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ODYSSEE-MURE webinar series on Energy Efficiency

The European Energy Efficiency Scoreboard 2024 and the Gap to European 2030 Energy Efficiency Targets

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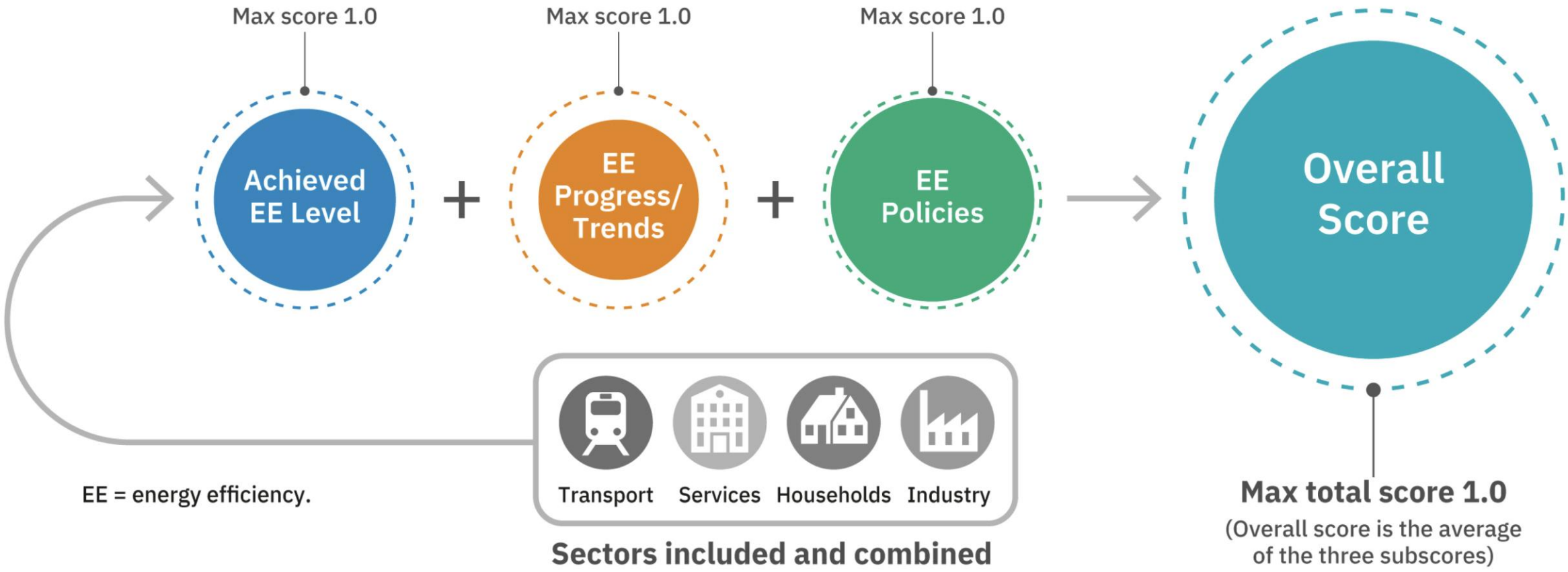
Section 01

Recall:
How the European Energy Efficiency Scoreboard is calculated

How does the ODYSSEE-MURE scoring method work?



Households: List of indicators used to calculate the scores

Households

End-use	Indicator	Weighting factor
Heating	Consumption for heating per m^2 scaled to EU climate and equivalent to central heating[3]	Share of heating in total households consumption
Other thermal uses	Consumption per dwelling for cooking and water heating	Share of cooking + ½ of water heating in total households consumption
Appliances	Specific consumption of electricity per dwelling for appliances (including AC) and lighting	Share of appliances (incl. AC) & lighting in households consumption
Solar penetration	% of dwellings with solar water heater	½ share of water heating in households consumption

Industry: List of indicators used to calculate the scores

Industry

Category	Indicator
Trend	ODEX (energy efficiency index)[6]
Level	Adjusted energy intensity at EU industry structure[7]

Transport: List of indicators used to calculate the scores

Transport

Modes	Indicator	Weighting factor
Cars	Specific consumption (goe/pkm)	Share of cars in total transport consumption
Trucks and light vehicles	Specific consumption (goe/tkm)	Share of trucks and light vehicles in total transport consumption
Air	Specific consumption (koe/pass)	Share of air in total transport consumption
Modal split: -Passengers	% of traffic by public mode	Share of buses and rail passengers in total transport consumption
-Goods	% of traffic by rail and water	Share of water and rail freight consumption in total transport

Section 02

Analysis of changes in the Scoreboard 2024 (compared to the Scoreboard 2023)

Overall Score (2024 compared to 2023)

Ranking	Overall	Scoreboard 2024	Scoreboard 2023	
1	Luxembourg	0,843	Luxembourg	0,856
2	Ireland	0,800	Germany	0,683
3	Latvia	0,646	France	0,626
4	Germany	0,631	Latvia	0,613
5	Poland	0,583	Denmark	0,602
6	Spain	0,582	Greece	0,591
7	Denmark	0,578	Spain	0,580
8	France	0,561	Estonia	0,542
9	Greece	0,551	Slovenia	0,510
10	Estonia	0,546	Netherlands	0,505
11	Cyprus	0,531	Cyprus	0,504
12	Bulgaria	0,514	Romania	0,486
13	Lithuania	0,511	Poland	0,485
14	Slovenia	0,508	Ireland	0,476
15	Netherlands	0,503	Hungary	0,468
16	Romania	0,488	Czech Republic	0,456
17	Czech Republic	0,467	Portugal	0,430
18	Portugal	0,455	Lithuania	0,420
19	Hungary	0,444	Sweden	0,411
20	Italy	0,414	Slovakia	0,407
21	Sweden	0,408	Austria	0,406
22	Slovakia	0,403	Italy	0,400
23	Austria	0,372	Blulgaria	0,371
24	Finland	0,368	Finland	0,361
25	Belgium	0,347	Belgium	0,330
26	Croatia	0,325	Croatia	0,278
27	Malta	0,146	Malta	0,257

Overall Score (2024 compared to 2023, refined)

Ranking	Overall	Scoreboard 2024		Scoreboard 2023	
1	Luxembourg	0,843		Luxembourg	0,856
2	Ireland	0,800		Germany	0,683
3	Latvia	0,646		France	0,626
4	Germany	0,631		Latvia	0,613
5	Poland	0,583		Denmark	0,602
6	Spain	0,582		Greece	0,591
7	Denmark	0,578		Spain	0,580
8	France	0,561		Estonia	0,542
9	Greece	0,551		Slovenia	0,510
10	Estonia	0,546		Netherlands	0,505
11	Cyprus	0,531		Cyprus	0,504
12	Bulgaria	0,514		Romania	0,486
13	Lithuania	0,511		Poland	0,485
14	Slovenia	0,508		Ireland	0,476
15	Netherlands	0,503		Hungary	0,468
16	Romania	0,488		Czech Republic	0,456
17	Czech Republic	0,467		Portugal	0,430
18	Portugal	0,455		Lithuania	0,420
19	Hungary	0,444		Sweden	0,411
20	Italy	0,414		Slovakia	0,407
21	Sweden	0,408		Austria	0,406
22	Slovakia	0,403		Italy	0,400
23	Austria	0,372		Blulgaria	0,371
24	Finland	0,368		Finland	0,361
25	Belgium	0,347		Belgium	0,330
26	Croatia	0,325		Croatia	0,278
27	Malta	0,146		Malta	0,257

Level Score (2024 compared to 2023)

Ranking	SB24-Level			SB23-Level	
1	Lithuania	1,000		Denmark	1,000
2	Latvia	0,869		Lithuania	0,964
3	Greece	0,830		Slovenia	0,875
4	Denmark	0,808		Greece	0,864
5	Slovenia	0,807		France	0,860
6	France	0,801		Latvia	0,857
7	Sweden	0,787		Spain	0,850
8	Germany	0,773		Germany	0,846
9	Estonia	0,772		Sweden	0,839
10	Ireland	0,758		Romania	0,838
11	Netherlands	0,747		Slovakia	0,827
12	Spain	0,741		Austria	0,821
13	Slovakia	0,737		Netherlands	0,781
14	Italy	0,731		Italy	0,762
15	Austria	0,679		Estonia	0,726
16	Portugal	0,666		Portugal	0,699
17	Hungary	0,644		Hungary	0,661
18	Romania	0,610		Poland	0,594
19	Poland	0,570		Ireland	0,573
20	Czech Republic	0,552		Luxembourg	0,569
21	Luxemburg	0,530		Bulgaria	0,538
22	Bulgaria	0,513		Czech Republic	0,508
23	Malta	0,401		Finland	0,492
24	Belgium	0,398		Belgium	0,370
25	Finland	0,361		Malta	0,283
26	Croatia	0,120		Croatia	0,157
27	Cyprus	0,000		Cyprus	0,000

Trend Score (2024 compared to 2023)

Ranking	SB24-Trend			SB23-Trend	
1	Luxembourg	1,000		Luxembourg	1,000
2	Ireland	0,882		Estonia	0,809
3	Denmark	0,823		Ireland	0,736
4	Estonia	0,810		Greece	0,715
5	Latvia	0,768		Denmark	0,691
6	Cyprus	0,677		Cyprus	0,681
7	France	0,648		Hungary	0,645
8	Belgium	0,644		Latvia	0,644
9	Czech Republic	0,622		Czech Republic	0,628
10	Greece	0,610		Belgium	0,618
11	Romania	0,600		France	0,606
12	Spain	0,598		Slovenia	0,546
13	Hungary	0,595		Netherlands	0,528
14	Portugal	0,573		Spain	0,522
15	Slovenia	0,550		Portugal	0,507
16	Netherlands	0,544		Croatia	0,456
17	Lithuania	0,466		Malta	0,436
18	Poland	0,435		Sweden	0,377
19	Croatia	0,428		Poland	0,373
20	Sweden	0,420		Romania	0,356
21	Italy	0,401		Austria	0,344
22	Austria	0,390		Italy	0,325
23	Germany	0,350		Germany	0,315
24	Slovakia	0,319		Slovakia	0,256
25	Finland	0,313		Lithuania	0,233
26	Bulgaria	0,230		Finland	0,185
27	Malta	0,000		Bulgaria	0,000

Policy Score (2024 compared to 2023)

Ranking	SB24-Policy			SB23-Policy	
1	Luxembourg	1,000		Luxemburg	1,000
2	Cyprus	0,915		Germany	0,887
3	Bulgaria	0,799		Cyprus	0,831
4	Germany	0,771		Bulgaria	0,573
5	Ireland	0,759		Poland	0,489
6	Poland	0,743		France	0,413
7	Finland	0,432		Finland	0,407
8	Croatia	0,427		Spain	0,367
9	Spain	0,407		Latvia	0,337
10	Latvia	0,300		Romania	0,262
11	Romania	0,256		Czech Republic	0,232
12	France	0,235		Croatia	0,220
13	Czech Republic	0,228		Netherlands	0,207
14	Netherlands	0,218		Greece	0,193
15	Greece	0,213		Slovakia	0,138
16	Slovenia	0,166		Ireland	0,118
17	Slovakia	0,154		Denmark	0,114
18	Portugal	0,125		Italy	0,112
19	Italy	0,109		Slovenia	0,110
20	Denmark	0,102		Hungary	0,098
21	Hungary	0,094		Estonia	0,091
22	Lithuania	0,067		Portugal	0,086
23	Estonia	0,055		Lithuania	0,063
24	Austria	0,047		Malta	0,052
25	Malta	0,036		Austria	0,052
26	Sweden	0,017		Sweden	0,016
27	Belgium	0,000		Belgium	0,000

Residential Score (2024 compared to 2023)

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Ranking	SB24-Residential			SB23-Residential	
1	Ireland	0,809		Luxembourg	0,832
2	Luxembourg	0,796		Germany	0,800
3	Germany	0,785		Netherlands	0,715
4	Netherlands	0,729		France	0,661
5	Bulgaria	0,687		Latvia	0,622
6	Latvia	0,666		Poland	0,587
7	Finland	0,644		Finland	0,587
8	Poland	0,614		Bulgaria	0,586
9	Spain	0,596		Spain	0,581
10	Denmark	0,591		Denmark	0,574
11	Czech Republic	0,566		Ireland	0,567
12	France	0,557		Sweden	0,562
13	Lithuania	0,555		Lithuania	0,551
14	Italy	0,550		Czech Republic	0,532
15	Sweden	0,535		Italy	0,528
16	Slovenia	0,532		Greece	0,519
17	Austria	0,522		Slovenia	0,503
18	Greece	0,517		Estonia	0,496
19	Romania	0,494		Austria	0,484
20	Estonia	0,485		Cyprus	0,434
21	Cyprus	0,473		Romania	0,431
22	Croatia	0,456		Hungary	0,428
23	Hungary	0,447		Croatia	0,379
24	Belgium	0,435		Belgium	0,371
25	Slovakia	0,359		Slovakia	0,349
26	Portugal	0,333		Portugal	0,310
27	Malta	0,240		Malta	0,212

Industry Score (2024 compared to 2023)

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Ranking	SB24-Industry			SB23-Industry	
1	Estonia	0,683		Estonia	0,632
2	Poland	0,664		Germany	0,576
3	Lithuania	0,573		Cyprus	0,576
4	Croatia	0,531		Ireland	0,494
5	Cyprus	0,527		Romania	0,474
6	Latvia	0,498		Lithuania	0,462
7	Ireland	0,494		Poland	0,461
8	Germany	0,469		Denmark	0,448
9	Denmark	0,440		Latvia	0,430
10	Romania	0,424		Greece	0,413
11	Portugal	0,418		Croatia	0,400
12	Greece	0,411		Finland	0,394
13	Malta	0,389		Malta	0,389
14	Slovenia	0,383		Slovenia	0,374
15	Finland	0,349		Portugal	0,369
16	Spain	0,333		Italy	0,361
17	Slovakia	0,321		Czech Republic	0,359
18	Luxembourg	0,308		Luxembourg	0,331
19	Belgium	0,304		Spain	0,327
20	Czech Republic	0,303		Slovakia	0,326
21	Bulgaria	0,301		Netherlands	0,323
22	Italy	0,299		Hungary	0,314
23	Austria	0,297		Austria	0,307
24	Hungary	0,288		bel	0,299
25	Netherlands	0,282		Sweden	0,275
26	France	0,265		France	0,255
27	Sweden	0,254		Bulgaria	0,235

Scoring: a learning process

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Industry

Level

Rank	Countries	Rank change	Score 2024	Score 2023	Comment
1	Cyprus	0	1,00	1,00	
2	Latvia	0	1,00	0,94	
3	Estonia	0	0,95	0,86	
4	Lithuania	8	0,94	0,73	Lithuania: The energy intensity of industry was miscalculated last year (error in the average), and the score should have been 0.93. The difference observed this year is fully explained by the correction of this error. The difference observed this year is fully explained by the correction of this error.
5	Denmark	-1	0,88	0,85	
6	Croatia	1	0,84	0,76	
7	Slovenia	-2	0,81	0,79	
8	Greece	1	0,78	0,75	
9	Poland	-3	0,76	0,78	
10	Austria	-2	0,75	0,75	

Residential

Level

Rank	Countries	Rank change	Score 2024	Score 2023	Comment
1	Netherlands	0	1,00	1,00	
2	Bulgaria	4	0,97	0,92	
3	Lithuania	2	0,96	0,92	
4	Finland	-1	0,94	0,96	
5	Sweden	-1	0,93	0,92	
6	Austria	1	0,89	0,85	
7	Luxembourg	1	0,85	0,80	
8	Germany	1	0,83	0,80	
9	Denmark	-7	0,79	0,97	Denmark : Last year, the final consumption of DHW was estimated (20% of heating consumption) and was much lower than the value collected this year.
10	Spain	0	0,76	0,72	

Scoring: a learning process

ODYSSEE-MURE

Industry

Level

Rank	Countries	Rank change	Score 2024	Score 2023	Comment
1	Cyprus	0	1,00	1,00	
2	Latvia	0	1,00	0,94	
3	Estonia	0	0,95	0,86	
4	Lithuania	8	0,94	0,73	Lithuania: The energy intensity of industry was miscalculated last year (error in the average), and the score should have been 0.93. The difference observed this year is fully explained by the correction of this error. The difference observed this year is fully explained by the correction of this error.
5	Denmark	-1	0,88	0,85	
6	Croatia	1	0,84	0,76	
7	Slovenia	-2	0,81	0,79	
8	Greece	1	0,78	0,75	
9	Poland	-3	0,76	0,78	
10	Austria	-2	0,75	0,75	

Residential

Level

Rank	Countries	Rank change	Score 2024	Score 2023	Comment
1	Netherlands	0	1,00	1,00	
2	Bulgaria	4	0,97	0,92	
3	Lithuania	2	0,96	0,92	
4	Finland	-1	0,94	0,96	
5	Sweden	-1	0,93	0,92	
6	Austria	1	0,89	0,85	
7	Luxembourg	1	0,85	0,80	
8	Germany	1	0,83	0,80	
9	Denmark	-7	0,79	0,97	Denmark : Last year, the final consumption of DHW was estimated (20% of heating consumption) and was much lower than the value collected this year.
10	Spain	0	0,76	0,72	

Section 03

Diverging climate and energy efficiency policies

Emission versus Fuel Savings

Tabelle 69: Minderungswirkung der Instrumente auf die Treibhausgasemissionen im Industriesektor für MMS und MWMS (ggü. kontrafaktischer Entwicklung)

Treibhausgasemissionen und -Minderungen* [Mio. t CO_2-Äq.]	2025	2030	2035	2040	2045	2050
EU-Emissionshandel	4,4	12,7	17,0	21,5	24,3	28,3
CO_2-Bepreisung für die Sektoren Verkehr und Wärme (BEHG)	0,3	0,9	1,7	2,9	5,2	7,6
EU-Innovationsfonds	0,1	2,0	3,9	4,9	5,4	5,3
Förderprogramme Dekarbonisierung in der Industrie* und Klimaschutzverträge	1,0	21,1	40,3	51,3	56,3	54,9
IPCEI Wasserstoff	0,1	1,3	2,5	3,2	3,5	3,4
Mindesteffizienzstandards – EU Ökodesign-Richtlinie	13,0	20,4	22,1	23,2	22,9	22,5
Treibhausgasemissionen des Sektors im MMS	**169,8**	**127,1**	**91,8**	**72,0**	**63,0**	**58,2**
Treibhausgasemissionen des Sektors im MWMS	**166,9**	**120,5**	**84,6**	**65,4**	**56,5**	**50,9**

GHG Emission Savings Industrial Measures

Tabelle 71: Wirkung der Instrumente auf den Brennstoffbedarf im Industriesektor für MMS und MWMS (ggü. kontrafaktischer Entwicklung)

Brennstoffbedarf und -Einsparungen* [TWh]	2025	2030	2035	2040	2045	2050
EU-Emissionshandel	4,8	17,0	25,2	33,2	38,0	42,6
CO_2-Bepreisung für die Sektoren Verkehr und Wärme (BEHG)	0,3	1,4	3,2	5,6	10,2	14,3
EU-Innovationsfonds	0,3	2,1	3,8	4,6	4,5	4,1
Förderprogramme Dekarbonisierung in der Industrie* und Klimaschutzverträge	3,4	21,7	39,3	47,9	46,5	42,7
IPCEI Wasserstoff	0,2	1,3	2,4	3,0	2,9	2,6
MMS	**419,6**	**350,4**	**302,5**	**278,3**	**273,5**	**273,2**
MWMS	**415,3**	**339,0**	**287,0**	**259,0**	**255,8**	**258,2**

Fuel Savings Industrial Measures

Source: Projektionsbericht 2023, Germany

Emission savings versus electricity increase

Tabelle 69: Minderungswirkung der Instrumente auf die Treibhausgasemissionen im Industriesektor für MMS und MWMS (ggü. kontrafaktischer Entwicklung)

Treibhausgasemissionen und -Minderungen* [Mio. t CO_2-Äq.]	2025	2030	2035	2040	2045	2050
EU-Emissionshandel	4,4	12,7	17,0	21,5	24,3	28,3
CO_2-Bepreisung für die Sektoren Verkehr und Wärme (BEHG)	0,3	0,9	1,7	2,9	5,2	7,6
EU-Innovationsfonds	0,1	2,0	3,9	4,9	5,4	5,3
Förderprogramme Dekarbonisierung in der Industrie* und Klimaschutzverträge	1,0	21,1	40,3	51,3	56,3	54,9
IPCEI Wasserstoff	0,1	1,3	2,5	3,2	3,5	3,4
Mindesteffizienzstandards – EU Ökodesign-Richtlinie	13,0	20,4	22,1	23,2	22,9	22,5
Treibhausgasemissionen des Sektors im MMS	**169,8**	**127,1**	**91,8**	**72,0**	**63,0**	**58,2**
Treibhausgasemissionen des Sektors im MWMS	**166,9**	**120,5**	**84,6**	**65,4**	**56,5**	**50,9**

GHG Emission Savings Industrial Measures

Tabelle 70: Wirkung der Instrumente auf den Strombedarf im Industriesektor für MMS und MWMS (ggü. kontrafaktischer Entwicklung)

Strombedarf und -Einsparungen* [TWh]	2025	2030	2035	2040	2045	2050
EU-Emissionshandel	-4,3	-13,3	-18,8	-24,2	-28,1	-31,4
CO_2-Bepreisung für die Sektoren Verkehr und Wärme (BEHG)	-0,1	-0,6	-1,5	-2,1	-3,8	-5,4
EU-Innovationsfonds	-0,2	-1,3	-2,7	-3,6	-3,5	-3,3
Förderprogramme Dekarbonisierung in der Industrie* und Klimaschutzverträge	-2,1	-13,8	-28,1	-37,5	-35,8	-34,2
IPCEI Wasserstoff	-0,1	-0,8	-1,7	-2,3	-2,2	-2,1
MMS	**229,6**	**242,9**	**261,9**	**281,2**	**286,4**	**290,5**
MWMS	**230,4**	**245,7**	**267,3**	**290,5**	**293,8**	**294,7**

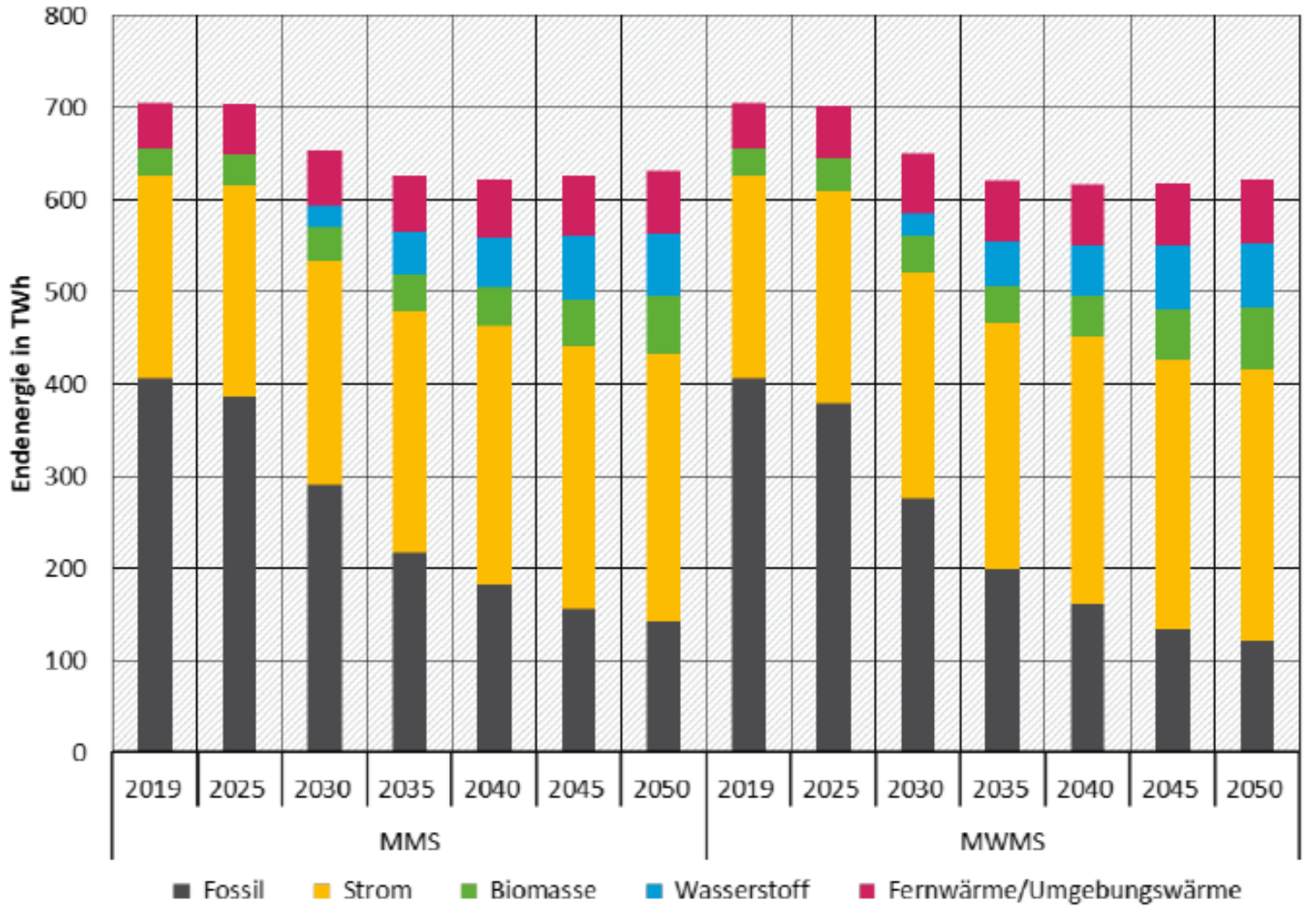
Negative value = negative savings (increase)

Negative Electricity „Savings“ Industrial Measures

Source: Projektionsbericht 2023, Germany

Energy demand industry in Germany: on the rise after 2030, despite largely increasing GHG savings

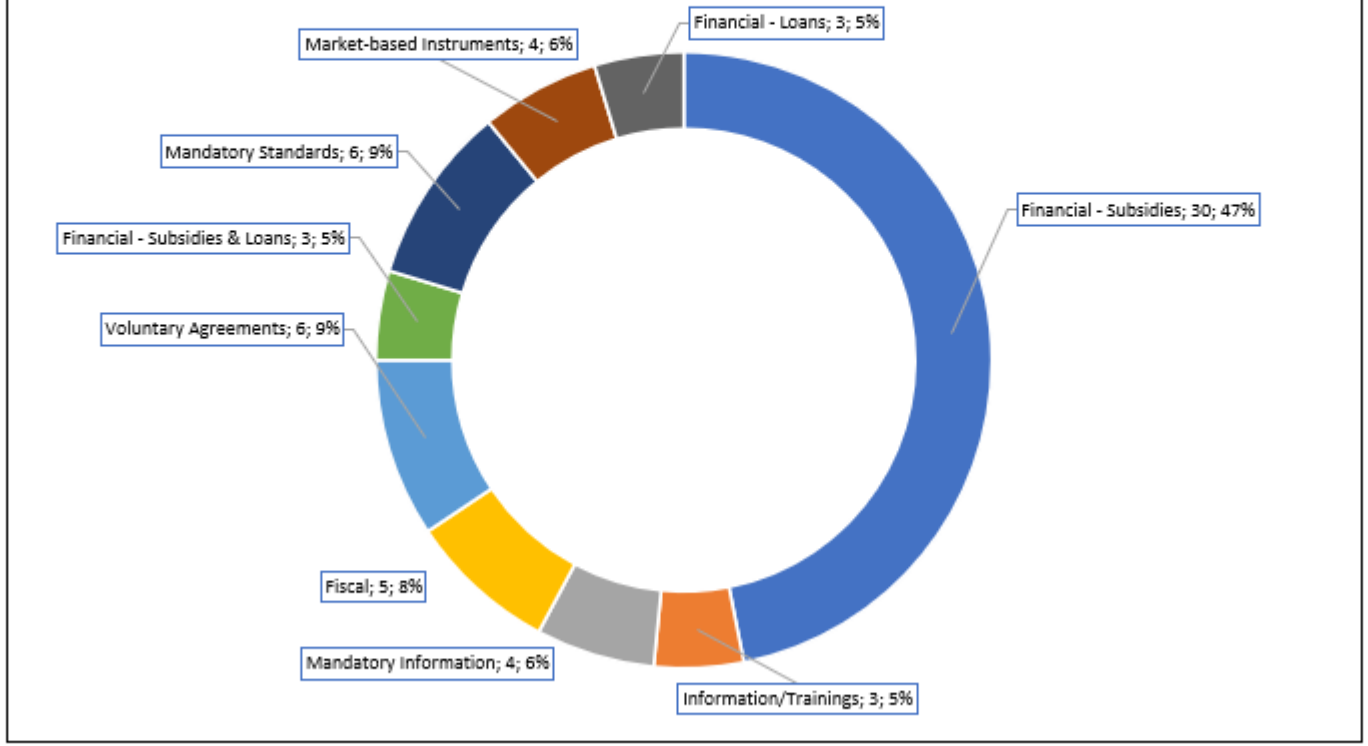
Abbildung 31: Endenergiebedarf Industriesektor (AGEB-Definition)



Source: Projektionsbericht 2023, Germany

Important role of electricity savings

Important role of „classical" electricity savings approaches (EU-MORE: replacement of old electric motors



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Source: EU MORE Porject

Section 04

Energy Efficiency Policy Assessment Tool : comparing with target scenarios

Policy Assessment Tool: What it does and how it functions

- Links to the ODYSSEE-MURE database on energy efficiency policies and indicators. These in turn are updated by national teams in each EU MS and link to NECPs and Art. 8 (formerly Art. 7) measures
- Extracts information on measures and their impacts by EU MS.
- Adjustment factors to account for implementation, impact and interactions (need to be determined by interviews as done previously)
- Allows to compare with EU scenarios (reference and policy scenario), establishes what part of the gap is filled by measures and what part still needs to be filled
- Will be linked to Multiple Impacts of the EE measures (see later)
- Has a dashboard to consult those measures and allows to identify the important ones.
- Links measures to EU directives as far as relevant (will allow in future to analyse also the impacts of different EU Directives).
- Under preparation: a gap filling approach based on the evaluation of measures in the tool based on certain number of criteria and a ranking of the measures. Multiple benefits could also become part of that ranking.

Conclusions

1. Comparatively stable development from the 2023 to the 2024 Scoreboard
2. Many changes in the „vicinity“, especially when there are small differences between scores. Steady evolution.
3. Scoring: A Learning process.
4. Climate versus energy policies
5. Development of a new policy assessment tool

Conclusions

1. Comparatively stable development from the 2023 to the 2024 Scoreboard
2. Many changes in the „vicinity“, especially when there are small differences between scores. Steady evolution.
3. Scoring: A Learning process.
4. Climate versus energy policies
5. Development of a new policy assessment tool

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Thank you for your attention!

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