

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).

This document presents the detailed calculations that the Commission performed and communicated to Member States in accordance with Article 4 and Annex I of the Directive (EU) 2023/1791 on energy efficiency (EED recast).

Introduction

According to Article 4(2) of the Directive (EU) 2023/1791 on energy efficiency¹ (EED recast), each Member State should have set and notified to the Commission an indicative national contribution for final energy consumption (FEC) together with an indicative trajectory to achieve it as part of its draft (updated) National Energy and Climate Plan (NECP). In addition, each Member State should make efforts to contribute to the Union's indicative primary energy consumption (PEC) target. To this end, each Member State should have notified an indicative national contribution for PEC together with an indicative trajectory to achieve it.

Article 4(5) of the EED recast introduces a mechanism (ambition gap mechanism) to ensure that the energy efficiency EU target is reached. This mechanism is based on the assessment that the Commission will perform to ensure that the collective contribution of Member States is at least equal to the Union's binding target for FEC set out in Article 4(1) of the EED recast.

Thus, and since Member States' collective contributions did not add up to the Union target, in accordance with Article 4(5) of the EED recast, the Commission submitted to each Member State² a corrected indicative national energy efficiency contribution for FEC.

However, “before applying the formula in Annex I for the mechanism established in this paragraph, the Commission shall update the 2020 EU Reference Scenario³ on the basis of the latest Eurostat data reported by the Member States, in accordance with Article 4(2), point (b), and Article 14 of Regulation (EU) 2018/1999⁴”. Member States that wished to update their indicative national contribution, using the updated 2020 EU Reference Scenario instead of the existing one, notified their updated contribution by 01 February 2024.

It should be recalled that in both cases, namely notifying either an indicative national energy efficiency contribution for FEC as part of the draft updated NECP or by 01 February 2024 using the updated 2020 EU Reference Scenario, a Member State “shall ensure that its contribution in Mtoe is not more than 2,5% above what it would have been had it resulted from the formula set out in Annex I with the use of the [respective] 2020 EU Reference Scenario”.

To construct the ambition gap mechanism, the criteria included in the EED recast have been used.

¹ <http://data.europa.eu/eli/dir/2023/1791/oj>

² This communication took place on 6 March 2024.

³ The updated 2020 EU Reference Scenario results were communicated to Member States on 15 December 2023.

⁴ <http://data.europa.eu/eli/reg/2018/1999/oj>

Notes on the used data

For the calculation of the energy indicators, the Eurostat ‘Complete_Energy_Balances, NRG_BAL_C’ datasets, retrieved in March 2023, were used⁵.

For the calculation of the GHG intensity factor, the EEA ‘Total net emissions with international aviation (EU NDC), All GHG gases (CO₂ eq.), Emissions per GDP in tCO₂eq. per milEUR(2015)’ dataset, retrieved in March 2024, was used⁶.

The source for PRIMES MIX 55% Scenario, the 2020 EU Reference Scenario projections for 2030, and the updated 2020 EU Reference Scenario projections for 2030 is the PRIMES model run by the E3MLab of National Technical University of Athens (NTUA).

The results of the PRIMES MIX 55% Scenario were produced for the impact assessment accompanying the Commission’s proposal for a Directive on energy efficiency (recast) in July 2021⁷.

The 2020 EU Reference Scenario projections for 2030 were published by the Commission in 2020⁸.

The updated 2020 EU Reference Scenario projections for 2030 were developed, in accordance with Article 4(5) of the EED recast. The updated version of the 2020 EU Reference Scenario, includes the following limited changes:

- Historical data of energy consumption were updated, and the model was calibrated to the relevant 2021 Eurostat data.
- Projections for economic growth and population were updated in line with the latest projections, used by the European Commission for the 2040 Climate Target modelling⁹.
- International fuel prices updated to the trajectories used by the European Commission in the REPowerEU plan¹⁰ analysis.
- Technology costs were updated in line with the latest projections used by the European Commission for the 2040 Climate Target modelling.

⁵ <https://ec.europa.eu/eurostat/web/energy/database>

⁶ <https://www.eea.europa.eu/en/analysis/indicators/total-greenhouse-gas-emission-trends>

⁷ https://commission.europa.eu/publications/proposals-delivering-european-green-deal_en

⁸ https://energy.ec.europa.eu/data-and-analysis/energy-modelling/eu-reference-scenario-2020_en

⁹ https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2040-climate-target_en

¹⁰ https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en

Indicative national contributions to the Union's energy efficiency targets, with use of the EU Reference Scenario 2020 and the updated EU Reference Scenario 2020, in accordance with the formula of Annex I of the Directive (EU) 2023/1791 on energy efficiency.

Early action factor

Table 1. FEC, in Mtoe

	2007	2008	2009	Average (2007-2009)	2017	2018	2019	Average (2017-2019)	Reduction (%)
EU	1004.3	1013.9	965.1	994.5	968.5	971.9	967.2	969.2	-3%
BE	33.8	35.3	34.2	34.4	34.5	34.8	34.2	34.5	0%
BG	10.0	9.8	8.6	9.5	9.9	9.9	9.9	9.9	5%
CZ	24.9	24.9	24.1	24.7	24.7	24.4	24.4	24.5	-1%
DK	15.7	15.5	14.8	15.3	14.6	14.6	14.3	14.5	-6%
DE	207.4	216.3	204.3	209.4	213.0	209.3	209.3	210.5	1%
EE	3.1	3.1	2.8	3.0	2.9	3.0	2.9	2.9	-2%
IE	13.2	13.2	11.8	12.7	11.8	12.4	12.4	12.2	-4%
EL	22.1	21.4	20.6	21.4	16.4	15.9	16.2	16.2	-24%
ES	97.4	94.0	87.5	92.9	83.7	85.7	85.6	85.0	-9%
FR	149.6	151.8	146.6	149.3	145.5	143.6	142.4	143.8	-4%
HR	7.3	7.4	7.2	7.3	6.9	6.9	6.9	6.9	-5%
IT	132.4	132.4	124.9	129.9	114.4	115.5	114.6	114.8	-12%
CY	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	-4%
LV	4.4	4.2	4.0	4.2	4.0	4.2	4.1	4.1	-2%
LT	5.2	5.1	4.6	5.0	5.3	5.6	5.6	5.5	10%
LU	4.3	4.4	4.1	4.3	4.2	4.3	4.4	4.3	1%
HU	17.1	17.1	16.8	17.0	18.1	18.1	18.2	18.1	7%
MT	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	38%
NL	51.5	52.5	50.6	51.6	48.3	48.8	47.8	48.3	-6%
AT	26.0	26.0	25.2	25.7	26.9	26.5	26.8	26.8	4%
PL	60.5	61.6	61.0	61.1	69.9	73.9	72.7	72.2	18%
PT	19.0	18.4	18.2	18.5	16.6	16.9	17.1	16.9	-9%
RO	23.3	24.1	21.9	23.1	23.3	23.6	23.9	23.6	2%
SI	5.1	5.5	4.9	5.2	4.9	5.0	4.9	4.9	-5%
SK	10.2	10.6	9.7	10.2	9.9	10.0	10.3	10.1	-1%
FI	25.8	24.9	23.3	24.7	24.8	25.2	25.1	25.0	1%
SE	32.5	31.9	31.0	31.8	31.5	31.3	30.9	31.2	-2%

Table 2. PEC, in Mtoe

	2007	2008	2009	Average (2007-2009)	2017	2018	2019	Average (2017-2019)	Reduction (%)
EU	1490.2	1488.8	1403.2	1460.7	1383.7	1377.3	1353.9	1371.6	-6%

	2007	2008	2009	Average (2007-2009)	2017	2018	2019	Average (2017-2019)	Reduction (%)
BE	50.4	51.2	50.1	50.6	48.5	46.5	48.4	47.8	-5%
BG	19.5	19.0	16.9	18.5	18.3	18.4	18.2	18.3	-1%
CZ	43.7	42.5	40.2	42.1	40.4	40.5	39.7	40.2	-5%
DK	20.4	19.8	19.1	19.8	17.4	17.4	16.8	17.2	-13%
DE	315.8	320.8	299.9	312.2	298.1	292.0	285.2	291.8	-7%
EE	6.2	5.4	4.3	5.3	5.8	5.7	4.8	5.4	3%
IE	16.0	15.6	14.9	15.5	14.4	14.6	14.7	14.6	-6%
EL	30.3	30.5	29.4	30.1	23.2	22.6	22.3	22.7	-24%
ES	138.8	133.9	123.0	131.9	124.9	124.3	120.6	123.3	-7%
FR	252.7	255.5	246.4	251.5	239.1	238.6	235.1	237.6	-6%
HR	9.4	9.2	8.9	9.2	8.3	8.2	8.2	8.2	-10%
IT	178.7	176.1	164.1	173.0	148.9	147.2	145.9	147.4	-15%
CY	2.7	2.9	2.8	2.8	2.5	2.5	2.5	2.5	-9%
LV	4.8	4.6	4.4	4.6	4.5	4.7	4.6	4.6	0%
LT	8.1	8.3	7.8	8.1	6.2	6.4	6.3	6.3	-22%
LU	4.6	4.6	4.3	4.5	4.3	4.5	4.5	4.4	-2%
HU	25.4	25.2	23.9	24.8	24.5	24.5	24.6	24.5	-1%
MT	0.9	1.0	0.9	0.9	0.8	0.8	0.9	0.8	-10%
NL	69.4	69.9	67.6	69.0	65.1	64.4	63.6	64.4	-7%
AT	32.2	32.5	30.6	31.8	32.8	31.8	32.3	32.3	2%
PL	91.9	93.1	89.5	91.5	99.1	104.1	100.2	101.1	10%
PT	23.9	23.6	23.6	23.7	22.8	22.7	22.1	22.5	-5%
RO	37.4	37.3	32.6	35.8	32.5	32.6	32.1	32.4	-10%
SI	7.3	7.7	6.8	7.3	6.7	6.7	6.5	6.6	-9%
SK	16.4	17.0	15.5	16.3	16.1	15.8	16.0	16.0	-2%
FI	36.0	34.5	32.3	34.3	32.2	32.8	32.1	32.4	-6%
SE	47.4	47.2	43.1	45.9	46.3	47.3	45.8	46.5	1%

Table 3. Final energy intensity (FEI), in ktoe/millionPPS

	2007	2008	2009	Average (2007-2009)	2017	2018	2019	Average (2017-2019)	Reduction (%)
EU	93.5	91.5	91.2	92.0	74.1	71.8	69.0	71.6	-22%
BE	109.6	112.1	111.2	111.0	87.5	85.5	80.8	84.6	-24%
BG	130.7	117.6	107.8	118.7	94.8	90.5	85.0	90.1	-24%
CZ	116.7	110.6	110.1	112.5	87.3	82.4	78.5	82.7	-26%
DK	93.5	88.3	88.0	89.9	66.5	64.5	62.3	64.4	-28%
DE	88.0	89.8	89.8	89.2	70.7	67.5	66.5	68.2	-24%
EE	131.2	129.2	133.8	131.4	93.7	90.6	84.8	89.7	-32%
IE	81.3	85.9	83.0	83.4	46.0	44.3	42.4	44.2	-47%
EL	86.4	80.8	80.9	82.7	77.6	73.8	73.4	74.9	-9%
ES	84.0	79.2	77.8	80.3	66.1	66.4	63.8	65.4	-19%
FR	86.7	86.6	86.6	86.6	71.0	67.8	63.4	67.4	-22%

	2007	2008	2009	Average (2007-2009)	2017	2018	2019	Average (2017-2019)	Reduction (%)
HR	109.7	105.6	109.2	108.1	89.9	85.5	81.6	85.6	-21%
IT	84.1	81.6	80.9	82.2	66.2	65.5	63.5	65.1	-21%
CY	96.8	92.9	93.9	94.5	82.2	77.4	73.6	77.7	-18%
LV	137.4	125.6	146.7	136.6	104.9	103.5	98.1	102.2	-25%
LT	107.0	99.8	107.3	104.7	81.5	80.6	75.4	79.2	-24%
LU	134.6	127.1	124.9	128.9	88.8	90.6	89.8	89.7	-30%
HU	113.0	106.2	107.1	108.8	91.2	85.7	81.6	86.2	-21%
MT	59.7	59.5	54.6	57.9	44.5	44.1	42.6	43.8	-24%
NL	90.7	88.6	91.0	90.1	74.5	72.2	69.4	72.0	-20%
AT	100.5	97.4	97.6	98.5	82.3	77.8	76.7	78.9	-20%
PL	119.7	113.8	110.1	114.6	89.5	89.6	83.0	87.3	-24%
PT	88.5	84.4	86.4	86.4	70.8	69.2	67.7	69.3	-20%
RO	103.1	90.0	85.7	93.0	64.3	60.4	56.5	60.4	-35%
SI	117.1	118.5	114.7	116.8	95.5	90.3	83.6	89.8	-23%
SK	113.6	107.0	103.3	108.0	88.3	86.0	85.2	86.5	-20%
FI	163.4	150.7	152.2	155.5	137.9	136.1	132.8	135.6	-13%
SE	109.9	105.8	109.6	108.4	87.7	84.8	80.7	84.4	-22%

Table 4. Primary energy intensity (PEI), in ktoe/millionPPS

	2007	2008	2009	Average (2007-2009)	2017	2018	2019	Average (2017-2019)	Reduction (%)
EU	138.8	134.3	132.5	135.2	105.8	101.8	96.6	101.4	-25%
BE	163.2	162.6	162.8	162.9	123.0	114.2	114.4	117.2	-28%
BG	255.5	228.0	212.2	231.9	175.6	167.5	157.2	166.8	-28%
CZ	204.3	188.6	183.4	192.1	142.8	136.5	127.7	135.7	-29%
DK	121.1	112.8	113.3	115.7	79.4	76.9	73.0	76.5	-34%
DE	134.0	133.2	131.7	133.0	98.9	94.1	90.6	94.6	-29%
EE	261.8	227.3	209.7	233.0	188.7	174.6	140.4	167.9	-28%
IE	98.4	101.7	104.9	101.7	55.8	52.3	50.3	52.8	-48%
EL	118.5	114.9	115.6	116.3	110.0	104.9	101.1	105.3	-9%
ES	119.8	112.9	109.5	114.1	98.7	96.2	90.0	95.0	-17%
FR	146.5	145.7	145.4	145.9	116.7	112.6	104.7	111.3	-24%
HR	142.0	131.1	136.1	136.4	108.1	102.0	96.9	102.3	-25%
IT	113.4	108.6	106.3	109.4	86.2	83.5	80.8	83.5	-24%
CY	135.8	134.2	134.0	134.6	111.7	106.1	98.9	105.6	-22%
LV	150.6	138.4	161.1	150.0	116.7	116.3	109.6	114.2	-24%
LT	166.3	160.7	180.7	169.2	93.9	92.2	85.2	90.4	-47%
LU	142.9	133.8	132.9	136.5	91.2	92.9	92.1	92.1	-33%
HU	167.3	155.9	152.7	158.6	123.4	115.7	110.0	116.4	-27%
MT	117.9	113.7	106.5	112.7	57.6	55.1	53.3	55.3	-51%
NL	122.1	118.0	121.6	120.6	100.4	95.3	92.3	96.0	-20%
AT	124.6	121.7	118.9	121.7	100.3	93.2	92.3	95.3	-22%

	2007	2008	2009	Average (2007-2009)	2017	2018	2019	Average (2017-2019)	Reduction (%)
PL	181.7	171.9	161.5	171.7	126.8	126.2	114.4	122.4	-29%
PT	111.4	108.0	111.9	110.5	97.6	93.1	87.2	92.6	-16%
RO	165.7	139.6	127.6	144.3	89.5	83.4	75.9	82.9	-43%
SI	165.8	166.4	160.9	164.4	129.9	121.3	112.5	121.2	-26%
SK	182.4	171.5	165.4	173.1	143.4	136.3	132.8	137.5	-21%
FI	228.1	208.9	211.3	216.1	178.8	177.0	169.9	175.2	-19%
SE	160.5	156.7	152.3	156.5	129.2	128.0	119.7	125.6	-20%

Table 5. Early action factor

	Cropped Savings subfactor		Cropped intensity subfactor		Early action factor	
	PEC	FEC	PEI	FEI	PEC	FEC
BE	100%	100%	89%	93%	89%	93%
BG	100%	100%	89%	92%	89%	92%
CZ	100%	100%	85%	84%	85%	84%
DK	50%	50%	74%	78%	50%	50%
DE	93%	100%	87%	94%	81%	94%
EE	100%	100%	90%	70%	90%	70%
IE	100%	61%	52%	50%	52%	50%
EL	50%	50%	100%	100%	50%	50%
ES	93%	50%	100%	100%	93%	50%
FR	100%	69%	100%	100%	100%	69%
HR	59%	50%	100%	100%	59%	50%
IT	50%	50%	100%	100%	50%	50%
CY	71%	63%	100%	100%	71%	63%
LV	100%	100%	100%	88%	100%	88%
LT	50%	100%	54%	91%	50%	91%
LU	100%	100%	77%	73%	77%	73%
HU	100%	100%	94%	100%	94%	100%
MT	59%	100%	50%	91%	50%	91%
NL	91%	50%	100%	100%	91%	50%
AT	100%	100%	100%	100%	100%	100%
PL	100%	100%	87%	93%	87%	93%
PT	100%	50%	100%	100%	100%	50%
RO	64%	100%	59%	63%	50%	63%
SI	69%	52%	95%	96%	66%	50%
SK	100%	100%	100%	100%	100%	100%
FI	100%	100%	100%	100%	100%	100%
SE	100%	100%	100%	100%	100%	100%

Wealth Factor

Table 6. Gross Domestic Product/population (GDP/cap), in thousandsPPS/person

	2017	2018	2019	Average (2017-2019)	Wealth factor
EU	29.3	30.3	31.4	30.4	
BE	34.7	35.7	36.9	35.8	118%
BG	14.7	15.6	16.5	15.6	51%
CZ	26.7	28.0	29.2	28.0	92%
DK	38.1	39.1	39.6	38.9	128%
DE	36.5	37.5	37.9	37.3	123%
EE	23.3	24.7	25.8	24.6	81%
IE	53.8	57.9	59.6	57.1	150%
EL	19.6	20.1	20.6	20.1	66%
ES	27.2	27.7	28.6	27.8	92%
FR	30.7	31.6	33.4	31.9	105%
HR	18.6	19.5	20.8	19.6	65%
IT	28.5	29.2	30.2	29.3	96%
CY	26.5	27.8	29.3	27.9	92%
LV	19.6	20.9	21.7	20.7	68%
LT	23.0	24.6	26.4	24.7	81%
LU	79.7	79.8	79.7	79.7	150%
HU	20.2	21.6	22.9	21.6	71%
MT	30.4	31.5	33.2	31.7	104%
NL	37.9	39.3	39.9	39.0	129%
AT	37.3	38.7	39.5	38.5	127%
PL	20.6	21.7	23.1	21.8	72%
PT	22.7	23.7	24.6	23.7	78%
RO	18.5	20.0	21.8	20.1	66%
SI	25.1	26.5	27.9	26.5	87%
SK	20.7	21.3	22.1	21.4	70%
FI	32.7	33.6	34.2	33.5	110%
SE	35.9	36.5	37.4	36.6	121%

Intensity Factor

Table 7. Final energy intensity (FEI), in ktoe/millionPPS

	2017	2018	2019	Average (2017-2019)	Final Intensity Factor
EU	74.1	71.8	69.0	71.6	
BE	87.5	85.5	80.8	84.6	118%
BG	94.8	90.5	85.0	90.1	126%
CZ	87.3	82.4	78.5	82.7	115%
DK	66.5	64.5	62.3	64.4	90%

	2017	2018	2019	Average (2017-2019)	Final Intensity Factor
DE	70.7	67.5	66.5	68.2	95%
EE	93.7	90.6	84.8	89.7	125%
IE	46.0	44.3	42.4	44.2	62%
EL	77.6	73.8	73.4	74.9	105%
ES	66.1	66.4	63.8	65.4	91%
FR	71.0	67.8	63.4	67.4	94%
HR	89.9	85.5	81.6	85.6	120%
IT	66.2	65.5	63.5	65.1	91%
CY	82.2	77.4	73.6	77.7	109%
LV	104.9	103.5	98.1	102.2	143%
LT	81.5	80.6	75.4	79.2	111%
LU	88.8	90.6	89.8	89.7	125%
HU	91.2	85.7	81.6	86.2	120%
MT	44.5	44.1	42.6	43.8	61%
NL	74.5	72.2	69.4	72.0	101%
AT	82.3	77.8	76.7	78.9	110%
PL	89.5	89.6	83.0	87.3	122%
PT	70.8	69.2	67.7	69.3	97%
RO	64.3	60.4	56.5	60.4	84%
SI	95.5	90.3	83.6	89.8	125%
SK	88.3	86.0	85.2	86.5	121%
FI	137.9	136.1	132.8	135.6	150%
SE	87.7	84.8	80.7	84.4	118%

Table 8. Primary energy intensity (PEI), in ktoe/millionPPS

	2017	2018	2019	Average (2017-2019)	Primary Intensity Factor
EU	105.8	101.8	96.6	101.4	
BE	123.0	114.2	114.4	117.2	116%
BG	175.6	167.5	157.2	166.8	150%
CZ	142.8	136.5	127.7	135.7	134%
DK	79.4	76.9	73.0	76.5	75%
DE	98.9	94.1	90.6	94.6	93%
EE	188.7	174.6	140.4	167.9	150%
IE	55.8	52.3	50.3	52.8	52%
EL	110.0	104.9	101.1	105.3	104%
ES	98.7	96.2	90.0	95.0	94%
FR	116.7	112.6	104.7	111.3	110%
HR	108.1	102.0	96.9	102.3	101%
IT	86.2	83.5	80.8	83.5	82%
CY	111.7	106.1	98.9	105.6	104%
LV	116.7	116.3	109.6	114.2	113%
LT	93.9	92.2	85.2	90.4	89%

LU	91.2	92.9	92.1	92.1	91%
HU	123.4	115.7	110.0	116.4	115%
MT	57.6	55.1	53.3	55.3	55%
NL	100.4	95.3	92.3	96.0	95%
AT	100.3	93.2	92.3	95.3	94%
PL	126.8	126.2	114.4	122.4	121%
PT	97.6	93.1	87.2	92.6	91%
RO	89.5	83.4	75.9	82.9	82%
SI	129.9	121.3	112.5	121.2	120%
SK	143.4	136.3	132.8	137.5	136%
FI	178.8	177.0	169.9	175.2	150%
SE	129.2	128.0	119.7	125.6	124%

Savings potential factor

Table 9. PRIMES MIX 55% and EU Reference Scenario 2020, in Mtoe

	MIX 55 (PEC)	PEC baseline 2030	Savings potential (%)	MIX 55 (FEC)	FEC baseline 2030	Savings potential (%)
BE	36.0	38.3	-6.0%	30.5	33.1	-7.8%
BG	14.0	15.6	-10.5%	9.2	10.0	-8.0%
CZ	30.1	32.8	-8.0%	21.2	22.9	-7.5%
DK	16.4	17.2	-4.6%	14.7	15.4	-4.3%
DE	198.3	221.4	-10.4%	162.8	178.7	-8.9%
EE	4.0	4.5	-12.7%	2.7	2.9	-4.3%
IE	11.4	12.6	-8.9%	10.1	11.1	-9.2%
EL	18.0	18.8	-4.4%	15.0	16.2	-7.8%
ES	86.0	91.5	-6.0%	68.6	72.4	-5.3%
FR	164.8	179.2	-8.0%	105.5	118.1	-10.7%
HR	6.7	7.6	-11.5%	5.7	6.6	-13.4%
IT	110.9	125.4	-11.6%	94.5	102.8	-8.1%
CY	2.1	2.3	-10.2%	1.8	2.0	-9.4%
LV	4.0	4.2	-5.0%	3.6	3.7	-3.9%
LT	5.3	5.7	-6.3%	4.4	4.8	-7.6%
LU	3.0	3.2	-7.6%	2.9	3.1	-7.7%
HU	24.6	26.1	-5.5%	16.9	18.4	-7.8%
MT	0.9	0.9	-4.6%	0.7	0.8	-5.8%
NL	49.8	52.3	-4.7%	40.9	43.2	-5.2%
AT	26.0	28.4	-8.7%	22.8	24.6	-7.4%
PL	73.8	89.1	-17.2%	58.7	66.0	-11.1%
PT	15.9	16.9	-6.0%	13.9	14.8	-6.7%
RO	30.0	33.2	-9.7%	23.0	25.3	-8.9%
SI	6.1	6.5	-6.5%	4.5	4.8	-6.0%
SK	14.6	15.4	-5.3%	8.8	9.6	-8.3%
FI	32.0	34.3	-6.9%	21.5	24.1	-10.6%

	MIX 55 (PEC)	PEC baseline 2030	Savings potential (%)	MIX 55 (FEC)	FEC baseline 2030	Savings potential (%)
SE	37.2	40.8	-8.8%	26.4	29.0	-9.0%

Table 10. PRIMES MIX 55% and updated EU Reference Scenario 2020, in Mtoe

	MIX 55 (PEC)	PEC baseline 2030	Savings potential (%)	MIX 55 (FEC)	FEC baseline 2030	Savings potential (%)
BE	36.0	40,2	-10,5%	30.5	33,1	-7,8%
BG	14.0	16,5	-15,6%	9.2	9,2	-0,7%
CZ	30.1	33,8	-10,8%	21.2	23,1	-8,4%
DK	16.4	16,4	0,0%	14.7	14,2	3,6%
DE	198.3	219,4	-9,6%	162.8	176,7	-7,8%
EE	4.0	3,6	10,1%	2.7	2,8	-3,4%
IE	11.4	12,8	-10,8%	10.1	12,0	-15,8%
EL	18.0	19,6	-8,2%	15.0	16,3	-8,0%
ES	86.0	93,3	-7,8%	68.6	71,8	-4,6%
FR	164.8	183,6	-10,2%	105.5	122,3	-13,8%
HR	6.7	7,5	-9,9%	5.7	6,5	-12,1%
IT	110.9	125,6	-11,7%	94.5	103,8	-9,0%
CY	2.1	2,2	-4,4%	1.8	1,9	-3,4%
LV	4.0	4,3	-6,8%	3.6	3,9	-9,4%
LT	5.3	6,2	-13,8%	4.4	5,0	-11,3%
LU	3.0	3,3	-9,7%	2.9	3,2	-8,6%
HU	24.6	26,5	-6,8%	16.9	18,2	-7,1%
MT	0.9	0,8	2,9%	0.7	0,7	-1,2%
NL	49.8	51,8	-3,7%	40.9	42,8	-4,4%
AT	26.0	27,5	-5,5%	22.8	23,1	-1,6%
PL	73.8	93,3	-21,0%	58.7	67,2	-12,6%
PT	15.9	19,4	-18,2%	13.9	16,3	-14,7%
RO	30.0	31,8	-5,5%	23.0	23,8	-3,1%
SI	6.1	6,4	-5,4%	4.5	4,9	-7,2%
SK	14.6	16,0	-9,3%	8.8	9,8	-10,1%
FI	32.0	34,7	-7,8%	21.5	23,8	-9,4%
SE	37.2	42,0	-11,4%	26.4	28,3	-6,8%

Total factor

Table 11. Calculation of the total factor (EU Reference Scenario 2020)

	Early action factor		Wealth factor	Intensity factor		Savings Potential factor		Total factor	
	PEC	FEC		PEC	FEC	PEC	FEC	PEC	FEC
BE	89%	93%	118%	116%	118%	52%	67%	94%	99%
BG	89%	92%	51%	150%	126%	89%	68%	95%	84%
CZ	85%	84%	92%	134%	115%	69%	65%	95%	89%

	Early action factor		Wealth factor	Intensity factor		Savings Potential factor		Total factor	
DK	50%	50%	128%	75%	90%	50%	50%	76%	80%
DE	81%	94%	123%	93%	95%	89%	76%	96%	97%
EE	90%	70%	81%	150%	125%	109%	50%	107%	82%
IE	52%	50%	150%	52%	62%	76%	78%	83%	85%
EL	50%	50%	66%	104%	105%	50%	66%	68%	72%
ES	93%	50%	92%	94%	91%	51%	50%	82%	71%
FR	100%	69%	105%	110%	94%	69%	91%	96%	90%
HR	59%	50%	65%	101%	120%	98%	115%	81%	87%
IT	50%	50%	96%	82%	91%	99%	69%	82%	77%
CY	71%	63%	92%	104%	109%	87%	81%	89%	86%
LV	100%	88%	68%	113%	143%	50%	50%	83%	87%
LT	50%	91%	81%	89%	111%	53%	65%	68%	87%
LU	77%	73%	150%	91%	125%	65%	66%	96%	104%
HU	94%	100%	71%	115%	120%	50%	66%	82%	89%
MT	50%	91%	104%	55%	61%	50%	50%	65%	77%
NL	91%	50%	129%	95%	101%	50%	50%	91%	82%
AT	100%	100%	127%	94%	110%	74%	63%	99%	100%
PL	87%	93%	72%	121%	122%	147%	95%	107%	96%
PT	100%	50%	78%	91%	97%	52%	57%	80%	70%
RO	50%	63%	66%	82%	84%	83%	76%	70%	72%
SI	66%	50%	87%	120%	125%	55%	51%	82%	79%
SK	100%	100%	70%	136%	121%	50%	71%	89%	91%
FI	100%	100%	110%	150%	150%	59%	91%	105%	113%
SE	100%	100%	121%	124%	118%	75%	77%	105%	104%

Table 12. Calculation of the total factor (updated EU Reference Scenario 2020)

	Early action factor		Wealth factor	Intensity factor		Savings Potential factor		Total factor	
	PEC	FEC		PEC	FEC	PEC	FEC	PEC	FEC
BE	89%	93%	118%	116%	118%	90%	67%	103%	99%
BG	89%	92%	51%	150%	126%	133%	50%	106%	80%
CZ	85%	84%	92%	134%	115%	92%	71%	101%	91%
DK	50%	50%	128%	75%	90%	50%	50%	76%	80%
DE	81%	94%	123%	93%	95%	82%	67%	95%	95%
EE	90%	70%	81%	150%	125%	50%	50%	93%	82%
IE	52%	50%	150%	52%	62%	92%	135%	87%	99%
EL	50%	50%	66%	104%	105%	70%	69%	72%	72%
ES	93%	50%	92%	94%	91%	67%	50%	86%	71%
FR	100%	69%	105%	110%	94%	88%	118%	101%	97%
HR	59%	50%	65%	101%	120%	85%	104%	77%	84%
IT	50%	50%	96%	82%	91%	100%	77%	82%	78%
CY	71%	63%	92%	104%	109%	50%	50%	79%	78%

	Early action factor		Wealth factor	Intensity factor		Savings Potential factor		Total factor	
LV	100%	88%	68%	113%	143%	58%	80%	85%	95%
LT	50%	91%	81%	89%	111%	118%	97%	85%	95%
LU	77%	73%	150%	91%	125%	83%	73%	100%	105%
HU	94%	100%	71%	115%	120%	58%	60%	85%	88%
MT	50%	91%	104%	55%	61%	50%	50%	65%	77%
NL	91%	50%	129%	95%	101%	50%	50%	91%	82%
AT	100%	100%	127%	94%	110%	50%	50%	93%	97%
PL	87%	93%	72%	121%	122%	150%	108%	107%	99%
PT	100%	50%	78%	91%	97%	150%	126%	105%	88%
RO	50%	63%	66%	82%	84%	50%	50%	62%	66%
SI	66%	50%	87%	120%	125%	50%	62%	81%	81%
SK	100%	100%	70%	136%	121%	79%	86%	96%	94%
FI	100%	100%	110%	150%	150%	67%	80%	107%	110%
SE	100%	100%	121%	124%	118%	97%	58%	110%	99%

Formula results

Table 13. EED recast Annex I formula results (EU Reference Scenario 2020 & updated EU Reference Scenario 2020), in Mtoe

	EU Reference Scenario 2020				Updated EU Reference Scenario 2020			
	Formula results		Formula results after correction factor		Formula results		Formula results after correction factor	
	PEC	FEC	PEC	FEC	PEC	FEC	PEC	FEC
BE	34,14	29,24	33,77	28,78	35,39	29,24	34,66	28,82
BG	13,86	8,99	13,71	8,85	14,49	8,38	14,20	8,25
CZ	29,13	20,53	28,81	20,21	29,79	20,66	29,18	20,36
DK	15,70	13,95	15,52	13,73	14,98	12,88	14,67	12,69
DE	196,38	158,42	194,23	155,95	195,05	157,05	191,06	154,75
EE	3,97	2,60	3,93	2,56	3,21	2,57	3,14	2,53
IE	11,35	10,01	11,23	9,86	11,53	10,61	11,29	10,45
EL	17,32	14,87	17,13	14,64	17,91	14,90	17,55	14,68
ES	82,69	66,41	81,78	65,38	83,90	65,90	82,19	64,94
FR	159,09	105,65	157,34	104,01	161,97	108,52	158,67	106,93
HR	6,91	5,96	6,83	5,87	6,81	5,89	6,67	5,81
IT	113,40	93,57	112,16	92,12	113,50	94,27	111,18	92,89
CY	2,06	1,84	2,04	1,81	1,96	1,74	1,92	1,71
LV	3,77	3,34	3,73	3,28	3,83	3,50	3,75	3,45
LT	5,21	4,32	5,16	4,25	5,55	4,45	5,44	4,38
LU	2,85	2,75	2,82	2,71	2,90	2,77	2,84	2,73
HU	23,57	16,45	23,31	16,19	23,84	16,36	23,35	16,12
MT	0,84	0,70	0,83	0,69	0,78	0,67	0,76	0,66
NL	46,72	39,03	46,21	38,42	46,25	38,70	45,30	38,13

	EU Reference Scenario 2020				Updated EU Reference Scenario 2020			
	Formula results		Formula results after correction factor		Formula results		Formula results after correction factor	
	PEC	FEC	PEC	FEC	PEC	FEC	PEC	FEC
AT	25,15	21,69	24,88	21,35	24,50	20,49	24,00	20,19
PL	78,01	58,64	77,16	57,73	81,60	59,40	79,93	58,53
PT	15,33	13,62	15,16	13,41	17,06	14,58	16,71	14,37
RO	30,49	23,12	30,16	22,76	29,46	21,92	28,86	21,60
SI	5,85	4,35	5,79	4,29	5,79	4,40	5,68	4,33
SK	13,77	8,59	13,62	8,46	14,23	8,72	13,94	8,59
FI	30,11	20,92	29,78	20,60	30,33	20,71	29,71	20,41
SE	35,82	25,50	35,42	25,10	36,59	25,05	35,84	24,69

Indicative national contributions to the Union’s energy efficiency target for final energy consumption, after application of the ‘ambition gap mechanism’ in accordance with Article 4(5) of the Directive (EU) 2023/1791 on energy efficiency.

Table 14: Indicative national contributions for FEC for all Member States

	Notified indicative national contributions (Mtoe)	Notification period¹¹	Deviation from formula result¹²	Notified indicative national contributions with max. 2,5% deviation (Mtoe)	Indicative national contributions that are used in the mechanism of Article 4(5) (Mtoe)
BE	29,90	Draft NECP	3,77%	29,54	29,54
BG	8,42	Draft NECP		8,42	
CZ	20,35	January 2024		20,35	
DK	13,73	January 2024		13,73	
DE	155,53	January 2024		155,53	
EE	2,59	Draft NECP	1,35%	2,59	2,59
IE	10,45	January 2024		10,45	
EL	15,40	Draft NECP	4,88%	15,05	15,05
ES	70,20	Draft NECP	7,37%	67,02	67,02
FR	106,93	January 2024		106,93	
HR	6,55	Draft NECP	11,65%	6,01	6,01
IT	94,40	Draft NECP	1,63%	94,40	94,40
CY	1,81	January 2024		1,81	
LV	3,54	January 2024	2,47%	3,54	3,54
LT	4,20	Draft NECP		4,20	
LU	3,05	January 2024	11,42%	2,80	2,80
HU	17,91	Draft NECP	10,62%	16,60	16,60
MT	0,80	January 2024	16,95%	0,70	0,70
NL	38,41	January 2024		38,41	
AT	21,97	January 2024	2,90%	21,88	21,88
PL	58,50	January 2024		58,50	
PT	14,37	January 2024		14,37	
RO	23,20	Draft NECP	1,95%	23,20	23,20

¹¹ ‘Draft NECP’ refers to an indicative national contribution notified as part of the draft updated NECP that Member States submitted in June 2023, while ‘January 2024’ refers to an indicative national contribution notified, in accordance with Article 4(5) of the EED recast. In case a Member States notified an indicative national contribution in both instances, only the latter is mentioned here.

¹² The formula result that is larger, thus the result that offers more flexibility to a Member State. Member States without a figure in this column have notified a target that is equal or better than the results of the formula in Annex I of the EED recast.

	Notified indicative national contributions (Mtoe)	Notification period ¹¹	Deviation from formula result ¹²	Notified indicative national contributions with max. 2,5% deviation (Mtoe)	Indicative national contributions that are used in the mechanism of Article 4(5) (Mtoe)
SI	4,43	Draft NECP	2,17%	4,43	4,43
SK	10,27	Draft NECP	19,55%	8,81	8,81
FI	20,60	January 2024		20,60	
SE	30,11	January 2024	19,96%	25,73	25,73
EU	787,62	-	-	775,59	-
Gap (Mtoe)	24,62	-	-	12,59	-
EU target (%)	-8,9%	-	-	-10,3%	-

GDP factor

Table 15. Ambition gap mechanism factor for Gross Domestic Product/population (GDP/cap) in 2019

	2019 GDP/cap	EU weighted	GDP factor
EU	0,0314	100%	100%
BE	0,0369	118%	118%
BG	0,0165	53%	53%
CZ	0,0292	93%	93%
DK	0,0396	126%	126%
DE	0,0379	121%	121%
EE	0,0258	82%	82%
IE	0,0596	190%	150%
EL	0,0206	65%	65%
ES	0,0286	91%	91%
FR	0,0334	106%	106%
HR	0,0208	66%	66%
IT	0,0302	96%	96%
CY	0,0293	93%	93%
LV	0,0217	69%	69%
LT	0,0264	84%	84%
LU	0,0797	254%	150%
HU	0,0229	73%	73%
MT	0,0332	106%	106%
NL	0,0399	127%	127%
AT	0,0395	126%	126%
PL	0,0231	73%	73%
PT	0,0246	78%	78%

	2019 GDP/cap	EU weighted	GDP factor
RO	0,0218	69%	69%
SI	0,0279	89%	89%
SK	0,0221	70%	70%
FI	0,0342	109%	109%
SE	0,0374	119%	119%

GHG factor

Table 16. Ambition gap mechanism factor for relative GHG intensity per GDP unit in 2019

	2019 GHG/GDP	EU weighted	GHG factor
EU	261,20	100%	100%
BE	271,60	104%	104%
BG	875,00	335%	150%
CZ	685,00	262%	150%
DK	171,50	66%	66%
DE	252,30	97%	97%
EE	656,00	251%	150%
IE	212,70	81%	81%
EL	461,30	177%	150%
ES	237,80	91%	91%
FR	183,20	70%	70%
HR	381,80	146%	146%
IT	227,30	87%	87%
CY	430,50	165%	150%
LV	336,90	129%	129%
LT	340,00	130%	130%
LU	204,40	78%	78%
HU	453,60	174%	150%
MT	206,80	79%	79%
NL	260,80	100%	100%
AT	227,80	87%	87%
PL	722,00	276%	150%
PT	320,20	123%	123%
RO	346,00	132%	132%
SI	306,90	117%	117%
SK	387,00	148%	148%
FI	211,90	81%	81%
SE	30,30	12%	50%

Total factor

Table 17. Calculation of the total factor to be used in the ambition gap mechanism

	GDP factor	GHG factor	Total factor
BE	118%	104%	111%
BG	-	-	-
CZ	-	-	-
DK	-	-	-
DE	-	-	-
EE	82%	150%	116%
IE	-	-	-
EL	65%	150%	108%
ES	91%	91%	91%
FR	-	-	-
HR	66%	146%	106%
IT	96%	87%	92%
CY	-	-	-
LV	69%	129%	99%
LT	-	-	-
LU	150%	78%	114%
HU	73%	150%	111%
MT	106%	79%	92%
NL	-	-	-
AT	126%	87%	106%
PL	-	-	-
PT	-	-	-
RO	69%	132%	101%
SI	89%	117%	103%
SK	70%	148%	109%
FI	-	-	-
SE	119%	50%	85%

NCEP ambition correction

Table 18. Calculation of the total NECP ambition since 2017-2019

	FEC 2017	FEC 2018	FEC 2019	Average (2017-2019)	Notified 2030 FEC target	Trajectory	NECP ambition correction
EU	989,76	992,50	986,48	989,58	775,59	-21,6%	
BE	36,12	36,39	35,79	36,10	29,54	-18,2%	40,3%
BG	9,90	9,92	9,85	9,89	8,42	-14,8%	48,4%
CZ	25,50	25,33	25,27	25,37	20,35	-19,8%	36,5%
DK	14,58	14,57	14,31	14,48	13,73	-5,2%	71,6%
DE	218,62	215,17	214,70	216,17	155,53	-28,0%	16,6%
EE	2,87	2,96	2,89	2,91	2,59	-10,9%	57,9%
IE	11,85	12,39	12,38	12,21	10,45	-14,4%	49,5%

	FEC 2017	FEC 2018	FEC 2019	Average (2017-2019)	Notified 2030 FEC target	Trajectory	NECP ambition correction
EL	16,41	15,91	16,17	16,16	15,05	-6,9%	67,5%
ES	84,75	86,72	86,48	85,99	67,02	-22,1%	31,0%
FR	149,13	146,96	145,58	147,23	106,93	-27,4%	18,2%
HR	6,93	6,85	6,91	6,90	6,01	-12,8%	53,3%
IT	115,19	116,33	115,36	115,62	94,40	-18,4%	39,9%
CY	1,86	1,86	1,89	1,87	1,81	-3,3%	76,0%
LV	4,01	4,18	4,08	4,09	3,54	-13,6%	51,4%
LT	5,34	5,57	5,56	5,49	4,20	-23,5%	27,5%
LU	4,18	4,35	4,39	4,31	2,80	-34,9%	0,0%
HU	18,50	18,53	18,60	18,54	16,60	-10,5%	58,8%
MT	0,62	0,66	0,70	0,66	0,70	6,6%	100,0%
NL	49,94	50,41	49,48	49,94	38,41	-23,1%	28,5%
AT	28,53	27,85	28,33	28,24	21,88	-22,5%	29,9%
PL	70,90	74,88	73,73	73,17	58,50	-20,0%	35,8%
PT	16,56	16,87	17,13	16,85	14,37	-14,7%	48,7%
RO	23,33	23,59	23,88	23,60	23,20	-1,7%	80,0%
SI	4,95	4,95	4,85	4,92	4,43	-10,0%	60,1%
SK	11,76	11,60	11,16	11,51	8,81	-23,5%	27,5%
FI	25,32	25,78	25,47	25,52	20,60	-19,3%	37,7%
SE	32,12	31,93	31,53	31,86	25,73	-19,3%	37,7%

Corrected indicative national contributions.

Table 19: Indicative national contributions for FEC for all Member States

	Notified indicative national contributions (Mtoe)	Corrected indicative national contributions (Mtoe)
BE	29,90	29,02
BG	8,42	8,42
CZ	20,35	20,35
DK	13,73	13,73
DE	155,53	155,53
EE	2,59	2,53
IE	10,45	10,45
EL	15,40	14,64
ES	70,20	66,28
FR	106,93	106,93
HR	6,55	5,88
IT	94,40	93,05
CY	1,81	1,81
LV	3,54	3,46
LT	4,20	4,25

	Notified indicative national contributions (Mtoe)	Corrected indicative national contributions (Mtoe)
LU	3,05	2,80
HU	17,91	16,17
MT	0,80	0,68
NL	38,41	38,41
AT	21,97	21,61
PL	58,50	58,50
PT	14,37	14,37
RO	23,20	22,47
SI	4,43	4,32
SK	10,27	8,70
FI	20,60	20,60
SE	30,11	25,41
EU	787,62	770,38
Gap (Mtoe)	24,62	7,38
EU target (%)	-8,9%	-10,9%

Next steps

In accordance with Article 4(5) of the EED recast, Member States are required to use the corrected indicative national contribution that the Commission communicated as their indicative national contribution for FEC, in their final updated NECPs to be submitted in June 2024.

Should the Commission's assessment of the final updated NECP under Article 31 of the Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action ('Governance Regulation'), conclude that an ambition gap remains for the collective achievement of the Union's 2030 target for energy efficiency, the Commission shall propose measures and exercise its powers at Union level ('ambition gap filling mechanism').