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How to account for « Efficiency First » in energy system modelling

Expert Online Workshop | Wednesday 17 June, 14:00 – 16:00



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 839509. The sole responsibility for the content of this presentation lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.



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Housekeeping rules

✓ Keep your mic muted when you do not speak

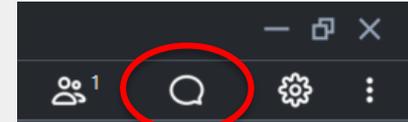
✓ if you want to **take the floor**:

Put your **webcam** on or put a message in the **chat box**



Mic Webcam

✓ The workshop is recorded, but only the minutes will be made public on the website



How to account for « Efficiency First » in energy system modelling

Agenda

14:00 – 14:10	The Energy Efficiency First principle in the EU context	Serena Pontoglio
14:10 – 14:20	Objectives of the workshop and introduction to ENEFIRST	Jean-Sébastien Broc
14:20 – 14:40	Methodological challenges in modelling Efficiency First	Tim Mandel
14:40 – 15:00	Discussion of methodological approaches and challenges	(all)
15:00 – 15:15	Research framework and methodology to analyze the long-term role of Efficiency First for Europe's building sector	Tim Mandel
15:15 – 15:30	Discussion about the research framework	(all)
15:30 – 15:40	sEEnergies – modelling approach linking different efficiency potentials	Ulrich Reiter
15:40 – 15:55	Discussion about sEEnergies approach and modelling challenges	(all)
15:55 – 16:00	Key takeaways and conclusion	Wolfgang Eichhammer

The Energy Efficiency First principle in the EU context

Serena Pontoglio, DG ENER, European Commission

How to account for « Efficiency First » in energy system modelling

Objectives of the workshop

- Presenting the ENEFIRST approach to operationalize the concept of Efficiency First, and particularly the approach to assess the impacts from implementing E1st
- Discussing how energy system models can be used to practically inform decision-makers in view of making the Efficiency First principle operational
- Discussing what methodological challenges this entails
- Getting insights about complementary approaches

Introducing ENEFIRST

Jean-Sébastien Broc
IEECP

17 June 2020

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MAKING THE ENERGY EFFICIENCY FIRST PRINCIPLE OPERATIONAL



Project funded by the European Union's **Horizon 2020** programme

Call H2020-LC-SC3-EE-14-2018 about Socio-economic research conceptualising and modelling energy efficiency and energy demand, and with a focus on

“make the energy efficiency first principle more operational”

Three projects selected



<https://enefirst.eu>



<https://www.seenergies.eu/>



<https://www.odyssee-mure.eu/>

Introducing the ENEFIRST team

“policy analysis” team



+ *communication*
& *dissemination*



Coordinator

+ *stakeholder engagement*

“modelling” team



Introducing ENEFIRST

‘making the E1st principle operational’

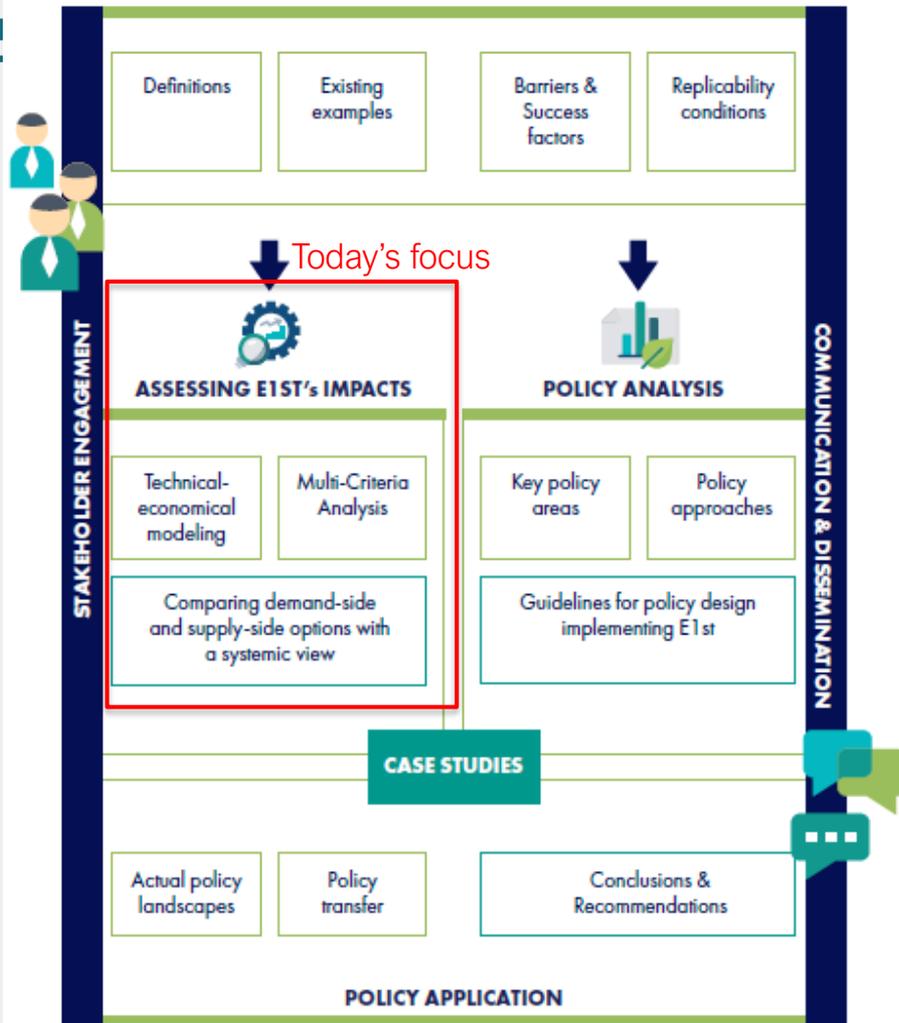
Objectives

- To **define** the principle of E1st in practical terms
 - To **map** how E1st has been applied internationally and in the EU
- 
- To **assess** the value of applying E1st across different policy areas and to **quantify potential impacts** for buildings’ end use and related energy systems

- 
- To develop **policy proposals** for the implementation of E1st

Focus on **buildings’** end use and **related energy systems**

BACKGROUND ANALYSIS



IDENTIFICATION of the most relevant policy areas where the E1st principle can be applied to achieve the highest impact in terms of energy system benefits

APPLICATION of E1st in existing policy instruments, through assessing the applicability & transferability of international E1st approaches and quantifying the impacts of E1st

ENGAGEMENT with stakeholders to apply E1st through the design of new policy instruments and analyse their application in country case studies

ENEFIRST Timeline

Where we are now



Already available on the website:

- Report on **background analysis and definition**:
<https://enefirst.eu/reports-findings/>
- Report on **examples about implementing E1st**:
<https://enefirst.eu/examples/>
- **Brochure** in 7 languages



Coming soon:

- Report on **barriers**
- Report on **modelling approaches**

A brief history of the Energy Efficiency First concept

From the 1980's, development of approaches for energy planning to take into account that **acting on the demand is possible**

Mostly about the electricity sector + US + vertical integration / monopolies

Demand-Side Management

Least-Cost Planning

Integrated Resource Planning

Energy Efficiency as a Resource

Late 1990's / early 2000's: liberalization of the energy markets → new context to develop energy efficiency activities

Energy Efficiency Obligation Schemes

First Fuel

Energy Efficiency First

2010's: **something more is needed** need to take into account **demand-side resources more systematically**

2016: [EC communication](#) on Clean Energy for All Europeans

2018: [Governance Regulation](#)

Efficiency First – E1st

*“Efficiency First 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**.”*

ENEFIRST definition (report [Defining and contextualizing the E1st principle](#))

demand-side resources = technologies and actions that reduce the quantity and/or temporal pattern of energy for the same energy service → **end-use energy efficiency** and **demand response** (demand flexibility), excluding distributed energy generation

‘equal opportunity’ policy design = enabling a **level playing field** for all resources, both demand side and supply side, not only in theory (by law) but also in practice (de facto)

Umbrella questions for today:

What does “*taking into account the E1st principle*” mean when modelling long term energy scenarios?

and what methodological challenges does this involve?



Website:

<https://enefirst.eu/>

Newsletter:

<https://enefirst.eu/stay-in-touch/>

Thank you

Jean-Sébastien Broc



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