Multiple Benefits of Energy Efficiency

Energy Savings

Why is energy efficiency important for energy savings?

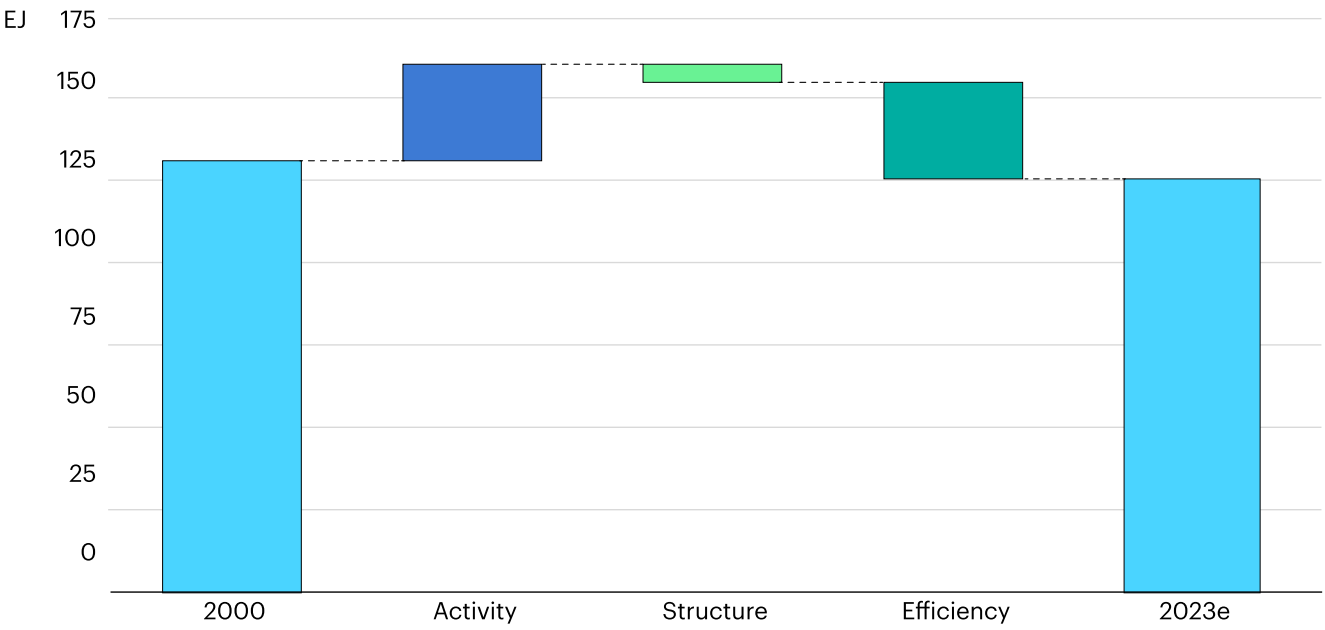
Energy efficiency measures **reduce the amount of energy required** to fuel and grow our economies. In economies where energy demand is set to grow significantly, efficiency also helps improve people's lives by increasing access to additional energy services.

- In the last two decades, efficiency measures have generated over 27 EJ of energy savings in IEA countries alone, equivalent to **20% of total energy demand.**
- The **industry** (including manufacturing) and **services** (including commercial buildings) sectors generated over half of the savings. In **transport**, most efficiency gains were achieved in passenger vehicles.

Key analysis

In selected IEA countries, increased economic activity – people using more energy services, firms increasing their production, and people travelling more – pushed energy use upwards by around 22% since 2000. However, efficiency improvements counteracted most of this demand growth, leading to cost savings and other benefits.

Energy demand decomposition, in selected IEA countries, 2000–2023



Notes
Selection of 24 IEA Member countries accounting for one-third of global final energy demand. Energy demand includes industry and services, residential buildings, and passenger and freight road transport. Structure refers to changes in economic structure. 2023 values are estimated.

Source
IEA (2025), Energy End-uses and Efficiency Indicators, (accessed on 04 April 2025).

A closer look at sectoral energy savings

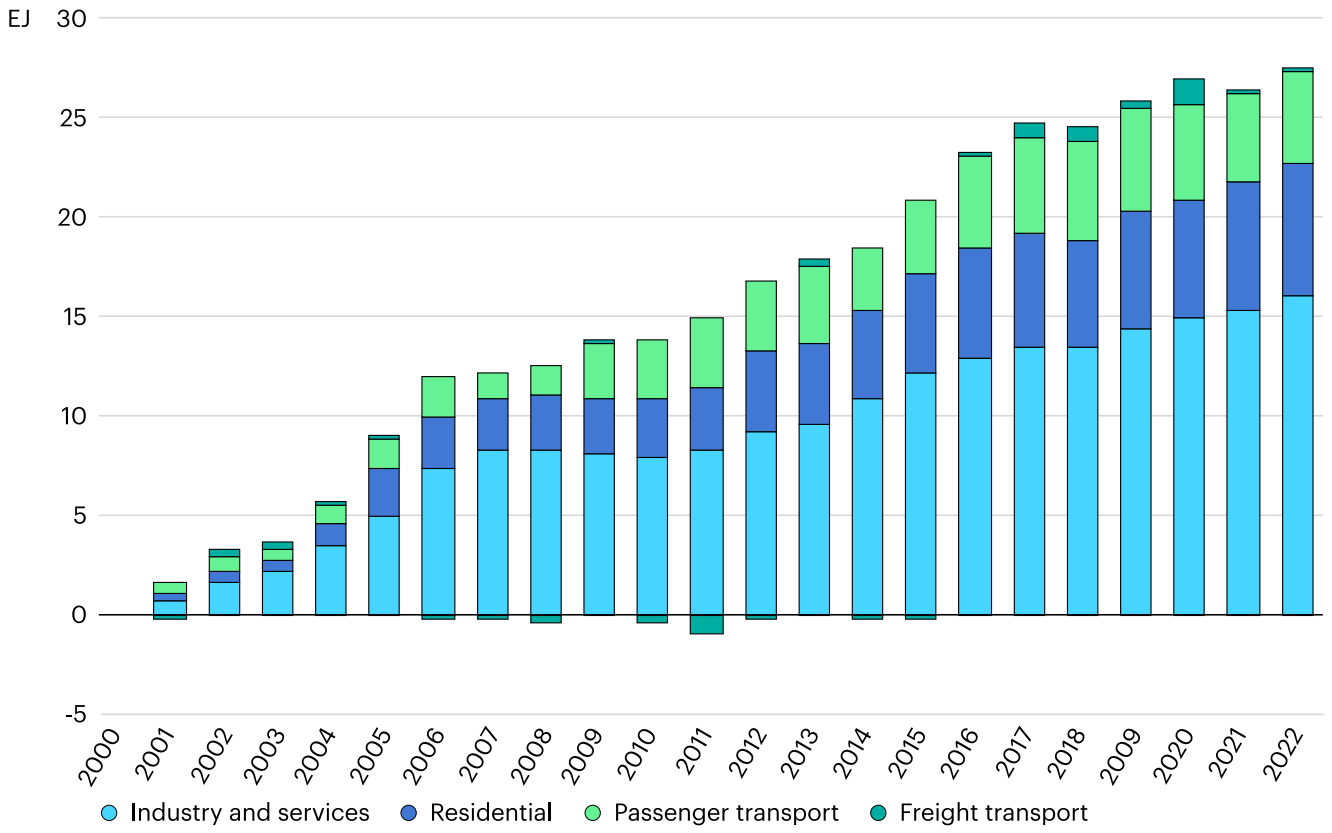
The **industry and services sector** realised the most energy savings due to improved efficiency, accounting for over half of the total savings. It also experienced the largest growth in activity in the last two decades, which pushed up energy demand.

Energy efficiency improvements in the **residential sector** accounted for around a quarter of total energy savings. This more than compensated for the increase in energy use due to increased activity, such as home building and increased home sizes.

In the **transport sector**, most efficiency improvements were realised in passenger vehicles – around one-sixth of the total. These energy savings were higher than the increased demand due to the rising number, frequency and distance of people travelling.

Efficiency improvements in **freight transport**, such as trucks, drove around 1% of the total energy savings. This was lower than the rise in freight transport activity over the same period.

Energy savings from efficiency improvements, by sector, selected IEA countries, 2000-2022



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IEA (2025), Energy End-uses and Efficiency Indicators, (accessed on 04 April 2025).

Need more information?

IEA (2025), Energy End-uses and Efficiency Indicators.
IEA (2023), Decomposition of change in IEA total final energy use.