

DOCUMENT 1

1. APPLYING THE EE1ST PRINCIPLE IN THE DECISION MAKING PROCESS

Applying the EE1st principle is linked to the way the decision making process is conducted so that it properly incorporates assessment of energy efficiency alternatives.

Given that cost-efficiency is one of the main criteria under the EE1st principle, it is often assumed that applying the cost-efficiency criteria in any decision-making process would automatically meet the requirements of the principle. However, the EE1st principle has wider implications, as it requires that various aspects related to energy-efficient solutions are properly analysed and addressed.

A proper cost-benefit analysis is, therefore, an important part of the application of the principle, but it is just one aspect of the decision making process, where the principle should be incorporated. Other aspects of the principle depend largely on the phase of the decision making process and type of decision-maker.

A dedicated study¹ contracted by the Commission looked at possible approaches for further disaggregation of the steps related to the application of the EE1st principle in the decision-making process. It developed a matrix (see Table below), where different steps are associated to various phases and types of decision-makers. Based on this matrix, a decision-making tool was designed in the form of a decision tree with guiding questions for each of the steps. The tool provides insights into the identified steps by providing multiple guiding questions pointing out to issues to be looked at when applying the EE1st principle. In order to better illustrate the applicability of the tool, the study also provided four real-life examples.

Table 1. Actions of various decision-makers linked to the EE1st in the decision making process.

Phase	Policy makers	Regulatory authorities	Market entities
Inception	<ul style="list-style-type: none"> • Define policy targets • Define need and demand • Define regulatory framework • Analyse policy impact and alternatives 	<ul style="list-style-type: none"> • Define market access rules for energy efficiency or demand-response solutions • Carry out compliance check of business/project goal with policy targets and market access rules 	<ul style="list-style-type: none"> • Define business/project goal
Preparation		<ul style="list-style-type: none"> • Define CBA method in principle 	<ul style="list-style-type: none"> • Define CBA method for concrete application • Collect information • Forecast energy service demand • Identify other cost and risk • Assess systematically based on the EE1st principle

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Phase	Policy makers	Regulatory authorities	Market entities
Validation		<ul style="list-style-type: none"> Check the implementation plan and if relevant, approve it 	<ul style="list-style-type: none"> Propose the implementation plan
Implementation			<ul style="list-style-type: none"> Implement the plan, e.g. provide designed service, adopt energy-efficiency technologies, make investment decisions, etc.

Source: Ecorys study

In this schematic representation of a decision making process, different players have different roles. In the matrix, it is market entities, which would eventually select and implement the energy efficient solution following the application of the principle. Nonetheless, the way the EE1st principle will be applied by different players depends very much on the context. While some steps are applicable to all situations, some can be sector specific and imply different actions depending on the type of decision, policy area or players involved. In some cases, there can be just one type of decision maker involved.

As indicated above, the actual actions to be taken, when preparing and implementing a decision, would be different depending on the specific context. The real-life examples in the study, which are presented in section 4, show what they would cover. The table below identifies actions and prerequisites for facilitating them in relation to different steps of application of the EE1st.

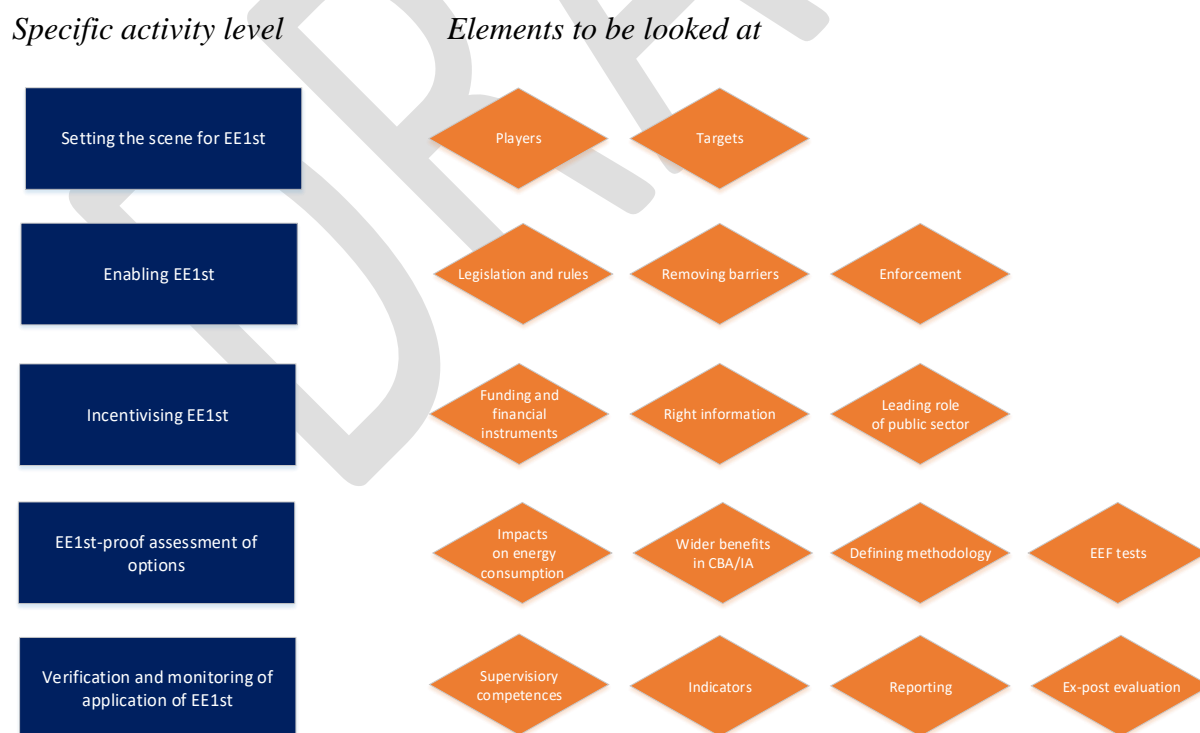
Table 2. Steps, actions and prerequisites for applying the EE1st by implementators

STEP	ACTION	PREREQUISITES
Define business/project goal	<ul style="list-style-type: none"> Consider energy efficiency as a part of solution 	<ul style="list-style-type: none"> Availability of information Access to know-how
Define CBA methodology	<ul style="list-style-type: none"> Consider wider benefits of energy efficiency Set criteria for selecting the right solution 	<ul style="list-style-type: none"> Standardised methodology to choose from Availability of data Availability of tools/ models
Information collection	<ul style="list-style-type: none"> Analyse the markets Consider policy development Acquire quality data Assess investment needs and return on investments 	<ul style="list-style-type: none"> Availability of information Availability of data Expertise
Forecast energy service demand	<ul style="list-style-type: none"> Consider future energy demand Assess impacts of alternatives on energy consumption 	<ul style="list-style-type: none"> Availability of disaggregated energy consumption data National/ regional forecasts Stable policy framework
Identify other cost and risk	<ul style="list-style-type: none"> Consider impacts of implementation factors Consider changes in fuel and energy prices 	<ul style="list-style-type: none"> Availability of data Clear policy objectives Availability of past experience

	<ul style="list-style-type: none"> - Consider macro-economic developments - Consider payback times and future cash flows 	<ul style="list-style-type: none"> - Availability of risk mitigation solutions (e.g. ESCOs)
Assess alternatives	<ul style="list-style-type: none"> - Implement CBA (monetise impacts) - Assess cost-effectiveness - Consider public support and available funding 	<ul style="list-style-type: none"> - Access and ease of use of available data and tools/ models - Right expertise - Funding schemes and support to EE projects
Implement	<ul style="list-style-type: none"> - Allocate right resources and know-how - Make use of support instruments - Ensure proper use 	<ul style="list-style-type: none"> - Availability of expertise and resources (manpower and funding) - Easy access to support schemes - Feedback mechanisms implementor-user
Monitor	<ul style="list-style-type: none"> - Collect data 	<ul style="list-style-type: none"> - Predefined indicators - Access to data - Availability of data analysis and processing tools

Source: European Commission

Figure 1. Levels and elements of application the EE1st principle



Source: European Commission

1.1. Setting the scene: Who and what?

1.1.1. Identification of key players

- Policymakers

For policymakers the application of the principle relates to all aspects affecting eligibility, feasibility and support to energy efficiency. This involves setting objectives that would not preclude energy efficient alternatives, removing legal and administrative barriers and carrying out a proper assessment of various policy initiatives on energy consumption and possible trade-offs with energy savings measures.

- Regulators

Regulators should safeguard the rules that ensure market access and enable viability of energy-efficient solutions. They should also provide methodology/guidance on how to assess various alternatives in the cost-benefit analysis.

- Market entities

This group covers companies that are responsible for the actual decisions on the market.

1.1.2. Setting goals and targets

It is important that targets and objectives do not predefine solutions to be used to reach them, unless necessary. If energy efficiency measures could be part of the solution, policy objectives should not preclude these measures' use. This requires setting objectives based on results and desired impacts rather than inputs. One clear approach is to set overarching objectives based on system performance rather than targets for specific solutions e.g. energy supply matching demand rather than increasing power generation capacity by 5% to match the expected growth in the demand.

1.2. Providing enabling framework

1.2.1. Setting the right rules and legislation

Energy-efficient measures also require an appropriate enabling legal framework, so that they can be implemented in practice. The legislation needs to identify energy efficiency as a possible solution, make it possible to implement it and ensure the proper follow up. If needed, it should also address the barriers to energy efficient solutions.

In order to assess if the EE1st principle could be applicable to specific policy initiative, regulation or project, an initial screening based on a set of questions (three groups of three questions) each could be performed. The first group of questions would indicate if energy

efficiency falls within the scope of a forthcoming initiative or project and it should be further explored. The second group would help clarify if energy efficiency can be applied in practice, and the third group, if energy efficiency can be properly implemented.

1. Should something be done?

- *Is energy consumption affected?*
- *Can energy efficiency help achieving the objectives of the initiative?*
- *Are there energy efficiency solutions that could be considered in the context of the initiative?*

If answer to all questions is YES, then further aspects of the EE1st principle should be explored (also if answers are not certain).

2. Is it feasible?

- *Is it possible to properly estimate wider benefits of energy efficiency solutions?*
- *Are there any barriers affecting implementation of the possible energy efficiency solution?*
- *Can it be ensured that energy efficiency solutions are effective in reaching/ contributing to the objectives of the initiative?*

If answer to any question would be NO or uncertain, a further action in line with the EE1st principle is needed.

3. Can it be done properly?

- *Do entities responsible for implementation know how to assess energy efficiency solutions?*
- *Are there sufficient resources and information available to implement energy efficiency solutions?*
- *Are there mechanisms in place that would allow enforcing and verification of implementation?*

If answer to any question would be NO or uncertain, additional action is needed.

Further action does not necessarily mean that specific provisions need to be included in the legislation. Some of these points could be addressed outside of legal acts. It is however important that any legislation or rules that consider an area where something could be done to improve energy efficiency do look at energy efficiency when setting general or specific provisions.

If applicable, such provisions should in particular:

- 1) Explicitly indicate that energy efficiency is a possible solution to be looked at and possibly prioritised if it is fit for the purpose.

- 2) Recognise the role of energy efficiency in addressing other objectives, in particular for reduction of GHG emissions.
- 3) Make sure that the requirements set allow for energy efficiency and demand-side solutions. Technical specifications should not hamper energy integration or application of energy efficiency.
- 4) Define the performance rather than a concrete solution to be achieved. Performance-based regulation would enable energy efficiency on equal footing with other alternatives.
- 5) Specify roles and obligations of various players in assessing and verifying energy efficiency solutions.
- 6) Provide clear criteria and methodology for assessing costs and benefits of energy efficient solutions and impacts on energy consumption.
- 7) Increase awareness about existing potential, costs and benefits of energy efficiency.
- 8) Make energy efficiency eligible, and even preferable for public support and financing.
- 9) Include monitoring of impacts on energy consumption and verification of other impacts of energy solutions.

It might also be necessary that legal provisions address barriers to the EE1st first principle and specific energy efficiency solutions. This requires proper identification of such barriers.