



Municipal energy and climate planning, management and monitoring

How to choose the right tool?

Why do cities invest in energy planning?

Cities consume approximately 70 % of the world's energy production and generate the same proportion of the world's GHG emissions. Local governments' contribution to the global fight against climate change is therefore crucial. For many of them, however, energy management is a challenging undertaking, due to limited institutional capacity, technical know-how and access to resources.

City governments wonder how to get started; how to establish relevant targets and monitor performance; how to translate objectives into action plans; make sure that energy and climate considerations are mainstreamed in urban planning processes; and how to access resources for implementation.

Over the past 10 years, an increasing number of tools have been developed to help local governments set up their own local energy policies and work towards the achievement of national climate targets. Despite the existence of tools, however, local governments often struggle with choosing the ones that best fit their needs, and with understanding how to effectively apply and combine them.



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The purpose of this brochure

This brochure is aimed to provide guidance for local governments and their partners to choose the tools that best meet their needs. Developed by the Swiss State Secretariat for Economic Affairs (SECO) it provides an overview of some of the most widely used approaches internationally: Covenant of Mayors, Compact of Mayors, the Tool for Rapid Assessment of City Energy (TRACE), Climate Action for Urban Sustainability (CURB) and the European Energy Award (eea), which has been supported by SECO in several international contexts, namely Eastern Europe and North Africa.

It is aimed to help local governments and their partners effectively engage in energy and climate planning, management and monitoring.

It further provides a basis for donors and cooperation agencies to work hand in hand and leverage important synergies as they support cities in setting up local energy and climate policies, using different, but complementary and combinable approaches and tools.

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Multiple approaches and instruments

Facilitating municipal energy planning, management and monitoring

Cities willing to engage in energy planning, management and monitoring can refer to a variety of tools that help them manage different phases of the energy and climate planning cycle, step-by-step. Some approaches provide accompaniment throughout the entire cycle (e.g. European Energy Award); others focus on specific planning phases (e.g. TRACE, CURB).

European Energy Award (eea) [LINK](#)

The eea is a **quality management and certification system** for local governments. With the help of accredited local advisors, it helps cities engage in a continuous process of improvement in sustainable energy management. This includes (1) a high-level commitment; (2) the establishment of an interdisciplinary Energy Team; (3) an initial energy review based on a standardised catalogue of measures in 6 areas: urban planning; municipal buildings and infrastructure; supply and disposal; mobility; internal organisation; cooperation and communication; (4) the establishment of an energy policy programme; (5) project implementation; (6) a yearly review of intermediate results; (7) an external audit (every four years), based on the standardised eea catalogue of measures; and (8) the certification of municipalities reaching at least 50% of all measures.

Covenant of Mayors [LINK](#)

The Covenant of Mayors, promoted by the EU, is a step-by-step initiative aimed to facilitate the **development of Sustainable Energy and Climate Action Plans (SECAPs)** for cities to reduce emissions by 40% until 2030. The 40% target is set on the basis of a GHG baseline emissions inventory (BEI), to be established right after signing the Covenant. The compulsory sectors covered by the CoM are municipal buildings, public lighting, transport/ mobility,

and communication. Additional sectors may be included based on opportunities identified. Every 2 years, municipalities publish an Implementation Report stating the degree of progress and emissions reduced.

Compact of Mayors [LINK](#)

The Compact of Mayors is a global coalition of mayors committing to reduce local GHG emissions, enhance resilience to climate change and track their progress publicly. It (1) **collects climate data that cities are already reporting, and makes it available** on a single platform; (2) builds on existing cooperative efforts, partnering with other initiatives to better measure and communicate the impact of city action; and (3) brings attention to, and quantifies, city action and its impact. Compact of Mayors has recently merged with Covenant of Mayors to become the “New Global Covenant of Mayors.”

The Tool for Rapid Assessment of City Energy (TRACE) [LINK](#)

TRACE, developed by the World Bank, is a decision-support tool designed to help cities **quickly identify under-performing sectors, evaluate improvement and cost-saving potential, and prioritise actions** for energy efficiency (EE) intervention. It covers 6 municipal sectors: passenger transport, municipal buildings, water and wastewater,

public lighting, solid waste, green power and heat. Consisting of 3 different modules it helps cities select locally appropriate EE interventions and calculate preliminary financial analysis. The final report includes recommendations on the most relevant EE interventions for a city to prioritise.

Climate Action for Urban Sustainability (CURB) [LINK](#)

Developed by the World Bank in collaboration with C40, CURB is a dynamic **energy and climate impact modelling and simulation tool**. It helps municipal governments assess the cost, feasibility, and implications of policy and technology interventions on energy demand, cost-savings, and GHG emissions. Based on the city's data on current performance, e.g. a GHG emissions inventory, CURB helps cities (a) understand the projected emissions/ energy demand trajectory in a business-as-usual scenario, (b) set local emissions/ energy targets, (c) benchmark against peer cities, and (d) prioritize feasible interventions based on expected cost savings, emission abatement, energy use reduction, and complexity/cost of implementation.

One process – multiple tools. How to choose?

Given the complementarity of approaches, the choice of the most appropriate tool remains with the city and its partners. It depends on the type and degree (short, medium or long-term) of a city's commitment; the presence/absence of committed national authorities willing to support local energy development; the size of a city, its capacity to collect quality data (e.g. for baseline emissions inventories); and the presence of international partners willing to support external advisors.

What's different?

The five approaches and tools can be compared based on the 7 following characteristics:

A Main target user

All approaches target municipal governments as the primary beneficiary and owner of the planning process.

B Implication of national government

With the exception of the Covenant of Mayors in developing country contexts, the eea is the only

approach recommending an active and permanent engagement of the National Government working hand in hand with private advisors.

C Planning cycle phases covered

All approaches cover the 4 initial stages of the Planning Cycle (commitment, dedicated team, diagnostic and planning). The eea, through its national offices, is the only one to deliver tools for project implementation. The Covenant of Mayors, Compact of Mayors and eea request the municipality to monitor progress on a regular basis. Covenant of Mayors monitors progress made on the SECAP and associated emission reductions; Compact of Mayors requires cities to report on yearly achieved overall emission reductions; the eea requires municipalities to assess performance based on a standardised catalogue of measures (including both quantitative and qualitative indicators). The eea is the only approach proposing an external audit and certification to reward outstanding performance.

D Duration of the full cycle

The establishment of an action plan lasts between a few weeks (TRACE/ CURB, if quality data is available), to 2 months (eea) and up to 3 years (Compact of Mayors), depending on the city-size, the level of details and the data required for the establishment of the plan. The eea certification must be renewed every 4 years.

E Cost of Implementation, Business Model

The eea is the only approach expected to „stand alone,“ based on fees and a nationally financed support structure. Municipal and national governments are thus expected to financially contribute to the sustainable implementation and quality-insurance of the system. The use of all other tools – created on an open source basis – is “free of charge.” Their implementation, however, is generally supported by international organisations (EU, WB etc.).

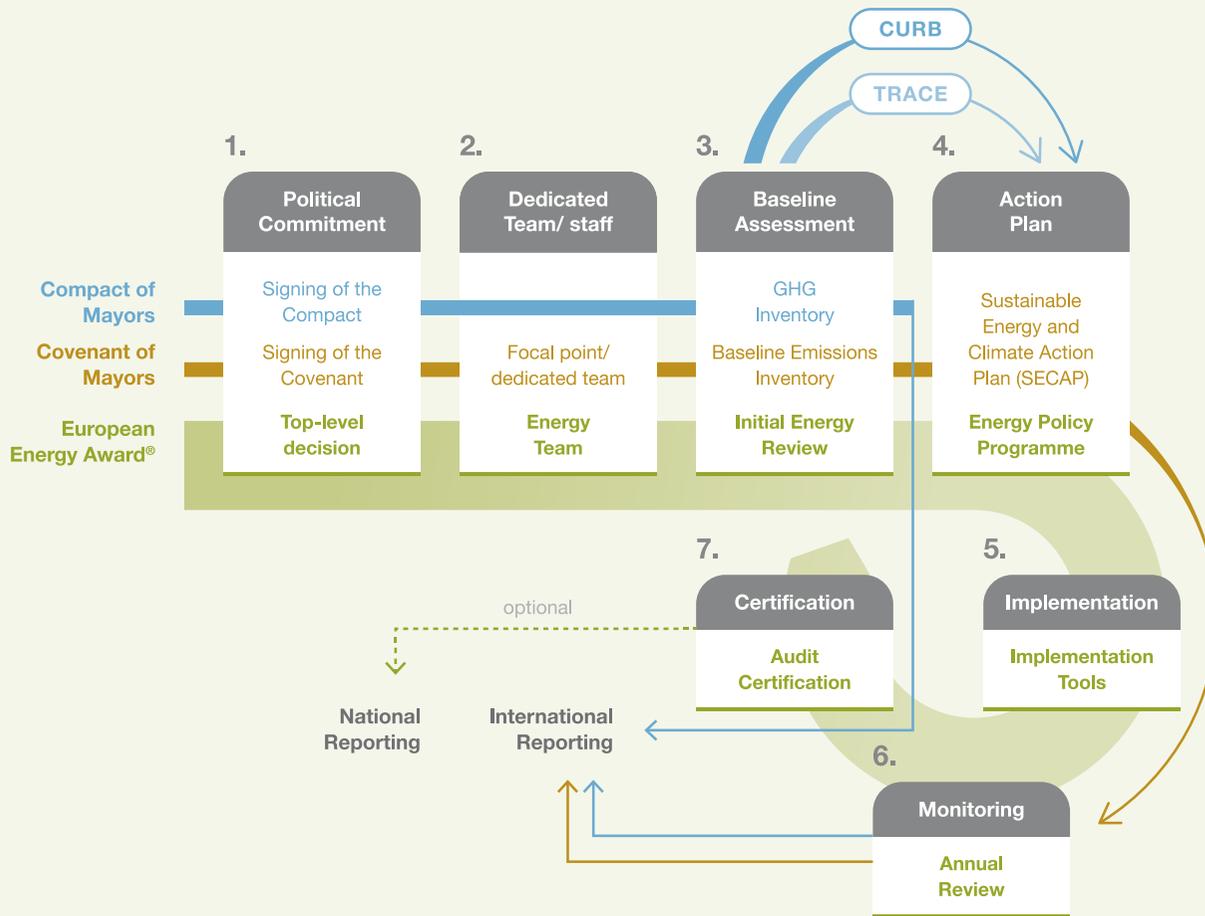
F Local investment and external advisory services

The introduction of all tools requires an important time commitment of local authorities. To take off some burden from municipal agents (for data gathering, analysis, planning and monitoring), international donors tend to refer to external advisors. The eea is the only system based on permanent, nationally accredited local advisors.

G Sectors covered

The most emissions-intensive sectors managed by the city are included in all approaches and tools, although the Covenant of Mayors considers that not all of them are compulsory. The eea pledges for a more holistic approach, including additional sectors like urban planning, internal organisation/ finance, and communication/ awareness.

How to combine several tools at a time?



All approaches follow the Municipal Energy Planning Cycle, based on the following phases:

- 1. Political Commitment:** Sign a commitment and/ or vote local climate or energy targets (e.g. 40% emission reduction by 2030).
- 2. Local Steering Structure:** Establish an interdisciplinary local steering committee and focal points.
- 3. Diagnostic:** Evaluate the current energy profile and policy situation based on quantitative and/or qualitative indicators.
- 4. Planning:** Identify opportunities, prioritise, fix targets and establish an action plan.
- 5. Implement:** Mobilise resources and expertise to implement priority action.
- 6. Monitoring:** Conduct regular review of achieved results and (climate, energy, economic and social) impact.
- 7. Audit, certification:** Confirm the performance level achieved by external auditors, and apply for certification.

How to combine several tools at a time?

Most approaches can be easily combined, as they refer to the municipal energy planning cycle in different and complementary ways:

- Covenant of Mayors, Compact of Mayors and eea stress more than others the importance of an **initial, political commitment**;
- Covenant of Mayors, TRACE and CURB emphasise the need for **quantitative initial diagnostics** (e.g. BEI); the eea proposes an initial energy review based on both quantitative and qualitative indicators; where data is missing, it needs to be gathered as part of the action plan emerging from the initial energy review.
- All approaches request municipal governments to set up an **action plan**. CoM, TRACE and CURB require that the action plan is based on a BEI. The eea activities program is based on a SWOT analysis. All energy action plans can be merged or combined into one, and should become an integrated element of municipalities' planning documents.
- TRACE, CURB and eea propose a **menu of measures and actions** (as a source of inspiration), to allow local governments to define and plan relevant action based on international best-practice.
- The eea is the only one offering (country-specific) tools for **implementation support**.
- The eea is the only one working with a **permanent eea advisor** that accompanies a municipality over several years; once a year, he/ she helps the municipality review its energy policy and adjust its activities programme if necessary.
- The eea and the Covenant of Mayors propose a **framework for annual monitoring**, beyond planning; the Compact of Mayors allows cities to report impacts on an international climate data platform.
- The eea is the only system proposing a **certification scheme**.

The City of Agadir (Morocco) - engaged in a continuous process of improvement, using several tools at a time.



Further information

This brochure is based on a comparative analysis of municipal energy planning approaches and tools. Both documents are available under:

<https://www.seco-cooperation.admin.ch/secocoop/en/home/themes/climate-compatibility/sustainable-energy.html>

Specific information on the different approaches and tools can be obtained over the following websites:

European Energy Award

<http://www.european-energy-award.org>

Covenant of Mayors

http://www.covenantofmayors.eu/index_en.html

Compact of Mayors

<https://www.compactofmayors.org/globalcovenantofmayors/>

Tool for Rapid Assessment of City Energy

<http://www.esmap.org/TRACE>

CURB Tool

<http://www.worldbank.org/en/topic/urbandevelopment/brief/the-curb-tool-climate-action-for-urban-sustainabili>

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