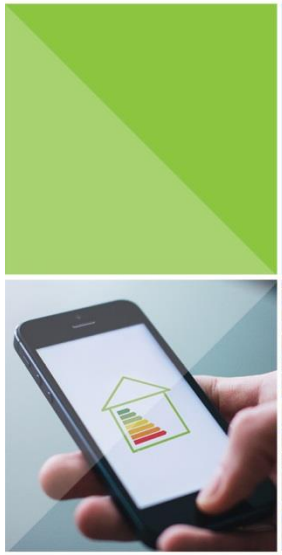





Energy Efficiency First principle

5th Plenary Meeting Concerted Action for the EED, Zagreb 2019

European Commission – DG ENERGY, Energy Efficiency: Policy and Financing

Legislative expression of the EEF principle

GOVERNANCE REGULATION (Regulation (EU) 2018/1999)

Article 2(18)

'energy efficiency first' means taking utmost account in energy planning, and in policy and investment decisions, of alternative cost-efficient energy efficiency measures to make energy demand and energy supply more efficient, in particular by means of cost-effective end-use energy savings, demand response initiatives and more efficient conversion, transmission and distribution of energy, whilst still achieving the objectives of those decisions

Article 3(3)(b)

With regard to their integrated national energy and climate plans, Member States shall take into account the interlinkages between the five dimensions of the Energy Union, in particular the energy efficiency first principle

Legislative expression of the EEF principle

GOVERNANCE REGULATION (Regulation (EU) 2018/1999)

Recital (64)

Member States should use the 'energy efficiency first' principle, which means to consider, before taking energy planning, policy and investment decisions, whether cost-efficient, technically, economically and environmentally sound alternative energy efficiency measures could replace in whole or in part the envisaged planning, policy and investment measures, whilst still achieving the objectives of the respective decisions. This includes, in particular, the treatment of energy efficiency as a crucial element and a key consideration in future investment decisions on energy infrastructure in the Union. Such cost-efficient alternatives include measures to make energy demand and energy supply more efficient, in particular by means of cost-effective energy end-use savings, demand-side response initiatives and more efficient conversion, transmission and distribution of energy. Member States should also encourage the spread of that principle in regional and local government, as well as in the private sector.

A bit of history

International Energy Agency Energy Efficiency Market report (2013)

Changing the paradigm: *"[t]he reduced energy demand stemming from energy efficiency over the past decades is larger than any other single supply-side energy source […], suggesting it is not so much a "hidden fuel" but could in fact be our "first fuel".*

Commission's proposal for EED amendment (November 2016)

- ✪ energy efficiency be treated as an energy source in its own right
- ✪ the 'energy efficiency first' principle should be taken into account when setting new rules for the supply side and other policy areas

The Clean Energy for All Europeans package proposal (November 2016)

- ✪ energy efficiency first as an overall theme

Legislative expression of the EEF principle

Principle simplified

- assess carefully, when planning, designing a policy or deciding on an investment, whether your goal can be – *fully or partially* – achieved via a cost-effective energy efficiency measure
- apply the principle to energy supply & energy demand
- spread the principle to regional, local and private levels

When to apply the principle

TO BE CONSIDERED BEFORE BUT ALSO IN THE COURSE OF

- **planning**
- **designing policies and measures**
- **deciding on investment**

concerning in particular **energy infrastructure**

but also policies and measures in the area of **energy security** and **internal energy market** *(Annex I part I of Governance Regulation)*

as well as all decisions about energy system development be that in **homes, offices, industry or mobility**

How to implement the principle

POSSIBLE MEANS OF APPLYING THE PRINCIPLE

- change the paradigm of energy system – treat energy efficiency as the "first fuel", a source of energy in its own right

- make proper projections for energy efficiency – reflect realistic level of energy efficiency efforts

- consider higher energy efficiency efforts in impact assessments / cost-benefit analyses – this will maximise energy efficiency efforts to the extent it is a cost-effective alternative in a specific project

  → look at the cost of energy efficiency from the perspective of the whole society rather than individual consumer *(lower discount rates)*

- consider a high energy efficiency scenario in modelling – a sensitivity scenario with wider consideration and quantification of societal benefits of energy efficiency, for example impacts on health, energy security or job creation

Step-by-step approach

TO DETERMINE AND CAPITALISE ON ENERGY EFFICIENCY BENEFITS

- Verify if the principle can be applied for a specific level of planning, policy decision or investment
- Check if an objective can be achieved through energy efficiency measures
- Consider whether the identified energy efficiency measures are economical and cost-efficient
- Consider whether the identified energy efficiency measures are environmentally sound
- Prioritise energy efficiency

Energy Efficiency First principle in NECPs

BEST PRACTICE TO APPLY THE PRINCIPLE IN PLANNING

Explain how the energy efficiency first principle is embedded in the NECP's overall strategy

- *not just a declaration, but set up a process to safeguard the principle within the common analytical basis set out in the Governance Regulation*

Identify the body which is in charge of monitoring the application of the principle

- *clear responsibilities must be granted to the body entity in charge of implementing the principle*

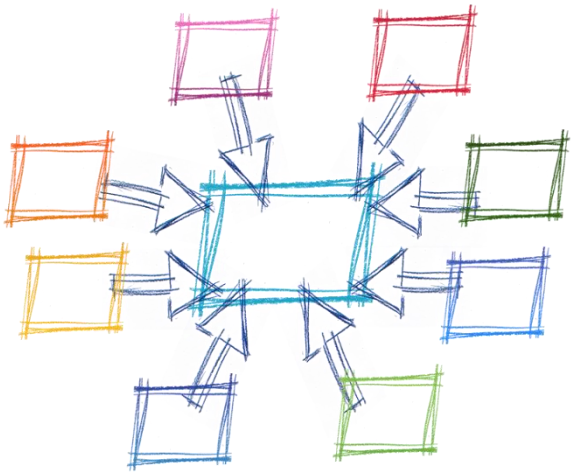
Describe how the principle was enacted in the process of drafting the NECP

Energy Efficiency First principle in NECPs

BEST PRACTICE TO APPLY THE PRINCIPLE IN PLANNING

Adopt an overarching vision for a highly energy efficiency economy

- *explain how this will boost the rapid decarbonisation of the economy*
- *explain interactions between the dimensions and how these affect energy efficiency*



Clearly state the internal energy market and energy security objectives

- *explain how these take into account a robust energy efficiency contribution*

Energy Efficiency First principle in NECPs

BEST PRACTICE TO APPLY THE PRINCIPLE IN PLANNING

Put in place processes to ensure that energy savings tests are performed for each plan or decision

Report in the NECP on these processes and on the results

- *assess each measure against an energy efficiency measure which would allow reaching the same objective*
- *explain how projects are tested against a robust energy efficiency scenario*

Energy Efficiency First principle in NECPs

BEST PRACTICE TO APPLY THE PRINCIPLE IN PLANNING

Maximise the energy efficiency impact through consultation with stakeholders

Present economic, social and environmental benefits of a higher target

Compare it with a situation where a lower target would be set

- *sensitivity analysis explaining what would be the consequences of increasing the ambition in energy efficiency*
- *presenting different scenarios would allow comparing the benefits of setting a higher energy efficiency target*

European Commission

Way forward

PUTTING THE PRINCIPLE INTO OPERATION

- **Timing** – **NECPs should be a starting point** for setting the right level of energy efficiency effort and fully incorporate the principle – subsequent implementing decisions the principle might be less affected
- **Players** – implementing entities that are responsible for achieving also other objectives might have less agency to apply the principle *(for example, network operators)* – challenging to take into account something that you cannot affect
- **Geographical dimension** – consideration of European, national and regional aspects and specificities might lead to different conclusions

Applying the principle it is still a learning process for everyone, as well as imbuing it with substance. Sharing best practices is vital for success.

Energy Efficiency First Principle is highlighted in the mandate given to Commissioner-Designate Kadri Simson by President von der Leyen. The Commission will have to work on mainstreaming the principle in its decision-making.

On-going research activities on the principle

PUTTING THE PRINCIPLE INTO OPERATION

ENEFIRST (Making Energy Efficiency First principle operational)

- fully funded under Horizon 2020 *(1.5 million EUR)*
- running from September 2019 until February 2022
- coordinated by the Institute for European Energy and Climate Policy (NL) with six other European partners
- designed to make the principle more concrete and operational, better understand its relevance for energy demand and supply and its broader impacts across sectors and markets, focusing on the buildings sector
- review global best practices & analyse their potential implementation in the Union in a quantitative and qualitative manner
- http://www.ieecp.org/project/enefirst-making-energy-efficiency-first-principle-operational/

On-going research activities on the principle

PUTTING THE PRINCIPLE INTO OPERATION

ODYSSEE-MURE (Monitoring EU energy efficiency first principle and policy implementation)

- almost fully funded under Horizon 2020 *(1.74 million EUR)*
- running from June 2019 until November 2021
- coordinated by Agence de l'Environnement et de la Maitrise de l'Energie (FR) with 35 other European partners
- focusing on supporting policy makers in Member States to fulfil their obligations in the framework of the Energy Efficiency Directive
- helping to operationalise the principle for Member States by developing an indicator-based approach exploring wider aspects such as new societal trends *(shared economy …)* which may increase or reduce energy demand, energy poverty and benefits of energy efficiency
- https://www.odyssee-mure.eu

On-going research activities on the principle

PUTTING THE PRINCIPLE INTO OPERATION

sEEnergies (Quantification of synergies between Energy Efficiency first principle and renewable energy systems)

- fully funded under Horizon 2020 *(1.5 million EUR)*
- running from September 2019 until February 2022
- coordinated by Aalborg University (DK) with eight other European partners
- considering all aspects of the Energy Efficiency First principle by applying it in sectors and markets, country-by-country and grid-by-grid
- designed to quantify and operationalise the potentials for energy efficiency in buildings, transport and industry
- given the inter-sectoral influence, synergies between sectors are comprehensively assessed and impacts of the Energy Efficiency First principle quantified
- https://www.seenergies.eu

Thank you!

Energy Efficiency: Policy and Financing
DG ENER, European Commission

https://ec.europa.eu/energy/topics/energy-efficiency

Experience of Member States

PUTTING THE PRINCIPLE INTO OPERATION

What is your experience with the principle

- in general
- in drafting the NECPs
- in practice

Experience of Member States

PUTTING THE PRINCIPLE INTO OPERATION

How to embed the principle in policy making

How to use the principle in decision taking

Examples

Compatibility of the principle with other objectives

FAIR TREATMENT OF ALL OBJECTIVES

Energy efficiency first principle does not mean that energy efficiency is all that matters, but that it should be considered on **together with** with other options

- Applies to **renewables**, but
  - higher share of renewables will require higher level of electrification (investment in electricity grids) which in turn is necessary to support the growth of efficient technologies in heating (heat pumps) and transport (electric vehicles),
  - decarbonised energy systems often need significant but underutilised infrastructure, in particular for meeting peak demand.

- **Security of supply** - a margin of overcapacity that is necessary to cope with stress situations and is not in contradiction as long as clearly identified and justified. Besides, energy savings do not necessarily lead to savings in grids if these have a geopolitical or economic 'insurance policy' function.

- **Interconnections** – should not be hampered, but should also lead to a reduction of generation capacity elsewhere.