



Energy Use in the New Millennium

*Trends in IEA
Countries*

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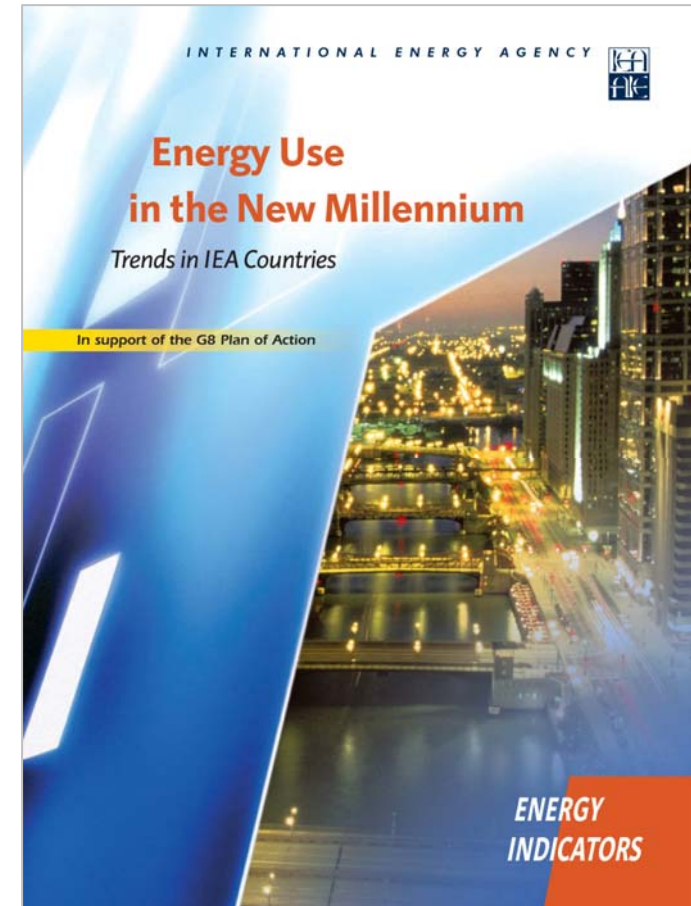
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Press Conference
10 September 2007

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Nobuo Tanaka, Executive Director
Neil Hirst
Peter Taylor



In support of the G8 Plan of Action



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G8 Ministers Request to the IEA

14 specific roles under the Gleneagles Plan of Action, amongst which:

- **Transforming the way we use energy:**
 - **Develop indicators to assess energy efficiency**
 - **Review existing energy efficiency standards and codes, and identify policy best-practices**
 - **Highlight areas for further analysis of energy efficiency measures**
- **Final report to Japanese G8 Summit in 2008**



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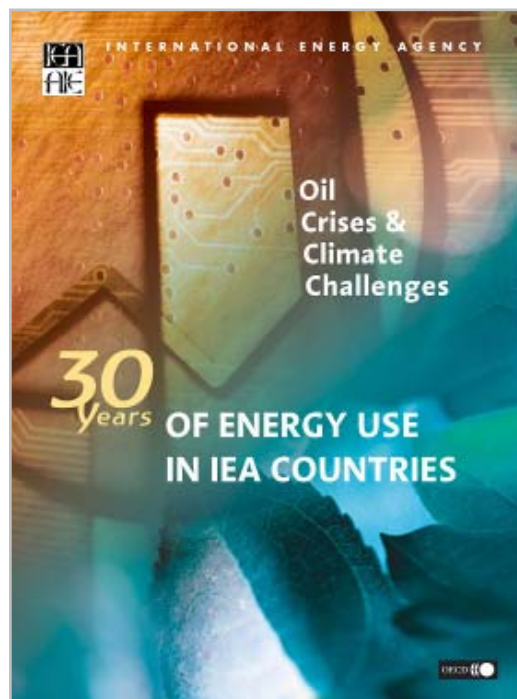
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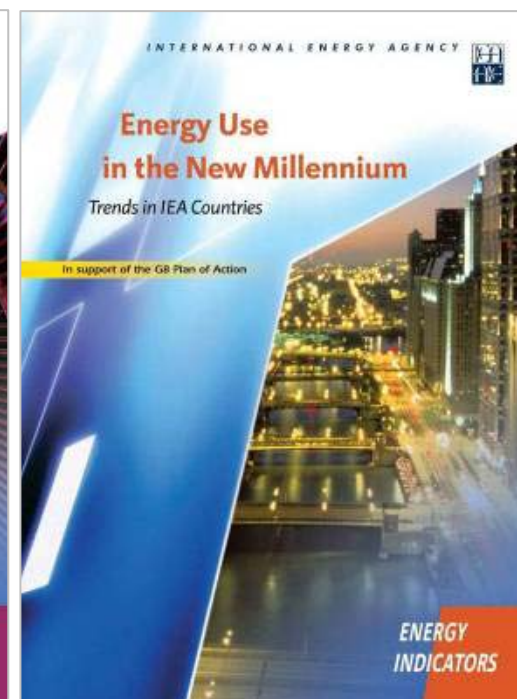
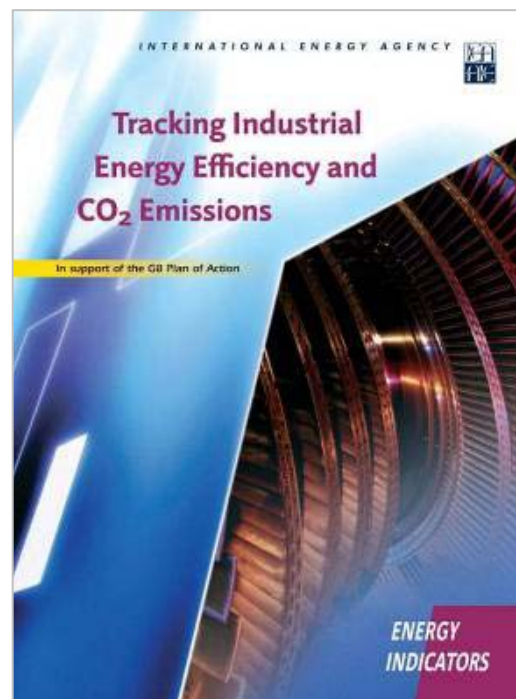
IEA Energy Indicators Publications

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2004



2007



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Contents of Millennium Publication

- **Main end-use sectors (manufacturing, services, households, passenger transport, freight transport)**
- **20 IEA countries, 14 countries for all sectors**
- **Time period 1990 - 2004**
- **Trends in energy use and CO₂ emissions**
- **Many different indicators for each sector**
- **Particular focus on role of energy efficiency**



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What are Energy Indicators?

- **Indicators relate energy use to activities driving demand for energy services**
- **Two main types:**
 - **Indicators following activities that drive energy use (e.g. population, industrial output, building area, appliance ownership, car-ownership and use)**
 - **Indicators following energy efficiency developments (e.g. energy use per capita, energy/value added by industry branch, space heating/floor area, energy/passenger-km)**
- **Understand driving forces behind growth in energy demand**
- **Separate factors related to energy efficiency from those that are not**
- **Monitor and evaluate progress of energy efficiency policies and programmes**

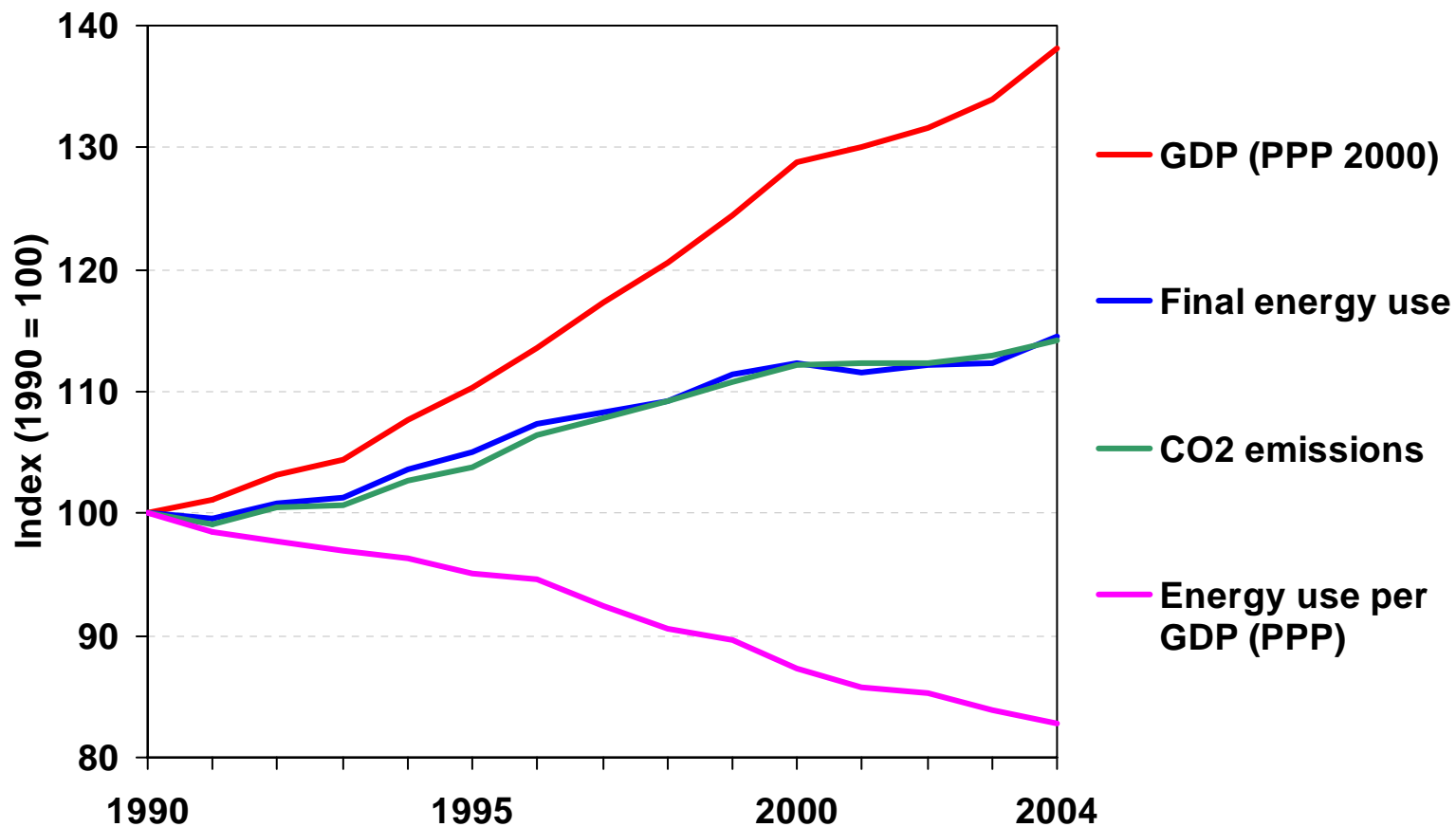


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Key Economy-wide Trends, IEA14



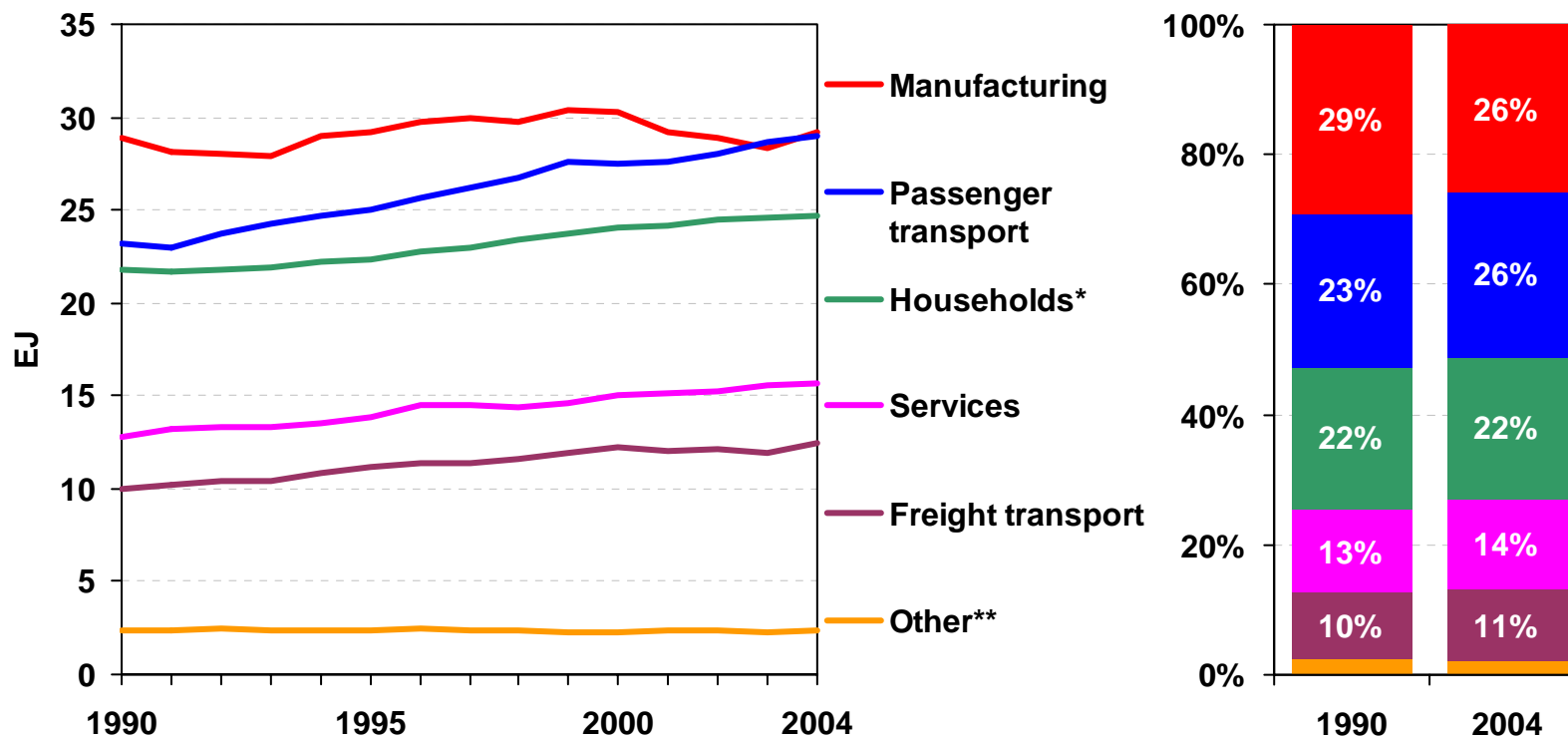


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Final Energy Consumption, IEA14



* Corrected for yearly climate variations.

** Other is construction and agriculture.

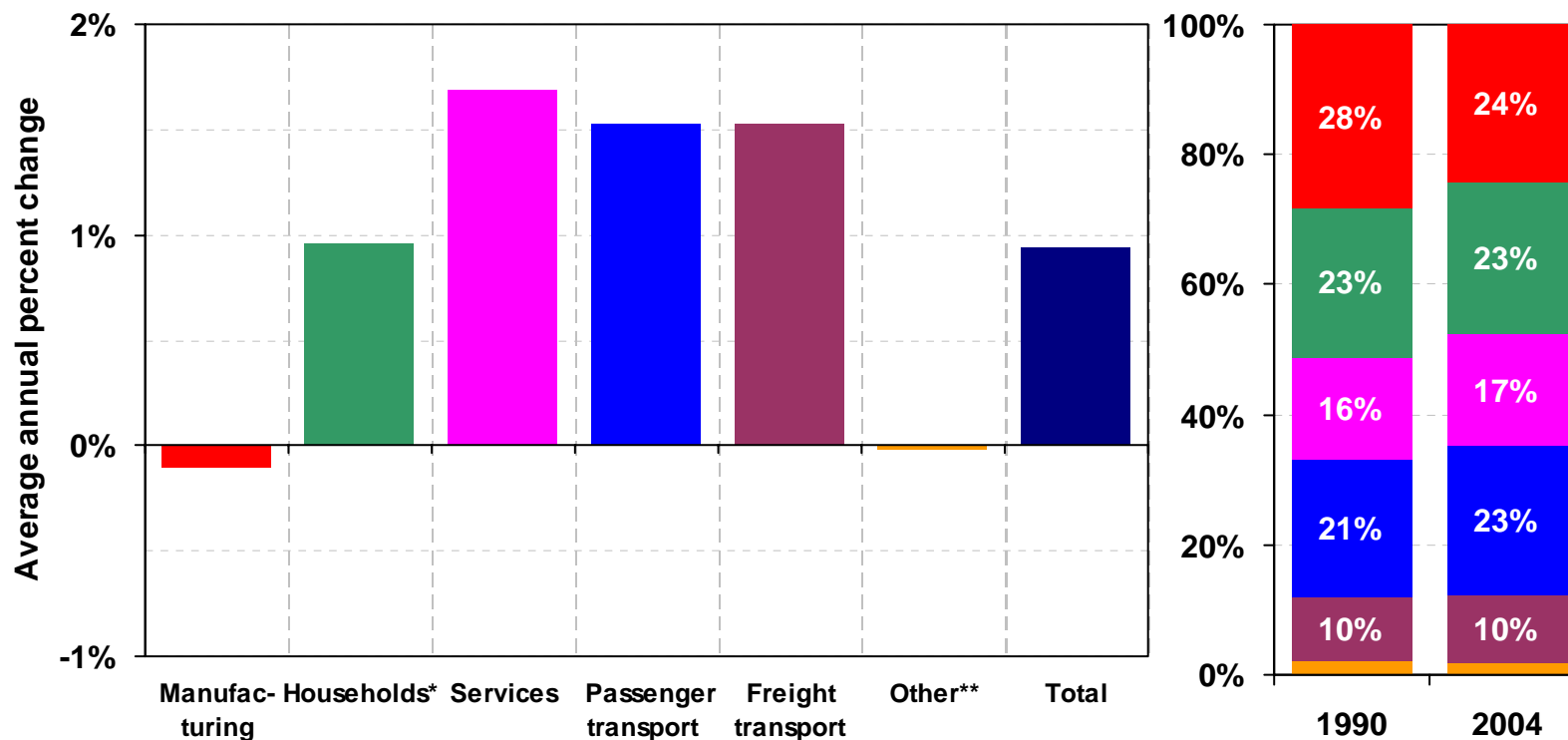


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CO₂ Emissions, 1990 – 2004, IEA14



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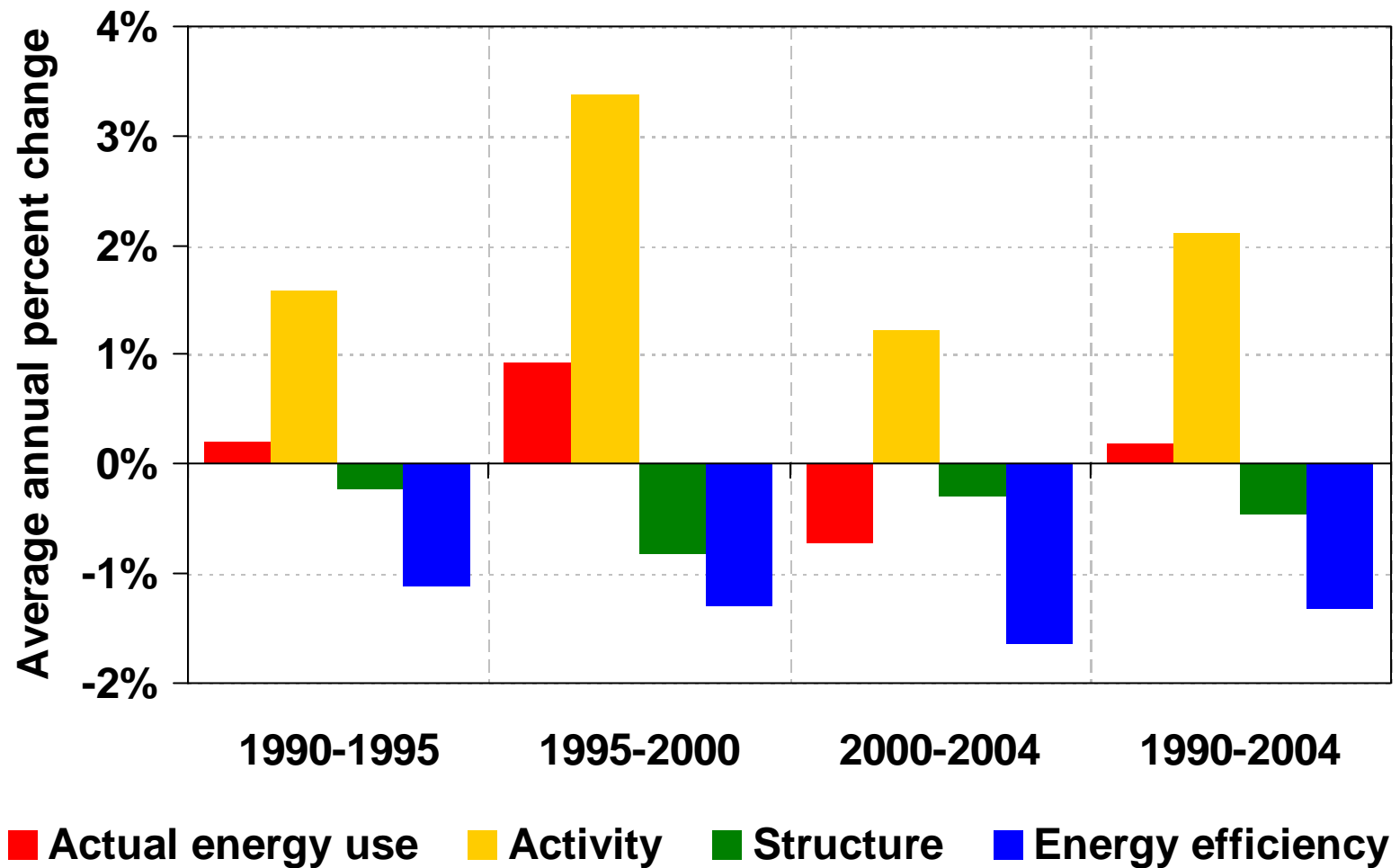


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Factors Affecting Manufacturing Energy Use, IEA19



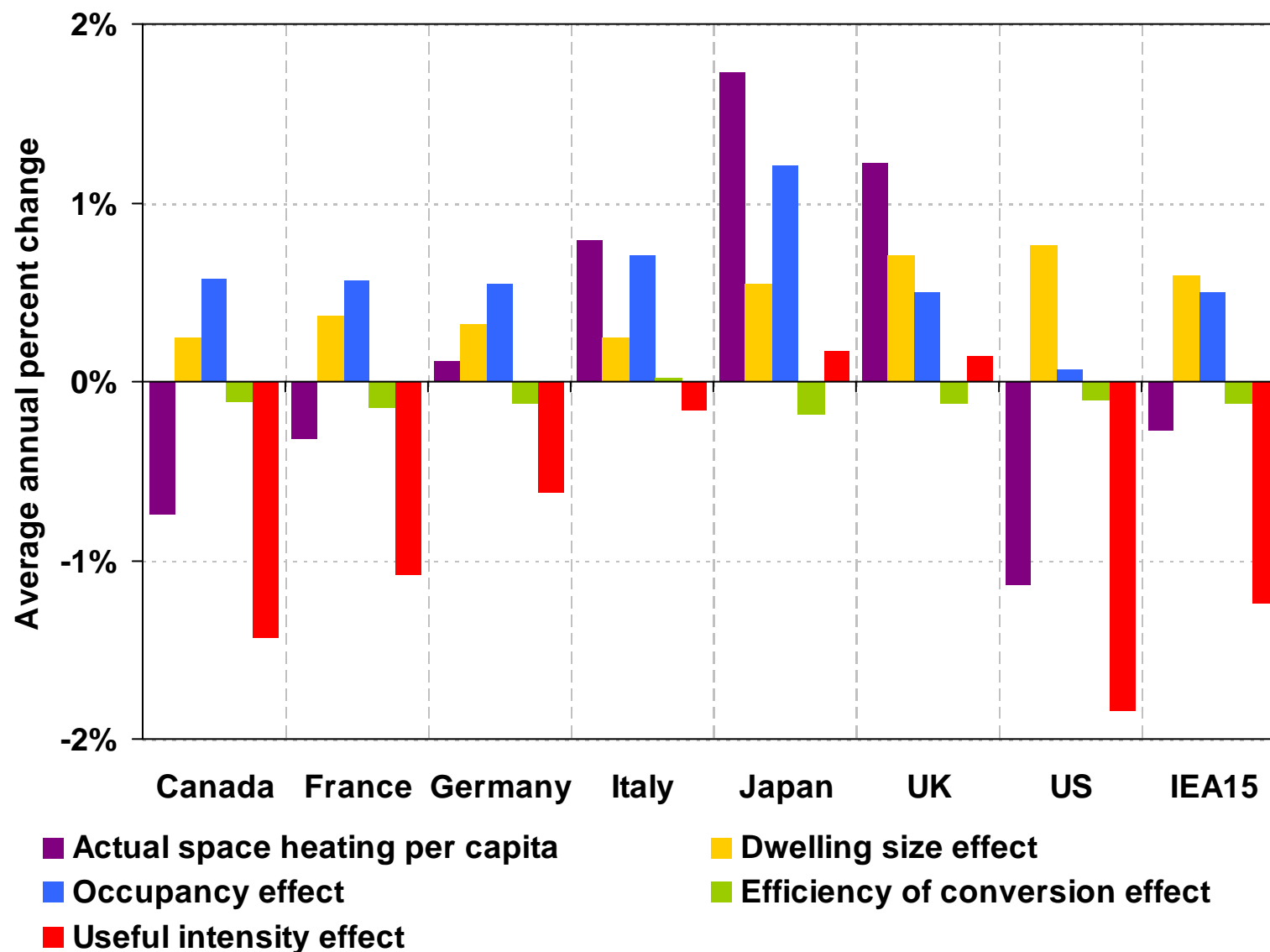


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Decomposition of Changes in Household Space Heating per Capita, 1990 – 2004



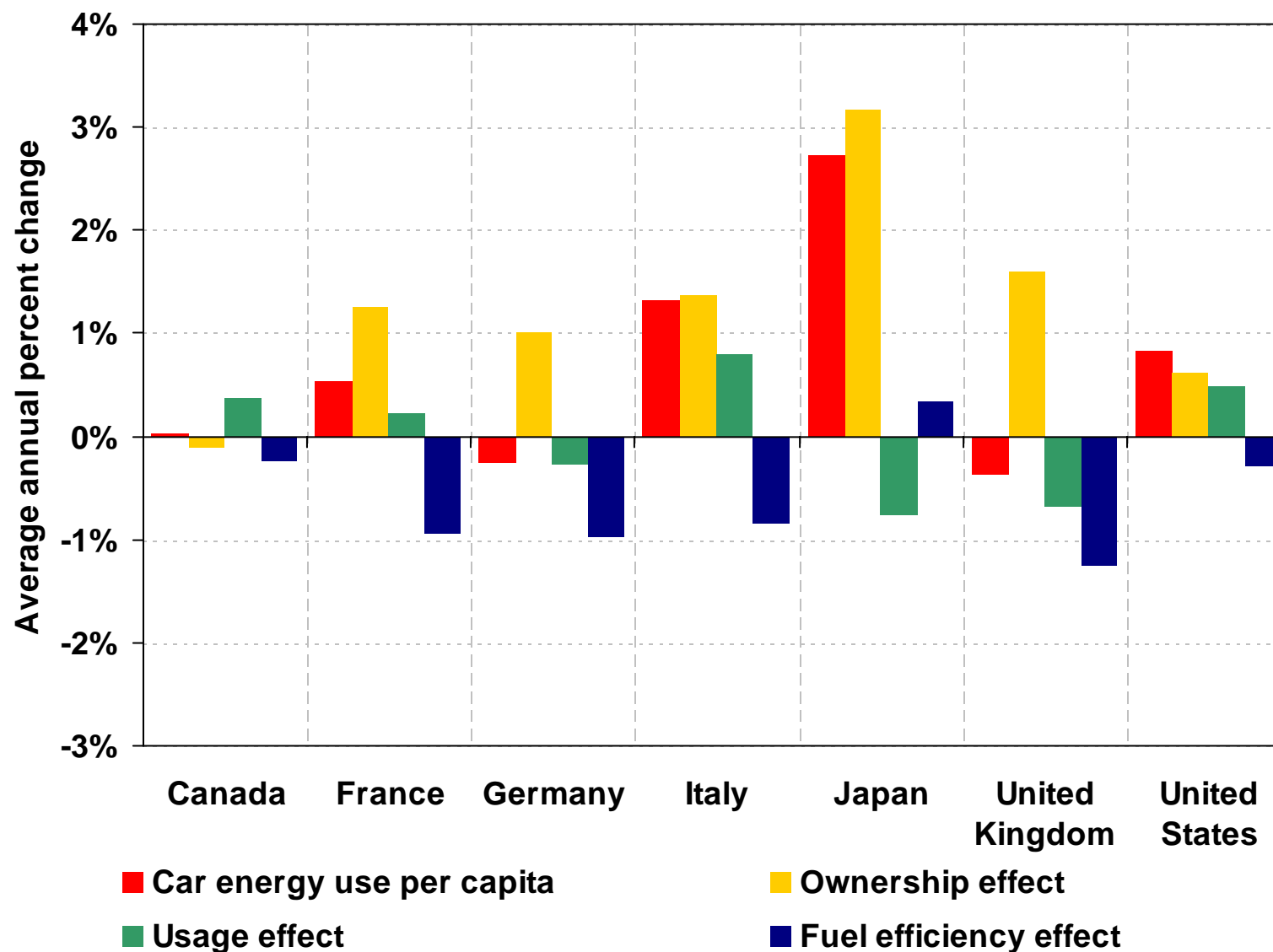


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Decomposition of Changes in Car Energy Use per Capita, 1990 – 2004



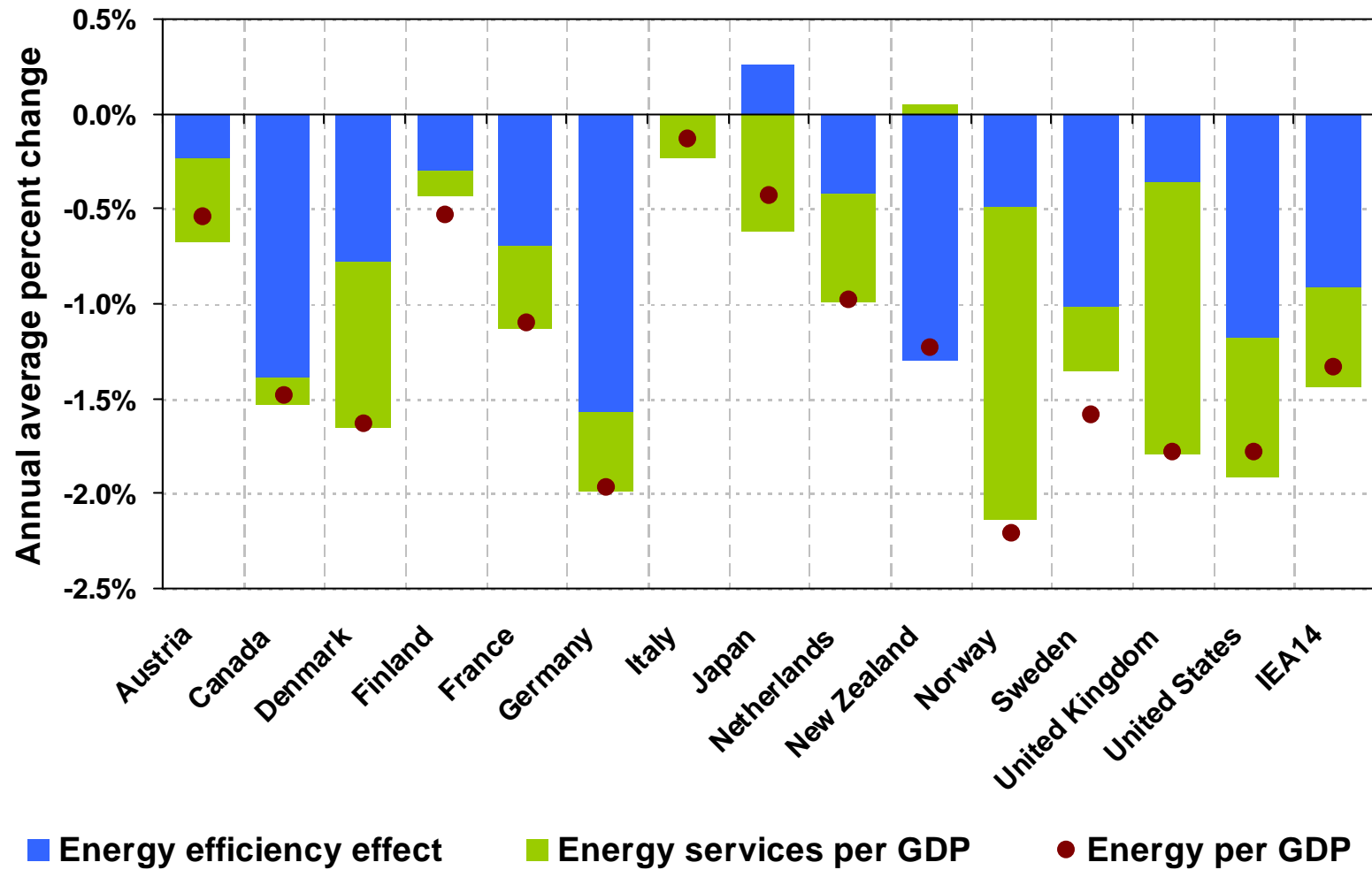


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Role of Energy Efficiency in Final Energy Intensity Reductions, 1990 – 2004





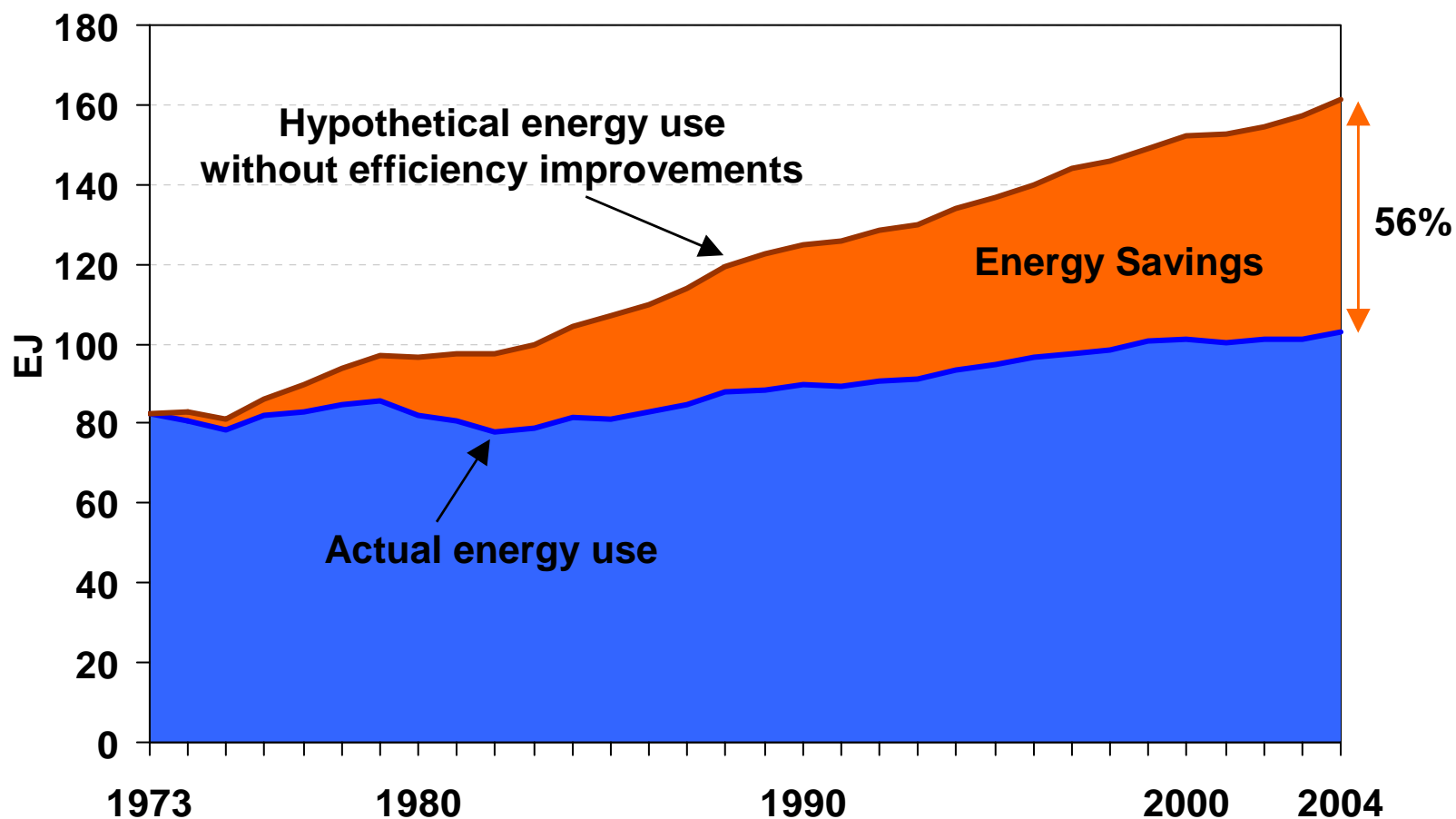
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Long-term Economy-wide Energy Savings from Improvements in Energy Efficiency



All sectors
Country coverage: IEA11

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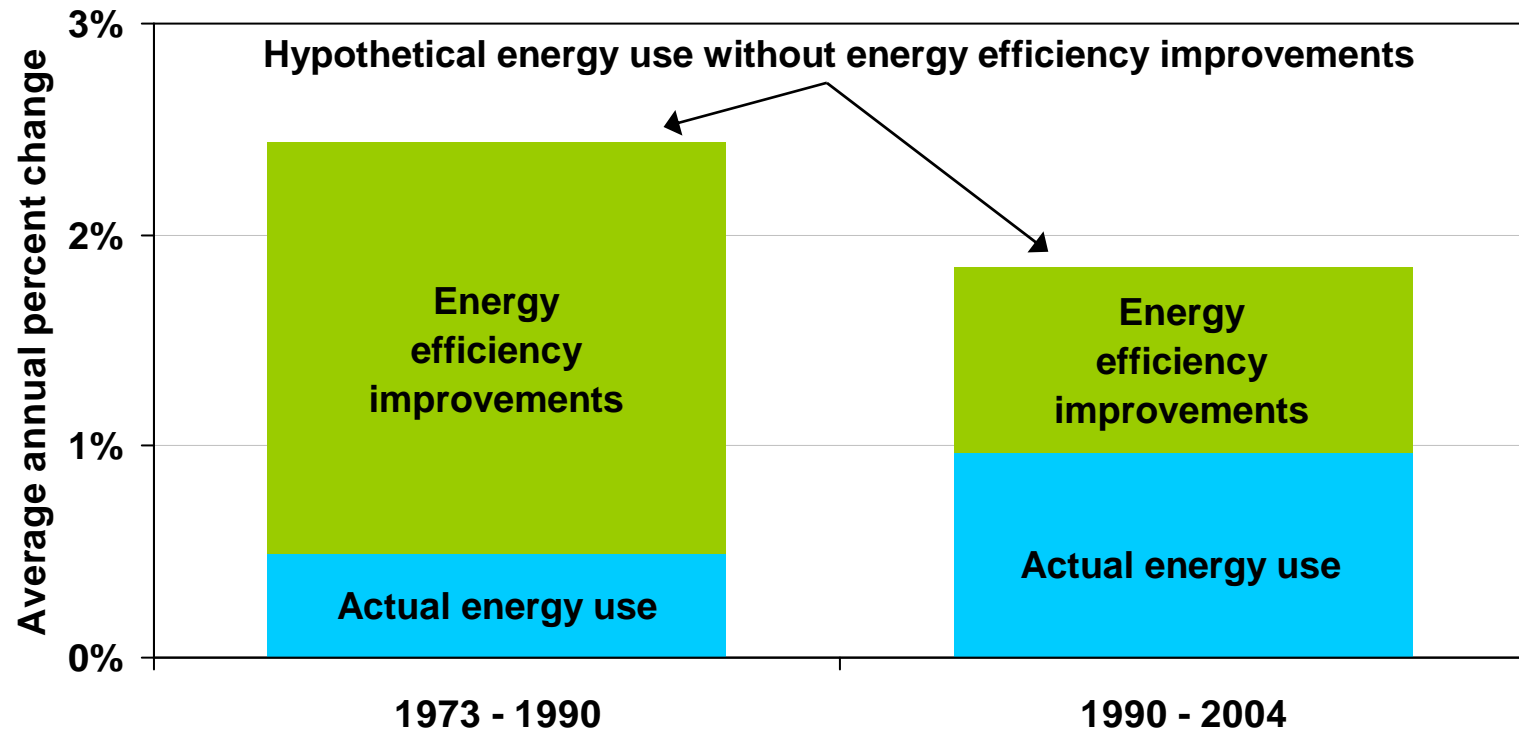


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Impact of Energy Efficiency Improvements on Final Energy Use, IEA11



We must - and we can - do better!

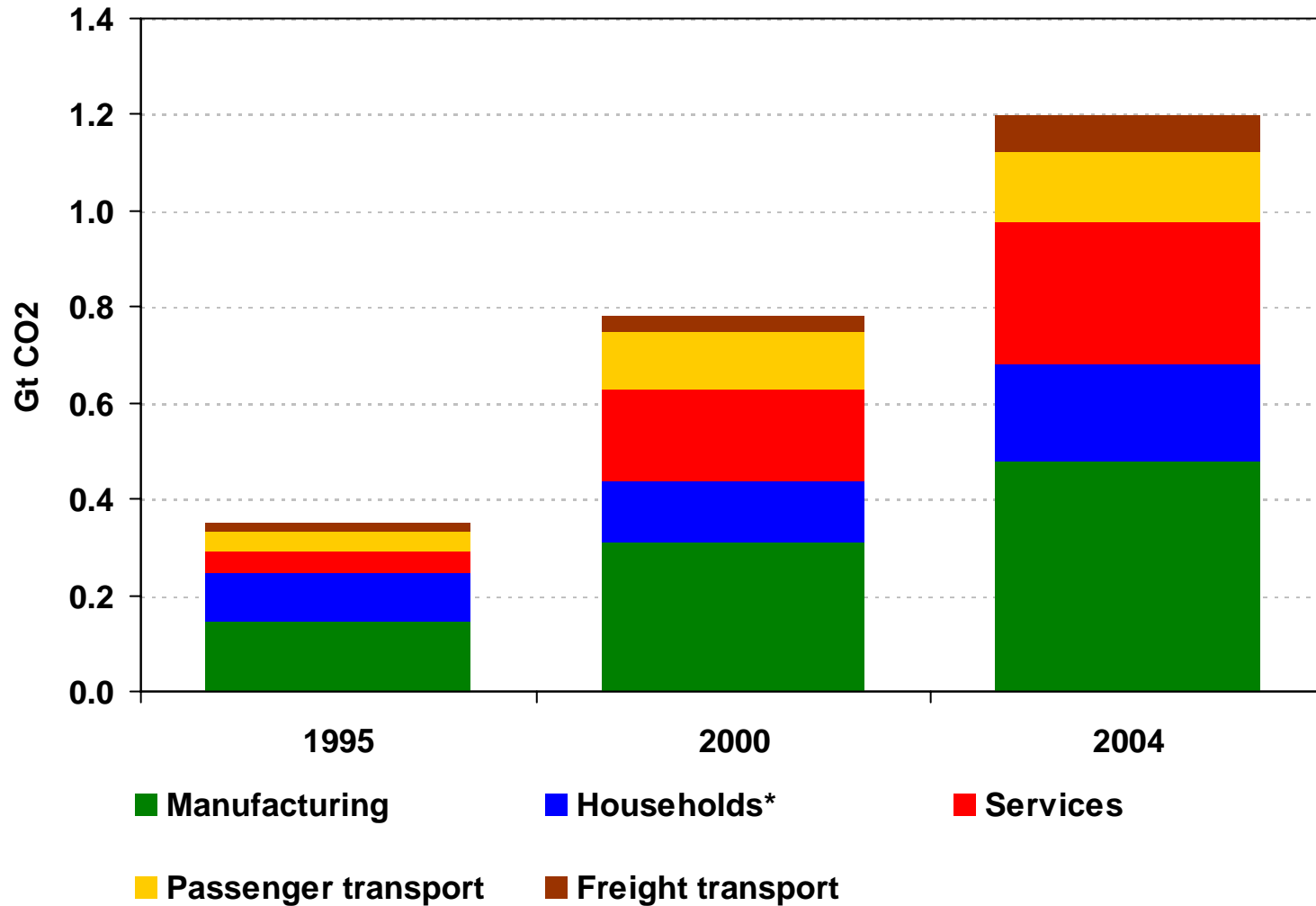


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Contributions to End-use CO₂ Savings Since 1990, IEA14



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Key Conclusions

- **Energy efficiency continues to play an important role in shaping patterns of energy use and CO₂ emissions**
- **BUT the rate of improvement since 1990 has been half that in previous decades**
- **Striking trends in the continuing growth of energy demand**
 - **electricity use in households and services**
 - **gasoline and diesel in passenger and freight transport**
- **CO₂ emissions growth can and must be decoupled from economic growth**
- **Further work needed to develop more detailed energy indicators, but data availability is a problem**



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Policy Messages

- **Improved energy efficiency is a key part of a more sustainable energy future**
- **Very strong action is needed across all sectors if rising demand is to be counteracted by gains in energy efficiency**
- **Governments must act now to develop and implement the necessary mix of market and regulatory-based policies**
- **Governments need to establish and maintain a framework to monitor energy consumption at an end-use level and should support work to address the gaps in available statistical data**



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