

Buildings Efficiency Guidance

Guidance for assessing the greenhouse gas impacts of buildings policies

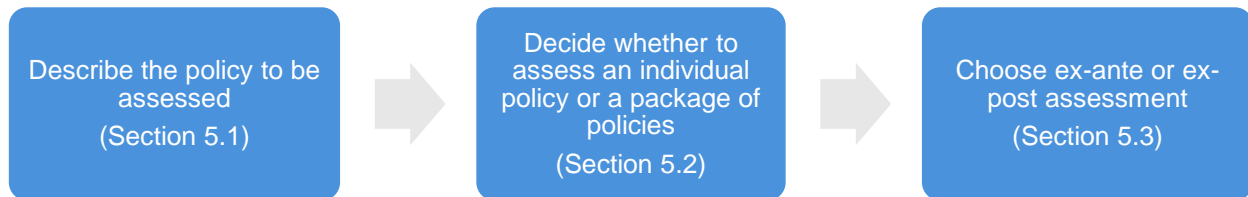
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How to describe the policy or action being assessed

5. DESCRIBING THE POLICY

This chapter provides guidance on describing the policy. In order to assess the GHG impacts of a policy, users need to describe the policy that will be assessed, decide whether to assess the individual policy or a package of related policies, and choose whether to carry out an ex-ante or ex-post assessment.

Figure 5.1: Overview of steps in the chapter



Checklist of key recommendations

- Clearly describe the policy (or package of policies) that is being assessed

5.1 Describe the policy to be assessed

In order to effectively carry out an impact assessment in subsequent chapters, it is necessary to have a detailed understanding of the policy or policy packages being assessed. It is a key recommendation to clearly describe the policy, or package of policies, that is being assessed. Table 5.1 provides a checklist of recommended information that should be included in a description to enable an effective assessment. Table 5.2 outlines additional information that may be relevant depending on the context.

If assessing a package of policies, these tables can be used to document either the package as a whole or each policy in the package separately. The first two steps in the chapter (Sections 5.1 and 5.2) can be done together or iteratively.

Users that are assessing the sustainable development and/or transformational impacts of the policy (using the ICAT *Sustainable Development Guidance* and/or *Transformational Change Guidance*) should describe the policy in the same way to ensure a consistent and integrated assessment.

Table 5.1: Checklist of recommended information to describe the policy being assessed

Information	Description	Example
Title of the policy	Policy name	Building code for new buildings
Type of policy	The type of policy, such as those presented in Table 3.1. Also include building stock type and building use targeted by the policy	Regulatory instrument
Description of the specific interventions	The specific intervention(s) carried out as part of the policy, such as the technologies, processes or practices implemented to achieve the policy	<p>The code includes two parts:</p> <p>Energy use intensity (EUI) standards (primary energy) for new buildings differentiated by types of residential housing buildings:</p> <ul style="list-style-type: none"> • Single-family house (SFH): 100 kWh/m²/year • Apartment block (AB): 80 kWh/m²/year <p>Minimum performance standards for the building envelope, insulation, windows, etc. to meet overall EUI standard.</p> <p>The code will be revised periodically to reduce the energy use intensity of new buildings over time based on long term targets.</p>
Status of the policy	Whether the policy is planned, adopted or implemented	Enacted and in force
Date of implementation	The date the policy comes into effect (not the date that any supporting legislation is enacted)	Came into force on 1 January 2013
Date of completion (if relevant)	If relevant, the date the policy ceases, such as the date a tax is no longer levied or the end date of an incentive scheme with a limited duration (not the date that the policy no longer has an impact)	Ongoing
Implementing entity or entities	The entity or entities that implement(s) the policy, including the role of various local, subnational, national, international or any other entities	Federal ministry
Objectives and intended impacts or benefits of the policy	The intended impact(s) or benefit(s) the policy intends to achieve (e.g., the purpose stated in the legislation or regulation)	Reduction of energy consumption in buildings, ensure safe building environment, and quality of life
Level of the policy	The level of implementation, such as national level, subnational level, city level, sector level or project level	National
Geographical coverage	The jurisdiction or geographic area where the policy is implemented or enforced, which may be more limited	Country

	than all the jurisdictions where the policy has an impact	
Sectors, targeted	Which sectors or subsectors are targeted	Emissions associated with electricity, steam and direct fossil fuel (energy carriers) use in buildings for lighting, heating, cooling, provision of hot water (end use)
Greenhouse gases targeted	Which GHG the policy aims to control, which may be more limited than the set of GHG that the policy affects	CO ₂ (CH ₄ and N ₂ O to lesser extent)
Other related policies or actions	Other policies or actions that may interact with the policy assessed	Mandatory share of 30% of renewable energy for new public buildings A loan incentive scheme for converting to wood pellet heating systems and for installation of solar thermal units Energy taxes

Table 5.2: Checklist of additional information that may be relevant to describe the policy being assessed

Information	Description	Example
Intended level of mitigation to be achieved and/or target level of other indicators	Target level of key indicators, if relevant	25% reduction in energy use emissions compared to current standards.
Title of establishing legislation, regulations, or other founding documents	The name(s) of legislation or regulations authorising or establishing the policy (or other founding documents if there is no legislative basis)	Energy Efficiency Building Code
Monitoring, reporting and verification procedures	References to any monitoring, reporting, and verification procedures associated with implementing the policy	Monitoring of fuel consumption in buildings to be done by maintaining a stock balance of fuel opening balance, purchase, consumption and closing balance. Data to be cross-checked with fuel purchase records. Calibration of measuring instruments to be carried out at appropriate intervals according to manufacturer specifications. Monitoring of electricity consumption to include a main as well as back-up metering system.
Enforcement mechanisms	Any enforcement or compliance procedures, such as penalties for noncompliance	Routine inspections by building supervisory authorities to ensure performance with design performance reported in building permit applications. The federal ministry provides guidance on how these inspections should be carried out.
Reference to relevant documents	Information to allow practitioners and other interested parties to access any guidance documents related to the policy (e.g., through websites)	Provincial Building Code

The broader context/significance of the policy	Broader context for understanding the policy	Will reduce energy consumption and contribute to energy security
Outline of sustainable development impacts of the policy	Any anticipated sustainable development benefits other than GHG mitigation	Improved air quality, reduced energy bills, occupant comfort, reduced burden on electrical infrastructure, reduced need for investment in expanding electricity generation, reduced land and water impacts of resource extraction and electricity generation.
Key stakeholders	Key stakeholder groups affected by the policy	Departments or ministries of energy, equipment manufacturers, energy efficiency materials and appliance developers, builders and contractors, building owners, investors, utilities
Other relevant information	Any other relevant information	

5.2 Decide whether to assess an individual policy or a package of policies

If multiple policies are being developed or implemented in the same timeframe, users can assess them either individually or as a package. When making this decision, users should consider the assessment objectives, feasibility of assessing impacts individually or as a package, and the degree of interaction between the policies. Where interactions exist, there can be advantages and disadvantages to assessing policies individually or as a package.

5.2.1 Types of policy interactions

Policies interact if their total impact, when implemented together, differs from the sum of their individual impacts if they had been implemented separately. Table 5.3 provides an overview of the four possible relationships and further information is available in the *Policy and Action Standard*.

Table 5.3: Types of relationships between RE policies

Type	Description
Independent	Multiple policies do not interact with each other. The combined impact of implementing the policies together is equal to the sum of their individual impacts of implementing them separately.
Overlapping	Multiple policies interact, and their combined impact is less than the sum of their individual impacts. This category includes policies that have identical or complementary goals as well as policies that have different or opposing goals.
Reinforcing	Multiple policies interact, and their combined impact is greater than the sum of their individual impacts of implementing them separately.
Overlapping and reinforcing	Multiple policies interact, and have both overlapping and reinforcing interactions. The combined impacts may be greater or less than the sum of the individual impacts of implementing them separately.

5.2.2 Identification of relationships between buildings policies

Where policies are implemented as a package, users should first consider their specific objectives and circumstances. The following approach helps users decide whether to assess an individual policy or several policies with overlapping objectives together:

Step 1: Characterise the type and degree of interaction between policies

Assess the relationship between the policies and the degree of interaction (minor, moderate or major) based on published studies of similar combinations of policies or on expert judgment. The assessment will be qualitative since a quantitative assessment would require many of the steps needed for a full assessment.

Consider whether the same types of buildings efficiency measures are eligible under the policy being assessed and other policies identified. Table 5.4 provides an example of relationship characteristics of policies that target the same GHG emissions sources.

Table 5.4: Example mapping of policies that target the same emissions sources

Policy being assessed	Other policy targeting the same sources	Type of interaction (independent, overlapping, reinforcing, overlapping and reinforcing)	Degree of interaction (minor, moderate, major)
Mandatory building code for new buildings	Financial support policy for retrofit of existing buildings	Independent – No overlap or reinforcement between the building code on new buildings and the financial support policy for existing buildings	Not applicable
	Mandatory appliance standard for air conditioning	Overlapping – Overlap because performance building code for new buildings includes mandatory standards for air conditioning appliances	Major
	Financial support policy for new buildings	Overlapping and reinforcing – Mandatory building code and financial support scheme for new buildings both overlap and reinforce each other; They overlap because the combined impact is less than the sum of their individual impacts (i.e., building code forces project developers to construct efficient houses regardless of financial support available); They may reinforce each other because the combined impact is greater than the sum of the individual impacts of implementing them separately (e.g., ambitious financial support scheme might trigger construction above normal rate of construction under building code)	Moderate

Step 2: Undertake a preliminary analysis to understand the nature of policy interactions and determine whether to assess an individual policy or a package of policies

This analysis is high-level and qualitative, since detailed analysis of interactions is taken up in subsequent chapters. Where interactions between different policies exist, the criteria and questions in Table 5.5 can help users decide whether to assess an individual policy or a package of policies.

Where interactions exist and assessing multiple policies is not feasible, assessing each policy separately and aggregating the results should be avoided since this would double count the resulting GHG emission reductions.

Table 5.5: Criteria for determining whether to assess an individual policy or a package of policies in the buildings sector

Criteria	Questions	Guidance
Objectives and use of results	Do the end-users of the assessment results want to know the impact of individual policies?	If “Yes”, consider undertaking an individual assessment
Significant interactions	<p>Are there significant (major or moderate) interactions between the identified policies, either overlapping or reinforcing, which will be missed if policies are assessed individually?</p> <p>This is the most relevant of the criteria in this table, since policies often interact in the buildings sector and it may be preferable to assess a package of policies. Policies that commonly co-exist and reinforce each other include:</p> <ul style="list-style-type: none"> • Building codes and financial support policies • Different parallel financial support policies <ul style="list-style-type: none"> ○ Grant schemes and loan schemes ○ Public and private sector financial support policies 	If “Yes”, consider assessing a package of policies
Feasibility	Will the assessment be manageable if a package of policies is assessed? Is data available for the package of policies? Are the policies implemented by a single entity?	If “No”, consider undertaking an individual assessment
	For ex-post assessments, is it possible to disaggregate the observed impacts of interacting policies?	If “No”, consider assessing a package of policies

5.3 Choose ex-ante or ex-post assessment

Choose whether to carry out an ex-ante assessment, an ex-post assessment, or a combined ex-ante and ex-post assessment. Choosing between ex-ante or ex-post assessment depends on the status of the policy. Where the policy is planned or adopted, but not yet implemented, the assessment will be ex-ante by definition. Alternatively, where the policy has been implemented, the assessment can be ex-ante, ex-post, or a combination of ex-ante and ex-post. The assessment is an ex-post assessment if the objective is to estimate the impacts of the policy to date; an ex-ante assessment if the objective is to estimate the

expected impacts in the future; or a combined ex-ante and ex-post assessment to estimate both the past and future impacts. An ex-ante assessment can include historical data if the policy is already implemented, but it is still an ex-ante assessment (rather than an ex-post) if the objective is to estimate future effects of the policy.

For policies in in the buildings sector, the combination of ex-ante and ex-post assessments might be beneficial since the quality of assessments for certain policies (e.g., financial support policies) may be critically enhanced by comparing ex-ante and ex-post estimation results to inform future assessments. This could also be institutionalised in a continual process where ex-post assessment informs ex-ante projections. This process can be regularly updated to improve assessments of policy interactions in the buildings sector.