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ODYSSEE-MURE

**Second meeting of the project “ODYSSEE-MURE,
Monitoring EU Energy Efficiency First Principle and Policy
Implementation”**

November 12th 2020, Visio Conference organized with SEDA

WP2 : Odyssee database update status & tools update status

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Introduction

- **What's new ?**
- **Odyssee database update status**
- **Update status of the EE indicator tools**
- **Next steps**

What's new?

What's new?

Overview

1. New definitions of primary and final energy consumption
2. Improvement of the Odyssee data template and updated version of the Guidelines
3. Financial indicators
4. Update of an EU28 AND EU27

What's new?

1. New definitions of primary and final energy consumption

- Given the **different definitions of energy consumption between Eurostat statistics and EU directives and targets**, we will consider in ODYSSEE data base and tools:
 - **two definitions for :**
 - Total ("primary") energy consumption
 - Final energy consumption
 - Transport energy consumption
- This is applied as from this update.
- The **new definitions** are now **aligned with Eurostat and IEA and exclude international air transport.**
- The **previous definitions** are useful for the **Article 3 monitoring** and corresponds to the previous definitions of Eurostat. They will only appear in the energy saving tool to avoid confusion.
- Implications on the tools : decomposition , energy savings,

What's new?




2. Improvement of the Odyssee data template and updated version of the Guidelines

Summary

1) Introduction

- 1.1. General presentation of the ODYSSEE-MURE project
- 1.2. Data flow and processing



2) General description of the template

- 2.1. General structure
-  2.2. General sheets
- 2.3. Graphics sheets (ODEX and decomposition)
- 2.4. Sectorial sheets
-  2.5. ODEX and decomposition sheets
- 2.6. EEA CO2 emissions sheet
-  2.7. Financial indicators sheet

3) Focus on data controls

- 3.1. Yearly variations
- 3.2. Sub total
- 3.3. Comparison to Eurostat/DGTREN
- 3.4. Main controls

4) How to complete the template : step by step instructions

- 4.1. Preliminary warnings
- 4.2. How to complete the intro sheet
- 4.3. Rules for completing the sectorial blue sheets
-  4.4. Data sources in the sectorial sheets
-  4.5. Report of sources in the sources sheet
- 4.6. About public and private comments

5) Focus on statistical definitions and issues

See also : <https://www.odyssee-mure.eu/private/guidelines-for-completing-the-ODYSSEE-data-template.pdf>

What's new?

3. Financial indicators

- Financial indicators are calculated for two sectors: **households** and **industry**.
- Their purpose is to estimate:
 - the **energy expenditures**, in particular to assess the weight of energy costs in household expenditures;
 - the **financial savings** achieved through energy savings, based on energy savings (from ODEX) and energy prices*.
- They will be **published online in February 2021**.

**filled in by NTs or completed by Enerdata*

What's new?

3. Financial indicators for the household sector

Indicator	Scope	Specific to Odyssee
Total energy expenditures	Housing Housing and cars	
Share of energy expenditures in the households budget	Housing Housing and cars	
Financial savings related to energy savings	Housing Housing and cars	X
Share of energy expenditures in the total expenditures for housing	Housing	
Reduction of the energy expenditures share related to energy savings (=additional purchasing power)	Housing Housing and cars	X

What's new?

3. Financial indicators for the industry sector

Indicator	Specific to Odyssee
Total energy expenditures	
Financial savings related to energy savings	X
Share of savings in total energy expenditures	X
Energy intensity of industry with and without EE improvement	X

What's new?

4. Update of an EU 28 and an EU 27

- EU 27 : to account for the Brexit (effective in 2021)
- For **consistency with Eurostat**, where EU27 data are calculated in 2020
- To have a comparison year (2020) before the Brexit (2021) for the EU27

Odyssee database update status

Odyssee DB update status

- Data templates sent to the NTs in **March and April**
- **22 countries received before 7 August** (date set initially for NTs to complete the template), 9 of them during the first week of August
- **3 countries** first update received in **September, 3 in October**
- For **16 countries** the quality of the update was **good** including the delay to finalize the data
- In **6 countries** this **delay was longer** (~ 2 months)
- **In 9 countries** this **delay was much too long** or the **update was received very late**

Odyssee DB update status

- About **95%** of key data* updated to 2018 in 2020 by country
- Around **50%** of countries provided almost all requested 2018 data**
- Countries provided in average **40%** of the new data series***, with a 2018 update rate of **90%**.

*based on a selection of 110 datasets in the different sectors

** data template fully completed

*** Around **50 new data series** included in the template : new vehicles technologies, blast furnace consumption, new efficient technologies for residential, Detail of renewable consumption for residential

Odyssee DB update

- **Important messages**

- Sources : Please pay attention to the **source format**
- Please use the **latest version of the template** stored on the TEAMS channel
- Planning of the next Odyssee update : strongly linked to the end of the projet in November 2021 → the objective is a full online publication in September 2021
- This implies to have the validated version of the template in mid-August the latest, **i.e. a first version of the template sent by the NTs in June.**

Odyssee DB update

- **How to improve the planning of publication :**
 - Context :
 - the full database update should be in September
 - This year, an update of the online data base was possible in July for early birds having returned the final template by mid June, but no template was validated before mid-August.
 - Some reasons have already been identified :
 - Covid context
 - For some NTs, the update planning of important national series is not compatible with the Odyssee update → For these specific cases, Enerdata will propose an **estimation methodology** for the next update
 - Other reasons? **A survey will be launched** to ask for the NT's feedback

Update status of the EE indicator tools

EE indicator tools

- **Odex & Decomposition**
- **Comparison**
- **Market diffusion tool**
- **Indicator Scoreboard (will be replaced by the combined scoreboard)**
- **Energy saving**

ODEX & decomposition : what is new ?

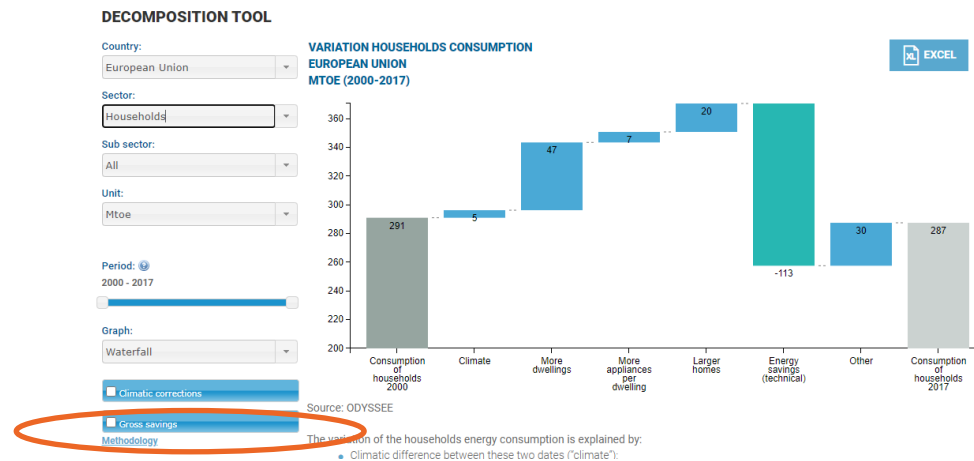
- Because of the definition changes (primary and final energy consumption), the ODEX calculation and the decomposition tool will change accordingly.
- **In the decomposition tool, the decomposition of energy consumption** will be done with each of the two definitions for the total and final consumption (through the option button). The transport consumption decomposition will be done only with the new definition (exc. international air).

In the tool, the following items will be displayed:

By default	As an option
Total energy supply: same as TPES IEA	Primary energy consumption ("EU definition"*)
Final consumption (excl. air bunkers)	Final consumption ("EU definition"*)

ODEX & decomposition

- What is new ?
 - Calculation of a gross savings effect (in addition to a technical savings effect) with a display option within the tool.



- Update planning

- End of November 2020

ODEX & Decomposition: early estimates

- The objective of early estimates is to **gain one year** compared to the update provided by national teams.
- Early estimates are **only** provided for the **data needed to calculate the ODEX** by sector, energy **savings** and **decomposition** analysis.
- Such estimates are produced by Enerdata.
- One sheet, called « estimates » has been added in the data template for the estimates, after the last data sheet, made of 5 parts (macro, industry, transport, households and services).
- The ODEX and decomposition are calculated applying the estimated data to the existing methodology.

Implementation of early estimates

- The methodology has been tested for France and UE in May for 2018.
- Early estimates of ODEX and decomposition for 2019 : **November/December 2020**
- Early estimates will appear in the online **data base in italic and in colour (red)** to well distinguish them from the normal update made by national teams to avoid confusion.
- In the **decomposition tool** clear explanations will indicate that the data have been estimated for the last year.

Market diffusion tool : update planning

Data	Update year	Update
Efficient and alternative cars*	2019	November 2020
Efficient new light duty vehicles (new)	2019	November 2020
Rooftop solar PV (new)	2019	January 2021
Modal shift	2018	October 2020
Solar water heaters	2019	December 2020
Heat pumps	2019	December 2020
Smart meters	2019	January 2021
Bioenergy	Share of biofuel -> 2018 Pellet boilers/stoves -> 2019	October 2020 January 2021

In orange, data from horizontal sources (EEA, EurObserver, etc.)

In blue, data from national teams

**for the last year, estimations from EEA*

Energy saving tool : what's new ?

- In the energy savings tool that is useful to track the gaps to the EU targets, we will only use the consumption definition consistent with EU targets (i.e with international aviation).
- Tool updated in **March 2020**:
 - Primary and final energy consumption targets updated for 2020 + new target for 2030 from NECP
 - Energy savings from Article 7 updated from NT notifications + new target for 2030 from NECP
 - Top-down energy savings updated from ODYSSEE Data Base
 - Primary and final consumption updated until 2018 from Eurostat
- The energy saving tool will be **updated again in November 2020**.
- It will be replaced in 2021 by the energy saving and target tracking tool (work from TNO)

Next steps

WP2 Next steps

What ?	When ?
Odyssee database / Next publications <ul style="list-style-type: none">• Indicators & new definitions• Early estimates (year 2019)• Financial indicators	Nov. 2020 Nov/Dec. 2020 Feb. 2021
Tools update <ul style="list-style-type: none">• Key indicators, Comparison, Energy savings• Decomposition • Market diffusion	Oct./Nov. 2020 Nov. 2020 Oct. 2020 to Jan. 2021
New tools <ul style="list-style-type: none">• Combined scoreboard• Energy savings and target tracking tool	See WP3 2021

Planning of the next Odyssee update

- **January 2021** : Data template sent to the NTs for update of year 2019
- **June 2021** : First update of the online Odyssee database for 2019
- **Sept. 2021** : Final update of the online database and tools for 2019
- **October/Nov. 2021** : Early estimates of ODEX and decomposition for 2020
- **November 2021** : end of the Odyssee Mure 2019-2021 project.

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Enerdata is an energy intelligence and consulting company established in 1991. Our experts will help you tackle key energy and climate issues and make sound strategic and business decisions. We provide research, solutions, consulting and training to key energy players worldwide.

What's new?

1. New definitions of primary and final energy consumption

For the **total** energy consumption :

- **Total energy supply**: same as TPES IEA
- **Primary energy consumption** = total energy supply
+ air international
- non energy uses
- ambient heat
- *the primary consumption corresponds to the definition of the EU target of Article 3 of EED and to what Eurostat calls "Primary energy consumption (Europe 2020-2030)"*
- *it is very close to the previous definition used in ODYSSEE (difference due to ambient heat).*

What's new?

1. New definitions of primary and final energy consumption

For the **final** energy consumption

- **Final consumption (excl. air bunkers)**
= Final consumption of IEA-non energy uses – ambient heat
- **Final consumption (incl. air bunkers)**
= Final consumption of IEA
 - non energy uses
 - + air international
 - ambient heat
- *air bunkers= consumption for international aviation*
- *The final consumption (incl. air bunker) corresponds to the definition of the EU target of Article 3 of EED and to what Eurostat calls "Final energy consumption (Europe 2020-2030)"; it is close to the previous definition in ODYSSEE (difference due to ambient heat).*

What's new?

1. New definitions of primary and final energy consumption

For the **transport** consumption

- **Transport consumption** (incl. air bunkers)
- **Transport consumption** (excl. air bunkers)

➔ **Implications on the following tools** (see presentation Status of the Odyssee tools):

- decomposition tool
- energy savings tool
- scoreboard transport

Odyssee DB update: status of updating

- Data templates sent to the NTs in March and April
- 22 countries received before 7 August, 9 of them during the first week of August
- 3 countries first update received in September, 3 in October

Country	First update	Final update	Update quality and delay between 1st/final update
France	03/05	06/06	
Estonia	16/06	21/09	
Spain	20/06	08/09	
Slovakia	29/06	05/10	
Slovenia	02/07	07/09	
Norway	03/07	11/09	
Latvia	08/07	12/08	
Belgium	09/07	17/08	
Lithuania	09/07	18/08	
Luxembourg	21/07	16/10	
Bulgaria	23/07	04/09	

Odyssee DB update: status of updating

Country	First update	Final update	Update quality and delay between 1st/final update
Switzerland	30/07	29/09	Green
Netherlands	31/07	04/09	Green
Italy	03/08	25/09	Green
Malta	03/08	20/08	Green
Portugal	05/08	19/10	Red
Poland	06/08	19/10	Red
United Kingdom	07/08	09/10	Yellow
Hungary	07/08	21/09	Green
Greece	07/08	09/10	Yellow
Denmark	07/08	27/10	Red
Serbia	07/08	01/10	Green

Odyssee DB update: status of updating

Country	First update	Final update	Update quality and delay between 1st/final update
Finland	18/08	2/10	Yellow
Cyprus	18/08	30/09	Yellow
Sweden	25/08	21/10	Red
Ireland	01/09	09/09	Yellow
Croatia	08/09	09/10	Red
Germany	11/09	23/10	Red
Czech Republic	08/10	26/10	Red
Romania	08/10	30/10	Red
Austria	09/10	30/10	Red

Odyssee DB update quality detail

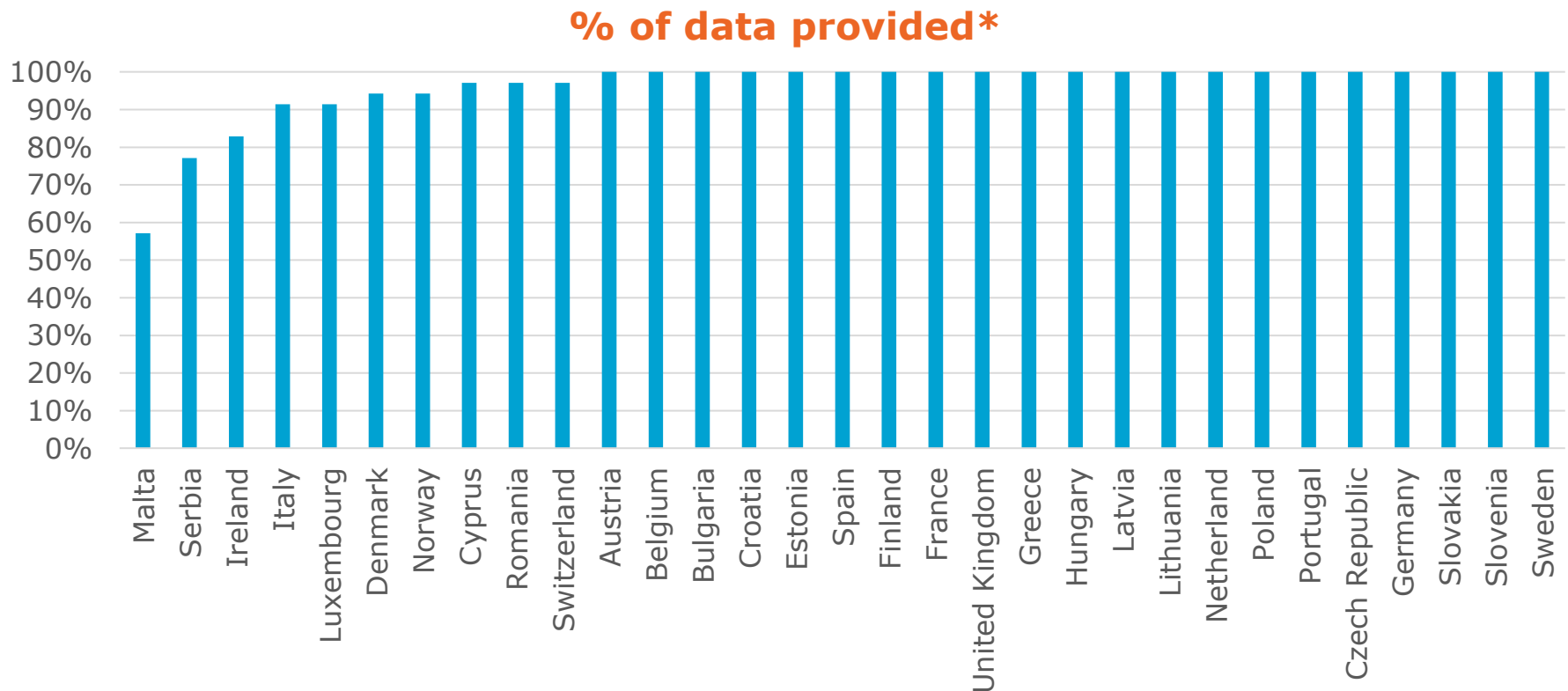
Detail by sector :

- **Industry** : on average, **96.4%** of key data was updated (37 data series are considered: production index, value added, energy consumption by branch and physical production)
- **Transport** : on average, **94.4%** of key data was updated (18 datasets on stock of vehicles, traffic, energy consumption by mode)
- **Households** : on average, **92.7%** of key data was updated (12 datasets on number of dwellings, floor area, energy consumption by end-uses, large appliances (refrigerators, washing machine))
- **Services** : on average, **95.4%** of key data was updated (22 datasets on floor area, employment, energy consumption by end-uses and by sectors)

Data coverage in industry



Excellent data coverage in industry !



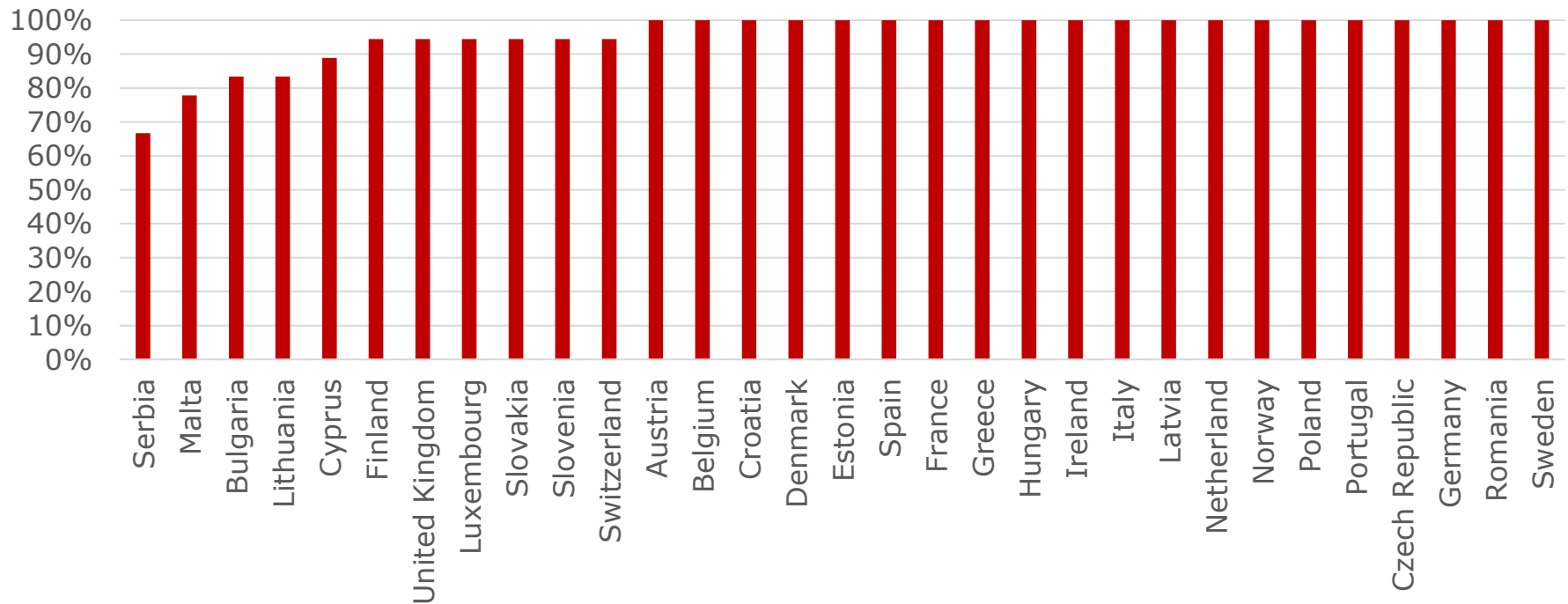
* Based on 36 data series: production index, value added, energy consumption by branch and physical production

Data coverage in transport



- Quite good data coverage in transport.
- Except for the average distance per year per car and the average specific consumption of cars.

% of data provided*



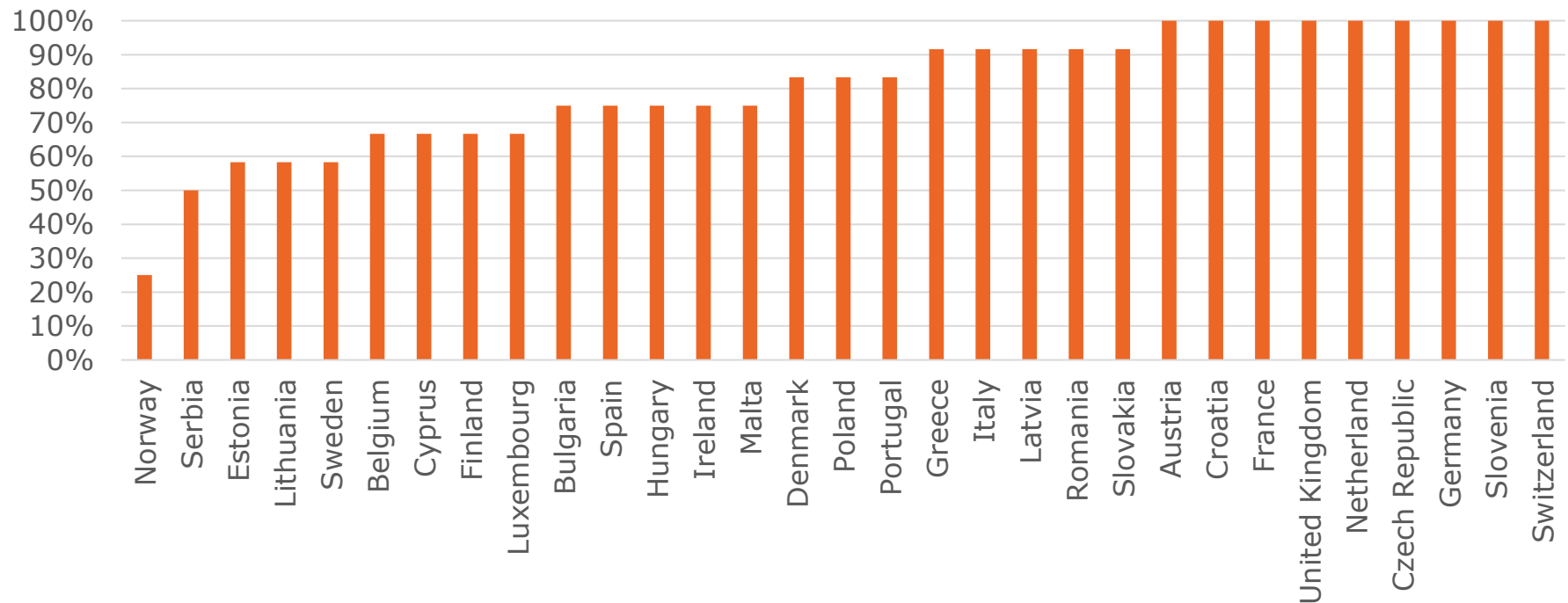
* Based on 18 data series: stock of vehicles, traffic, energy consumption by modes

Data coverage in households



- The data coverage in households sector has to be improved.
- In particular, for the stocks and the average specific consumption of large appliances, as well as the electricity consumption for lighting.

% of data provided*



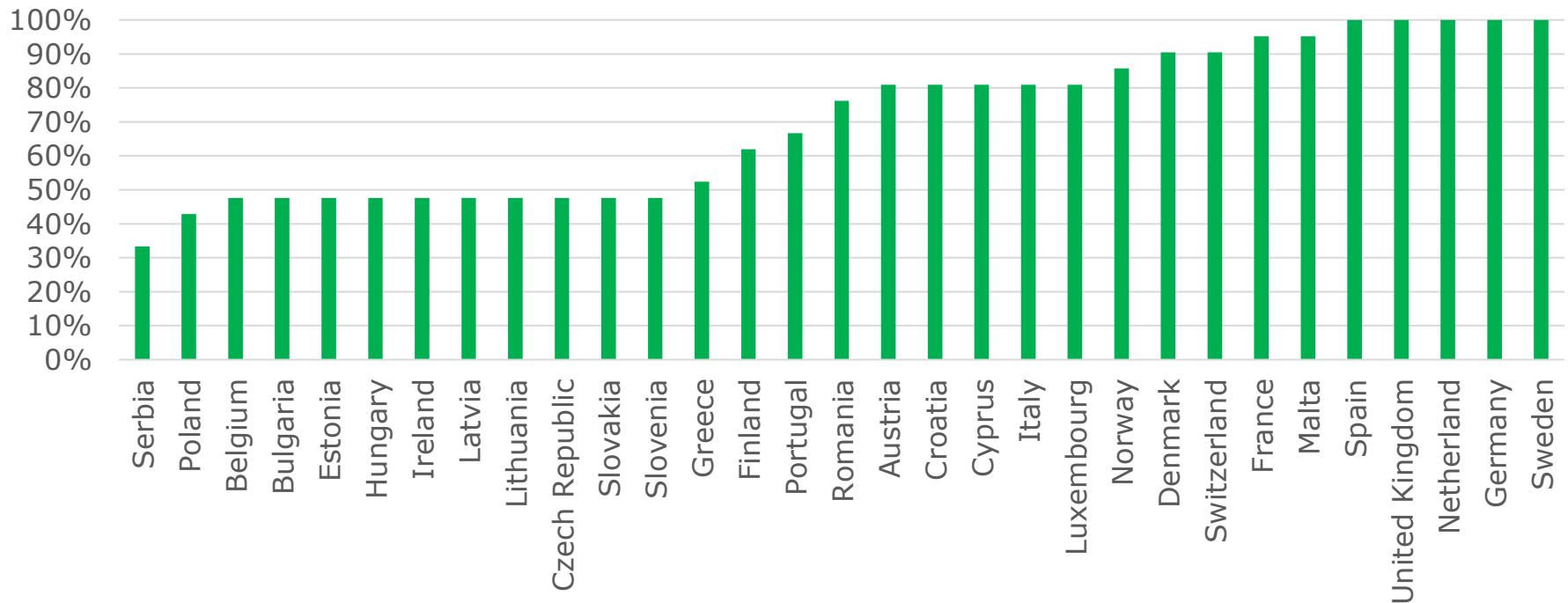
* Based on 12 datasets on number of dwellings, floor area, energy consumption by end-uses, large appliances (refrigerators, washing machine)

Data coverage in services



- The data coverage in tertiary sector also has to be improved (only 5 countries provide 100% of key data).
- The consumption by end-use and by branch are available for very few countries, as well as the surface areas.

% of data provided*



* Based on 24 data series: floor area, employment, energy consumption by sectors