Co-funded by the Horizon 2020 programme
of the European Union

ODYSSEE-MURE

M68 full and regular meetings
February 17th &18th 2021

WG “decision support tools for Energy Efficiency policies evaluation”

So-called WG “Monitoring tools”

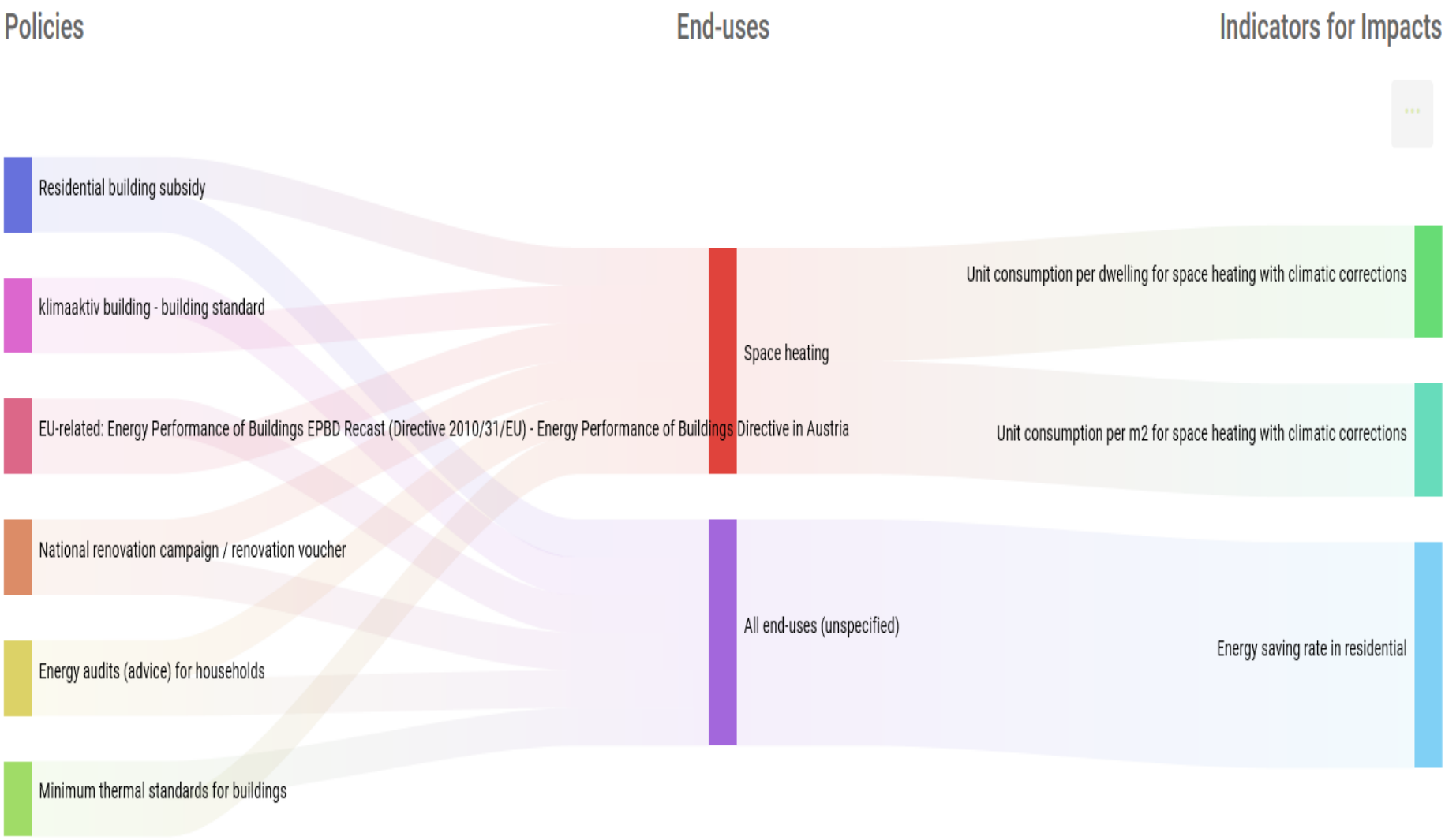
Evaluation report

Dr Didier Bosseboeuf, ADEME; WG Chair

ADEME
AGENCE DE LA TRANSITION ÉCOLOGIQUE

The Graal

To monitor and evaluate EE policies impact through EE Indicators
Top-down (ODYSSEE) versus Bottom-up (MURE)



Objectives and key features

- The EnR monitoring tools ODYSSEE MURE have been supported by the H2020 programme of the European Commission from the last 25 years. It covers 31 countries*, mainly energy efficiency agencies or Ministries; coordinated by ADEME
- **Its main objectives are to exchange of information and provide evidences :**
  - ✓ Evaluate and compare energy efficiency progress by sector, in relation to the observed trend in energy consumption and to the EU targets ;
  - ✓ Evaluate energy efficiency policy measures and identify the “best measures” .
  - ✓ New topics each round (Ex: EE1P; fuel poverty, sufficiency for 2020-21)

- The project relies on two data bases:
  - ✓ **ODYSSEE** on energy efficiency indicators;
  - ✓ **MURE** on all policy measures implemented by sector, and their impact evaluation.
    - ✓ Decentralised data collection which ensures a legitimacy of the results
    - ✓ Exchange on methodologies, interpretation through workshops gathering 60 experts
    - ✓ Harmonised data collection allowing data going « beyond the energy balance », Rapid updating (- one year), quality check

**28 EU Member States (UK included)+ Norway, Serbia and Switzerland*

The EnR monitoring tools
ODYSSEE (200 Indicators) & MURE (2500 P&Ms)

The EnR WG Monitoring tool network : 150 experts mainly from energy efficiency agencies

AUSTRIA
Austrian Energy Agency

BELGIUM
Ministry of Economy and Energy

BULGARIA
Sustainable Energy Development Agency

CROATIA
Energy Institute Hrvoje Požar

CYPRUS
Cyprus University of Technology

CZECH REPUBLIC
ENVIROS

DENMARK
Danish Energy Agency

ESTONIA
Tallinn University of Technolog

FINLAND
Motiva

FRANCE
Agency for Ecological Transition (ADEME)

FRANCE
Enerdata

GERMANY
Fraunhofer ISI

Co-ordinator

GREECE
Centre For Renewable Energy Sources And Saving

HUNGARY
Hungarian Energy and Public Utility Regulatory Authority

IRELAND
Sustainable Energy Authority of Ireland

ITALY
National Agency for New Technologies, Energy and the Environment

LATVIA
Institute of Physical Energetics

LITHUANIA
Lithuanian Energy Institute

LUXEMBOURG
MyEnergy

MALTA
Energy & Water Agency

NORWAY
Institute for Energy Technology

POLAND
Central Statistical Office of Poland

POLAND
Polish National Energy Conservation Agency

PORTUGAL
Energy Agency ADENE

ROMANIA
Regulatory Authority for Energy

SERBIA
Institute Nikola Tesla Belgrade

SLOVAKIA
Slovak Innovation and Energy Agency

SLOVENIA
Jozef Stefan Institute

SPAIN
Institute for the Diversification And Saving of Energy (IDAE)

SWEDEN
Borg and CO / ECEEE

SWEDEN
Swedish Energy Agency

SWITZERLAND
University of Geneva

SWITZERLAND
Zurich University of Applied Sciences

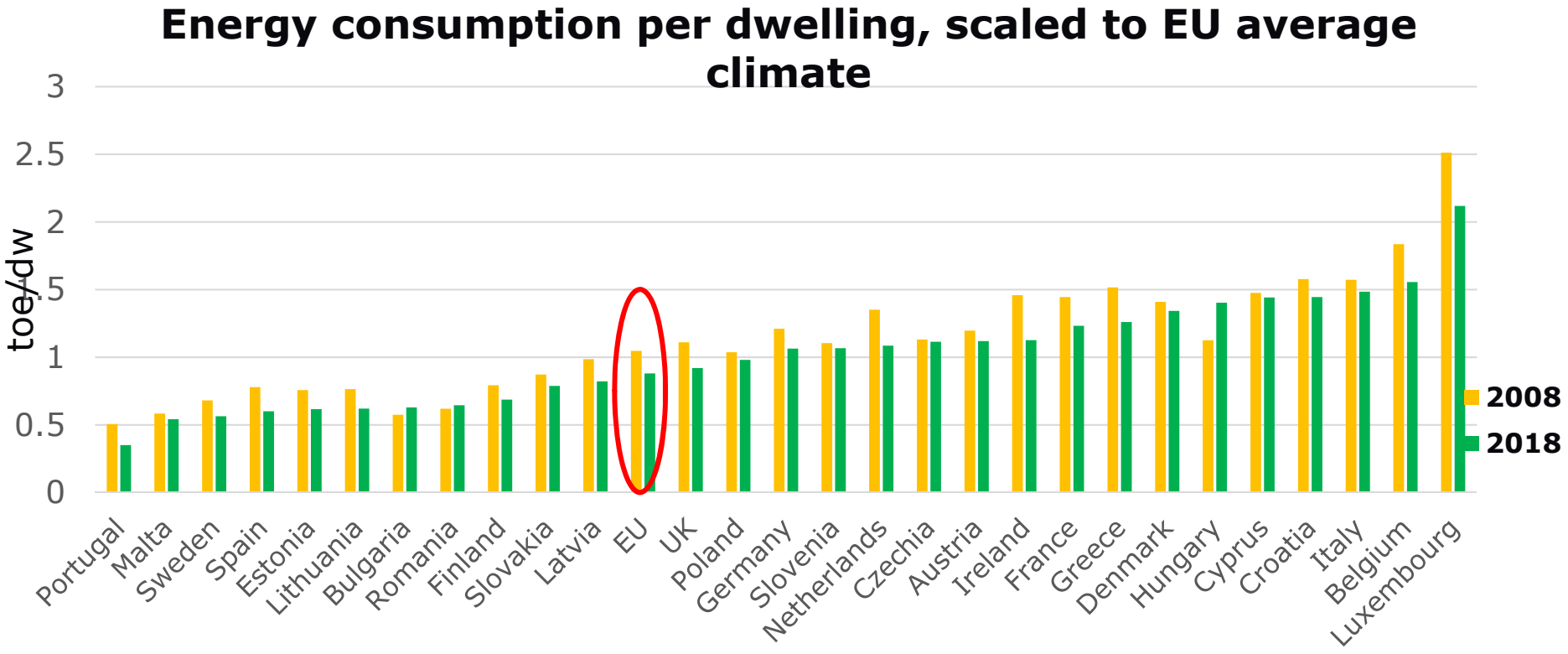
THE NETHERLANDS
Energy research Centre

THE NETHERLANDS
Ministry of Economic Affairs

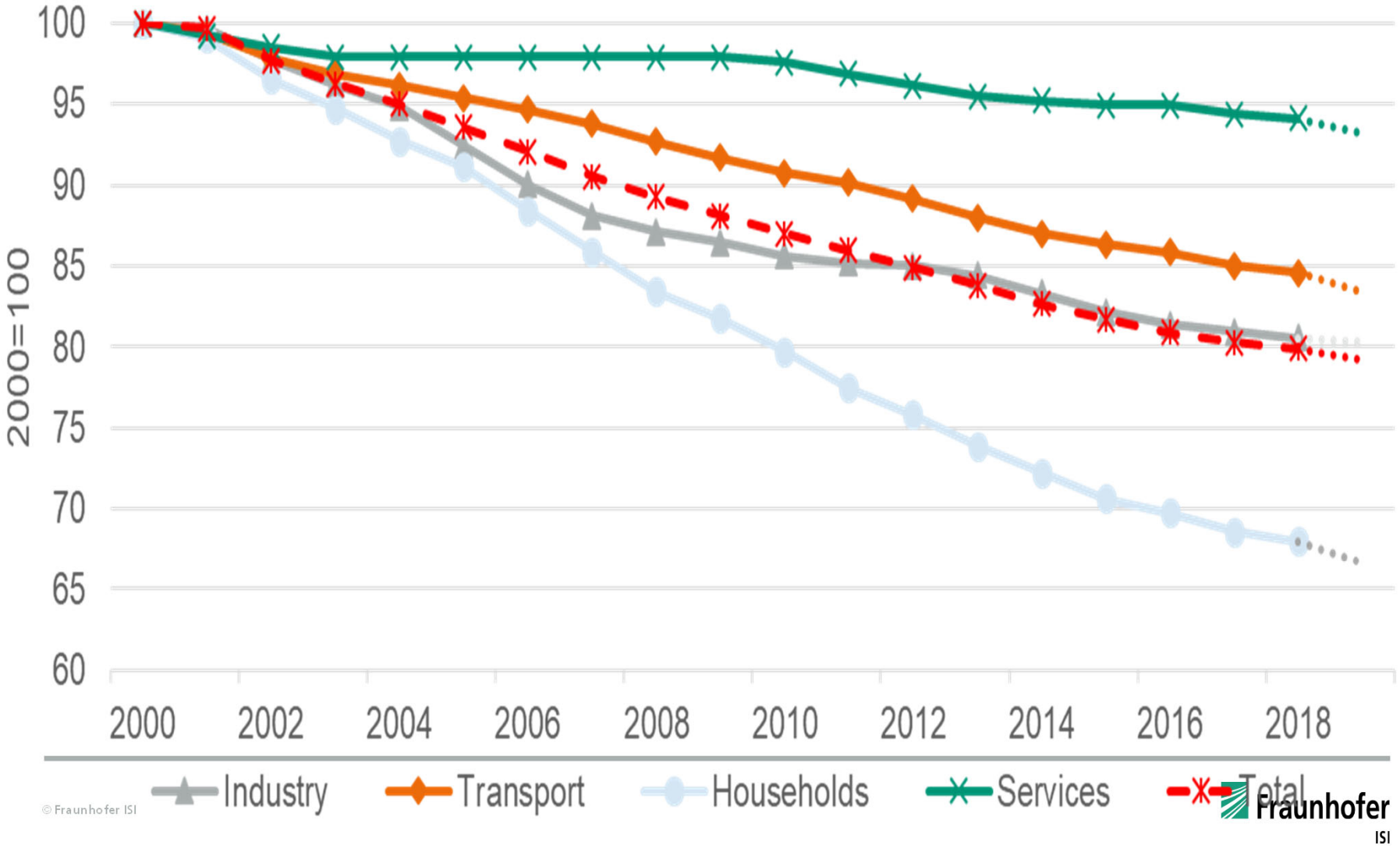
UNITED KINGDOM
Ricardo Energy & Environment

We deliver a unique and original data set of energy efficiency evaluation both at national and EU Levels

In 2018, the energy consumption per dwelling is 0.9 toe/dwelling on average in the EU.
It shows large disparities among countries, even after adjustment to the same climate, ranging from 0.35 toe/dw in Portugal to six times more in Luxembourg (2.1 toe/dw).
This unit consumption is decreasing in all countries (-1.7%/year on the EU scale), except in Bulgaria, Romania and Hungary.



We deliver advanced methodologies (ODEX and early estimates etc.)

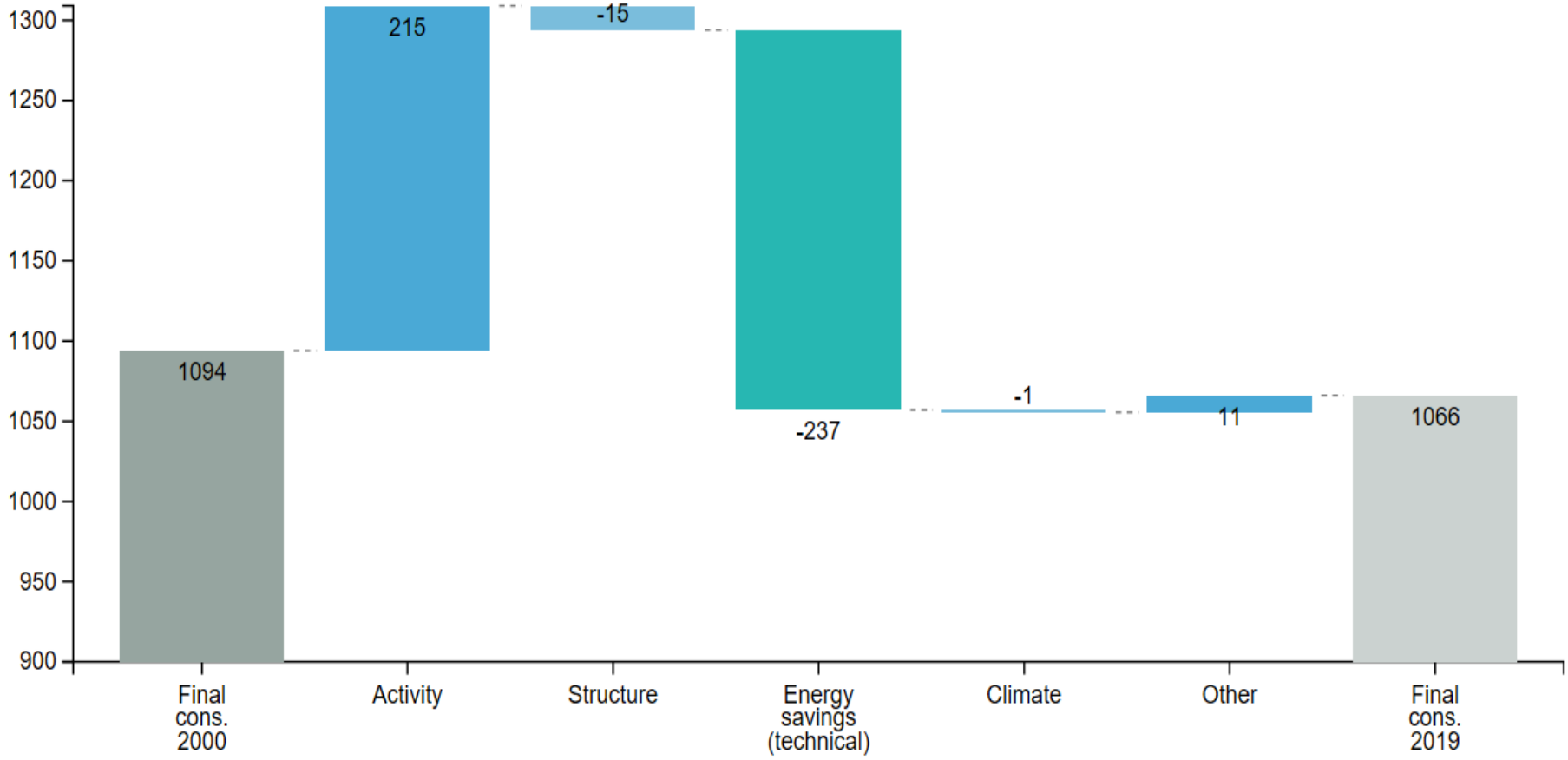


We deliver advanced methodologies
Decomposition analysis and energy saving calculation

VARIATION FINAL ENERGY CONSUMPTION
EUROPEAN UNION 28
MTOE (2000-2019)

VARIATION ENERGY INTENSITY

EXCEL

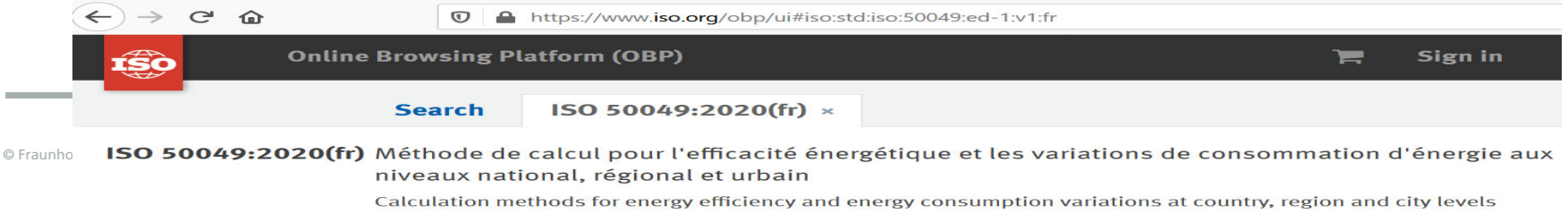


The methodology of these tools is implemented in 70 countries..

- **Europe/EC :** (DGEN, JRC, EEA, Eurostat, ECEEE, EnR club)
- **OECD/IEA** : (EEUMD for G20),
- **G20** : With the co-chairing of IEA (EEUDM project)
- **Latin America** : UN-CEPAL (project BIEE& ROSE 25 countries), Mexico (AFD-CONUEE),
- **Africa** : (MEDENER/MEETMED (7 SEMCs)
- **Asia** : India (BEE)

- **National level (e.g. German Ministry of Economic Affairs BMWi)**

- **ISO 500049**: Energy saving calculation at country, region and cities : Energy efficiency index, structural changes of energy intensities and decomposition analysis

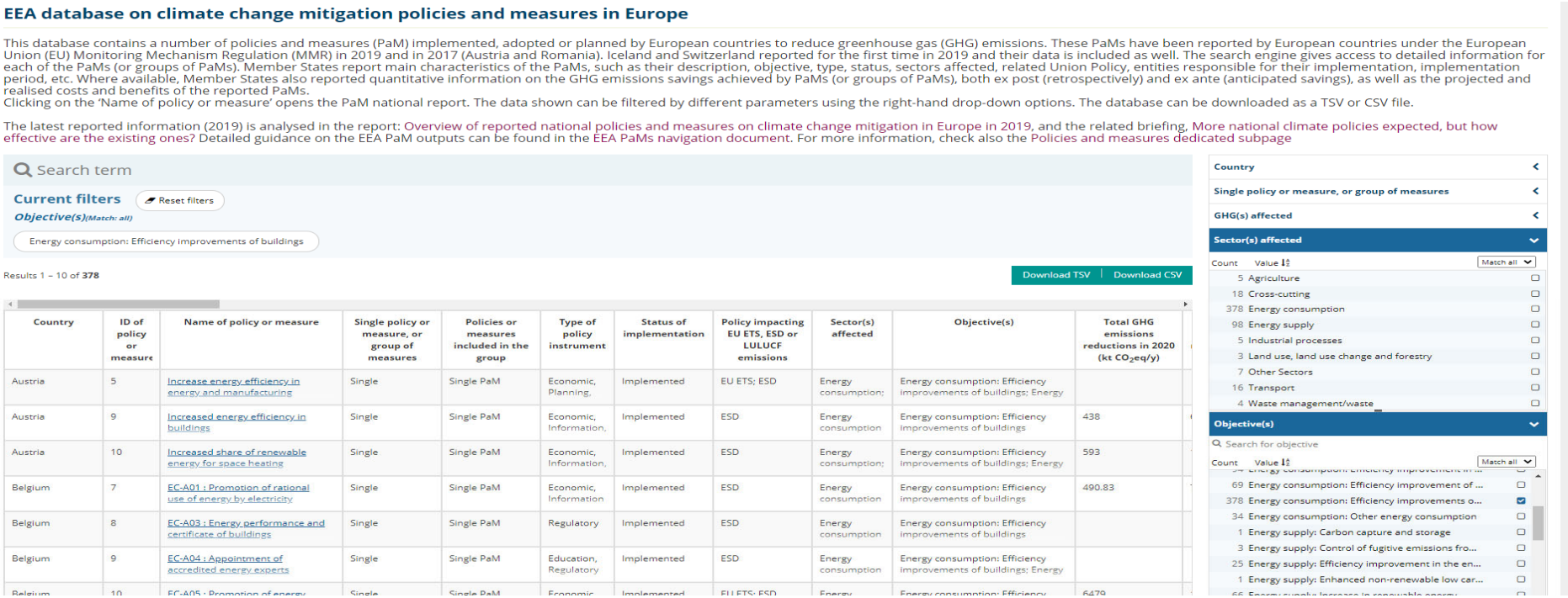


What does EEA think about the MURE data base?

EEA Policy and Measures (P&Ms) data base benchmark study identified qualities of MURE database

- Comprehensive, reliable, accessible, better geo scope, energy sector
- Complementary for policy evaluation:
  - (++) Better for coherence
  - (+) Very good for evaluating of efficiency and effectiveness (energy PaMs)

http://pam.apps.eea.europa.eu



EEA database on climate change mitigation policies and measures in Europe

This database contains a number of policies and measures (PaM) implemented, adopted or planned by European countries to reduce greenhouse gas (GHG) emissions. These PaMs have been reported by European countries under the European Union (EU) Monitoring Mechanism Regulation (MMR) in 2019 and in 2017 (Austria and Romania). Iceland and Switzerland reported for the first time in 2019 and their data is included as well. The search engine gives access to detailed information for each of the PaMs (or groups of PaMs). Member States report main characteristics of the PaMs, such as their description, objective, type, status, sectors affected, related Union Policy, entities responsible for their implementation, implementation period, etc. Where available, Member States also reported quantitative information on the GHG emissions savings achieved by PaMs (or groups of PaMs), both ex post (retrospectively) and ex ante (anticipated savings), as well as the projected and realised costs and benefits of the reported PaMs.
Clicking on the 'Name of policy or measure' opens the PaM national report. The data shown can be filtered by different parameters using the right-hand drop-down options. The database can be downloaded as a TSV or CSV file.

The latest reported information (2019) is analysed in the report: Overview of reported national policies and measures on climate change mitigation in Europe in 2019, and the related briefing, More national climate policies expected, but how effective are the existing ones? Detailed guidance on the EEA PaM outputs can be found in the EEA PaMs navigation document. For more information, check also the Policies and measures dedicated subpage

Search term

Current filters | Reset filters

Objective(s) (Match: all)

Energy consumption: Efficiency improvements of buildings

Results 1 – 10 of 378

Download TSV | Download CSV

Country	ID of policy or measure	Name of policy or measure	Single policy or measure, or group of measures	Policies or measures included in the group	Type of policy instrument	Status of implementation	Policy impacting EU ETS, ESD or LULUCF emissions	Sector(s) affected	Objective(s)	Total GHG emissions reductions in 2020 (kt CO_2eq/y)
Austria	5	Increase energy efficiency in energy and manufacturing	Single	Single PaM	Economic, Planning,	Implemented	EU ETS; ESD	Energy consumption;	Energy consumption: Efficiency improvements of buildings; Energy	
Austria	9	Increased energy efficiency in buildings	Single	Single PaM	Economic, Information,	Implemented	ESD	Energy consumption	Energy consumption: Efficiency improvements of buildings	438
Austria	10	Increased share of renewable energy for space heating	Single	Single PaM	Economic, Information,	Implemented	ESD	Energy consumption;	Energy consumption: Efficiency improvements of buildings; Energy	593
Belgium	7	EC-A01 : Promotion of rational use of energy by electricity	Single	Single PaM	Economic, Information	Implemented	ESD	Energy consumption	Energy consumption: Efficiency improvements of buildings	490.83
Belgium	8	EC-A03 : Energy performance and certificate of buildings	Single	Single PaM	Regulatory	Implemented	ESD	Energy consumption	Energy consumption: Efficiency improvements of buildings	
Belgium	9	EC-A04 : Appointment of accredited energy experts	Single	Single PaM	Education, Regulatory	Implemented	ESD	Energy consumption	Energy consumption: Efficiency improvements of buildings; Energy	
Belgium	10	EC-A05 : Promotion of energy	Single	Single PaM	Economic	Implemented	EU ETS; ESD	Energy	Energy consumption: Efficiency	6479

Country

Single policy or measure, or group of measures

GHG(s) affected

Sector(s) affected

Count Value Match all

5 Agriculture
18 Cross-cutting
378 Energy consumption
98 Energy supply
5 Industrial processes
3 Land use, land use change and forestry
7 Other Sectors
16 Transport
4 Waste management/waste

Objective(s)

Search for objective

Count Value Match all

69 Energy consumption: Efficiency improvement of ...
378 Energy consumption: Efficiency improvements o...
34 Energy consumption: Other energy consumption
1 Energy supply: Carbon capture and storage
3 Energy supply: Control of fugitive emissions fro...
25 Energy supply: Efficiency improvement in the en...
1 Energy supply: Enhanced non-renewable low car...

How the E.C. uses ODYSSEE-MURE outputs


EUROPEAN COMMISSION

Brussels, 30.11.2016
SWD(2016) 405 final

PART 1/3

COMMISSION STAFF WORKING DOCUMENT

IMPACT ASSESSMENT

Accompanying the document

Proposal for a Directive of the European Parliament and of the Council amending Directive 2012/27/EU on Energy Efficiency

{COM(2016) 761 final}
{SWD(2016) 406 final}

European Commission

Clean energy
for all Europeans

Good practice
in energy efficiency

For a sustainable, safer and more competitive Europe

210 x 297 mm

- Reporting for National Energy and Climate Plans NECPs (and previously National Energy Efficiency Action Plans NEEAPs)
- Impact assessments (e.g. Energy Efficiency Directive, Energy Performance Directive for Buildings)
- Monitoring of targets (e.g. with the ODYSSEE decomposition tool)
- Monitoring of measures with MURE (e.g. analysis of measures contributing to the 2030 energy efficiency targets, identification of gaps and measures who could close the gaps)
- European Energy Efficiency Scoreboard: comparison of national efforts

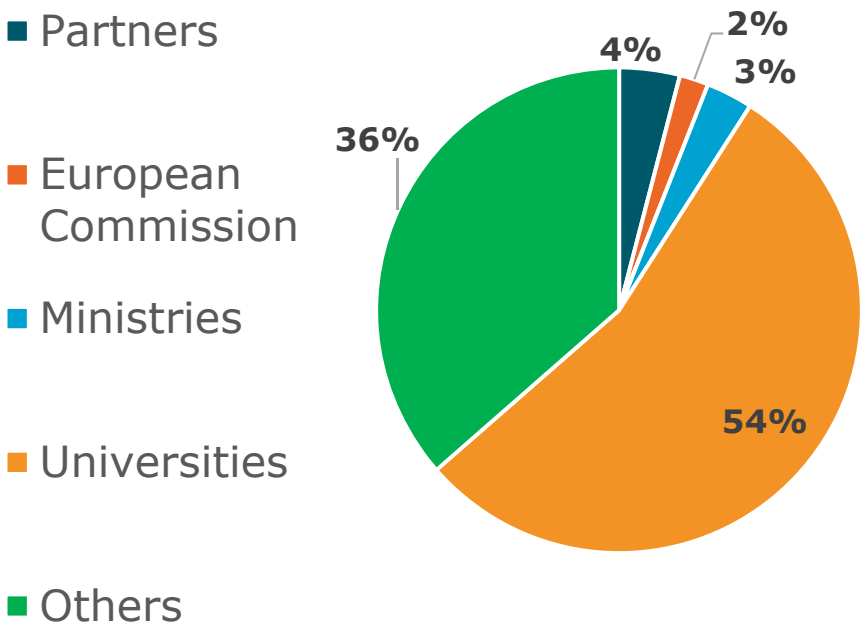
Fraunhofer ISI

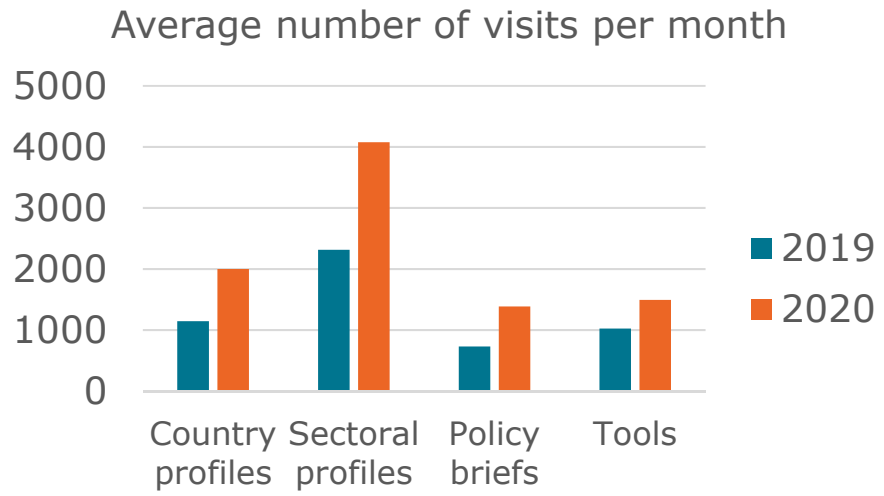
A comprehensive dissemination strategy using 10 complementary channels

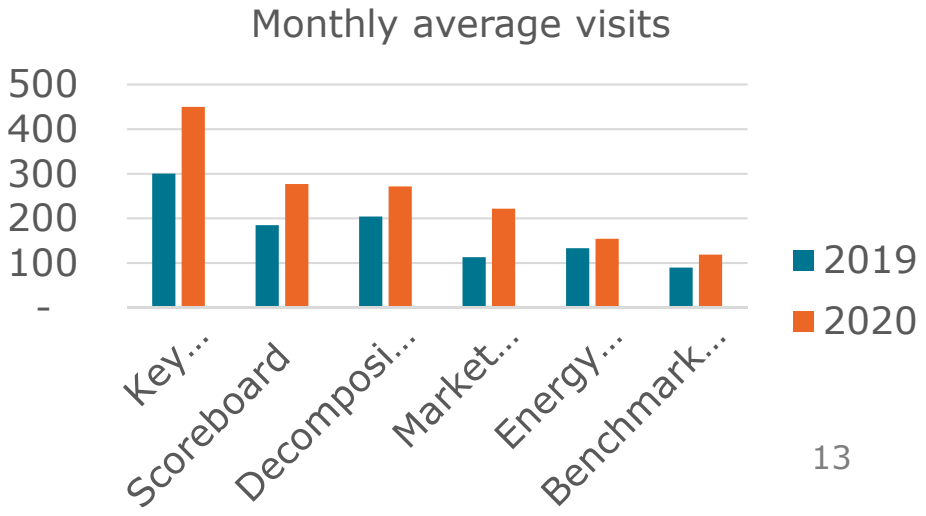
1. Website EnR and ODYSSEE-MURE (400 000 views per year)
2. 32 Country energy profiles (Updated one a year)
3. 200 Sectoral profiles (Updated once a year)
4. 22 Policy briefs 6) done) and 7 webinars (3 done)
5. 6 Newsletters (3 done)
6. National reports (17 planned)
7. National seminars (2 achieved among 14 planned)
8. 3 Capacity building trainings to public authorities (2 oocured)
9. International dissemination (DGEN; EEA; IEA, UN-ECLAC etc;)
10. Scoreboard (ECEEE web site)

Website

400 000 visits per year and it's increasing







22 Policy briefs and 7 associated webinars

22 policy briefs aiming at highlighting key results stemming from the project will be produced. These policy briefs consist in 4 pages dedicated to present energy efficiency trends or best practices in energy efficiency policy.

7 webinars focussing on the policy briefs are with Leonardo Academy. The webinar recordings and presentations are available at http://www.odyssee-mure.eu/events/webinar/.

Topic	Sector	Organisation	Year	Month	Webinar	Status
Energy efficiency trends in the EU: Have we got off track?	**EE**	**Enerdata**	**2020**	**June**	**June 25 2020**	Published
Evaluation of (transport) energy efficiency policy	Transport	Ricardo	2020	July		Published
CO2 emissions of vehicles: a broad and persistent problem	**Transport**	**TNO**	**2020**	**October**	**October 29 at 2 PM**	Review
Road transport : Externalities and efficient pricing	EE	ZHAW	2020	October		Published
How energy and carbon dioxide taxes are related to energy efficiency?	EE	STEM	2020	November		
Energy poverty and energy efficiency	Buildings	ENEA	2020	November		Review
The Multiple Benefits of Energy Auditing.	Buildings	EWA	2020	November		
Incentives on Energy poverty	EE	ENEA	2020	December		
"The role of Energy Efficiency Measures for a Green Economic Recovery after the Pandemic	EE	CUT	2020	December		
Enerrgy efficiency in buildings	**EE**	**Enerdata**	**2020**	**December**	**December 8 at 1:30 PM**	
The impact of rehabilitation programmes on the energy efficiency of the buildings	Buildings	IDAE	2020	December		

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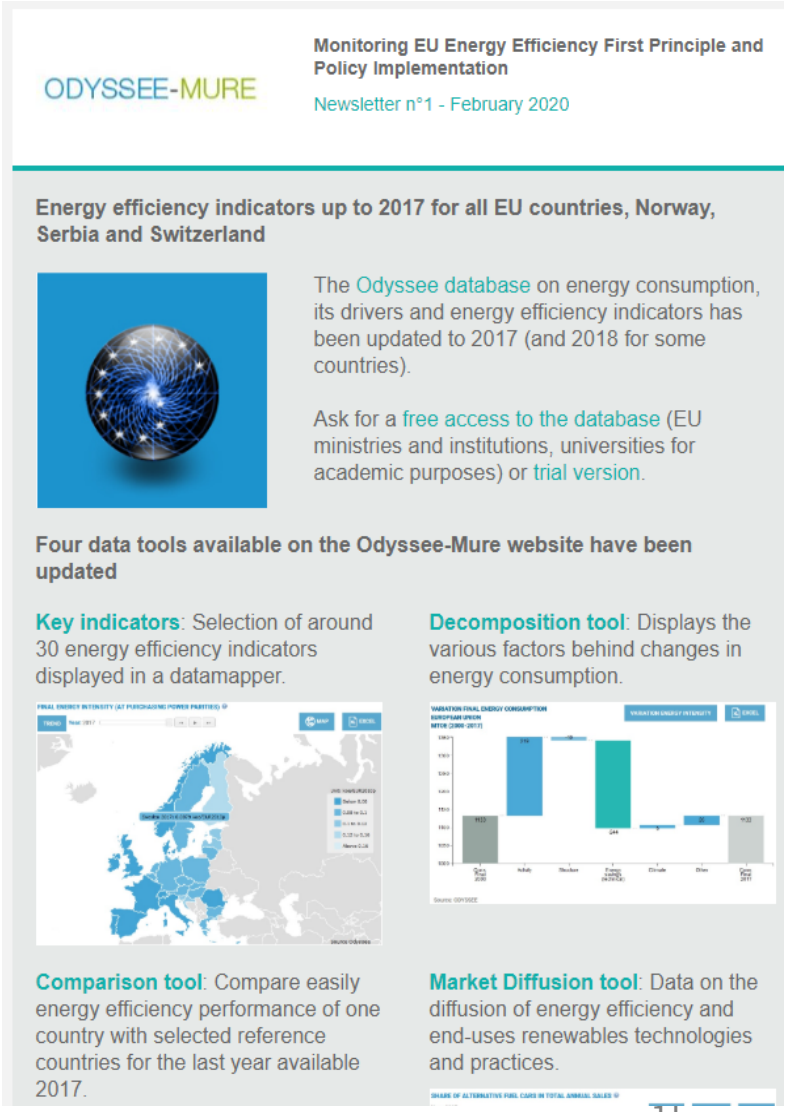


ODYSSEE-MURE

Monitoring EU Energy Efficiency First Principle and Policy Implementation

Newsletter n°1 - February 2020

Energy efficiency indicators up to 2017 for all EU countries, Norway, Serbia and Switzerland

The Odyssee database on energy consumption, its drivers and energy efficiency indicators has been updated to 2017 (and 2018 for some countries).

Ask for a free access to the database (EU ministries and institutions, universities for academic purposes) or trial version.

Four data tools available on the Odyssee-Mure website have been updated

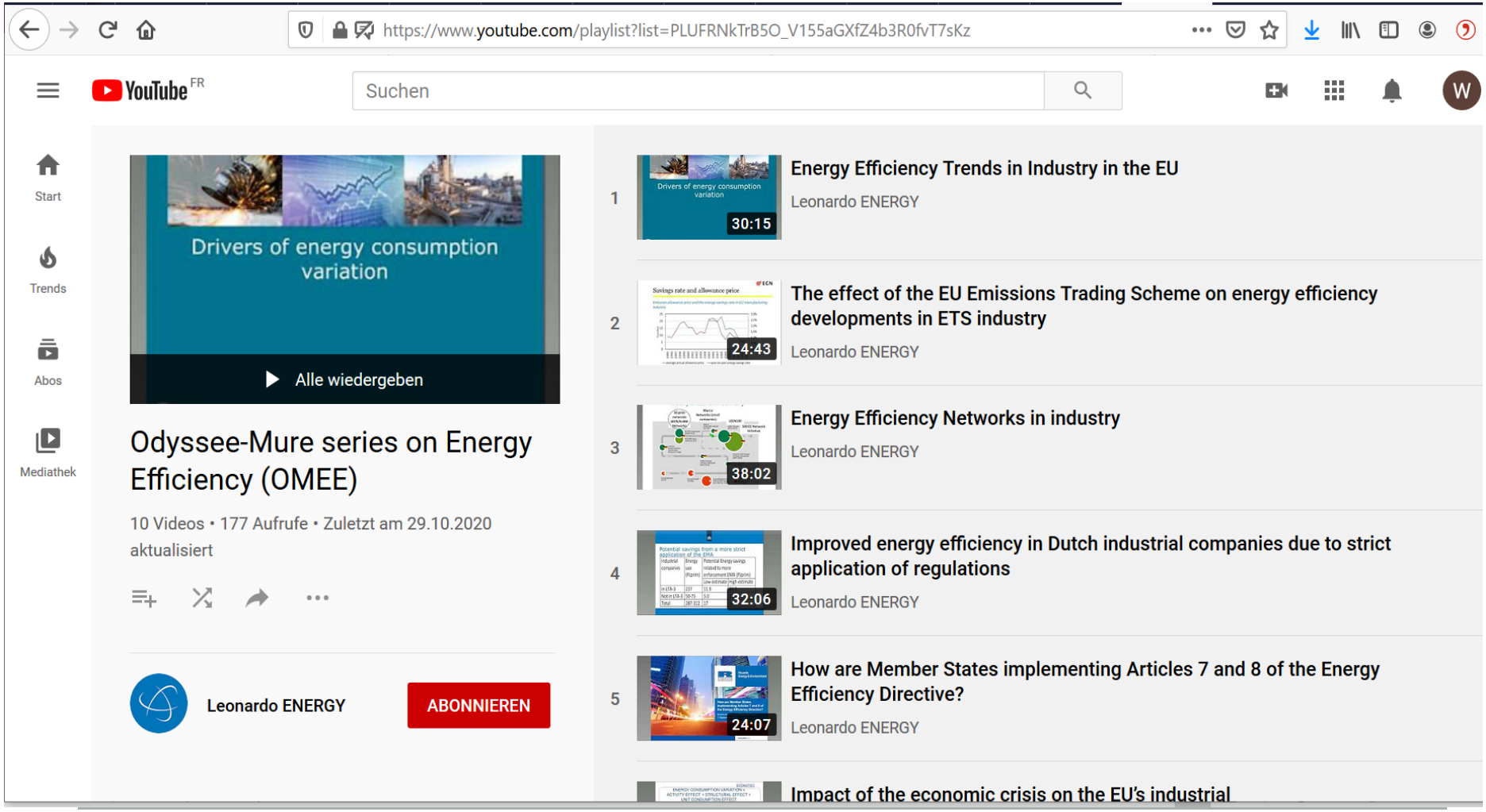
Key indicators: Selection of around 30 energy efficiency indicators displayed in a datamapper.

Decomposition tool: Displays the various factors behind changes in energy consumption.

Comparison tool: Compare easily energy efficiency performance of one country with selected reference countries for the last year available 2017.

Market Diffusion tool: Data on the diffusion of energy efficiency and end-uses renewables technologies and practices.

Dissemination Channels: example YouTube



https://www.youtube.com/playlist?list=PLUFRNkTrB5O_V155aGXfZ4b3R0fvT7sKz

Conclusion : The short-medium strategy

- To give better visibility in the Enr Web site
- To contribute to the interaction between WGs

- **To Submit a new proposal for the 2021 September H2020 program**

  - To include Balkans countries in EU accession

  - To Include the Assessment Tool developed by Fraunhofer and ENERDATA for DG ENER

  - To evaluate the Energy Efficiency in the Hydrogen Value Chain

  -To integrate the Multiple Benefits approach further developed by the H2020 MICAT project

  - Energy Efficiency indicators and policies for IT

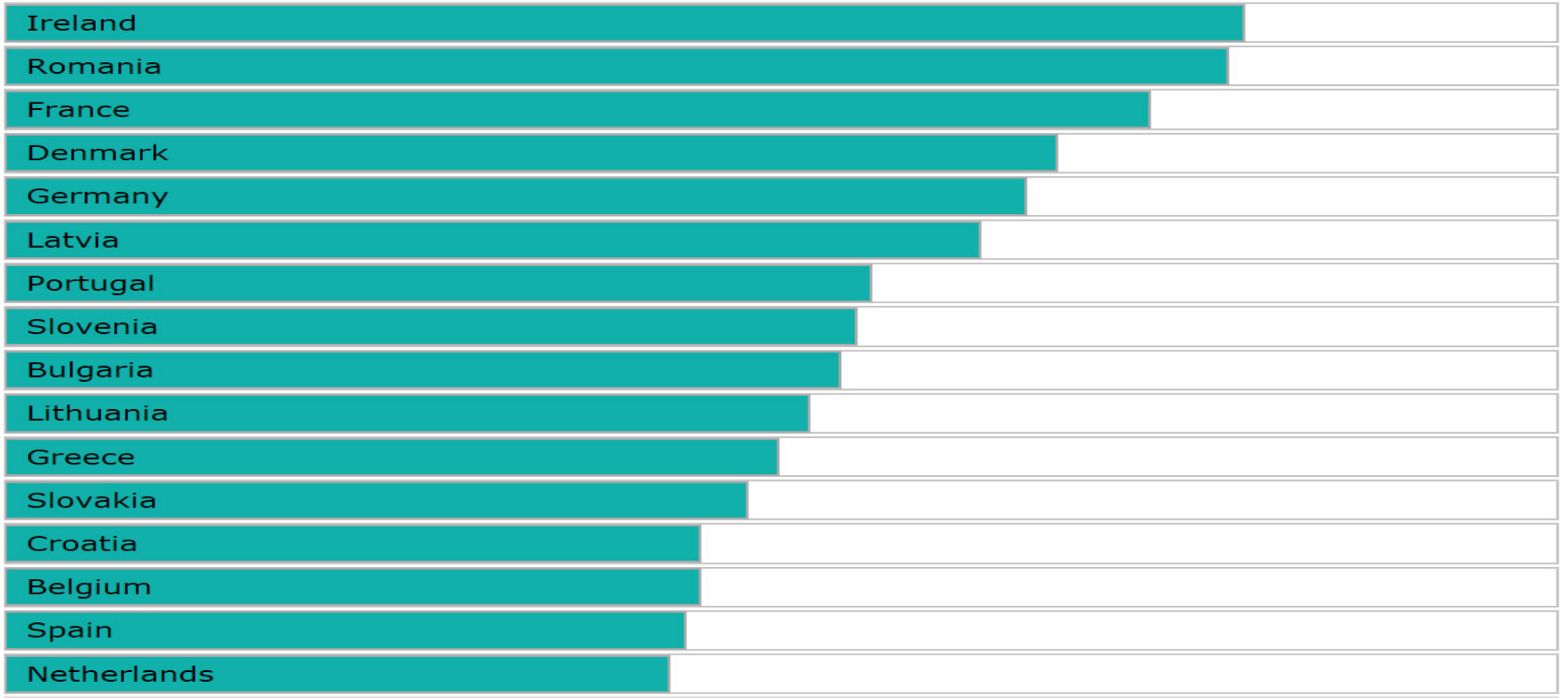
  - New data sources for indicators based on smart meters

  - Indicators and synergetic policies for decarbonisation in industry

Conclusion : The long term strategy

- To contribute to satisfy the increasing requirements to monitor and report quantitatively the impact of energy P&Ms.
- To contribute to the harmonisation requested for cross-country evaluation or benchmarking of energy efficiency performances and measures implementation.
- To continue to enlarge the country coverage
- To be reference for DG TREN (including JRC) for energy efficiency assessment.
- These monitoring tools can be part of the EED platform.
- To transfer this knowledge to Eurostat.

Conclusion : And the winner is : The ODYSSEE-MURE Combined score board



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).

Next meeting : Zagreb June 2021 (EIHP) with Balkans countries in EU accession

Thank you for your attention

For more information

Didier.bosseboeuf@ademe.fr

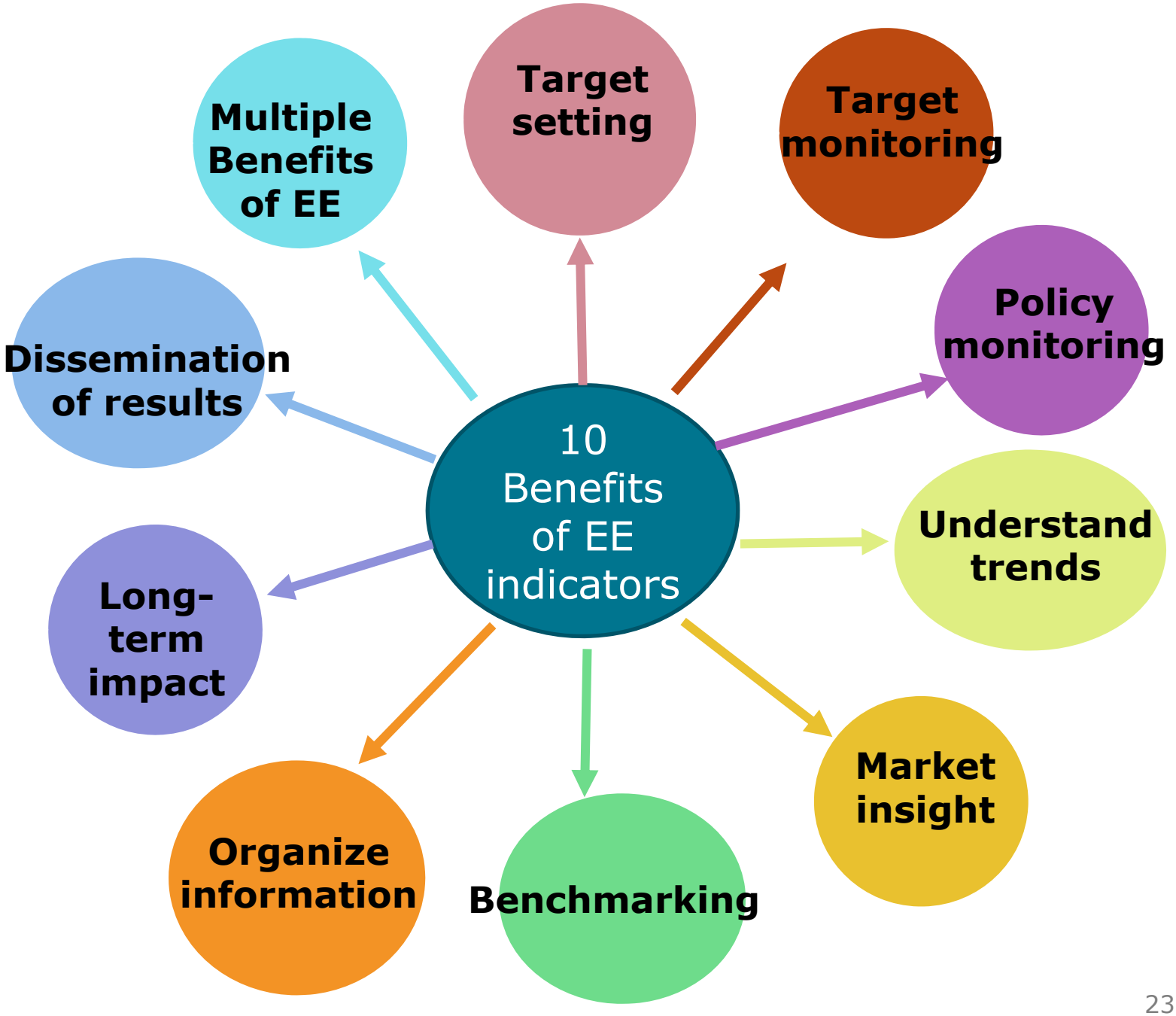
Tel : 00 33 1 47652355

www.odyssee-mure.eu

Annexes

How the ODYSSEE-MURE approach could support your agency, MS, The EU and others stakeholders

- Inspire systematic and harmonized collection of data and information on energy efficiency trends and policies
- Inform NECPs, Nationally Determined Contributions NDCs or similar national strategies
- Help to establish monitoring tools for target achievement
- Help to understand why targets are achieved/not achieved
- Support impact assessments and conception of new policies
- Serve for comparisons in terms of indicators and policies (e.g. MURE policy mapper and successful policy facility)
- Help to standardize the determination of energy savings
- ...


Multiple Benefits of EE
Target setting
Target monitoring
Policy monitoring
Understand trends
Market insight
Benchmarking
Organize information
Long-term impact
Dissemination of results
10 Benefits of EE indicators

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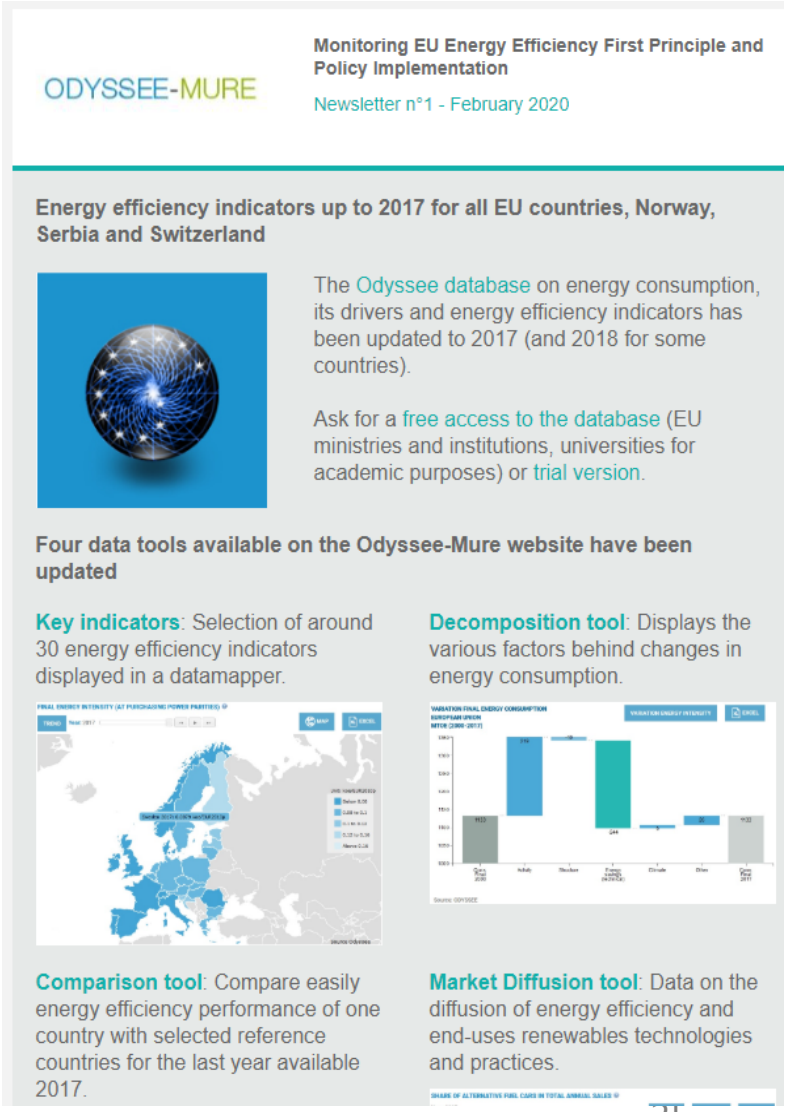

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