Making energy efficiency visible in the European energy mix

Energy efficiency is rightly considered "the first fuel" in policy debates, as there is no cleaner and cheaper energy than the one which has not been consumed. Energy efficiency is a resource (e.g. building insulation) that we can use to meet our energy needs (e.g. indoor thermal comfort) while consuming less energy, thereby reducing energy bills and imports, as well as CO_2 emissions. At the same time, energy efficiency is typically absent from energy balances, which makes it difficult for energy savings to become part of every energy strategy.

IEECP prepared a study "Make Energy Efficiency Visible in the Energy Mix" supported by the European Climate Foundation and Knauf Insulation, analysing **possible ways to add energy savings to national and European Union energy mixes figures, next to energy sources such as renewables, gas and coal, in a structured way**.

The study integrated 2021 big picture 'energy savings' data from the ODYSSEE-MURE project with Eurostat data on 'supply' energy carriers such as oil and gas for the 27 EU countries. This shows the impact that energy savings made in the energy mix, using classical graphs where energy savings is included:
in 2021, energy savings contributed 12% to the European Union's energy mix, 12.7% to the energy mix in Germany, 13.6% in France, 14% in Italy, 16.3% in Spain and 10.4% in Poland.

7 actions to make energy efficiency visible in the overall energy picture

1 Integrating energy efficiency in the energy mix

Adding next to the current energy supply mix a graph showing the evolution of final energy consumption per energy carrier, including energy savings on the top. This would make an energy efficiency share visible in the final energy mix.

2 Integrating the energy mix in the energy efficiency publications

Adding figures showing the energy efficiency share in the energy mix also in the main figures of energy efficiency publications . The link between energy efficiency and the energy mix should be made in both ways. Energy efficiency publications could develop as well an 'energy savings balance' that could mirror the usual energy balance.

3 Making energy efficiency visible in forward-looking scenarios

Adding the share related to additional energy savings or energy efficiency improvements in the graphs showing the results of the scenarios. Otherwise, the risk is that discussions on the results be focused on the evolution in the shares of the supply energy carriers.

4 Allocate means to data collection in line with data needs

A more ambitious policy framework implies more data needed for an effective implementation and monitoring. Digitalisation provides ways to develop data collection and processing, but does not solve everything and does not work alone. It is therefore essential to allocate sufficient means to data collection, processing and analysis.

5 Establish a European working group on energy efficiency data

Providing a forum where national and European experts could exchange regularly about methodologies, in view of preparing more formal discussions to agree on methodological choices for the publications of energy efficiency data in a consistent manner across countries.

6 Improving the visibility of the results of energy efficiency policies

Ensuring that results from energy efficiency policies are published regularly, and easy to access. This could be complemented with monitoring and publishing achievements related to major objectives such as renovating the building stock. This is essential to inform policymaking, provide visibility to market players and transparency to citizens.

7 Highlighting the topical impacts of energy efficiency

Complementing the energy efficiency data available on a regular basis with ad-hoc studies providing key figures about impacts selected according to the current policy priorities. Illustrating other impacts from energy efficiency improvements show how strategic they can be for multiple objectives and contexts. This can increase the visibility of energy efficiency beyond the energy efficiency community.

Download the report

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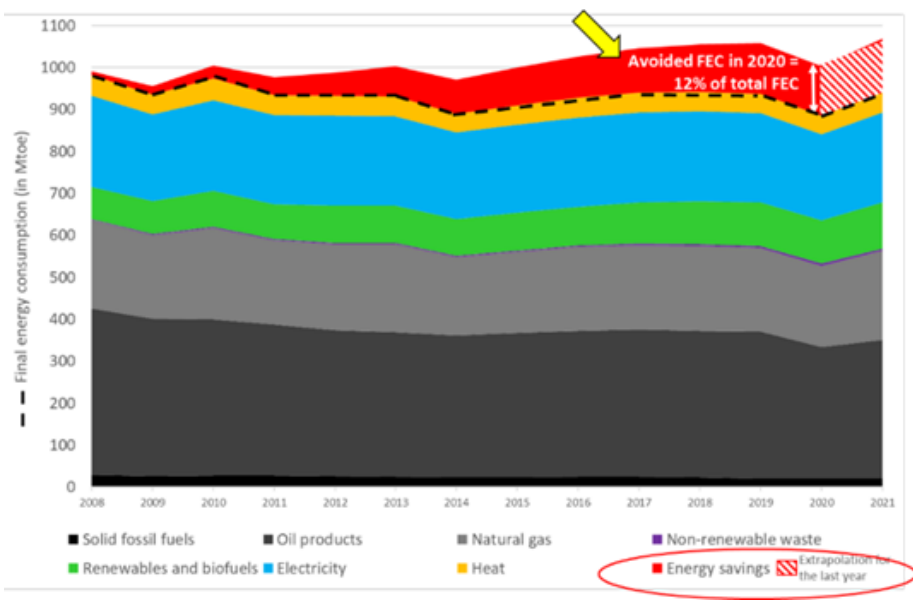
Zoom in on 3 actions to illustrate how energy efficiency can be visible

1 Integrating energy efficiency in the energy mix

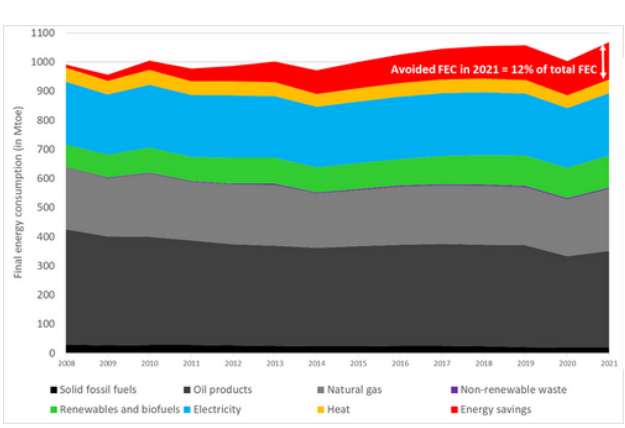
Example of figure about EU27's final energy mix that could be used to integrate energy savings in the energy mixes figures.

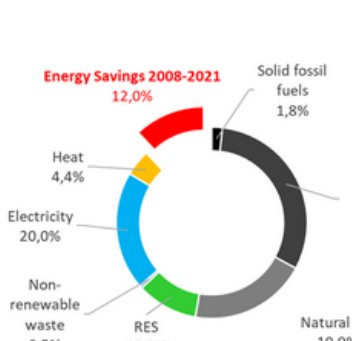


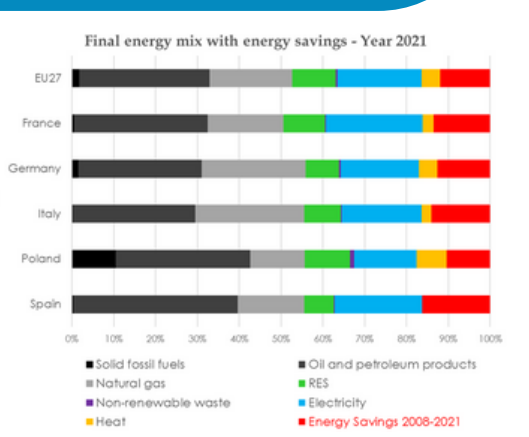
Last year's data about energy savings is voluntarily differentiated, showing it would be a provisional estimate, due to a time lag: energy efficiency data is available one year later than the usual energy data (see the report for more details).

2 Integrating the energy mix in the energy efficiency publications

Example of figures that could be included in energy efficiency publications. (As these publications are specific to energy efficiency, there is no issue with time lag)







3 Making energy efficiency visible in forward-looking scenarios

Example of figures that could be included in energy efficiency publications.
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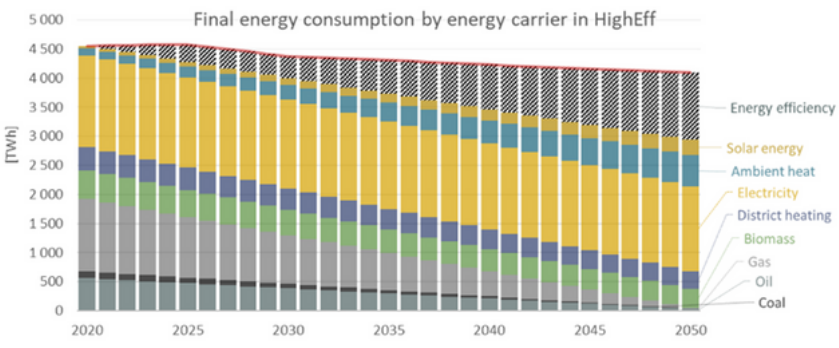
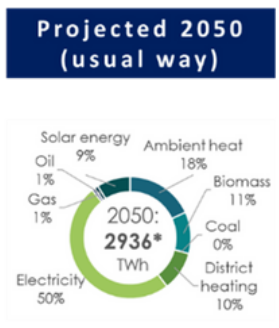
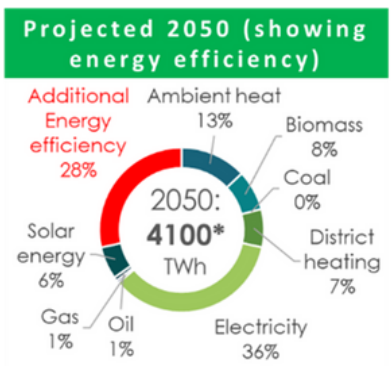
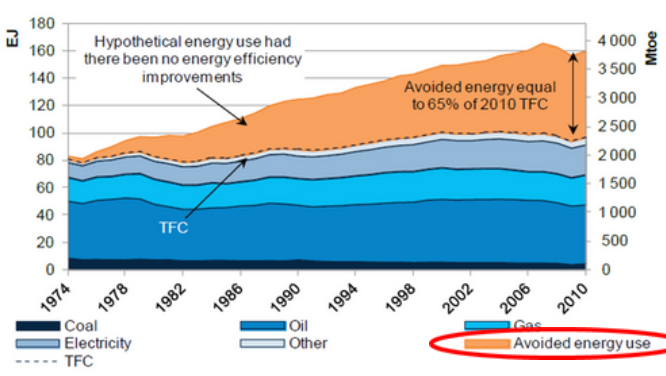
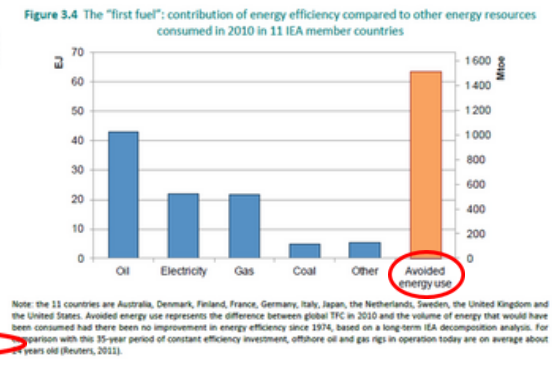






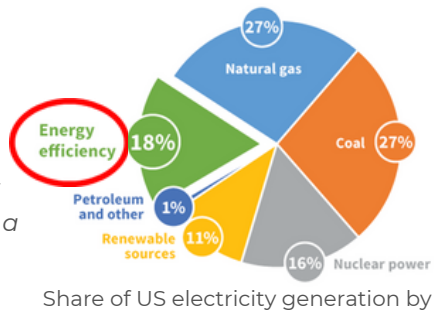
Figures integrating energy efficiency in the energy mix do exist already



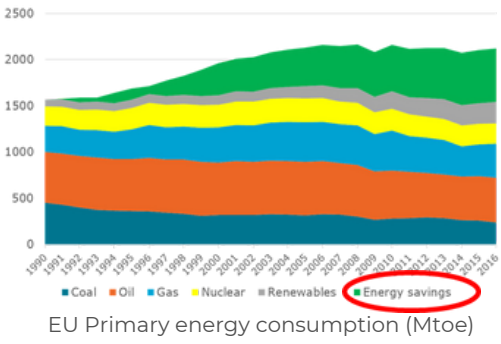


Energy Efficiency Market Report 2013 – Market Trends and Medium-Term Prospects.

The greatest energy story you haven't heard: How investing in energy efficiency changed the US power sector and gave us a tool to tackle climate change. (2016)



Share of US electricity generation by resource in 2015



EU Primary energy consumption (Mtoe)

Energy savings at sector level in ODYSSEE (2019)

For full references, links and explanations, see the report!