II

(Non-legislative acts)

REGULATIONS

COMMISSION IMPLEMENTING REGULATION (EU) 2022/2299

of 15 November 2022

laying down rules for the application of Regulation (EU) 2018/1999 of the European Parliament and of the Council as regards the structure, format, technical details and process for the integrated national energy and climate progress reports

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (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 ([1]), and in particular Article 17(4) thereof,

Whereas:

(1) Regulation (EU) 2018/1999 requires Member States to submit to the Commission integrated national energy and climate plans covering a ten-year period and to rely on a two-step approach by, first, setting national objectives, targets and contributions for all the five dimensions of the Energy Union and, second, planning the relevant policies and measures to achieve those. Member States were required to submit their first final integrated national energy and climate plans for the period 2021-2030 by 31 December 2019.

(2) Pursuant to Article 17(1) of Regulation (EU) 2018/1999, each Member State is to report to the Commission every two years on the status of implementation of its national energy and climate plan by means of an integrated national energy and climate progress report covering all five dimensions of the Energy Union.

(3) Those biennial progress reports represent a key source for the Commission's assessment under Article 29 of Regulation (EU) 2018/1999 of the progress made both at Union level towards the Energy Union's targets and objectives, and by each Member State towards meeting its objectives, targets and contributions and implementing the policies and measures set out in their integrated national energy and climate plans.

(4) Pursuant to Article 14 of Regulation (EU) 2018/1999, Member States are to submit updated integrated national energy and climate plans every 10 years, at the midterm of the implementation of their national energy and climate plans. For the period 2021-2030, Member States are to submit draft updated integrated national energy and climate plans by 30 June 2023 and final ones by 30 June 2024.

([1]) OJ L 328, 21.12.2018, p.1.

(5) The structure, format, technical details and process for the biennial progress reports set out by this Regulation should ensure complete reporting in a structured manner, by reflecting the elements set out in this Regulation for integrated national energy and climate plans, and the information referred to in Article 17 and 20 to 25 of Regulation (EU) 2018/1999, while avoiding unnecessary administrative burden.

(6) Member States are required to report progress as regards mandatory information included in their integrated national energy and climate plans, taking due account of any exemption or derogation granted pursuant to Article 5(4) of Regulation (EC) No 1099/2008 of the European Parliament and of the Council ([2]). They are also required to report progress as regards information if the relevant national objectives, targets and contributions, and policies and measures are included in their national energy and climate plans. Because of possibly incomplete collection of data at the time of the first reporting by 15 March 2023, and every two years thereafter, certain information should only be reported if it is available at the time of the reporting. Member States should be able to provide voluntary information to supplement the mandatory elements.

(7) Member States should report progress towards the national objectives, targets and contributions separately in respect to the five dimensions of the Energy Union.

(8) Because of the interrelations of all the dimensions of the Energy Union, policies and measures may be relevant to more than one of the national objectives, targets and contributions set out in the integrated national energy and climate plans. In order to ensure consistency, when reporting on financing and implementation of those policies and measures, as well as the quantitative impact of such policies and measures on air quality and on emissions of air pollutants, Member States should report on individual policies and measures or groups of policies and measures as appropriate.

(9) In accordance with the content of the integrated national energy and climate plans as set out in Annex I to Regulation (EU) 2018/1999, Member States should also be required to report on other relevant information included in their national plans in the matter of renewable energy and energy efficiency.

(10) Pursuant to Article 18 of Regulation (EU) 2018/1999, Member States are to submit to the Commission integrated reports on greenhouse gas policies and measures and on projections by 15 March 2021 and every two years thereafter. By submitting those reports, Member States comply with the relevant obligation under Article 17(3) of Regulation (EU) 2018/1999. In addition, Member States should report on progress towards financing those policies and measures and, where possible, should quantify the impact of those policies and measures on air quality and on emissions of air pollutants.

(11) Pursuant to Article 26(3) of Regulation (EU) 2018/1999, Member States are required to report to the Commission the final greenhouse gas inventory data together with national inventory reports by 15 March 2023 and every year thereafter. By the submission of the final greenhouse gas inventory data together with national inventory reports, within the respective reporting date, Member States comply with the relevant obligation under Article 17(3) of Regulation (EU) 2018/1999. The final reports submitted pursuant to Article 26(3) of Regulation (EU) 2018/1999 are also considered for the purposes of the reporting on the progress accomplished towards reaching the climate mitigation objectives, taking into account the outcomes of the initial checks as referred to in Article 37(4) of Regulation (EU) 2018/1999.

(12) Member States should submit their reports through the single entry point of the Commission via the relevant linked reporting systems established under the e-platform referred to in Article 28 of Regulation (EU) 2018/1999.

(13) To strengthen the efficiency of the reporting by the Member States, information reported through other existing reporting streams in the field of energy, and in particular, pursuant to Regulation (EC) No 1099/2008, will be prefilled by the Commission on the basis of the data available for the purposes of the integrated national energy and climate progress reports to the extent possible.

(14) The measures provided for in this Regulation are in accordance with the opinion of the Energy Union Committee,

([2]) Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics (OJ L 304, 14.11.2008, p. 1).

HAS ADOPTED THIS REGULATION:

CHAPTER I

DEFINITIONS

Article 1

Definitions

For the purposes of this Regulation, the following definitions shall apply:

(1) 'mandatory if applicable' means the following categories of information that Member States have to submit:

(a) information regarding national objectives, targets and contributions or national policies and measures, only if the Member States have set or adopted them;

(b) information regarding how the Member States address a recommendation issued pursuant to Article 32(1) or (2) of Regulation (EU) 2018/1999 only if the Commission have issued it;

(2) 'mandatory if available' means a category of information that Member States have to submit only if such information is available to them at the time of the submission of the biennial progress report.

CHAPTER II

REPORTING ON NATIONAL OBJECTIVES, TARGETS AND CONTRIBUTIONS

Article 2

Reporting on progress with respect to the decarbonisation dimension

1. Member States shall report the information on progress towards the objectives, including progress towards the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119 of the European Parliament and of the Council ([3]), and towards the targets with respect to greenhouse gas emissions and removals referred to in Article 4, point (a)(1) of Regulation (EU) 2018/1999, in accordance with the formats set out in Annex I to this Regulation.

The Commission shall consider biennial reports by Member States submitted pursuant to Article 18(1), point (b) of Regulation (EU) 2018/1999 and annual reports submitted pursuant to Article 26(3) of that Regulation, taking into account the initial checks as referred to in Article 37(4) of that Regulation, as a submission for the purpose of biennial integrated national energy and climate progress reports pursuant to Article 17(1) of that Regulation with regard to the area of greenhouse gas emissions.

2. Member States shall report the information on progress towards the objectives, targets and contributions with respect to renewable energy referred to in Article 4, point (a)(2) and Article 20, point (a) of Regulation (EU) 2018/1999 in accordance with the formats set out in Annex II to this Regulation.

3. Member States shall report the information on adaptation referred to in Article 4, point (a)(1) of Regulation (EU) 2018/1999 in accordance with the formats set out in Annex III to this Regulation.

([3]) Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law') (OJ L 243, 9.7.2021, p. 1)

Article 3

Reporting on progress with respect to the energy efficiency dimension

Member States shall report the information on progress towards the objectives, targets and contributions with respect to the energy efficiency dimension referred to in Article 4, point (b) and Article 21, point (a) of Regulation (EU) 2018/1999 in accordance with the formats set out in Annex IV to this Regulation.

Article 4

Reporting on progress with respect to the energy security dimension

Member States shall report the information on progress towards the objectives, targets and contributions with respect to the energy security dimension referred to in Article 4, point (c) and Article 22, points (a) to (d) of Regulation (EU) 2018/1999 in accordance with the formats set out in Annex V to this Regulation.

Article 5

Reporting on progress with respect to the internal energy market dimension

Member States shall report the information on progress towards the objectives, targets and contributions with respect to internal energy market dimension referred to in Article 4, point (d) and Article 23(1), points (a) to (g) of Regulation (EU) 2018/1999 in accordance with the formats set out in Annex VI to this Regulation.

Article 6

Reporting on progress with respect to the research, innovation and competitiveness dimension

1. Member States shall report the information on progress towards the objectives, targets and contributions with respect to the research, innovation and competitiveness dimension referred to in Article 4, point (e) and Article 25, points (a) to (c) of Regulation (EU) 2018/1999 in accordance with the formats set out in Annex VII to this Regulation.

2. Member States shall report the information on progress towards the national objectives to phase out energy subsidies, in particular for fossil fuels, referred to in Article 25(d) of Regulation (EU) 2018/1999 in accordance with the formats set out in Annex VIII to this Regulation.

CHAPTER III

REPORTING ON POLICIES AND MEASURES

Article 7

Reporting on national policies and measures

1. Member States shall report the information on progress towards implementing the national policies and measures, and where appropriate updated or new policies and measures, or groups of policies and measures, referred to in Article 17(2), points (a) and (c), and Articles 20 to 25 of Regulation (EU) 2018/1999 in accordance with the formats set out in Annex IX to this Regulation.

2. The Commission shall consider biennial reports by Member States submitted pursuant to Article 18(1), point (a) of Regulation (EU) 2018/1999 as submissions for the purpose of biennial integrated national energy and climate progress reports pursuant to Article 17(1) of that Regulation with regard to the area of greenhouse gas emissions. Member States shall complement the reports pursuant to Article 18(1), point (a) with information referred to in Article 10 and Article 11 of this Regulation.

3. When reporting on the new policies and measures referred to in Article 21, point (b)(3) of Regulation (EU) 2018/1999, Member States shall, in addition, report the information in accordance with the formats set out in Annex X to this Regulation.

Article 8

Reporting on the amount of energy savings achieved under Article 7 of Directive 2012/27/EU

Member States shall report the information referred to in Part 2, points (b) to (d) of Annex IX to Regulation (EU) 2018/1999 in accordance with the formats set out in Annex XI to this Regulation.

Article 9

Reporting in accordance with Article 5 of Directive 2012/27/EU

1. Member States shall report the total renovated building floor area of heated and cooled buildings owned and occupied by their central government referred to in Part 2, point (g) of Annex IX to Regulation (EU) 2018/1999 in accordance with the formats set out in Table 1 of Annex XII to this Regulation.

2. Member States shall report the amount of energy savings in eligible buildings owned and occupied by their central government referred to in Part 2, point (g) of Annex IX to Regulation (EU) 2018/1999 in accordance with the formats set out in Table 2 of Annex XII to this Regulation.

Article 10

Reporting on progress towards financing

Member States shall report the information on progress towards financing the policies and measures, or groups of policies and measures, referred to in Article 17(2), point (a), Article 20, point (b)(3), Article 21, point (b)(7), Article 22, point (g), Article 23(1), point (j) and Article 25, point (g) of Regulation (EU) 2018/1999 and reported in accordance with Article 7(1) of this Regulation, including a review of actual investment against initial investment assumptions, in accordance with the formats set out in Annex XIII to this Regulation.

Article 11

Reporting on impact on air quality and on emissions of air pollutants

When reporting on quantification of the impact of the policies and measures, or groups of policies and measures, on air quality and on emissions of air pollutants, that are covered by the reports submitted in accordance with Article 7(1) and (2), Member States shall do so in accordance with the formats set out in Annex XIV

Article 12

Reporting on policies and measures to phase out energy subsidies, in particular for fossil fuels

Member State shall report on the policies and measures referred to in Article 17(2), points (a) and (c) of Regulation (EU) 2018/1999 concerning the phasing out of energy subsidies, in particular for fossil fuels, in accordance with the formats set out in Annex XV to this Regulation.

CHAPTER IV

OTHER REPORTING OBLIGATIONS

Article 13

Additional reporting obligations in the area of renewable energy

Member States shall report the additional information referred to in Part 1 of Annex IX to Regulation (EU) 2018/1999 in the area of renewable energy in accordance with the formats set out in Annex XVI to this Regulation.

Article 14

Additional reporting obligations in the area of energy efficiency

Member States shall report the additional information referred to in Part 2, points (e), (f) and (h) to (k) of Annex IX to Regulation (EU) 2018/1999 in accordance with the formats set out in Annex XVII to this Regulation.

Article 15

Reporting on energy poverty and just transition

1. Where Article 3(3), point (d), second subparagraph, of Regulation (EU) 2018/1999 applies, Member States shall report:

(a) the information on progress towards the national indicative objectives to reduce the number of households in energy poverty, referred to in Article 24, point (a) of Regulation (EU) 2018/1999, in accordance with the formats set out in Annex XVIII to this Regulation;

(b) the quantitative information on the number of households in energy poverty, referred to in Article 24, point (b) of Regulation (EU) 2018/1999, in accordance with the formats set out in Table 1 of Annex XIX to this Regulation.

2. Member States may report on the indicators in relation to energy poverty in accordance with the formats set out in Tables 2 and 3 of Annex XIX to this Regulation.

3. Member States may report the information on national definition of energy poverty in accordance with the formats set out in Table 4 of Annex XIX to this Regulation.

4. Member States may report the information on how the implementation of their integrated national energy and climate plans contribute to the just transition including through the promotion of both human rights and gender equality and address inequalities in energy poverty in accordance with the formats set out in Annex XX to this Regulation.

Article 16

Reporting on implementation of regional cooperation

Member States shall report the information on the implementation of regional cooperation referred to in Article 12, Article 20, point (b)(2), Article 21, point (b)(6), Article 22, point (f), Article 23(1), point (i), and Article 25, point (f) of Regulation (EU) 2018/1999 in the context of the implementation of the objectives, targets and contributions and policies and measures referred to in Chapters II and III of this Regulation in accordance with the formats set out in Annex XXI to this Regulation.

Article 17

Reporting on implementation of recommendations referred to in Article 32(1) or (2) of Regulation (EU) 2018/1999

Where the Commission has issued recommendations pursuant to Article 32(1) or (2) of Regulation (EU) 2018/1999, Member States shall report the information on the policies and measures adopted, or intended to be adopted and implemented, to address those recommendations as referred to in Article 17(6) of Regulation (EU) 2018/1999 in accordance with the formats set out in Annex XXII to this Regulation.

Where the Member States concerned decide not to address a recommendation or a substantial part thereof, they shall provide their reasoning in accordance with the formats set out in Annex XXII to this Regulation.

Article 18

Reporting on multilevel climate and energy dialogue referred to in Article 11 of Regulation (EU) 2018/1999

Member States shall report the information on progress in establishing the dialogue referred to in Article 11 of Regulation (EU) 2018/1999, in accordance with the formats set out in Annex XXIII to this Regulation.

CHAPTER V

SUBMISSION PROCESSES

Article 19

Submission of reports

Member States shall use the e-platform referred to in Article 28 of Regulation (EU) 2018/1999 and the tools and templates linked to it for the submission of their integrated national energy and climate progress reports pursuant to this Regulation.

CHAPTER VI

FINAL PROVISIONS

Article 20

Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 15 November 2022.

For the Commission
The President
Ursula VON DER LEYEN

ANNEX I

DECARBONISATION: GREENHOUSE GAS EMISSIONS AND REMOVALS

Table 1

Current and projected national progress towards the national greenhouse gas (GHG) emissions reduction targets in view of climate-neutrality

Reporting element	ID [1]	Specification	Scope [2]	Unit	GWP [3]	Year					Target year for climate-neutrality	Indirect CO_2-emissions included (yes/no)? [11]
						X-3 [10]	X-2	2030	2040	2050		
Climate-neutrality [4]	A1	M_{iap}										
Role of removals [5]	A2	M_{iap}		$ktCO_2e$	AR 5							
National GHG target – for 2030 and beyond, if available, and indicative milestones for 2040 and 2050.	B	M_{iap}	Total GHG emissions excluding LULUCF, excluding international aviation [6]	$ktCO_2e$	AR 5							
	C	M_{iap}	Total GHG emissions including LULUCF, excluding international aviation [6]	$ktCO_2e$	AR 5							
	D	M_{iap}	Total GHG emissions including LULUCF, including international aviation [6]	$ktCO_2e$	AR 5							
Historic emissions	E	M_{iap}	Total GHG emissions excluding LULUCF, excluding international aviation [7]	$ktCO_2e$	AR 5							
	F	M_{iap}	Total GHG emissions including LULUCF, excluding international aviation [7]	$ktCO_2e$	AR 5							
	G	M_{iap}	Total GHG emissions including LULUCF, including international aviation [7]	$ktCO_2e$	AR 5							

Article 18 WEM scenario	H	M_{iap}	Total GHG emissions excluding LULUCF, excluding international aviation ([8])	$ktCO_2e$	AR 5							
	I	M_{iap}	Total GHG emissions including LULUCF, excluding international aviation ([8])	$ktCO_2e$	AR 5							
	J	M_{iap}	Total GHG emissions including LULUCF, including international aviation ([8])	$ktCO_2e$	AR 5							
Article 18 WAM scenario	K	M_{iav}	Total GHG emissions excluding LULUCF, excluding international aviation ([8])	$ktCO_2e$	AR 5							
	L	M_{iav}	Total GHG emissions including LULUCF, excluding international aviation ([8])	$ktCO_2e$	AR 5							
	M	M_{iav}	Total GHG emissions including LULUCF, including international aviation ([8])	$ktCO_2e$	AR 5							
Current progress (X-3): Difference between historical data and values in line with national GHG target path	N1	n/a	Total GHG emissions excluding LULUCF, excluding international aviation	Percent ([9])	AR 5							
	O1	n/a	Total GHG emissions including LULUCF, excluding international aviation	Percent ([9])	AR 5							
	P1	n/a	Total GHG emissions including LULUCF, including international aviation	Percent ([9])	AR 5							
Current progress (X-2): Difference between historical data and values in line with national GHG target path	N2	n/a	Total GHG emissions excluding LULUCF, excluding international aviation	Percent ([9])	AR 5							
	O2	n/a	Total GHG emissions including LULUCF, excluding international aviation	Percent ([9])	AR 5							
	P2	n/a	Total GHG emissions including LULUCF, including international aviation	Percent ([9])	AR 5							

Projected progress: Difference between WEM scenario and values in line with national GHG target path	Q	n/a	Total GHG emissions excluding LULUCF, excluding international aviation	Percent (9)	AR 5							
	R	n/a	Total GHG emissions including LULUCF, excluding international aviation	Percent (9)	AR 5							
	S	n/a	Total GHG emissions including LULUCF, including international aviation	Percent (9)	AR 5							
Projected progress: Difference between WAM scenario and values in line with national GHG target path	T	n/a	Total GHG emissions excluding LULUCF, excluding international aviation	Percent (9)	AR 5							
	U	n/a	Total GHG emissions including LULUCF, excluding international aviation	Percent (9)	AR 5							
	V	n/a	Total GHG emissions including LULUCF, including international aviation	Percent (9)	AR 5							

Notation: X = reporting year; Miap = mandatory if applicable; Miav = mandatory if available.

Notes:

(1) IDs are shown to demonstrate how progress is calculated – the calculations using these IDs are listed in note 9.

(2) Data only to be supplied in those lines which apply to Member States target scope. Report data in line with GHG inventory. The totals reported for this column should include indirect CO2-emissions if these are reported in the GHG inventory.

(3) Information according to which Global Warming Potential values the GHG emissions shall be reported. GHG inventory data: the Global Warming Potential applies that applies to GHG inventories in the same year. AR 5 = Global Warming Potential values from the IPCCs 5th Assessment Report.

(4) If national climate-neutrality objective is in place, targeted year for climate-neutrality.

(5) If national total GHG emissions target for 2030, 2040 or 2050 is in place, total estimated removals for the target year respectively. If national climate-neutrality objective is in place, total estimated removals for the target year of climate-neutrality in ktCO2e.

(6) Provided by the Member State according to information in current integrated national energy and climate plan (as in Annex I, Part 1, Section A, Section 2, point 2.1.1(ii). Objectives and targets consistent with the Paris Agreement and the existing long-term strategies of Regulation (EU) 2018/1999) in line with its long-term strategy reported under Article 15 of Regulation (EU) 2018/1999.

(7) Final total GHG emissions as submitted by the Member States in their final GHG inventory information under Article 26(3) of Regulation (EU) 2018/1999 in the same reporting year and reported in line with GHG inventory guidelines (see Article 8 of Commission Implementing Regulation (EU) 2020/1208 of 7 August 2020 on structure, format, submission processes and review of information reported by Member States pursuant to Regulation (EU) 2018/1999 of the European Parliament and of the Council and repealing Commission Implementing Regulation (EU) No749/2014 (OJ L 278, 26.8.2020, p. 1)).

(8) Final data from Member States submissions in the same reporting year according to Annex XXV to Commission Implementing Regulation (EU) 2020/1208 for reporting under Article 18(1), point (b) of Regulation (EU) 2018/1999.

(9) Values are automatically calculated as percent difference to the given target. Only automatically calculated for those reporting elements where the corresponding row in block with IDs B-D was completed. If no automatic calculation is possible, the cell to be filled with notation key NA – not applicable. A negative value indicates that emissions are x % higher than the given target, while positive value indicates emissions are x % below the target.
N1= (B-E)/B – using data from X-3 for E
N2= (B-E)/B – using data from X-2 for E
O1= (C-F)/C – using data from X-3 for F
O2= (C-F)/C – using data from X-2 for F
P1= (D-G)/D – using data from X-3 for G
P2= (D-G)/D – using data from X-2 for G
Q= (B-H)/B
R= (C-I)/C
S= (D-J)/D
T= (B-K)/B
U=(C-L)/C
V=(D-M)/D

(10) X-3 shall not apply for the first progress reports in 2023.

(11) Indicates with yes/no whether indirect CO2-emissions are included in the target figure.

Table 2

Current and projected progress towards the annual binding national limits pursuant to Regulation (EU) 2018/842 as reported pursuant to Article 26(3) and Article 18(1), point(b) of Regulation (EU) 2018/1999

Reporting element	ID	Specification	Unit	GWP ([1])	Year				
					X-3 ([9])	X-2	t	t+5	t+10
Annual emission allocation (AEA) ([2])	A	M	$ktCO_2e$	AR 5					
Total Effort Sharing emissions in X-3 and X-2 ([3])	B	M	$ktCO_2e$	AR 5					
Total Effort Sharing emissions – WEM scenario ([4])	C	M	$ktCO_2e$	AR 5					
Total Effort Sharing emissions – WAM scenario ([4])	D	M_{iav}	$ktCO_2e$	AR 5					
Total Effort Sharing emissions – WOM scenario ([4])	E	M_{iav}	$ktCO_2e$	AR 5					
Current progress: Difference between AEA and reported total ESR emissions in X-3 and X-2 ([5])	F	n/a	$ktCO_2e$	AR 5					
Projected progress: Difference between AEA and total ESR emissions in the WEM scenario ([6])	G	n/a	$ktCO_2e$	AR 5					
Projected progress: Difference between AEA and total ESR emissions in the WAM scenario ([7])	H	n/a	$ktCO_2e$	AR 5					
Projected progress: Difference between AEA and total ESR emissions in the WOM scenario ([8])	I	n/a	$ktCO_2e$	AR 5					

Notation: X = reporting year; M = Mandatory; Miav = mandatory if available; t = the first future year ending with 0 or 5 immediately following the reporting year.

Notes:

([1]) Information according to which Global Warming Potential values the GHG emissions shall be reported. GHG inventory data: the Global Warming Potential applies that applies to GHG inventories in the same year. AR 5 = Global Warming Potential values from the IPCC's 5th Assessment Report.

([2]) Annual emission allocation pursuant to Article 4(3) of Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013 (OJ L 156, 19.6.2018, p. 26), adjusted in accordance with Article 10 of that Regulation, or any subsequent annual GHG emissions targets in this regard.

([3]) Final total GHG emissions as submitted by the Member States in their final GHG inventory information of the same reporting year according to the formula as laid out in Annex XV to Implementing Regulation (EU) 2020/1208.

([4]) Final data from Member States submissions in the same reporting year according to Annex XXV to Implementing Regulation (EU) 2020/1208 for reporting under Article 18(1), point (b) of Regulation (EU) 2018/1999

([5]) Calculated automatically as F = A-B

([6]) Calculated automatically as G = A-C

([7]) Calculated automatically as H = A-D and only if information is available in row with ID D, otherwise fill with notation key NA – not applicable.

([8]) Calculated automatically as I = A-E and only if information is available in row with ID E, otherwise fill with notation key NA – not applicable.

([9]) X-3 shall not apply for the first progress reports in 2023.

Table 3

Current and projected progress towards commitments pursuant to Regulation (EU) 2018/841 of the European Parliament and of the Council ([1]) as reported pursuant to Article 26(3) and Article 18(1), point (b) of Regulation (EU) 2018/1999

Reporting element	ID	Specification	Description	Unit	GWP ([1])	Year				
						X-3 ([5])	X-2	t	t+5	t+10
Land Use, Land-Use Change and Forestry ([2])	A	M		$ktCO_2e$	AR 5					
Land Use, Land-Use Change and Forestry in the WEM scenario ([3])	B	M		$ktCO_2e$	AR 5					
Land Use, Land-Use Change and Forestry in the WAM scenario ([3])	C	M_{iav}		$ktCO_2e$	AR 5					
LULUCF commitment stated in current NECP ([4])	D	M_{iap}								

Notation: X = reporting year, t signifies the first future year ending with 0 or 5 immediately following the reporting year; M = mandatory; M_{iap} = mandatory if applicable; M_{iav} = mandatory if available.

Notes:

([1]) Information according to which Global Warming Potential values the GHG emissions shall be reported. GHG inventory data: the Global Warming Potential applies that applies to GHG inventories in the same year. AR 5 = Global Warming Potential values from the IPCC's 5th Assessment Report.

([2]) Final total GHG emissions as submitted by the Member States in their final GHG inventory information under Article 26(3) of Regulation (EU) 2018/1999 in the same reporting year and reported in line with GHG inventory guidelines (see Article 8 of Implementing Regulation (EU) 2020/1208).

([3]) Final data from Member States submissions in the same reporting year according to Annex XXV to Commission Implementing Regulation (EU) 2020/1208 for reporting under Article 18(1), point (b) of Regulation (EU) 2018/1999.

([4]) The individual national LULUCF commitment as stated in current integrated national energy and climate plan. Member States shall provide textual description in column "Description". Member States shall provide numerical data in columns under "Year" and indicate the Unit and GWP used in the respective columns.

([5]) X-3 shall not apply for the first progress reports in 2023.

([1]) Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU (OJ L 156, 19.6.2018, p. 1).

Table 4

Current and projected progress towards other national greenhouse-gas related targets and objectives set out in integrated national energy and climate plans, including sector targets in accordance with Article 4(a), point (1)(iii) of Regulation (EU) 2018/1999

National target/ objective (1)	Specification	Reporting Element	Name of national target/ objective	Sector(s) addressed	Description (2)	Unit (3)	GWP used (4)	Year				
								X-3 (5)	X-2	t	t+5	t+10
National target/ objective #1 (1)	M_{iap}	Target/objective										
		Current progress										
		Projected progress under WEM scenario										
		Projected progress under WAM scenario										
National target/ objective #2 (1)	M_{iap}	Target/objective										
		Current progress										
		Projected progress under WEM scenario										
		Projected progress under WAM scenario										
Add further rows if needed for any other national target/ objective	M_{iap}	Target/objective										
		Current progress										
		Projected progress under WEM scenario										
		Projected progress under WAM scenario										

Notation: X = reporting year; M_{iap} = mandatory if applicable; t = the first future year ending with 0 or 5 immediately following the reporting year.

Notes:

(1) Member States shall add further rows in case other national targets/objectives apply.

(2) Textual description to be provided for clarification and in case targets/objectives and progress towards these cannot be expressed using the quantitative columns.

(3) Unit comparable to the unit of projected progress data.

(4) Information according to which Global Warming Potential values the GHG emissions were calculated. AR 4 = Global Warming Potential values from the IPCC's 4th Assessment Report; AR 5 = Global Warming Potential Values from the IPCC's 5th Assessment Report.

(5) X-3 shall not apply for the first progress reports in 2023.

ANNEX II

DECARBONISATION: RENEWABLE ENERGY

Table 1

Sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources ([1])

Reporting element	Specification	Unit	Year	
			X-3	X-2
Gross final consumption of energy from renewable sources	M	ktoe		
Gross final consumption of energy with aviation adjustment	M	ktoe		
Overall RES share	M	%		
Renewable electricity generation (with normalisation)	M	GWh		
Total Gross Electricity Consumption	M	GWh		
RES-E generation share	M	%		
RES-T numerator with multipliers	M	ktoe		
RES-T denominator with multipliers	M	ktoe		
RES-T consumption share	M	%		
RES-H&C numerator	M	ktoe		
RES-H&C denominator	M	ktoe		
Of which waste heat and cold utilised through district heating/cooling networks	M ([2])	ktoe		
RES -H&C share	M	%		
RES-H&C share with waste heat and cold	M	%		
Energy from renewable sources and from waste heat and cold used in district heating and cooling	M ([2])	ktoe		
Energy from all sources used for district heating and cooling	M ([2])	ktoe		
Share of energy from renewable sources and from waste heat and cold in district heating and cooling	M ([2])	%		
Statistical transfers/Joint projects/joint support schemes – total amount to be added	M ([2])	Ktoe		

Statistical transfers/Joint projects/joint support schemes –total amount to be deducted	M	ktoe		
Indigenous renewable hydrogen production	V	ktoe		
Indigenous biogas production	V	ktoe		
In case one or more of the RES shares in X-3 or X-2 have fallen below the national trajectory as reported in the integrated national energy and climate plan, or the baseline share of 2020, explain the reasons for this development and information on additional measures that are planned in order to cover the gap compared to the national reference point.	M_{iap}			
Please provide information on whether the MS intends to use waste heat and waste cold for the purposes of fulfilling the H&C target (Article 23) and DH&C targets (Article 24) of REDII (pursuant to Article 23(1) of REDII) and accordingly whether the MS plans to apply target 1.1 ppt (pure RES) or 1.3 (RES + waste heat/cold).	M_{iap}			
In case the average annual increase is lower than the H&C target in Article 23 of REDII, please state the achieved level and provide reasons, including of choice of measures (pursuant to the second and third subparagraphs of Article 23(2) of REDII)	M_{iap}			

Notation: X = reporting year; M = mandatory; M_{iap} = mandatory if applicable; V = voluntary.

(1) All calculation provisions set out in Directive (EU) 2018/2001 are applied to the total numerator and the total denominator.

(2) These values have to be reported starting from year 2021.

Table 2

Total installed capacity from each renewable energy technology [1]

Renewable energy technology	Specification	Unit	Year	
			X-3	X-2
Hydro	M	MW		
Of which pure hydro power with no pumping	M	MW		
Of which mixed hydro power	M	MW		
Of which pumped hydro power	M	MW		
Geothermal	M	MW		
Solar	M	MW		
Of which photovoltaic	M	MW		
Of which photovoltaic < 30 kW	M [5]	MW		
Of which rooftop	M [5]	MW		
Of which off grid	M [5]	MW		
Of which photovoltaic 30 kW – 1 000 kW	M [5]	MW		
Of which rooftop	M [5]	MW		
Of which off grid	M [5]	MW		
Of which photovoltaic ≥ 1 MW	M [5]	MW		
Of which rooftop	M [5]	MW		
Of which off grid	M [5]	MW		
Of which concentrated solar power	M	MW		
Tide, wave, ocean	M	MW		
Wind	M	MW		
Of which onshore	M	MW		
Of which offshore	M	MW		

Biomass ([2]) ([3])	M	MW		
Of which solid biomass fuels ([4])	M	MW		
Of which bioliquids	M	MW		
Of which gaseous biomass fuels ([4])	M	MW		
Solar collectors surface	M	1 000 m^2		
Liquid biofuels plants capacity	M	1 000 tonnes		
Of which biogasoline	M	1 000 tonnes		
Of which biodiesels	M	1 000 tonnes		
Of which bio jet kerosene	M	1 000 tonnes		
Of which other liquid biofuels	M	1 000 tonnes		
Relevant information, in case the evolution of installed capacity has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.	M			

Notation: X = reporting year; M = mandatory.

Notes:

([1]) Categories to be reported in this table are based on the annual energy questionnaires on Renewables and Wastes from Eurostat, according to Regulation (EC) No 1099/2008 on energy statistics.

([2]) As defined in Directive (EU) 2018/2001: 'biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture, including vegetal and animal substances, from forestry and related industries, including fisheries and aquaculture, as well as the biodegradable fraction of waste, including industrial and municipal waste of biological origin.

([3]) In case of blended solid or gaseous biomass fuels or bioliquids only the capacity corresponding to the bio part should be taken into account. If no capacity data available then provide an estimate based on inputs, efficiencies, generation and full load hours of both fossil and RE fuels.

([4]) As defined in Directive (EU) 2018/2001 Article 2 Definitions (27) 'biomass fuels' means gaseous and solid fuels produced from biomass.

([5]) These values have to be reported starting from year 2022.

Table 3

Total actual contribution (gross electricity generation) from each renewable energy technology in electricity

Renewable energy technology	Specification	Unit	Year	
			X -3	X -2
Normalised hydro generation	M	GWh		
Of which normalised pure hydro power with no pumping	M	GWh		
Of which normalised mixed hydro power (only the part of generation without pumping)	M	GWh		
Normalised wind generation	M	GWh		
Of which normalised on-shore wind generation	M ([1])	GWh		
Of which normalised off-shore wind generation	M ([1])	GWh		
From pure bioliquids, **compliant** + **non-compliant**	M	GWh		
of which from **compliant** pure (non-blended) bioliquids	M	GWh		
of which not from food and feed crops	M ([1])	GWh		
of which from food and feed crops	M ([1])	GWh		
of which from NON high-ILUC risk	M ([1])	GWh		
From **compliant** blended bioliquids, only bio part	M	GWh		
of which not from food and feed crops	M ([1])	GWh		
of which from food and feed crops	M ([1])	GWh		
of which from NON high-ILUC risk	M ([1])	GWh		
From biogas blended in the grid	M	GWh		
Of which compliant	M ([1])	GWh		
From biogas accounted towards electricity based on certificates	M ([1])	GWh		
Geothermal	M	GWh		
Solar photovoltaic	M	GWh		

Of which photovoltaic < 30 kW	M (2)	GWh		
Of which rooftop	M (2)	GWh		
Of which off grid	M (2)	GWh		
Of which photovoltaic 30 kW – 1 000 kW	M (2)	GWh		
Of which rooftop	M (2)	GWh		
Of which off grid	M (2)	GWh		
Of which photovoltaic ≥ 1 MW	M (2)	GWh		
Of which rooftop	M (2)	GWh		
Of which off grid	M (2)	GWh		
Solar thermal	M	GWh		
Tide, wave and ocean	M	GWh		
Municipal waste (renewable)	M	GWh		
Solid biofuels	M	GWh		
Of which compliant	M (1)	GWh		
From pure biogas	M	GWh		
Of which compliant	M (1)	GWh		
Relevant information, in case the evolution of gross electricity generation has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.	M			

Notation: X = reporting year; M = mandatory.
(1) These values have to be reported starting from year 2021.
(2) These values have to be reported starting from year 2022.

Table 4

Total actual contribution (gross final energy consumption) from each renewable energy technology in heating and cooling

Renewable energy technology	Specification	Unit	Year	
			X -3	X -2
Final Energy Consumption of renewable sources and fuels in Industry and Other Sectors (households, commercial and public services, agriculture and forestry, fishing and not elsewhere specified) excluding transport	M	ktoe		
Charcoal	M	ktoe		
Pure biogas	M	ktoe		
Biogas blended in the grid	M	ktoe		
Of which compliant	M (1)	ktoe		
Biogas accounted towards FEC in industry and other sectors based on certificates	M (1)	ktoe		
Geothermal (excluding geothermal heat pumps)	M	ktoe		
Solar thermal	M	ktoe		
Municipal waste renewable	M	ktoe		
Solid biofuels excluding charcoal	M	ktoe		
Of which compliant	M (1)	ktoe		
all bioliquids, **compliant** and also **non-compliant**	M	ktoe		
of which only **compliant** bioliquids	M	ktoe		
of which not from food and feed crops	M (1)	ktoe		
of which from food and feed crops	M (1)	ktoe		
of which from NON high-ILUC risk	M (1)	ktoe		
Production of heat from renewable fuels	M	ktoe		
Geothermal energy (excluding geothermal heat pumps)	M	ktoe		
Solar thermal	M	ktoe		
Municipal Waste – Renewable	M	ktoe		
Solid biofuels	M	ktoe		
Of which compliant	M (1)	ktoe		
From pure biogas	M	ktoe		

Of which compliant	M ([1])	ktoe		
From biogas blended in the grid	M	ktoe		
Of which compliant	M ([1])	ktoe		
From biogas accounted towards heat production based on certificates	M	ktoe		
all pure bioliquids, **compliant** and also **non-compliant**	M	ktoe		
of which only **compliant** pure bioliquids	M	ktoe		
of which not from food and feed crops	M ([1])	ktoe		
of which from food and feed crops	M ([1])	ktoe		
of which from NON high-ILUC risk	M ([1])	ktoe		
blended bioliquids, **compliant**, only bio- part	M	ktoe		
of which not from food and feed crops	M ([1])	ktoe		
of which from food and feed crops	M ([1])	ktoe		
of which from NON high-ILUC risk	M ([1])	ktoe		
From hydrogen of renewable origin	M ([1])	ktoe		
From RFNBOs	M ([1])	ktoe		
Ambient heat (captured by heat pumps, with the exception of geothermal heat pumps)	M	ktoe		
Of which air-air	M	ktoe		
Of which air-water	M	ktoe		
Of which air-air reversible	M	ktoe		
Of which air-water reversible	M	ktoe		
Of which exhaust air-air	M	ktoe		
Of which exhaust air-water	M	ktoe		
Of which water-air	M	ktoe		
Of which water-water	M	ktoe		
Geothermal energy using heat pumps	M	ktoe		
Of which ground-air	M	ktoe		
Of which ground-water	M	ktoe		

Renewable cooling	M (1)	ktoe		
Of which individual cooling systems higher than or equal to 1.5 MW capacity	M (1)	ktoe		
Of which from renewable heat driven cooling (absorption and adsorption)	M (1)	ktoe		
Of which Individual cooling systems below 1.5 MW capacity	M (1)	ktoe		
Space cooling in residential sector	M (1)	ktoe		
Of which from renewable heat driven cooling (absorption and adsorption)	M (1)	ktoe		
Space cooling in the tertiary sector	M (1)	ktoe		
Of which from renewable heat driven cooling (absorption and adsorption)	M (1)	ktoe		
Process cooling	M (1)	ktoe		
Of which from renewable heat driven cooling (absorption and adsorption)	M (1)	ktoe		
Other individual cooling systems	M (1)	ktoe		
Of which from renewable heat driven cooling (absorption and adsorption)	M (1)	ktoe		
District cooling	M (1)	ktoe		
Of which from renewable heat driven cooling (absorption and adsorption)	M (1)	ktoe		
Relevant information, in case the evolution of final energy consumption for heating and cooling has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.	M			

Notation: X = reporting year; M = mandatory.
(1) These values have to be reported starting from year 2021.

Table 5

Total actual contribution (gross final energy consumption) from each renewable energy technology in the transport sector

		Volumes			Greenhouse gas saving performance ([3])		
Renewable energy technology	Specification	Unit	X -3	X -2	Unit ([4])	X-3	X-2
Biofuels in transport ([1])							
Liquid biofuels in road transport	M	ktoe					
Liquid biofuels in rail transport	M	ktoe					
Liquid biofuels in other modes	M	ktoe					
Gaseous biofuels in road transport	M	ktoe					
Gaseous biofuels in rail transport	M	ktoe					
Gaseous biofuels in other modes	M	ktoe					
Non-biomass fuels that can be counted towards transport							
Hydrogen of renewable origin	M	ktoe					
Of which in Art 27.2(c) – in maritime sector	M ([5])	ktoe					
Of which in Art 27.2(c) – in aviation sector	M ([5])	ktoe					
Renewable fuels of non-biological origin (RFNBOs)	M	ktoe					
Of which in Art 27.2(c) – in maritime sector	M ([5])	ktoe					
Of which in Art 27.2(c) – in aviation sector	M ([5])	ktoe					
Recycled carbon fuels	M	ktoe					
Of which in Art 27.2(c) – in maritime sector	M ([5])	ktoe					
Of which in Art 27.2(c) – in aviation sector	M ([5])	ktoe					
COMPLIANT biofuels in transport ([2])							
all compliant biofuels in all transport modes	M	ktoe					
Annex IX (all transport modes)	M	ktoe					
Of which Art. 27.2(c) – in maritime sector	M ([5])	ktoe					
Of which Art. 27.2(c) – in aviation sector	M ([5])	ktoe					
By feedstock (all modes)							

Part A							
Of which Part A in maritime sector (Art. 27.2c)	M ([5])	ktoe					
Of which Part A in aviation sector (Art. 27.2c)	M ([5])	ktoe					
Part A by feedstock (all modes)							
(a)	M	ktoe					
(b)	M	ktoe					
(c)	M	ktoe					
(d)	M	ktoe					
(e)	M	ktoe					
(f)	M	ktoe					
(g)	M	ktoe					
(h)	M	ktoe					
(i)	M	ktoe					
(j)	M	ktoe					
(k)	M	ktoe					
(l)	M	ktoe					
(m)	M	ktoe					
(n)	M	ktoe					
(o)	M	ktoe					
(p)	M	ktoe					
(q)	M	ktoe					
Part B	M	ktoe					
Of which Part B in maritime sector (Art. 27.2c)	M ([5])	ktoe					
Of which Part B in aviation sector (Art. 27.2c)	M ([5])	ktoe					
Part B by feedstock (all modes)	M	ktoe					
(a)	M	ktoe					
(b)	M	ktoe					

Article 26(1) – From food and feed crops	M	ktoe					
of which from **NON** high ILUC risk	M ([5])	ktoe					
other compliant biofuels	M	ktoe					
Of which in maritime sector (Art. 27.2c)	M ([5])	ktoe					
Of which in aviation sector (Art. 27.2c)	M ([5])	ktoe					
Renewable electricity in the grid used in the transport sector							
All electricity in transport	M	ktoe					
All electricity in road transport	M	ktoe					
RE in road transport	M	ktoe					
non-RE in road transport	M	ktoe					
All electricity in rail transport	M	ktoe					
RE in rail transport	M	ktoe					
non-RE in rail transport	M	ktoe					
All electricity in all other transport modes	M	ktoe					
RE in all other transport modes	M	ktoe					
non-RE in all other transport modes	M	ktoe					
Relevant information, in case the evolution of final energy consumption for transport has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.	M						

Notation: X = reporting year; M = mandatory.

Notes:

([1]) This includes all biofuels, compliant and non-compliant, pure biofuels and corresponding part of blended biofuels, other renewable fuels, hydrogen and synthetic fuels of renewable origin in transport

([2]) This includes only compliant biofuels and biomass fuels (Articles 29 & 30 of Directive (EU) 2018/2001), pure and corresponding renewable part of blended fuels used in transport

([3]) Greenhouse saving performance has to be reported for the total of sustainable biofuels. Data may be reported more detailed and, in that case, if information cannot be provided because of confidentiality, Member States to include "C" for the related category.

([4]) Specify the unit in which the greenhouse saving performance is expressed.

([5]) These values have to be reported starting from year 2021.

Table 6

Biomass supply for energy use

	X-3					X-2				
	Indigenous production in 1 000 m3 (1)	Imports in 1 000 m3 (1)	Exports in 1 000 m3 (1)	Stock changes in 1 000 m3 (1)	Average net calorific value (TJ/1 000 m3) (2)	Indigenous production in 1 000 m3 (1)	Imports in 1 000 m3 (1)	Exports in 1 000 m3 (1)	Stock changes in 1 000 m3 (1)	Average net calorific value (TJ/1 000 m3) (2)
Specification	M (6)	M (6)	V	V	V	M	M	V	V	V
(1) Forest biomass used for energy production										
(a) Primary biomass from forest										
(i) Branches and tree tops	(3)	(3)				(3)	(3)			
(ii) Stumps	(4)	(4)				(4)	(4)			
(iii) Roundwood										
(I) Industrial roundwood										
(II) Fuelwood										
(b) Forest-based industry co-products										
(i) Bark										
(ii) Chips, sawdust and other wood particles										
(iii) Black liquor and crude tall oil **(tonnes)**										
(c) Post-consumer wood	(3)	(3)				(3)	(3)			
(d) Processed wood-based fuel, produced from feedstocks not accounted under point (1)(a), (b) or (c):										
(i) Wood charcoal										
(ii) Wood pellets and wood briquettes										

(2) Agricultural biomass	(3)	(3)				(3)	(3)			
(a) Energy crops for electricity or heat (including short rotation coppice)	(3)	(3)				(3)	(3)			
(i) Of which: From food and feed feedstocks	(3)	(3)				(3)	(3)			
(b) Agricultural crop residues for electricity or heat	(3)	(3)				(3)	(3)			
(3) Organic waste biomass	(3)	(3)				(3)	(3)			
(a) Organic fraction of industrial waste	(3)	(3)				(3)	(3)			
(b) Organic fraction of municipal waste	(3)	(3)				(3)	(3)			
(c) Waste sludges	(3)	(3)				(3)	(3)			

For forest biomass: Description how these meet the land-use, land-use change and forestry (LULUCF) criteria of Article 29(7) of Directive (EU) 2018/2001 (5)	
Relevant information, in case the evolution on bioenergy supply has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.	

Notation: X = reporting year; M = mandatory; V = voluntary.

(1) except 1b(iii) in tonne

(2) except 1b(iii) in TJ/tonne

(3) reporting mandatory if available

(4) reporting mandatory if applicable

(5) With per country or regional economic integration organisation of origin of the forest biomass, detailing whether the country or organisation is a Party to the Paris Agreement and:
it has submitted a nationally determined contribution (NDC) that includes the LULUCF sector;
it reports to the UNFCCC a national GHG emission inventory that includes the LULUCF sector or will start doing so by 2025 at the latest; or
it has national or sub-national laws in place, in accordance with Article 5 of the Paris Agreement, applicable in the area of harvest, to conserve and enhance carbon stocks and sinks, and provides evidence that reported LULUCF-sector emissions do not exceed removals.

(6) These values have to be reported starting from year 2021.

Table 7

Other national trajectories and objectives

Trajectory or objective	Description	Target ([1])	Target year	Progress towards target/objective	Progress Indicator (if applicable) ([2])			
					Name of indicator to monitor progress ([3])	Unit	X-3	X-2
M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}
Renewable energy use in district heating								
Renewable energy use in buildings								
Renewable energy produced by cities								
Renewable energy communities								
Renewables self-consumers								
Energy recovered from the sludge acquired through the treatment of wastewater								
Other national objective and trajectory, including sectoral and long term								
Add further rows, as needed								

Notation: X = reporting year; M_{iap} = mandatory if applicable.

Notes

([1]) Can be quantitative or qualitative

([2]) If the target/objective is quantifiable, Member States to provide an indication of progress, with the latest available information. Indicators for reporting are to be determined on the basis of national objectives or targets

([3]) Member States to refer to a base year and value, as appropriate, if this aids in demonstrating progress.

Table 8

Assessment of the support for electricity from renewable sources pursuant to Article 6(4) of Directive (EU) 2018/2001

When applicable, provide information on the assessment of the support for electricity from renewable sources that Member States are to carry out pursuant to Article 6(4) of Directive (EU) 2018/2001 ([1])	M_{iap}	

Notation: M_{iap} = mandatory if applicable.
Notes:
([1]) Member States to include references to concerned policies and measures

ANNEX III

DECARBONISATION: ADAPTATION

Table 1

Adaptation goals in integrated national energy and climate plans

Adaptation goals in integrated national energy and climate plans	Specification	Response
Are adaptation goals in accordance with Article 4 included in the integrated national energy and climate plan? ([1])	M	
Will the next submission of the integrated national energy and climate plan include adaptation goals? ([1])	V	
If adaptation goals are included in the integrated national energy and climate plan or the planned submission of the integrated national energy and climate plan, please provide an overview of these goals.	V	
If available, please provide other documents containing adaptation goals relevant to meeting the objectives and targets of the Energy Union and the long-term Union greenhouse gas emissions commitments consistent with the Paris Agreement, including the date of adoption and a link to the document.	V	

Notes:
M = mandatory; V = voluntary
([1]) Member States to choose from the following options: Yes; No.

Table 2

Information on adaptation, which may affect delivery of Energy Union objectives and targets and the long-term Union GHG emission reduction commitments under the Paris Agreement

Information on adaptation which may affect delivery of Energy Union objectives and targets and the long-term Union GHG emission reduction commitments under the Paris Agreement	Dimension	Specification	Response
National circumstances			
1. Vulnerabilities, including adaptive capacities (identified in the integrated national energy and climate plan and/or in other documents identified in Table 1 – please cite references), that are relevant to the Energy Union dimension selected.	Decarbonisation: GHG emissions and removals	M	
	Decarbonisation: renewable energy	M_{iap}	
	Energy efficiency	M_{iap}	
	Energy security	M_{iap}	
	Internal energy market	M_{iap}	
	Research, innovation and competitiveness	M_{iap}	
1.(a) Where relevant and available, please provide information on vulnerabilities, including adaptive capacities, referred to in field 1 above, disaggregated by vulnerable group. ([1])	Decarbonisation: GHG emissions and removals	V	
	Decarbonisation: renewable energy	V	
	Energy efficiency	V	
	Energy security	V	
	Internal energy market	V	
	Research, innovation and competitiveness	V	
2. Risk of potential future impacts (identified in the integrated national energy and climate plan and/or in other documents identified in Table 1– please cite references), that are relevant to the Energy Union dimension selected.	Decarbonisation: GHG emissions and removals	M	
	Decarbonisation: renewable energy	M_{iap}	
	Energy efficiency	M_{iap}	
	Energy security	M_{iap}	
	Internal energy market	M_{iap}	
	Research, innovation and competitiveness	M_{iap}	

Strategies and plans				
3. Adaptation goals (identified in the integrated national energy and climate plan and/or in other documents identified in Table 1 – please cite references) that are relevant to the Energy Union dimension selected.	Decarbonisation: GHG emissions and removals	M	
	Decarbonisation: renewable energy	M_{iap}	
	Energy efficiency	M_{iap}	
	Energy security	M_{iap}	
	Internal energy market	M_{iap}	
	Research, innovation and competitiveness	M_{iap}	
4. Challenges, gaps and barriers (identified in the integrated national energy and climate plan and/or in other documents identified in Table 1 – please cite references) that are relevant to the Energy Union dimension selected.	Decarbonisation: GHG emissions and removals	V	
	Decarbonisation: renewable energy	V	
	Energy efficiency	V	
	Energy security	V	
	Internal energy market	V	
	Research, innovation and competitiveness	V	
5. Foreseen actions, budget and timeline related to the adaptation goals identified in Field 3.	Decarbonisation: GHG emissions and removals	V	
	Decarbonisation: renewable energy	V	
	Energy efficiency	V	
	Energy security	V	
	Internal energy market	V	
	Research, innovation and competitiveness	V	

6. Overview of the content of sub-national strategies, policies, plans and efforts related to the adaptation goals identified in Field 3.	Decarbonisation: GHG emissions and removals	V	
	Decarbonisation: renewable energy	V	
	Energy efficiency	V	
	Energy security	V	
	Internal energy market	V	
	Research, innovation and competitiveness	V	
Monitoring and evaluation			
7. Progress towards reducing climate impacts, vulnerabilities and risks (identified in the integrated national energy and climate plan and/or in other documents identified in Table 1 – please cite references), relevant to the Energy Union dimension selected.	Decarbonisation: GHG emissions and removals	V	
	Decarbonisation: renewable energy	V	
	Energy efficiency	V	
	Energy security	V	
	Internal energy market	V	
	Research, innovation and competitiveness	V	
7(a). Where relevant and available, please provide information on progress towards reducing climate impacts, vulnerabilities and risks, referred to in field 7 above, disaggregated by vulnerable group. ([1])	Decarbonisation: GHG emissions and removals	V	
	Decarbonisation: renewable energy	V	
	Energy efficiency	V	
	Energy security	V	
	Internal energy market	V	
	Research, innovation and competitiveness	V	
8. Progress towards increasing adaptive capacity (identified in the integrated national energy and climate plan and/or in other documents identified in Table 1 – please cite references), relevant to the Energy Union dimension selected.	Decarbonisation: GHG emissions and removals	V	
	Decarbonisation: renewable energy	V	
	Energy efficiency	V	
	Energy security	V	
	Internal energy market	V	
	Research, innovation and competitiveness	V	

9. Progress of implementation towards meeting the adaptation goals identified in Field 3.	Decarbonisation: GHG emissions and removals	M	
	Decarbonisation: renewable energy	M_{iap}	
	Energy efficiency	M_{iap}	
	Energy security	M_{iap}	
	Internal energy market	M_{iap}	
	Research, innovation and competitiveness	M_{iap}	
10. Progress towards addressing barriers (identified in the integrated national energy and climate plan and/or in other documents identified in Table 1 – please cite references) that are relevant to the Energy Union dimension selected.	Decarbonisation: GHG emissions and removals	V	
	Decarbonisation: renewable energy	V	
	Energy efficiency	V	
	Energy security	V	
	Internal energy market	V	
	Research, innovation and competitiveness	V	

Notes:
M = mandatory; M_{iap} = mandatory if applicable; V = voluntary
([1]) Vulnerable group refers to a segment of the human population that has the propensity or predisposition to be adversely affected by climate variability and change.

ANNEX IV

ENERGY EFFICIENCY

Table 1

National contribution and indicative trajectory for primary and final energy consumption

Reporting element	Specification	Unit	Indicator	
Definition of the 2030 savings contribution (1)	M	n/a		
Description of the 2030 contribution and indicative trajectory from 2021-2030	M	n/a		
Value of the savings contribution 2030	M			
Translation into absolute level of PEC	M	ktoe		
Translation into absolute level of FEC	M	ktoe		
			X-3 (4)	X-2
Progress towards indicative trajectory 2021-2030 in PEC (2)	M	ktoe		
Progress towards indicative trajectory 2021-2030 in FEC (2)	M	ktoe		
Baseline GDP level, if the contribution is set as an intensity target	M_{iap}	Million-euro, chain-linked volumes (3)		
General comments on the national contribution and indicative trajectory for primary and final energy consumption (5)	V			

Notation: X = reporting year; M = mandatory; M_{iap} = mandatory if applicable; V = voluntary

Notes:

(1) Member States shall select from the following options: primary energy consumption; final energy consumption; primary energy savings; final energy savings; energy intensity.

(2) PEC and FEC according to the Eurostat indicators of the complete energy balances [nrg_bal_c] – Primary and Final energy consumption (Europe 2020-2030). Please see the PEC and FEC definitions (as the monitoring indicators for the Directive on energy efficiency) in the most recent version of the Energy balance guide on the website of Eurostat (see chapter "Complementing indicators").

(3) Reference year 2015 (at 2015 exchange rates).

(4) X-3 shall not apply for the first progress reports in 2023.

(5) Member States may provide additional explanation on the national contribution and indicative trajectory for primary and final energy consumption, including their underlying methodology.

Table 2

Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non-residential buildings – building stock

	Number of buildings (1)			Total floor area (m2) (2)			Primary energy use of buildings (TJ) (3)			Final energy use of buildings (TJ) (3)			Direct GHG emissions in buildings (tCO_{2e})			Total GHG emissions in buildings (tCO_{2e})			Other (4)		
	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2
Specification	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}
Residential buildings																					
Of which worst performing buildings (5)																					
Non-Residential buildings																					
Of which worst performing buildings																					
Public buildings (6)																					
Of which worst performing buildings																					

Notation: M_{iav} = mandatory if available;

Notes:

(1) Building means a roofed construction having walls, for which energy is used to condition the indoor climate (Directive 2010/31/EU, Article 2(1)) whereas Annex I of the same directive defines, for the purpose of the calculation of energy performance of buildings, the following classification of categories: (a) single-family houses of different types; (b) apartment blocks; (c) offices; (d) educational buildings; (e) hospitals; (f) hotels and restaurants; (g) sports facilities; (h) wholesale and retail trade services buildings; (i) other types of energy-consuming buildings (Directive 2010/31/EU, Annex I point 5.).

(2) Floor area used as reference size for the assessment of the energy performance of a building, calculated as the sum of the useful floor areas of the spaces within the building envelope specified for the energy performance assessment.

(3) As considered in the energy performance calculation of buildings defined by Directive 2010/31/EU.

(4) As presented in the national long-term renovation strategy. Other indicators could reflect the number of buildings and/or total floor area (m2) per energy performance class, per construction period, per building size, per climatic zone, the number of Energy Performance Certificates per building type and/or per energy performance class, an overview of the capacities in the construction, the share of heating system in the building sector, heating system type, etc. Other externalities could also be used to provide a better picture of the buildings sector, such as investments for the renovation of the existing stock, construction's share in GDP, health issues, etc.

(5) As defined in the national long-term renovation strategy. The COMMISSION RECOMMENDATION (EU) 2019/786 on building renovation provides examples to determine the worst-performing segments of the national building stock: (a) setting a specific threshold, such as an energy performance category (e.g. below 'D'); (b) using a primary energy consumption figure (expressed in kWh/m2 per year); or even (c) targeting buildings built before a specific date (e.g. before 1980).

(6) The COMMISSION RECOMMENDATION (EU) 2019/786 on building renovation, clarifies that Article 2a(1)(e) of Directive 2010/31/EU concerns all public buildings (and not just public bodies buildings' that are owned and occupied by central government). Policies and actions under Article 2a(1)(e) of Directive 2010/31/EU should include, for example, buildings that are occupied (e.g. leased or rented) by local or regional authorities and buildings that are owned by central government and regional or local authorities, but not necessarily occupied by them.

Table 3

Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non-residential buildings – renovation rates (1)

		Number of buildings renovated		Total floor area renovated (m^2) (2)		Renovation rate (3)		Deep renovation equivalent rate (5)	
		X-3	X-2	X-3	X-2	X-3	X-2	X-3	X-2
Specification		M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	V	V
Residential buildings	Light								
	Medium								
	Deep								
	Total								
Residential buildings – worst performing	Light								
	Medium								
	Deep								
	Total								
Non-residential buildings	Light								
	Medium								
	Deep								
	Total								
Non-residential buildings – worst performing	Light								
	Medium								
	Deep								
	Total								

Public buildings ([4])	Light								
	Medium								
	Deep								
	Total								
Public buildings – worst performing	Light								
	Medium								
	Deep								
	Total								

Notation: X = reporting year; M_{iav} = mandatory if available; V = voluntary

Notes:

([1]) An energy renovation means the change of one or more building elements (building envelope and technical building systems according to EPBD Art. 2(9)),having the potential to significantly affect the calculated or metered amount of energy needed to meet the energy demand associated with a typical use of the building, which includes, inter alia, energy used for heating, cooling, ventilation, hot water and lighting.

([2]) Floor area used as reference size for the assessment of the energy performance of a building, calculated as the sum of the useful floor areas of the spaces within the building envelope specified for the energy performance assessment.

([3]) Renovation rate refers to the cumulated affected building floor area [m2] of all buildings that underwent an energy renovation in calendar year X-3 or X-2, for different renovation depths, divided by the total floor area [m2] of the building stock in the same period.

Renovation depths can be defined as "light" (3 % ≤ x ≤ 30 % savings), "medium" (30 % < x ≤ 60 % savings) and "deep" (a renovation which transforms a building or building unit (a) before 1 January 2030, into a nearly zero-energy building (b) as of 1 January 2030, into a zero-emission building).

The total energy renovation rate is defined as the sum of all renovation rates of the covered depths.

The definition of nearly zero-energy buildings (NZEB) is according to official national NZEB definitions transposing Article 9 of Directive 2010/31/EU, following the framework definition in Article 2 of Directive 2010/31/EU: "Nearly zero-energy building means a building that has a very high energy performance, as determined in accordance with Annex I. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby."

([4]) The COMMISSION RECOMMENDATION (EU) 2019/786 on building renovation, clarifies that Article 2a(1)(e) of Directive 2010/31/EU concerns all public buildings (and not just public bodies buildings' that are owned and occupied by central government). Policies and actions under Article 2a(1)(e) of Directive 2010/31/EU should include, for example, buildings that are occupied (e.g. leased or rented) by local or regional authorities and buildings that are owned by central government and regional or local authorities, but not necessarily occupied by them.

([5]) Deep renovation equivalent rate equalises/weights the renovation rates at deep renovation depth and can be calculated by the following formula: Equivalent deep renovation rate = [(light renovation depth)* (light renovation rate) + (medium renovation depth)*(medium renovation rate) + (deep renovation depth)*(deep renovation rate)]/(deep renovation depth)] – all factors in %.

Renovation depths are the ratio between primary energy saved and total primary energy before renovation of the respective part of the stock.

Table 4

Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non-residential buildings – other indicators

Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non-residential buildings	Description	Target (1)	Target year	Progress towards target/objective	Progress Indicator (if applicable) (2)			
					Name of indicator to monitor progress (3)	Unit	X-3	X-2
M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}
Milestone/progress indicator 1								
Milestone/progress indicator 2								
Add further rows, as needed								

Notation: X = reporting year; M = mandatory.

Notes

(1) Can be quantitative or qualitative

(2) If the target/objective is quantifiable, Member States to provide an indication of progress, with the latest available information. Indicators for reporting are to be determined on the basis of national objectives or targets

(3) Member States to refer to a base year and value, as appropriate, if this aids in demonstrating progress.

Table 5

Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non-residential buildings – the contributions to the Union's energy efficiency targets

	Specification	Description
Please describe how progress towards the milestones in the long-term renovation strategy contributed to achieving the Union's energy efficiency targets in accordance with Directive 2012/27/EU	M	

Notation: M = mandatory.

Table 6

Update of other national objectives on energy efficiency as reported in the integrated national energy and climate plan

Name of national target/objective	Description	Progress towards target/objective (1)	Expected impacts of the set objective (2)
M_{iap}	M_{iap}	M_{iap}	M_{iap}
National target/objective 1			
National target/objective 2			
Add further rows, as needed			

Notes:

M_{iap} = mandatory if applicable

(1) Member States shall provide an update on the progress achieved up to the current situation. If targets were set, an overview of the main actions and achieved milestones should be given. If targets were not set, then an update on whether targets have since been set and a description of the targets should be provided.

(2) Member States shall describe the expected impacts of the set objectives, and their timeframe.

ANNEX V

ENERGY SECURITY

Table 1

Details about national objectives, targets and contributions

Name of national target/objective	Description	Relevance to Article 22 (1)	Target year	Status (2)	Policy which drove setting the objective (where relevant)		Entity responsible for achieving the objective	Energy sources and fuels covered (5)
					Union policy (3)	National policy (Legal reference) (4)		
M	M	M_{iap}	M_{iap}	M	M_{iap}	M_{iap}	M	M
National target/objective 1								
National target/objective 2								
National target/objective 3								
Add further rows, as needed								

Notes:

M = mandatory; M_{iap} = mandatory if applicable

(1) Member States shall select from the following objectives (additional objectives may be added and specified under 'other'): diversification of energy sources and supply, reducing energy import dependency from third countries, development of the ability to cope with constrained or interrupted supply, flexibility of the national energy system, other.

(2) Member States shall select from the following categories: planned; adopted; implemented; expired.

(3) Member State shall select a policy/policies from a list provided in the electronic version of the tabular format, or select other and specify the name of the Union policy.

(4) National law or document defining the objective.

(5) Member States shall select from the following options (more than one option can be selected, additional energy sources and fuels may be added and specified under 'other fuels'): whole system, electricity, gas, petroleum products, nuclear, other fuels.

Table 2

Progress towards implementation of quantifiable national objectives and targets

Name of national target/objective	Indicator(s)	Unit	Category		Year			Target value/Year ([3])	Methodological notes ([4])
					X-3	X -2	X-1 ([2])		
					M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}
Overall objectives and targets									
Diversification of energy sources and supply	Primary production	TJ	Coal						
			Natural Gas						
			Other fossil fuels and wastes						
			Oil and petroleum products						
			Renewables and biofuels						
			Nuclear Heat						
	Imports ([1])		Imports ([1])						
	Exports ([1])		Exports ([1])						
Reducing energy import dependency from third countries	Energy dependence from third countries by fuel type ([5])	Percentage	Overall						
			By fuel	Coal					
				Natural gas					
				Other fossil fuels and wastes					
				Oil and petroleum products					
				Combustible renewables (biofuels)					
				Electricity and heat (including nuclear)					

Development of the ability to cope with constrained or interrupted supply of an energy source ([6])	Resilience of the power system	Hours	LOLE (Loss of load expectation) ([7])					
		MWh	EENS (expected energy not served) ([7])					
	Resilience of the gas system	Percent	Result of the N-1 formula ([8])					
Nationally set objectives and targets								
National target/ objective 1								
National target/ objective 2								
National target/ objective 3								
Add further rows, as needed								

Notation: X = reporting year; M_{iap} = mandatory if applicable

Notes:

([1]) Total imports and exports across all fuels included in the energy balances.

([2]) For Year X-1, Member States shall report on reporting elements for which such assessment is available.

([3]) Member States to report the value of the target and the relevant year the target should be achieved, where quantified targets associated with the metrics are present.

([4]) Member States to provide further methodological information regarding the indicator.

([5]) Only imports from third countries (Non-EU members).

([6]) Member States should report data from the most recent adequacy assessment made for the relevant year. For example, they should report the LOLE for the year X-1 as estimated either in year X-1, X-2 or earlier. The year in which the resource adequacy assessment was performed should be reported under Methodological notes. See also note (5).

([7]) To be calculated in accordance with the requirements of Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC (OJ L 158, 14.6.2019, p. 1) and of Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (OJ L 158, 14.6.2019, p. 54). The specific methodology is set by the Agency for the Cooperation of Energy Regulators, in the Annex I of its decision on the Methodology for calculating the value of lost load, the cost of new entry, and the reliability standard.

([8]) To be calculated in accordance with the requirements of Annex II, Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010 (OJ L 280, 28.10.2017, p. 1). The N-1 rule calculates the technical capacity of the remaining infrastructure in case of disruption of the single largest gas infrastructure element, estimating whether this is able to satisfy gas needs equal to a day of exceptionally high demand that occurs with probability of once in 20 years.

Table 3

Progress towards implementation of non-quantifiable national objectives and targets

Name of national target/ objective	Indicator(s)/Milestone(s)	Target year	Description of indicator/ milestone ([1])	Progress towards target/ objective ([2])	Details concerning the monitoring strategy ([3])	Reference to assessments and underpinning technical reports
M	M	M_{iap}	M	M	V	V
National target/objective 1						
National target/objective 2						
National target/objective 3						
Add further rows, as needed						

Notes:
M = mandatory; M_{iap} = mandatory if applicable; V = voluntary
([1]) Member States shall provide details on the indicators/milestone and why this has been chosen to present progress with the objective.
([2]) Member States shall provide qualitative information to summarise the current status of the indicator (for example whether it is on track, already achieved, missed, delayed, etc.).
([3]) Details about how the indicator is monitored, for example via a set of indicators, via an expert review, via a panel, via a specific methodology and so on.

ANNEX VI

INTERNAL ENERGY MARKET

Table 1

Progress towards national objectives relating to electricity interconnectivity

Name of national target/objective	Unit	Year		Target value in 2030
		X-3	X-2	
		M	M	M_{iap}
Nominal transmission capacity to installed generation capacity	%			
Nominal transmission capacity to peak load	%			
Nominal transmission capacity to installed renewable generation capacity	%			
Average or absolute hourly price differentials for day-ahead markets (separately for every intra-EU border) (1)	EUR/MWh			
Border 1	EUR/MWh			
Border 2	EUR/MWh			
Add further rows, as needed	EUR/MWh			

Notation: X = reporting year; M = mandatory; M_{iap} = mandatory if applicable

Notes:

(1) The price differentials of day-ahead markets calculated and published by Agency for the Cooperation of Energy Regulators (ACER) in the annual Market Monitoring Report may be used.

Table 2

Information on transmission Projects of Common Interest

Please report any important developments on PCI projects compared to the last PCI Monitoring Report that might have an impact on the objectives and targets set in the national energy and climate plan.	M	

Notation: M = mandatory

Table 3

Information on other main infrastructure projects

Project description									Project implementation				
Project name (1)	TYNDP ID	Energy carrier (2)	Project type (3)	Project description	Planned year of commission-ing	Transmission capacity (MW for electricity GWh/d for natural gas, hydrogen and other gases/liquids)	Description of how the project will contribute to achieving the planned levels reported under Article 23(1)(a) (2)	Description of how the project will contribute to the Energy Union dimensions	Project status	Description of progress	Implementa-tion delay (years)	Rescheduling (years)	Reason for delays in implementa-tion or for rescheduling of the project plan
M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}
Project 1													
Project 2													
Add further rows, if needed													

Notes:
M_{iap} = mandatory if applicable
(1) Member States shall include in this table also PCI projects other than cross-border transmission projects, if they indirectly contribute to increasing the cross-border interconnectivity. The contribution to increased cross-border interconnectivity should be explained in the table.
(2) Member States to select from the following energy carriers (additional energy carrier may be added and specified under 'Other'): Electricity; Natural gas; Hydrogen; Other.
(3) Member States to provide general categories of infrastructure (for example LNG terminal; storage facility; third-country interconnector).

Table 4

Progress towards national objectives relating to energy system flexibility, including with regards to renewable energy production

Name of national target/objective	Description	Energy carrier (1)	Element(s) of system flexibility addressed (2)	Target (3)	Target year	Progress towards target/objective	Progress Indicator(s) (if applicable) (4)			
							Name of indicator to monitor progress (5)	Unit	X-3	X-2
M	M_{iap}	M	M	M	M	M	M_{iap}	M_{iap}	M_{iap}	M_{iap}
National target/ objective 1										
National target/ objective 2										
National target/ objective 3										
Add further rows, as needed										

Notation: X = reporting year; M = mandatory; M_{iap} = mandatory if applicable

Notes:

(1) Member States shall select from the following options: electricity; natural gas; hydrogen.

(2) Member States shall select from the following options (more than one option may be selected, additional options may be added and specified under 'other'): market integration and coupling aiming to increase the tradeable capacity and efficient use of interconnectors; smart metering/grids; aggregation; demand response; storage; distributed generation; mechanisms for dispatching, re-dispatching and curtailment; real-time price signals; other.

(3) Can be quantitative or qualitative

(4) If the target/objective is quantifiable, Member States shall provide an indication of progress, with the latest available information. Indicators for reporting are to be determined on the basis of national objectives or targets.

(5) Member States shall refer to a base year and value, as appropriate, if this aids in demonstrating progress.

Table 5

Progress towards national objectives relating to non-discriminatory participation in energy markets

Name of national target/objective	Description	Energy carrier (1)	Element(s) of non-discriminatory participation addressed (2)	Target (3)	Target year	Progress towards target/ objective (4)
M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}
National target/objective 1						
National target/objective 2						
National target/objective 3						
Add further rows, as needed						

Notes:
M_{iap} = mandatory if applicable
(1) Member States shall select from the following options: electricity; natural gas; hydrogen.
(2) Member States shall select from the following options (more than one option may be selected, additional options may be added and specified under 'other'): renewable energy; demand response; storage; other.
(3) Can be quantitative or qualitative
(4) When describing progress, Member States shall detail progress on non- discriminatory participation, considering the following elements, as relevant. This list is non-exhaustive and may be complemented by Member States:

In relation to markets: elements such as balancing markets, capacity markets (where applicable), wholesale energy markets, retail markets.
In relation to technologies: elements such as demand response, energy storage, aggregation, citizen energy communities/renewable energy communities, prosumers.
In relation to participation: elements such as market participation, tariff availability (including for charging points for electromobility; and energy storage e.g. preventing double charging for injection and withdrawal), dynamic price contract availability, simultaneous multi-service/product participation.

Table 6

Progress towards national objectives relating to consumer participation in the energy system and benefits from self-generation and new technologies, including smart meters

Name of national target/objective	Description	Energy carrier ([1])	Element(s) of consumer participation addressed ([2])	Target ([3])	Target year	Progress towards target/objective	Progress Indicator(s) (if applicable) ([4])			
							Name of indicator to monitor progress ([5])	Unit	X-3	X-2
M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}
National target/ objective 1										
National target/ objective 2										
National target/ objective 3										
Add further rows, as needed										

Notation: X = reporting year; M_{iap} = mandatory if applicable

Notes:

([1]) Member States shall select from the following options: electricity; natural gas; hydrogen.

([2]) Member States shall select from the following options (more than one option may be selected, additional options may be added and specified under 'other'): self generation; new technologies (including smart meters); other.

([3]) Can be quantitative or qualitative

([4]) If the target/objective is quantifiable, Member States shall provide an indication of progress, with the latest available information. Indicators for reporting are to be determined on the basis of national objectives or targets.

([5]) Member States shall refer to a base year and value, as appropriate, if this aids in demonstrating progress.

Table 7

Progress towards national objectives relating to electricity system adequacy

Name of national target/objective	Description	Element(s) addressed (1)	Target (2)	Target year	Progress towards target/objective	Progress Indicator(s) (if applicable) (3)			
						Name of indicator to monitor progress (4)	Unit	X-3	X-2
M	M_{iap}	M	M	M	M	M_{iap}	M_{iap}	M_{iap}	M_{iap}
National target/ objective 1									
National target/ objective 2									
National target/ objective 3									
Add further rows, as needed									

Notation: X = reporting year; M = mandatory; M_{iap} = mandatory if applicable

Notes:

(1) Member States shall select one or more from the following options: flexibility of energy system – renewable energy production; roll-out of intraday market coupling; roll-out of cross-border balancing markets; other.

(2) Can be quantitative or qualitative

(3) If the target/objective is quantifiable, Member States to provide an indication of progress, with the latest available information. Indicators for reporting are to be determined on the basis of national objectives or targets.

(4) Member States to refer to a base year and value, as appropriate, if this aids in demonstrating progress.

ANNEX VII

RESEARCH, INNOVATION AND COMPETITIVENESS

Table 1

Progress towards national objectives translating the SET Plan objectives and policies to a national context

Name of national target/objective ([1])	Description	Supported Energy Union R&I priority ([2])	Supported Clean energy/low carbon technologies ([3]) ([4])	Progress towards target/objective	Progress indicator(s) (if applicable)				General Comments
					Name of indicator to monitor progress	Value of indicator	Reference year	Unit	
M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	V
National target/ objective 1									
National target/ objective 2									
Add further rows, as needed									

Notes:
M_{iap} = mandatory if applicable; V = voluntary
([1]) Member States shall describe any national objective set up in the country, which is supporting the implementation and translation of the SET Plan.
([2]) Member States shall select one or more priorities from a list provided in the electronic version of the tabular format.
([3]) Member States shall select one or more technologies from a list provided in the electronic version of the tabular format.
([4]) 'Clean energy and low carbon technologies' include all the technologies covered under the SET Plan.

Table 2

Progress towards quantifiable national objectives for total public and, where available, private spending in research and innovation relating to clean energy technologies as well as for technology cost and performance development [1]

Name of national target/objective	Unit	Specification	Year		Target value/year	General comments
			X-3	X-2		
Public R&I expenditure						
Total Yearly R&I public expenditure in clean energy and low carbon technologies	Million EUR	M_{iap}				
Total yearly R&I public expenditure in clean energy and low-carbon technologies, as a percentage share of overall public R&I expenditure	%	M_{iap}				
Total yearly R&I public expenditure in clean energy and low-carbon technologies, as a percentage share of annual GDP	%	M_{iap}				
Private R&I expenditure						
Total Yearly R&I private expenditure in clean energy and low carbon technologies	Million EUR	V				
Total yearly R&I private expenditure in clean energy and low-carbon technologies, as a percentage share of overall private R&I expenditure	%	V				
Total yearly R&I private expenditure in clean energy and low-carbon technologies, as a percentage share of annual GDP	%	V				
Other nationally set objectives and targets						
National target/objective 1		M_{iap}				
National target/objective 2		M_{iap}				
Add further rows, as needed		M_{iap}				

Notation: X = reporting year; M_{iap} = mandatory if applicable; V = voluntary

[1] 'Clean energy technologies and low carbon technologies' include all the technologies covered under the SET Plan.

Member States shall provide national objectives for total public and, where available, private spending in research and innovation relating to clean energy technologies as well as for technology cost and performance development. Member States to include separate objectives as needed, covering public and private spending, technology focus objectives, performance development, etc.

Table 3

Progress towards non-quantifiable national objectives for total public and, where available, private spending in research and innovation relating to clean energy technologies as well as for technology cost and performance development (1)

Name of national target/objective	Description	Supported Energy Union RI priority (2)	Supported Clean energy/low carbon technologies (3)	Progress towards target/ objective (4)	Expected impacts of the set objective (5)
M_{iap}	M_{iap}	V	V	M_{iap}	M_{iap}
National target/objective 1					
National target/objective 2					
Add further rows, as needed					

Notes:
M_{iap} = mandatory if applicable; V = voluntary
(1) 'Clean energy technologies and low carbon technologies' include all the technologies covered under the SET Plan.
Member States shall provide national objectives for total public and, where available, private spending in research and innovation relating to clean energy technologies as well as for technology cost and performance development. Member States to include separate objectives as needed, covering public and private spending, technology focus objectives, performance development, etc.
(2) Member States may select one or more priorities from a list provided in the electronic version of the tabular format.
(3) Member States may select one or more technologies from a list provided in the electronic version of the tabular format.
(4) Member States shall provide an update on the progress achieved up to the current situation. If targets were set, an overview of the main actions and achieved milestones should be given. If targets were not set, then an update on whether targets have since been set and a description of the targets should be provided.
(5) Member States shall describe the expected impacts of the set objectives, and their timeframe.

Table 4

Progress towards national objectives, including long-term targets for 2050 for the deployment of technologies for decarbonising energy- and carbon-intensive industrial sectors and, where applicable, for related carbon transport, use, and storage infrastructure (1)

Name of national target/objective	Description	Progress towards target/objective	Progress indicator(s) (if applicable)				General Comments
			Name of indicator to monitor progress	Value of indicator	Reference year	Unit	
M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	V
National target/objective 1							
National target/objective 2							

Add further rows, as needed							

Notes:
M_{iap} = mandatory if applicable; V = voluntary
([1]) Member State shall describe any long-term plans for decarbonising measures in the industrial sector. Elements such as energy efficiency, carbon capture and storage, electrification and any other technologies that will contribute towards decarbonisation should be included. Milestones, objectives, and timeframe should be provided, as well as an indication of the considered technologies and their expected deployment.

Table 5

Progress towards national objectives with regard to competitiveness

Name of national target/objective	Description	Progress towards target/objective	Progress indicator(s) (if applicable)				General Comments
			Name of indicator to monitor progress	Value of indicator	Reference year	Unit	
M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	V
National target/objective 1							
National target/objective 2							
Add further rows, as needed							

Notes:
M_{iap} = mandatory if applicable; V = voluntary
(1) Member States shall describe any targets or objectives in the area of competitiveness. These could include objectives related to:
— Patents and research publications
— Value chain aspects such as milestones and targets in new job fields, company start-ups and growth in specific energy sectors.
— The global or internal/domestic market, such as international/national market penetration of technologies and trade volumes (change in imports and/or exports) on both a European and global scale.

ANNEX VIII

NATIONAL OBJECTIVES TO PHASE OUT ENERGY SUBSIDIES, IN PARTICULAR FOSSIL FUELS

Table 1

Progress towards national objectives to phase out energy subsidies, in particular for fossil fuels ([1])

National objective(s) or plan(s) set to phase out energy subsidies, in particular for fossil fuels	Description	Target year ([2])	Milestones ([3])	Progress towards target/ objective ([4])	Steps to ensure phase out does not affect efforts to reduce energy poverty ([5])	General comments
M	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	V
National objective/plan 1						
National objective/plan 2						
National objective/plan 3						
Add further rows, as needed						

Notes:

M = mandatory; M_{iap} = mandatory if applicable; V = voluntary

([1]) Member States shall report any objectives to phase-out fossil fuel subsidies and any objectives to phase-out other energy subsidies. Member States should indicate in the description column whether the objective has been laid down in legislation and, if applicable, provide the reference to the relevant legislation.
If no objectives are set to phase out energy subsidies, Member States shall report on any plans to make a phase out commitment or set a phase out objective. Member States shall include in the description column a short description of these plans, and clarify when such commitments are expected to become effective.

([2]) Member States shall provide a target year the objective should be achieved.

([3]) Member States shall specify any quantitative milestones. For example, 50 % phase out by 2024, 100 % phase out by 2026.

([4]) Member States shall report on progress accomplished towards meeting the objective and the milestones, if relevant.

([5]) Member States shall report on any steps taken to ensure the phase outs do not affect efforts to reduce energy poverty. Member States shall provide whether estimates of economic and other impacts of fossil fuel subsidy phase outs on energy poor households have been developed, what policies or measures are in place or proposed to alleviate such impacts (for example support for home energy renovations and high energy efficiency technology, such as electric heat pumps and home insulation).

ANNEX IX

PROGRESS ACCOMPLISHED TOWARDS IMPLEMENTING THE NATIONAL POLICIES AND MEASURES

Table 1

Key characteristics and progress towards implementing policies and measures

PaM number	PaM number in NECP, if different	Name of policy or measure	Single or grouped policy or measure	In case of a grouped policy or measure, which single policies or measures does it cover	Relevant objective(s), target(s) or contribution(s) the policy or measure contributes to (1)	Geographical coverage (2)	Sector(s) affected (3)	Objective (4)	Quantified objective (5)	Short description
M	M_{iap}	M	M	M	M	M	M	M	M_{iap}	M
PaM 1										
PaM 2										
Add further rows, as needed										

Notes:

M = mandatory; M_{iap} = mandatory if applicable

([1]) Member States shall select from the following objectives, targets and contributions in the integrated national energy and climate plan (more than one objective, target or contribution can be selected):

In dimension **Decarbonisation: GHG emissions and removals** – Member State's binding national target for greenhouse gas emissions and the annual binding national limits pursuant to Regulation (EU) 2018/842; Member State's commitments pursuant to Regulation (EU) 2018/841; Other objectives and targets, including sector targets and adaptation goals.

In dimension **Decarbonisation: Renewable energy** – A contribution to the Union's binding target of at least 32 % renewable energy in 2030 as referred to in Article 3 of Directive (EU) 2018/2001; Estimated trajectories for the sectoral share of renewable energy in final energy consumption from 2021 to 2030 in the electricity, heating and cooling and transport sector; Estimated trajectories per renewable energy technology; Estimated trajectories on bioenergy demand, disaggregated between heat, electricity and transport, and on biomass supply, by feedstock and origin; Other national trajectories and objectives, including those that are long-term or sectoral (e.g. share of renewable energy in district heating, renewable energy use in buildings, renewable energy produced by cities, renewable energy communities and renewables self-consumers, energy recovered from the sludge acquired through the treatment of wastewater).

In dimension **Energy efficiency** – The indicative national energy efficiency contribution to achieving the Union's energy efficiency targets of at least 32,5 % in 2030 as referred to in Article 1(1) and Article 3(5) of Directive 2012/27/EU; The cumulative amount of end-use energy savings to be achieved over the period 2021-2030 under point (b) of Article 7(1) on the energy saving obligations pursuant to Directive 2012/27/EU; The indicative milestones of the long-term strategy for the renovation of the national stock of residential and non-residential buildings; The total floor area to be renovated or equivalent annual energy savings to be achieved from 2021 to 2030 under Article 5 of Directive 2012/27/EU on the exemplary role of public bodies' buildings; Other national objectives, including long-term targets or strategies and sectoral targets, and national objectives in areas such as energy efficiency in the transport sector and with regard to heating and cooling.

In dimension **Energy security** – National objectives with regard to increasing the diversification of energy sources and supply from third countries, the purpose of which may be to reduce energy import dependency; National objectives with regard to reducing energy import dependency from third countries, for the purpose of increasing the resilience of regional and national energy systems; National objectives with regard to increasing the flexibility of the national energy system, in particular by means of deploying domestic energy sources, demand response and energy storage; National objectives with regard to addressing constrained or interrupted supply of an energy source, for the purpose of improving the resilience of regional and national energy systems.

In dimension **Internal energy market** – The level of electricity interconnectivity that the Member State aims for in 2030 in consideration of the electricity interconnection target for 2030 of at least 15 %; Key electricity and gas transmission infrastructure projects, and, where relevant, modernisation projects, that are necessary for the achievement of objectives and targets under the five dimensions of the Energy Union; Main infrastructure projects envisaged other than Projects of Common Interest (PCIs); National objectives related to other aspects of the internal energy market such as increasing system flexibility, in particular related to the promotion of competitively determined electricity prices in line with relevant sectoral law, market integration and coupling, aimed at increasing the tradeable capacity of existing interconnectors, smart grids, aggregation, demand response, storage, distributed generation, mechanisms for dispatching, re-dispatching and curtailment, and real-time price signals; National objectives related to the non-discriminatory participation of renewable energy, demand response and storage, including via aggregation, in all energy markets; National objectives with regard to ensuring that consumers participate in the energy system and benefit from self-generation and new technologies, including smart meters; National objectives with regard to ensuring electricity system adequacy, as well as for the flexibility of the energy system with regard to renewable energy production; National objectives to protect energy consumers and improve the competitiveness of the retail energy sector; national objectives with regard to energy poverty.

In dimension **Research, innovation and competitiveness** – National objectives and funding targets for public and, where available, private research and innovation relating to the Energy Union; National 2050 objectives related to the promotion of clean energy technologies and, where appropriate, national objectives, including long-term targets (2050) for deployment of low-carbon technologies, including for decarbonising energy and carbon-intensive industrial sectors and, where applicable, for related carbon transport and storage infrastructure; National objectives with regard to competitiveness.

([2]) Member States shall select from the following categories: covering two or more countries, national, regional, local.

([3]) Member States shall select from the following sectors (more than one sector can be selected for cross-sectoral policies and measures): energy supply (comprising extraction, transmission, distribution and storage of fuels as well as the transformation of energy for heating and cooling and electricity production); energy consumption (comprising consumption of fuels and electricity by end users such as households, public administration; services, industry and agriculture); transport; industrial processes (comprising industrial activities that chemically or physically transform materials leading to greenhouse gas emissions, use of greenhouse gases in products and non-energy uses of fossil fuel carbon); agriculture; LULUCF; waste management/waste; other sectors.

([4]) Objective means 'initial statement of the outcomes (including results and impacts) intended to be achieved by the intervention'. Member States shall select from the following objectives (more than one objective may be selected, additional objectives may be added and specified under 'other'):
For **energy supply** – increase in renewable energy sources in the electricity sector; increase in renewable energy in the heating and cooling sector; switch to less carbon-intensive fuels; enhanced non-renewable low carbon generation (nuclear); reduction of losses; efficiency improvement in the energy and transformation sector; carbon capture and storage or carbon capture and utilisation; control of fugitive emissions from energy production; increase the number of sources used in primary energy generation; reduce energy dependency from third countries; improve the resilience of energy supply infrastructure, including ensuring energy supply in case of major disruptions to the network; increase the ability of the power network to absorb increased share of renewable generation; increase electricity interconnectivity; increase price convergence of electricity markets; increase consumer participation in energy markets; increase electricity system flexibility and adequacy; research and innovation in energy supply; other energy supply.
For **energy consumption** – efficiency improvements of buildings; efficiency improvement of appliances; efficiency improvement in services/tertiary sector; efficiency improvement in industrial end-use sectors; demand management/reduction; research and innovation in technologies, processes and materials, which will contribute to reduction in energy consumption; other energy consumption.
For **transport** – efficiency improvements of vehicles; modal shift to public transport or non-motorized transport; low carbon fuels; electric road transport; demand management/reduction; improved behaviour; improved transport infrastructure; reduce emissions from international air or maritime transport; research and innovation to reduce emissions from the transport sector; innovation in digitalisation of transport; other transport.
For **industrial processes** – installation of abatement technologies; improved control of fugitive emissions from industrial processes; improved control of manufacturing, fugitive and disposal emissions of fluorinated gases; replacement of fluorinated gases by gases with a lower GWP value; research and innovation in making EU industry less energy intensive; other industrial processes.
For **waste management/waste** – demand management/reduction; enhanced recycling; enhanced CH4 collection and use; improved treatment technologies; improved landfill management; waste incineration with energy use; improved wastewater management systems; reduced landfilling; other waste.
For **agriculture** – reduction of fertilizer/manure use on cropland; other activities improving cropland management; improved livestock management; improved animal waste management systems; activities improving grazing land or grassland management; improved management of organic soils; other agriculture.
For **LULUCF** – afforestation and reforestation; conservation of carbon in existing forests; enhancing production in existing forests; increasing the harvested wood products pool; enhanced forest management; prevention of deforestation; strengthening protection against natural disturbances; substitution of GHG intensive feedstocks and materials with harvested wood products; prevention of drainage or rewetting of wetlands; restoration of degraded lands; other LULUCF.
For **Other** – Member States shall provide a brief description of the objective.

([5]) Member States shall include, as a minimum, the figure(s), unit(s), end year and base year if the objective(s) is(are) quantified. Quantified objectives shall be specific, measurable, achievable, relevant and time related.

	Assessment of the contribution of the policy or measure to the achievement of the Union's climate-neutrality objective set out in Article 2(1) of Regulation 2021/1119 and to the achievement of the long-term strategy referred to in Article 15 Regulation (EU) 2018/1999	Type of policy instrument ([6])	Union policies which resulted in the implementation of the PaM			Status of implementation ([9])	Implementation period		Entities responsible for implementing the policy ([10])		Indicators used to monitor and evaluate progress over time ([11])		
			Union policy ([7])	Other	Relevant provision ([8])		Start	Finish	Type	Name	Description	Year	Value
M	M	M	M_{iap}			M	M	M_{iap}	M		M_{iap}		
PaM 1													
PaM 2													
Add further rows, as needed													

Notes (cont.):

([6]) Member States shall select from the following policy types: economic; fiscal; voluntary/negotiated agreements; regulatory; information; education; research; planning; other.

([7]) List here only Union policy/policies that are implemented through the national policy or where national policies are aimed directly at meeting the objectives of Union policies. Member State shall select a policy/policies from a list provided in the electronic version of the tabular format, or select other and specify the name of the Union policy.

([8]) Member States shall report on the policies and measures or groups of policies and measures that contribute to dimensions Decarbonisation: Renewable energy and Energy efficiency. Member State shall select a relevant provision from a list provided in the electronic version of the tabular format, or select other and specify the name of the provision.

([9]) Member States shall select from the following categories: planned; adopted; implemented; expired.

([10]) Member States shall select from the following options and enter the name/s of entities responsible for implementing the policy or measure (more than one entity may be selected): national government; regional entities; local government; companies/businesses/industrial associations; research institutions; others not listed.

([11]) Member States shall provide any indicator (including the unit) and values for such indicators that will be used (ex-ante) to monitor and evaluate progress of policies and measures. Member States shall specify the year or years for which the value applies. Values for multiple indicators and years may be reported. Performance indicators identified by Member States shall be relevant, accepted, credible, easy and robust.

Update since last submission ([12])	Explanations of the update or the link to an extra/additional document	Progress against policy objective ([13])	Progress against policy indicators ([14])				Reference to assessments and underpinning technical reports	General Comments
			Indicator	Value	Year	Unit		
M	M_{iap}	M	M_{iap}				M	M

Notes (cont.):

([12]) Member States shall select from the following options (additional options may be added and specified under 'Other'): Adoption of a new measure, conclusion of agreement, publication of legislation; Commencement/enforcement of a measure/programme; Abolition/termination/completion of measure; Amendments, implementation or design changes and extension of an on-going measure; Monitoring information, update on progress or impact assessment results; Continuation of existing measures/no significant updates; Drafts, announcements, commitments, planned measures, discussions for a new measure; Other.

([13]) Member States shall provide qualitative description of the progress achieved against policy objective.

([14]) Member States shall provide the indicator(s) (including the unit) and values for such indicators that have been used (ex-post) to monitor and evaluate progress of policies and measures. Member States shall specify the year or years for which the value applies. Values for multiple indicators and years may be reported. Performance indicators identified by Member States shall be relevant, accepted, credible, easy and robust.

Dimension specific reporting			
Vector(s) affected ([15])	Supported Energy Union R&I priority ([16])	Supported Clean energy/low carbon technologies ([17])	Sectors supported ([18])
M_{iap}	M	M	M_{iap}

Notes (cont.):

([15]) Member States shall report on the policies and measures or groups of policies and measures that contribute to dimension Energy security. Member States shall select from the following vectors (more than one vector can be selected; additional vectors may be added and specified under 'Other fuels'): Whole system; Electricity; Gas; Petroleum products; Nuclear; Heat; Other fuels.

([16]) Member States shall report on the policies and measures or groups of policies and measures that contribute to dimension Research, innovation and competitiveness. Member States shall select one or more priorities from a list provided in the electronic version of the tabular format.

([17]) Member States shall report on the policies and measures or groups of policies and measures that contribute to dimension Research, innovation and competitiveness. 'Clean energy and low carbon technologies' include all the technologies covered under the SET Plan. Member States shall select one or more technologies from a list provided in the electronic version of the tabular format.

([18]) Member States shall report on the policies and measures or groups of policies and measures that contribute to dimension Research, innovation and competitiveness. Member States should include a description of which sectors are supported by this policy.

Table 2

Available results of ex-ante and ex-post assessments of the effects of individual or groups of policies and measures on renewable energy production (1)

PaM Number	Ex-ante assessment						Ex-post assessment			
	Renewable energy production (ktoe/year)				Explanation of the basis for the estimate	Documentation/ Source of estimation if available (provide a weblink of the report where the figure is referenced from)	Year for which production applies (2)	Renewable energy production (ktoe/year) (3)	Explanation of the basis for the estimate	Documentation/Source of estimation if available (provide a weblink of the report where the figure is referenced from)
	t	t + 5	t + 10	t + 15						
V										
PAM 1										
PAM 2										
Add further rows, as needed										

Notation: V = voluntary; t signifies the first future year ending with 0 or 5 immediately following the reporting year.

Notes:

(1) Member States shall report on the policies and measures or groups of policies and measures that contribute to dimension Decarbonisation: Renewable energy. Member States shall report on all the policies and measures or groups of policies and measures for which such assessment is available.

(2) Member States may report ex-post assessments for more than one year, where available reporting shall focus on years ending with 0 or 5.

(3) Ex-post evaluations include all evaluations based on results from parts of, or the whole implementation period.

Table 3

Available results of ex-ante and ex-post assessments of the effects of individual or groups of policies and measures on energy efficiency (1)

PaM Number	Ex-ante assessment						Ex-post assessment			
	Energy reductions (ktoe/year, final energy)				Explanation of the basis for the estimate	Documentation/ Source of estimation if available (provide a weblink of the report where the figure is referenced from)	Year for which reduction applies (2)	Energy reductions (ktoe/year, final energy) (3)	Explanation of the basis for the estimate	Documentation/Source of estimation if available (provide a weblink of the report where the figure is referenced from)
	t	t + 5	t +10	t + 15						
V										
PAM 1										
PAM 2										
Add further rows, as needed										

Notation: V = voluntary; t signifies the first future year ending with 0 or 5 immediately following the reporting year.

Notes:

(1) Member States shall report on the policies and measures or groups of policies and measures that contribute to dimension Energy efficiency. Member States shall report on all the policies and measures or groups of policies and measures for which such assessment is available.

(2) Member States may report ex-post assessments for more than one year, where available reporting shall focus on years ending with 0 or 5.

(3) Ex-post evaluations include all evaluations based on results from parts of, or the whole implementation period.

Table 4

Available projected and realised costs and benefits of individual or groups of policies and measures on renewable energy production (1)

PaM Number		Projected costs and benefits (*ex-ante* assessment)										Realised costs and benefits (*ex-post* assessment)											
	Year(s) for which cost has been calculated	Gross cost in EUR per toe renewable energy production	Absolute gross costs per year in EUR	Absolute benefits (2) per year in EUR	Benefits (2) in EUR per toe renewable energy production	Net costs in EUR per toe renewable energy production	Absolute net cost per year in EUR	Price year	Description of cost estimates (basis for cost estimate, what type of costs are included in the estimate, methodology) (3)	Documentation/source (provide a weblink of the report where the figure is referenced from)	Description of other benefits	Year(s) for which cost has been calculated	Gross cost in EUR per toe renewable energy production	Absolute gross costs per year in EUR	Benefits (2) in EUR per toe renewable energy production	Absolute benefits (2) per year in EUR	Net costs in EUR per toe renewable energy production	Absolute net costs per year in EUR	Price year	Description of cost estimates (basis for cost estimate, what type of costs are included in the estimate, methodology) (3)	Documentation/source (provide a weblink of the report where the figure is referenced from)	Description of other benefits
V																							
PAM 1																							
PAM 2																							
Add further rows, as needed																							

Notes:

V = voluntary

(1) Member States shall report on the policies and measures or groups of policies and measures that contribute to dimension Decarbonisation: Renewable energy. Member States shall report on all the policies and measures or groups of policies and measures for which such assessment is available.

(2) A benefit shall be indicated as a negative value.

(3) The description shall include the type of costs and benefits that have been taken into consideration, the stakeholders considered in the assessment of costs and benefits, the baseline against which costs and benefits are compared, and the methodology.

Table 5

Available projected and realised costs and benefits of individual or groups of policies and measures on energy efficiency (1)

PaM Number		Projected costs and benefits (*ex-ante* assessment)										Realised costs and benefits (*ex-post* assessment)										
	Year(s) for which cost has been calculated	Gross cost in EUR per toe final energy reduction	Absolute gross costs per year in EUR	Absolute benefits (2) per year in EUR	Benefits (2) in EUR per toe final energy reduction	Net costs in EUR per toe final energy reduction	Absolute net cost per year in EUR	Price year	Description of cost estimates (basis for cost estimate, what type of costs are included in the estimate, methodology) (3)	Documentation/source (provide a weblink of the report where the figure is referenced from)	Description of other benefits	Year(s) for which cost has been calculated	Gross cost in EUR per toe final energy reduction	Absolute gross costs per year in EUR	Benefits (2) in EUR per toe final energy reduction	Absolute benefits (2) per year in EUR	Net costs in EUR per toe final energy reduction	Absolute net costs per year in EUR	Price year	Description of cost estimates (basis for cost estimate, what type of costs are included in the estimate, methodology) (3)	Documentation/source (provide a weblink of the report where the figure is referenced from)	Description of other benefits
V																						
PAM 1																						
PAM 2																						
Add further rows, as needed																						

Notes:

V = voluntary

(1) Member States shall report on the policies and measures or groups of policies and measures that contribute to dimension Energy efficiency. Member States shall report on all the policies and measures or groups of policies and measures for which such assessment is available.

(2) A benefit shall be indicated in the template as a negative value.

(3) The description shall include the type of costs and benefits that have been taken into consideration, the stakeholders considered in the assessment of costs and benefits, the baseline against which costs and benefits are compared, and the methodology.

ANNEX X

NEW POLICIES AND MEASURES PURSUANT TO ARTICLE 21, POINT (B) 3 OF REGULATION (EU) 2018/1999

Table 1

Energy efficiency Obligation Schemes (EEOS) referred to in Article 7a of Directive 2012/27/EU

PaM Number	M	
Source(s) of information (including the reference of the related law or other legal text(s))	M	
Expected savings for 2021-2030 and duration of the obligation period(s) (points 5(d) and 5(e) of Annex V to Directive 2012/27/EU)		
Expected cumulative end-use energy savings for the period 2021-2030 (ktoe)	M	
Expected new annual end-use energy savings (ktoe/year) ([1])	Miap	
2021	Miap	
2022	Miap	
2023	Miap	
2024	Miap	
2025	Miap	
2026	Miap	
2027	Miap	
2028	Miap	
2029	Miap	
2030	Miap	
Duration of the obligation period(s)	M	
Key design features		
Obligated parties and their responsibilities (point 5(b) of Annex V to Directive 2012/27/EU)	M	
Target sectors (point 5(c) of Annex V to Directive 2012/27/EU) ([2])	M	
Sectors where individual actions are eligible to the EEOS (if different from the target sectors listed above) (point 5(c) of Annex V to Directive 2012/27/EU)	M	
Individual actions eligible to the EEOS (point 5(f) of Annex V to Directive 2012/27/EU) and corresponding lifetimes (points 2(i) and 5(h) of Annex V to Directive 2012/27/EU) ([3])	M	
Information on the application of the following EED provisions:		
Where applicable, specific actions and/or share of savings to be achieved in vulnerable households, including those affected by energy poverty, and, where appropriate, in social housing (article 7(11) to Directive 2012/27/EU)	Miap	
Savings achieved by energy service providers or other third parties (Article 7a(6), point (a) of Directive 2012/27/EU ([4])	Miap	

Rules about banking and borrowing (point (b) of Article 7a(6), point (b) of Directive 2012/27/EU)	Miap	
Possibilities for trading of energy savings (where relevant)	Miap	
Interactions with a National Energy Efficiency Fund in accordance with Article 20(6) of Directive 2012/27/EU (as considered in Article 7a(1) of that Directive) ([5])	Miap	
General information about the calculation methodology		
Measurement method(s) used (point 1 of Annex V, to Directive 2012/27/EU) ([6])	M	
Metric(s) used to express the energy savings (primary or final energy savings) (Article 7a(4), and point 3(d) of Annex V to Directive 2012/27/EU)	M	
How are lifetimes (and possible changes in savings over time) taken into account in savings calculations (points 2(i) and 5(h) of Annex V to Directive 2012/27/EU) ([7])	M	
Other sources of information or references (e.g. studies, evaluation reports) where more explanations and details about the savings calculations can be found	V	
Additionality and materiality (requirements related to points 2 and 5(g) of Annex V to Directive 2012/27/EU)		
Description of the calculation methodology; including how additionality is taken into account in the calculation methodology (point 2(a) of Annex V to Directive 2012/27/EU) ([8])	M	
Does the EEOS promote early replacements? If so, how is it taken into account in the calculation of the savings? (point 2(f) of Annex V to Directive 2012/27/EU)	M	
Benchmarks used for deemed and scaled savings (in case deemed or scaled savings are used) (point 1(c) of Annex V to Directive 2012/27/EU)	M	
How is materiality of savings ensured? (point 3(h) of Annex V to Directive 2012/27/EU)	M	
Possible overlaps (between policy measures and between individual actions) and double counting		
Possible overlaps between individual actions eligible to the EEOS ([9])	Miap	
Possible overlaps between the EEOS and alternative measure(s) reported according to Article 7 of Directive 2012/27/EU	Miap	
How are possible overlaps (between the EEOS and alternative measures) addressed to avoid any double counting of energy savings? (point 3(g) of Annex V to Directive 2012/27/EU)	M	
Climatic variations (where relevant) (points 2(h) and 5(i) of Annex V to Directive 2012/27/EU)		
Are there climatic variations between regions? And can they affect the actions eligible to the EEOS?	Miap	
How are climatic variations addressed in savings calculations where relevant?	Miap	

Monitoring and verification (M&V) of savings (point 5(j) of Annex V to Directive 2012/27/EU)		
Brief description of the monitoring & verification system and of the process of verification	M	
Authorities responsible for the M&V of the EEOS	M	
Independence of the M&V from obligated parties (Article 7a(5) of Directive 2012/27/EU)	M	
Verification of statistically representative samples (Article 7a(5) of Directive 2012/27/EU)) ([10])	M	
Reporting obligations for obligated parties (savings achieved by each obligated party, or each sub-category of obligated party, and in total under the scheme)	M	
Publication of energy savings achieved each year under the EEOS (Article 7a(7) of Directive 2012/27/EU))	M	
Penalties applied in case of non-compliance (and related references, including the law or other legal texts setting the penalties and related conditions)	M	
Provision(s) in case the progress of the EEOS is not satisfactory (point 3(f) of Annex V to Directive 2012/27/EU))	M	
Information about quality standards (point 2(g) of Annex V to Directive 2012/27/EU)		
How are quality standards (for products, services and installation of measures) promoted or required by the EEOS?	Miap	
Complementary information or explanations		
Mention here any other information of explanation that can be useful for experience sharing	V	

Notes:

M = mandatory; Miap = mandatory if applicable; V = voluntary

([1]) Member States shall complete this field if expected new annual end-use energy savings are stable. If the new annual end-use energy savings are expected to change over time MS shall complete the fields per year.

([2]) Member States shall specify the sectors (residential; services; industry; transport;other(s)) taken into account to calculate the target(s) of the EEOS and to define obligated parties. If the sectors eligible for individual actions are different, it shall be specified in the next field.

([3]) Member States shall specify here the eligible actions. If the list of measures is too long, Member States shall mention here the main eligibility criteria and provide the list as a separate file. Member States shall specify the lifetime values assumed for the different types or categories of actions using Table 4 in this Annex.

([4]) In case obligated parties are allowed to count towards their obligation certified energy savings achieved by energy service providers or other third parties, Member States shall explain the eligibility criteria for these third parties and how it is ensured that the certification of energy savings follows an approval process that is clear and transparent.

([5]) Member States shall specify if obligated parties can or shall fulfil their savings obligation, in whole or in part, as a contribution to an Energy Efficiency National Fund.

([6]) Member States shall specify the methods used according to the typology defined in Annex V(1): (a) deemed savings/(b) metered savings/(c) scaled savings/(d) surveyed savings. Member States shall explain in case another type of method is used.

([7]) Member States shall add explanation, especially if a method different from the one presented in point 2(i) of Annex V is used).

([8]) Member States shall explain how the calculation methodology complies with points (a) to (c) of Annex V(2), including how the effects of EU laws and regulations are taken into account, as required by points 2(b) and 2(c) of Annex V.

([9]) Member States shall explain how such overlaps are taken into account in the savings calculations; for example interactions between insulation of walls and replacement of heating systems. Member States shall also explain how the M&V system prevents the same individual action to be reported by several obligated parties (avoiding double counting within the EEOS).

([10]) Member States shall explain how verification of statistically representative samples of actions is ensured, and specify the criteria used to define and select representative samples.

Table 2

Alternative policy measures referred to in Article 7b and Article 20(6) of Directive 2012/27/EU) (except taxation measures)

PaM Number	M	
Source(s) of information (including the reference of the related law or other legal text(s))	M	
Budget planned or estimated, including the corresponding implementation period(s)	V	
Expected savings for 2021-2030 and duration of the obligation period(s) (points 5(d) and 5(e) of Annex V to Directive 2012/27/EU))		
Expected cumulative end-use energy savings for the period 2021-2030 (ktoe)	M	
Expected new annual end-use energy savings (ktoe/year) ([1])	Miap	
2021	Miap	
2022	Miap	
2023	Miap	
2024	Miap	
2025	Miap	
2026	Miap	
2027	Miap	
2028	Miap	
2029	Miap	
2030	Miap	
Intermediate period(s), where relevant ([2])	Miap	
Key design features		
Implementing public authorities, participating or entrusted parties and their responsibilities for implementing the policy measure (points 3(b) and 5(b) of Annex V to Directive 2012/27/EU))	M	
Target sectors (point 5(c) of Annex V to Directive 2012/27/EU)) ([3])	M	
Individual actions eligible to the alternative measure (point 5(f) of Annex V to Directive 2012/27/EU)) and corresponding lifetimes (points 2(i) and 5(h) of Annex V to Directive 2012/27/EU)) ([4])	M	
Specific policy measures or individual actions targeting energy poverty (where applicable)	Miap	
General information about the calculation methodology		
Measurement method(s) used (point 1 of Annex V to Directive 2012/27/EU)) ([5])	M	

Metric(s) used to express the energy savings (primary or final energy savings) (point 3(d) of Annex V to Directive 2012/27/EU))	M	
How are lifetimes (and possible changes in savings over time) taken into account in savings calculations (points 2(i) and 5(h) of Annex V to Directive 2012/27/EU)) ([6])	M	
Other sources of information or references (e.g. studies, evaluation reports) where more explanations and details about the savings calculations can be found	V	
Additionality and materiality (requirements related to points 2 and 5(g) of Annex V to Directive 2012/27/EU))		
Description of the calculation methodology; including how additionality is taken into account in the calculation methodology (point 2(a) of Annex V to Directive 2012/27/EU)) ([7])	M	
Does the policy measure promote early replacements? If so, how is it taken into account in the calculation of the savings? (point 2(f) of Annex V to Directive 2012/27/EU))	M	
Benchmarks used for deemed and scaled savings (in case deemed or scaled savings are used) (point 1(c) of Annex V to Directive 2012/27/EU))	M	
How is materiality of savings ensured? (point 3(h) of Annex V to Directive 2012/27/EU))	M	
Possible overlaps (between policy measures and between individual actions) and double counting		
Possible overlaps between individual actions eligible to the policy measure ([8])	Miap	
Possible overlaps between the EEOS (if any) and alternative measure(s) reported according to Article 7	Miap	
How are possible overlaps (between the EEOS, if any, and alternative measures) addressed to avoid any double counting of energy savings? (point 3(g) of Annex V)	M	
Climatic variations (where relevant) (points 2(h) and 5(i) of Annex V to Directive 2012/27/EU))		
Are there climatic variations between regions? And can they affect the actions eligible to the policy measure?	Miap	
How are climatic variations addressed in savings calculations where relevant?	Miap	
Monitoring and verification (M&V) of savings (point 5(j) of Annex V to Directive 2012/27/EU))		
Brief description of the monitoring & verification system and of the process of verification	M	
Authorities responsible for the M&V of the policy measure	M	
Independence of the M&V from the participating or entrusted parties (Article 7b(2) of Directive 2012/27/EU)	M	
Verification of statistically representative samples (Article 7b(2) of Directive 2012/27/EU) ([9])	M	
Publication of energy savings achieved each year under the policy measure (point 3(e) of Annex V to Directive 2012/27/EU)	M	

Penalties applied in case of non-compliance (and related references, including the law or other legal texts setting the penalties and related conditions)	M	
Provision(s) in case the progress of the policy measure is not satisfactory (point 3(f) of Annex V to Directive 2012/27/EU)	M	
Information about quality standards (point 2(g) of Annex V to Directive 2012/27/EU)		
How are quality standards (for products, services and installation of measures) promoted or required by the policy measure?	Miap	
Complementary information or explanations		
Any other information of explanation that can be useful for experience sharing	V	

Notes:

M = mandatory; Miap = mandatory if applicable; V = voluntary

(1) Member States shall complete this field if expected new annual end-use energy savings are stable. If the new annual end-use energy savings are expected to change over time MS shall complete the fields per year.
(2) Member States shall indicate here the periods or dates used to define intermediate objectives to enable reviewing the progress of the alternative measure.
(3) Member States shall specify the sectors (residential; services; industry; transport;other(s)) taken into account.
(4) Member States shall specify the categories of individual actions that can receive financial incentives or other types of support from the alternative measure, or that are promoted by the alternative measure through regulations, information or any type of policy instrument. If the list of measures is too long, Member States shall mention here the main eligibility criteria and provide the list as a separate file. Member States shall specify the lifetime values assumed for the different types or categories of actions using Table 4 in this Annex.
(5) Member States shall specify the methods used according to the typology defined in Annex V(1): (a) deemed savings/(b) metered savings/(c) scaled savings/(d) surveyed savings. Member States shall explain in case another type of method is used.
(6) Member States shall add explanation, especially if a method different from the one presented in point 2(i) of Annex V is used).
(7) Member States shall explain how the calculation methodology complies with points (a) to (c) of Annex V(2), including how the effects of EU laws and regulations are taken into account, as required by points 2(b) and 2(c) of Annex V).
(8) Member States shall explain how such overlaps are taken into account in the savings calculations; for example interactions between insulation of walls and replacement of heating systems.
(9) Member States shall explain how verification of statistically representative samples of actions is ensured, and specify the criteria used to define and select representative samples.

Table 3

Information on taxation measures

PaM Number	M	
Duration of taxation measure (point 5(k)(iv) of Annex V to Directive 2012/27/EU)	M	
Implementing public authority (point 5(k)(ii) of Annex V to Directive 2012/27/EU)	M	
Target sectors and segment of taxpayers (point 5(k)(i) of Annex V to Directive 2012/27/EU) (1)	M	
Source(s) of information (including the reference of the related law or other legal text(s))	M	
Expected savings for 2021-2030 and duration of the obligation period(s) (points 5(d) and 5(e) of Annex V to Directive 2012/27/EU)		
Expected cumulative end-use energy savings for the period 2021-2030 (ktoe)	M	
Expected new annual end-use energy savings (ktoe/year) (2)	Miap	
2021	Miap	
2022	Miap	
2023	Miap	

2024	Miap	
2025	Miap	
2026	Miap	
2027	Miap	
2028	Miap	
2029	Miap	
2030	Miap	
Complementary explanations (when relevant)	V	
General information about the calculation methodology		
Calculation method(s) used ([3])	M	
Approach to calculating savings (point (4)(a) of Annex V to Directive 2012/27/EU) ([4])	M	
Elasticities (short-term) (point (4)(b) of Annex V to Directive 2012/27/EU) ([5])	Miap	
Elasticities (long-term) (point (4)(b) of Annex V to Directive 2012/27/EU) ([6])	Miap	
How lifetimes are addressed in savings calculations (point 2(e) of Annex V to Directive 2012/27/EU) ([7])	M	
How is double counting with other policy measure(s) avoided? (point (4)(c) of Annex V to Directive 2012/27/EU)	M	
Independence from the implementing public authority ([8])	M	
Complementary explanations and source(s) of information	V	

M = mandatory; Miap = mandatory if applicable; V = voluntary

([1]) Member States shall specify the sectors (residential; services; industry; transport;other(s)) taken into account.

([2]) Member States shall complete this field if expected new annual end-use energy savings are stable. If the new annual end-use energy savings are expected to change over time MS shall complete the fields per year.

([3]) Member States shall explain the model used to calculate the savings, if short-term and/or long-term elasticities are taken into account and why, the variables taken into account in the model and how they were selected.

([4]) Member States shall explain the method for analyzing the effects on energy consumption with and without the taxation measure (counterfactual); How the counterfactual is defined, and how it is ensured that at least the minimum EU levels of taxation are taken into account.

([5]) When relevant, Member States shall explain how the short-term elasticities are defined, ensuring that they represent the responsiveness of energy demand to price changes. Member States shall mention the data sources to be used to define the elasticities.

([6]) When relevant, Member States shall explain how the long-term elasticities are defined, ensuring that they represent the responsiveness of energy demand to price changes. Member States shall mention the data sources to be used to define the elasticities.

([7]) Member States shall explain how the calculation methodology ensures that only savings from individual actions implemented after 31 December 2020 and before 31 December 2030 can be taken into account.

([8]) Member States shall explain how the independence of the evaluator(s) of the energy savings from the taxation measure is ensured.

Table 4

Information about the lifetime of the individual actions eligible to the policies and measures reported for Article 7 of Directive 2012/27/EU

Eligible action	*End-use sector*	*Assumed lifetime value (in years)*	*Assumptions about possible changes in the energy savings over time*	*Source or method used to estimate the lifetime and related assumptions*
Miap	*Miap*	*Miap*	*Miap*	*Miap*
Action 1				
Action 2				
Action 3				

Notes: Miap = mandatory if applicable

ANNEX XI

INFORMATION ON THE ENERGY SAVINGS ACHIEVED UNDER ARTICLE 7 OF DIRECTIVE 2012/27/EU (1)

Table 1

Energy savings achieved through Article 7 of Directive 2012/27/EU in year X-2

PaM number	Unit	Vulnerable households addressed (2)	Final energy savings achieved through national EEOs referred to in Article 7a of Directive 2012/27/EU or alternative measures adopted in application of Article 7b of that Directive (excl. Article 7(4), point (c) of that Directive)			Of which final energy savings achieved by PaMs aimed at alleviation of energy poverty in line with Article 7(11) of Directive 2012/27/EU			Amount of final energy savings achieved in accordance with Article 7(4), point (c) of Directive 2012/27/EU		
			Total annual end-use savings achieved in Year X-2 (3)	Thereof, savings achieved in Year X-2 only from new actions that were implemented in Year X-2	Total cumulative end-use savings achieved from 2021 to Year X-2	Total annual end-use savings achieved in Year X-2 (3)	Thereof, savings achieved in Year X-2 only from new actions that were implemented in Year X-2	Total cumulative end-use savings achieved from 2021 to Year X-2	Total annual end-use savings achieved in Year X-2 (3)	Thereof, savings achieved in Year X-2 only from new actions that were implemented in Year X-2	Total cumulative end-use savings achieved from 2021 to Year X-2
M		M	M	M	M	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}
PaM 1	ktoe										
PaM 2	ktoe										
Add further rows, as needed	ktoe										

Notation: Reporting for calendar year X-2, with X = reporting year, M = mandatory; M_{iap} = mandatory if applicable.

Notes:

(1) Member States shall report on national energy efficiency obligation scheme and alternative measures pursuant to Article 7a and 7b of Directive 2012/27/EU.
(2) Member States shall select from the following options whether vulnerable households, including those affected by energy poverty and, where appropriate, in social housing are included: Yes; No. For the definition on vulnerable households, guidance is provided in Article 28 of Directive (EU) 2019/944 and Article 3(3), point (d) of Regulation (EU) 2018/1999.
(3) Total annual end-use savings achieved in Year X-2, i.e. amount of savings from new actions implemented from 2021 to Year X-3 that continue delivering savings in X-2, taking into account savings lifetimes.

Table 2

Energy savings achieved through Article 7 of Directive 2012/27/EU in year X-3 ([1])

PaM number	Unit	Vulnerable households addressed ([2])	Final energy savings achieved through national EEOs referred to in Article 7a of Directive 2012/27/EU or alternative measures adopted in application of Article 7b of that Directive (excl. Article 7(4), point (c) of that Directive)			Of which final energy savings achieved by PaMs aimed at alleviation of energy poverty in line with Article 7(11) of Directive 2012/27/EU			Amount of final energy savings achieved in accordance with Article 7(4), point (c) of Directive 2012/27/EU		
			Total annual end-use savings achieved in Year X-3 ([3])	Thereof, savings achieved in Year X-3 only from new actions that were implemented in Year X-3	Total cumulative end-use savings achieved from 2021 to Year X-3	Total annual end-use savings achieved in Year X-3 ([2])	Thereof, savings achieved in Year X-3only from new actions that were implemented in Year X-3	Total cumulative end-use savings achieved from 2021 to Year X-3	Total annual end-use savings achieved in Year X-3 ([2])	Thereof, savings achieved in Year X-3 only from new actions that were implemented in Year X-3	Total cumulative end-use savings achieved from 2021 to Year X-3
M		M	M	M	M	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}
PaM 1	ktoe										
PaM 2	ktoe										
Add further rows, as needed	ktoe										

Notation: Reporting for calendar year X-3, with X = reporting year; M = mandatory; M_{iap} = mandatory if applicable;

Notes:

([1]) X-3 shall not apply for the first progress reports in 2023.

([2]) Member States shall select from the following options whether vulnerable households, including those affected by energy poverty and, where appropriate, in social housing are included: Yes; No. For the definition on vulnerable households, guidance is provided in Article 28 of Directive (EU) 2019/944 and Article 3(3), point (d) of Regulation (EU) 2018/1999.

([3]) Total annual end-use savings achieved in Year X-3, i.e., amount of savings from new actions implemented from 2021 to Year X-4 that continue delivering savings in X-3, taking into account savings lifetimes.

ANNEX XII

REPORTING IN ACCORDANCE WITH ARTICLE 5 OF DIRECTIVE 2012/27/EU

Table 1

Total renovated building floor area of heated and/or cooled buildings owned and occupied by the Member States' central government referred to in Article 5(1) of the Directive 2012/27/EU (1)

Reporting element	Specification	Unit	Year X-3		Year X-2		Additional information
			Primary Energy Consumption (PEC)	and/or Final Energy Consumption (FEC)	PEC	and/or FEC	
PaM Number	M_{iap}	n/a					
Total building floor area of buildings renovated	M_{iap}	m^2					
Amount of energy savings achieved due to renovation of buildings in Year X-3 and X-2 (2)	V	ktoe					
Sum of new energy savings achieved due to renovation of buildings, over the time period 2021 – Year X-3 (X-2)(i.e. corresponding to 3 % renovation rate)	M_{iap}	ktoe					

Notation: X = reporting year; M_{iap} = mandatory if applicable; V = voluntary

Notes:

(1) Member States shall report on policies and measures referred to in Article 5(1) of the Directive 2012/27/EU.
(2) Amount of energy savings can be estimated: deemed, metered, scaled or surveyed savings can be reported.

Table 2

The amount of energy savings in eligible buildings owned and occupied by their central government as referred to in Article 5(6) of Directive 2012/27/EU (1) (2)

Reporting element	Specification	Unit	Year X-3		Year X-2		Additional information
			PEC	and/or FEC	PEC	and/or FEC	
PaM Number	M_{iap}	n/a					
Amount of energy savings achieved in eligible buildings owned and occupied by their central government in Year X-3 and X-2 (3)	M_{iap}	ktoe					
Sum of energy savings achieved in eligible buildings owned and occupied by their central government, over the time period 2021 – Year X-3 (X-2) (i.e. corresponding to 3 % renovation rate)	M_{iap}	ktoe					

Notation: X = reporting year; M_{iap} = mandatory if applicable

Notes:

(1) Member States shall report on policies and measures referred to in Article 5(6) of the Directive 2012/27/EU.

(2) Without prejudice to Article 7 of Directive 2010/31/EU, Member States may opt for an alternative approach to paragraphs 1 to 5 of Article 5 of Directive 2012/27/EU, whereby they take other cost effective measures, including deep renovations and measures for behavioural change of occupants, to achieve an amount of energy savings in eligible buildings owned and occupied by their central government that is at least equivalent.

(3) Amount of energy savings can be estimated: deemed, metered, scaled or surveyed savings can be reported.

ANNEX XIII

PROGRESS TOWARDS FINANCING

Table 1

Progress towards financing

PaM number(s) the reporting concerns [1]	Eligible technologies/ solutions	Initial investment assumptions (EUR)		Actual investments up to and including year X-2 (EUR)							Actual investments still to be implemented (EUR)	
		Value	Price year	National public funding	Total EU funding	Of which RRF funding	Of which European Regional Development Fund and/or Cohesion Fund	Private funding (where available)	Price year	Description of source	Value	Price year
M	V	M		M	M	M	M	M_{iav}	M	M	M	
PaM 1, or a group of PaM												
PaM 2, or a group of PaM												
Add further rows, as needed												

Notation: X = Reporting year; M = mandatory; M_{iav} = mandatory if available; V = voluntary

Notes:

[1] Member States to list all PaM numbers the reporting concerns. Separate rows should be used for reporting on different PaMs or groups of PaMs.

ANNEX XIV

IMPACTS ON AIR QUALITY AND EMISSIONS TO AIR

Table 1

Impacts on air quality and emissions to air ([1])

PaM number(s) the reporting concerns ([2])	Reference year ([3])	Affected pollutant (s) ([4])	Quantified expected emission impacts ([5]) (kt/yr)						Qualitative assessment of expected emission impacts ([6])	Details of the methodologies used for analysis ([7])	Qualitative description of uncertainties (where available)	Documentation/Source of methodologies	General comments
			t	t+5	t+10	t+15	t+20	t+25					
M	M	M	M_{iav}						V/M	M_{iav}	V	M_{iav}	V
PaM 1, or a group of PaM													
PaM 2, or a group of PaM													
Add further rows, as needed													

Notation: t signifies the first future year ending with 0 or 5 immediately following the reporting year; M = mandatory; M_{iav} = mandatory if available; V = voluntary.

Notes:

([1]) Member States shall report on the quantification of the impact of the policies and measures, or groups of policies and measures, as far as possible.

([2]) Member States to list all PaM numbers the reporting concerns. Separate rows should be used for reporting on different PaMs or groups of PaMs.

([3]) Reference year is the base year used to project emissions.

([4]) Member States to select from the following pollutants (additional pollutants may be added and specified under 'other'): SO2, NOx, NMVOC, NH3, PM2,5, other.

([5]) Member States shall report expected increases in emissions as positive numbers or ranges, whereas expected reductions in emissions are shown as negative numbers or ranges.

([6]) In case no quantified impacts are available, a qualitative assessment is mandatory (M). If impacts are quantified, the qualitative assessment is voluntary (V).

([7]) The description shall include information on the methodology, such as models used, the baseline against which impacts are compared and underlying data.

ANNEX XV

POLICIES AND MEASURES TO PHASE OUT ENERGY SUBSIDIES, IN PARTICULAR FOR FOSSIL FUELS

Table 1

Policies and measures to phase out energy subsidies, in particular for fossil fuels

Subsidy for fossil fuel or for other (1)	Name of policy (English)	Name of policy (Local language)	Sector (2)	Purpose (3)	Carrier (4)	Category (5)	Implementation period		Subsidy volumes		
							Start (6)	Finish (7)	X-3 (8)	X-2 (8)	Currency (9)
M	M	M	M	M	M	M	M	M	M_{iav}	M	M
Subsidy 1											
Subsidy 2											
Add further rows, as needed											

Notation: X = Reporting year; M = mandatory; M_{iav} = mandatory if available

Notes:

(1) Member State shall select from the following options (additional options may be added and specified under 'Other'): Fossil fuel; Other (including subsidies for electricity, nuclear, renewables, and energy efficiency). In case of subsidies for the generation of electricity from fossil fuel sources, these should be included under the fossil fuel category.

(2) Member State shall select from the following options: Energy sector (if possible, select from the following sub-sectors: ENER-Fossil fuel extraction; ENER-Energy crops; ENER-Conversion; ENER-Conversion-Refining; ENER-Conversion-LNG; ENER-Conversion-CHP; ENER-Conversion-Electricity production; ENER-Conversion-Heating & Cooling; ENER-Conversion-Liquid biofuels; ENER-Conversion-Biogas production; ENER-Conversion-Hydrogen production; ENER-Infrastructure; ENER-Infra-Transmission; ENER-Infra-Distribution; ENER-Infra-T&D; ENER-Infra-Storage; ENER-Assets decommissioning; ENER-Waste management; ENER-Retail); Agriculture (if possible, select from the following sub-sectors: AGRI-Crop, animal production, hunting; AGRI-Forestry and logging; AGRI-Fishing and aquaculture); Construction; Mining; Industry (if possible, select from the following sub-sectors: INDU-Energy-intensive industry (industrial sectors that are covered by the EU Emissions Trading System); INDU-Non energy intensive-industry); Transport (TRANS-Air transport; TRANS-Rail transport; TRANS-Road transport; TRANS-Water transport; TRANS-Public transport); Services (tertiary sector); Households (if possible, select from the following sub-sectors: Households; HH-Low income); Public; Cross sectors (multiple sectors); Economic sectors.

(3) Member State shall select from the following options (additional options may be added and specified under 'Other'): Support to energy demand; Support to energy efficiency; Support to industry restructuring; Support to infrastructure; Support to production; Other.

(4) Member State shall select one or more from the following options: Fossil fuels (if possible, select from the following sub-carriers: FF-All fossil fuels; FF-Several fossil fuels; FF-Coal/Lignite; FF-Natural gas; FF-Mine gas; FF-Shale gas; FF-Crude oil & NGL; FF-Oil & Gas; FF-Petroleum products; FF-PP-Gasoil; FF-PP-Blended gasoil; FF-PP-Gasoline; FF-PP-Leaded Gasoline; FF-PP-Unleaded Gasoline; FF-PP-Blended gasoline; FF-PP-LPG; FF-PP-Kerosene; FF-PP-Fossil-based marine fuels; FF-PP-Heavy fuel oil (HFO); FF-Peat; All energies; Heat; Electricity; Nuclear; Bioenergy (if possible, select from the following sub-carriers: RES-Biogas; RES-Biomass & biogas; RES-Biomass (solid); RES-Biomass MSW; RES-Liquid biofuels; RES-Liquid biofuels-Biodiesel; RES-Liquid biofuels-Bioethanol); RES (if possible, select from the following sub-carriers: RES-All; RES-Several; RES-Geothermal; RES-Heat; RES-Hydro; RES-Marine energy; RES-Solar; RES-Wind; RES-Wind offshore; RES-Wind onshore); Hydrogen (if possible, select from the following sub-carriers: FF-All fossil fuels; RES-Biogas).

(5) Member State shall select from the following options (additional options may be added and specified under 'Others'): Direct transfers (if possible, select from the following sub-categories: Soft loans; Grants; Others); Tax expenditures (Tax reduction; Tax exemption; Tax refund; Tax credits; Tax allowance; Others); Under-pricing of goods/services (if possible, select from the following sub-categories: Under-pricing of government-owned resources or land; Under-pricing of government-owned infrastructure; Under-pricing of other government-provided goods or services); Income or price supports (if possible, select from the following sub-categories: Capacity payments (electricity capacity mechanisms); Biofuels blending mandate; RES quotas with tradable certificates; Differentiated grid connection charges; Energy efficiency obligations; Interruptible load schemes; Contract for Difference (CfD); Feed-in premiums; Feed-in tariffs; Consumer price guarantees (cost support); Consumer price guarantees (price regulation); Producer price guarantees (price regulation); Others

(6) Year policy enabling subsidy was first implemented.

(7) Year when the enabling policy ends (is no longer in effect or implementation), at which time subsidies can no longer be paid.

(8) Subsidy volumes paid in nominal currency values.

(9) Member State shall select from the following options (one option can be selected): EUR; BGN; HRK; CZK; DKK; HUF; PLN; RON; SEK.

ANNEX XVI

ADDITIONAL REPORTING OBLIGATIONS IN THE AREA OF RENEWABLE ENERGY

Table 1

Functioning of the system of guarantees of origin for electricity, gas and heating & cooling from RES

Reporting element	Specification	Unit	Year	
			X-3	X-2
Electricity				
Guarantees of origin – issued (1)	M_{iap}	Number		
Guarantees of origin – canceled (2)	M_{iap}	Number		
Guarantees of origin – resulting annual national renewable energy consumption (3)	M_{iap}	GWh		
Gas				
Guarantees of origin – issued	M_{iap}	Number		
Guarantees of origin – canceled	M_{iap}	Number		
Guarantees of origin – resulting annual national renewable energy consumption (4)	M_{iap}	GWh		
Heating/cooling				
Guarantees of origin – issued	M_{iap}	Number		
Guarantees of origin – canceled	M_{iap}	Number		
Guarantees of origin – resulting annual national renewable energy consumption (4)	M_{iap}	GWh		
Measures taken to ensure reliability	M_{iap}	n/a		
Measures taken to protect against fraud of the system	M_{iap}	n/a		

Notation: X = reporting year; M_{iap} = mandatory if applicable

Notes:

(1) The number of guarantees of origin issued for energy that is produced from renewable energy sources in the Member State during the reporting period, based on the time of production of the energy.

(2) The number of guarantees of origin from renewable energy sources cancelled for energy that is consumed in the Member State during the reporting period.

(3) The quantity of energy consumption for which the origin has proven to originate from renewable energy sources, being determined as the cancelled guarantees of origin for energy consumption from renewable energy sources in the reporting period + the renewable share of the residual mix multiplied by the total energy consumption for the reporting period that is not covered with guarantees of origin cancellation.

(4) The quantity of energy consumption for which the origin has proven to originate from renewable energy sources, being determined as the cancelled guarantees of origin for energy consumption from renewable energy sources in the reporting period + the energy consumption from renewable energy sources through other reliable tracking mechanisms that avoid double counting (which may include "the renewable share of the residual mix multiplied by the total energy consumption for the reporting period that is not covered with guarantees of origin cancellation nor other reliable tracking mechanisms").

Table 2

Changes in commodity prices and land use associated with use of biomass and other forms of energy from renewable sources

Please report changes in commodity prices and land use within the Member State associated with its increased use of biomass and other forms of energy from renewable sources ([1]) ([2])	Miap	

M_{iap} = mandatory if applicable

([1]) Changes in commodity prices to be reported at national level (or subnational if applicable). These include any shifts in prices related to food and feed crops. (increased price for food/feed product due to increased energy use of the same feedstock). These also include shifts in prices related to increased demand for forest biomass for energy use – i.e., shifts in prices for material products made from waste and residue due to increased energy use and competition for feedstock.

([2]) For land use change, please report only the actual change in land used for biomass consumed for energy, not all agricultural land.

Table 3

Estimated excess production of energy from renewable sources compared to the national trajectory towards the 2030 target

Reporting element	Specification	Unit	2022	2023	2024	2025	2026	2027	2028	2029	2030
Estimated excess production resulting from domestic renewable sources (A)	M_{iap}	ktoe									
Estimated production resulting from joint projects between Member States or joint projects between Member States and third countries which counts toward the national contribution towards the 2030 target (B)	M_{iap}	ktoe									
Estimated production resulting from joint support schemes which counts toward the national contribution towards the 2030 target (C)	M_{iap}	ktoe									
Estimated excess production overall (excluding future statistical transfers) (= A+B+C)	M_{iap}	ktoe									
Estimated deficit production resulting from domestic renewable sources (D)	M_{iap}	ktoe									

M_{iap} = mandatory if applicable

Table 4

Technological development and deployment of biofuels made from feedstocks listed in Annex IX to Directive 2018/2001

Please report technological development and deployment of biofuels in your country made from feedstocks listed in Annex IX to Directive 2018/2001 (1)	M	

Notes:

M = mandatory

(1) Deployment can be reported in installed capacities and actual production of different advanced biofuels based on different technologies. As well as the number of installations and feedstock type. Development could list the different technology pathways and give a brief description of their status in a qualitative manner (development phase, how close to market uptake, recent developments, investments).

Table 5

Estimated impact of the production or use of biofuels, bioliquids and biomass fuels on biodiversity, water resources, water availability and quality, soils and air quality

Reporting element	Production of biofuels, bioliquids, biomass				Use of biofuels, bioliquids, biomass			
	Estimated impact of production of biofuels, bioliquids, biomass (1)	Unit	Time period	Description of methods to estimate the impact (1)	Estimated impact of use of biofuels, bioliquids, biomass (1)	Unit	Time period	Description of methods to estimate the impact (1)
	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}	M_{iav}
Biodiversity								
Water stock (ground water, surface water) & water availability								
Soils								
Air quality								

Notes:

M_{iav} = mandatory if available

(1) Estimated impacts and the methods used can be described in quantitative and qualitative manner. If quantitative impacts are described, please do specify the unit and the time period they relate to.

Table 6

Observed cases of fraud in the chain of custody of biofuels, bioliquids and biomass fuels

Please report observed cases of fraud in the chain of custody of biofuels, bioliquids and biomass fuels	M_{iap}	

M_{iap} = mandatory if applicable

Table 7

Share of biodegradable waste in waste-to-energy plants used for producing energy

		Year	
		X-3	X-2
Are waste-to-energy plants operated? (1)	M_{iap}		
If yes			
Share of biodegradable waste used (%)	M_{iap}		
Methodology for estimating the share	M_{iap}		
Steps taken to improve and verify the estimates	M_{iap}		

Notation: X = reporting year; M_{iap} = mandatory if applicable
Notes:
(1) Member States shall select from the following options: Yes; No.

Table 8

Electricity and heat generation from renewable energy in buildings, including, where available, disaggregated data on energy produced, consumed and injected into the grid (1)

Reporting element	Specification	Unit	Year	
			X-3	X-2
Total final energy consumption from renewables in buildings for heating purposes	M_{iav}	ktoe		
Solar thermal systems	M_{iav}	ktoe		
Biomass (2)	M_{iav}	ktoe		
Heat pumps	M_{iav}	ktoe		

Geothermal systems	M_{iav}	ktoe		
Other decentralised renewable sources	M_{iav}	ktoe		
Total renewable heat consumed in buildings	M_{iav}	ktoe		
Solar thermal systems	M_{iav}	ktoe		
Biomass (2)	M_{iav}	ktoe		
Heat pumps	M_{iav}	ktoe		
Geothermal systems	M_{iav}	ktoe		
Other decentralised renewable sources	M_{iav}	ktoe		
Total renewable heat produced and fed into the grid (district heating)	M_{iav}	ktoe		
Solar thermal systems	M_{iav}	ktoe		
Biomass (2)	M_{iav}	ktoe		
Heat pumps	M_{iav}	ktoe		
Geothermal systems	M_{iav}	ktoe		
Other decentralised renewable sources	M_{iav}	ktoe		
Total renewable electricity production in buildings	M_{iav}	ktoe		
Solar PV systems	M_{iav}	ktoe		
Biomass (2)	M_{iav}	ktoe		
Geothermal systems	M_{iav}	ktoe		
Other decentralised renewable sources	M_{iav}	ktoe		
Total renewable electricity consumption in buildings	M_{iav}	ktoe		
Solar PV systems	M_{iav}	ktoe		
Biomass (2)	M_{iav}	ktoe		
Geothermal systems	M_{iav}	ktoe		
Other decentralised renewable sources	M_{iav}	ktoe		
Total renewable electricity fed into grid	M_{iav}	ktoe		
Solar PV systems	M_{iav}	ktoe		
Biomass (2)	M_{iav}	ktoe		

Geothermal systems	M_{iav}	ktoe		
Other decentralised renewable sources	M_{iav}	ktoe		

Notation: X = reporting year; Miav = mandatory if available.

Notes:

(1) Building' means a roofed construction having walls, for which energy is used to condition the indoor climate (Directive 2010/31/EU, Article 2(1)) whereas Annex I of that Directive defines, for the purpose of the calculation of energy performance of buildings, the following classification of categories: (a) single-family houses of different types; (b) apartment blocks; (c) offices; (d) educational buildings; (e) hospitals; (f) hotels and restaurants; (g) sports facilities; (h) wholesale and retail trade services buildings; (i) other types of energy-consuming buildings (Directive 2010/31/EU, point 5 of Annex I).

(2) Biomass produced in accordance with the sustainability criteria for biofuels, bioliquids and biomass fuels, laid down in Article 29 of Directive (EU) 2018/2001.

Table 9

The amount of solid biomass used for energy production

Reporting element	Specification	Unit	Year	
			X-3	X-2
1) Energy sector (total) (1)	M	TJ NCV		
a) Electricity (1)	M	TJ NCV		
b) Combined heat and power (1)	M	TJ NCV		
c) Heat (1)	M	TJ NCV		
2) Transformation sector (except for energy) (1)	M	TJ NCV		
3) Industry sector internal (consumed and autoproduced electricity, CHP and heat) (1)	M	TJ NCV		
4) Direct final consumption residential (1)	M	TJ NCV		
5) Other (1) (2)	M	TJ NCV		

Notation: X = reporting year; M = mandatory

Notes:

(1) Amounts of biomass used in the related sector, covering also transformation losses.

(2) This includes among others, agriculture, forestry and commerce, trade and services.

ANNEX XVII

ADDITIONAL REPORTING OBLIGATIONS IN THE AREA OF ENERGY EFFICIENCY

Table 1

Progress in each sector and reasons why energy consumption remained stable or was growing in final energy consumption sectors

Sector	Specification	Reasons for growth/stable final energy consumption in year X-3 ([3])	Reasons for growth/stable final energy consumption in year X-2
Industry	M	Choose (an) item(s) ([1])	Choose (an) item(s) ([1])
Transport	M	Choose (an) item(s) ([1])	Choose (an) item(s) ([1])
Households	M	Choose (an) item(s) ([1])	Choose (an) item(s) ([1])
Services	M	Choose (an) item(s) ([1])	Choose (an) item(s) ([1])
Agriculture	M	Choose (an) item(s) ([1])	Choose (an) item(s) ([1])
Other ([2])	M_{iap}		

Notation: X = reporting year; M = mandatory; M_{iap} = mandatory if applicable.

Notes:

([1]) Member States to choose from the following reasons (more than one reason can be selected, additional reasons can be specified under 'other'): Economic growth; Decline of fuel prices; Increase of value added; Increase of employment; Increase of transport of goods; Increase of transport of passengers; Increase of population and/or households; Increase of disposable income of households; Worsening of winter climatic conditions; Worsening of summer climatic conditions; Exceptional event; Change in the methodology of measurement or calculation of energy consumptions; other.

([2]) Additional sectors may be added and specified under 'other'.

([3]) X-3 shall not apply for the first progress reports in 2023.

Table 2

Total building floor area of the buildings with a total useful floor area over 250 m2 owned and occupied by the Member States' central government that, on 1 January in year X-2 and X-1, which did not meet the energy performance requirements referred to in Article 5(1) of Directive 2012/27/EU

Reporting element	Specification	Unit	Indicators 1 January of Year X-2	Indicators 1 January of Year X-1	Additional information
Total building floor area of the buildings with a total useful floor area over 250 m^2 owned and occupied by the Member States' central government	V	m^2			
Total building floor area of the buildings which did not meet the energy performance requirements	M	m^2			

Notation: X = reporting year; M = mandatory; V = voluntary.

Table 3

Number of energy audits carried out in in year X-3 and X-2. In addition, the total estimated number of large companies in their territory to which Article 8(4) of Directive 2012/27/EU is applicable and the number of energy audits carried out in those enterprises in the year X-3 and X-2

Reporting element	Specification	Unit	Year	
			X-3 ([2])	X-2
Total number of energy audits carried out	M	number		
Number of large companies ([1]) to which Article 8(4) of Directive 2012/27/EU applies	M	number		
Number of energy audits carried out in large companies to which Article 8(4) of Directive 2012/27/EU is applicable	M	number		

Notation: X = reporting year; M = mandatory.

Notes:

([1]) The definition for the enterprises in scope of Article 8(4) of Directive 2012/27/EU follows the Commission's definition for small and medium-sized enterprises (SMEs), as included in Commission Recommendation 2003/361/EC of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (OJ L 124, 20.5.2003, p. 36).

([2]) X-3 shall not apply for the first progress reports in 2023.

Table 4

Applied national primary energy factor for electricity and a justification, if this is different from the default coefficient referred to in footnote (3) of Annex IV to Directive 2012/27/EU

National primary energy factor for electricity (number)	M	
Justification, if factor is different from default coefficient referred to in footnote (3) of Annex IV to Directive 2012/27/EU	M	

M = mandatory

Table 5

Number and floor area of new and renovated nearly zero-energy buildings ([1]) in year X-2 and X-1, as provided in Article 9 of Directive 2010/31/EU, where necessary based on statistical sampling

Reporting element	Specification	Number		Total floor area (m^2)	
		1 January of X-2	1 January of X-1	1 January of X-2	1 January of X-1
Residential sector: Total	M_{iav}				
Residential sector: New NZEBs	V				

Residential sector: Renovation	V				
Non-residential (private): Total	M_{iav}				
Non-residential (private): New NZEBs	V				
Non-residential (private): Renovation	V				
Non-residential (public ([2])): Total	M_{iav}				
Non-residential (public): New NZEBs	V				
Non-residential (public): Renovation	V				

Definition of nearly zero-energy buildings ([3])	V	

Notation: X = reporting year; M_{iav} = mandatory if available; V = voluntary.

Notes:

([1]) The definition of nearly zero-energy buildings is according to official national NZEB definitions transposing Article 9 of Directive 2010/31/EU, following the framework definition in Article 2 of Directive 2010/31/EU: "Nearly zero-energy building means a building that has a very high energy performance, as determined in accordance with Annex I. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby".

([2]) The COMMISSION RECOMMENDATION (EU) 2019/786 on building renovation, clarifies that Article 2a(1)(e) of Directive 2010/31/EU concerns all public buildings (and not just public bodies buildings' that are owned and occupied by central government). Policies and actions under Article 2a(1)(e) ofDirective 2010/31/EU should include, for example, buildings that are occupied (e.g. leased or rented) by local or regional authorities and buildings that are owned by central government and regional or local authorities, but not necessarily occupied by them.

([3]) Member States may provide a reference to or a short description of their national NZEB definitions.

Table 6

internet link to the website where the list or the interface of energy services providers referred to in Article 18(1), point (c) of Directive 2012/27/EU can be accessible

Internet link to the website of the list or the interface of energy services providers referred to in Article 18(1), point (c) of Directive 2012/27/EU	M	
Further details or comments on data	V	

M = mandatory; V = voluntary

ANNEX XVIII

ENERGY POVERTY

Table 1

Information on progress towards national indicative objectives to reduce the number of households in energy poverty

Name of national target/ objective	Description	Target year	Progress towards target/ objective (1)	Progress Indicator(s) (if applicable)						Details concerning the monitoring strategy	Reference to assessments and underpinning technical reports
				Name of indicator to monitor progress	Base year	Value in base year	Unit	X-3	X-2		
M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}
National target/ objective 1											
National target/ objective 2											
National target/ objective 3											
Add further rows, as needed											

Notation: X = reporting year; M_{iap} = mandatory if applicable

Notes:

(1) Member States shall explain the progress towards national indicative objective/target to reduce the number of households in energy poverty. Where relevant, Member States shall include information on general trends or effects from other programmes/policies, which might have an effect on the progress.

ANNEX XIX

ENERGY POVERTY

Table 1

Quantitative information on the number of households in energy poverty

Number of households in energy poverty	Unit (1)	Reference year (2)	Year of publication	Methodology to determine the number of households in energy poverty	Criteria and data (including source) underpinning the assessment of the number of households in energy poverty
M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}

Notes:
M_{iap} = mandatory if applicable
(1) Member States shall select from the following options (additional units may be added and specified under 'other'): absolute numbers; %; other.
(2) Member States may choose to report a reference period (e.g. average of three years).

Table 2

Reporting on indicators in relation to energy poverty

Reporting element	Specification	Unit	X-3	X-2
Share of population at risk of poverty not able to keep home adequately warm	V	Population below 60 % of median equivalised income (%)		
Share of total population not able to keep home adequately warm	V	Population (%)		
Share of population at risk of poverty with arrears on utility bills	V	Population below 60 % of median equivalised income (%)		
Share of total population with arrears on utility bills	V	Population (%)		
Share of population at risk of poverty with leak, damp or rot in dwelling (1)	V	Population below 60 % of median equivalised income (%)		
Share of total population with leak, damp, rot in dwelling (1)	V	Population (%)		

V = voluntary
Note:
(1) These data are not part of yearly Eurostat surveys but may be available on national level.

Reporting element	Specification	Unit	X-3 1st half	X-3 2nd half	X-2 1st half	X-2 2nd half
Household electricity prices	V	ct/kWh				
Household gas prices	V	ct/kWh				
Household electricity prices, lowest consumption band	V	ct/kWh				
Household gas prices, lowest consumption band	V	ct/kWh				

Table 3

Reporting on national indicators in relation to energy poverty

Name of indicator ([1])	Data source	Unit	Year		Data collection period ([2])	Short description
			X-3	X-2		
V	V	V	V	V	V	V
Indicator 1						
Indicator 2						
Add further rows, as needed						

Notation: X = reporting year; V = voluntary

Notes:

([1]) Member States may report national indicators that complement the indicators in Table 2. These may include income of households, the affordability of energy services, housing situations and equipment and complementary/indirect indicators useful to deepen the analysis of potential drivers of energy poverty. Indicators may be drawn from the Building Stock Observatory database.
([2]) Member States may report the data collection period and whether data is collected regularly.

Table 4

Information on national definition of energy poverty

National definition of energy poverty	Year of publication	Year of last amendment	General comments ([1])
V	V	V	V

Notes:

V = voluntary
([1]) Member States may include information on the status, e.g., whether it is a legal definition or a working definition (which has no legal status but creates a common knowledge on the characteristics of energy poverty and supports setting of targets, implementing measures and monitoring trends) and information on supporting indicators.

ANNEX XX

INFORMATION ON HOW THE IMPLEMENTATION OF THE INTEGRATED NATIONAL ENERGY AND CLIMATE PLAN CONTRIBUTES TO JUST TRANSITION, THE PROMOTION OF BOTH HUMAN RIGHTS AND GENDER EQUALITY, AND ADDRESSING INEQUALITIES IN ENERGY POVERTY

Table 1

Impact of the implementation of the national energy and climate plan on jobs, workers and regions

Expected impacts on jobs, labour markets and skills ([1])	V	
Expected distributional impacts amongst population ([2])	V	
Expected impact for most affected regions ([3])	V	
Expected impact on quality of life, well-being ([4])	V	
Expected impacts on costs ([5])	V	
Inclusiveness and participatory processes ([6])	V	

Notes:

V = voluntary

([1]) Member States may provide quantitative elements on the expected evolution of labour market as a result of policies (e.g. sectors that will grow, others that will shrink, and by how much) and describe measures adopted/to be adopted to accompany this transition, including as regards education and training policies as well as social protection.

([2]) Member States may describe expected impacts of policies on overall population as well as specific groups, especially the most vulnerable, reflecting as well whether some groups will benefit more than others, and describe measures aimed to ensure fairness and equal burden sharing in that respect.

([3]) Member States may describe expected impacts of policies on regions that are to be most affected by the transition, especially coal, peat or oil shale regions or carbon-intensive regions, and mitigating measures to address socioeconomic consequences in such areas. Member States are encouraged to provide quantitative indicators such as jobs, economic output and local tax revenue.

([4]) Member States may describe expected impacts on reducing environmental hazards, degradation and pollution, improving the access to safer products, intact ecosystems and their services (food, clean air, water, climate stability etc.), secure livelihoods and benefit health and well-being, including healthier working condition, e.g., limiting emission and improving air quality standards of workplaces.

([5]) Member States may describe the expected impacts on costs introduced as a result of climate, energy and environmental policies for both business and consumers (e.g., energy savings lower energy cost; more durable products lower costs for replacement; lower costs for environmental clean-up and public health).

([6]) Member States may describe the expected impacts of measures to ensure inclusiveness of climate, energy and environmental policies, in particular as regards low-income households and communities directly affected by the transition, for instance in most affected regions, through e.g. the implementation of green infrastructure and public services, participatory processes, etc.

Table 2

Impact of the implementation of the national energy and climate plan on the promotion of human rights and gender equality and addressing inequalities in energy poverty

Promotion of human rights ([1])	V	
Promotion of gender equality ([2])	V	
Addressing inequalities in energy poverty	V	

Notes:
V = voluntary
([1]) Climate justice and just transition also address the sharing of benefits and burdens of climate change from a human rights perspective. Climate change threatens the effective enjoyment of a range of human rights including those to life, water and sanitation, food, health, housing, self-determination, culture and development. Member States may describe how the implementation of their integrated national energy and climate plans contributes to their obligation to prevent the foreseeable adverse effects of climate change and ensure that those affected by it, particularly those in vulnerable situations, have access to effective remedies and means of adaptation to enjoy lives of human dignity.
([2]) Member States may describe how their integrated national energy and climate plans are implementing the just transition considering the different impacts on opportunities for men, women and gender diverse people in transitioning regions, what obstacles exist, and what plans they have planned and implemented to move forward.

ANNEX XXI

IMPLEMENTATION OF REGIONAL COOPERATION

Table 1

Reporting on information on the implementation of regional cooperation

Name of regional cooperation initiative with other Member States in implementing the objectives and policies	Relevant Union dimension(s) affected [1]	Implementation period	Description	Member States involved	Expected contribution to implementing the objectives and policies	Progress towards regional cooperation
M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}
Cooperation 1						
Cooperation 2						
Add further rows, as needed						

M_{iap} = mandatory if applicable

[1] Member States shall select one or more of following: Decarbonisation – GHG emissions and removals; Decarbonisation – Renewable energy; Energy efficiency; Energy security; Internal energy market – Electricity interconnectivity; Internal energy market – Energy transmission infrastructure; Internal energy market – Market integration; Research, innovation and competitiveness; Phase out of energy subsidies

ANNEX XXII

REPORTING ON IMPLEMENTATION OF RECOMMENDATIONS REFERRED TO IN ARTICLE 32(1) OR (2) OF REGULATION (EU) 2018/1999

Table 1

Reporting on implementation of recommendations

Recommendation	Category of recommendation ([1])	Policies and measures adopted, or intended to be adopted and implemented, to address the recommendation	Detailed timetable for implementation	Reasons for not addressing the recommendation or a substantial part thereof
M_{iap}	M_{iap}	M_{iap}	M_{iap}	M_{iap}
Recommendation 1				
Recommendation 2				
Add further rows, as needed				

M_{iap} = mandatory if applicable

Notes:

([1]) Member State shall select from a list of categories provided in the electronic version of the tabular format

ANNEX XXIII

REPORTING ON MULTILEVEL CLIMATE AND ENERGY DIALOGUE REFERRED TO IN ARTICLE 11 OF REGULATION (EU) 2018/1999

Table 1

Progress in establishing multilevel climate and energy dialogue referred to in Article 11 of Regulation (EU) 2018/1999 ([1])

Details on multilevel climate and energy dialogue	M	
Progress in establishing the multilevel climate and energy dialogue	M_{iap}	

Notes:

M = mandatory; M_{iap} = mandatory if applicable

([1]) Member States to provide details of multilevel climate and energy dialogue pursuant to national rules, in which local authorities, civil society organisations, business community, investors and other relevant stakeholders and the general public engaging and discussing the different scenarios envisaged for energy and climate policies, including for the long term