central Europe achieved through transnational cooperation”.</i></p>

<sup>9</sup> DIRECTIVE 2010/31/EU, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010L0031&qid=1544708005194&from=EN>

<sup>10</sup> DIRECTIVE 2010/31/EU, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010L0031&qid=1544708076274&from=EN>