



International  
Energy Agency

# **Energy end-use data - IEA data collection**

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IEA, Energy efficiency indicators statistics

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# The IEA EEI data collection

- Agreed by member countries in 2009 (IEA Ministerial)
- Developed with international community of experts, based on historical work on indicators (Odyssee, LBNL, etc.)
- A user-friendly Excel template (available online)
- Collects energy consumption and activity data
- Covers four sectors: residential, services, industry, transport

Draft Energy Efficiency Indicators Template country name	
<b>COUNTRY DATA SECTION (to be reviewed and updated)</b>	
MACRO ECONOMIC DATA	Macro economic and activity data
COMMODITIES	Production outputs from selected energy-consuming industries
INDUSTRY	Energy consumption by ISIC categories
SERVICES	Energy consumption by end-uses in the services sector
RESIDENTIAL	Household energy consumption by end-uses and selected appliances data
TRANSPORT	Energy and activity data for passenger and freight transport
<b>IEA DATA and AGGREGATE INDICATORS</b>	
ELECTRICITY GENERATION	Electricity generation from combustible fuels and efficiencies
BASIC INDICATORS	Predetermined set of aggregate energy and activity indicators
<b>SUPPORT TOOLS</b>	
USER REMARKS	To incorporate comments associated to the data from the individual sheets
DATA COVERAGE	Generates a graphical summary of data coverage (completed vs. expected)
SINGLE INDICATOR GRAPHS	To generate a graph for one energy indicator
MULTIPLE INDICATORS GRAPHS	To generate a graph comparing trends from multiple indicators
CONSISTENCY CHECKS	To run the integrated consistency checks





# Industry Sector

## Energy consumption data

(major ISIC sub-sectors):

- Chemical
- Iron and steel
- Non-ferrous metals
- Aluminum
- Non-metallic minerals
- Cement
- Clinker
- Pulp and paper
- Pulp
- Paper
- .... etc.

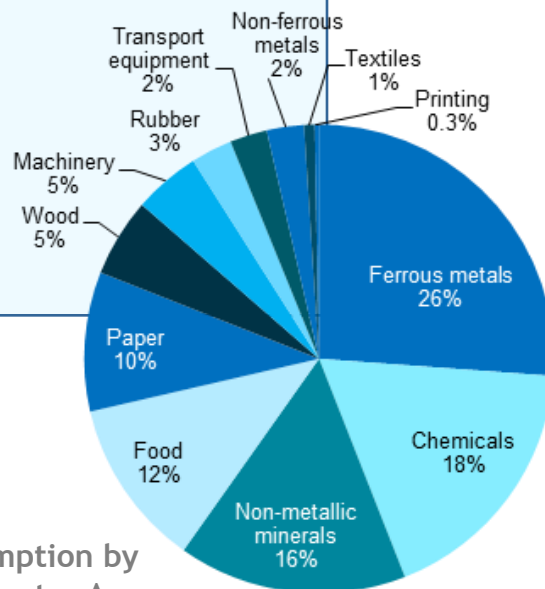
## Activity data:

- Value added
- Physical production

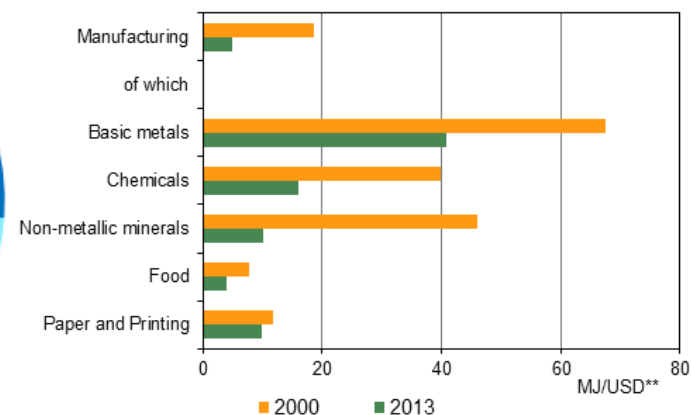


*Volume*

*Value*



Energy consumption by end-use, country A



Selected energy intensities, country A



# Residential Sector

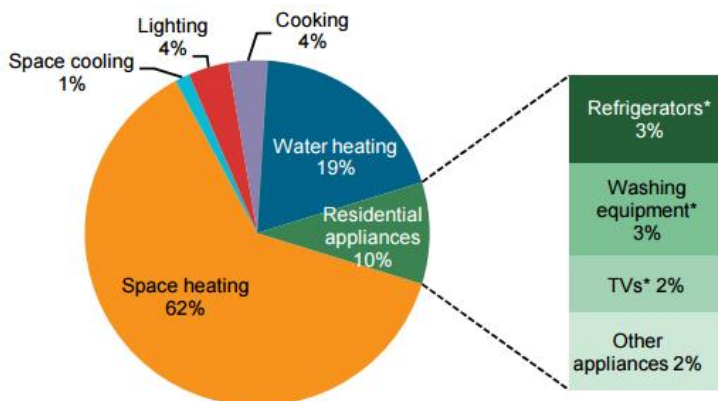
## Energy consumption data:

- Space heating\*
- Space cooling\*
- Water heating
- Cooking
- Lighting
- Appliances energy consumption:
  - Refrigerator
  - Freezer
  - Dishwasher
  - Clothes washer
  - Clothes dryer
  - TV
  - Computers

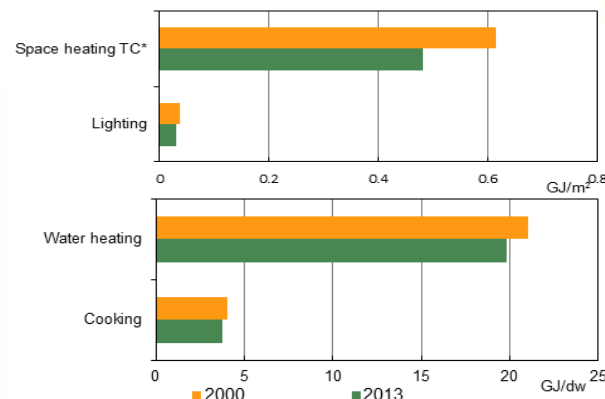
\* Temperature corrected, using HDD & CDD

## Activity data:

- Population
- Number of occupied dwellings
- Residential floor area
- Appliances stock and diffusion



Energy consumption by end-use, country B



Selected energy intensities, country B



# Services Sector

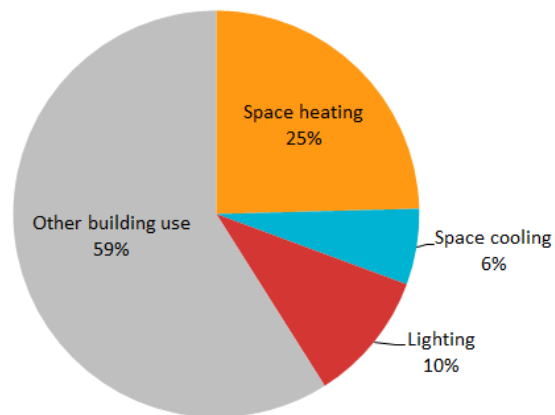
## Energy consumption data:

- Space heating\*
- Space cooling\*
- Lighting
- Other building use
- Non-building use

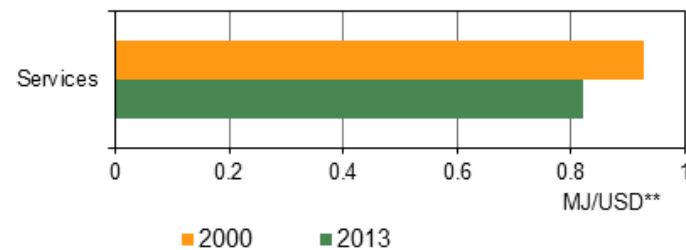
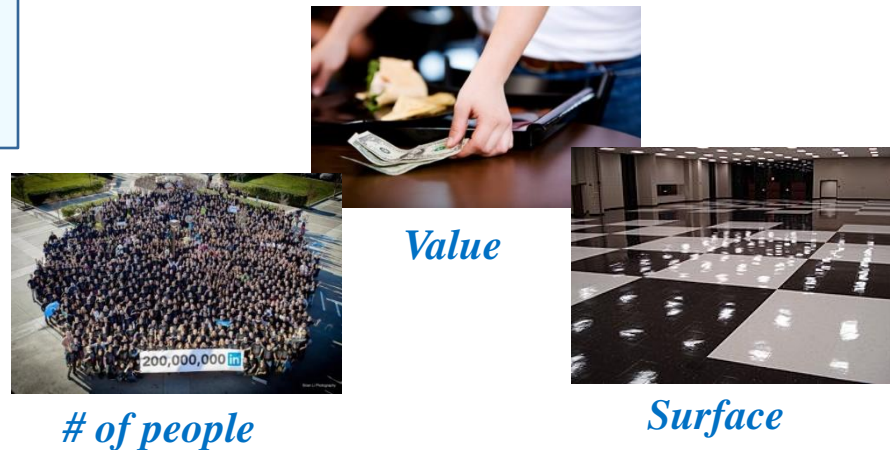
\* Temperature corrected, using HDD & CDD

## Activity data:

- Value added
- Number of employees
- Services floor area



Energy consumption by end-use, country C



Selected energy intensities, country C



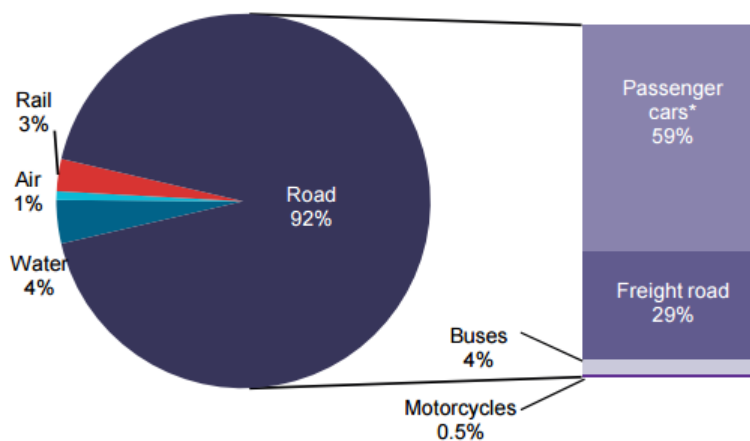
# Transport Sector

## Energy consumption data:

- Transport segment
  - passenger / freight
- Transport modes
  - road, rail, air, water, etc.

## Activity data:

- Vehicle stocks
- Passenger-kilometers
- Tonne-kilometers



Energy consumption by mode/vehicle type, country D



*Distance travelled*

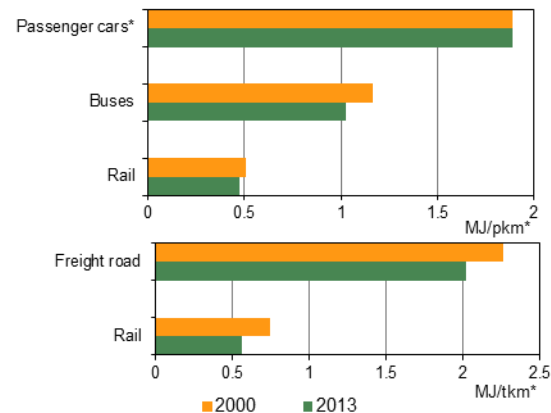


*Occupancy*

*Vehicle stock*



*Load*



Selected energy intensities, country D



# Data assessment - Report Cards

## 1 - General cooperation

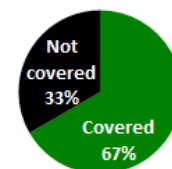
- Timeliness of submission
- Timeliness of answers
- Quality of answers
- Submission of year 2014

## Statland

2013 Data Cycle\*

### General Data Completeness

(share of TFC covered)



	General
1.1 Timeliness of submissions (31 October )	
1.2 Timeliness of answers	
1.3 Quality of answers	

	Energy End-Use Data			
	Industry	Services	Residential	Transport
1.4 Submission of year 2014				

	Activity Data			
	Industry	Services	Residential	Transport

## 2 - Data assessment

- Data Completeness
- Data Consistency (with fuel questionnaires)

	Energy End-Use Data			
	Industry	Services	Residential	Transport
2.1 Data Completeness				
2.2 Data Consistency (with fuel questionnaires)				

	Activity Data			
	Industry	Services	Residential	Transport

	Indicators			
	Industry	Services	Residential	Transport
3.1 Indicators Stability				
3.2 Indicators Plausibility				

## 3 - Indicators assessment

- Indicators Stability (unexplained breaks)
- Indicators Plausibility (unexplained deviations from expected ranges)

### Legend and notes

Overall assessment



\*including a comparison with 2012 data cycle

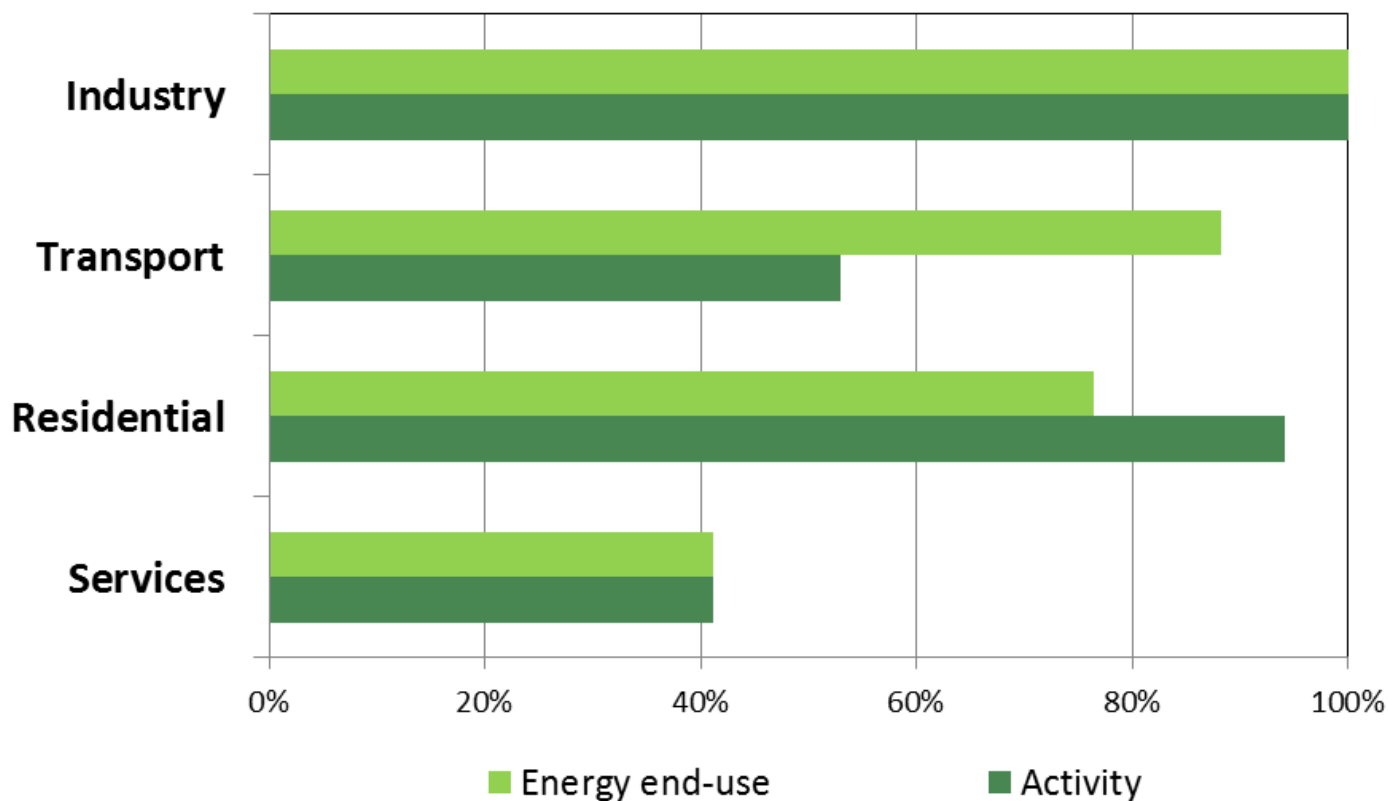
(for this cycle - this option probably would be not available)

indicates that the performance in the current cycle was very good, versus good in the previous cycle.



# Data assessment (2015-2016 cycle)

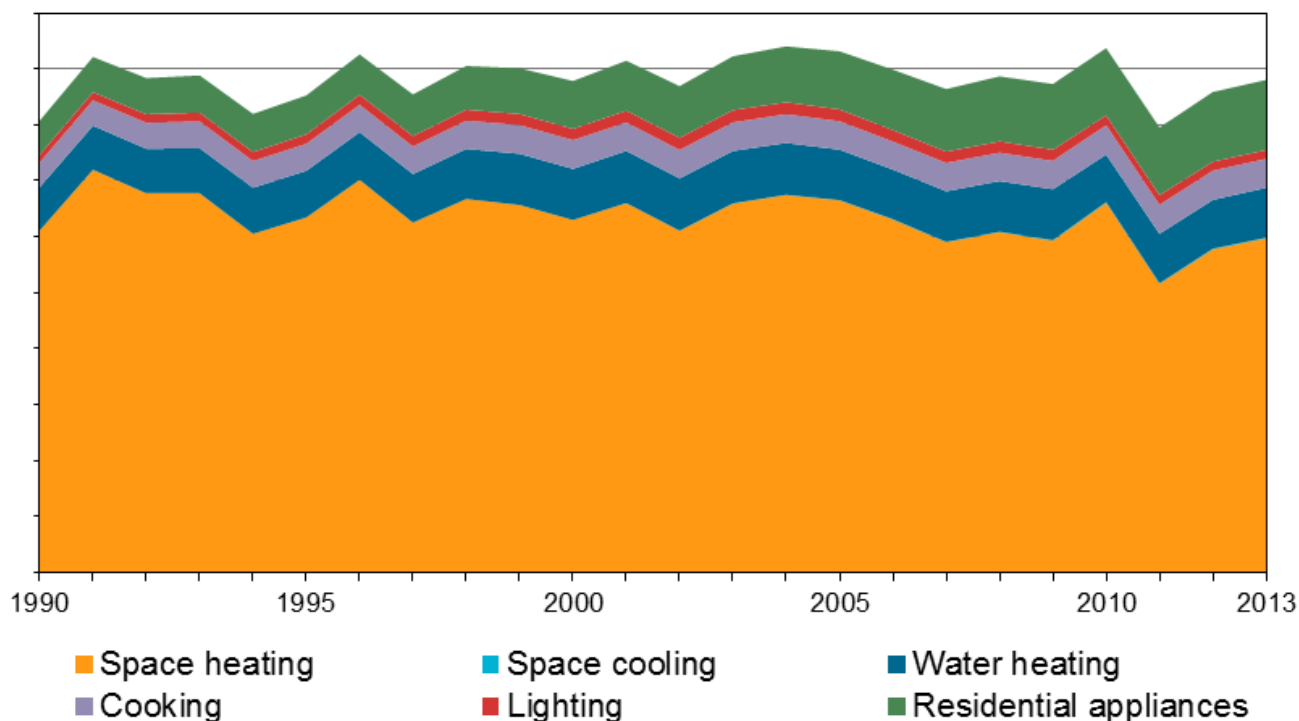
## Completeness (share of good and fair)





# Data assessment (2015-2016 cycle)

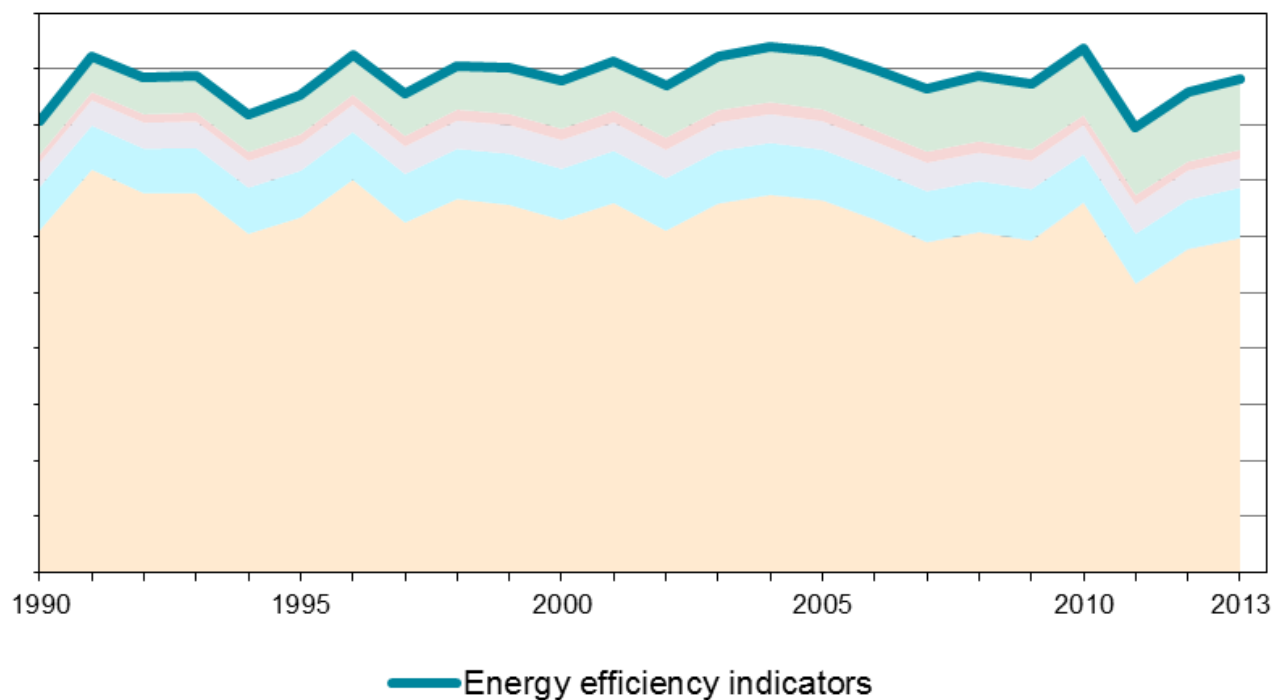
## Residential energy consumption by end-use, Country E





# Data assessment (2015-2016 cycle)

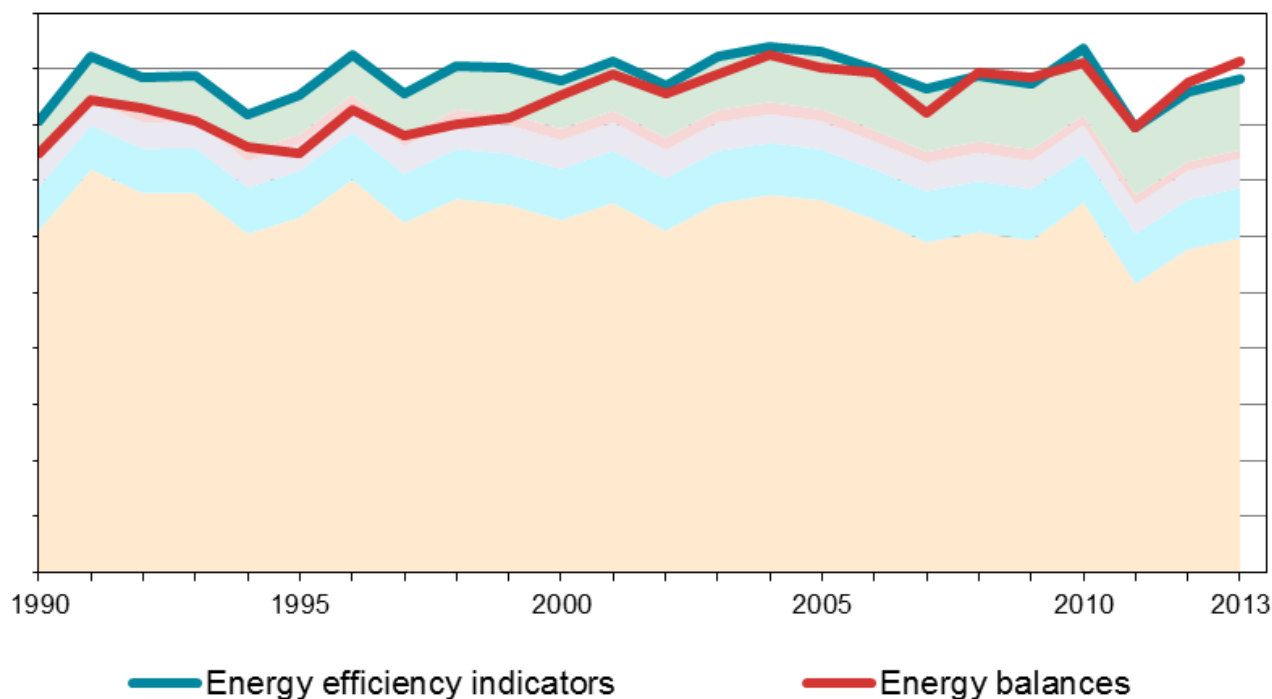
## Residential energy consumption, Country E





# Data assessment (2015-2016 cycle)

## Consistency with the IEA energy balances data - Residential energy consumption, Country E





# Good country end-use data are crucial

We should strengthen international effort to:

- Promote use of data in policy making
- Raise importance of end-use data collection
- Enhance cooperation to ensure consistency



Thank you  
for your  
attention!

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