

Using Member States' information on policies and measures to support policymaking: energy efficiency in buildings

In line with EU legislation, Member States report information on their policies and measures to reduce greenhouse gas emissions. This information is used to monitor climate action at a national level. It is also important for supporting policy evaluation and informing policy decisions. This briefing presents the results of two case studies analysing policies and measures targeting energy efficiency in buildings.



Main findings

- Publicly available information on national policies and measures represents a valuable resource to undertake policy assessments and evaluations.
- None of the currently available resources captures all of the information necessary to perform full evaluations. In particular, there is a lack of quantitative information on policy effects (e.g. achieved emission savings) or on cost and benefits.
- However, combining the information on greenhouse gas-related policies and measures available from different resources can significantly reduce knowledge gaps on individual policies.
- This information on policies and measures can help to identify the logical steps of a policy intervention (i.e. an intervention logic). This in turn would support the evaluation of any given policy, as illustrated by a case study on the improvement of energy efficiency in public buildings in Estonia.
- The information on policies and measures also provides a comprehensive overview of policy mixes in specific countries or sectors, as illustrated by a case study showing the different types of policy instruments implemented by Member States for saving energy in buildings.

Combining public information on policies and measures is the most effective way to support policy evaluations

Evaluating the effects of existing policies can help decision-makers to make better and more informed decisions about future policies. This requires a systematic process for assessing policy design, implementation, outputs and impacts. Policymakers from different countries can also learn from each other by making information available on their country's experiences of designing and implementing policies and measures in various sectors, and of assessing and monitoring their effects.

In the policy areas of climate change mitigation and energy, a number of resources or 'databases' on national policies and measures bring together some of this information to support the work of policymakers, researchers and other stakeholders. Notably, these include the EEA database on climate change mitigation policies and measures in Europe ^[1], which is based on the national information that Member States report in line with the EU's requirements ^([2], [3]).

A comparison of resources on policies and measures ^[4] shows that none is currently able to capture all of the information both available and relevant to policy evaluation. For example, the EEA's database extensively covers greenhouse gas-emitting sectors, is easily accessible and includes both qualitative and quantitative information for each policy and measure. However, the information on the achieved (ex post) effects of all policies remains incomplete.

Therefore, combining publicly available information sources provides a more complete picture of national climate mitigation policies in various sectors across the EU, as well as more detailed information on each policy's effectiveness, efficiency, relevance or coherence. The following practical case studies illustrate how these databases can support policy analysis.

Evaluating individual national policies

'Evaluation can be defined as an evidence-based judgement of the extent to which an intervention has: been effective and efficient, been relevant given the needs and its objectives, been coherent both internally and with [other] interventions, and achieved [EU] added-value' [5].

When evaluating a policy or 'intervention', an 'intervention logic' can be used to identify its main characteristics, particularly how the action was intended to achieve its objectives. A well-designed intervention logic helps to identify relevant questions that help to evaluate each policy or measure against several criteria (e.g. relevance, coherence, effectiveness or efficiency).

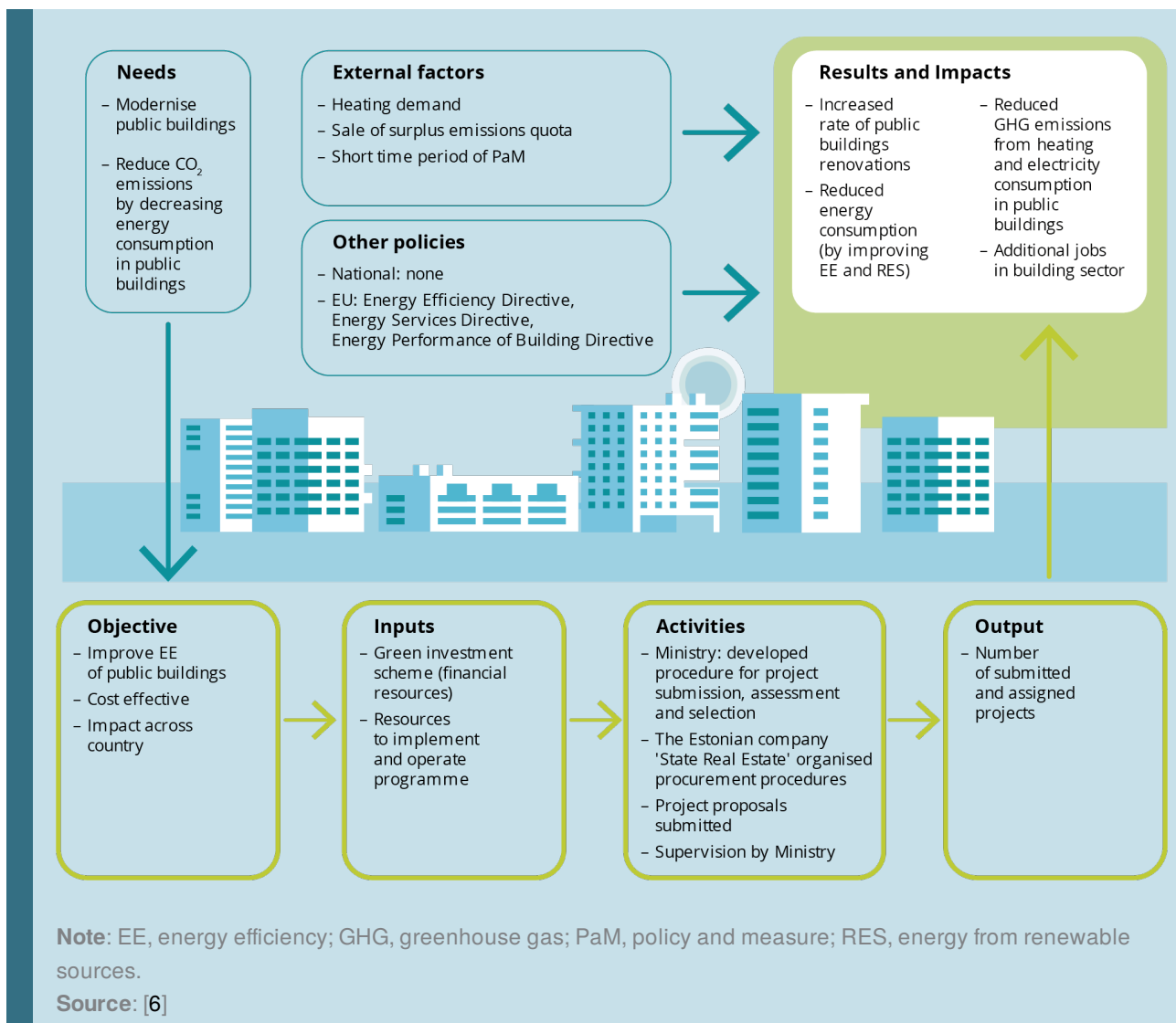
Case study: Energy efficiency improvement in public buildings in Estonia

The aim of this policy was to improve the efficiency of public sector buildings by investing in their renovation. Based on the information that Estonia reported on its climate mitigation policies and measures, complemented by a literature search and interviews with national experts, the EEA identified the main needs, objectives, inputs and outputs associated with this measure.

The policy was found to effectively reduce public buildings' energy consumption and greenhouse gas emissions, with almost 550 buildings across Estonia more energy efficient. The measure was financed through a green investment scheme using resources from the sale of surplus emission quotas under the Kyoto Protocol. Without this policy, it is unlikely that renovations of this kind, and in this time frame, would have occurred.

Figure 1 Case study: energy efficiency improvements in Estonia's public buildings and the related intervention logic

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Policy databases can effectively support external evaluations by providing useful information for defining an intervention logic for different policies or measures. For example, in a recent evaluation study of reported national information [6], the EEA selected a sample of the policies and measures in its database, aiming to be representative of countries, sectors, instrument types and targeted greenhouse gases. An intervention logic was defined for each selected policy, using the information available from databases on policies and measures as a starting point.

The information available from the EEA's database was either used directly or referred to other relevant resources. Publicly available information was further complemented by national evaluations and other information suggested by national experts. Figure 1 presents an example of an intervention logic for a measure to improve energy efficiency in Estonian public buildings.

Assessing the combined effects of multiple policies

Policy databases provide useful overviews of the different climate policies at national and/or sector level, making it possible to benchmark or evaluate several instruments within one sector, objective or country, or even across countries. For example, policy mixes combine instrument types to achieve a single objective.

Databases of policies and measures can support such evaluations. For example, in a recent analysis ^[7] of policy mixes aimed at improving energy efficiency in buildings, the EEA traced the development of policy mixes in six countries during the 2000-2020 period, based on information from these databases and complemented by a wider literature search. The analysis mapped policy goals, timeframes, instrument types developed and audience targeted.

The findings showed that Member States implemented a large number of policies and measures to save energy in buildings: regulations, economic incentives, taxes, information, education and voluntary agreements. These policies and measures also targeted different actors: building professionals, owners or tenants, energy suppliers, local or national authorities and financial institutions. Figures 2 and 3 show how policies and measures addressing energy efficiency in buildings in the Netherlands have evolved.

Policy mixes, if well designed, are generally more effective than single instrument types. Their overall effectiveness can be affected, positively or negatively, by interactions between instruments. The illustrated case study shows how evaluating a group of policies and measures can capture and assess the links between policies sharing an objective.

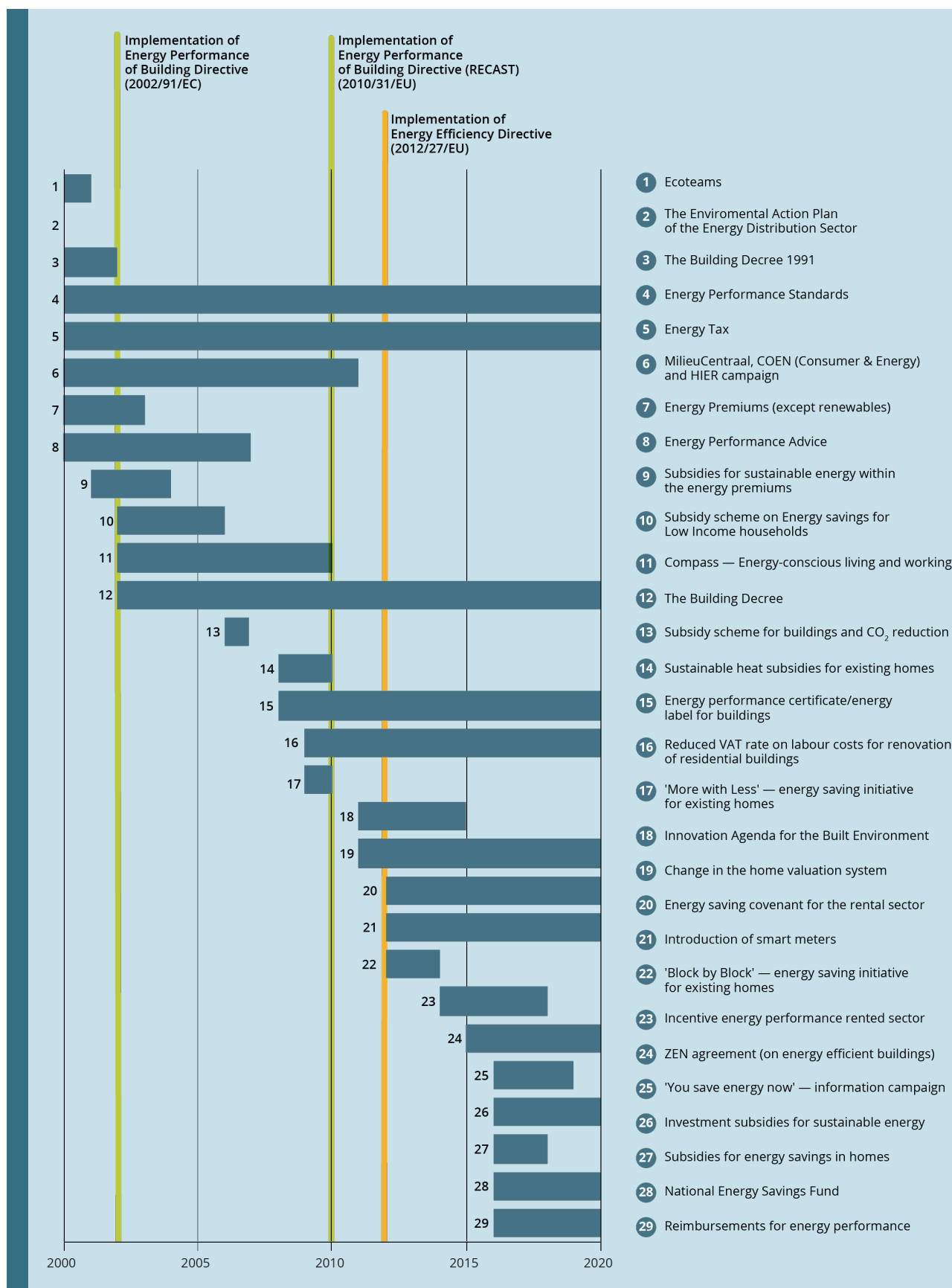
Case study: Evolution of the policies and measures addressing energy efficiency in buildings in the Netherlands

The case study^[7] shows that national policy mixes targeting energy efficiency in buildings tend to become more complex as more policies and measures are implemented. The Dutch example shows more dynamism, with a significant number of policies and measures that expire and are replaced. Figure 2 illustrates the timeline of Dutch policies and measures to improve energy efficiency in buildings. The Netherlands has a long history of diverse energy-saving measures in the buildings sector (heating and cooling). Figure 2 shows that the great majority of policies and measures were implemented after 2002, when the first important EU directive linked to the heating and cooling of buildings, the Energy Performance of Buildings Directive (EPBD), was introduced. Of the 29 policies and measures adopted in the residential sector, 15 were still in operation in 2017. The measures that had ended were mostly financial.

The long-term strategies developed in the Netherlands have helped to set up a coherent and effective policy mix in the building sector. This resulted in a decrease in the energy consumed by residential heating in 2000-2015 (Figure 3). Figure 2 shows that financial, legislative/normative, and information/education instruments dominate. Other types, such as fiscal measures, and cooperation and voluntary agreements, play only a limited part in the overall policy package.

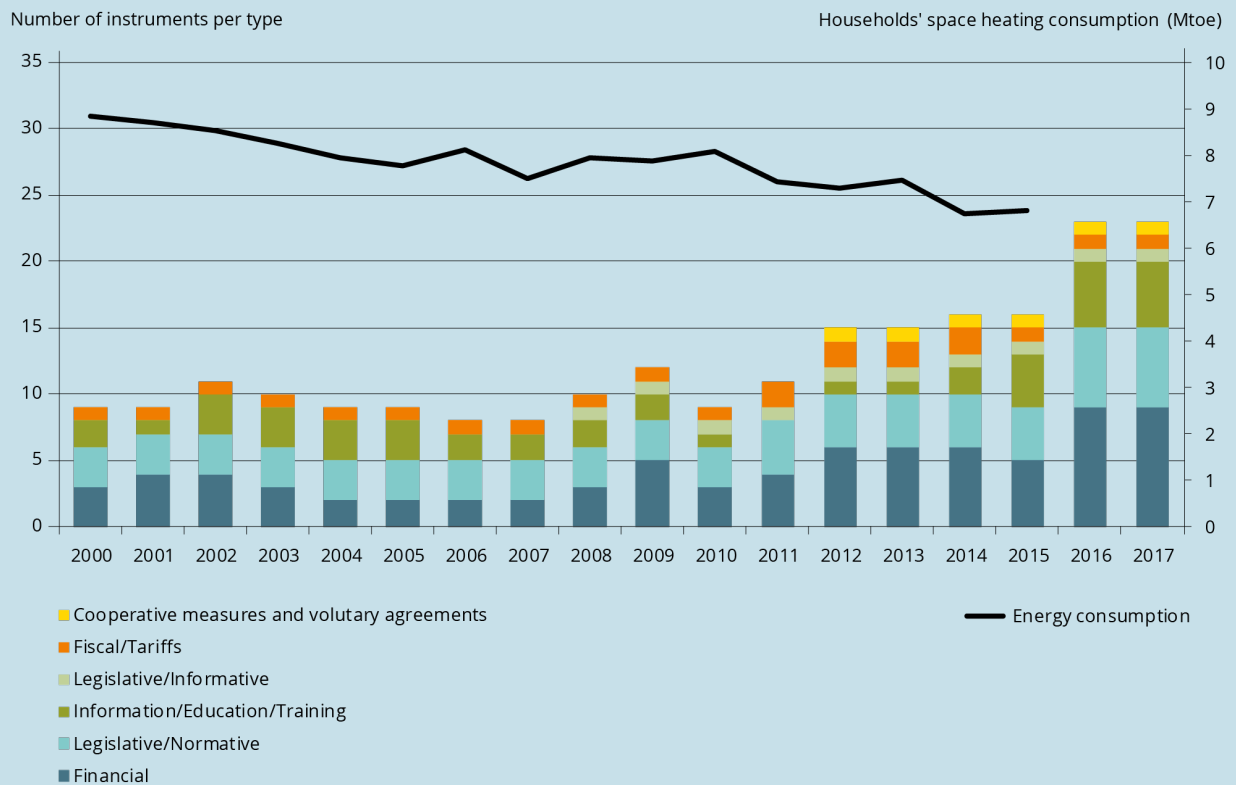
Figure 2 History of policies and measures to improve energy efficiency in buildings in the Netherlands

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Figure 3 Energy consumption of household space heating, and evolution of policies and measures addressing energy efficiency in buildings in the Netherlands (based on ODYSSEE-MURE)



Source: [7]

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