ODYSSEE-MURE fit-4-55 (2022-2025)
30 years in monitoring energy efficiency in Europe

Make Energy Efficiency visible in the energy mix
On line workshop November 7th 2023

Didier Bosseboeuf (ADEME) : Project coordinator;

This project has received funding from the European Union's LIFE programme under grant agreement No. 101075902
2022-2025 work program in brief

• Programme: LIFE-CET, Topic: Towards an effective implementation of key legislation in the field of sustainable energy policy, Duration: 30 months, starting October 2022

• 40 partners from 28 EU countries (mainly represented by energy efficiency agencies) and 9 EnCs, coordinated by ADEME with a technical coordination (Enerdata and FHG-ISI)

• The project relies on 2 data bases:
  - ODYSSEE: 200 energy efficiency indicators and 4 related facilities; 3 updates; New updating process, using more widely EUROSTAT data and horizontal sources
  - MURE: 3000 national energy efficiency policies and ex-post impact evaluation and related facilities

• Integration of a web-based Policy Assessment Tool Policy radar (based on Artificial Intelligence AI/Web scraping methods)

• Dissemination: Country profile; national report; newsletters; Scoreboard; presence in social
ABOUT THE ODYSSEE-MURE PROJECT

Comprehensive monitoring of efficiency trends and policy evaluation in EU countries, Switzerland and Energy Community countries.

LEARN MORE

ABOUT ODYSSEE

Database on energy efficiency indicators and energy consumption by end-use and their underlying drivers in industry, transport and buildings.

Learn more

ABOUT MURE

Database on energy efficiency policies and measures by country in industry, transport and buildings.

Learn more

LATEST NEWS

24 APRIL 2023

The project is organising its first meeting in Zagreb on April 24-26, 2023, followed by a training on energy efficiency indicators and impact evaluation of policies dedicated for new corners of the project.
The energy efficiency index to assess the energy efficiency progress (ODEX)

- In ODYSSEE, an energy efficiency index is calculated at sector level (i.e. industry, transport, households) and for all final consumers to assess energy efficiency progress.

- The energy efficiency index by sector combines the trends observed in the various indicators of specific energy consumption by sub-sector or end-use, by weighting indices of specific consumption by sub-sector (or end-use) with the share of each sub-sector in the sector’s energy consumption.

- Indices are used to enable to express specific consumption by sub-sector or end-use in different physical units so as to be as close as possible to energy efficiency evaluation (e.g. toe/ton, toe/IPI for industry, toe per pkm or tkm in transport, toe/m2 or kWh/appliance for households).
The energy efficiency ODEX (2000-2010)

Energy efficiency index (ODEX technical EU 2000-2021)

Scoop : 0,5% energy savings improvement in 2021 !!!!
In 2019, total final energy savings reached 190 Mtoe in EU27. The building sector provides half of the total energy savings. The share of transport in these savings was only 15%, a share more than twice lower than its share in consumption (32%), due to much slower energy efficiency progress than in other sectors.

Source: ODYSSEE
“Energy savings end-use facility”

Cumulated annual final savings (Germany, 2008-2021)

GLOSSARY

- **ODYSSEE savings**: In ODYSSEE, energy savings represent the effect of a reduction in unit consumption at the level of up to 30 sub-sectors or end-use. They are calculated year by year in reference to the previous year (“annual new savings”). The savings shown in the graph represent the annual savings cumulated over a period (“cumulative new energy savings”). They correspond to “technical energy savings” and are derived from the technical ODEX, an indicator that measures the energy efficiency progress by sector. Negative savings, mainly due to a deterioration of energy efficiency in periods of recession when factories and trucks do not operate at full capacity, are excluded. More information about ODEX.

Source: Odyssee based on Eurostat and national source
Drivers of the energy demand variation in households (EU 2000-2021)

Source: Odyssee data base from Eurostat and national sources
“Decomposition end-use facility”

Drivers of the energy demand variation in transport (France, 2000-2021)

Source: ADEME’s national report based Odyssee data base from Eurostat and national sources
The European energy efficiency scoreboard end-use facility

The Scoreboard covers 31 countries: EU, Norway, the UK, Serbia and Switzerland

- **Upper value**: Score above 0.70 [4 countries, 2021]
- **Middle value**: Score in the range 0.41–0.69 [13 countries]
- **Lower value**: Score below 0.40 [14 countries including Norway and Serbia with incomplete data]

Source: Odyssee data base from Eurostat and national sources
“The European energy efficiency scoreboard end-use facility”

### Overall

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<th>Policies</th>
<th>Combined</th>
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### Households

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Source: Odyssee data base from Eurostat and national sources
Short term indicators:
Electricity consumption variation at EU level in 2022

Final electricity consumption decreased by 3% in 2022 in EU:

- **Warmer winter** has lowered electricity consumption by 19 TWh.
- **Energy efficiency** improvements have saved around 48 TWh.
- These savings have been partially offset by **economic growth** contributing to increase electricity consumption by around 27 TWh.
- Significant **behavioural changes** due to energy prices increase and sufficiency policies have reduced electricity consumption by 40 TWh.

Source: Enerdata calculations from Eurostat (yearly and monthly data)
Conclusions

• ODYSSEE MURE is considered as the best practice in the EU to monitor energy efficiency trends in the EU. Its methodology is broadly applied worldwide (ISO 50049);

• To properly monitor energy efficiency in relation to energy efficiency policies, a detailed data collection on energy demand and its related drivers should be performed. Relying only on «pure official data» limits the analysis and provides results less connected to the actual energy efficiency improvements.

• Since 30 years, the ODYSSEE-MURE network supported by the EC and through a collaborative process (data collection performed by national teams) provides a set of 200 harmonised, comparable and updated energy efficiency indicators (ODEX, Energy savings, decomposition, short term indicators etc.).

• Many efforts and channels have been devoted to communicate and disseminate this analysis (ex: Country and sectoral profiles, national reports, end-use facilities, policy briefs and related webinars, scoreboard etc.)
Conclusions

• Considering the previous argumentaire, the following figure can be considered as reliable and the best practice in EU. It can also be displayed on the basis of the final energy and consumption. The level of « avoided consumption » depends on the reference year (here 1990).

• Adding short term evaluation of energy savings (n-1) based on the ODYSSEE-methodology allows to publish useful information to the decisions makers about a « full updated energy consumption balance ».

Source: ODYSSEE based on eurostat and national data

Thank you for your attention
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