ENERGY EFFICIENCY POLICIES & MEASURES IN THE EU: THE ODYSSEE-MURE PROJECT

Presentation in the frame of the IAEA - Virtual Regional Training Course on Assessing Demand-side Contributions to Energy and Climate Strategies

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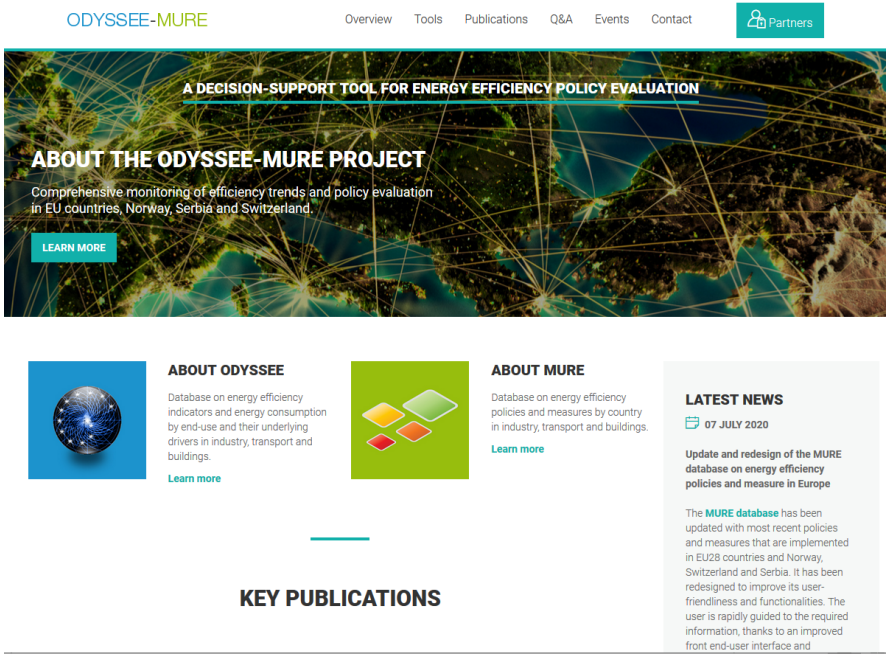
and Utrecht University, Netherlands

11 November 2020



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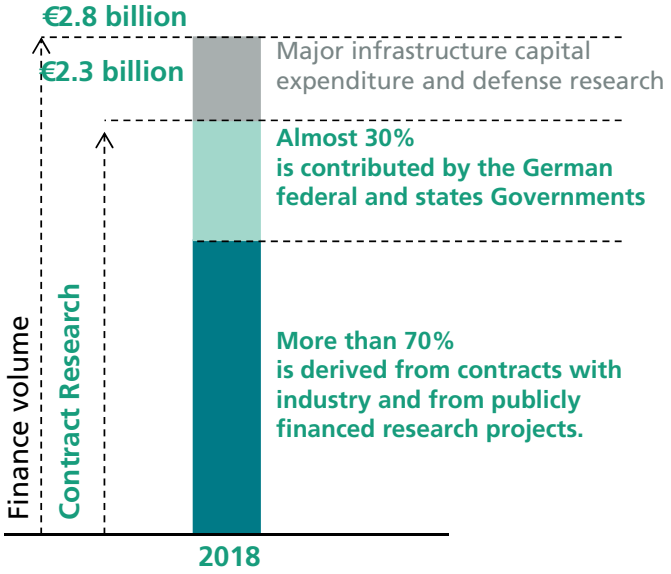

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The European ODYSSEE-MURE project on Energy Efficiency Indicators and Policies

- 31 EU countries represented by energy efficiency agencies
- Decentralised data collection ⟹ 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
- Dissemination process (free access to non-profit organisations, sectoral and country profiles, national reports)
- Communication tools - Analysis facilities for end users , A single website :

http://www.odyssee-mure.eu/

The ODYSSEE-MURE network : more than 150 experts mainly from energy efficiency agencies, statisticiens and policy analysts

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 Technology

FINLAND
Motiva

FRANCE
Agency for Ecological Transition (ADEME)

FRANCE
Enerdata

GERMANY
Fraunhofer ISI

Co-ordinators

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

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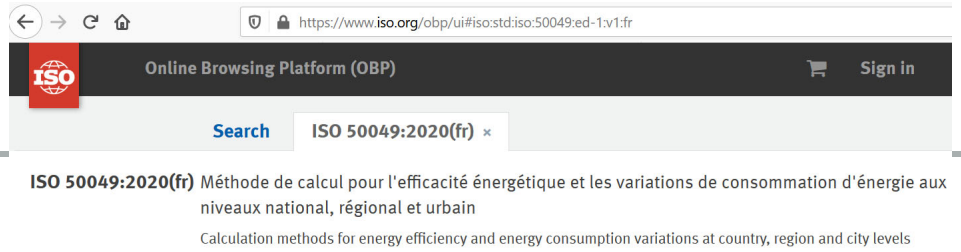
Users of ODYSSEE-MURE...

- **Europe/EC :** (DGEN, JRC, EEA, Eurostat, ECEEE, EnR club)
- **Others :**
  - IEA (EEUMD for G20),
  - Latin America : UN-CEPAL (project BIEE& ROSE 25 countries), Mexico (AFD-CONUEE),
  - Africa (MEDENER 7 Mediterranean countries, UN-Tunisia,
  - 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



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How ODYSSEE-MURE was used...

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}

- 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

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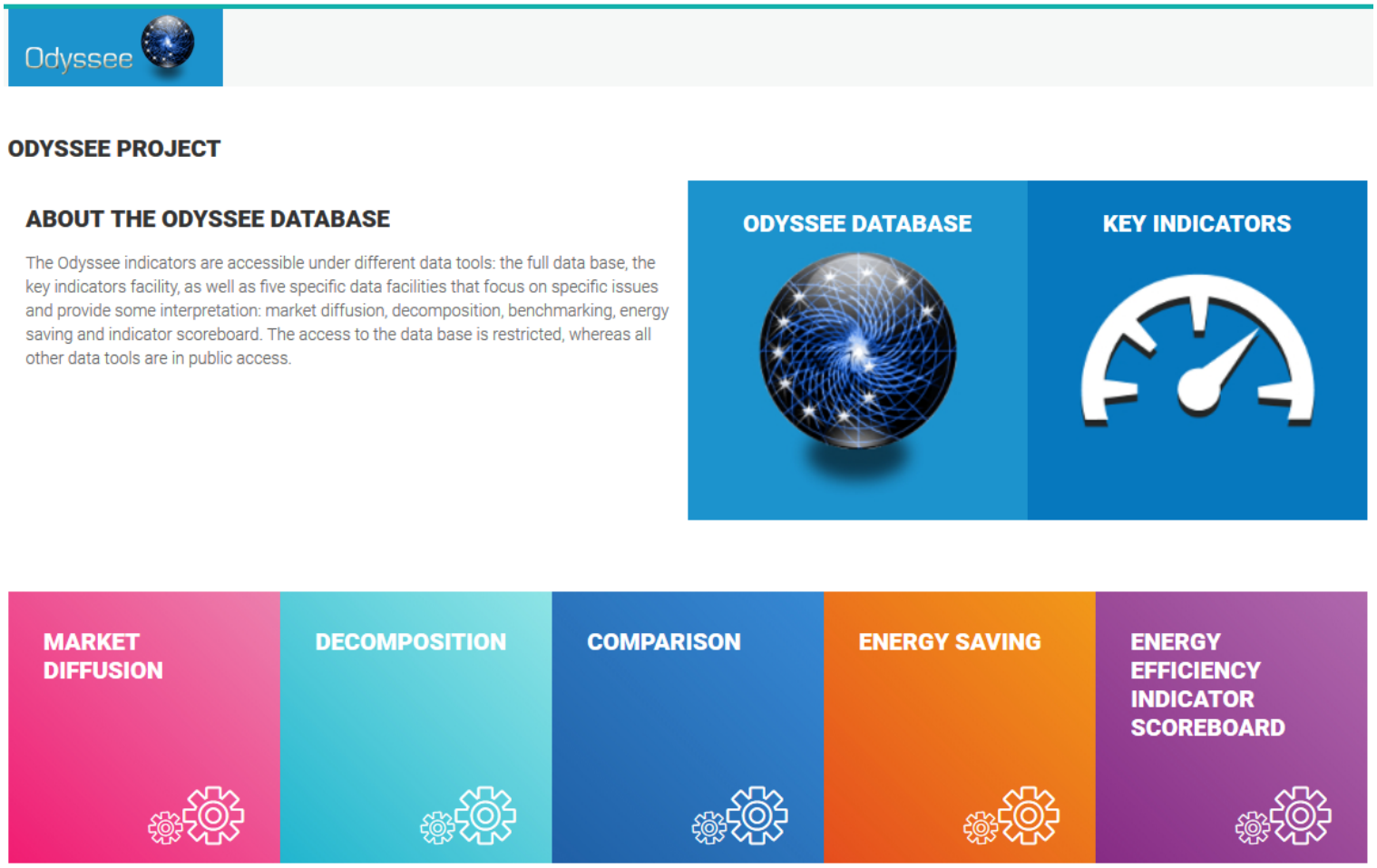
ODYSSEE: A Database on Energy Indicators and Analysis Tools



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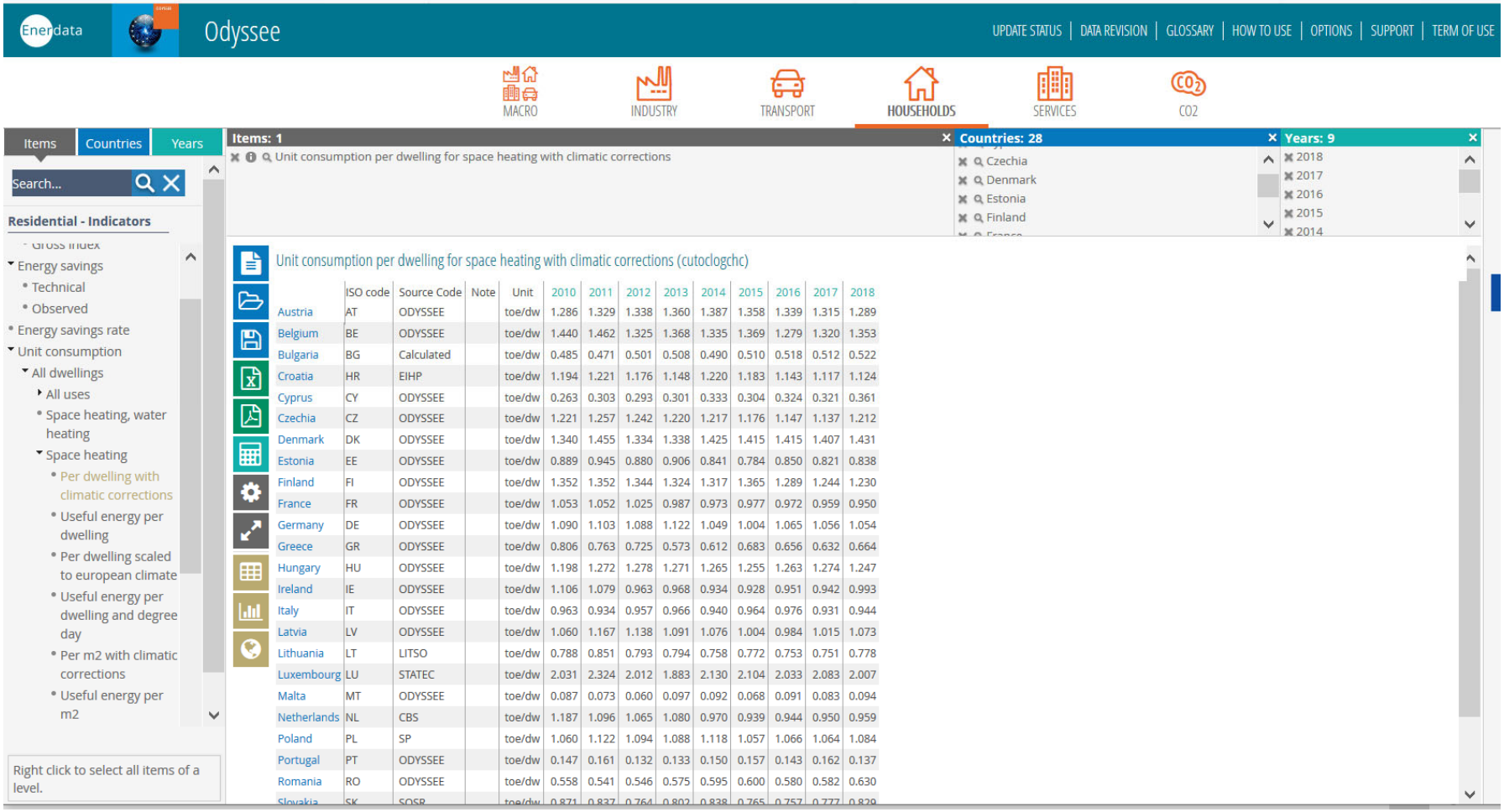
ODYSSEE: A Database on Energy Indicators and Analysis Tools



	ISO code	Source Code	Note	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018
Austria	AT	ODYSSEE		toe/dw	1.286	1.329	1.338	1.360	1.387	1.358	1.339	1.315	1.289
Belgium	BE	ODYSSEE		toe/dw	1.440	1.462	1.325	1.368	1.335	1.369	1.279	1.320	1.353
Bulgaria	BG	Calculated		toe/dw	0.485	0.471	0.501	0.508	0.490	0.510	0.518	0.512	0.522
Croatia	HR	EIHP		toe/dw	1.194	1.221	1.176	1.148	1.220	1.183	1.143	1.117	1.124
Cyprus	CY	ODYSSEE		toe/dw	0.263	0.303	0.293	0.301	0.333	0.304	0.324	0.321	0.361
Czechia	CZ	ODYSSEE		toe/dw	1.221	1.257	1.242	1.220	1.217	1.176	1.147	1.137	1.212
Denmark	DK	ODYSSEE		toe/dw	1.340	1.455	1.334	1.338	1.425	1.415	1.415	1.407	1.431
Estonia	EE	ODYSSEE		toe/dw	0.889	0.945	0.880	0.906	0.841	0.784	0.850	0.821	0.838
Finland	FI	ODYSSEE		toe/dw	1.352	1.352	1.344	1.324	1.317	1.365	1.289	1.244	1.230
France	FR	ODYSSEE		toe/dw	1.053	1.052	1.025	0.987	0.973	0.977	0.972	0.959	0.950
Germany	DE	ODYSSEE		toe/dw	1.090	1.103	1.088	1.122	1.049	1.004	1.065	1.056	1.054
Greece	GR	ODYSSEE		toe/dw	0.806	0.763	0.725	0.573	0.612	0.683	0.656	0.632	0.664
Hungary	HU	ODYSSEE		toe/dw	1.198	1.272	1.278	1.271	1.265	1.255	1.263	1.274	1.247
Ireland	IE	ODYSSEE		toe/dw	1.106	1.079	0.963	0.968	0.934	0.928	0.951	0.942	0.993
Italy	IT	ODYSSEE		toe/dw	0.963	0.934	0.957	0.966	0.940	0.964	0.976	0.931	0.944
Latvia	LV	ODYSSEE		toe/dw	1.060	1.167	1.138	1.091	1.076	1.004	0.984	1.015	1.073
Lithuania	LT	LITSO		toe/dw	0.788	0.851	0.793	0.794	0.758	0.772	0.753	0.751	0.778
Luxembourg	LU	STATEC		toe/dw	2.031	2.324	2.012	1.883	2.130	2.104	2.033	2.083	2.007
Malta	MT	ODYSSEE		toe/dw	0.087	0.073	0.060	0.097	0.092	0.068	0.091	0.083	0.094
Netherlands	NL	CBS		toe/dw	1.187	1.096	1.065	1.080	0.970	0.939	0.944	0.950	0.959
Poland	PL	SP		toe/dw	1.060	1.122	1.094	1.088	1.118	1.057	1.066	1.064	1.084
Portugal	PT	ODYSSEE		toe/dw	0.147	0.161	0.132	0.133	0.150	0.157	0.143	0.162	0.137
Romania	RO	ODYSSEE		toe/dw	0.558	0.541	0.546	0.575	0.595	0.600	0.580	0.582	0.630
Slovakia	SK	SOSR		toe/dw	0.871	0.837	0.764	0.802	0.838	0.765	0.757	0.777	0.829

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ODYSSEE: A Database on Energy Indicators and Analysis Tools (Example: Decomposition Analysis for the Power Sector)

Odyssee

DECOMPOSITION TOOL

Country: European Union

Sector: Power

Unit: Mtoe

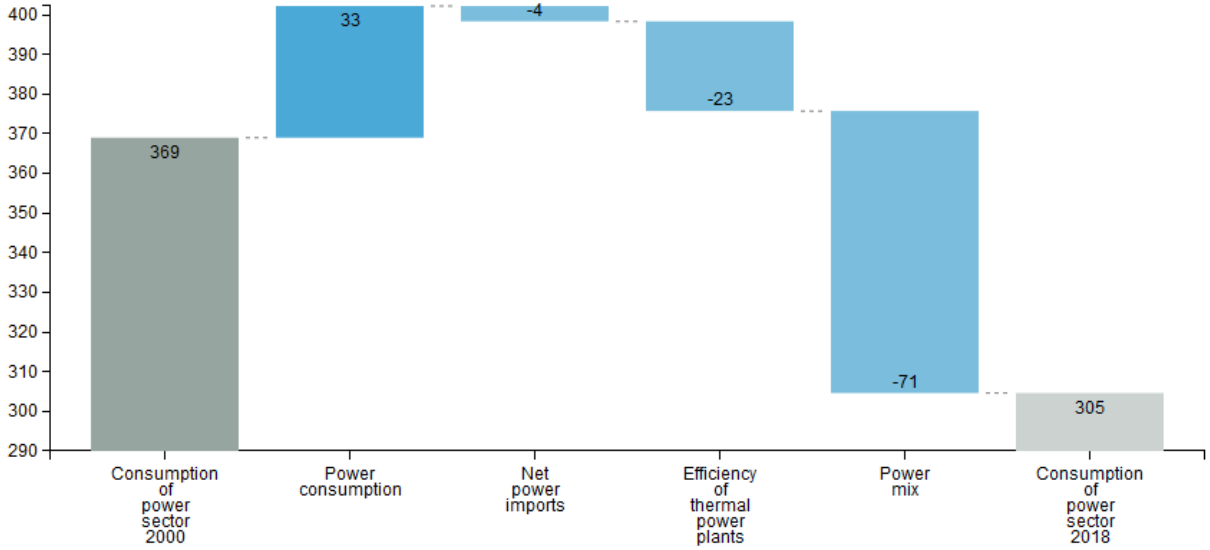
Period: 2000 - 2018

Graph: Waterfall

Methodology

VARIATION POWER SECTOR CONSUMPTION
EUROPEAN UNION
MTOE (2000-2018)

EXCEL



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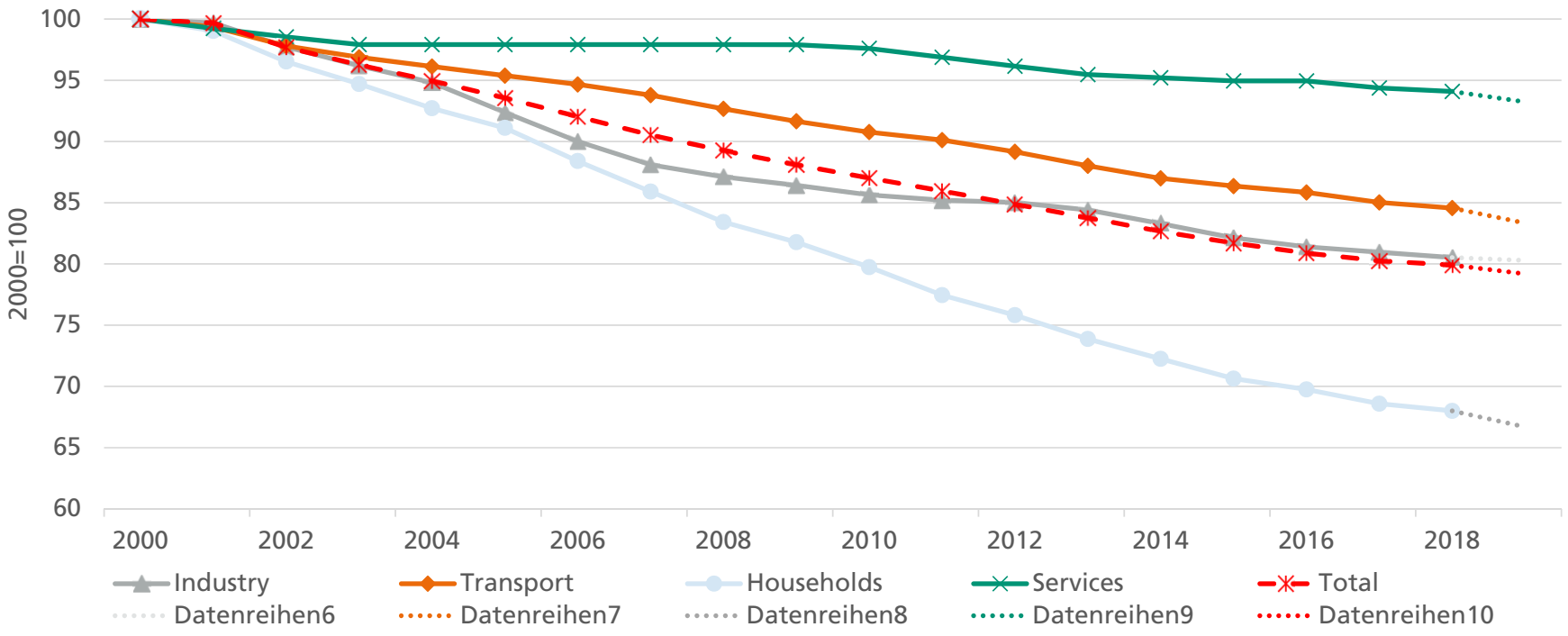
ODYSSEE: A Database on Energy Indicators and Analysis Tools (Example: ODEX – Dow Jones of Energy Efficiency)



The ODEX calculates energy efficiency indicators at detailed level and agregates them into a singly indicator

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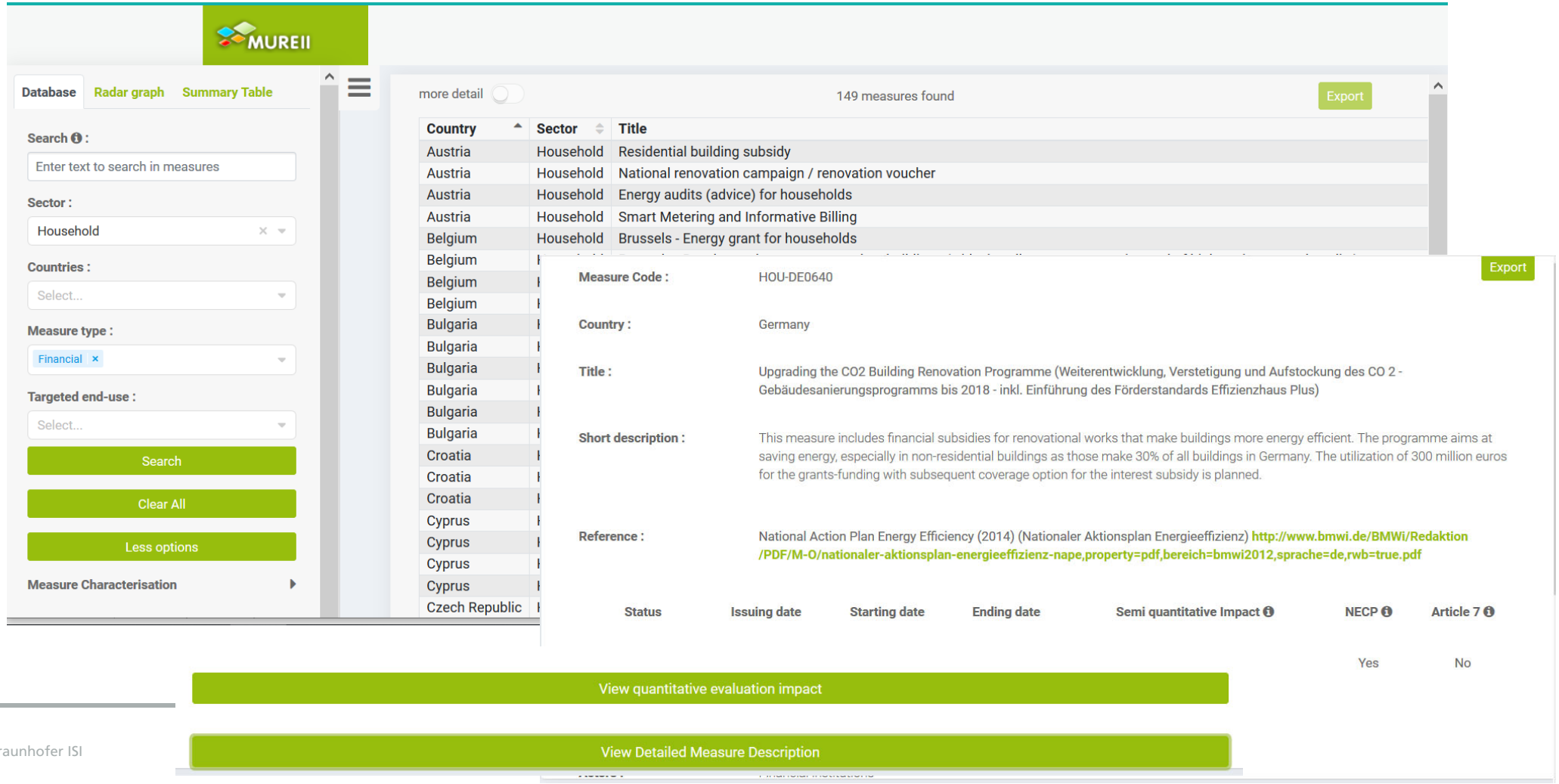
MURE: A Database on Energy Efficiency Policies and Analysis Tools



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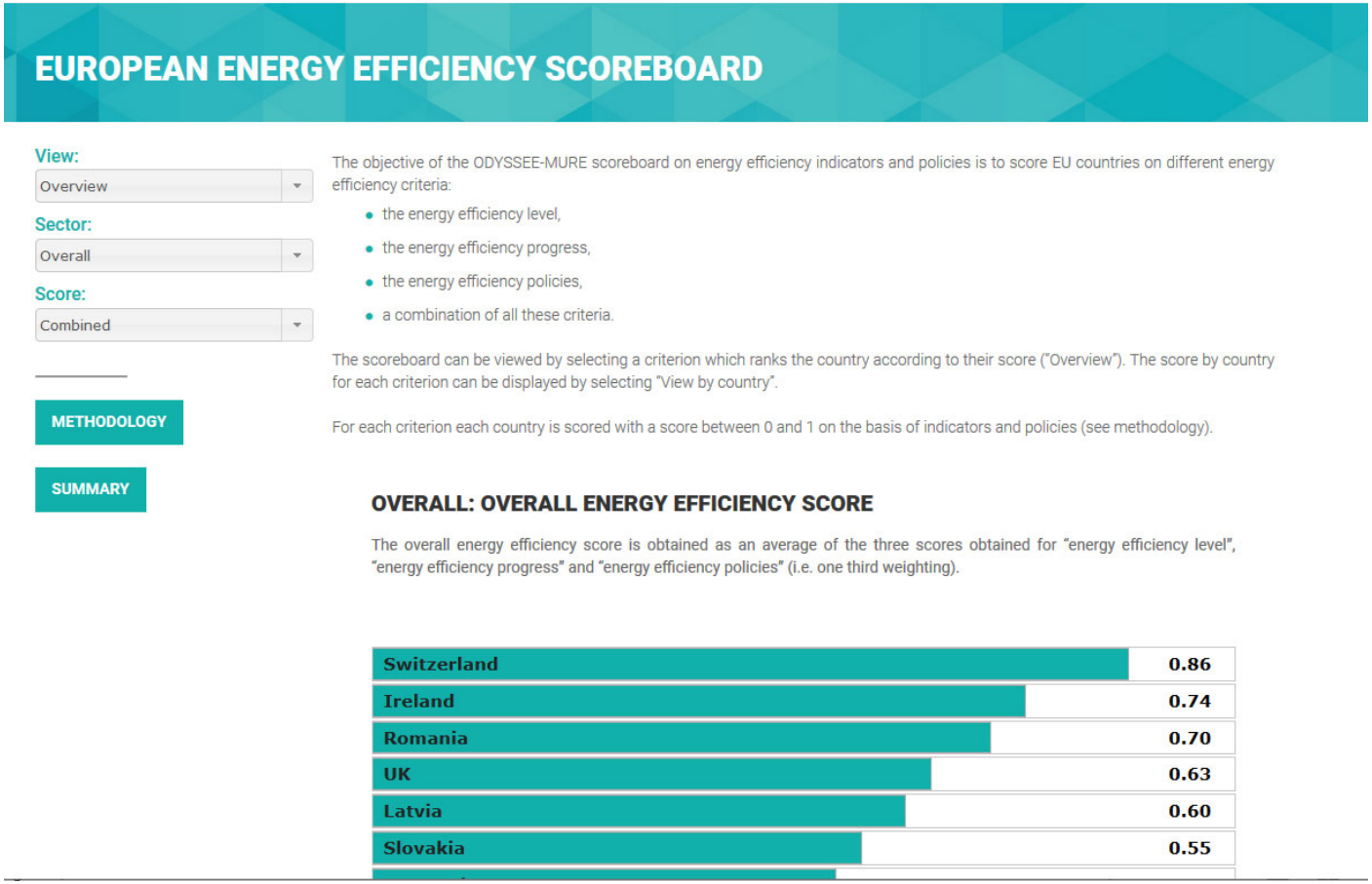
MURE: A Database on Energy Indicators and Analysis Tools (Example: The European Energy Efficiency Scoreboard)



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MURE: A Database on Energy Indicators and Analysis Tools (Example: Assessment of Energy Efficiency Policies for 2030)

Option settings

Split cross-cutting savings between sectors | Include Article 7 measures | Implementation factor | Impact factor | Interaction factor | Semi-quantitative impact | Update Dashboard results

Approach by measure

Settings

Country:	*Spain*
Sector:	*All sectors*
National / EU / All:	*All*

Assessment of energy effciency policies

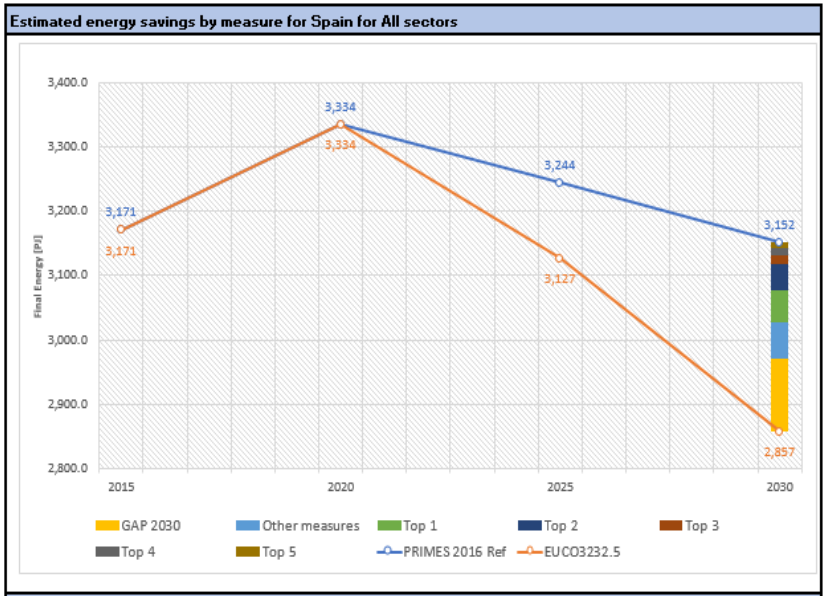
Scenario data [PJ]	2015	2020	2025	2030
PRIMES 2016 Ref	3,171	3,334	3,244	3,152
EUCO3232.5	3,171	3,334	3,127	2,857
GAP 2030				*113*
Policy 2030			*129*	*182.0*
Top 5 measures			*96*	*124*
Other measures			*33*	59

Estimated energy savings by measure for Spain for All sectors- TOTAL BY SECTOR

Sector	2025	2030
Total	129	181
Household	11	21
Industry	55	58
Services	34	54
Transport	28	48

Estimated energy savings by measure for Spain for All sectors

Rank	ID Measure	Title	Sector	2025	2030
		All measures selected	Total	129	182
Top 1	IND-ES1352	FNEE-Aids to SMEs and large companies in the industrial sector	Industry	49.0	49.0
Top 2	SER-ES1919	FNEE-Aid Programme for the Renewal of Municipal Street Lighting Installati	Services	27.1	40.7
Top 3	GEN-ES0379	DUS EELL Programme-Aids Programme to singular projects for local entitie	General cross-cutting	8.0	13.0
Top 4	GEN-ES0374	Energy Efficiency Obligation Scheme	General cross-cutting	8.3	12.5
Top 5	new_HOU_ES_7	NECP Measure 2.7. Measures for the renewal of residential equipment	Household	3.7	8.3
6	new_TRA_ES_1	NECP Measure 2.1. Modal shift measures (promoting more efficient modes of transport) & lo	Transport	2.6	5.9



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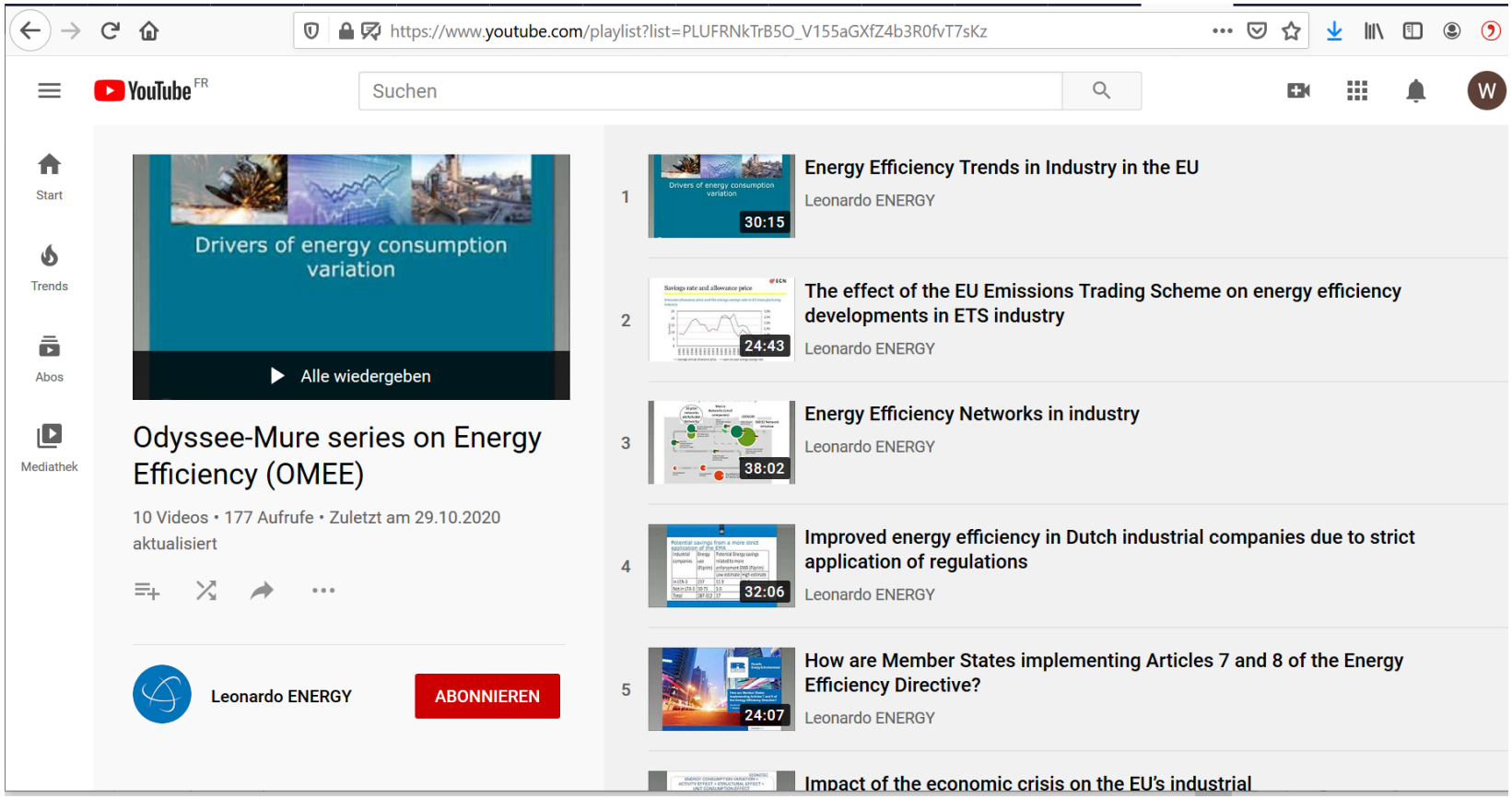
Dissemination Channels: example YouTube

(and: country/sector profiles, policy briefs, scientific articles, seminars, webinars, trainings...)



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

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How the ODYSSEE-MURE approach could support your countries...

- 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
- ...

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Thank you for the attention

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