

# GUIDEBOOK

## "HOW TO DEVELOP A SUSTAINABLE ENERGY ACTION PLAN (SEAP)"



## INTRODUCTION - About these guidelines

The European Union is leading the global fight against climate change, and has made it its top priority. The EU committed itself to reducing its overall emissions to at least 20% below 1990 levels by 2020. Local authorities play a key role in the achievement of the EU's energy and climate objectives. The Covenant of Mayors is a European initiative by which towns, cities and regions voluntarily commit to reduce their CO<sub>2</sub> emissions beyond this 20% target. This formal commitment is to be achieved through the implementation of Sustainable Energy Action Plans (SEAPs). The purpose of the present guidebook is to help the Covenant of Mayors signatories to reach the commitments they have taken by signing the Covenant, and in particular to prepare within the year following their official adhesion:

- a Baseline Emission Inventory (BEI)
- a Sustainable Energy Action Plan (SEAP)

BEI is a prerequisite to SEAP elaboration, as it will provide knowledge of the nature of the entities emitting CO<sub>2</sub> on the municipality's territory, and will thus help select the appropriate actions. Inventories conducted in later years will allow determining if the actions provide sufficient CO<sub>2</sub> reductions and if further actions are necessary.

The current guidelines provide detailed step-by-step recommendations for the entire process of elaborating a local energy and climate strategy, from initial political commitment to implementation. It is divided in 3 parts:

- Part I relates to the description of the overall SEAP process and covers the strategic issues
- Part II gives guidance on how to elaborate the Baseline Emission Inventory.
- Part III is dedicated to the description of technical measures that can be implemented at local level by the local authority in the different sectors of activity

The guidebook provides a flexible but coherent set of principles and recommendations. The flexibility will allow local authorities to develop a SEAP in a way that suits their own circumstances, and will allow those already engaged in energy and climate action to come on board of the Covenant of Mayors while continuing to follow the approaches they have used before with as little adjustments as possible.

The number of topics covered by these guidelines is quite large. This is why we had to approach some of the topics in a rather general manner, providing links to further readings and information.

The Joint Research Centre<sup>1</sup> (JRC) - Institute for Energy (IE) and Institute for Environment and Sustainability (IES) - of the European Commission has been assigned the task of scientific and technical support to the Covenant. These guidelines have been elaborated by the JRC, in collaboration with the Energy and Transport Directorate-General (DG TREN) of the European Commission, the Covenant of Mayors Office, and with the support and input of many experts, from municipalities, regional authorities, other agencies or private companies.

This document is intended to help beginner towns/cities/regions to initiate the process and guide them through it. It should also provide experienced local authorities with answers to specific questions they are faced in the context of Covenant of Mayors, and if possible, with some fresh and new ideas on how to proceed.

### Further information and support:

If you do not find the desired information in the present guidebook, you can refer to the "[Frequently Asked Question](#)" section, available on the Covenant website:

[http://www.eumayors.eu/faq/index\\_en.htm](http://www.eumayors.eu/faq/index_en.htm)

In addition, a helpdesk has been set up to provide Covenant signatories with information and guidance on the preparation/implementation of both their BEI and their SEAP.

Inquiries can be sent by email: [technical.info@eumayors.org](mailto:technical.info@eumayors.org) or by phone: **+39 0332 78 9703**

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<sup>1</sup>JRC's website: [www.jrc.ec.europa.eu](http://www.jrc.ec.europa.eu)

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## GLOSSARY

**Activity Data:** Activity data quantifies the human activity occurring in the territory of the local authority

**Covenant signatory:** local authority that has signed the Covenant of Mayors

**Baseline year:** Baseline year is the year against which the achievements of the emission reductions in 2020 shall be compared.

**Baseline Emission Inventory (BEI):** quantifies the amount of CO<sub>2</sub> emitted due to energy consumption in the territory of the Covenant signatory in the baseline year

**Emission factors:** Emission factors are coefficients which quantify the emission per unit of activity.

**Certified green electricity:** electricity that meets the criteria for guarantee of origin of electricity produced from renewable energy sources set in the Directive 2001/77/EC and updated in the Directive 2009/28/EC.

**Heating degree days (HDD):** denote the heating demand in a specific year.

**Life cycle assessment (LCA):** Method that takes into account emissions over the entire life cycle of the commodity. For example, life cycle emissions of oil include emissions from oil extraction, refining, transportation, distribution and combustion.

**Local heat production:** production of heat in the territory of the local authority that is sold/distributed as a commodity to end users

**Local electricity production:** (small-scale) production of electricity in the territory of the local authority

**Monitoring Emission Inventory (MEI):** Emission inventory that the local authority carries out to measure the progress towards target.

**Per capita target:** the local authority may decide to set the target as "per capita". In that case, the emissions in the baseline year are divided by the population in that year, and the target for year 2020 is calculated on that basis.

**Territory of the local authority:** geographical area within the administrative boundaries of the entity governed by the local authority