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ANNEX

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to the

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

EU wide assessment of the final updated national energy and climate plans

Delivering the Union's 2030 energy and climate objectives

{SWD(2025) 140 final}

ANNEX

1 METHODOLOGY FOR THE AGGREGATION OF GREENHOUSE GAS EMISSIONS ACROSS MEMBER STATES

The EU-wide aggregation of data on GHG emissions is based on the 24 NECPs submitted at the time of publication of this assessment¹.

The aggregation of data from the final NECPs is based on the following rules:

- When available, projections with additional measures (WAM) provided in the NECPs were used;
- If the WAM projections are missing, the projections with existing measures (WEM) provided in the NECP were used instead.

Estonia and Poland provided updated figures to be used in the EU-wide assessment based on the versions of the final NECPs available for public consultation (not yet officially submitted). WAM projections were used for these Member States. For Belgium, March 2024 WAM projections submitted as per Article 18 of the Governance Regulation were used.

As outlined in the Climate Action Progress Report 2024², the scope that best represent the EU's climate target under the EU Climate Law can be obtained by adding the emissions from international aviation and maritime transport regulated under EU law to the total domestic GHG emissions, including LULUCF. However, this includes only part of international transport. For international aviation, the scope regulated under EU law covers intra EU flights, flights departing from the EU to EEA non-EU countries, the United Kingdom, and Switzerland. For international maritime transport, the scope regulated under EU law covers emissions as reflected in the Monitoring Reporting and Verification (MRV) Maritime Regulation³ from voyages between two EU Member States, and 50% of emissions from voyages between an EU Member State and a third country (including Norway and Iceland). For LULUCF, the European Climate Law sets a limit of 225 MtCO₂eq to the contribution of net removals to the 2030 target.

Given the focus of the NECPs on national policies, the GHG emissions projections provided by Member States in general do not include data on international transport with the relevant scope. To fill this gap, an estimate was used (see Table 2).

TABLE 1: INTERNATIONAL TRANSPORT (ESTIMATE OF EMISSIONS REGULATED IN EU LAW *)

International aviation and maritime transport (MtCO₂eq)	1990	2030*
Minimum estimated over 2000-2022	90	106
Maximum estimated over 2000-2022	90	154.1

**Estimate of emissions from international aviation and maritime transport covered by the ETS. See Climate Action Progress Report 2024, Technical information accompanying the document (SWD(2024) 249 final – Section 2.5).*

¹ Data from Slovakia's NECP are included in the EU wide aggregation. An individual assessment of Slovakia's plan will follow.

² See the technical information accompanying the document (SWD(2024) 249 final – section 2.3).

³ Regulation (EU) 2015/757.

building on JRC report JRC139028⁴. The 2023 level is estimated to be slightly less than 120 MtCO₂. Estimates exclude 2020, as international transport was affected by the COVID crisis

Based on data in Table 1, net domestic GHG emissions in 2030 are projected to be more than 56% lower than in 1990. When considering the limit of 225 MtCO₂eq to the LULUCF contribution, net domestic emissions in 2030 are projected to be more than 55.5% lower than in 1990.

When considering the estimated emissions of international transport regulated under EU law (as per Table 2) and the full LULUCF contribution, net GHG emission reductions in 2030 are estimated to be in the range of 54% to 55% below the 1990 levels.

When considering the estimated emissions of international transport regulated under EU law and applying the limit of 225 MtCO₂eq to the LULUCF contribution, net GHG emission reductions in 2030 compared to 1990 are estimated to be between 53.3% and 54.3%.

⁴ European Commission, Joint Research Centre, AXA-ROZEN, M., RÓZSAI, M. and NEUWAHL, F., Aligning historical international aviation and maritime transport data to the scope of EU climate policies, Publications Office of the European Union, Luxembourg <https://data.europa.eu/doi/10.2760/6836357>, JRC139028.

TABLE 2: UNDERLYING GHG EMISSIONS AND REDUCTIONS DATA USED FOR EU WIDE AGGREGATION

	Total GHG emissions		ESR emissions			LULUCF emissions			
	MtCO ₂ eq., excluding LULUCF and international transport		MtCO ₂ eq., 2005 legal base as per Annex I of the ESR			MtCO ₂ eq., 2024 submissions for the 2016-2018 average			
	1990	2030	2005	2030	Target	1990	2016-2018 average	2030	Gap to target
EU	4867.2	2286.4	2517.1	1553	1510.2	217.47	-	-259.1	-
Austria	79.08	54.40	57.0	30.7	29.6	-11.68	-1.46	-5.7	-3.4
Belgium**	145.85	83.30	81.6	46.8	43.3	-2.94	-0.59	-1.27	-0.3
Bulgaria	99.04	27.20	22.3	19.9	20.1	-17.78	-9.82	-9.52	1.4
Cyprus	5.58	5.80	4.3	3.2	2.9	-0.15	-0.27	-0.31	0.0
Czechia	201.31	64.74	65.0	41.74	48.1	-8.84	-4.10	-3.78	0.2
Germany	1250.66	454.00	484.7	287.0	242.3	32.88	-5.05	-2.2	6.6
Denmark	71.64	24.70	40.4	22.4	20.2	6.69	1.36	0.69	-0.2
Estonia*	40.27	11.90	6.2	5.1	4.7	-5.24	2.38	1.54	-0.4
Greece	103.99	50.50	63.0	35.7	48.7	-2.27	-4.22	-6.6	-1.2
Spain	287.29	195.18	242.0	134.1	150.8	-33.89	-47.22	-34	6.1
Finland	71.33	30.00	34.4	18.9	17.2	-23.17	-4.73	-6.4	1.2
France	539.49	271.00	401.1	215.0	210.6	-18.29	-24.71	-18	13.4
Croatia	32.04	18.83	18.1	14.2	15.0	-6.35	-5.36	-3.96	2.0
Hungary	95.06	47.8	47.8	35.9	38.9	-3.36	-4.91	-5.72	0.1
Ireland	55.23	43.10	47.7	35.6	27.7	5.01	4.18	4.91	1.4
Italy	522.37	291.00	343.1	203.8	193.2	-3.64	-34.41	-28.4	9.2

Lithuania	26.06	14.44	13.1	10.3	10.3	-5.34	-6.45	-7.65	-0.3
Luxembourg	12.73	5.63	10.1	4.5	5.1	0.01	-0.363	-0.43	0.0
Latvia	26.06	8.10	8.6	6.8	7.1	-12.39	-1.58	3.30	5.5
Malta	2.63	1.78	1.0	1.3	0.8	-0.01	0.002	0.003	0.0
Netherlands	222.70	120.31	128.1	78.6	66.6	5.37	5.36	3.70	-1.2
Poland*	475.72	263.40	192.5	157.3	158.4	-28.34	-41.13	-42.1	5.9
Portugal	58.95	37.06	48.6	29.5	34.7	7.14	6.34	-6.54	-11.9
Romania	256.65	83.40	78.2	66.3	68.3	-26.24	-48.66	-49.05	2.0
Sweden	71.26	39.20	43.2	24.3	21.6	-51.39	-44.86	-35.5	13.3
Slovenia	18.80	13.38	11.8	8.4	8.6	-4.38	0.741	-2.09	-2.6
Slovakia	73.46	26.22	23.1	15.9	17.9	-8.89	-4.92	-4	1.9

* Member States that did not submit a final updated NECP but provided preliminary information for this assessment.

** Member States that did not submit a final updated NECP and did not provide preliminary information for this assessment.

All numbers based on WAM projections except for Denmark, Finland, and Sweden.

FIGURE 1 : GAP TO 2030 ESR TARGETS, PROJECTED ACHIEVEMENT AS A PERCENTAGE SHARE OF THE TARGET

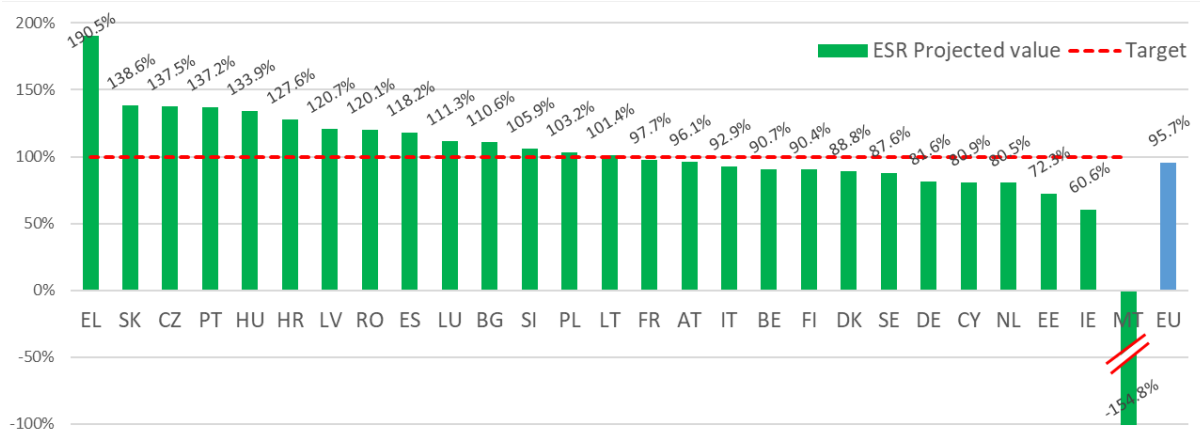
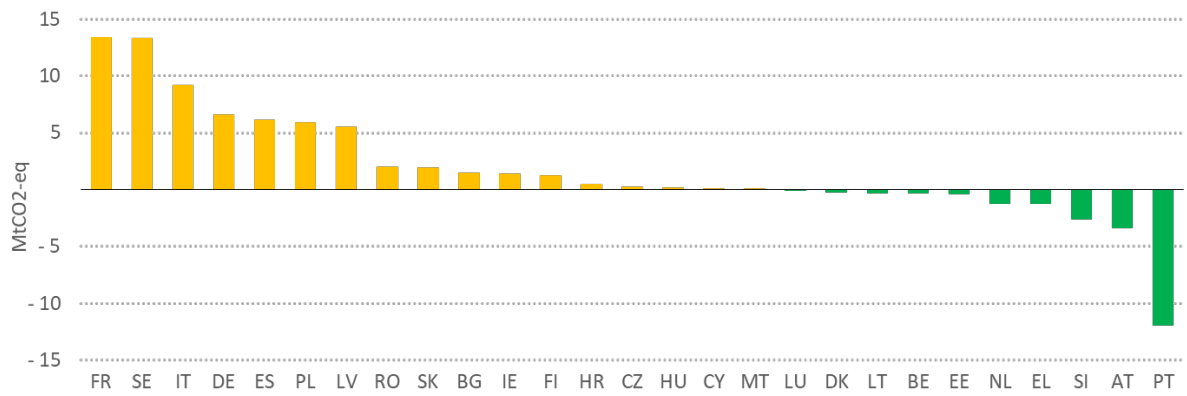


FIGURE 2 : GAP TO 2030 LULUCF TARGETS, MTCO₂EQ.



2 OVERVIEW OF MEMBER STATES' CONTRIBUTIONS TO THE EU RENEWABLE ENERGY TARGET FOR 2030

The following criteria were used to assess the ambition gap between the submitted contributions to the EU-wide share of renewable energy target of at least 42.5% and the share of renewable energy that results from applying the formula set out in Annex II of Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action⁵:

With x referring to the Member State's renewables shares contribution in the draft updated NECP

$x \leq -4\%$ = significantly below

$-4\% < x \leq -2\%$ = below

$-2\% < x < 0\%$ = slightly below

$x = 0\%$ = in line

$0\% < x < 2\%$ = slightly above

$2\% \leq x < 5\%$ = above

The Member States' renewable energy share in gross final energy consumption (GFEC) and their associated GFEC levels are necessary to establish whether the collective contribution of Member States add up to at least 42.5%, the EU wide binding renewable energy share in GFEC.

For those Member States that have not submitted the GFEC values, or that have not submitted a final updated NECP, the contributions provided in their draft updated NECPs of 2023, or more recent data submitted to the Commission were used to fill in the remaining data gaps.

24 Member States submitted a final updated NECP including an explicit or implicit contribution to the EU's binding 42.5% renewable energy target for 2030.

Estonia and Poland provided updated figures to be used in the EU-wide assessment based on the versions of the final NECPs available for public consultation (not yet officially submitted).

One Member State (Belgium) did not submit either a final updated NECP or a contribution to the Commission.

⁵Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council. OJ L 328, 21.12.2018, p. 1–77.

TABLE 3: NATIONAL CONTRIBUTIONS TO THE EU'S RENEWABLE ENERGY TARGET

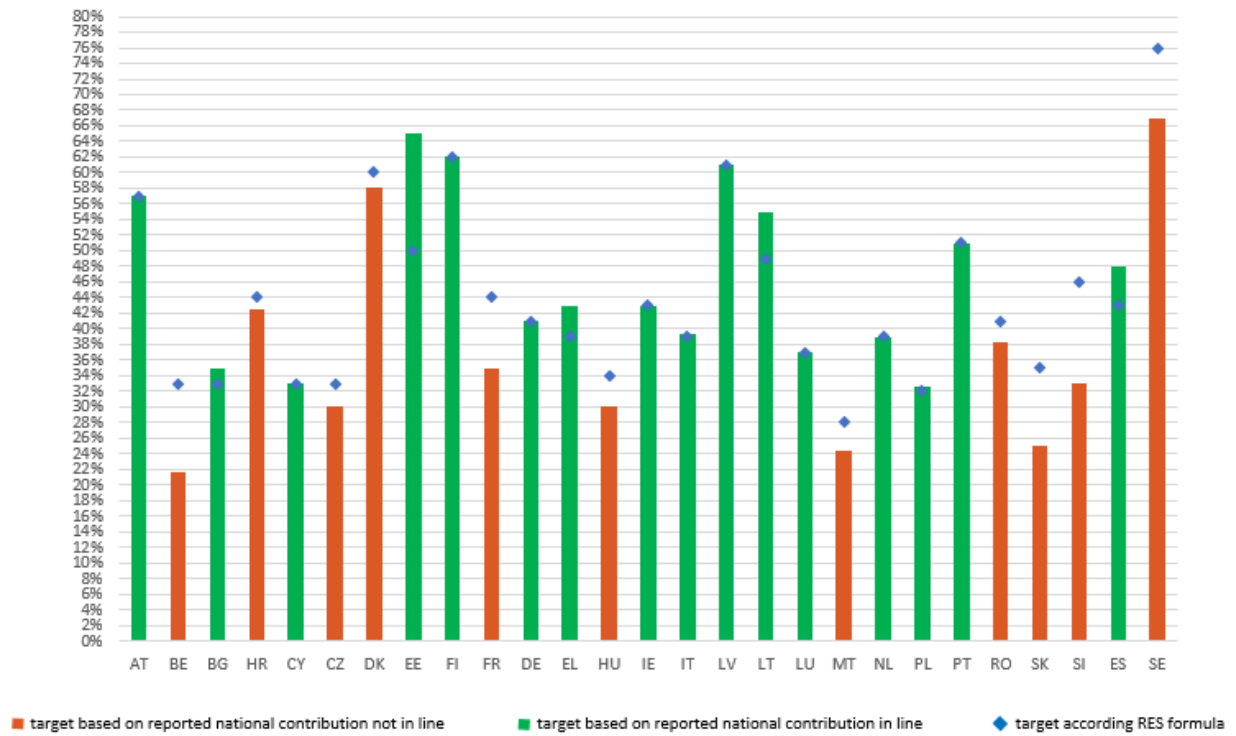
Member State	2023	2030			
			Draft updated NECPs	Final updated NECPs	
		Formula result	Contribution	Contribution ⁶	Ambition
Austria	41%	57%	46%-50%	57%	in line
Belgium	14.7%	33%	21.70%	21.7%	significantly below
Bulgaria	22.5%	33%	30%	34.9%	slightly above
Croatia	28.1%	44%	42.5%	42.5%	slightly below
Cyprus	20.2%	33%	27%	33%	in line
Czechia	18.6%	33%	30%	30.1%	below
Denmark	44.4%	60%	71%	58%	below
Estonia	41.0%	50%	65%	65%	significantly above
Finland	50.8%	62%	51%	62%	in line
France	22.3%	44%	33%	35%	significantly below
Germany	21.6%	41%	40%	41%	in line
Greece	25.3%	39%	44%	43%	above
Hungary	17.1%	34%	29%	30%	significantly below
Ireland	15.3%	43%	31.4%-34.1%	43%	in line
Italy	19.6%	39%	41%	39.4%	in line
Latvia	43.2%	61%	57%	61%	in line
Lithuania	31.9%	49%	55%	55%	significantly above
Luxembourg	14.4%	37%	37%	37%	in line
Malta	15.1%	28%	12%	24.5%	below
Netherlands	17.4%	39%	27%	39% ⁷	in line
Poland	16.6%	32%	23%-31%	32.6%	slightly above
Portugal	35.2%	51%	49%	51%	in line
Romania	25.8%	41%	34%	38.3%	below
Slovakia	17.0%	35%	23%	25%	significantly below
Slovenia	25.1%	46%	30%-35%	33%	significantly below

⁶ Belgium, Estonia, and Poland have not submitted their final updated NECPs to date and the information used on the national contributions for the final NECPs is based on information provided by the Member States apart from Belgium for which the draft NECP national contributions were used.

⁷ Netherlands confirmed that the required 39% contribution resulting from the formula falls within their contribution range - and so 39% was taken as their contribution.

Spain	24.9%	43%	48%	47.9%	above
Sweden	66.4%	76%	65%	67%	significantly below
EU-27	24.6%	42.5%	38.6%-39.3%	41%	

FIGURE 3 - NATIONAL CONTRIBUTIONS TO THE EU'S RENEWABLE ENERGY TARGET⁸



⁸ Note: Figure 3 illustrates national ambitions for renewable energy based on submitted final NECPs (24 Member States), otherwise on provisional figures (EE, PL) or draft NECPs (BE). The blue dots represent the collective EU targets of 42.5% renewable energy when converted to Member States' contributions in line with the Governance Regulation. Green bars mean that a Member State achieves (or overshoots) national contributions, orange means they do not.

3 OVERVIEW OF MEMBER STATES' CONTRIBUTIONS TO THE EU ENERGY EFFICIENCY TARGET FOR 2030

The calculation of the sum of the national contributions of Member States reported in the final updated NECPs for both final and primary energy consumption (FEC and PEC) is necessary to assess whether the collective contributions of Member States add up to 763 Mtoe for final energy consumption and 992.5 Mtoe for primary energy consumption.

With x referring to the deviation of the Member State's primary and final energy consumption from the target in line with the EED in the draft updated NECP

$5\% \leq x$ = significantly above

$0\% < x < 5\%$ = slightly above

$x = 0\%$ = in line

$5\% < x < 0\%$ = slightly below

$x \leq -5\%$ = significantly below

For those Member States that have not submitted any national contribution for either their final or primary energy consumption, the data reported in the draft updated NECP or more recent data submitted to the Commission were used to fill in the remaining data gaps.

24 Member States submitted a final updated NECP including an explicit or implicit contribution to the EU's binding 11.7% final energy consumption target for 2030.

Estonia and Poland provided updated figures to be used in the EU-wide assessment based on the versions of the final NECPs available for public consultation (not yet officially submitted).

One Member State (Belgium) did not submit either a final updated NECP or a contribution to the Commission.

TABLE 4: NATIONAL CONTRIBUTIONS TOWARDS THE EU'S FINAL ENERGY CONSUMPTION TARGET				
Final Energy Consumption (Mtoe)				
	Target (contribution sent to Member States) ⁹	Draft contribution (June 2023)	Final contribution	Ambition (target consumption) ¹⁰
EU-27	770.4	814.3	794.1 ¹¹	
BE	29.0	29.9	29.9	slightly above
BG	8.4	9.9	8.8	slightly above
CZ	20.35	20.2	20.35	in line
DK	13.7	14.2	13.7	in line
DE	155.5	160.5	155.5	in line
EE	2.5	2.6	2.5	in line
IE	10.5	12.9	10.5	in line
EL	14.6	15.4	15.2	slightly above
ES	66.3	70.2	71.7	significantly above
FR	106.9	104.0	106.9	in line
HR	5.9	6.6	5.9	in line
IT	93.1	94.4	101.7	significantly above
CY	1.8	1.9	1.8	in line
LV	3.5	3.4	3.5	in line
LT	4.3	4.2	4.4	slightly above
LU	2.8	3.0	3.2	significantly above
HU	16.2	17.9	17.7	significantly above
MT	0.7	0.8	0.8	significantly above
NL	38.4	43.9	38.4	in line
AT	21.6	25.6	21.6	in line
PL	58.5	67.0	58.5	in line
PT	14.4	14.9	14.4	in line
RO	22.5	23.2	22.5	in line
SI	4.3	4.4	4.3	in line
SK	8.7	10.3	9.6	significantly above
FI	20.6	23.2	20.6	in line
SE	25.4	29.8	30.1	significantly above

⁹ The corrected national contributions sent to the MS are available on table 19 of [Detailed calculations for the Member States' indicative national contributions to the Union's energy efficiency targets, in accordance with Article 4 of the Directive \(EU\) 2023/1791 on energy efficiency \(EED recast\)](#).

¹⁰ Ambition of the final contribution compared to the corrected national contribution sent to Member States.

¹¹ Belgium, Estonia and Poland have not submitted their final updated NECPs to date and the national contributions are based on the information provided by the Member States apart from Belgium for which the draft NECP national contributions were used.

Table 5: national contributions to the EU's primary energy consumption target

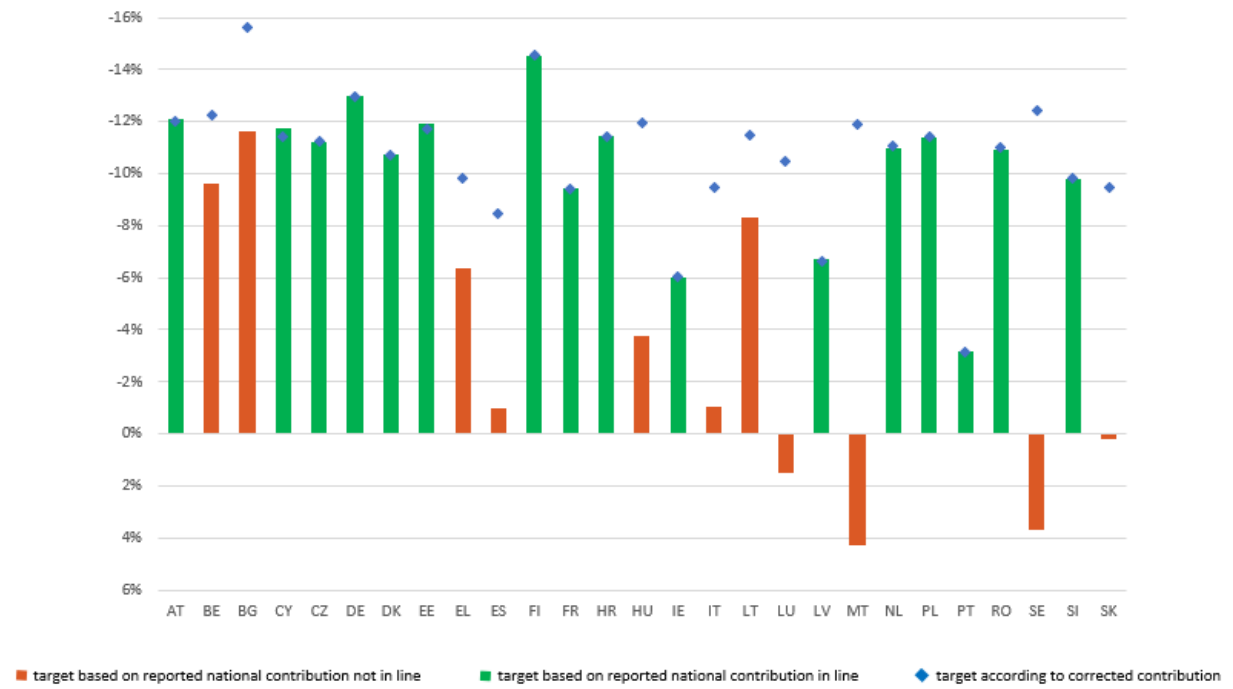
Primary Energy Consumption (Mtoe)				
	Target ¹²	Draft contribution (June 2023)	Final contribution	Ambition (target consumption) ¹³
EU-27	992.50	1067.50	1039.7714	
BE	34.66	36.50	36.50	Significantly above
BG	14.20	15.30	13.19	Slightly below
CZ	29.18	28.80	29.19	In line
DK	15.52	16.70	15.35	Slightly below
DE	194.23	193.60	193.64	Slightly below
EE	3.93	5.10	3.14	Significantly below
IE	11.29	15.20	11.29	In line
EL	17.55	18.20	17.80	Slightly above
ES	82.19	96.70	98.40	Significantly above
FR	158.67	157.30	158.56	In line
HR	6.83	8.10	8.05	Significantly above
IT	112.16	115.00	123.30	Significantly above
CY	2.04	2.30	2.03	slightly below
LV	3.75	4.10	3.85	slightly above
LT	5.44	5.20	5.40	slightly below
LU	2.84	3.50	3.28	Significantly above
HU	23.35	30.70	24.12	Slightly above
MT	0.83	1.10	0.96	Significantly above
NL	46.21	46.60	46.22	In line
AT	24.88	30.80	25.92	Slightly above
PL	79.93	91.30	79.90	In line
PT	16.71	20.80	16.71	In line
RO	30.16	31.40	28.70	Slightly below
SI	5.79	6.00	5.98	Slightly above
SK	13.94	15.70	16.42	Significantly above
FI	29.78	31.10	30.70	Slightly above
SE	35.84	40.40	41.19	Significantly above

¹² Highest value for 2030 according to the formula set out in Annex I of the EED recast based on the 2020 reference scenario or updated reference scenario.

¹³ Ambition of the final contribution calculated with respect to the results of the 2020 reference scenario and the updated 2020 reference scenario, whichever value is higher.

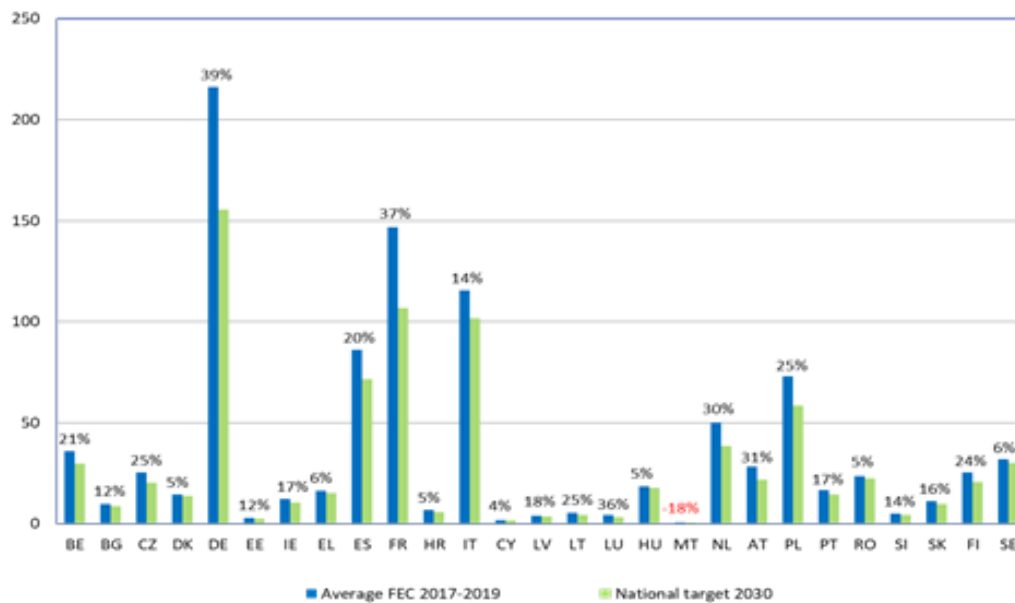
¹⁴ Belgium, Estonia and Poland have not submitted their final updated NECPs to date, and the national contributions are based on the information provided by the Member States apart from Belgium for which the draft NECP national contributions were used.

FIGURE 4 - NATIONAL CONTRIBUTIONS TO THE EU'S COLLECTIVE ENERGY EFFICIENCY TARGET¹⁵



¹⁵ Note: Figure 4 illustrates national ambitions for energy efficiency based on submitted final NECPs (24 MS), or on informal figures (EE, PL) or draft NECPs (BE). The blue dots represent the collective EU reduction target of 11.7% converted to Member States' contributions. Green bars mean that a Member State achieves (or overshoots) national contributions, orange means they do not.

FIGURE 5: REDUCTION IN FEC TO BE ACHIEVED BY 2030¹⁶



¹⁶ Note: Figure 5 illustrates national ambitions for energy efficiency compared to the average final energy consumption. The blue bars represent the average final energy consumption of a Member State for the years 2017, 2018 and 2019. Green bars show the national contribution to the EU-wide target reported by the Member State based either on submitted final NECPs (24 MS), otherwise on informal figures (EE, PL) or draft NECPs (BE). The percentages show the difference between the average final energy consumption and the national target.