

From climate plans to action: supporting local energy transition for Covenant of Mayors cities

Three Covenant of Mayors (CoM) signatories show how practical tools can support different stages of the Sustainable Energy and Climate Action Plan (SECAP) process, from planning actions and preparing investments to implementing renewable energy communities.

The Green Living Areas Mission of the Interreg Euro-MED Programme has developed a Local Energy Transition Integrated Support Framework, bringing together tools and approaches from the Programme and municipal experiences from Covenant of Mayors (CoM) signatory cities to support local authorities in planning, financing and implementing Sustainable Energy and Climate Action Plan (SECAP) actions.

Joining the CoM is an important step, but the real work starts afterwards. Local authorities need to translate their climate and energy commitments into concrete and well-planned actions, prepare investments, involve local stakeholders and monitor progress. For many municipalities, particularly those with limited technical and administrative capacity, moving from a commitment to a plan and its implementation can be as challenging as setting the targets themselves.

The 2025 Covenant of Mayors SECAP Guidebook provides the methodological reference of this process, providing detailed guidance on key aspects of SECAP development, supporting local authorities in designing effective and comprehensive climate and energy strategies. The experience presented in this document illustrates how practical tools developed and tested in Mediterranean cities through integration of mitigation, adaptation and energy poverty considerations can support this process.

In line with the Interreg Euro-MED Programme's strategy, the Green Living Areas governance project has brought together prominent results of the Programme into a local energy transition integrated support framework that can support local authorities at different stages of the process of planning and implementing their SECAPs.

The experiences of Riba-roja de Túria in Spain, Karlovac in Croatia and Valencia in Spain (all CoM signatory municipalities) illustrate how this support can be used in different circumstances: when defining or updating local actions, when preparing investments for financing, and when moving towards implementation with local communities.

Planning SECAP actions: the experience of Riba-roja de Túria

Riba-roja de Túria, a Covenant of Mayors signatory since 2011, has set 2030 objectives that include reducing greenhouse gas emissions by at least 40% compared with 2010, improving energy efficiency and increasing the share of renewable energy. Its priorities include improving the energy performance of buildings, modernising public lighting and reducing dependence on fossil fuels.

The municipality tested a [local energy transition planning toolkit](#) in a particularly demanding context. After the October 2024 DANA floods severely affected municipal buildings, reconstruction became an immediate priority, and local resources had to be redirected. Rather than abandoning the energy transition agenda, the municipality adapted the application of the toolkit to help identify energy-related measures that could be incorporated into the reconstruction process.

The local energy transition planning toolkit was applied to the Municipal Cultural Centre and Auditorium. The process combined data collection, analysis of energy consumption and visits to the buildings with discussions about possible measures. Three measures were prioritised: a photovoltaic installation of around 32 kWp, the replacement of single-glazed windows, and the installation of thermostats combined with a participatory process to reduce energy consumption.

The proposed photovoltaic system could cover around 32% of the building's annual electricity demand. Replacing the windows was estimated to reduce heat losses through windows substantially, while the thermostat and behavioural measures addressed energy use through both technical and organisational changes.

The participatory element was particularly relevant. Around 20–25 people, including teaching and support staff, students, municipal radio staff and representatives of the parents' association, contributed to the process. Together they developed practical rules for heating and cooling, shutting down classrooms and managing lift use. The municipality subsequently adopted the resulting plan and committed to its implementation, linking it to both its SECAP and the post-DANA reconstruction process.

The experience also highlighted a practical advantage of an integrated planning resource: it does not have to be used as a rigid sequence. A municipality starting a SECAP or updating an existing one can use the full approach, while a city facing a specific challenge can draw selectively on the relevant resources. In Riba-roja, the toolkit helped turn a changing local situation into an opportunity to keep energy transition measures within the reconstruction agenda.

Preparing SECAP measures for financing: the experience of Karlovac

For Karlovac, Croatia, the challenge was further along the implementation path: how to turn a planned energy transition measure into a well-prepared public investment. A Covenant of Mayors signatory since 2010, the city has incorporated energy efficiency, renewable energy and resilience into its climate and energy planning.

The pilot focused on a biosolar roof at the Ivan Goran Kovačić City Library. The investment combines photovoltaic panels with a green roof. Vegetation can reduce roof temperatures, retain rainwater and support biodiversity, while the cooler environment can also contribute to photovoltaic performance. The investment is estimated at approximately EUR 55,000 including VAT, with the photovoltaic system expected to cover around 18% of the library's annual electricity consumption.

The [Green Finance Evaluation Tool](#) was used to assess the project from both a financial and a wider economic perspective. The financial assessment considered investment and operating costs, expected electricity production and savings on the library's energy bills. The economic assessment also considered benefits that do not appear directly in the municipality's financial accounts, including avoided greenhouse gas emissions, energy security, rainwater retention, improved air quality and the demonstration value of the solution.

This distinction matters for public investment decisions. Electricity savings are measurable and directly relevant to the municipality's budget, but they capture only part of the value generated by a biosolar roof. Some benefits accrue to building users and the wider community rather than producing direct revenue for the city. Looking only at financial cost-effectiveness could therefore lead municipalities to undervalue projects with broader environmental and social benefits.

The pilot also includes monitoring of electricity production and roof temperatures, comparing areas with the biosolar system with areas using conventional photovoltaic panels and areas without panels. This will provide evidence for future investment decisions and help refine the assessment of similar projects.

For Covenant of Mayors signatories, the lesson is relevant beyond this particular technology. When preparing investments arising from a SECAP, municipalities need to look not only at whether a project pays for itself, but also at the wider public value it can generate and at the financing options available to deliver it.

Implementing renewable energy communities: the experience of Valencia

Valencia provides an example of the implementation stage, where the challenge is not only installing renewable energy but also ensuring that local communities can participate in and benefit from the energy transition. The pilot focused on the maritime neighbourhoods of Malvarrosa and Nazaret, where vulnerable households, an ageing and poorly insulated building stock and exposure to high temperatures create overlapping energy and climate challenges.

EnerCmed's feasibility assessment approach was used to examine local conditions from several perspectives, combining regulatory, spatial and technical factors with climate and socio-economic information, including energy poverty. The assessment considered photovoltaic potential, electricity demand and grid conditions alongside energy vulnerability, thermal stress, green areas and potential climate shelters. This helped identify where Renewable Energy Communities (RECs) and Nature-Based Solutions could respond to several needs at the same time.

The Valencia experience is also relevant to the integrated approach promoted by the 2025 SECAP guidance. In this case, renewable energy, adaptation to extreme heat and support for households affected by energy poverty are addressed within the same local context, rather than as separate areas of intervention.

The tool and related implementation resources are available through the EnerCmed Knowledge Sharing Platform.

One of the main results is CoEnSoMa – Comunitat Energètica Solidària Malvarrosa, a solidarity-based Renewable Energy Community centred on CEIP Ballester Fandos. A 26.4 kWp photovoltaic system has been installed on the school roof. Part of the electricity is used by the school, while most of the benefits are directed towards around 25–30 vulnerable families living in the neighbourhood. The municipality granted the energy community a 25-year concession for the use of the school roof, turning a public building into a long-term resource for the local energy community.

The Valencia pilot also connects renewable energy with measures to improve the neighbourhood's response to extreme heat. At CEIP Ballester Fandos, a bioclimatic pergola of around 100 m² provides a shaded and ventilated area. At CEIP Las Moreras in Nazaret, a vegetated wooden pergola was combined with the renaturalisation of part of the schoolyard following a participatory process with the school community.

The approach was subsequently structured and applied through the [EnerCmed Feasibility Scan Tool](#) within the project's replication network, involving other Mediterranean cities and several Covenant of Mayors signatories such as Kalamata, Málaga, Poreč-Parenzo, Pazin and Labin. This broader application provides useful evidence on how municipalities can assess local conditions and barriers before moving towards implementation.

Supporting the SECAP journey from planning to implementation

The three municipal experiences take place at different moments in the wider SECAP cycle. Riba-roja shows how practical planning resources can help define or re-define actions and adapt them to changing and challenging local circumstances. Karlovac illustrates the preparation of an investment, including its financial and wider economic value. Valencia shows what implementation can look like when renewable energy is combined with community participation, social objectives and climate adaptation.

These are not separate exercises, nor will municipalities necessarily address them in the same order. Depending on the local context, a city may need to refine an action, assess its financial and economic implications, identify suitable financing, or work on the institutional and community arrangements needed to implement it. In practice, these needs often overlap and may have to be revisited as the action develops.

This is the rationale behind the Local Energy Transition Integrated Support Framework promoted through the Green Living Areas Mission governance project. Rather than adding another methodology, the framework brings together existing practical resources and lessons from municipal testing so that local authorities can identify what is useful for their own situation. This can be particularly valuable for smaller municipalities, where the availability of specialised technical and administrative staff is often limited.

For Covenant signatories, the three experiences offer different ways into the same practical challenge. Municipalities can draw on the resources that are most relevant to their own situation, whether they need support with planning, investment preparation, local feasibility or implementation.

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