



# How to include building renovation in your Sustainable Energy and Climate Action Plan

Ensuring ambitious local  
and national building  
renovation policy



December 2019



This project has received funding from the European Union's  
Horizon 2020 research and innovation programme under  
grant agreement No 840926

# BUILD UPON<sup>2</sup>



## The BUILD UPON<sup>2</sup> Project

We are in a state of climate emergency. We must act now to reach net zero carbon by 2050 - and cities can lead the way. To get there, cities must unlock the huge potential of their buildings - and building renovation in particular.

Deep building renovation has far-reaching benefits for society as increasing indoor comfort and air quality avoids illnesses and premature deaths associated with living in cold and damp homes. This in turn reduces pressure on healthcare and social services.

## About BPiE

The Buildings Performance Institute Europe is a European not-for-profit think-tank with a focus on independent analysis and knowledge dissemination, supporting evidence-based policy making in the field of energy performance in buildings. It delivers policy analysis, policy advice and implementation support.

The EU Horizon 2020 funded BUILD UPON<sup>2</sup> project will empower cities across Europe to join forces with national governments and industry to decarbonise their existing building stock by 2050. BUILD UPON<sup>2</sup> will strengthen the local effectiveness and implementation of the national building renovation strategies required by the EU Energy Performance of Buildings Directive (EPBD).

[www.worldgbc.org/build-upon](http://www.worldgbc.org/build-upon)

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**Action is needed at all levels of government to build and execute strong policy. There are already several policies and initiatives in place to guide such policymaking at the European, national and local levels. Aligning the different initiatives to ensure that one contributes to the other is essential to efficiently reach targets and minimise duplication of resources.**

# List of acronyms

- BEI** Baseline Emission Inventory
- CoM** Covenant of Mayors
- CO<sub>2</sub>** Carbon Dioxide
- EED** Energy Efficiency Directive
- EPBD** Energy Performance of Buildings Directive
- ERDF** European Regional Development Fund
- GHG** Greenhouse Gas
- JRC** Joint Research Centre
- LTRS** Long-Term Renovation Strategy
- NECP** National Energy and Climate Plan
- RVA** Risk Vulnerability Assessment
- SEAP** Sustainable Energy Action Plan
- SECAP** Sustainable Energy and Climate Action Plan

# 1. Introduction

**On the European level, the “Clean energy for all Europeans” package is a comprehensive set of legislation that defines European climate and energy policy for beyond 2020. It is composed of eight different pieces of legislation aimed at accelerating the energy transition in Europe.**

Some 97% of Europe’s existing building stock is inefficient [1]. Given that the buildings sector is responsible for approximately 36% CO<sub>2</sub> emissions and 40% of energy consumption in Europe, there is great potential for energy and emissions reductions. Policy to strengthen building performance is a huge factor in achieving climate targets.

Action is needed at all levels of government to build and execute strong policy. There are already several policies and initiatives in place to guide such policymaking at the European, national and local levels. Aligning the different initiatives to ensure that one contributes to the other is essential to efficiently reach targets and minimise duplication of resources.

On the European level, the “Clean energy for all Europeans” package [2] is a comprehensive set of legislation that defines European climate and energy policy for 2020 and beyond. It is composed of eight different pieces of legislation aimed at

accelerating the energy transition in Europe. The primary European legislation for buildings is the Energy Performance of Buildings Directive (EPBD).

National energy efficiency policy is largely determined by the EU legal framework and many of the national efficiency measures are the direct result of the implementation of EU directives. Regarding building policy on the national level, Member States are required to prepare long-term renovation strategies (LTRs) to achieve a highly energy efficient and decarbonised building stock by 2050.

Regional and local authorities play a large role in leading and achieving climate initiatives, not only in drafting and implementing building policy, but often in implementing even more ambitious local targets. Additionally, even if the decisions are coming from a high level, the renovation/construction work is carried out on the local level, having an impact on the local community. On the municipal level, voluntary signatories of the Covenant of Mayors (CoM) are required to create their own policy and framework to achieve climate goals, called Sustainable Energy and Climate Action Plans (SECAPs). The buildings sector is one of the main sectors covered under SECAPs.

This paper, developed in the framework of the Horizon2020 Project BUILD UPON<sup>2</sup>, will focus on the alignment between the local and national levels, SECAPs and LTRs respectively, to create strong renovation policy in the buildings sector.

The goal of BUILD UPON<sup>2</sup> is to strengthen the effectiveness and implementation of the LTRs, particularly their objective of achieving a decarbonised building stock by 2050. It will do this by working with cities so that they can play a central role in the design and implementation of these renovation strategies, enhancing coordination across local and national authorities.

Specifically, the project will work with CoM signatories, national governments and a wide range of key stakeholders to develop and test a multi-level renovation impact framework which can be integrated into SECAPs<sup>1</sup> prepared by CoM municipalities.

**This paper will check the possible synergies between SECAPs and LTRs and will suggest how local renovation initiatives can be duly taken into account in the LTR drafting and implementation.**



<sup>4</sup> This paper will focus on alignment between SECAPs of EU local authorities, or local authorities in candidate countries, and their contribution to EU legislation. It will not cover SECAPs of local authorities outside the EU.

# 2. The Covenant of Mayors initiative

**The CoM's mission is to connect authorities to coordinate and execute national and regional climate initiatives, as well as promote more ambitious targets at a local level.**

The Covenant of Mayors for Climate and Energy (CoM) is a voluntary initiative that brings together local governments committed to implementing EU climate and energy objectives. This bottom-up EU initiative, initially meant to cover around 30 of Europe's largest cities, has grown to over 9,000 local and regional authorities in 59 countries worldwide.<sup>2</sup> These signatories have committed to reduce their CO<sub>2</sub> emissions by at minimum 20% by 2020 and/or 40% by 2030, through the implementation of a climate action plan. This was originally called the Sustainable Energy Action Plan (SEAP), which later became the Sustainable Energy and Climate Action Plan (SECAP).

The CoM's mission is to connect authorities to coordinate and execute national and regional climate initiatives, as well as promote more ambitious targets at a local level. The CoM provides

a forum to guide local authorities, harmonise data collection and share best practices.

The primary vision of the signatories is to work toward accelerating the decarbonisation of their region by 2050. The CoM is based around three primary pillars of action:

- 1. Mitigation (at least 40% emissions reduction by 2030)**
- 2. Adaptation to climate change**
- 3. Secure, sustainable and affordable energy.**

In order to support this shared vision, signatories must submit a SECAP within two years of committing. As of September 2019, 6,281 signatories have submitted their SECAP to the European Commission.<sup>3</sup>

## 2.1 Sustainable Energy and Climate Action Plans

SECAPs define and guide the mitigation and adaptation goals of the municipality, establishing measures, initiatives and resources to achieve the targets and timeframes for their implementation. They also assign responsibility to execute the plan to different departments with a primary focus on actions to reduce GHG emissions and initiate adaptation measures.

<sup>2</sup> Based on information retrieved from the Covenant of Mayors' website on 19 September 2019.  
<sup>3</sup> Based on information retrieved from the Covenant of Mayors' website on 19 September 2019.

## SECAPs covers three main sectors:



Significant resources are available to help local authorities craft their SECAPs, in particular a guidebook in three parts from the Joint Research Centre (JRC). This has been extensively used in this report and is the key source for delineating a SECAPs' primary elements listed below [4].

## SECAP reporting timeline



# Key elements of a SECAP are as follows:

1

## Formal adoption of the plan by the municipal council (or equivalent)

To ensure the plan has strong political support and backing, the plan must be formally adopted by the municipal government. Formal municipal support is essential as it shows public commitment to the SECAP, provides long-term credibility for the targets and enables local authorities to play a role in crafting policy and aligning it with other local level initiatives.

2

## Definition of clear mitigation and adaptation targets/goals

The CoM as a whole has an overall GHG emissions reduction target of 40% from 1990 levels and SECAPs must establish targets in line with this objective expressed in tonnes/year by 2030. However, this level of ambition is a minimum and local authorities can choose to go beyond and set a more ambitious target.

The adaptation goals must be in line with the overall European Commission strategy on adaptation (adopted in April 2013) [3]. The strategy has three core pillars: (1) provide funding to help Member States build up their adaptation capacity, (2) promote adaptation in vulnerable sectors (e.g. agriculture) and their infrastructure, and (3) promote better information and knowledge sharing to provide adaptation solutions.

3

## Assessment of the local situation

CoM signatories are required to complete two assessments that map the starting situation in the municipality: The Baseline Emission Inventory and a Climate Change Risk Vulnerability Assessment:

- The Baseline Emission Inventory (BEI) must provide a description of energy consumption and CO<sub>2</sub> emissions in the city through sound local data. It should include an analysis of all sectors that are relevant for the CoM, including an overview of emissions and energy consumption in the building sector. The BEI provides an overview of the starting point for identifying target areas in which actions should be prioritised and serves as the baseline to measure future progress [3].
- The Climate Change Risk Vulnerability Assessment (RVA)'s purpose is to identify exposure to climate change impacts and risks. The RVA sets the baseline in order to identify adaptation measures for the municipality.  
The results from BEI and the RVA must be included in the SECAP submission.

4

## Outline of comprehensive measures addressing the key sectors of activity

The SECAP must include mitigation measures that reflect the key areas for improvement identified in the BEI and include measurable and realistic targets. In this phase, it is also recommended that local authorities set a long-term target for the city as this helps clarify the future vision for the city to stakeholders and citizens.

5

## Strategies and actions until 2030

SECAPs must provide a full strategy with goals until 2030, including specific targets for key relevant areas, such as the building sector. It must also include a detailed outline of shorter-term measures that help translate these goals into intermediate steps. When defining the measures, details must also be included on the responsible body for implementation, timing, cost, indicators for monitoring, estimated savings and estimated CO<sub>2</sub> reductions.

6

## Mobilisation of all municipal departments involved

SECAP development and implementation should be a joint effort of multiple departments within the local authority and not only energy/environment. In particular, the coordination of actions between mitigation and adaptation departments is of crucial importance. In addition, the implementation of a SECAP must be embedded in all departments' daily work and aligned with existing plans and processes. Detailed plans of how communications and cooperation will be facilitated must be outlined in the SECAP. To coordinate these efforts, SECAP guidance recommends creating a Covenant coordinator with a budget, who has the ability to create and oversee relevant working groups or steering committees to facilitate the SECAP process.

7

## Engagement of citizens and stakeholders

The SECAP process should be an inclusive one by facilitating the participation of stakeholders, local groups and citizens. Citizens and stakeholders should be consulted at various times throughout the entire process, from setting the overall vision, to drafting and developing the SECAP, to its implementation. A participative process is necessary to achieve consensus and support for the measures that will be implemented under the SECAP; this makes the overall process more transparent and democratic.

8

## Identify key financial resources

Developing a SECAP, and even more the implementation of the planned measures, requires that the local authorities set aside appropriate financial resources. The CoM's website provides an extensive list of possible financing opportunities broken down by category (structural funds, project development assistance, financial institutions' instruments and alternative schemes) [5]. A careful analysis of the existing funds and how they can be utilised at the local level should be included in the SECAP.

9

## Monitoring and reporting

There are extensive requirements for SECAP reporting, which are necessary to assess whether local authorities are on track towards achieving the targets of the SECAP and adjust the measures, if necessary. There are two types of reporting a signatory must do: (1) action reporting (every two years) and (2) full reporting (every four years). Action reporting does not require an updated monitoring emissions inventory, whereas full reporting does. This means that CoM signatories carry out alternately every two years one or the other report.

10

## SECAP submission process

Signatories have two years to submit their SECAP upon joining the CoM. For both monitoring and reporting, and the submission process, there is a template on the CoM website, which helps maintain consistency between reporting periods and between municipalities.

# 3. EPBD long-term renovation strategies (LTRSs)

The EPBD requires Member States to produce their national LTRS by 10 March 2020. A LTRS is a national roadmap with the objective of achieving a highly energy efficient and decarbonised building stock by 2050, facilitating the cost-effective transformation of existing buildings into nearly-zero energy buildings.

The LTRS must contain 2030, 2040 and 2050 milestones and measurable progress indicators (EPBD Article 2a.2). The Commission EPBD guidance specifies that milestones and progress indicators can be quantitative or qualitative and can be tailored to national circumstances. It also provides examples of how Member States could define these, for example in terms of percentage of renovated buildings or annual proportion of buildings undergoing deep renovations.<sup>4</sup>

The LTRS should also clearly contribute to achieving the energy efficiency targets, as outlined in the national energy and climate plans (NECPs).

<sup>4</sup> For the full list of indicators and milestones, please see point 2.3.2 of Commission Recommendation (EU) 2019/786 of 8 May 2019 on building renovation. In addition, the Horizon 2020 project BUILD UPON also developed a list with examples of milestones and indicators to track the impact of renovation strategies, available at [buildupon.eu/wp-content/uploads/2016/11/BUILD-UPON-Renovation-Strategies-Impact-Framework.pdf](https://buildupon.eu/wp-content/uploads/2016/11/BUILD-UPON-Renovation-Strategies-Impact-Framework.pdf)

## 3.1 Core components of the LTRSs<sup>5</sup>

Article 2a of the EPBD specifically lists the elements that each Member State must include in its LTRS. These are the following:



**An overview of the national building stock, based, as appropriate, on statistical sampling and expected share of renovated buildings in 2020 (Article 2a.1.a):** An accurate picture of the characteristics of the national building stock in terms of main building categories, age, ownership/tenure and location is the starting point for planning tailored and effective policies<sup>[1]</sup>. The expected share of renovated buildings by 2020 can be expressed in many ways, for example in percentage or absolute number of renovated square metres per type of building<sup>[6]</sup>.



**The identification of cost-effective approaches to renovation relevant to the building type and climatic zone, considering potential relevant trigger points, where applicable, in the life-cycle of the building (Article 2a.1.b):** When deciding renovation measures, those that achieve a better balance between costs and benefits (including benefits at large that go beyond the economic appraisal) must be prioritised. The EPBD specifically mentions renovations at trigger points as being an “opportune moment in the life-cycle of a building, for example from a cost-effectiveness or disruption perspective, for carrying out energy efficiency renovations.”



**Policies and actions to stimulate cost-effective deep renovation of buildings, including staged deep renovation, and to support targeted cost-effective measures and renovation, for example by introducing an optional scheme for building renovation passports (Article 2a.1.c):** As the renovation cycle for buildings is often very long (30-50 years), it is essential that when a refurbishment takes place every effort is made to reduce the energy consumption of the building to the lowest level possible. However, deep renovation measures are challenging to implement because they are capital and labour intensive and often the building’s owner lacks tailored information and advice on how to renovate. Member States should design measures to overcome these challenges and stimulate deep renovations, for example by introducing building renovation passports<sup>6</sup>.



**An overview of policies and actions to target the worst-performing segments of the national building stock, split-incentive dilemmas and market failures, and an outline of relevant national actions that contribute to the alleviation of energy poverty (Article 2a.1.d):** The LTRS must also include detailed measures to target the worst-performing buildings, which can be identified for example through the energy class of

<sup>5</sup> The section below mirrors the one developed for BUILD UPON 2 deliverable 1.1

<sup>6</sup> A building renovation passport outlines the long-term (generally 15-20 years) renovation plan for an individual building. The passport is based on an on-site energy audit and includes expected benefits from renovation beyond energy performance. Building renovation passports are useful tools to support owners with personalised renovation advice and ensure coordination of works during the different stages of the renovation for all involved parties.

the energy performance certificate, using energy consumption figures expressed in kWh/m<sup>2</sup> per year, or according to their year of construction [6]. Targeting the worst-performing segment is often highly cost-effective in terms of energy savings, also considering the additional non-energy benefits of renovation, such as reduction of energy bills for occupants. The landlord-tenant split incentive is also a barrier to implementing renovation measures, as the benefits of the renovation (e.g. lower bills, increased indoor comfort) are not enjoyed by those paying for it (landlord). Member States must therefore outline the measures they aim to put in place to solve this challenge, like for example rules for dividing or recovering some of the costs.

5

**Policies and actions to target all public buildings (Article 2a.1.e):** Public buildings can play an exemplary role by showcasing state-of-the-art construction and renovation practices to the general public. In addition, focusing initially on the public sector provides the opportunity to test renovation measures, as well as develop necessary expertise to then apply similar programmes in the private sector. The EED requires each Member State to renovate each year 3% of the total floor area of heated and/or cooled buildings owned or occupied by central government. This obligation should be the starting point of the policies and actions to target public buildings within the LTRS. However, the scope of actions to be planned in the LTRS is much broader than central government buildings and the strategies should target all public buildings, including those of local and regional authorities [6]. The diversity of the public building stock makes it a microcosm of what will need to happen in other sectors.

6

**An overview of national initiatives to promote smart technologies and well-connected buildings and communities, as well as skills and education in the construction and energy efficiency sectors (Article 2a.1.f):** Smart buildings have the capability to adapt to the needs of the occupant and the grid, and therefore improve energy efficiency by consuming less and providing more flexibility to the energy system overall. Member States must list the initiatives they are promoting in this framework. This requirement shows that LTRSs should also serve to promote new technological developments and technologies in the building sector. Additionally, Member States must also include initiatives to promote skills and education in the construction and energy efficiency sectors. Given the rapidly evolving world of technology, ensuring there is a skilled, knowledgeable workforce equipped to install and advise on energy efficiency measures is crucial to increase the uptake of energy renovations.

7

**An evidence-based estimate of expected energy savings and wider benefits, such as those related to health, safety and air quality (Article 2a.1.g):** Non-energy benefits are often overlooked in the appraisal of energy efficiency projects. Often the costs of a renovation project can be covered by additional benefits, beyond monetary energy savings, including improving local air quality, increasing energy security and increasing asset value, to name a few.

## 3.2 Mobilisation of investment

Member States are required to actively facilitate actions that will support the mobilisation of investments in energy renovation works (Article 2a 3):



**Project aggregation:**

Energy efficiency projects are small in nature. Bundling similar, small-scale projects makes energy efficiency investments more attractive to institutional investors looking for larger investments.



**Reduction of risk:**

Due to projected future savings guarantees, energy efficiency investments are often considered risky. Building risk guarantees and databases of proven savings are important operations to help reduce energy efficiency risk perception.



**Public funding to leverage private-sector investment:**

In recent years, public institutions have dedicated more funds to energy efficiency projects. However, given the level of investment necessary to achieve climate targets, leveraging private investment is of paramount importance.



**Public building stock:**

Often, public buildings face different investment barriers (e.g., lease term, accounting principles), so it is important for governments to find ways to guide investment into the public building stock. Guidance to facilitate investment is key to grow the market. Eurostat issued a guidance note [7] clarifying energy performance contracts in government accounts, to outline and guide public actor investment.



**Setting up accessible and transparent advisory tools,** such as one-stop-shops.

A new provision has also been added to Article 10 on financial incentives and market barriers that requires Member States to link their financial measures to the targeted or achieved energy savings from building renovation. This stresses the importance of showing the link between energy performance and cost.

## 3.3 LTRS: Consultation requirements

Member States must conduct a public consultation on the LTRS before they submit it to the European Commission. They must also enclose a summary of the consultation with the LTRS. The Commission Recommendation on building renovation [6] (“Commission EPBD Guidance”) invites Member States to specify details such as the duration of the consultation, the method used to consult and the number or type of participants. It also recommends setting up stakeholder platforms – on the model of those created by the Horizon2020 project [BUILD UPON](#).

# 4. Comparing SECAPs and LTRs

SECAPs and LTRs have different scopes, requirements and specific processes for their drafting and implementation, but ultimately, they both are planning tools that aim at setting a course of action to reduce GHG emissions.

Many cities are planning ambitious steps to reduce the negative impacts of climate change, in some cases putting local authorities ahead of their own governments in the implementation of pioneering initiatives on the ground. The alignment and cooperation between different levels of governance, notably the national and the local level, must be strengthened to ensure the different initiatives are complementary and contribute to the same objective without duplication of efforts.

The following section compares SECAPs and LTRs in term of their scope, content and process and identifies the synergies between the two planning tools, with a specific in-depth analysis for measures in the buildings sector. While SECAPs must contain plans for both mitigation and adaptation, this paper will primarily focus on the mitigation component as LTRs do not cover adaptation measures in the buildings sector.

## 4.1 Key features

### LEVEL OF GOVERNANCE:

The most obvious difference between the two plans is that LTRs set national goals whereas SECAPs set goals for the local/municipal level. However, for several EU countries, many of their largest cities in term of population are CoM signatories<sup>7</sup> indicating that the goals, measures and initiatives taken at the local level under the SECAPs have the potential to be directly relevant to the LTRs because of their scale in term of citizen outreach. Data from September 2016 shows that there were 5,984 signatories in the EU28 covering about 181 million inhabitants in the EU.

### STATUS:

Another key difference between LTRs and SECAPs is their legal status. Every EU Member State must develop an LTR and these are also a required component of national energy and climate plans (NECPs). By contrast, only local authorities that voluntarily decide to join the CoM must draft a SECAP. However, once a city becomes a CoM member, it commits to develop and implement a SECAP. A local authority that does not do so will be suspended from the CoM.

### SCOPE:

SECAPs focus primarily on GHG emissions reductions (mitigation measures) across sectors, including the buildings sector, and cover adaptation measures as well. LTRs, as part of the EPBD, have a focus on reducing energy consumption in the buildings sector, which also results in GHG emissions reductions. The LTRs do not include any climate change adaptation measures in the building sector, though renovations may increase building occupants' resilience to warmer temperatures by improving thermal comfort.

## Overview of the different levels of governance and energy planning



<sup>7</sup> See BUILD UPON2 deliverable 1.3

## 4.2 Time horizon and goal setting



### Long-term target

“A highly energy efficient and decarbonised building stock by 2050”



Establishment of a long-term vision with clear objectives (optional)

Setting a longer-term target is considered a key success factor of SECAPs as it clearly shows the local authority's political commitment

### 2030 objective

Article 2a. paragraph 2

The roadmap shall include indicative milestones for 2030, 2040 and 2050, and specify how they contribute to achieving the Union's energy efficiency targets in accordance with Directive 2012/27/EU.

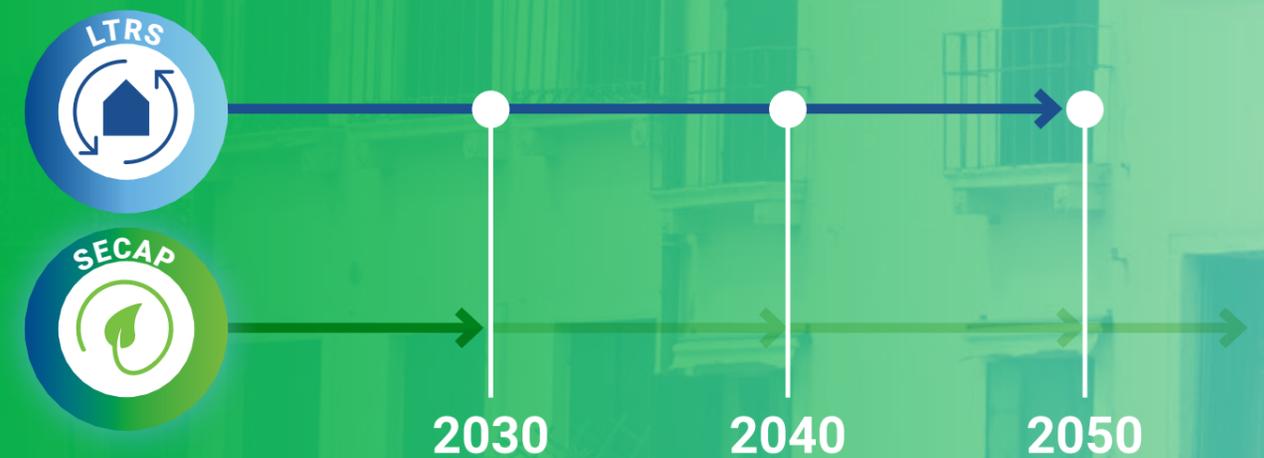
Strategies and actions until 2030

Even though the main commitment concerns GHG emissions reduction, it is advisable to define also energy savings and/or energy production targets, and to state sector-specific targets.

In any government plan, constructing a clear overall vision is key for defining parameters to create a solid framework. The vision primarily concerns establishing overall clear targets, a mission and a timeline to get there. To facilitate further alignment between SECAPs and LTRs, identifying similarities and overlap within both plans is an essential starting point.

LTRs must have a long-term outlook, with primary objectives out to 2050 and interim milestones at 2030 and 2040. However, SECAPs' primary focus is until 2030 (local authorities can, and are encouraged to, establish a long-term vision out to 2050, however 2030 is the primary timeframe). Despite different overall timescales, both plans overlap with a major milestone at 2030.

### Overview of SECAP and LTRs time horizon



Note: LTRs requirements stated here come directly from EBPD, article 2a. SECAP requirements are summarised from various sections of the three guidebooks published by the JRC [4].

The primary focus of SECAPs is to reduce GHG emissions in line with the EU target of cutting emissions by at least 40% by 2030 compared to 1990 levels. However, it is strongly recommended that local authorities establish also energy-savings or sector-specific targets [3] to break down the emissions objective and to better monitor progress. Under the LTRs, the 2050 goal is a decarbonisation objective that is mainly to be delivered through energy savings measures (“a highly energy efficient and decarbonised building stock by 2050”). The same apply for the 2030 milestones, as those must contribute both to the 2030 energy efficiency and the long-term decarbonisation objective.<sup>8</sup>

From the above, and in conjunction with aligning the time horizon, ensuring targets use consistent metrics is crucial for alignment as this will unequivocally show how local targets contribute to national ones.

- A 2050 decarbonisation objective: this could be an overall climate neutrality objective<sup>9</sup> in which

the building sector within the local authority aims at becoming highly energy efficient and decarbonised by 2050, in line with the LTRs requirement.

- A 2030 energy efficiency target: defining a target for energy savings can help align the two plans and will mirror the structure of the EU legal framework in which, in addition to the GHG emissions reduction target, there are also objectives for energy efficiency and renewable energy. It is also clear that the reduction of final energy consumption in buildings contributes significantly to emissions reductions at the local and national level.
- Milestones and indicators for building renovations: local authorities should review the LTRs of their Member State and set milestones and indicators that are aligned with it to demonstrate the contribution of their municipality to the overall national strategy.<sup>10</sup>

**The primary focus of SECAPs is to reduce GHG emissions in line with the EU target of cutting emissions by at least 40% by 2030 compared to 1990 levels.**

<sup>8</sup> The Commission's recommendation on building renovation presents possible milestones for 2030; those include milestones expressed in terms of both energy savings and CO2 emissions reduction.

<sup>9</sup> See as well the Opening Statement in the European Parliament Plenary Session by Ursula von der Leyen, Candidate for President of the European Commission on 16 July, in which she suggests that the EU must become “the first climate-neutral continent in the world by 2050” ([https://europa.eu/rapid/press-release\\_SPEECH-19-4230\\_en.htm](https://europa.eu/rapid/press-release_SPEECH-19-4230_en.htm)).

<sup>10</sup> The European Commission has suggested a non-exhaustive list of milestones and indicators in its recommendation on building renovation.

## 4.3 Data requirements

Setting climate and energy targets and policies requires strong data inputs to identify focus areas and measure progress. On one side, Member States must provide an overview of the national building stock for their LTRs; on the other side, local authorities must develop a BEI, which includes data on buildings, to assess and decide measures in the SECAP. For this, the CoM SECAP template [8] clearly requires local authorities to collect and break down final energy consumption of buildings in three categories (municipal, tertiary and residential buildings) and also to indicate the

energy source (electricity/heat and fossil fuels/renewable energy).

As mentioned in the previous section, ensuring that national and local targets use the same metrics facilitates data collection and allows local data to feed into national databases, thus avoiding duplication. In this case specifically, Member States should gather and include local data from CoM signatories to compile their building stock overview for the LTRs.



Article 2a

An overview of the national building stock, based, as appropriate, on statistical sampling and expected share of renovated buildings in 2020



Sound assessment of the local situation (based on the Baseline Emission Inventory)

Note: LTRs requirements stated here come directly from EBPD, article 2a. SECAP requirements are summarised from various sections of the three guidebooks published by the JRC.

## 4.4 Policies



Article 2a

- Policies and actions to stimulate cost-effective deep renovation of buildings, including staged deep renovation, and to support targeted cost-effective measures and renovation for example by introducing an optional scheme for building renovation passports.
- An overview of policies and actions to target the worst-performing segments of the national building stock, split-incentive dilemmas and market failures, and an outline of relevant national actions that contribute to the alleviation of energy poverty.
- Policies and actions to target all public buildings.



Part 3 chapter 5

### Municipal policies for energy efficiency in buildings

The philosophy underpinning the CoM is that, based on the emissions related to final energy consumption, local authorities are able to tailor the necessary actions for implementing energy savings and increasing the renewable energy deployment in their territories. The local authority itself assumes an exemplary role in the implementation of these actions.

Local authorities empowered with the jurisdiction to build upon national efficiency policies in the building sector can implement codes and regulation with more stringent requirements than national ones.

Note: LTRS requirements stated here come directly from EBPB, article 2a. SECAP requirements are summarised from various sections of the three guidebooks published by the JRC.

Both the LTRS and SECAP call on Member States and local authorities respectively to outline and implement policy measures to reduce energy consumption, and emissions, in the buildings sector. While national policies under the LTRS are de facto implemented in cities and municipalities, EU legislation does not directly encourage a bottom-up approach by which the contribution of local initiatives to the overall EU and national targets is directly visible. But it is clear that the solid understanding of local needs and infrastructure that local authorities have should be better used when deciding what the most appropriate measures are to improve energy efficiency in buildings.

### 4.4.1 Renovation of buildings

The section below compares the LTRS and SECAP in relation to buildings renovation policies in i) public buildings, ii) residential buildings and iii) tertiary buildings.

#### *i) Renovation of public buildings*

Local authorities have greater control over the buildings they own and use, compared to residential or commercial buildings that are privately owned. As a result, they are often a priority area for action within the SECAPs as local authorities are in a position to easily map their energy consumption and emissions and develop and implement a renovation strategy. For example, out of the savings in final energy consumption that CoM signatories are planning to achieve by 2020, 21% are estimated to be reached by measures in municipal buildings, equipment and facilities[9]. In addition, introducing public building pilot projects could demonstrate the potential savings and technology use to the private sector and prove replicable for other similar buildings.

To comply with the LTRS, Member States should put in place policies and measures to target all public buildings, including those of local authorities as well as those owned and occupied by central government. Member States should therefore

ensure they are, at a minimum, able to track existing local initiatives under the SECAPs that focus on local authorities' public buildings and, if possible, provide financial and/or technical support to local authorities with their renovation projects.

#### *ii) Renovation of residential buildings*

Given Europe's aging, relatively poorly performing building stock, both LTRS and SECAP requirements acknowledge the high energy savings potential associated with building renovation and the need to speed up the renovation rate.

One of the major barriers to renovating residential buildings is the fragmentation and the small size of refurbishment projects. Local authorities, within the implementation of their SECAPs, could facilitate the aggregation of these projects, making it easier and cheaper for citizens to renovate. The SECAP guidelines also suggest, as a best practice, the provision of incentives and subsidies to citizens to encourage building renovation. Establishing an energy efficiency fund/credit line is one way to encourage and promote renovation measures at local level.

Local authorities, where possible and in line with their competencies that vary between Member States, could also set stricter minimum energy standards and codes compared to national ones to ensure renovations that take place are deep renovations[10]. For example, out of the GHG emissions reductions that CoM signatories are planning to achieve by 2020, 11% are estimated to be achieved by stringent requirements for building codes and buildings regulation [9].

At the local level, capacity building and information campaigns could also contribute to inform the public of potential energy savings measures and their benefits. One-stop-shops (mentioned in the EPBD) are another local initiative to guide building renovation.

#### *iii) Renovation of tertiary buildings*

Compared to the residential sector, the tertiary

buildings sector is much more complex and heterogeneous, making it difficult to make all-encompassing policy or renovation recommendations. It includes a large variety of building typologies, such as offices, shops, hotels, restaurants, supermarkets and hospitals, that often have different energy needs and energy use patterns.

Both LTRSs and SECAPs should aim to reduce emissions and consumption from buildings, including tertiary buildings. Even if local authorities participating in the CoM do not directly own tertiary buildings, many of them have established programmes to support the wider renovation of the non-domestic building stock.

Tertiary buildings, especially the commercial ones, have on average higher renovation rates than residential buildings; for example, shopping centres have a renovation rate of about 4.4% per year. When drafting their LTRSs, Member States should identify cost-effective approaches for renovations relevant to the building type, considering potential relevant trigger points. For example, for commercial buildings, this could imply setting minimum energy performance requirements once they undergo renovations. Local authorities, in the framework of their action under the SECAP, could do the same.

In summary, every measure in the building sector that a local authority puts in place under the SECAP could also contribute to the policies and measures that Member States should implement under the LTRS. However, there are several issues that remain to be addressed, including how the best local policies can be highlighted and can serve as an inspiration to Member States, and how Member States assign specific responsibilities, and resources, to local authorities to help them comply with the LTRS objectives. These issues have been acknowledged by, among others, the European Committee of the Regions, which in 2019 adopted an opinion [11] calling for greater recognition of and involvement of the local level in national-level planning and decision-making on climate action.

#### 4.4.2 Measures to fight energy poverty

Across Europe, 57 million people cannot keep their homes warm during winter and 104 million people are not able to keep their homes comfortable during summer [12]. Energy poverty is generally due to a combination of very high energy costs, resulting from inefficient buildings and the increasing cost of energy, and low income of the occupants. Prioritising energy efficiency renovations in energy-poor households would ensure a reduction of energy consumption in line with SECAP and LTRS objectives and at the same time contribute to improving the living conditions of citizens.

In their LTRSs, Member States are required to provide an overview of measures to address the worst-performing building stock and an outline of actions to address energy poverty. Under the CoM, signatories also commit to providing access to secure, sustainable and affordable energy for all citizens. In the European context, this means taking action to alleviate energy poverty.

Local authorities have long played a key role in providing support to those affected by energy poverty and seeking to alleviate its causes. In addition, they have a better overview of those vulnerable households in need compared to the national level. This knowledge can be useful in the elaboration of tailored strategies for reducing energy poverty that can also be helpful for designing national measures under the LTRS. In particular, considering establishing minimum energy performance requirements for rental properties would ensure that the most vulnerable have access to decent houses.

#### 4.4.3 Multiple benefits of energy renovations

Building energy renovation often delivers benefits beyond just energy savings. These additional benefits are often referred to as the multiple benefits of energy efficiency. Some of the key multiple benefits include improved standard of living, increased public budgets, decreased GHG emissions, reduction of energy poverty, better local air quality and improved indoor environmental quality. For instance, home renovations to switch to electric renewables-based heating or cleaner cooking can reduce local/on-site air pollutants, leading to improved health for the homeowner as well as overall energy savings.

Under LTRSs, Member States are required to provide an evidence-based estimate of expected

energy savings and wider benefits, such as those related to health, safety and air quality (Article 2a.1.g). This means that the multiple benefits have become an integral part of the LTRS.

SECAPs, on the contrary, are not required to quantify the multiple benefits of energy renovations. A requirement to include and quantify the multiple benefits in SECAPs would be an opportunity to present tangible benefits to citizens of energy renovations as well as to engage all local authority departments, such as economic development or health, in implementing SECAP building-related policies. Engaging other departments by aligning policy can create more robust policymaking, as well as open up new funding opportunities for energy renovations.

**Some of the key multiple benefits of building renovation include improved standard of living, increased public budgets, decreased GHG emissions, reduction of energy poverty, better local air quality and improved indoor environmental quality.**

## 4.5 Public consultation



### Article 2a, paragraph 5

To support the development of its long-term renovation strategy, each Member State shall carry out a public consultation on its long-term renovation strategy prior to submitting it to the Commission. Each Member State shall annex a summary of the results of its public consultation to its long-term renovation strategy.

Each Member State shall establish the modalities for consultation in an inclusive way during the implementation of its long-term renovation strategy.



### Part 1

Stakeholders' involvement is the starting point for stimulating the behavioural changes that are needed to complement the technical actions embodied in the SECAP.

Citizens and other stakeholders should be involved in the key stages the SECAP elaboration process: building the vision, defining the objectives and targets, setting the priorities, etc.

Note: LTRS requirements stated here come directly from EBPB, article 2a. SECAP requirements are summarised from various sections of the three guidebooks published by the JRC.

Stakeholder engagement and consultation at the local, national and EU level is highly recommended, and often a requirement, to ensure citizens' acceptance and ownership of policies. The EPBD establishes strict consultation requirements for the LTRSs with Member States needing to organise a public consultation before submitting their plan to the Commission. When producing the SECAPs, local authorities are also recommended to run an inclusive consultation with stakeholders and citizens.

As SECAPs' targets are in line, as a minimum, with the EU GHG emissions reduction target, and have the potential to be aligned and increasingly

contribute to LTRSs, their consultation process should also be an occasion to make citizens aware of EU and national policies. This is a win-win situation: on one side local authorities can present their plans as contributing to the bigger picture, and on the other side EU policies and national policies can be better explained to citizens, including the direct positive impacts on their daily lives. Also, local authorities should actively participate in the national public consultations on LTRS to give input based on their experience and knowledge.

**Stakeholder engagement and consultation at the local, national and EU level is highly recommended, and often a requirement, to ensure citizens' acceptance and ownership of policies.**

## 4.6 Financing

Mobilisation of investment is essential to ensure building renovations take place; therefore, it must be considered a core component of any renovation strategy at both the national and local levels. As mentioned in the previous section, on the national level, the LTRS must be underpinned by a solid financing strategy and Member States are required to focus on specific areas to facilitate the mobilisation of investment, such as project aggregation, reduction of perceived risk, leveraging private financing, directing resources to finance renovation of public buildings, and setting up advisory tools (EPBD Article 2a.3).

Mobilising financing is also essential to ensure local authorities achieve the objectives established in their SECAPs. The CoM's Office has produced a detailed interactive funding guide available in multiple EU languages that maps out and explains how to access the available financing opportunities offered by the EU, Member States and key financial institutions such as the European Investment Bank (see below).

Part 3 of the JRC Guidebook on developing a SECAP additionally provides a thorough explanation of the financing mechanisms and opportunities that local

authorities have at their disposal to successfully implement the SECAPs.

Local and national authorities can and should work together to enable financing for renovation projects. For example, regional funds are available through the EU, such as the European Regional Development Fund (ERDF), which specifically aims to support local authorities and administrative bodies to develop and implement SECAPs. Although not explicitly used for SECAPs, a good example of this in practice is the [London Green Fund](#), established using the ERDF, to support green infrastructure and energy efficiency measures.

Regarding investment advisory tools, the recent Eurostat Guidance note [7] on the statistical treatment of energy performance contracts and public-private partnerships is a good example of EU, national and regional authorities working together to clarify investment principles to facilitate overall financing for energy efficiency projects.

Overall, finance is essential to the success of LTRSs and SECAPs. The more EU, national and local authorities can work together to design and communicate the needs of all stakeholders, the more efficient and effective financing options will be.

### Financing opportunities for Sustainable Energy & Climate Action Plans as presented on the Covenant of Mayors website (accessed on 23 September 2019)



## 4.7 Monitoring and reporting



By 15 March 2023, and every two years thereafter, each Member State shall report to the Commission on the status of implementation of its integrated national energy and climate plan by means of an integrated national energy and climate progress report covering all five dimensions of the Energy Union (Governance Regulation, Article 17)

Member States shall include in the integrated national energy and climate progress reports information [...] on the implementation of [...] long-term renovation strategies in accordance with Article 2a of Directive 2010/31/EU (Governance Regulation, Article 21)

Note: the timeline for the LTRS reporting is included in the Governance Regulation as the LTRS forms an integral part of the national energy and climate plans (NECPs). SECAP requirements are summarised from various sections of the three guidebooks published by the JRC.

Part 1, Chapter 10

### Monitoring and reporting

The CoM signatories are committed to submit a monitoring report every second year following the submission of the SECAP. The SECAP should contain a brief outline on how the local authority intends to ensure the follow-up of the actions and monitor the results.

The monitoring and reporting of both plans tie into the data collection section: data reporting is the primary way to ensure that targets are on track. If they are not, the data will help to identify what sectors and policies need adjustment.

Member States must report progress on the LTRS in the biennial progress reporting on the NECP that is due by 15 March 2023 and every two subsequent years. CoM signatories must submit a monitoring

report every second year after submitting their initial SECAP. While the dates of the biennial SECAP progress report will not necessarily be aligned with the progress report that monitors the LTRS (depending on when the SECAP has been submitted), the information included in the first should inform and help in compiling the second.

**Member States must report progress on the LTRS in the biennial progress reporting on the NECP that is due by 15 March 2023 and every two subsequent years.**

# 5. Conclusions

With around 75% of the EU population living in cities [13], urban areas are major contributors to GHG emissions. At the same time, many cities are also frontrunners in adopting ambitious policies on the ground. This is the case, for example, for local authorities that voluntarily sign up to the CoM initiative in order to plan and implement policies for climate change mitigation and adaptation.

When looking at the EU legal framework for energy efficiency in buildings, specifically the LTRSS under the EPBD, there seems to be a disconnection between targets and policy setting at the European and national levels, and within the countless initiatives that flourish at the local level in the same areas, including those under the CoM.

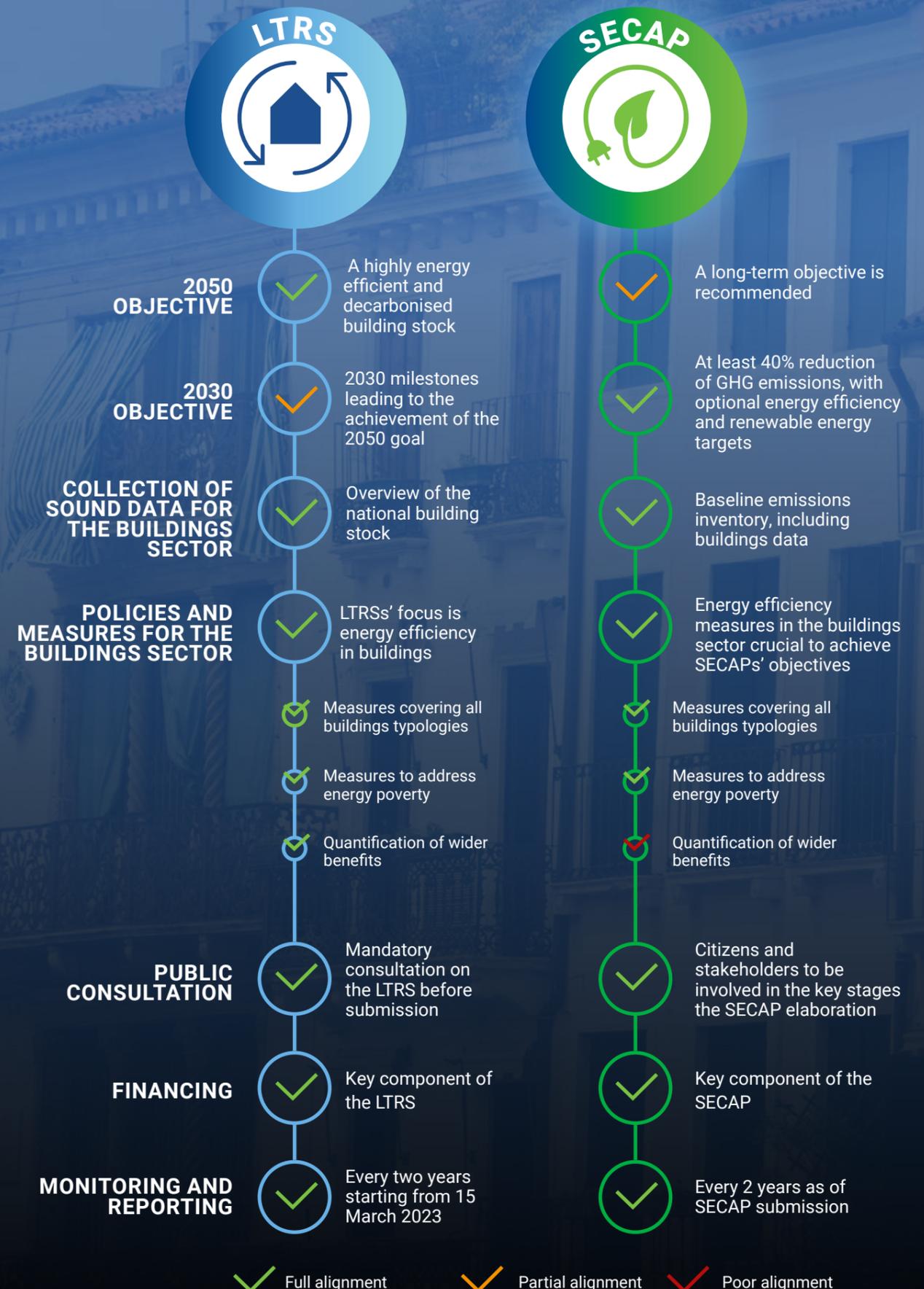
In many instances, local authorities have knowledge, expertise and sound data that would

make a valuable contribution to the design of national policies, but robust processes are lacking to gather this input and make it useful to national governments. In other cases, however, municipalities still need increased capacity building and additional support, specifically in the area of buildings, as shown by a recent survey run by the CoM Office [14].

This report offers some suggestions on how local measures to improve energy efficiency in buildings and reduce GHG emissions in the buildings sector in line with SECAPs can also make a useful contribution to the LTRS. Table 1 below shows that there is a very high potential to reinforce synergies between building policies at the national and local level, as the LTRS and SECAP are very much aligned in term of content and specific requirements.

**With around 75% of the EU population living in cities, urban areas are major contributors to GHG emissions. At the same time, many cities are also frontrunners in adopting ambitious policies on the ground. This is the case, for example, for local authorities that voluntarily sign up to the CoM initiative in order to plan and implement policies for climate change mitigation and adaptation.**

## Summary of key components of LTRS and SECAP



In conclusion, a better alignment between local and national initiatives is possible on the basis of the existing similarities between SECAPs and LTRSs; however, a constant dialogue between the two governance levels, the national and the local, would ensure synergies are maximised to the benefits of citizens and the environment.

As a first point, national governments must take into account the successful local initiatives, including those under the CoM, when defining their policies under the LTRS. Facilitating an open, inclusive, transparent public consultation, in which local authorities can have their say, it is the starting point for a good LTRS. Also, additional ways to track and gather already available data on the local building stock should be put in place.

As a second point, when local authorities develop SECAPs, they should also review their national LTRS and mirror, as far as possible, its long-term objectives, milestones and indicators by aligning time horizons and metrics. This would ensure that the local contributions can directly and easily be accounted by Member States in drafting their LTRS.

Finally, as local authorities indirectly help Member States to achieve their obligations under EU legislation, national governments should provide local authorities with adequate financial and technical assistance and resources and ensure those positive results are collected in a systematised way.

**In conclusion, a better alignment between local and national initiatives is possible on the basis of the existing similarities between SECAPs and LTRSs; however, a constant dialogue between the two governance levels, the national and the local, would ensure synergies are maximised to the benefits of citizens and the environment.**

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# The Clean Energy Package: implications for National Renovation Strategies

The Clean energy package for All Europeans is a comprehensive set of legislation that defines European climate and energy policy for beyond 2020. It is composed of eight different pieces of legislation aimed at accelerating the energy transition in Europe. This publication analyses some of the most important changes that will influence building renovation policy in the coming decades, and more specifically on four core

components: the EPBD (Energy Performance of Building Directive), the EED (Energy Efficiency Directive), the RED (Renewable Energy Directive) and the GOV (Governance Regulation). It also identifies the specific role for local, national and European actors in order to implement the legislation and develop ambitious renovation policies in line with the EU 2030 and 2050 targets.



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