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ODYSSEE-MURE



Sofinancirano s programom
Evropske unije: Obzorje 2020

Kateri ukrepi pripomorejo k izboljšanju energetske učinkovitosti? Baza in orodja MURE

spletni seminar “Najprej energetska
učinkovitost”

Ljubljana, spletno
29.11.2021

Kaj je to baza MURE?

- MURE: “Mesures d’Utilisation Rationnelle de l’Énergie” - Ukrepi za učinkovito rabo energije
- 27 EU držav + VB, Norveška, Srbija, Švica
- Vsebuje približno 1800 ukrepov + orodja za analizo



MURE PROJECT

ABOUT THE MURE DATABASE

MURE (Mesures d’Utilisation Rationnelle de l’Energie) provides information on energy efficiency policies and measures that have been carried out in the Member States of the European Union. The information is accessible by query in the database. The distribution of measure by type can be visualized through radar graph. Finally several facilities enable specific queries.



Glavne značilnosti MURE

- Usklajen pristop k zbiranju informacij o ukrepih: podatke o ukrepih vnašajo nacionalne ekipe
 - Predloge za zbiranje informacij: strukturirane informacije o ukrepih + podrobni opisi
 - Navodila: katere ukrepe vključiti (regionalna/lokalna raven) in kako
- Iskanje po bazi preko označb ali prostega teksta
- Osvežitev enkrat letno. Povezava na obdobja AN URE/NEPN kolikor možno
- Kontrola kakovosti tehničnega koordinatorja (Fraunhofer ISI), delno avtomatska kontrola
- Kvantitativna in delno kvantitativna ocena učinka – za približno 30 % ukrepov (največkrat najpomembnejši)

MURE: pogled v bazo

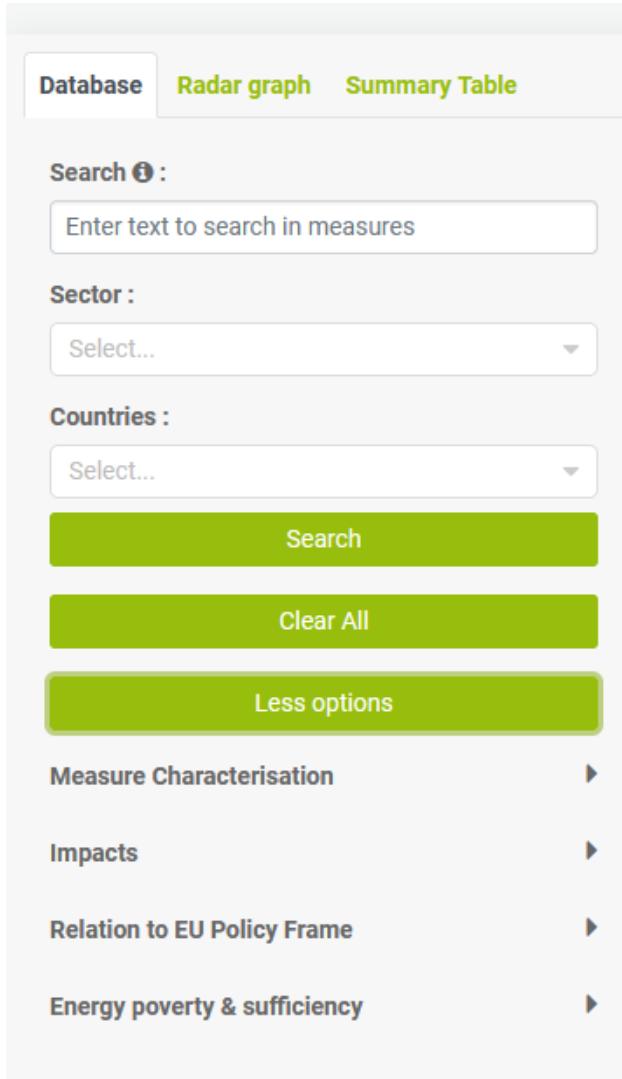
<https://www.measures.odyssee-mure.eu/energy-efficiency-policies-database.html#/>

Država | Sektor | Ime ukrepa | Povezan z EU ukrepom | (Vpliv) | (v NEPN) | (Člen 7) | Tip ukrepa | Začetek | (Konec)

MURE DATABASE

Country	Sector	Title	EU	Type
Austria	General cross-cutting	EU-related: Community framework for the taxation of energy products and electricity (Directive 2003/96/EC) - Energy and transport taxes	Yes	Others
Austria	General cross-cutting	Climate and Energy Fund	No	General programme
Austria	General cross-cutting	EU-related: Austrian Federal Energy Efficiency Act - Implementation of the Energy Efficiency Directive (EED)	Yes	General programme, Mandates
Austria	General cross-cutting	klimaaktiv - National programme for climate protection	No	General programme
Austria	General cross-cutting	Energy efficiency obligation scheme for energy suppliers	No	Market-based Instruments
Austria	General cross-cutting	EU-related: Promotion of Electricity from Renewable Sources (Directive 2001/77/EC) - Green Electricity Support	Yes	General programme
Austria	Household	Residential building subsidy	No	Financial
Austria	Household	klimaaktiv building - building standard	No	Information/training
Austria	Household	EU-related: Energy Performance of Buildings EPBD Recast (Directive 2010/31/EU) - Energy Performance of Buildings Directive in Austria	Yes	Mandatory information
Austria	Household	National renovation campaign / renovation voucher	No	Financial
Austria	Household	Smart Metering and Informative Billing	No	Financial, Information/training
Austria	Household	Minimum thermal standards for buildings	No	Mandatory standards
Austria	Industry	Domestic Environmental Support, UFI	No	Financial
Austria	Industry	EU-related: EU Emission Trading Scheme (2003/87/EC)	Yes	Market-based Instruments
Austria	Industry	klimaaktiv - energy-efficient business	No	Information/training
Austria	Services	Federal Properaty Contracting - Energy saving programme for federal buildings	No	Others
Austria	Services	klimaaktiv - biogas	No	Information/training
Austria	Services	klimaaktiv - "energy wood" (increasing the share of biomass heating)	No	Information/training
Austria	Services	Public procurement of energy efficient products	No	Market-based instruments
Austria	Services	topprodukte-at - guide to the most efficient products	No	Information/training
Austria	Services	Minimum thermal standards for buildings	No	Mandatory standards
Austria	Services	Energy audits for local authorities	No	Financial, Information/training
Austria	Services	Energy experts and energy consultants of the Federal Government	No	Information/training
Austria	Transport	Annual Technical Inspection of Cars	No	Mandatory standards
Austria	Transport	Ownership tax except for electric vehicles	No	Fiscal

MURE: iskalnik



The screenshot shows the MURE search interface. At the top, there are three tabs: 'Database' (selected), 'Radar graph', and 'Summary Table'. Below the tabs are search fields for 'Search' (with placeholder 'Enter text to search in measures'), 'Sector' (with dropdown 'Select...'), and 'Countries' (with dropdown 'Select...'). There are also three green buttons: 'Search', 'Clear All', and 'Less options'. On the left side, there is a sidebar with expandable sections: 'Measure Characterisation', 'Impacts', 'Relation to EU Policy Frame', and 'Energy poverty & sufficiency'.

Iskanje po

- prostem tekstu
- sektorjih
- državah

Measure characterisation – leto začetka/konca

Impacts/vplivi (High – medium – low)

Povezava z EU ukrepi

Ukrep naslavlja **energetsko revščino / zadostnost**

MURE: opis ukrepa

EU-related: Community framework for the taxation of energy products and electricity (Directive 2003/96/EC) - Energy and transport taxes - Measure Detail

x

Measure Code : GEN-AT0001

Export

Country : Austria

Title : EU-related: Community framework for the taxation of energy products and electricity (Directive 2003/96/EC)

Short description : Taxes on all kind of energy including fuel and electricity aim to reduce energy consumption.

Directive : Energy Taxation Directive

Reference : 3rd NEEAP

Delno kvantitativni učinek (Semi quantitative impact):
low - medium - high : nivoji določeni kot % celotne rabe električne energije oz rabe končne energije pripadajočega sektorja; v primeru zamenjave goriv in SPTE od rabe primarne energije – low < 0,1 %; medium 0,1 – 0,5; high >= 0,5 %

Status	Issuing date	Starting date	Ending date	Semi quantitative Impact ⓘ	NECP ⓘ	Article 7 ⓘ
Ongoing	1996	1996		High	Yes	Yes

Types : Others - Tariffs - Preferential feed-in tariffs for renewables
Others - Tariffs - Preferential feed-in tariffs for CHP

Types:

General programme
Mandatory standards
Financial
Market based instruments
Others

Targeted End Use or type : All end-uses (unspecified)

Energy poverty : No

Sufficiency : No

View quantitative evaluation impact

View Detailed Measure Description

MURE: opis ukrepa / ocena učinka

EU-related: Community framework for the taxation of energy products and electricity (Directive 2003/96/EC) - Energy and transport taxes - Measure Detail

[Hide quantitative evaluation impact](#)

Targeted End Use

All end-uses (unspecified)

Cumulative annual savings :

Year:	2014	2020
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PJ:	22.8	-
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kt CO ₂ :	-	-
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First year of notification : 1990

Evaluation method : Econometric modelling

Comments : Only short-term effects. Savings are calculated using short-term elasticities

MURE: opis ukrepa / bolj podroben

EU-related: Community framework for the taxation of energy products and electricity (Directive 2003/96/EC) - Energy and transport taxes - Measure Detail

[Hide Detailed Measure Description](#)

General description : Taxes on electric energy, natural gas, mineral oil products are regulated under the following laws in

Austria:

- Energy Tax Act (BGBl. No 201/1996)
- Natural Gas Tax (BGBl. No 201/1996)
- Mineral Oil Tax (BGBl. No 630/1994)

All three acts lay down higher tax rates than the EU Energy Taxation Directive (Directive 2003/96/EC).

Impact evaluation : The estimated savings from energy taxes are calculated using energy price elasticities. The following parameters are required:

- Tax-relevant energy consumption
- Amount of tax as a proportion of the energy price
- Elasticity of energy consumption at the energy price

Using the above parameters, the theoretical final energy consumption without additional taxes (exceeding EU requirements) is calculated. The difference between this theoretical consumption and the actual observed final energy consumption represents the final energy savings. The estimation is based on short-term elasticities, which primarily reflect consumers' short-term changes in behaviour in response to price changes.

In 2014, revenue from energy taxes was € 4 985 million.

Interaction of measures : TRA-AT4381 (Fuel tax (MOEST) with reduced tax rate for biofuels) -> The transport related taxes are explained in this measure description

Historical data :

References :

Sumarne tabele („Summary table“)

Types	Slovenia	Austria	Germany	France	Slovakia	Netherlands
Financial						
Subsidies						
Subsidies for clean and efficient vehicles	2H1L	2H1M	1M4L	3H3L	2M	2M1L
Scraping old vehicles				2H		
Fiscal						
Tax exemption/reduction						
Tax reduction for clean and efficient vehicles		1H1M2L	1H2L	1H1L		
Tax deduction home/job travel	1H		1M1L	1L		
Taxation						
Annual tax on vehicles		1L	1H1L	1L	1M	1M
Mineral oil tax		1H			1M	1H
Tax on the purchase of cars	2H1L	1H	1M1L			1M
Eco-tax			1H1M			
Information/training						
Information on energy efficient driving behaviour	2H	1H1M	1M			2L
Information on public transport				2L		
Promotion of cycling or walking	1L	1H1L	1L	6L		
Others						
Organisation						
Car-sharing		1L	1L	1L		
Promotion of public transport and multi-modal transport	1H	1H1M	2H1M1L	1M1L		
Traffic management and optimisation	1H	1H1M		1H1M1L	1M2L	
Transport management in companies				2L		
Traffic demand response			1L			
Infrastructure						
Infrastructure for intermodality / interconnection of transport modes	1H	1H	6L	1H2L	1L	1M
Infrastructure for public transport	1L		1L			
Reduction in traffic volume		1H1L			1L	
General programme						
General programme		1H1M	1H3L	1H		1M

Ukrepi v
prometu

Types	Slovenia	Austria	Germany	France	Slovakia
Financial					
Subsidies					
Subsidies for efficient/renewable heating technologies	1H	1H1M	2H		
Subsidies for energy audits		1M	4L	1L	
Subsidies for building renovation	1H2L	1M	2H1M	1H4L	2H6L
Subsidies for efficient new construction	1H	1H	1H1L		
Subsidies for highly efficient electrical appliances			1L		1M
Subsidies for other energy efficiency/renewable investments		1H	2L		1H1L
Other financial instruments					
Others	2L	2H	2L	1L	
Soft loans	2H1L		2H	1H1M	1H
Fiscal					
Tax reduction					
Tax reduction/tax credit			1H	1H1M	
VAT reduction on equipment				1H	
VAT reduction on labour costs (for retrofitting investment)				1H	
Information/training					
Smart metering and informative billing		1H	1M	1M	
Informative campaigns		1H1M		1H1L	1L
Informative centres	1M	1M		1M2L	
Voluntary labelling		1M		3L	
Other informational instruments					
Market-based Instruments					
Energy saving obligation				1H	
Energy saving auctions					
Technology procurement				1M	
Others					
Negotiated/Voluntary agreements					
Tariffs					
Others		1H	4L		
General programme					
General programme	2H				

**Ukrepi v
gospodinjstvih:
Primerjava med
Slovenijo, Avstrijo,
Nemčijo, Francijo
in Slovaško**

MURE orodja: Uspešni ukrepi (“Successful measures”)

Namen: identificirati različne ukrepe, ki vplivajo na določen namen rabe energije ali sektor, ki jih lahko smatramo kot dobra praksa oz. uspešne

<https://www.measures.odyssee-mure.eu/successful-efficiency-measures-tool.html#/>



MURE orodja: Uspešni ukrepi - Metodologija

Splošni metodološki pristop

- Korak 1: Predizbranih 10-15 ukrepov na državo (2-3 na sektor) na podlagi naslednjih kriterijev
 - Samo ukrepi z visokim in srednjim učinkom
 - Ukrepi, ki se že nekaj časa uspešno izvajajo
 - Ne prestari ukrepi (< 2000)
 - Predstavljajo več tipov ukrepov
 - Ekspertna ocena
- Korak 2: Ocena izbranih ukrepov: možnost razvrščanja predizbranih ukrepov glede na njihovo uspešnost
 - 12 kriterijev je bilo identificiranih za določitev nivoja uspešnosti ukrepa

Vnos
nacionalnih
ekspertov

MURE orodja: Uspešni ukrepi - Metodologija

Kriteriji za razvrstitev (ocene 1-5):

Skupina 1: Kriteriji z visoko prioriteto

1. Velik učinek / visoko število izvedb
2. Stroškovna učinkovitost za izvajalca / potrebna administrativna podpora
3. Potencial za spremembo trga in promocijo trga energetskih storitev
4. Primernost za premagovanje ovir pri ukrepih URE
5. Enostavnost in stabilnost refinanciranja (samo za finančne ukrepe)
6. Obstojnost prihrankov energije doseženih zaradi ukrepa

Vnos
nacionalnih
ekspertov

MURE orodja: Uspešni ukrepi - Metodologija

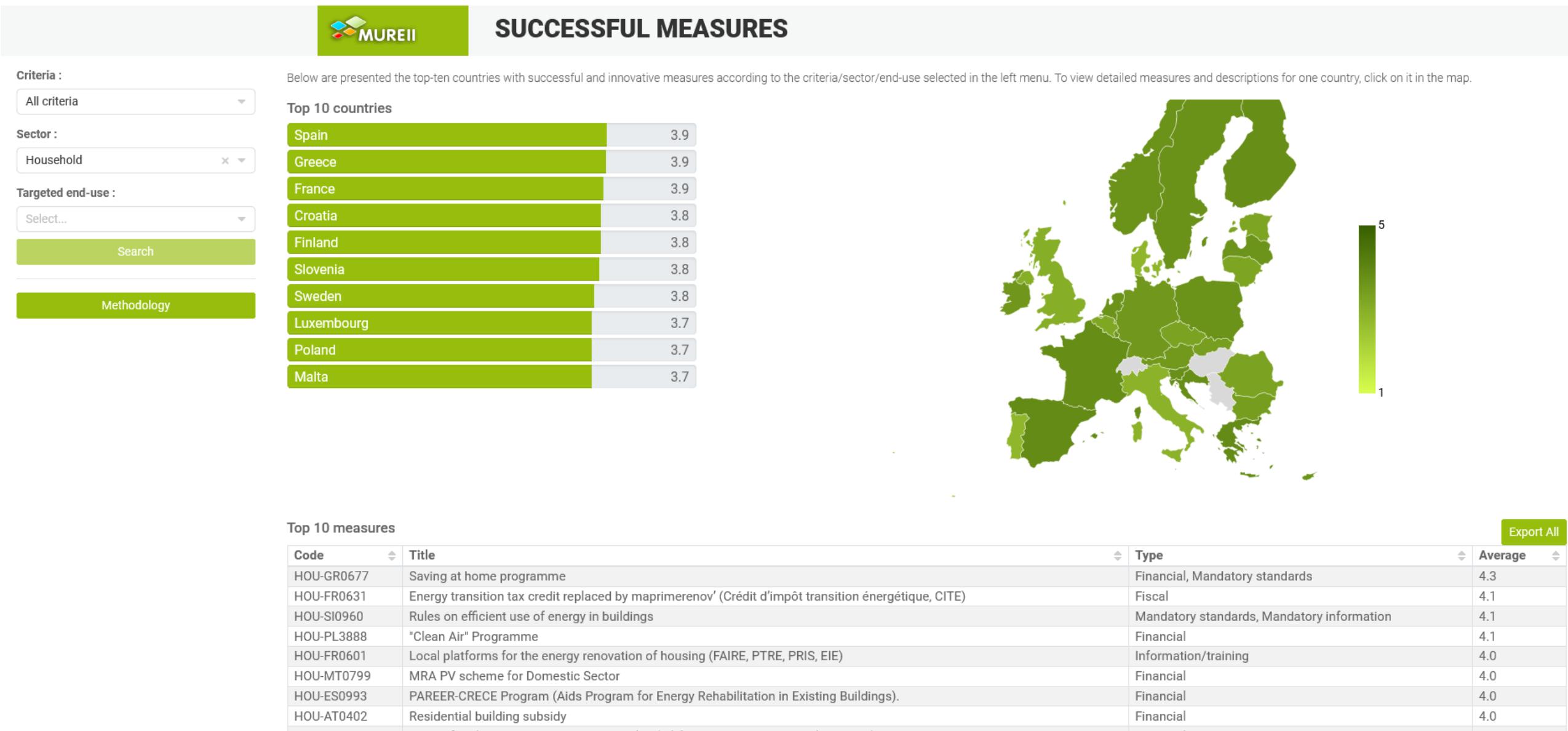
Kriteriji za razvrstitev (ocene 1-5):

Skupina 2: Kriteriji z nizko prioriteto

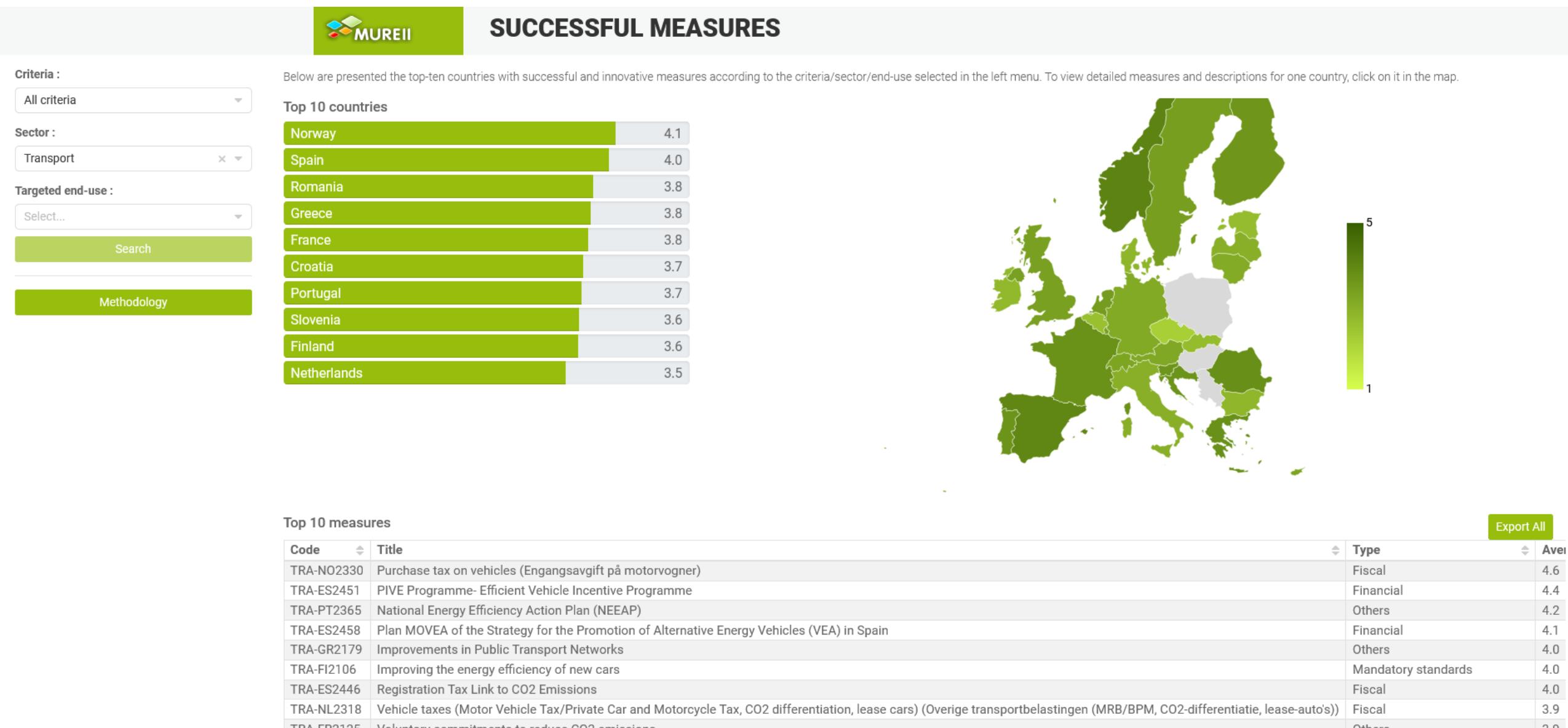
7. Primernost za prenos med državami
8. Povezava z ostalimi ukrepi / paketi ukrepov
9. Ukrepi, ki se že nekaj časa uspešno izvajajo (leto začetka, učinki)
10. Ukrep ne povzroča negativnih stranskih učinkov
11. Pozitivni stranski učinki / dodatne koristi zaradi ukrepa
12. Sprejemljivost ukrepa s strani deležnikov

Vnos
nacionalnih
ekspertov

MURE orodja: Uspešni ukrepi – Primeri (GOSPODINJSTVA)



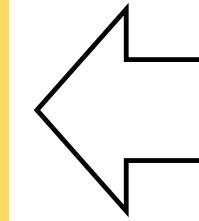
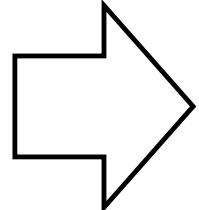
MURE orodja: Uspešni ukrepi – Primeri (PROMET)



MURE orodja: Zemljevid ukrepov (“Policy mapper”)

- **Namen:** Ustvariti povezavo ukrepov iz baze MURE z nameni rabe, ki jih targetirajo in na ta način ustvariti pregleden prikaz, kateri ukrepi se prepetajo
- Povezovanje ukrepov in kazalnikov iz baze ODYSSEE, ki omogočajo evaluacijo agregatnih učinkov ukrepov

<https://www.measures.odyssee-mure.eu/policy-mapper-efficiency-tool.html#/>



MURE orodja: Zemljevid ukrepov (“Policy mapper”)

Slovenia - Household

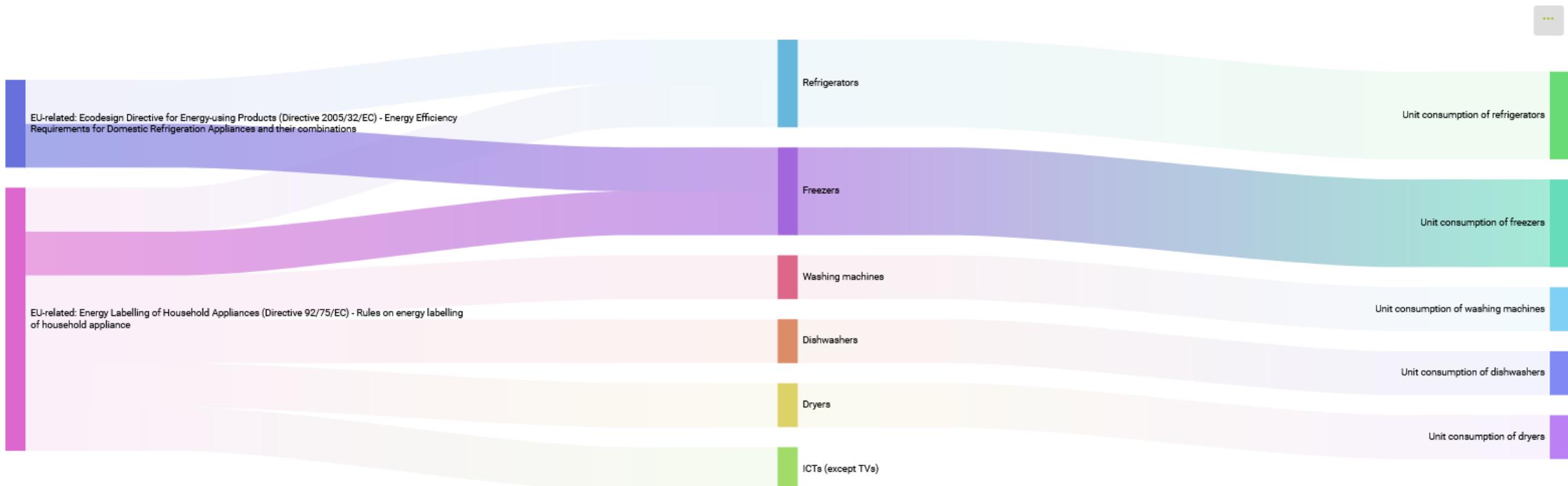
Diagram Graph

Click on Graph to visualise indicators corresponding to selected policies.

Policies

End-uses

Indicators for Impacts



MURE orodja: Zemljevid ukrepov (“Policy mapper”)

Slovenia - Household

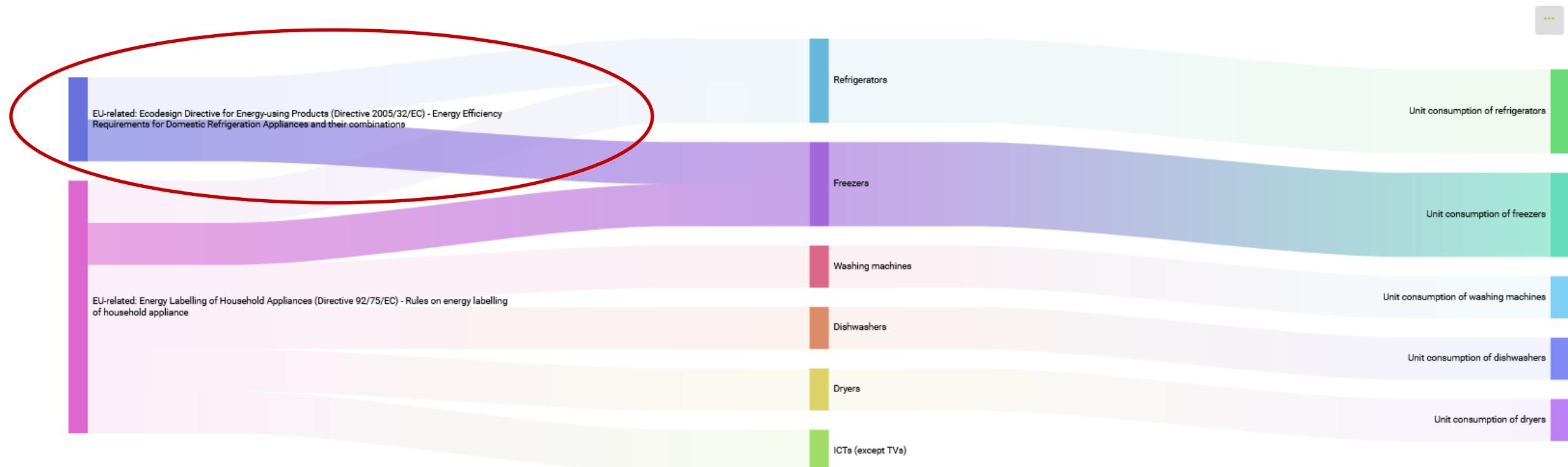
Diagram Graph

Click on Graph to visualise indicators corresponding to selected policies.

Policies

End-uses

Indicators for Impacts



MURE orodja: Zemljevid ukrepov (“Policy mapper”)



POLICY MAPPER

EU-related: Ecodesign Directive for Energy-using Products (Directive 2005/32/EC) - Energy Efficiency Requirements for Domestic Refrigeration Appliances and their combinations - Measure Detail

Starting year: 2002 Ending year: 2012

Mandatory standards

All electric end-uses (unspecified) Refrigerators Freezers

The "Order on energy efficiency requirements for household electric refrigerators, freezers and combinations thereof has been prepared by the Ministry of Environment and Spatial Planning in harmonization with the Slovenian Energy Act and European Directive 96/57/EEC. The Order has been in force partly since 06. 01. 2002 and in full since 1. 05. 2004.

The order was repealed by "Regulation on establishing a framework for setting of ecodesign requirements for energy-related products", 14.06.2012.

MURE orodja: Zemljevid ukrepov (“Policy mapper”)

Slovenia - Household

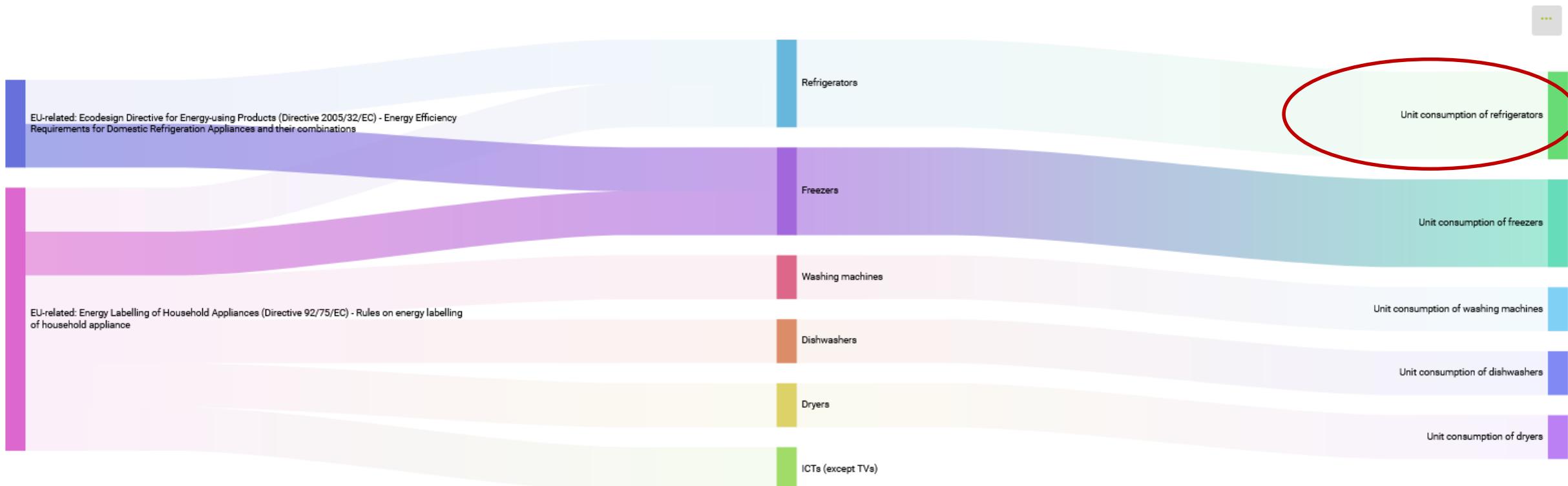
Diagram Graph

Click on Graph to visualise indicators corresponding to selected policies.

Policies

End-uses

Indicators for Impacts



MURE orodja: Zemljevid ukrepov (“Policy mapper”)

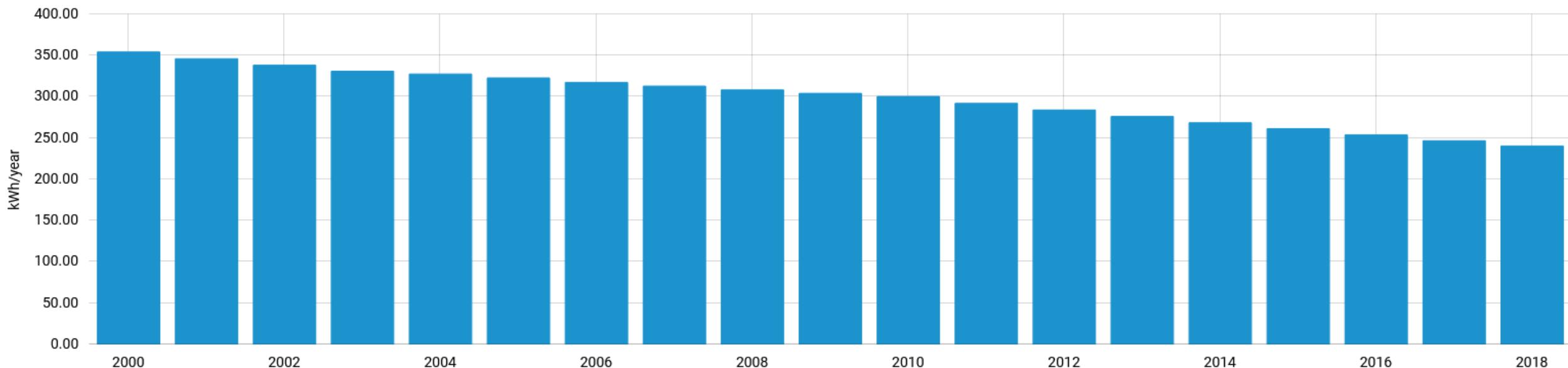


POLICY MAPPER

Slovenia - Household

Energy policies corresponding to the end-uses selected in the menu are proposed under the graphs. The left side of the policy bars correspond to the measure start.
Click on the title of the measures to see its description.

Unit consumption of refrigerators



EU-related: Energy Labelling of Household Appliances (Directive 92/75/EC) - Rules on energy labelling of household appliance

MURE orodja: Mnoge koristi URE (“Multiple benefits EE”)

- Orodje predstavlja kvantitativni pristop s kazalniki za opredelitev mnogih koristi ukrepov URE
- Mnoge koristi so zbrane v tri skupine: OKOLJSKI, EKONOMSKI in SOCIALNI
- Orodje uporablja: spodaj navzgor (“bottom up”) učinke ukrepov MURE, od zgoraj navzdol (“top-down”) prihranke iz ODYSSEE



MURE orodja: Mnoge koristi URE (“Multiple benefits EE”)

- Obdelanih 20 koristi ukrepov URE
- Za vsako korist kratek opis
- Podroben opis metodologije v PDF obliki
- Na voljo dokumenti z nadaljnimi informacijami
- Za vsako korist pripravljen kazalnik

<https://www.odyssee-mure.eu/data-tools/multiple-benefits-energy-efficiency.html>

The screenshot shows a web page titled 'MB:EE | Employment effects'. At the top, there is a yellow header bar with the title and a close button ('x'). Below the header, there are three tabs: 'Info' (which is selected), 'Documents', and 'Graph'. The main content area is titled 'Info' and contains the following text:

The direct effects of energy efficiency on employment are based on two main drivers: investments in energy efficiency measures and related energy savings. While the former triggers a demand impulse in those industries producing relevant technology, the latter reduces the demand for energy products in the long-run. However, in an interrelated economy these impacts indirectly affect other sectors as well. In order to comprehensively trace the economic impacts of certain demand changes to all sectors affected, an Input-Output analysis is applied. It allows for calculating how gross value added (GVA) in selected sectors is affected by demand changes. GVA is converted into employment effects by using sector specific productivity coefficients, which link GVA to fulltime equivalent figures. In this analysis, data on energy savings from the ODYSSEE database are represented as demand changes in economic sectors which comprise fuels and combustibles. In which sectors investments are included depends on the nature of the energy efficiency measure implemented, e.g. the improvement of thermal insulation of buildings directly induces demand changes in the construction industry. Data on investments are provided by either policy evaluations from the MURE database or other studies.

On the right side of the page, there is additional text:

As various studies have shown, net employment gains are likely to occur due to a shift in spending on energy consumption towards investing in energy efficiency measures. The industries providing the respective technology and materials usually show a higher labour intensity than the energy supply industry. More important, provided that the energy efficiency measures are cost-effective they increase disposable incomes, which can further stimulate job creation in the long-run.

Results for this indicator are given as full-time equivalent (FTE).

[Detailed information \(PDF\)](#)

[Download data \(Excel\)](#)

MURE orodja: Mnoge koristi URE

Koristi (Kazalniki):

SOCIALNI

Udobnost življenja:

Zdravje in dobro počutje (kazalnik: Zmanjšanje prezgodnjih smrti)

Razpoložljivi dohodek gospodinjstev (Prihranki stroškov v deležu razpoložljivega prihodka)

Energetska revščina:

Zmanjšanje energetske revščine (Prihranki stroškov v deležu razpoložljivega prihodka)

MURE orodja: Mnoge koristi URE

Koristi (Kazalniki)

OKOLJSKI

Upravljanje z energijo in viri:

Vpliv na doseganje ciljev OVE (Delež OVE v rabi končne energije)

Prihranki energije (Letni prihranki energije)

Prihranki fosilnih goriv (Letni prihranki energije po gorivih)

Blaženje podnebnih sprememb in zmanjšanje emisij onesnaževal:

Zmanjšanje emisij TGP (Letno zmanjšanje emisij TGP)

Zmanjšanje emisij onesnaževal (Letne preprečene emisije onesnaževal)

MURE orodja: Mnoge koristi URE

Koristi (Kazalniki)

EKONOMSKI

Mikro ekonomija:

Produktivnost industrije (Produktivnost industrije)

Vrednost nepremčnine (Dodatna vrednost nepremičnine)

Marko ekonomija:

Učinek na zaposlenost (učinek na zaposlenost - FTE)

Učinek na BDP (Spremembra BDP zaradi ukrepov URE v stavbah)

Učinek na cene energije (/)

Proračun (dodatni prihodki od davkov zaradi novih služb)

MURE orodja: Mnoge koristi URE

Koristi (Kazalniki)

EKONOMSKI

Inovacije in konkurenčnost:

Učinki inovacij (Revealed patent advantage - RPA)

Konkurenčnost (Revealed Comparative Advantage - RCA)

Promet z energetsko učinkovitim proizvodi (Letni promet z energetsko učinkovitim proizvodi v primerjavi s prihranki energije v gospodinjstvih)

Zanesljivost oskrbe

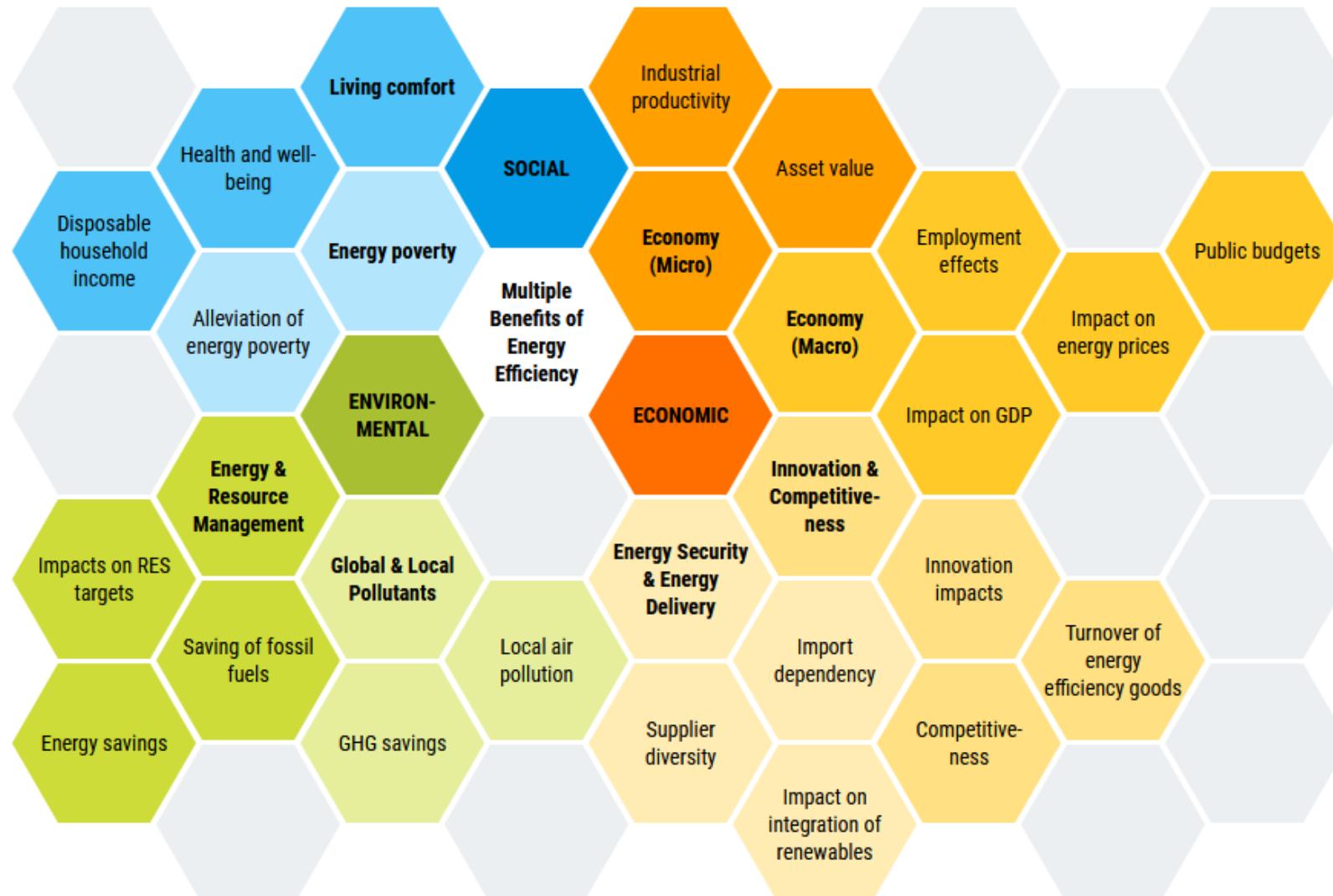
Uvozna odvisnost (Stopnja uvozne odvisnosti)

Raznovrstnost dobaviteljev (Herfindahl-Hirschman indeks)

Vpliv na integracijo OVE (Potencial za prilaganje odjema)

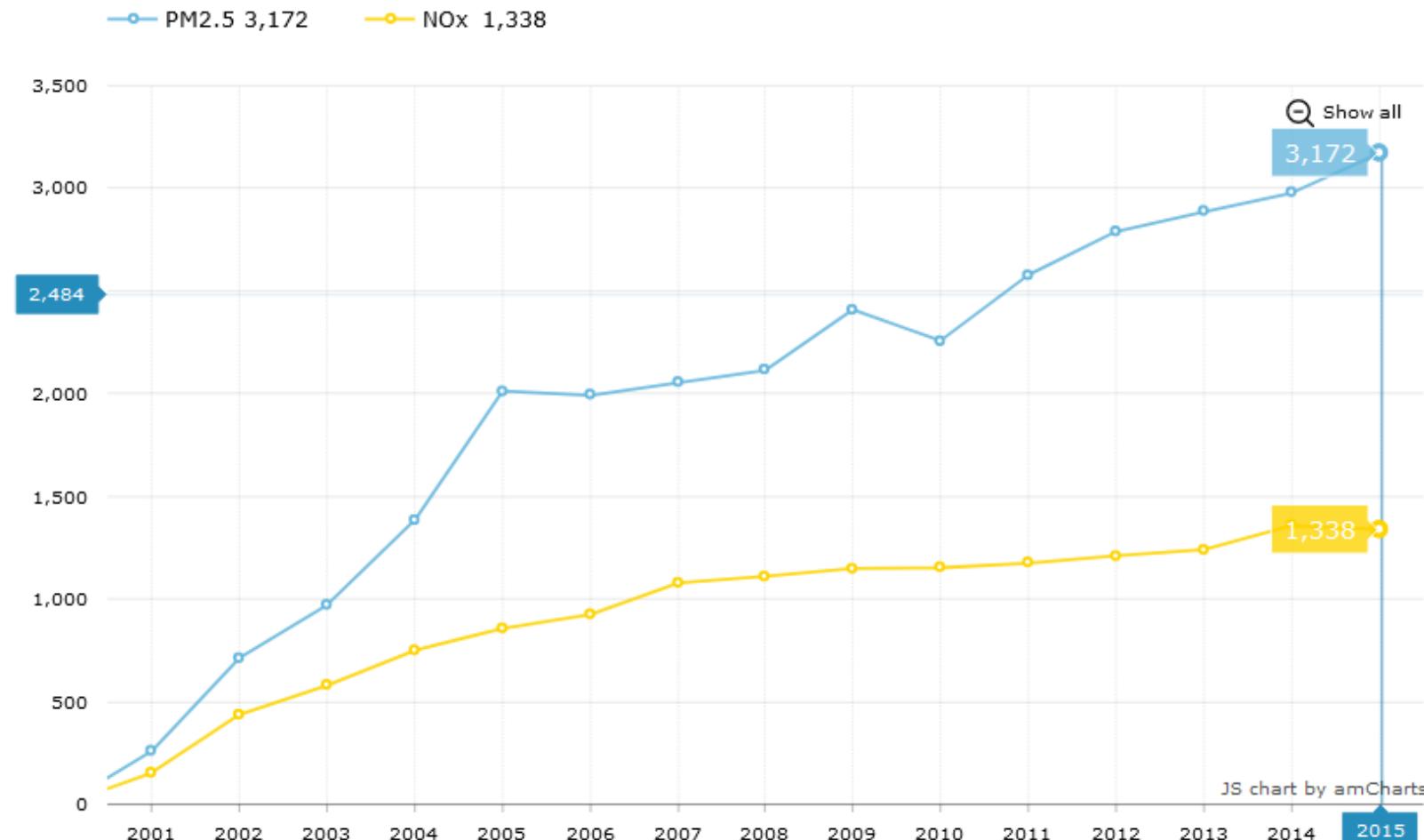
MULTIPLE BENEFITS OF ENERGY EFFICIENCY

ABOUT MB:EE MAP VIEW ▾ LIST VIEW COUNTRY VIEW ▾ LITERATURE



Health and well-being

Avoided premature deaths per year compared to 2000 [deaths]



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ODYSSEE-MURE



Sofinancirano s programom
Evropske unije: Obzorje 2020

matjaz.cesen@ijs.si

Hvala za pozornost.