



Co-funded by the Horizon 2020 programme  
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ODYSSEE-MURE

## Germany – World Champion of Energy Efficiency?

*National workshop within the EU project "ODYSSEE-MURE"  
Monday, 11 June 2018, Berlin, die Kalkscheune*

### EU-Ranking: The New Combined ODYSSEE-MURE Indicator and Policy Scoreboard

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Utrecht University

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# Why Scoring?

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- School marks
- Sports competitions (football...)
- Companies are scoring the performance of different parts of the company and employees
- Scoreboards for different fields such as innovation, education (PISA), universities....
- Energy Efficiency

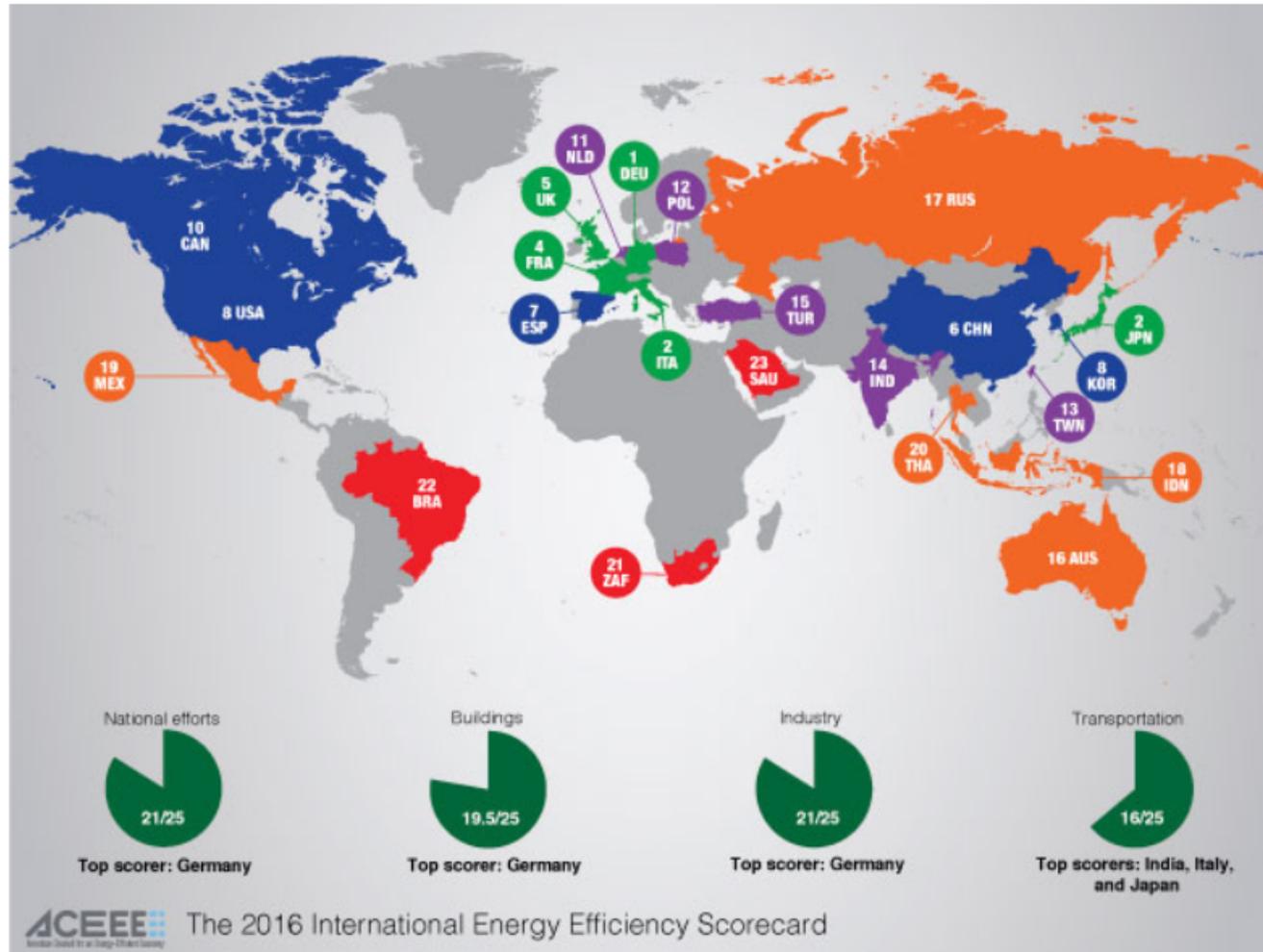
# The most passionate scoreboard under preparation (for some of us....)

The image shows a mobile application interface for the FIFA World Cup scoreboard. It features a dark blue header with a back arrow and the text 'FIFA World Cup'. Below the header, there are four tabs: 'MATCHES', 'NEWS', 'STANDINGS', and 'BRACKETS'. The main content area is divided into sections for different stages of the tournament. The 'MATCHES' section shows a list of matches with team flags, names, and dates/times. The 'STANDINGS' section shows a list of teams. The 'BRACKETS' section shows a tournament bracket with match dates and times. The 'NEWS' section is currently empty. The 'MATCHES' section is currently selected and shows the following matches:

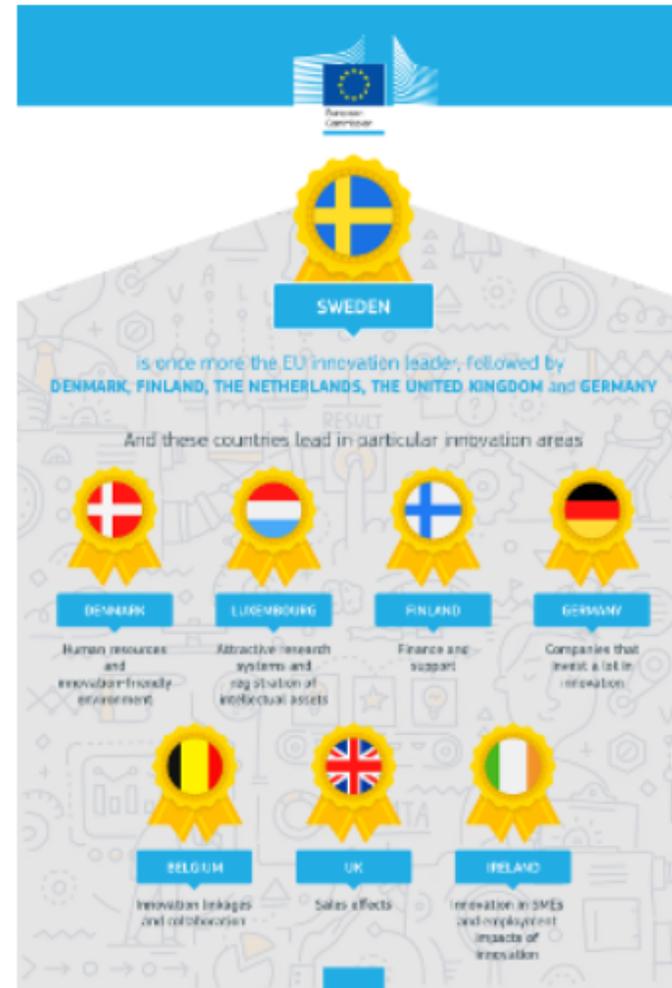
Stage	Match 1	Date/Time	Match 2	Date/Time
Group Stage	Morocco vs Iran	Fri, 15/06 17:00	Portugal vs Spain	Fri, 15/06 20:00
Group Stage - Matchday 1 of 3	France vs Australia	Sat, 16/06 12:00	Argentina vs Iceland	Sat, 16/06 15:00
Group Stage - Matchday 2 of 3	Peru vs Denmark	TBD	TBD	TBD
Group Stage - Matchday 3 of 3	Costa Rica vs Serbia	TBD	TBD	TBD
Group Stage - Matchday 4 of 3	Brazil vs Switzerland	TBD	TBD	TBD
Semi-finals	TBD vs TBD	10/07 20:00	TBD vs TBD	11/07 20:00
Third place play-off	TBD vs TBD	14/07 16:00		
Finals	TBD vs TBD	15/07 17:00		

All times are in Central European Time

# The ACEEE International Energy Efficiency Scorecard



# The European Innovation Scoreboard



# Academic Ranking of World Universities



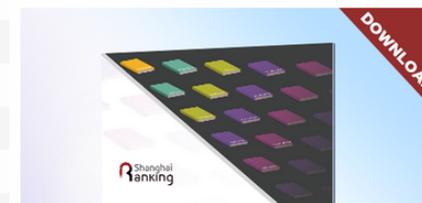
Home About ▾ Rankings ▾ Survey ▾ Universities GRUP Initiative ▾ Conference Study in China Advertise with Us ▾

Home >> ARWU 2017

2017 2016 2015 2014 2013 2012 2011 2010 2009 2008 2007 2006 2005 2004 2003

## Academic Ranking of World Universities 2017

Top 500 501-800 Methodology Statistics					
World Rank	Institution*	By location	National Rank	Total Score	Score on
		All ▾			Alumni ▾
1	Harvard University		1	100.0	100.0
2	Stanford University		2	76.5	44.5
3	University of Cambridge		1	70.9	81.4
4	Massachusetts Institute of Technology (MIT)		3	70.4	68.7
5	University of California, Berkeley		4	69.1	64.4
6	Princeton University		5	61.1	54.4
7	University of Oxford		2	60.1	50.8
42	Heidelberg University		1	34.8	19.7
43	University of Colorado at Boulder		27	34.7	12.4
44	Karolinska Institute		1	33.3	25.4
45	University of California, Santa Barbara		28	33.2	14.4
46	King's College London		7	33.1	20.9
47	Utrecht University		1	33.0	22.7



# Scoring in the PISA projects on school education

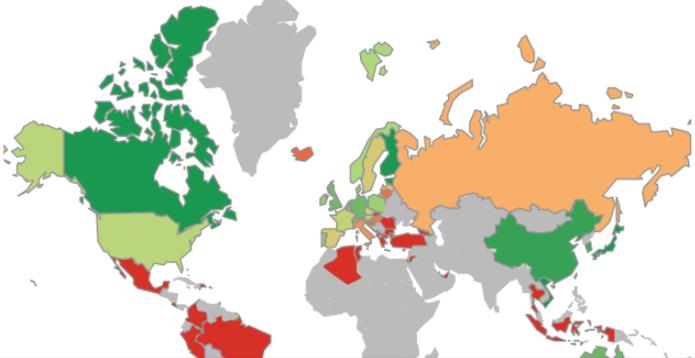


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## Results by Country

select country/economy ✕ ▼



## PISA 2015 Results

- Volume I: Excellence and Equity in Education**  
[English](#) | [French](#) | [German](#)
- Volume II: Policies and Practices for Successful Schools**  
[English](#) | [French](#)
- Volume III: Students' Well-Being**  
[English](#) | [French](#)
- Volume IV: Students' Financial Literacy**  
[English](#)
- Volume V: Collaborative Problem Solving**  
[English](#)

**PISA 2015 Results in Focus**  
Volumes I-V: [English](#)  
Volumes I-II: [French](#) | [Spanish](#)

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# OBJECTIVE OF ODYSSEE-MURE SCOREBOARD ON ENERGY EFFICIENCY INDICATORS AND POLICIES

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## Score EU countries on different energy efficiency criteria:

- the energy efficiency level,
  - the energy efficiency progress,
  - the energy efficiency policies,
  - a combination of all these criteria.
- 
- The overall energy efficiency score is obtained as an average of the three scores obtained for “energy efficiency level”, “energy efficiency progress” and “energy efficiency policies” (i.e. **one third weighting**).

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# ODYSSEE-MURE SCOREBOARD

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- For each criterium each country is scored with a score between 0 and 1 on the basis of a variety of indicators that are explained in more detail in **two complementary scoreboards**: the ODYSSEE Scoreboard for Indicators and the MURE Scoreboard for Energy Efficiency Policies.
- The scoreboard can be viewed, either by criterion or by country; in the later case, the scoring is detailed for each country by criterion

View:

Sector:

Score:

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# Scoring Methodology ODYSSEE Indicators

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- based on OECD Composite Indicators methodology,
- normalized scores across countries (range 0-1).
- To get the average score by sector, each indicator is weighted with the same weight for all countries, taking into account a typical share of end-use or subsector.
- The total score is calculated from the scores by sector with a weight representative of the share of the sector in the country's final energy consumption.
- The scores are calculated with the latest date available.
- The trend values are calculated as the annual growth rate over the period 2000 to latest year available.

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# SCORING METHODOLOGY MURE POLICIES

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- Makes use of information in the MURE database on energy savings (“policy output”) and compares the savings with the final energy consumption of the sector for a given year (Output-based scoring based on energy savings).
- The MURE database comprises quantitative impacts (provided by detailed evaluations; about 40% of measures) and semi-quantitative expert estimates in three categories (low, medium, high; defined in terms of share in sector energy consumption)
- The whole is normalised to a range 0-1.
- By default the scoring period comprises measures from 2000 to present but other periods can be selected.

# Web Facility on Combined Scoreboard

## ODYSSEE-MURE SCOREBOARD ON ENERGY EFFICIENCY INDICATORS AND POLICIES

View:

Overview

Sector:

Overall

Score:

Combined

The objective of the ODYSSEE-MURE scoreboard on energy efficiency indicators and policies is to score EU countries on different energy efficiency criteria:

- the energy efficiency level,
- the energy efficiency progress,
- the energy efficiency policies,
- a combination of all these criteria.

For each criterium each country is scored with a score between 0 and 1 on the basis of a variety of indicators that are explained in more detail in two complementary scoreboards: the first one on energy efficiency progress and level ([ODYSSEE Scoreboard for Indicators](#)) and the other one on policies ([MURE Scoreboard for Energy Efficiency Policies](#)).

The scoreboard can be viewed, either by criterion or by country; in the later case, the scoring is detailed for each country by criterion

[Methodology](#)

SUMMARY

### OVERALL: OVERALL ENERGY EFFICIENCY SCORE

The overall energy efficiency score is obtained as an average of the three scores obtained for "energy efficiency level", "energy efficiency progress" and "energy efficiency policies" (i.e. one third weighting).

UK	0.87
Ireland	0.85
Spain	0.82
Germany	0.77
Denmark	0.75
Romania	0.74
Italy	0.74

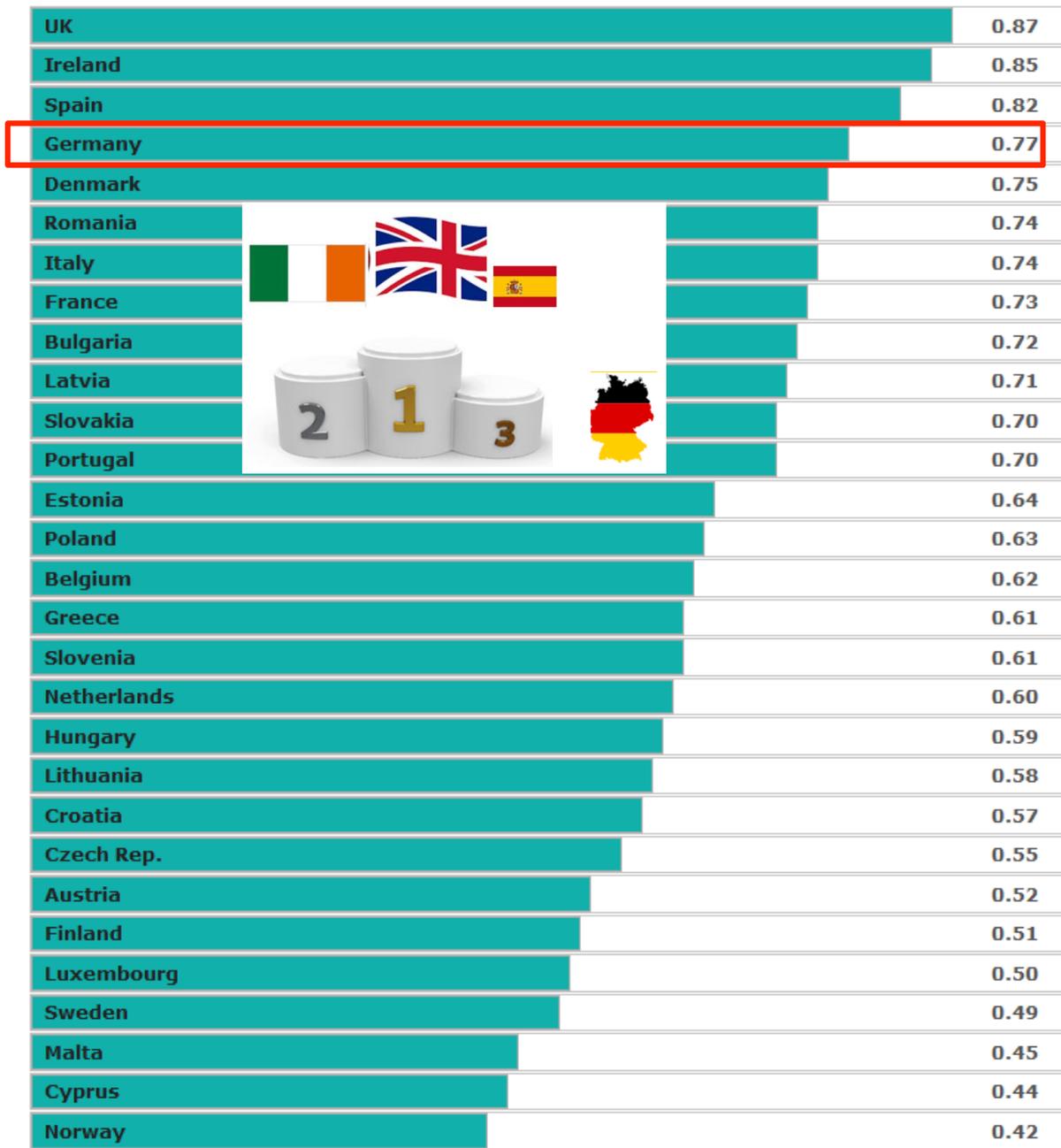
**Live demo in Browser**

[LINK](#)

[Back up](#)

<http://www.indicators.odyssee-mure.eu/energy-efficiency-scoreboard-combined.html>

(The Combined Scoreboard is in the phase completion. Later on this will be integrated into the official ODYSSEE-MURE website.)



# Combined Energy Efficiency Scoreboard

UK	1.00
Spain	0.95
Lithuania	0.94
Italy	0.91
France	0.88
Poland	0.87
Slovakia	0.87
Portugal	0.86
Austria	0.85
Denmark	0.85
Netherlands	0.84
Germany	0.84
Czech Rep.	0.82
Slovenia	0.82
Sweden	0.81
Greece	0.80
Latvia	0.80
Ireland	0.77
Estonia	0.74
Finland	0.65
Belgium	0.64
Hungary	0.61
Bulgaria	0.61
Malta	0.58
Croatia	0.57
Luxembourg	0.53
Romania	0.49
Cyprus	0.47
Norway	0.45

# Indicator Scoreboard EE Levels

# Indicator Scoreboard EE Trends

UK	1.00
Latvia	0.93
Slovakia	0.92
Romania	0.86
Portugal	0.84
Ireland	0.79
Belgium	0.77
Hungary	0.77
Greece	0.76
Lithuania	0.76
Bulgaria	0.75
Netherlands	0.74
Croatia	0.74
Poland	0.73
Luxembourg	0.70
Norway	0.68
France	0.66
Denmark	0.65
Sweden	0.65
Estonia	0.64
Spain	0.63
Czech Rep.	0.61
Austria	0.57
Cyprus	0.55
Italy	0.55
Germany	0.54
Malta	0.53
Slovenia	0.48
Finland	0.21

Ireland	1.00
Germany	0.91
Romania	0.87
Spain	0.87
Bulgaria	0.78
Denmark	0.74
Italy	0.74
Finland	0.66
France	0.66
UK	0.61
Estonia	0.53
Slovenia	0.53
Belgium	0.44
Croatia	0.40
Hungary	0.40
Latvia	0.40
Portugal	0.40
Cyprus	0.31
Slovakia	0.31
Greece	0.27
Luxembourg	0.27
Poland	0.27
Malta	0.23
Czech Rep.	0.23
Netherlands	0.23
Austria	0.14
Norway	0.14
Lithuania	0.05
Sweden	0.01

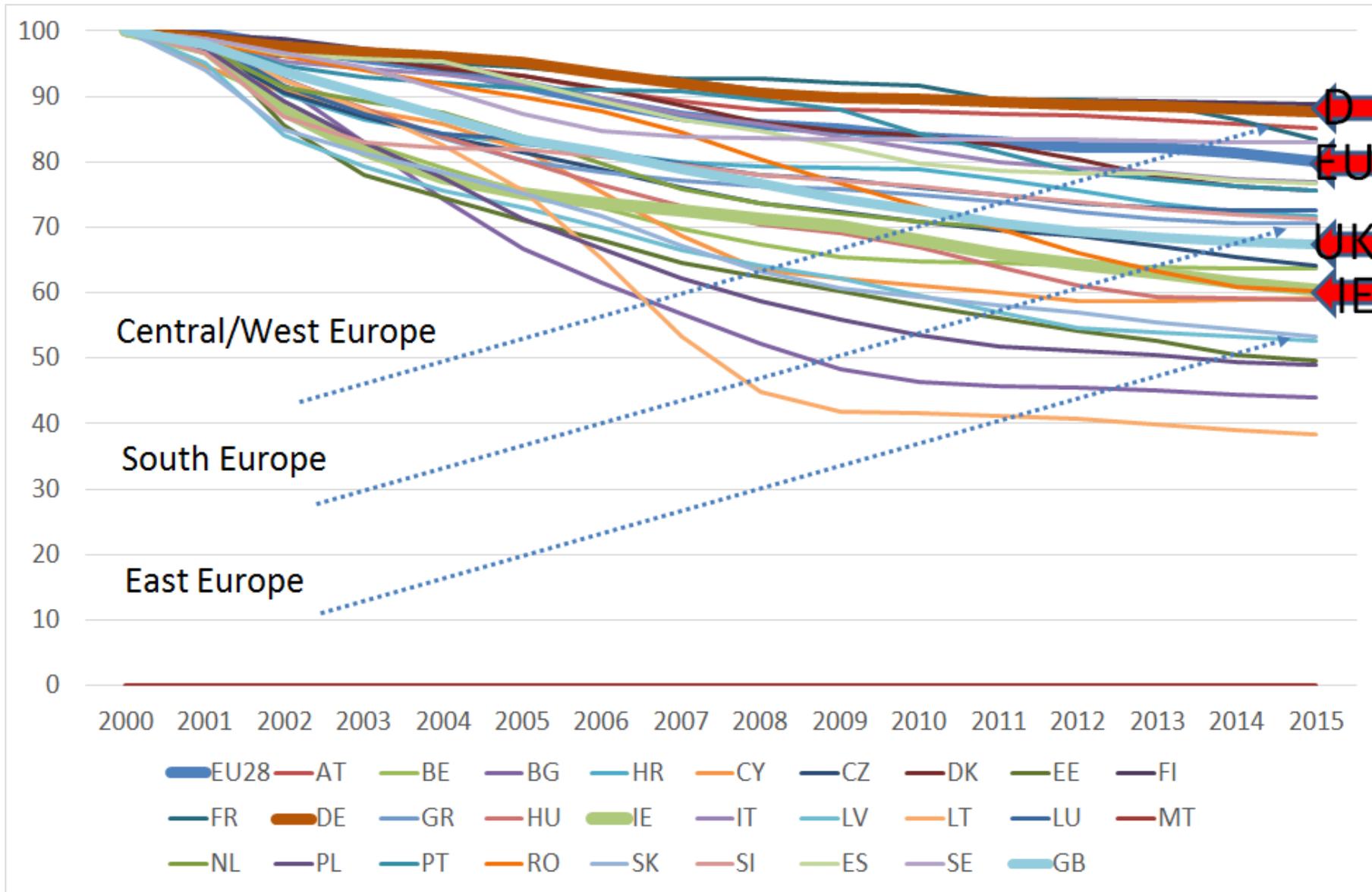
# EE Policy Scoreboard - a promise to the future

# Sectoral View Germany

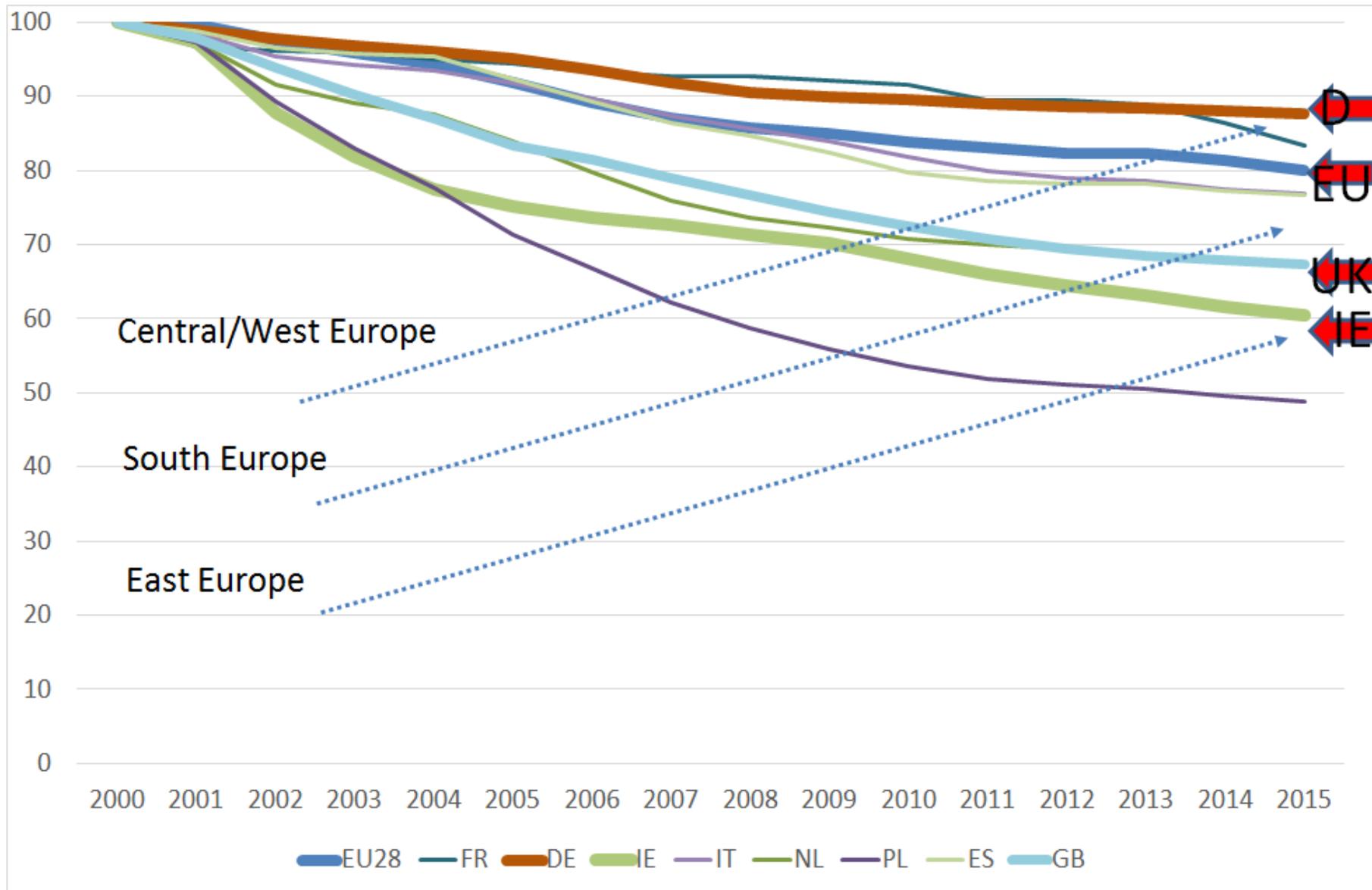
## GERMANY - SUMMARY

		Level	Trend	Policies	Combined
Overall	Germany	12 / 29	26 / 29	2 / 29	4 / 29
	Highest score (benchmark)	UK	UK	Ireland	UK
Industry	Germany	9 / 28	27 / 28	4 / 29	13 / 29
	Highest score (benchmark)	Italy	Lithuania	Denmark	Denmark
Transport	Germany	16 / 29	15 / 29	3 / 29	7 / 29
	Highest score (benchmark)	Italy	UK	Spain	Spain
Households	Germany	13 / 29	16 / 29	2 / 29	3 / 29
	Highest score (benchmark)	Bulgaria	Ireland	Ireland	Ireland
Services	Germany	18 / 29	7 / 29	5 / 29	5 / 29
	Highest score (benchmark)	Lithuania	Hungary	Ireland	Ireland

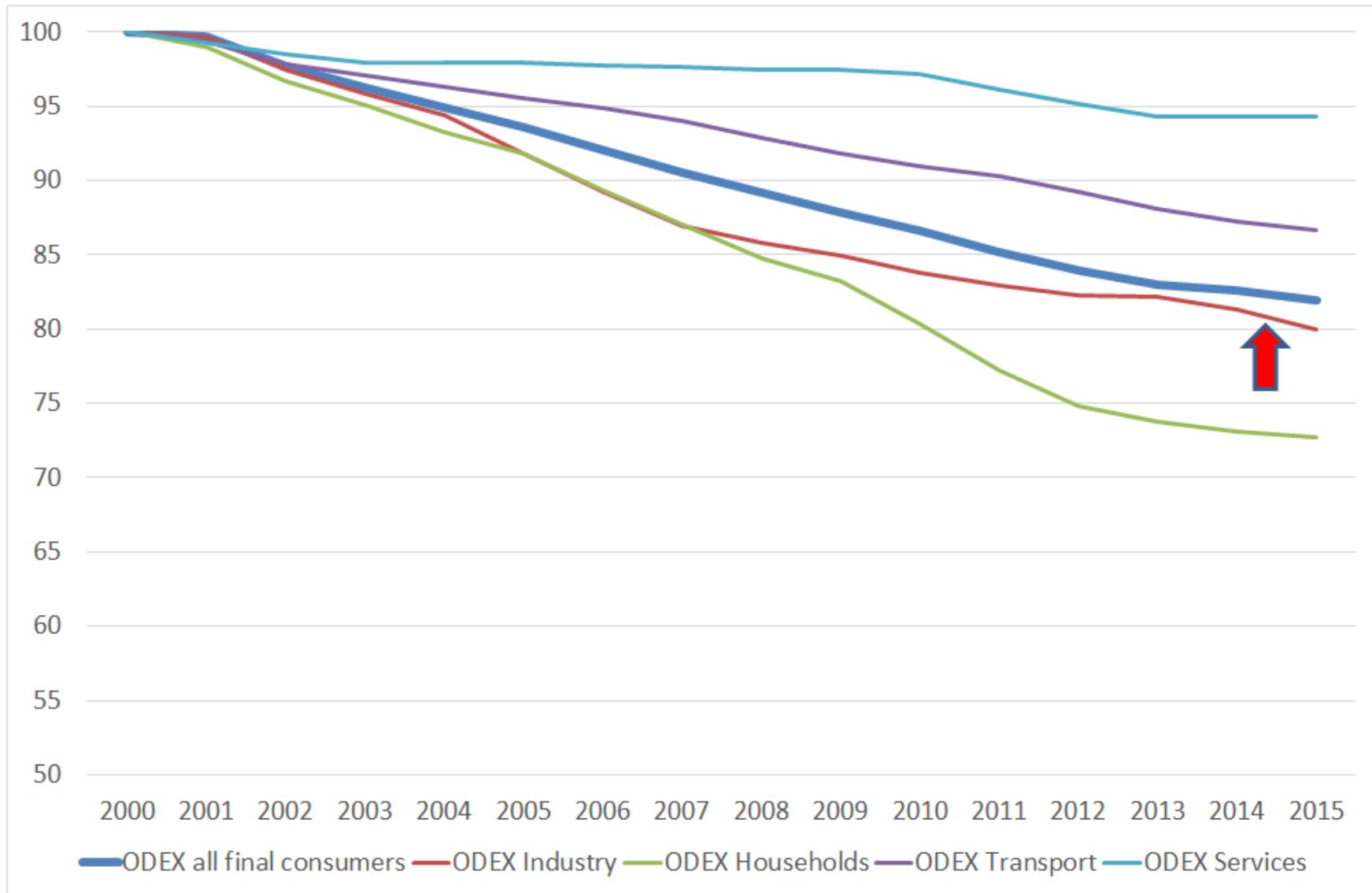
# ODEX: Industry (EU28 + Member States)



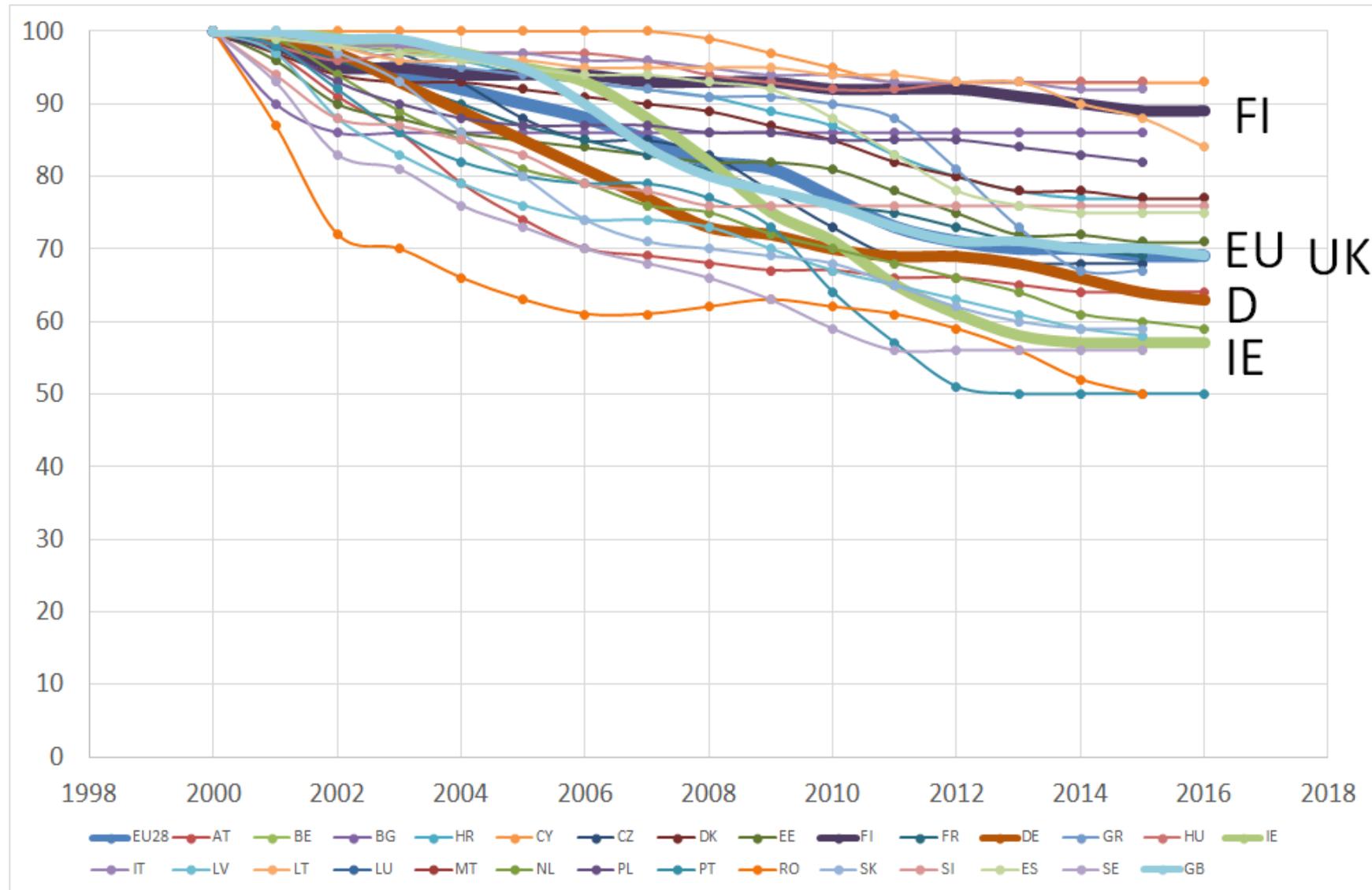
# ODEX: Industry (EU28 + Member States)



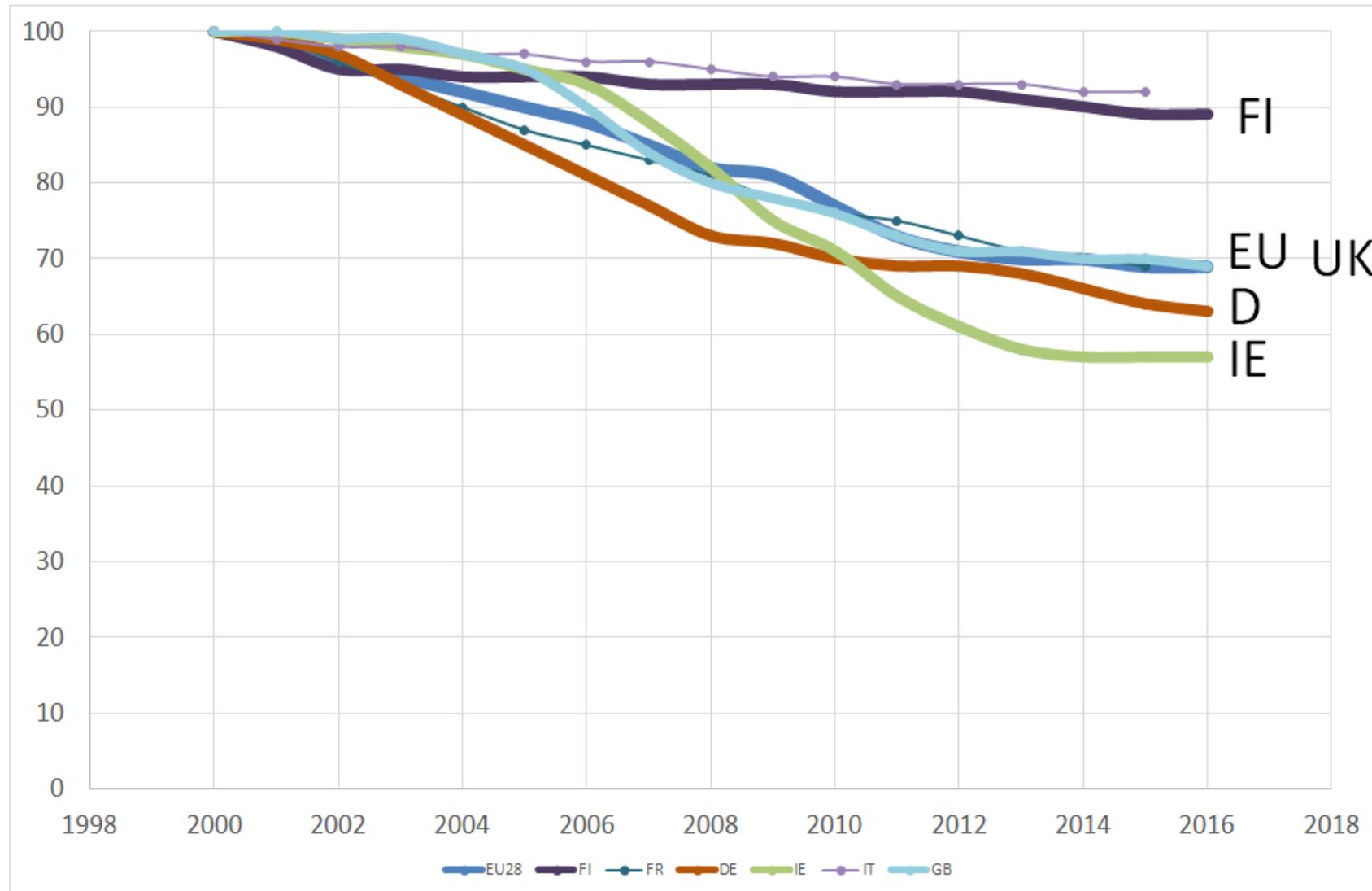
# ODEX: Industry (EU28) has been flattening off considerably since 2008



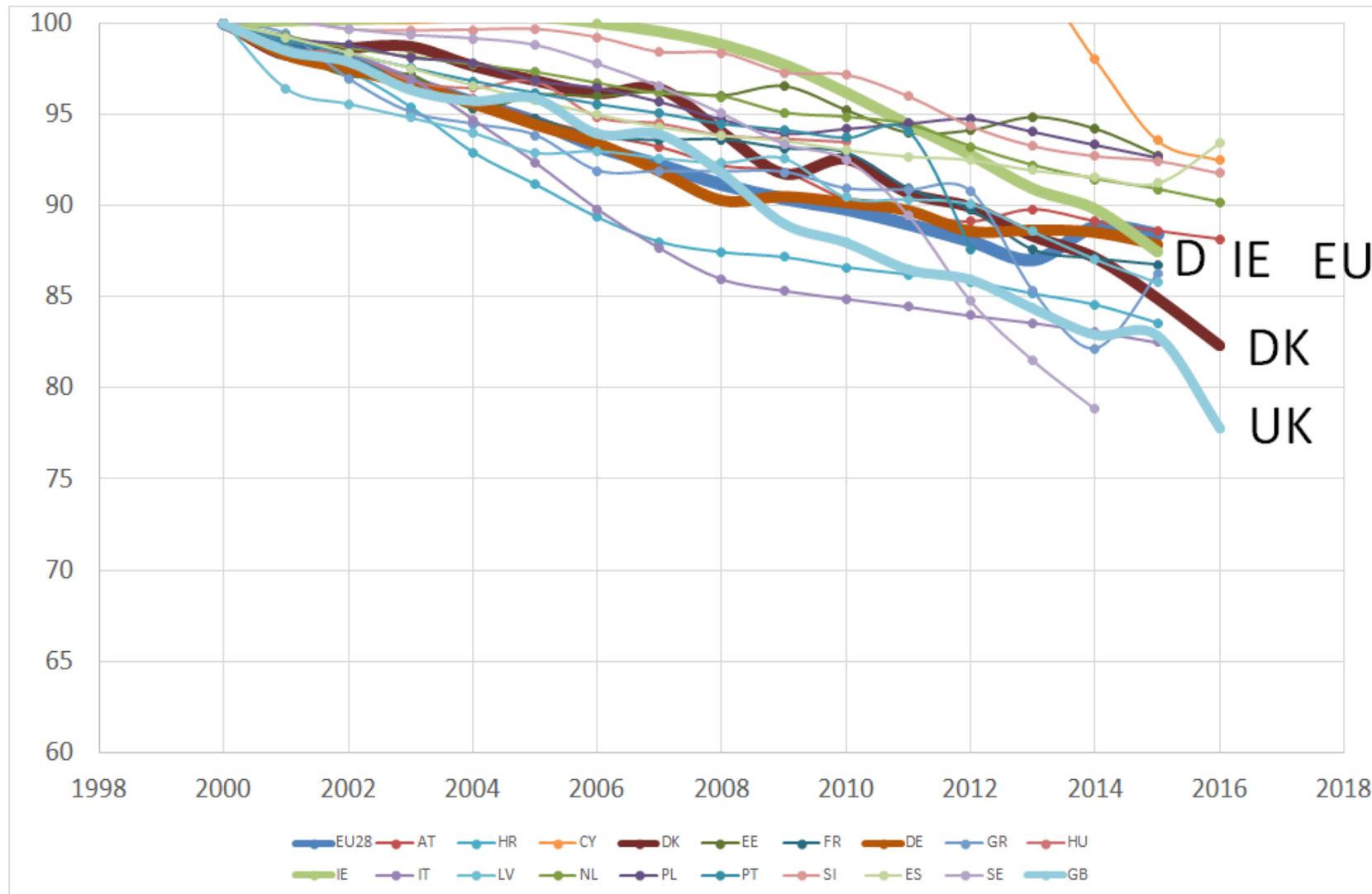
# ODEX: Space heating (per M2) (EU28 + Member States)



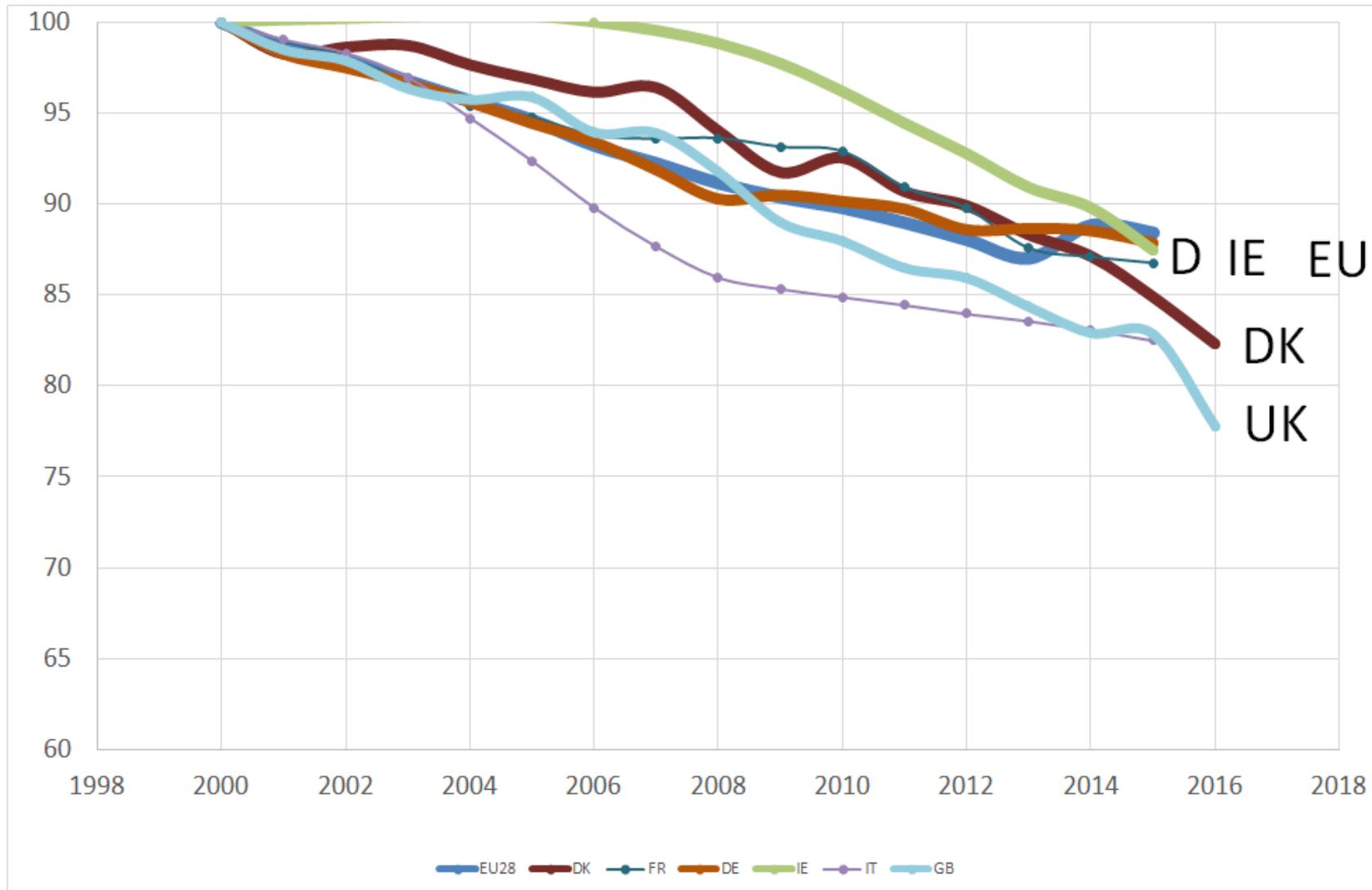
# ODEX: Space heating (per M2) (EU28 + Member States)



# ODEX: Passenger Transport by Cars (L/100km) (EU28 + Member States)



# ODEX: Passenger Transport by Cars (L/100km) (EU28 + Member States)



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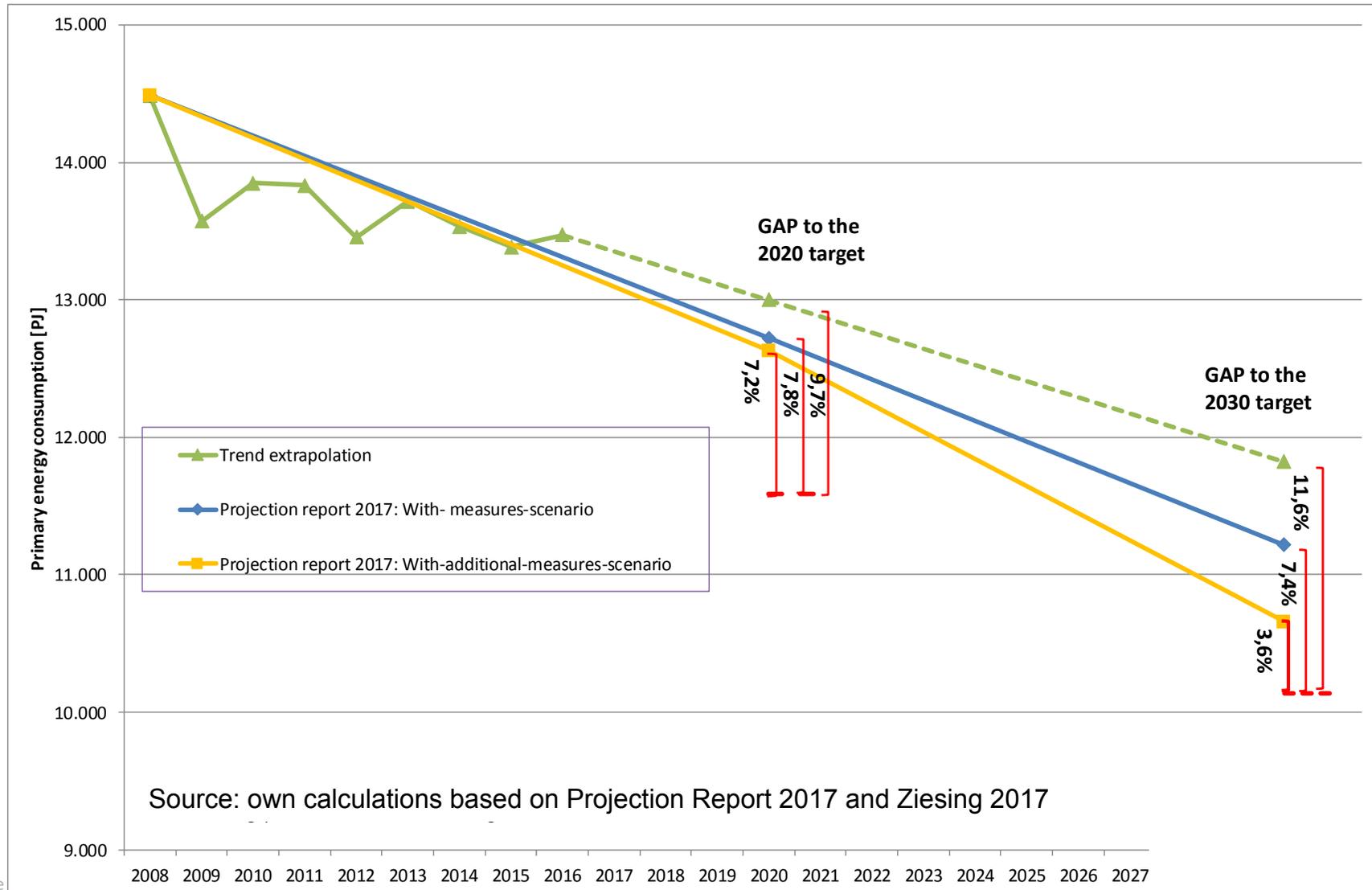
# IN SUMMARY: WHAT ARE LEADERS IN THE SCOREBOARD DOING

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## BETTER?

- **UK, next to Italy**, was particularly successful with passenger **transport** (cars): Fuel taxation; Limited access to city centers
- **Ireland** had good success in the **building sector**: large number of thermally renovated buildings (“Better Energy Homes”)
- **Industry**: Ireland and UK were performing considerably better than Germany, but partly this was supported by structural change
- However: Germany has a strong industrial basis. The more the country should innovate (**ETS Innovation Fund**)

# CURRENT GAP TO THE GERMAN ENERGY SAVINGS TARGET 2020 AND 2030



# MEDIUM-TERM TARGETS FOR 2030 FOR GERMANY IN THE FIVE ACTION AREAS

Area of action	1990 <i>(in million tonnes of CO<sub>2</sub> equivalent)</i>	2014 <i>(in million tonnes of CO<sub>2</sub> equivalent)</i>	2030 <i>(in million tonnes of CO<sub>2</sub> equivalent)</i>	2030 <i>(reduction in % compared to 1990)</i>
Energy sector	466	358	175 – 183	62 – 61 %
Buildings	209	119	70 – 72	67 – 66 %
Transport	163	160	95 – 98	42 – 40 %
Industry	283	181	140 – 143	51 – 49 %
Agriculture	88	72	58 – 61	34 – 31 %
Subtotal	1209	890	538 – 557	56 – 54 %
Other	39	12	5	87%
<b>Total</b>	<b>1248</b>	<b>902</b>	<b>543 – 562</b>	<b>56 – 55 %</b>

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# CONCLUSIONS

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- Overall good position of Germany in EU scoreboard, but...:
  - **Energy efficiency trends** have considerably slowed down, notably in industry but also in transport
  - **Energy efficiency levels** good average (countries are close together in that part of the scoreboard)
- Promise to the future: good scoring on **energy efficiency policies**, but policies must deliver and are not sufficient yet to reach the 2020 and 2030 targets
- Coalition Agreement: Energy Efficiency First; Continued development of the National Action Plan Energy Efficiency based on Green Book Energy Efficiency,...