Making Energy Efficiency First principle operational

Quantifying Energy Efficiency First in EU scenarios: Implications for buildings and their energy supply

Stakeholders' Online Workshop | **Wednesday 23 February 2022**, 2 to 4 pm CET

Registration link

INTRODUCTION

"**Energy Efficiency First"** (EE1st) is a decision principle that now has a prominent standing in Europe's energy and climate policy framework. It comes down to prioritizing investments in energy efficiency and other demand-side resources whenever they are more cost-effective from a societal perspective than investing in supply or networks – whilst meeting consumers' needs as well as policy objectives.

The ENEFIRST project aims to support the implementation and operationalisation of the EE1st concept with a focus on buildings and the related energy systems (especially, power sector and district heating). One part of the project deals with the **quantitative assessment of the impacts of implementing the EE1st principle**.

A first workshop was organised in June 2020 to discuss possible methodologies for such assessments. Following these discussions, interviews with modelling experts and a literature review, a first report (ENEFIRST 2020) developed guidance on the conceptual implications and on existing quantitative approaches for assessing demand and supply side resources in light of the EE1st principle.

A second report (ENEFIRST 2021) presented a methodological concept for a **model-based analysis** of the EE1st principle for the **EU-27**, describing the scope and objectives of this modelling approach, the scenarios developed and the models and assumptions used. It also discusses the added value and limitations of the approach. The main objective of this energy system analysis is to investigate **what level of demand and supply-side resources should be deployed to provide the greatest value to the EU's society in transitioning to net-zero GHG emissions for the building sector by 2050**.

On the demand side, the analysis focuses on the resource option of end-use energy efficiency in buildings, investigating the contributions of thermal retrofits, efficient appliances, and other measures towards the net-zero target. On the supply side, the analysis quantifies the possible deployment and costs of various generation, network and storage options for the provision of electricity, district heat and gas products for the building sector.

This workshop will **present and discuss the results** from this modelling work.

OBJECTIVES OF THE WORKSHOP

The objectives of the workshop are:

- To provide an overview of the main results from 3 EU scenarios simulated in the ENEFIRST project to assess the implementation of EE1st in buildings and their energy supply systems;
- To discuss these results;
- To discuss what conclusions and lessons can be drawn from these results.

The workshop is primarily meant for policy officers, policy analysts, modelling experts and stakeholders interested in results from national or EU energy scenarios.

The project ENEFIRST has received funding from the European Union's Horizon 2020 Research and innovation programme under grant agreement No 839509.

It is planned for 2 hours. The discussions will be partly in plenary and in breakout groups.

AGENDA

2.00-2.20	• **Overview of the scenarios, methodology and key** results *(including short clarification questions)*	*Tim Mandel (Fraunhofer ISI)*
2.20-3.05	• **What each main component of the scenarios tells us** *(including Q&A after each of the three presentations)*	*Lukas Kranzl (TU Wien) about buildings, Eftim Popovski (IREES) about district heating supply, and Tim Mandel (Fraunhofer ISI) about power supply*
3.05-3.20	• **Discussions on the overall results**	
3.20-3.50	• **Discussions on the interpretation of the results** Group 1: discussing the implications of the results for the EU energy and climate policy framework Group 2: discussing methodological and model-related aspects of the scenarios	*Breakout groups*
3.50-4.00	• **Wrap up and next steps**	*Jean-Sébastien Broc, IEECP*

About ENEFIRST

ENEFIRST is a 3-year project funded under the Horizon2020 programme, which gathers a consortium of seven partners: IEECP, BPIE, Fraunhofer ISI, CEU, RAP, IREES, TU Wien.

From definition to implementation, ENEFIRST aims at making the "Energy Efficiency First" (EE1st) principle more concrete and operational, better understand its relevance for decision processes related to energy demand and supply, its broader impacts across sectors and markets, focusing on the building sector and related energy systems in EU Member States.

> ***EE1st gives priority to demand-side resources whenever they are more cost-effective from a societal perspective than investments in energy infrastructure in meeting policy objectives. It is a decision principle that is applied systematically at any level to energy-related investment planning and enabled by an "equal opportunity" policy design.***