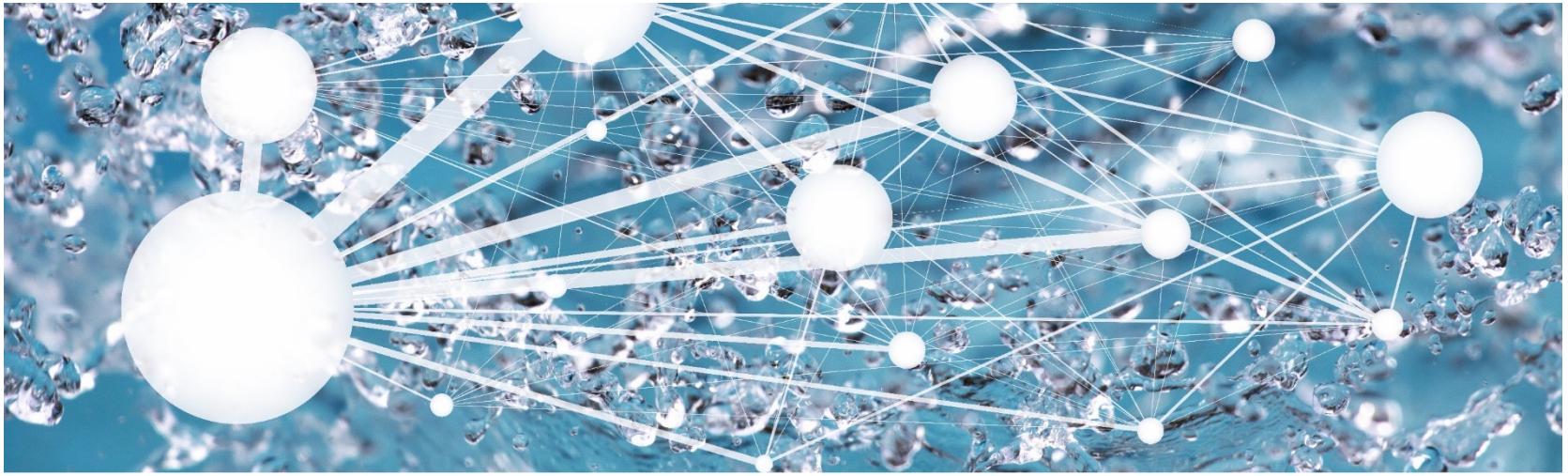
EFFORTS TO REDUCE ENERGY USE AND GHG EMISSIONS IN GERMANY

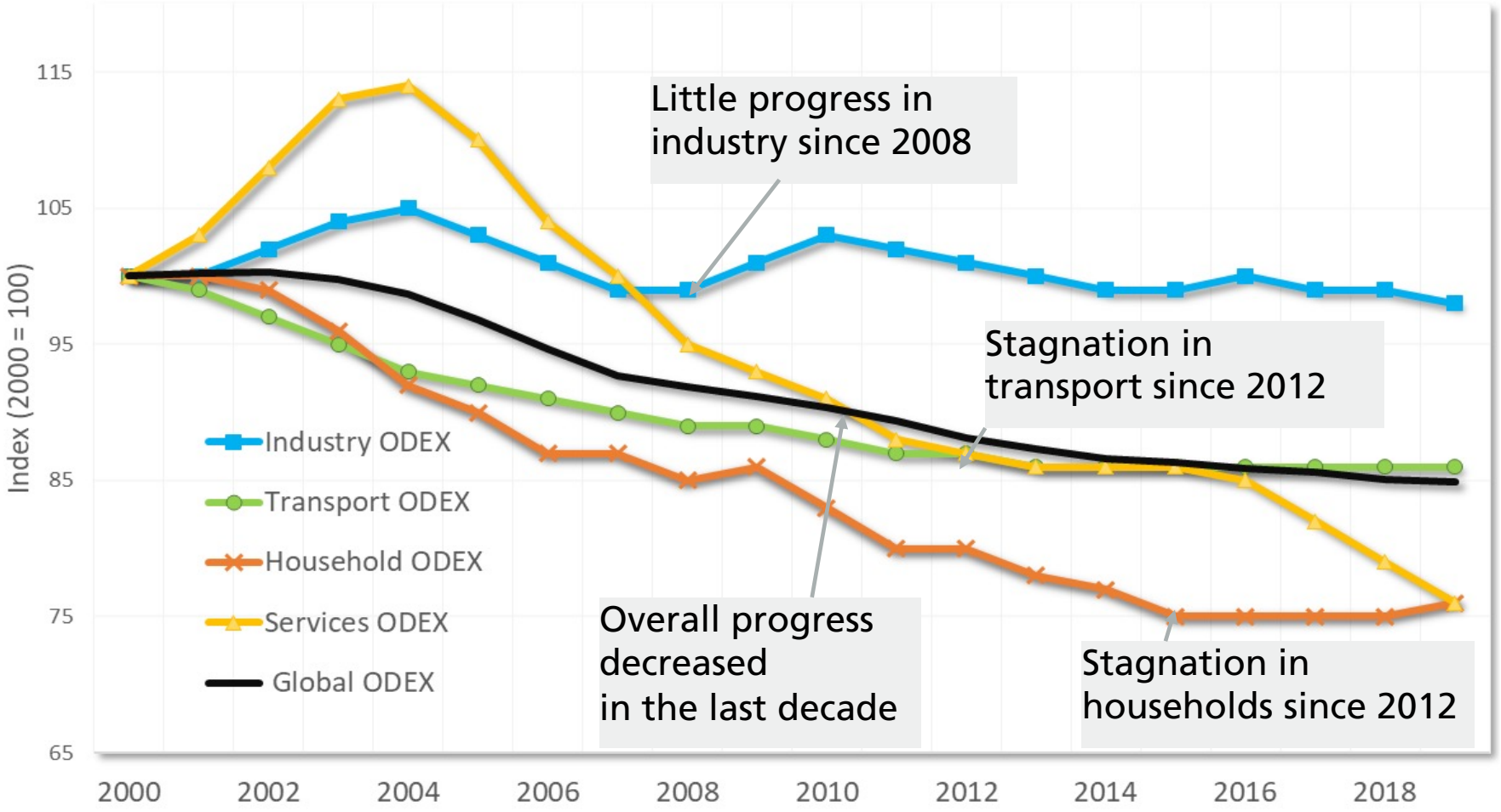
ACEEE 2022 International Scorecard Symposium
April 6, 2022



Barbara Schlomann
Fraunhofer Institute for Systems and Innovation Research ISI
Karlsruhe, Germany

Fraunhofer ISI

Energy efficiency progress in Germany 2000-2019
Measured by the energy efficiciency index ODEX



Source: ODYSSEE database (observed ODEX) - www.odyssee-mure.eu

Fraunhofer ISI

MILESTONES OF THE GERMAN ENERGY TRANSITION ("ENERGIEWENDE") 2010 - 2018

Date	Action of the German Government
Sept. 2010	Energy Concept including ambitious targets for GHG emissions, renewable energies and energy efficiency for 2020 and 2050
March 2011	Decision on a phase-out of nuclear energy by 2022
July 2011	Decisions on accelerating the transformation of the energy system ⇨ starting point of the German "Energiewende"
Oct. 2011	Implementation of an official Monitoring Process ⇨ yearly check of the success of the energy transition (targets / policies)
Dec. 2014	New programs to achieve 2020 targets: National Action Plan on Energy Efficiency (NAPE 1.0) Action Program on Climate 2020 (APC)
August 2016	Green Paper on Energy Efficiency ⇨ perspective 2030
Nov. 2016	Climate Action Plan 2050: non-binding GHG reduction targets for 2030 by sector
March 2018	Coalition Agreement of the new coalition elected in autumn 2017: announcement of ambitious energy efficiency and climate policies and a new Climate Change Act with binding sectoral GHG targets ⇨ > 1.5 years needed for a decision

Energy and Climate Policy Actions in Germany and the European Union since 2019

Oct. 2019
Climate Action Program 2030

Dec. 2019
Energy Efficiency Strategy 2050

Dec. 2019
Federal Climate Change Act

Dec. 2019
EU Green Deal

Tightened energy efficiency target

„Energy Efficiency First" principle

July 2020
Phase-out of coal until 2038

2021
EU „Fit-for-55" package

12 EU Directives to be adapted

Roadmap Energieeffizienz 2045

March 8, 2022
REPowerEU

Plan to make EU independent from Russian fossil fuels

Nov. 2021
Coalition Agreement of the new German Government

Easter / Summer 2022

Planned decisions of the new German Government on a „Climate Action Program 2022" including a large number of new and enhanced energy and climate policy measures for all sectors of the Climate Change Act

23 March 2022
Measure package of the German government to reduce impact of high energy costs and dependency on Russian gas

2019 2020

Energy Efficiency Measures in the Climate Action Program 2019

Buildings:
More funding for efficient buildings
Tax incentives for building renovation
New „Buildings Energy Act"

Industry:
New large funding program for energy efficiency and renewable heat

Transport:
Funding programs for electric mobility

Cross-cutting:
New pricing system for GHG emissions

2021

EU „Fit-for-55" package

Planned revisions of many relevant EU Directives:

- Energy Efficiency Directive
- Energy Performance of Buildings Directive
- Tightened CO2 emission standards for vehicles
- Emission Trading Scheme
- Effort Sharing Regulation

2022

Announced energy efficiency measures for the new German Climate Action Program 2022

- New Energy Efficiency Law
- Reduction of levies on electricity consumption
- Accelated expansion of renewable energies and hydrogen
- Increased funding of decarbonisation and energy efficiency in industry, accelerated depreciation
- Buildings: increased funding programs for renovation and heat pumps, phase-out of heating systems based on fossil fuels
- Accelerated expansion of electric mobility

Fraunhofer ISI

RESULTS OF THE EUROPEAN ENERGY EFFICIENCY SCOREBOARD 2020

Best top Overall Score – ranking top

Rank	Country	Score
1	Switzerland	0.92
2	UK	0.80
3	Ireland	0.78
4	Romania	0.77
5	France	0.72

Level – overall (all sectors) ranking top 5

Rank	Country	Score
1	Lithuania	1.0
2	Switzerland	0.86
3	Denmark	0.79
4	Spain	0.79
5	Portugal	0.77

Trend – overall (all sectors) ranking top 5

Rank	Country	Score
1	Romania	1.0
2	Ireland	0.96
3	UK	0.91
4	Switzerland	0.90
5	Slovakia	0.89

Policy – overall (all sectors) ranking top 5

Rank	Country	Score
1	France	1.0
2	Switzerland	1.0
3	Finland	0.95
4	Ireland	0.86
5	Germany	0.82

Source: ODYSSEE-MURE https://www.odyssee-mure.eu/data-tools/scoring-efficiency-countries.html

ODYSSEE-MURE

Fraunhofer ISI

Conclusions

- The overall good position of Germany in the ACEEE and ODYSSEE-MURE energy efficiency ranking is mainly due to a good scoring on energy efficiency policies ⇨ but policies must deliver and are not yet sufficient to reach the ambitious national 2030 GHG targets
- Energy efficiency trends in Germany have considerably slowed down in the last decade ⇨ much more action is needed
- "Energy Efficiency First" as a guiding principle in Germany and the EU is an important step – but concrete implementation is still lacking
- Until end of 2021, energy efficiency policy in Germany was mainly triggered by ambitious energy efficiency and climate targets at the national and EU level ⇨ Since 2022, energy security and the urgent need to reduce imports from fossil fuel is another important driver for energy efficiency
- The "Multiple Benefits of Energy Efficiency" thus also gain a higher importance

Thank you for your attention

Contact

Barbara Schlomann

Fraunhofer Institute for Systems and Innovation Research ISI

barbara.schlomann@isi.fraunhofer.de

www.isi.fraunhofer.de

Fraunhofer ISI