Additional information on domestic mitigation measures

This addendum provides additional information on domestic mitigation measures synthesized from 64 new nationally determined contributions communicated by 64 Parties to the Paris Agreement and recorded in the registry of nationally determined contributions between 1 January 2024 and 30 September 2025.

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Abbreviations and acronyms

AFOLU	agriculture, forestry and other land use
AR	Assessment Report
CCS	carbon dioxide capture and storage
CCUS	carbon dioxide capture, use and storage
CDR	carbon dioxide removal
CH_4	methane
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
CO_2	carbon dioxide
CO_2 eq	carbon dioxide equivalent
GDP	gross domestic product
GHG	greenhouse gas
GWP	global warming potential
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
IRENA	International Renewable Energy Agency
LT-LEDS	long-term low-emission development strategy(ies)
N_2O	nitrous oxide
NDC	nationally determined contribution
SDG	Sustainable Development Goal
UNEP	United Nations Environment Programme

I. Introduction

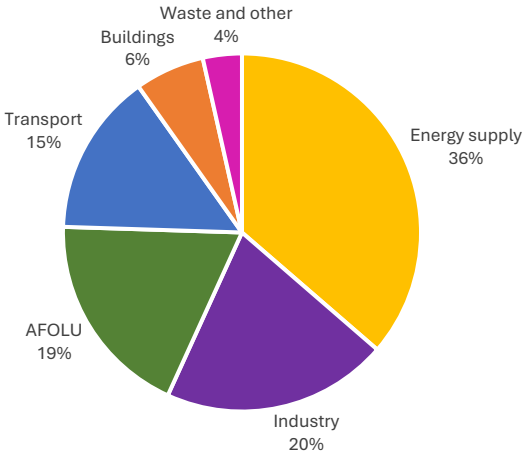
1. Under Article 4, paragraph 2, of the Paris Agreement, Parties shall pursue domestic mitigation measures with the aim of achieving the objectives of their NDCs. CMA 5 emphasized the urgent need for accelerated implementation of domestic mitigation measures.[1]

2. In this report, domestic mitigation measures refer to specific domestic policies and actions in NDCs that contribute to achieving mitigation objectives identified in NDCs, including adaptation actions and economic diversification plans with mitigation co-benefits.[2]

II. Emissions from and measures and quantitative targets for priority areas

3. A total of 98 per cent of Parties (the same share as in their previous NDCs) outlined in their NDCs domestic mitigation measures as key instruments for achieving mitigation targets for their NDCs and/or specific priority areas, including energy supply,[3] transport, buildings, industry, AFOLU and waste. Specifically, Parties communicated measures most frequently in the priority area of energy supply, followed by transport and AFOLU. According to UNEP,[4] these three priority areas together accounted for about 70 percent of global GHG emissions in 2023 (see Figure **1**).

Figure 1
Estimated share of global greenhouse gas emissions in priority areas in 2023



4. A total of 87 per cent of Parties (an increase from 80 per cent in their previous NDCs) communicated one or more quantitative mitigation targets specific to priority areas or sub-areas. These targets support and underpin Parties' overall mitigation targets, thereby

[1] Decision 1/CMA.5, para. 31.

[2] Parties are not required to communicate domestic mitigation measures in their NDCs, as indicated in paragraph 1 above. Therefore, this report may not cover all such measures by Parties.

[3] Energy supply covers emissions from generating energy such as electricity and heat, as well as fugitive emissions from fuels. Industry includes emissions from fuel use in industry, industrial process emissions and emissions from product use. For the scopes of emissions covered by the priority areas, see document FCCC/PA/CMA/2021/8/Add.2.

[4] Emissions shares of priority areas were estimated on the basis of data from UNEP. 2024. *Emissions Gap Report 2024: No more hot air … please! With a massive gap between rhetoric and reality, countries draft new climate commitments.* Nairobi: UNEP. Available at https://www.unep.org/resources/emissions-gap-report-2024; and UNEP Copenhagen Climate Centre and Common Futures. 2024. *Bridging the gap: Sectoral greenhouse gas mitigation potentials in 2035*. Copenhagen: UNEP Copenhagen Climate Centre. Available at https://unepccc.org/publications/bridging-the-gap-sectoral-greenhouse-gas-mitigation-potentials-in-2035/

enhancing clarity in terms of how the overall targets will be implemented and sending clear signals to the private sector to encourage investment and innovation in low-emission technologies and practices in the priority areas or sub-areas. Such quantitative targets were provided most frequently for energy supply (80 per cent of Parties), followed by AFOLU (59 per cent), transport (59 per cent) and cross-cutting or other (58 per cent), while they were less frequently indicated in the other priority areas (19–36 per cent). Renewable energy generation targets were the most frequently communicated quantitative targets specific to sub-areas (75 per cent).

5. A total of 56 per cent of Parties (the same share in their previous NDCs) communicated in their NDCs domestic mitigation measures aimed at fully unconditional mitigation targets, whereas 70 per cent (an increase from 67 per cent in their previous NDCs) included measures aimed at fully or partially conditional mitigation targets.[5] Measures aimed at fully or partially conditional mitigation targets were most frequently identified by Parties in relation to energy supply (69 per cent of Parties), followed by transport (64 per cent) and cross-cutting or other (62 per cent). The share of Parties indicating measures aimed at fully or partially conditional mitigation targets has increased the most since their previous NDCs in relation to industry (by 17 percentage points), followed by AFOLU and cross-cutting or other (by 16 percentage points, respectively).

III. Feasible, effective and low-cost mitigation options in priority areas

6. CMA 5 noted that feasible, effective and low-cost mitigation options are already available in all sectors to keep the 1.5 ºC temperature goal within reach in this critical decade with the necessary cooperation on technologies and support. Further, it welcomed that over the past decade mitigation technologies have become increasingly available, and that the unit costs of several low-emission technologies have fallen continuously, notably wind power and solar power and electricity storage, while recognizing the need to increase the affordability and accessibility of such technologies.[6]

A. Feasible, effective and low-cost mitigation options in 2030

7. According to the contribution of Working Group III to the AR6,[7] mitigation options costing USD 100/t CO_2 eq or less (with an estimated net mitigation potential of 31–44 Gt CO_2 eq/year) could reduce global GHG emissions by at least half of the 2019 level by 2030, and options costing less than USD 20/t CO_2 eq account for over 50 per cent of the net mitigation potential.[8] Many of these options have been assessed as technically viable and publicly

[5] Domestic mitigation measures aimed at fully or partially conditional targets include those aimed at fully conditional targets and those targeting both unconditional and conditional targets. The sum of share of Parties reporting measures aimed at fully unconditional mitigation targets and share of Parties reporting measures aimed at fully or partially conditional mitigation targets exceeds 100 per cent. This exceedance arises because some Parties that have communicated NDCs with both unconditional and conditional mitigation targets indicate multiple conditionalities of measures for a single mitigation option – specifically, measures for fully conditional targets, measures for fully unconditional targets, and/or measures for both unconditional and conditional targets. Out of the 64 Parties that submitted new NDCs, 27 communicated NDCs with both unconditional and conditional mitigation targets.

[6] Decision 1/CMA.5, paras. 16(c) and 30.

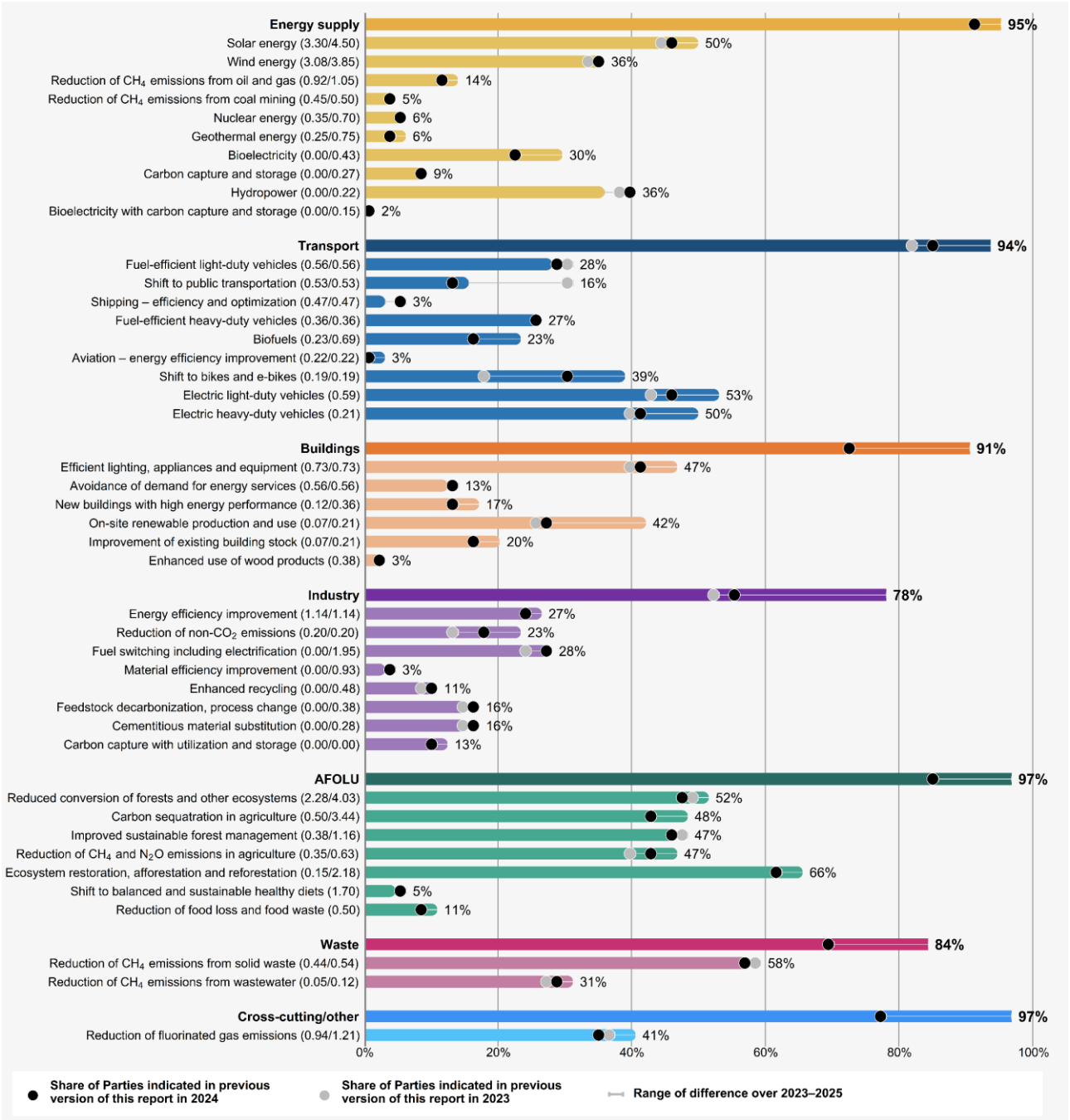
[7] IPCC. 2022. *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. PR Shukla, J Skea, R Slade, et al. (eds.). Cambridge and New York: Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg3/.

[8] The contribution of Working Group III to the AR6 presents the net mitigation potential as the sum of the reduced emissions and/or enhanced sinks compared with current-policy scenarios for 2015–2019. It refers to the costs as the net lifetime discounted costs of avoided GHG emissions relative to a reference technology. The costs of some mitigation options in Figure 2, such as efficient lighting, appliances and equipment and fuel-efficient light-duty vehicles, are estimated to be less than zero. Negative costs indicate that lifetime monetary revenues exceed lifetime monetary costs.

supported. Parties reported measures for such feasible, effective and low-cost mitigation options in their NDCs (see Figure **2**).

Figure 2

Share of Parties referring to domestic mitigation measures for specific priority areas and mitigation options with high mitigation potential costing less than USD 20/t CO_2 eq or USD 100/t CO_2 eq or less in 2030 in nationally determined contributions



Notes: (1) The shares reflect measures included in the Parties' new and/or previous NDCs that are aimed at achieving 2030 mitigation targets. See footnote 16 below for the definition of new NDCs; (2) if a Party communicated more than one measure for a mitigation option (e.g. three different measures for solar energy), it was counted as one Party communicating measures for that option; (3) the estimated net mitigation potential (in Gt CO_2 eq/year) of each option costing less than USD 20/t CO_2 eq and each option costing USD 100/t CO_2 eq or less in 2030 is presented as a pair – for example, "3.30/4.50" in the case of solar energy. These estimates are based on data from the contribution of Working Group III to the AR6, which states that the mitigation potentials and costs of individual technologies in a specific context or region may differ greatly from the provided estimates and are associated with uncertainties; (4) according to the contribution of Working Group III to the AR6, estimating the costs of mitigation potentials was not possible for options with only one mitigation potential listed (e.g. electric light-duty vehicles), owing to high variation in or lack of data.

Table 1
Conditionality of mitigation options with the highest estimated emission reduction potential costing less than USD 20/t CO_2 eq or USD 100/t CO_2 eq or less in 2030 in nationally determined contributions

Mitigation option	*Share of Parties reporting measures (%)*	*Share of Parties reporting measures for fully or partially conditional targets (%)*	*Share of Parties reporting measures for fully unconditional targets (%)*
Solar energy	50	34	23
Wind energy	36	23	16
Reduced conversion of forests and other ecosystems	52	30	20
Energy efficiency improvement in industry	27	16	13
Reduction of fluorinated gas emissions	41	23	20
Reduction of CH_4 emissions from oil and gas	14	5	11

Notes: (1) As notes (1) and (2) to Figure **2**.

8. Of the 42 feasible, effective and low-cost mitigation options in 2030 (see Figure **2**), nearly two-thirds (26 options) have seen an increase in the share of Parties mentioning them compared with the previous NDCs assessed in the 2023 edition of this report. The largest increases were observed for shifting to bikes and e-bikes (by 20 percentage points), followed by on-site renewable production and use in buildings (by 16 percentage points). Conversely, the largest declines were observed for shifting to public transportation (by 16 percentage points), followed by fuel-efficient light-duty vehicles, shipping – efficiency and optimization, and hydropower (by 3 percentage points, respectively).

9. Among these 42 mitigation options, Parties most frequently communicated measures aimed at fully or partially conditional mitigation targets in their NDCs in relation to ecosystem restoration, afforestation and reforestation (46 per cent), followed by reducing CH_4 emissions from solid waste (44 per cent), efficient lighting, appliances and equipment and carbon sequestration in agriculture (36 per cent, respectively). This is an indication of Parties' greater absolute need for support in implementing these options.

10. Furthermore, a conditionality gap,[9] where the share of Parties reporting measures for fully or partially conditional targets was greater than the share of Parties reporting measures for fully unconditional targets, was identified for over half of the 42 options (22 options). This gap suggests that these 22 options could be more challenging to implement in the absence of support, compared with other options. The largest conditionality gap was found in relation to efficient lighting, appliances and equipment (22 percentage points), followed by reducing CH_4 emissions from wastewater, ecosystem restoration, afforestation and reforestation, and reducing CH_4 and N_2O emissions in agriculture (20 percentage points, respectively). Together with the findings reported in paragraph 9 above, this indicates a greater need for support for these options, particularly the options of ecosystem restoration, afforestation and reforestation, and efficient lighting, appliances and equipment.

11. Of the 42 options, 6 have the highest mitigation potential, each exceeding 0.9 Gt CO_2 eq/year (see Table **1**). For these options, domestic mitigation measures aimed at fully or partially conditional targets were most frequently reported in NDCs in relation to solar energy and the reduced conversion of forests and other ecosystems. Additionally, a considerable conditionality gap was identified for solar energy (11 percentage points), the reduced conversion of forests and other ecosystems (9 percentage points), and wind energy (8

[9] The conditionality gap refers to the difference between the share of Parties that included domestic mitigation measures in their NDCs aimed at fully or partially conditional targets and the share that referred to measures aimed at fully unconditional targets. It is calculated by subtracting the share of Parties reporting measures aimed at fully unconditional mitigation targets from the share reporting measures aimed at fully or partially conditional mitigation targets. For example, the conditionality gap for bioelectricity (14 percentage points) is derived from 23 per cent of Parties that included measures for bioelectricity aimed at fully or partially conditional mitigation targets and 9 per cent that reported measures for bioelectricity aimed at fully unconditional mitigation targets.

percentage points). These findings indicate a greater need for support for these options, particularly for solar energy and the reduced conversion of forests and other ecosystems.

B. Feasible, effective and low-cost mitigation options in 2035

12. According to the UNEP Bridging the gap report,[10] if fully implemented, mitigation options costing USD 200/t CO_2 eq or less in 2035 could reduce GHG emissions sufficiently by 2035 to align with the UNEP 1.5 °C pathway with no or limited overshoot. The estimated net mitigation potential of these options is projected to be 41 (36–46) Gt CO_2 eq/year,[11] with options costing less than USD 100/t CO_2 eq[12] accounting for about 90 per cent of the mitigation potential.[13] Similar to the feasible, effective and low-cost mitigation options in 2030, many of the 2035 options have been assessed as technically viable. Parties reported measures for such mitigation options for 2035 targets in their NDCs (see Figure **3**).

13. Among the 46 feasible, effective and low-cost mitigation options in 2035, Parties most frequently communicated in their NDCs measures aimed at fully or partially mitigation targets in relation to electric light-duty vehicles and reducing CH_4 emissions from solid waste (44 per cent, respectively), followed by electric heavy-duty vehicles and afforestation and reforestation (42 per cent, respectively), and reducing CH_4 and N_2O emissions in agriculture (41 per cent). This is an indication of Parties' greater absolute need for support in implementing these options.

14. Furthermore, a conditionality gap[14] was identified for over two-thirds of the 46 options (35 options). The largest gaps were observed in relation to reducing deforestation and reducing CH_4 and N_2O emissions in agriculture (28 percentage points, respectively), followed by afforestation and reforestation (27 percentage points) and solar energy (25 percentage points), suggesting these options could be more challenging to implement in the absence of support, compared with other options. Together with the findings reported in paragraph 13 above, this indicates a greater need for support for these options, particularly the options of afforestation and reforestation and reducing CH_4 and N_2O emissions in agriculture.

15. Of the 46 options, 6 have the highest mitigation potential, each exceeding 2 Gt CO_2 eq/year (see Table **2**). For these options, measures aimed at fully or partially conditional targets were most frequently reported in NDCs in relation to afforestation and reforestation, solar energy and reducing deforestation. Additionally, the considerable conditionality gap was identified for reducing deforestation (28 percentage points), afforestation and reforestation (27 percentage points) and solar energy (25 percentage points). These findings indicate a greater need for support particularly for afforestation and reforestation, solar energy and reducing deforestation. This is similar to the findings for the feasible, effective and low-cost mitigation options in 2030 referred to in paragraph 11 above.

[10] See footnote 4 above.

[11] Similar to the contribution of Working Group III to the AR6, the UNEP Bridging the gap report presents the net mitigation potential as the sum of reduced emissions and/or removals beyond the current-policy baseline reflecting climate policies in place. Total current-policy baseline emissions are estimated to be 57 Gt CO_2 eq in 2035.

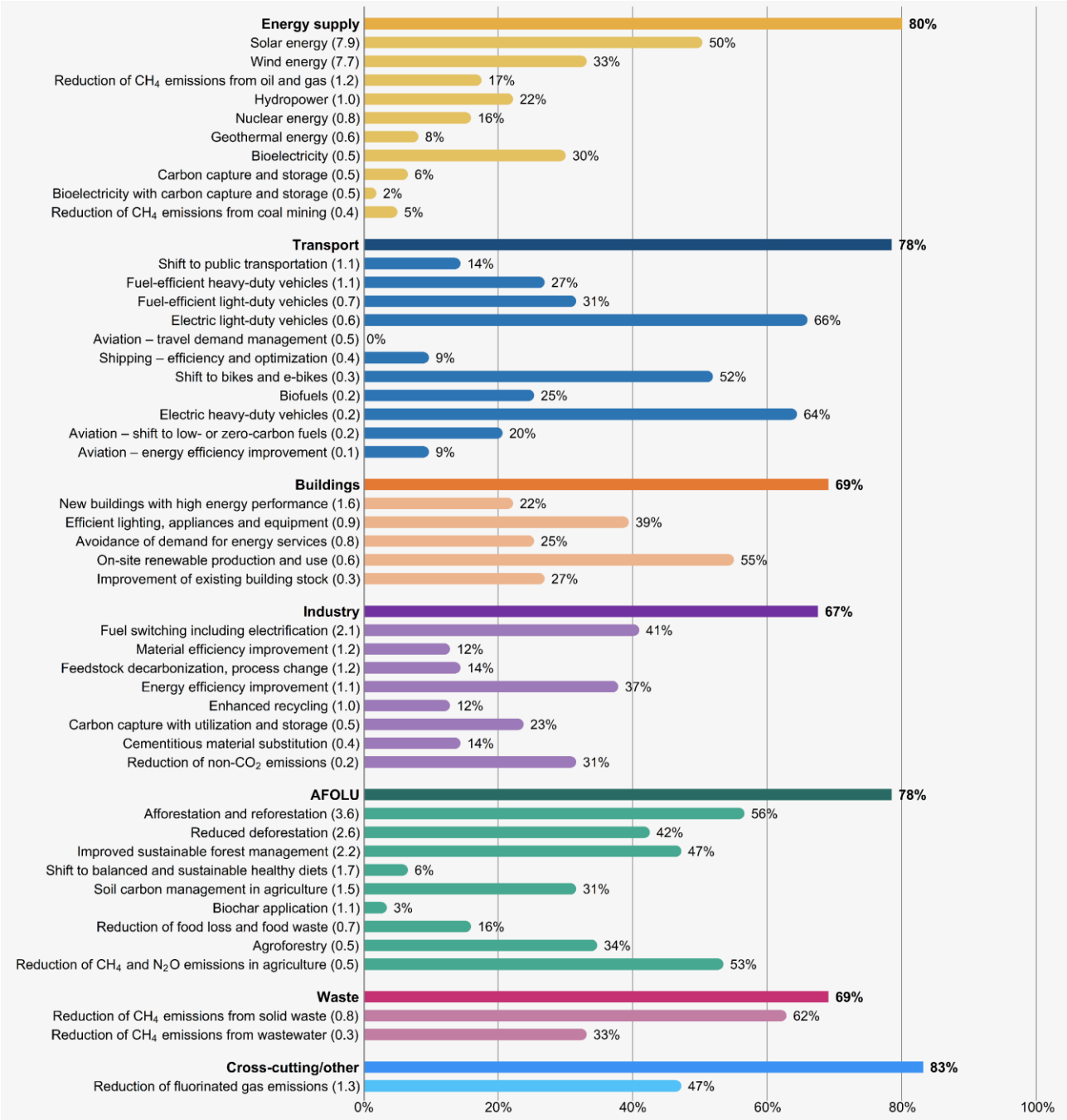
[12] The cost includes internal monetary costs and savings, such as costs of equipment and benefits due to saved energy, but excludes external costs and benefits, such as climate change impacts.

[13] While extensive data is available for the mitigation potential and costs by 2030, research for 2035 remains limited. The UNEP Bridging the gap report notes that a deeper analysis of mitigation costs is beyond the scope of the assessment.

[14] As footnote 9 above.

Figure 3

Share of Parties referring to domestic mitigation measures for specific priority areas and mitigation options with high mitigation potential costing USD 200/t CO_2 eq or less in 2035 in nationally determined contributions



Notes: (1) The shares reflect measures included in the Parties' new NDCs that are aimed at achieving 2035 mitigation targets; (2) as notes (2) to Figure **2**; (3) the estimated net mitigation potential (in Gt CO_2 eq/year) of each option is presented in parentheses, for example, "(7.9)" in the case of solar energy. These estimates are based on data from the UNEP Bridging the gap report and are associated with uncertainties.

Table 2
Conditionality of mitigation options with the highest estimated emission reduction potential costing USD 200/t CO2 eq or less in 2035 in nationally determined contributions

Mitigation option	*Share of Parties reporting measures (%)*	*Share of Parties reporting measures for fully or partially conditional targets (%)*	*Share of Parties reporting measures for fully unconditional targets (%)*
Solar energy	50	39	14
Wind energy	33	27	8
Afforestation and reforestation	56	42	16
Reduced deforestation	42	36	8
Improved sustainable forest management	47	34	12
Fuel switching in industry, including electrification	41	22	20

Notes: (1) As notes (1) to Figure **3**. (2) As notes (2) to Figure **2**.

IV. Global efforts and mitigation options covered in recent decisions

16. Parties reported in their NDCs measures and quantitative targets for the global efforts[15] and mitigation options covered in decisions 1/CMA.3, 1/CMA.4 and 1/CMA.5, as outlined in sections A – K below. Taking into account contributions to the efforts and options covered in all these CMA decisions, including those with the 2030 timeline and focus on this critical decade, this chapter and chapter V below consider measures and quantitative targets reported in both Parties' new and previous NDCs.[16]

17. Some of the global efforts and options are addressed in the main report (FCCC/PA/CMA/2025/8), including in sections relating to forests and the ocean.

A. Tripling renewable energy capacity globally by 2030

18. Increasing renewable energy offers significant mitigation potential at low costs. For example, in 2030, solar energy could reduce emissions by 3.30 Gt CO_2 eq/year, and wind energy by 3.08 Gt CO_2 eq/year, at costs below USD 20/t CO_2 eq. At costs below USD 100/t CO_2 eq, the mitigation potential increases to 4.50 Gt CO_2 eq/year for solar and to 3.85 Gt CO_2 eq/year for wind (see Figure **2**). In 2035, the potential reaches 7.9 Gt CO_2 eq/year for solar and 7.7 Gt CO_2 eq/year for wind at costs below USD 200/t CO_2 eq (see Figure **3**).[17]

19. A total of 92 per cent of Parties in their NDCs, accounting for 32 per cent of total global electricity generation from fossil fuels in 2023,[18] indicated measures for increasing

[15] The indicators used to track the progress of ambitions for the global efforts do not preclude the use of other relevant indicators. The indicators were selected based on the frequency of references in the submitted NDCs as well as the availability of historical data and scenarios consistent with 1.5 °C pathways with no or limited overshoot.

[16] New NDCs are defined as those submitted between 1 January 2024 and 30 September 2025, as referred to in the main report (FCCC/PA/CMA/2025/8). Where new NDCs do not include 2030 mitigation targets, measures and quantitative targets reported in the previous NDCs of the Parties in question were considered.

[17] The aggregate net mitigation potential of increasing renewable energy has not been estimated. The contribution of Working Group III to the AR6 states that the mitigation potential in 2030 is assessed independently for each option and cannot necessarily be summed. Similarly, the UNEP Bridging the gap report notes that the net mitigation potential of mitigation options in 2035 cannot simply be added together as the options may interact or compete with each other. These considerations also apply to the aggregate net mitigation potential of other global efforts and mitigation options, as applicable.

[18] Estimated on the basis of data from IEA. 2025. *World Energy Balances*. Paris: IEA. All rights reserved; as modified by the secretariat. IEA data used in this report are subject to IEA terms and conditions, available at www.iea.org/terms.

renewable energy in their NDCs. When reporting such measures in their NDCs, 58 per cent of Parties made direct references to contributing to the global effort for tripling renewable energy capacity globally by 2030.

20. A total of 44 per cent of Parties, accounting for 9 per cent of total global electricity generation from fossil fuels in 2023,[19] indicated quantitative targets for total or additional[20] installed capacity for renewables-based electricity generation by 2030, with 28 per cent directly referencing their contribution to tripling renewable energy capacity globally by 2030. The aggregated capacity of these quantitative targets reaches 261 GW.[21] Considering the existing installed capacity taken into account in the additional renewable capacity targets by 2030,[22] the aggregated quantitative target for total installed capacity by 2030 is estimated at 564 GW[23] (including 421 GW directly referenced as a contribution to this global effort). This represents about 13 per cent of total global installed capacity for renewables-based electricity generation in 2024 (or 4,443 GW).[24] Of this 564 GW, 57 GW (or 10 per cent) was communicated in relation to mitigation targets that are fully or partially conditional, highlighting Parties' need for enhanced support and cooperation to effectively implement these targets.

21. Moreover, 16 per cent of Parties, accounting for 1 per cent of total global electricity generation from fossil fuels in 2023,[25] reported targets for at least tripling their own total renewable capacity above the 2022 level in their NDCs.[26]

22. In its COP28 Tripling Renewable Capacity Pledge,[27] IEA estimates that the total domestically announced commitments for renewable capacity by 2030 reach 7,903 GW globally. For the 64 Parties that submitted new NDCs, these commitments total 2,022 GW.[28] This figure is more than 3.5 times the 564 GW of aggregated target capacity based on the NDCs, indicating that submitted NDCs do not cover all domestic commitments. Some Parties may nationally determine that progress in these areas, along with other contributing factors such as enhanced international cooperation and support, contribute to potential for accelerated implementation and more ambition.

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[19] As footnote 18 above.

[20] Some Parties included targets to develop additional renewable capacity, such as installing an additional 300 MW of large-scale solar PVs by 2030.

[21] This encompasses pre-2030 targets that fall within the time frame for NDC implementation.

[22] All new NDCs were submitted in 2024 or 2025 whereas about 80 per cent of Parties' previous NDCs were submitted in 2020 or 2021. Therefore, unless otherwise specified in the NDCs, the baselines for additional renewable capacity targets are assumed to be the total installed capacity in 2023 for new NDCs, and in 2019 for previous NDCs.

[23] A comprehensive estimate of the aggregated targets for the global efforts referred to in this chapter IV will only be possible once all new NDCs have been submitted.

[24] (1) IRENA. 2025. *Renewable Energy Statistics 2025*. Abu Dhabi: IRENA. Available at https://www.irena.org/Publications/2025/Jul/Renewable-energy-statistics-2025. It estimates that total global renewable power capacity continued its sharp upward trend, reaching a record 4,443 GW in 2024. This represents the largest annual increase to date of 582 GW (or 15.1 per cent) from 3,861 GW in 2023. At this pace of the growth (or 15.1 per cent), total global renewable capacity is projected to reach 10, 317 GW by 2030. (2) IEA. 2024. *From Taking Stock to Taking Action: How to implement the COP28 energy goals*. Paris: IEA. All rights reserved. Available at https://www.iea.org/reports/from-taking-stock-to-taking-action. It projects that total global installed capacity for renewables-based electricity generation will triple from 3,680 GW in 2022 to 11,500 GW in 2030 on a 1.5 °C pathway with no or limited overshoot under its COP28 Full Implementation Case. (3) IRENA. 2024. *Delivering on the UAE Consensus: Tracking progress toward tripling renewable energy capacity and doubling energy efficiency by 2030*. Abu Dhabi: IRENA. Available at https://www.irena.org/Publications/2024/Oct/UAE-Consensus-2030-tripling-renewables-doubling-efficiency. It projects that total global installed capacity for renewables-based electricity generation will triple from 3,392 GW in 2022 to 11,174 GW in 2030 under the IRENA 1.5°C Scenario.

[25] As footnote 18 above.

[26] Estimated on the basis of data from IRENA. 2025. *Renewable Energy Statistics 2025*. Abu Dhabi: IRENA.

[27] IEA. 2024. *COP28 Tripling Renewable Capacity Pledge: Tracking countries' ambitions and identifying policies to bridge the gap*. Paris: IEA. All rights reserved. Available at https://www.iea.org/reports/cop28-tripling-renewable-capacity-pledge.

[28] Estimated on the basis of data from the IEA COP28 Tripling Renewable Capacity Pledge.

23. The deployment of renewable energy is increasingly constrained by geographical distances between renewable energy sources and demand regions, the variability of renewable energy sources, and the time required to obtain approvals for renewable energy projects. According to the IEA From Taking Stock to Taking Action report, extending and modernizing electricity grids, enhancing energy storage capacity and expediting permission processes could play a major role in tripling global renewable capacity by 2030. A total of 58 per cent of Parties indicated measures for grid improvement and 50 per cent for energy storage – a sharp increase from 42 and 25 per cent, respectively, in their previous NDCs assessed in the 2024 edition of this report.

B. Doubling the global average annual rate of energy efficiency improvements by 2030

24. Improving energy efficiency presents significant mitigation potential at low costs across priority areas. For example, in 2030, improving energy efficiency in industry could reduce emissions by 1.14 Gt CO_2 eq/year and efficient lighting, appliances and equipment by 0.73 Gt CO_2 eq/year, at costs below USD 20/t CO_2 eq (see Figure **2**). At costs below USD 100/t CO_2 eq, improving material efficiency could contribute reductions of 0.93 Gt CO_2 eq/year, while new buildings with high-energy performance could reduce emissions by 0.36 Gt CO_2 eq/year. In 2035, the mitigation potential reaches 1.6 Gt CO_2 eq/year for new buildings with high-energy performance, 1.2 Gt CO_2 eq/year for improving material efficiency, and 0.9 Gt CO_2 eq/year for efficient lighting, appliances and equipment, at costs below USD 200/t CO_2 eq (see Figure **3**).

25. A total of 92 per cent of Parties, accounting for 33 per cent of total global energy supply[29] in 2023,[30] indicated measures for improving energy efficiency in their NDCs. When reporting such measures in their NDCs, 52 per cent of Parties made direct references to contributing to the global effort for doubling the global average annual rate of energy efficiency improvements by 2030.

26. A total of 14 per cent of Parties included in their NDCs quantitative targets for increasing economy-wide energy efficiency improvements by 2030, with 8 per cent directly referencing their contribution to doubling the global average annual rate of energy efficiency improvements by 2030. A total of 5 per cent of Parties, accounting for 0.5 per cent of total global energy supply in 2023, [31] communicated targets for increasing the average annual improvement rate of primary energy intensity[32] by 2030, with 2 per cent directly referencing their contribution to this global effort. The aggregated average annual improvement rate target up until 2030 is estimated at 2.3 per cent.[33] This figure is 2.3 times higher than the rate from 2023 to 2024 (approximately 1 per cent), and 1.6 times higher than the rate from 2015 to 2020 (1.4 per cent).[34] Two-thirds of this 5 per cent of Parties (3 per cent of Parties) reported

[29] According to IEA, total energy supply includes all the energy produced in or imported to a country, minus that which is exported or stored. It represents all the energy required to supply end users in the country. Some of these energy sources are used directly while most are transformed into fuels or electricity for final consumption.

[30] As footnote 18 above.

[31] As footnote 18 above.

[32] Defined as the ratio of total energy supply to GDP (in United States dollars, based on 2017 purchasing power parity), that is, energy used to produce a unit of GDP. In its From Taking Stock to Taking Action report, IEA identifies primary energy intensity, that is, energy intensity of economy, as the most comprehensive measure of energy efficiency, as it reflects all changes that improve the ratio of economic activity to energy inputs. However, using primary energy intensity to track the progress of ambition for this global effort does not preclude the use of any other relevant indicators, as referred to in footnote 15 above.

[33] Estimated on the basis of data from World Energy Balances; and the World Bank Group's. *World Development Indicators 2025*, available at https://data.worldbank.org/indicator/ (accessed 28 April 2025); and the International Monetary Fund's *World Economic Outlook (April 2025)*, available at https://www.imf.org/external/datamapper/datasets/WEO (accessed 28 April 2025).

[34] IEA, IRENA, United Nations Statistics Division, World Bank and World Health Organization. 2025. *Tracking SDG 7: The Energy Progress Report 2025*. Washington, D.C.: World Bank. Available at

their targets in relation to mitigation targets that are fully or partially conditional, highlighting Parties' need for enhanced support and cooperation to effectively implement these targets.

27. In its From Taking Stock to Taking Action report, IEA identifies the three main levers for doubling the rate of energy efficiency improvements by 2030: implementing technical efficiency improvements in all sectors; shifting to more efficient fuels through electrification, renewables and universal access to clean cooking fuels; and avoiding energy demand through material efficiency gains, modal shifts in transport and enhanced recycling. 59 per cent of Parties indicated in their NDCs measures for efficient lighting, appliances and equipment, 44 per cent indicated measures for improving energy efficiency in industry, and 28 per cent indicated measures for improving material efficiency in industry. These figures represent significant increases compared with the previous NDCs assessed in the 2024 edition of this report, where the corresponding shares were 42, 25 and 13 per cent, respectively.

C. Accelerating efforts towards the phase-down of unabated coal power

28. A total of 30 per cent of Parties, accounting for 12 per cent of total global electricity generation from coal in 2023,[35] indicated measures for phasing down unabated coal power in their NDCs, such as replacing coal-fired power plants with combined-cycle gas power plants with CCS-ready specifications. When reporting such measures in their NDCs, 22 per cent of Parties made direct references to contributing to the global effort towards the phase-down of unabated coal power.

29. A total of 8 per cent of Parties, accounting for 0.3 per cent of total global electricity generation from coal in 2023,[36] communicated quantitative targets for reducing unabated coal power generation by 2030 in their NDCs, with 3 per cent directly referencing their contribution to the global effort towards the phase-down of unabated coal power. These targets amount to a reduction of 33 TWh[37] (including 24 TWh directly referenced as a contribution to this global effort) by 2030, equivalent to 0.3 per cent of total global electricity generation from unabated coal in 2024 (10,704 TWh).[38] The entire 33 TWh reduction was reported in relation to fully unconditional mitigation targets.

30. Further, 11 per cent of Parties, accounting for 7 per cent of total global electricity generation from coal in 2023,[39] communicated quantitative targets for reducing unabated coal power generation by 2035, with 5 per cent directly referencing their contribution to the global effort. These targets represent a total reduction of 776 TWh (including 766 TWh directly

https://www.iea.org/reports/tracking-sdg7-the-energy-progress-report-2025. It estimates that primary energy intensity improved by 1.2 per cent per year globally between 1990 and 2010, 2.2 per cent between 2010 and 2015, 1.4 per cent between 2015 and 2020, and just 0.5 per cent in 2021 owing to the pandemic exacerbating the already slowing trend. After rising sharply to 2.1 per cent in 2022, driven by reduced energy consumption during the global energy crisis, the improvement rate declined to approximately 1 per cent in 2023 and 2024. In its From Taking Stock to Taking Action report, IEA projects that global average annual improvement rate of primary energy intensity will double from 2 per cent in 2022 to 4 per cent by 2030 and to 4.2 per cent by 2035 on its 1.5 °C pathway with no or limited overshoot.

[35] As footnote 18 above.

[36] As footnote 18 above.

[37] For the same reason referred to in footnote 22 above, unless otherwise specified in the NDCs, the baselines for calculating target reductions are assumed to be the total coal-based electricity generation in 2023 for new NDCs, and in 2019 for previous NDCs.

[38] (1) IEA. 2025. *Electricity 2025: Analysis and forecast to 2027*. Paris: IEA. All rights reserved. Available at https://www.iea.org/reports/electricity-2025. It estimates that total global electricity generation from unabated coal continued to rise, reaching a record 10,704 TWh in 2024. This represents a 0.9 per cent (or 93 TWh) annual increase from 2023, although this growth rate is half the 1.7 per cent (or 174 TWh) from 2022 to 2023. (2) IEA. 2024. *World Energy Outlook 2024*. Paris: IEA. All rights reserved. Available at https://www.iea.org/reports/world-energy-outlook-2024. IEA projects that total global electricity generation from unabated coal will sharply decline to 5,357 TWh in 2030, 1,551 TWh in 2035 and 0 TWh in 2040 on its 1.5 °C pathway with no or limited overshoot. The contribution of Working Group III to the AR6 finds that new investments in coal-fired electricity without CCS are inconsistent with limiting likely warming to 2 °C or below.

[39] As footnote 18 above.

referenced as a contribution to this global effort) by 2035, equivalent to 7 per cent of total global electricity generation from unabated coal in 2024 (10,704 TWh).[40] Of this 776 TWh reduction, 2 TWh (or 0.2 per cent) was reported in relation to mitigation targets that are fully or partially conditional. A total of 19 per cent of Parties also mentioned the need or measures for a just transition for communities and workers dependent on coal.

31. In addition, 13 per cent of Parties, accounting for 2 per cent of total global electricity generation from coal in 2023,[41] outlined quantitative targets for reducing the share of unabated coal in electricity generation by 2030 in their NDCs,[42] with 8 per cent directly referencing their contribution to this global effort. Examples include phasing out unabated coal-fired electricity by 2030. A total of 15 per cent of these Parties (2 per cent of Parties) reported their targets in relation to mitigation targets that are fully or partially conditional, highlighting Parties' need for enhanced support and cooperation.

32. Similarly, 16 per cent of Parties, accounting for 9 per cent of total global electricity generation from coal in 2023,[43] outlined quantitative targets for reducing the share of unabated coal in electricity generation by 2035 in their NDCs,[44] with 8 per cent directly referencing their contribution to this global effort. Examples include achieving carbon pollution-free power sector by 2035. Nearly one-fifth of these Parties (3 per cent of Parties) reported their targets in relation to mitigation targets that are fully or partially conditional, highlighting Parties' need for enhanced support and cooperation to effectively implement these targets. Furthermore, more than half of these 16 per cent of Parties (9 per cent of Parties), accounting for 7 per cent of total global electricity generation from coal in 2023,[45] included targets for phasing out unabated coal in electricity generation by 2035.

D. Accelerating efforts globally towards net zero emission energy systems, utilizing zero- and low-carbon fuels, well before or by around mid-century

33. Shifting to zero- and low-carbon fuels[46] presents notable mitigation potential at low costs. For example, in 2030, biofuels in transport could reduce emissions by 0.23 Gt CO_2 eq/year at costs below USD 20/t CO_2 eq. At costs below USD 100/t CO_2 eq, fuel switching in industry could achieve reductions of 1.95 Gt CO_2 eq/year, while the mitigation potential of biofuels in transport increases to 0.69 Gt CO_2 eq/year. In 2035, the potential of fuel switching in industry reaches 2.1 Gt CO_2 eq/year at costs below USD 200/t CO_2 eq.

34. A total of 97 per cent of Parties, accounting for 31 per cent of total global energy supply from fossil fuels in 2023,[47] communicated measures for shifting to zero- and low-carbon fuels in their NDCs, such as providing funding to support fuel switching to bioenergy in order to accelerate industrial heat decarbonization. When reporting such measures in their NDCs, 27 per cent of Parties made direct references to contributing to the global effort towards net zero emission energy systems, utilizing zero- and low-carbon fuels, well before or by around mid-century.

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[40] As footnote 38 above.

[41] As footnote 18 above.

[42] In its World Energy Outlook 2024, IEA projects that the share of unabated coal in total global electricity generation will sharply decline from 36 per cent in 2023 to 13 per cent in 2030, 3 per cent in 2035 and 0 per cent in 2040 on its 1.5 °C pathway with no or limited overshoot.

[43] As footnote 18 above.

[44] As footnote 42 above.

[45] As footnote 18 above.

[46] IEA. 2023. *Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in reach: 2023 Update*. Paris: IEA. All rights reserved. Available at https://www.iea.org/reports/net-zero-roadmap-a-global-pathway-to-keep-the-15-c-goal-in-reach. The report refers to modern bioenergy, low-emission hydrogen, and low-emission hydrogen-based fuels (e.g. ammonia and synthetic hydrocarbons produced from low-emission hydrogen) as low-emission fuels. It defines modern bioenergy as bioenergy excluding the traditional use of biomass (e.g. wood, wood waste) and renewable waste.

[47] As footnote 18 above.

35. The contribution of Working Group III to the AR6 clarifies that net zero CO_2 energy systems[48] entail the use of alternative energy carriers, such as modern bioenergy, low-emission hydrogen and low-emission hydrogen-based fuels, in applications less amenable to electrification such as long-distance transport and heavy industry. Further, in its World Energy Outlook 2024, IEA projects that modern bioenergy, such as biomethane and biofuels, will be one of the pillars of the clean energy transition over the remainder of this decade and beyond.[49] This projection assumes a shift from using conventional feedstocks towards using advanced bioenergy feedstocks from waste and residues to avoid trade-offs with food and feed production, which also contributes to circular economy approaches, as referred to in section K below.

36. A total of 72 per cent of Parties (a sharp increase from 56 per cent in their previous NDCs), accounting for 23 per cent of total global energy supply from fossil fuels in 2023,[50] communicated measures for shifting to modern bioenergy, such as increasing the bioethanol blending rate in gasoline to 11 per cent by 2030.

E. Transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science

37. A total of 97 per cent of Parties, accounting for 31 per cent of total global energy supply from fossil fuels in 2023,[51] indicated measures for transitioning away from fossil fuels in energy systems in their NDCs, such as replacing 20 per cent of fuel oil consumption with renewable sources in industrial steam generation by 2030 and increasing the share of electric light passenger vehicles to 30 per cent of total sales by 2030. When reporting such measures in their NDCs, 42 per cent of Parties made direct references to contributing to the global effort towards transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade.

38. A total of 3 per cent of Parties, accounting for 0.5 per cent of total global energy supply from fossil fuels in 2023,[52] communicated quantitative targets for reducing the share of total energy supply from unabated fossil fuels by 2030 in their NDCs,[53] without directly referencing their contribution to the global effort towards transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade. All of these Parties reported their targets in relation to mitigation targets that are fully or partially conditional, highlighting Parties' need for enhanced support and cooperation to effectively implement these targets.

39. With regard to the use of unabated fossil fuels in electricity generation, nearly half of Parties (47 per cent), accounting for 9 per cent of total global electricity generation from

[48] The term "energy systems" encompasses both energy supply and energy end-use sectors.

[49] In the World Energy Outlook 2024, the share of total energy supply from modern bioenergy is projected to sharply increase from 7 per cent in 2023 to 12 per cent by 2030, 16 per cent by 2035 and 18 per cent by 2050 on its 1.5 °C pathway with no or limited overshoot, owing to its ability to serve as a drop-in substitute for fossil fuels.

[50] As footnote 18 above.

[51] As footnote 18 above.

[52] As footnote 18 above.

[53] It is estimated, based on the data from the World Energy Balances, that the share of unabated fossil fuels in total global energy supply has been gradually declining from 83 per cent in 2010 to 82 per cent in 2019, 80.9 per cent in 2022 and 80.7 per cent in 2023, driven largely by the growing share of renewable sources. According to the World Energy Outlook 2024, the share is projected to fall rapidly to 61 per cent by 2030, 39 per cent in 2035 and 9 per cent in 2050 on its 1.5 ºC pathway with no or limited overshoot that is projected to achieve net zero CO_2 emissions by 2050. In its contribution to the AR6, Working Group III projects that the share of fossil fuels in total global energy supply will decline to 59–69 per cent in 2030 and 25–40 per cent in 2050 on its 1.5 ºC pathways with no or limited overshoot. Meanwhile, in absolute terms, total global energy supply from fossil fuels reached a record high of 511 EJ in 2023, increasing by 1.6 per cent from 504 EJ in 2022. This growth outpaced the annual average rates of increase of 1 per cent from 2021 to 2022, 0.9 per cent from 2019 to 2022, and 1.3 per cent from 2010 to 2019.

fossil fuels in 2023,[54] communicated quantitative targets for reducing the share of unabated fossil fuels in electricity generation by 2030 in their NDCs,[55] with 16 per cent directly referencing their contribution to this global effort. Nearly two-thirds of these Parties (30 per cent of Parties) reported their targets in relation to mitigation targets that are fully or partially conditional, highlighting Parties' need for enhanced support and cooperation.

40. Additionally, 59 per cent of Parties, accounting for 24 per cent of total global electricity generation from fossil fuels in 2023,[56] communicated quantitative targets for reducing the share of unabated fossil fuels in electricity generation by 2035,[57] with 22 per cent directly referencing their contribution to this global effort. Examples include achieving at least 95 per cent of power generation from clean energy sources by 2030. Nearly half of these Parties (28 per cent of Parties) reported such targets in relation to mitigation targets that are fully or partially conditional. Furthermore, over a quarter of these 59 per cent of Parties (16 per cent of Parties), accounting for 18 per cent of total global electricity generation from fossil fuels in 2023,[58] included targets for phasing out the use of unabated fossil fuels in electricity generation by 2035.

41. Further, 30 per cent of Parties (nearly double the 16 per cent in their previous NDCs assessed in the 2024 edition of this report) reported measures relevant to clean cooking in their NDCs, such as scaling up the adoption of household biogas systems for cooking to cover 500,000 households by 2030. A total of 2 per cent of Parties reported targets for increasing the share of the population with access to clean cooking to 100 per cent by 2030.[59]

42. Approximately three-quarters of Parties (73 per cent) reported the need and/or measures for a just transition for communities and workers dependent on fossil fuels, such as providing targeted training in green skills to support workers to access sustainable employment, particularly in the growing clean energy sector.

F. Accelerating zero- and low-emission technologies, including, inter alia, renewables, nuclear, abatement and removal technologies such as carbon capture and utilization and storage, particularly in hard-to-abate sectors, and low-carbon hydrogen production

43. Accelerating zero- and low-emission technologies[60] offers substantial mitigation potential at low costs. For example, in 2030, nuclear energy could reduce emissions by 0.35 Gt CO_2 eq/year at costs below USD 20/t CO_2 eq. At costs below USD 100/t CO_2 eq, the mitigation potential of nuclear energy increases to 0.70 Gt CO_2 eq/year, while CCS in the

[54] As footnote 18 above.

[55] It is estimated, based on the data from the World Energy Balances, that the share of unabated fossil fuels in total electricity generation has been declining from 67 per cent in 2010 to 63 per cent in 2019, 61 per cent in 2022 and 60 per cent in 2023, primarily owing to the rapid expansion of renewable sources as indicated in section A above. In its World Energy Outlook 2024, IEA projects that the share will decline sharply to 30 per cent by 2030, 9 per cent by 2035 and 0 per cent in 2050 on its 1.5 °C pathway with no or limited overshoot. Meanwhile, in line with the trends in total global energy supply from fossil fuels referred to in footnote 53 above, total global electricity generation from unabated fossil fuels reached a record high of 18,106 TWh in 2023, marking a 1.7 per cent increase from 17,797 TWh in 2022. This exceeds the annual average increase of 1 per cent from 2021 to 2022 and 1.4 per cent from 2019 to 2022, and approaching the 2 per cent annual average increase observed between 2010 and 2019.

[56] As footnote 18 above.

[57] See footnote 55 above.

[58] As footnote 18 above.

[59] According to the IEA From Taking Stock to Taking Action report, this traditional use of biomass will be phased out by 2030 on its 1.5 ºC pathway with no or limited overshoot, with the share of global population with access to clean cooking projected to increase from 74 per cent in 2022 to 100 per cent in 2030. IEA. 2025. *Universal Access to Clean Cooking in Africa: Progress update and roadmap for implementation*. Paris: IEA. All rights reserved. Available at https://www.iea.org/reports/universal-access-to-clean-cooking-in-africa. It is estimated that this transition to 100 per cent clean cooking is expected to reduce both premature deaths by about 3 million and GHG emissions by 1.2 Gt CO_2 eq annually.

[60] Defined as technologies that produce little or no CO_2 or that remove CO_2 from the atmosphere.

energy supply could achieve reductions of 0.27 Gt CO_2 eq/year. In 2035, the mitigation potential further increases at costs below USD 200/t CO_2 eq, with nuclear energy projected to reduce emissions by 0.8 Gt CO_2 eq/year and CCS in the energy supply by 0.5 Gt CO_2 eq/year. Additionally, CCS in industry and bioelectricity with CCS could each contribute reductions of 0.5 Gt CO_2 eq/year at costs below USD 200/t CO_2 eq in 2035.

44. A total of 98 per cent of Parties, accounting for 32 per cent of total global energy supply from fossil fuels in 2023,[61] indicated measures for accelerating zero- and low-emission technologies in their NDCs, such as developing 5 GW of low-carbon hydrogen production capacity by 2030 and introducing an investment tax credit for capital invested in CCUS projects. When reporting such measures in their NDCs, 42 per cent of Parties made direct references to contributing to the global effort towards accelerating zero- and low-emission technologies including, inter alia, renewables, nuclear, abatement and removal technologies such as carbon capture and utilization and storage, particularly in hard-to-abate sectors, and low-carbon hydrogen production.

45. The contribution of Working Group III to the AR6 finds that net zero CO_2 energy systems entail electricity systems that emit no net CO_2, the use of CCS in the remaining fossil fuel systems after a substantial reduction in overall fossil fuel use, the deployment of CDR to counterbalance hard-to-abate residual emissions,[62] and the use of alternative energy carriers in applications less amenable to electrification as referred to in paragraph 35 above.

46. A total of 2 per cent of Parties, accounting for 0.6 per cent of total global electricity generation from fossil fuels in 2023,[63] communicated quantitative targets for increasing total or additional installed capacity for nuclear-based electricity generation by 2030 in their NDCs, without directly referencing their contribution to the global effort towards accelerating zero- and low-emission technologies. Considering the existing installed capacity taken into account in the additional nuclear capacity targets by 2030,[64] the aggregated quantitative target for total installed capacity by 2030 is estimated at 6 GW. This represents 1.3 per cent of the total global installed capacity in 2024 (420 GW).[65] The entire 6 GW was reported in relation to fully unconditional mitigation targets.

47. Further, 3 per cent of Parties, accounting for 1 per cent of total global electricity generation from fossil fuels in 2023,[66] reported quantitative targets for increasing total or additional installed capacity for nuclear-based electricity generation by 2035, with 2 per cent directly referencing their contribution to the global effort. Considering the existing capacity taken into account in the additional capacity targets by 2035,[67] the aggregated quantitative target by 2035 is estimated at 10 GW (including 4.7 GW directly referenced as a contribution to this global effort). This represents 2 per cent of the global installed capacity in 2024 (420 GW).[68] Of this 10 GW, 4.7 GW (or 46 per cent) was reported in relation to mitigation targets that are fully or partially conditional, highlighting Parties' need for enhanced support and cooperation to effectively implement these targets.

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[61] As footnote 18 above.

[62] According to the contribution of Working Group III to the AR6, CDR to counterbalance hard-to-abate residual emissions, such as CO_2 from industrial activities and from long-distance transport and CH_4 and N_2O from agriculture, is unavoidable if net zero CO_2 or GHG emissions are to be achieved. The scale and timing of deployment will depend on the trajectories of gross emission reductions in different sectors. Upscaling the deployment of CDR depends on developing effective approaches to address feasibility and sustainability constraints especially at large scales.

[63] As footnote 18 above.

[64] As footnote 22 above.

[65] IEA. 2025. *Global Energy Review 2025*. Paris: IEA. All rights reserved. Available at https://www.iea.org/reports/global-energy-review-2025. Nuclear power, the second-largest low-emission source of electricity after hydropower, supplied 9 per cent of total global electricity in 2024 with a total global installed capacity of 420 GW (up from 416 GW in 2023). In its World Energy Outlook 2024, IEA projects that total global installed capacity for nuclear power will increase to 554 GW in 2030, 750 GW in 2035 and 1,017 GW in 2050 on its 1.5 °C pathway with no or limited overshoot.

[66] As footnote 18 above.

[67] As footnote 22 above.

[68] As footnote 65 above.

48. In terms of CCUS, 6 per cent of Parties communicated quantitative targets for increasing their annual carbon capture capacity by 2030 in their NDCs, with 3 per cent directly referencing their contribution to the global effort towards accelerating zero- and low-emission technologies. These targets amount to a capture capacity of 39 Mt CO_2 (including 12 Mt CO_2 directly referenced as a contribution to this global effort), equivalent to 98 per cent of total global carbon captured in 2023 (40 Mt CO_2).[69] The entire 39 Mt CO_2 was reported in relation to fully unconditional mitigation targets. On the other hand, IEA projects in its CCUS Projects Explorer[70] that, if all CCUS projects currently under development were completed, total global capture capacity could reach 430 Mt CO_2 annually in 2030.[71] For the 64 Parties that submitted new NDCs, total capture capacity could reach 299 Mt CO_2.[72] This figure is more than seven times the 39 Mt CO_2 aggregated target capacity based on the NDCs, indicating that submitted NDCs do not cover all announced projects. Some Parties may nationally determine that progress in these areas, along with other contributing factors such as enhanced international cooperation and support, contribute to potential for accelerated implementation and more ambition.

49. Additionally, 8 per cent of Parties reported quantitative targets for increasing carbon capture capacity by 2035, with 3 per cent directly referencing their contribution to this global effort. These targets also total 39 Mt CO_2 (including 12 Mt CO_2 directly referenced as a contribution to this global effort). The entire 39 Mt CO_2 was also reported in relation to fully unconditional mitigation targets. The CCUS Projects Explorer projects that, if all announced projects are completed, total global capture capacity could reach 451 Mt CO_2 annually in 2035. For the 64 Parties that submitted new NDCs, total capture capacity could reach 309 Mt CO_2.[73] This figure is about eight times the 39 Mt CO_2 aggregated target capacity based on the NDCs, indicating that submitted NDCs do not cover all announced projects.

50. Regarding other CDR technologies,[74] 9 per cent of Parties indicated in their NDCs measures for direct air carbon capture and storage, 2 per cent measures for bioenergy with carbon capture and storage, and 6 per cent measures for biochar applications. These figures represent a notable increase in or continuation of the same share of Parties from the previous NDCs, where the corresponding shares were 3, 2 and 3 per cent, respectively. According to the Synthesis Report of the AR6,[75] 1.5°C pathways with no or limited overshoot require cumulative net-negative emissions of 220 Gt CO_2 by 2100, increasing to 360 Gt CO_2 for 1.5°C pathways with a high overshoot.[76] Deep GHG emission reductions by 2030 and 2040, including substantial reductions in emissions of short-lived climate forcers, particularly CH_4 as referenced in section G below, are critical to reduce peak warming levels.

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[69] In the IEA World Energy Outlook 2024 report, total global carbon captured is projected to rise steeply from 40 Mt CO_2 in 2023 to 1,023 Mt CO_2 in 2030, 2,540 Mt CO_2 in 2035 and 5,924 Mt CO_2 in 2050 on its 1.5 °C pathway with no or limited overshoot.

[70] IEA. 2025. *CCUS Projects Explorer*. Paris: IEA. All rights reserved. Available at https://www.iea.org/data-and-statistics/data-tools/ccus-projects-explorer (accessed 11 June 2025).

[71] With the announced projects completed, the CCUS Projects Explorer projects that total storage capacity will reach 676 Mt CO_2 in 2030 and 777 Mt CO_2 in 2035.

[72] Estimated on the basis of data from IEA. 2025. *CCUS Projects Database*. Paris: IEA. All rights reserved. Available at https://www.iea.org/data-and-statistics/data-product/ccus-projects-database (accessed 9 October 2025).

[73] As footnote 72 above.

[74] According to the contribution of Working Group III to the AR6, in addition to deep, rapid, and sustained emission reductions, CDR can fulfil three different complementary roles: lowering net CO_2 or net GHG emissions in the near term; counterbalancing 'hard-to-abate' residual emissions in order to help reach net zero CO_2 or net zero GHG emissions in the mid-term as referred to in footnote 62 above; and achieving net-negative CO_2 or GHG emissions in the long term if deployed at levels exceeding annual residual emissions.

[75] IPCC. 2023. *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Core Writing Team, H Lee, and J Romero (eds.). Geneva: IPCC. Available at https://www.ipcc.ch/report/ar6/syr/.

[76] According to the Synthesis Report of the AR6, high overshoot refers to temporarily exceeding 1.5°C global warming by 0.1–0.3°C for up to several decades.

51. As to the production of low-carbon hydrogen,[77] 3 per cent of Parties communicated quantitative targets for increasing low-carbon hydrogen production by 2030 in their NDCs, with 2 per cent directly referencing their contribution to the global effort towards accelerating zero- and low-emission technologies. These targets amount to 1.5 Mt (including 1 Mt directly referenced as a contribution to this global effort), representing 1.9 times the total global low-carbon hydrogen production in 2024 (0.8 Mt).[78] Of this 1.5 Mt, 0.5 Mt (or 33 per cent) was reported in relation to mitigation targets that are fully or partially conditional, highlighting Parties' need for enhanced support and cooperation to effectively implement these targets. IEA finds that, if all announced projects are realized, global low-emission hydrogen production could reach 37 Mt in 2030, with 10 Mt considered almost certain or having strong potential to be operational.[79] For the 64 Parties that submitted new NDCs, low-emission hydrogen production could reach 18 Mt, including 2.2 Mt considered almost certain to be operational.[80] This figure is over 12 times the 1.5 Mt aggregated target production based on the NDCs, indicating that submitted NDCs do not cover all announced projects. Some Parties may nationally determine that progress in these areas, along with other contributing factors such as enhanced international cooperation and support, contribute to potential for accelerated implementation and more ambition.

52. Additionally, 3 per cent of Parties communicated quantitative targets for increasing low-carbon hydrogen production by 2035, with 2 per cent directly referencing their contribution to this global effort. These targets also total 1.5 Mt (including 1 Mt directly referenced as a contribution to this global effort). Of this 1.5 Mt, 0.5 Mt (or 33 per cent) was also reported in relation to in relation to mitigation targets that are fully or partially conditional.

G. Accelerating the substantial reduction of non-carbon-dioxide emissions globally, in particular methane emissions by 2030

53. The Synthesis Report of the AR6 finds that a more rapid reduction in CO_2 and non-CO_2 emissions, particularly CH_4, limits peak warming levels[81] and reduces the need for net-negative CO_2 emissions and CDR, thereby reducing feasibility and sustainability concerns, and social and environmental risks,[82] as indicated in paragraph 50 above. This report also states that accelerating reductions in CH_4 emissions offers co-benefits, such as improved air quality through reduced surface ozone levels.

54. Total global CH_4 emissions are estimated to have continued to rise, reaching a record high of 320 Mt (9 Gt CO_2 eq) in 2023, which represents a 1 per cent increase from 317 Mt

[77] The World Energy Outlook 2024 defines low-carbon hydrogen as hydrogen produced through water electrolysis, using electricity generated from low-emissions sources such as renewables and nuclear, and hydrogen produced from biomass or from fossil fuels equipped with CCUS technology.

[78] IEA. 2025. *Global Hydrogen Review 2025*. Paris: IEA. All rights reserved. Available at https://www.iea.org/reports/global-hydrogen-review-2025. It estimates that global production increased slightly from 0.7 Mt in 2023 to 0.8 Mt in 2024, accounting for less than 1 per cent of the almost 100 Mt hydrogen produced globally. In its World Energy Outlook 2024, IEA projects that global low-carbon hydrogen production will increase rapidly to 66 Mt in 2030, 152 Mt in 2035 and 401 Mt in 2050 on its 1.5 °C pathway with no or limited overshoot.

[79] As footnote 78 above. Projects currently under construction or at final investment decision stage account for 4.2 Mt. An additional 6 Mt has strong potential to be operational with supportive policies that stimulate demand.

[80] Estimated on the basis of the data from IEA. 2025. *Hydrogen Production and Infrastructure Projects Database*. Paris: IEA. All rights reserved. Available at https://www.iea.org/data-and-statistics/data-product/hydrogen-production-and-infrastructure-projects-database (accessed 9 October 2025)

[81] According to the contribution of Working Group III to the AR6, due to the short lifetime of CH_4 in the atmosphere, deep reduction of CH_4 emissions up until the time of net zero CO_2 in modelled mitigation pathways effectively reduce peak global warming.

[82] For example, the contribution of Working Group III to the AR6 notes that afforestation, production of biomass crops for bioenergy with carbon capture and storage or biochar can cause adverse socio-economic and environmental impacts, including on biodiversity, food and water security, local livelihoods and on the rights of Indigenous Peoples, especially if implemented poorly and at large scales.

(8.9 Gt CO_2 eq) in 2022 and a 1.7 per cent increase from 315 Mt (8.8 Gt CO_2 eq) in 2019.[83] The 1 per cent growth rate between 2022 and 2023 exceeds the annual average increase of 0.8 per cent from 2010 to 2019 and 0.4 per cent from 2019 to 2023.

55. A total of 13 per cent of Parties, accounting for 4 per cent of total global CH_4 emissions in 2023,[84] indicated economy-wide quantitative targets for reducing CH_4 emissions by 2030,[85] with 6 per cent directly referencing their contribution to substantially reducing non-CO_2 emissions globally, in particular CH_4 emissions by 2030. Nearly half of these Parties (6 per cent of Parties) reported their targets in relation to mitigation targets that are fully or partially conditional, highlighting Parties' need for enhanced support and cooperation.

1. Accelerating the substantial reduction of non-carbon-dioxide emissions globally, in particular methane emissions from fossil fuel operations by 2030

56. Reducing CH_4 emissions from fossil fuel operations presents notable mitigation potential at low costs. In 2030, at costs below USD 20/t CO_2 eq, oil and gas operations could reduce emissions by 0.92 Gt CO_2 eq/year and coal mining by 0.45 Gt CO_2 eq/year. At costs below USD 100/t CO_2 eq, the mitigation potential increases to 1.05 Gt CO_2 eq/year for oil and gas operations and to 0.5 Gt CO_2 eq/year for coal mining. In 2035, the mitigation potential for oil and gas operations reaches 1.2 Gt CO_2 eq/year at costs below USD 200/t CO_2 eq.

57. Measures for reducing CH_4 emissions from fossil fuel operations, such as achieving zero routine flaring and venting by 2030, were communicated by 20 per cent of Parties, accounting for 37 per cent of total global CH_4 emissions from fossil fuel operations in 2024.[86] When reporting such measures in their NDCs, 11 per cent of Parties made direct references to contributing to the global effort towards substantially reducing non-CO_2 emissions globally, in particular CH_4 emissions by 2030.

58. According to the IEA Methane Tracker, energy supply is the second largest source of global anthropogenic CH_4 emissions after agriculture, accounting for 39 per cent. These emissions primarily originate from the production, processing, storage and transportation of fossil fuels. Total global CH_4 emissions from fossil fuel operations have continued to rise, reaching a record high of about 124 Mt (about 3.5 Gt CO_2 eq) in 2024.

59. A total of 3 per cent of Parties, accounting for 3 per cent of total global CH_4 emissions from fossil fuel operations in 2024,[87] indicated quantitative targets for reducing CH_4 emissions from these operations by 2030 in their NDCs, with all of them directly referencing their contribution to the global effort towards substantially reducing non-CO_2 emissions globally, in particular CH_4 emissions by 2030. These targets amount to a reduction of 2 Mt[88] by 2030 (all of which is directly referenced as a contribution to this global effort), equivalent

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[83] Estimated on the basis of data from Gütschow, J.; Busch, D.; Pflüger, M. 2025. *The PRIMAP-hist national historical emissions time series v2.6.1 (1750-2023)*. Zenodo, available at https://zenodo.org/records/15016289; as modified by the secretariat, based on the GWP-100 values from the contribution of Working Group I to the AR5 in line with decision 7/CP.27. The contribution of Working Group III to the AR6 estimates that GHG emissions reached 11 ± 3.2 Gt CO_2 eq in 2019, using GWP-100 values from the contribution of Working Group I to the AR6, with uncertainties reported for a 90 per cent confidence interval.

[84] As footnote 83 above.

[85] The Synthesis Report of the AR6 projects that total global CH_4 emissions will fall by 34 per cent below 2019 levels by 2030, and by 44 per cent by 2040, on its 1.5 °C pathway with no or limited overshoot.

[86] Estimated on the basis of data from the IEA Methane Tracker, available at https://www.iea.org/articles/methane-tracker-data-explorer (accessed 11 July 2025). All rights reserved; as modified by the secretariat. While most segments of CH_4 emission data from fossil fuel operations were collected in 2024, a few were gathered in 2022. Similarly, some segments of CH_4 emissions data from agriculture were collected in 2021, while others were gathered in 2019 or 2020.

[87] As footnote 86 above.

[88] For the same reason referred to in footnote 22 above, unless otherwise specified in the NDCs, the baselines for calculating target reductions are assumed to be the total CH_4 emissions from fossil fuel operations in 2023 for new NDCs, and in 2019 for previous NDCs.

to 1.6 per cent of total global CH_4 emissions from fossil fuel operations in 2024 (124 Mt).[89] The entire 2 Mt reduction was reported in relation to fully unconditional mitigation targets.

2. Accelerating the substantial reduction of non-carbon-dioxide emissions globally, in particular methane emissions from agriculture by 2030

60. Reducing CH_4 and N_2O emissions from agriculture also presents substantial mitigation potential at low costs. In 2030, emission reductions are estimated at 0.35 Gt CO_2 eq/year at costs below USD 20/t CO_2 eq, increasing to 0.63 Gt CO_2 eq/year at costs below USD 100/t CO_2 eq.

61. A total of 66 per cent of Parties, accounting for 31 per cent of total global CH_4 emissions from agriculture in 2021,[90] communicated measures for reducing CH_4 and N_2O emissions from agriculture in their NDCs, such as adopting technologies that minimize methane emissions from effluent and manure management for 55 per cent of the dairy herd by 2030 and constructing biodigesters to replace fuelwood consumption with biogas from the anaerobic digestion of manure. When reporting such measures in their NDCs, 19 per cent of Parties made direct references to contributing to the global effort towards substantially reducing non-CO_2 emissions globally, in particular CH_4 emissions by 2030.

62. According to the IEA Methane Tracker, agriculture is the largest source of global anthropogenic CH_4 emissions, accounting for 41 per cent. Total global CH_4 emissions from agriculture in 2021 were estimated at 137 Mt (or about 3.8 Gt CO_2 eq).[91] 2 per cent of Parties, accounting for 0.8 per cent of total global CH_4 emissions from agriculture in 2021,[92] indicated quantitative targets for reducing CH_4 emissions from agriculture by 2030, with all of them directly referencing their contribution to this global effort. All such targets were communicated in relation to fully unconditional mitigation targets.

H. Accelerating the reduction of emissions from road transport on a range of pathways, including through development of infrastructure and rapid deployment of zero- and low-emission vehicles

63. Reducing emissions from road transport offers notable mitigation potential at low costs. For example, in 2030, fuel-efficient light-duty vehicles could reduce emissions by 0.56 Gt CO_2 eq/year, shifting to public transport by 0.53 Gt CO_2 eq/year, and biofuels in transport by 0.23 Gt CO_2 eq/year, at costs below USD 20/t CO_2 eq. At costs below USD 100/t CO2 eq, the mitigation potential of biofuels in transport increases to 0.69 Gt CO_2 eq/year. Electrification also plays a key role, with electric light-duty vehicles and electric heavy-duty vehicles projected to reduce emissions by 0.59 Gt CO_2 eq/year and 0.21 Gt CO_2 eq/year, respectively.[93] In 2035, the mitigation potential reaches 1.1 Gt CO_2 eq/year for shifting to public transport, 0.7 Gt CO_2 eq/year for fuel-efficient light-duty vehicles, and 0.6 Gt CO_2 eq/year for electric light-duty vehicles, at costs below USD 200/t CO_2 eq.

64. A total of 91 per cent of Parties, accounting for 37 per cent of total global vehicle sales in 2024,[94] indicated measures for reducing emissions from road transport in their NDCs, such as providing subsidies for electric vehicle purchases, investing in the expansion of charging infrastructure, and enforcing stricter emission standards for imported second-hand vehicles. When reporting such measures in their NDCs, 34 per cent of Parties made direct references

[89] Tracking COP28 progress, available at https://www.iea.org/topics/cop28-tracking-the-energy-outcomes (accessed 10 October 2025). In its From Taking Stock to Taking Action report and Tracking COP28 progress, IEA projects that global CH_4 emissions from fossil fuel operations will decline sharply by 75 per cent to about 29 Mt (about 1 Gt CO_2 eq) by 2030 on its 1.5 °C pathway with no or limited overshoot.

[90] As footnote 86 above.

[91] As footnote 86 above.

[92] As footnote 86 above.

[93] According to the contribution of Working Group III to the AR6, no estimated costs of mitigation potentials could be allocated to this mitigation option, owing to high variation or lack of data.

[94] Estimated on the basis of data from the International Organization of Motor Vehicle Manufacturers, available at https://www.oica.net/category/sales-statistics/ (accessed 20 August 2025).

to contributing to the global effort towards reducing emissions from road transport on a range of pathways, including through development of infrastructure and rapid deployment of zero- and low-emission vehicles.

65. A total of 14 per cent of Parties indicated quantitative targets for increasing the sales share of zero- and low-emission (primarily electric) cars by 2030 in their NDCs, accounting for 4 per cent of total global car sales in 2024,[95] reported targets for increasing the sales share of electric cars[96] by 2030,[97] with 5 per cent directly referencing their contribution to the global effort towards reducing emissions from road transport on a range of pathways. More than three-quarters of these Parties (or 11 per cent of Parties) communicated their targets in relation to mitigation targets that are fully or partially conditional, underscoring Parties' need for enhanced support and cooperation to effectively implement these targets.

66. Additionally, 17 per cent of Parties, accounting for 10 per cent of total global car sales in 2024,[98] indicated target for increasing the sales share of zero- and low-emission cars by 2035,[99] with 6 per cent directly referencing their contribution to the global effort. Again, more than three-quarters of these Parties (or 13 per cent of Parties) communicated their targets in relation to mitigation targets that are fully or partially conditional. Furthermore, about 30 per cent of these 17 per cent of Parties (5 per cent of Parties), accounting for 10 per cent of total global car sales in 2024,[100] included targets for achieving 100 per cent sales share of zero- and low-emission cars by 2035.

I. Phasing out inefficient fossil fuel subsidies that do not address energy poverty or just transitions, as soon as possible

67. According to the contribution of Working Group III to the AR6, removing fossil fuel subsidies is projected to lead to global GHG emission reductions of up to 10 per cent by 2030, along with other environmental and financial benefits. The Fossil Fuel Subsidy Tracker[101] finds that total global fossil fuel subsidies declined by 35 per cent from USD 1,682 billion in 2022 to USD 1,102 billion in 2023, as some government provisions in response to the global energy crisis expired. However, the current level remains 32 per cent higher than the 10-year annual average of USD 749 billion. Specifically, fossil fuel consumption subsidies, as estimated by the IEA Fossil Fuel Subsidies Database,[102] decreased by 48 per cent from USD 1,178 billion in 2022 to USD 616 billion in 2023, although the 2023 figure is still 17 per cent above the 10-year annual average of USD 514 billion.

68. A total of 19 per cent of Parties, accounting for 7 per cent of total global fossil fuel subsidies in 2023,[103] identified measures for removing fossil fuel subsidies in their NDCs, with 16 per cent directly referencing their contribution to the global effort towards phasing out inefficient fossil fuel subsidies that do not address energy poverty or just transitions, as soon as possible. Examples of such measures include shifting subsidies from buses with

[95] As footnote 94 above.
[96] Electric cars refer to battery electric and plug-in hybrid passenger light-duty vehicles.
[97] IEA estimates in its Global Energy Review 2025 that global electric car sales rose by over 25 per cent, from under 14 million units in 2023 to more than 17 million units in 2024, representing over 20 per cent of all cars sold, up from 18 per cent in 2023. In its From Taking Stock to Taking Action report, IEA projects that the share of electric cars in global sales will increase to 67 per cent by 2030 and 99 per cent by 2035 on its 1.5 °C pathway with no or limited overshoot, thereby contributing to the doubling of energy efficiency improvements and to the transition away from fossil fuels in energy systems.
[98] As footnote 94 above.
[99] See footnote 97 above.
[100] As footnote 94 above.
[101] Fossil Fuel Subsidy Tracker, available at https://fossilfuelsubsidytracker.org/ (accessed 2 January 2025). Global estimates up until 2022 are based on data from 195 economies, while the estimate for 2023 is based on data from 83 economies.
[102] IEA Fossil Fuel Subsidies Database, available at https://www.iea.org/topics/fossil-fuel-subsidies (accessed 2 January 2025). The global estimate for 2022 is based on data from 47 economies, while the estimate for 2023 is based on data from 41 economies.
[103] Estimated on the basis of data from the Fossil Fuel Subsidy Tracker.

internal combustion engines to electric buses and redirecting funds to effectively incentivize the decarbonization of public transport while ensuring affordable transportation.

J. Transitional fuels playing a role in facilitating the energy transition while ensuring energy security

69. This mitigation option contributes, for example, to fuel switching in industry, which could reduce emissions by 1.95 Gt CO_2 eq/year at costs below USD 100/t CO_2 eq in 2030 and 2.1 Gt CO_2 eq/year at costs below USD 200/t CO_2 eq in 2035.

70. The contribution of Working Group III to the AR6 finds that natural gas may remain part of energy systems through mid-century, both for electricity generation and use in industry and buildings, even if likely warming is limited to 2° C or less.[104] Its scenarios indicate that gas use in electricity will likely peak around 2035 and 2050 if warming is limited to 1.5°C with limited or no overshoot or to 2°C with action starting in 2020, respectively.[105]

71. A total of 36 per cent of Parties, accounting for 10 per cent of total global energy supply from coal and oil in 2023,[106] indicated measures for using transitional fuels in facilitating the energy transition while ensuring energy security in their NDCs, such as encouraging industries to switch from heavy fuel oil to natural gas through pollution control laws and securing LNG-fired power as a means of facilitating the energy transition and fuel security while promoting the fading out of inefficient coal-fired thermal power generation. When reporting such measures in their NDCs, 5 per cent of Parties made direct references to transitional fuels playing a role in facilitating the energy transition while ensuring energy security.

K. Transitioning to sustainable lifestyles and sustainable patterns of consumption and production in efforts to address climate change, including through circular economy approaches

72. This mitigation option offers substantial mitigation potential across priority areas at low costs. For example, in 2030, reducing CH_4 emissions from solid waste could achieve reductions of 0.44 Gt CO_2 eq/year at costs below USD 20/t CO_2 eq. At costs below USD 100/t CO_2 eq, improving material efficiency in industry could contribute reductions of 0.93 Gt CO_2 eq/year, while enhancing recycling in industry could reduce emissions by 0.48 Gt CO_2 eq/year. Shifting to balanced and sustainable healthy diets could also achieve reductions of 1.7 Gt CO_2 eq/year in 2030.[107] In 2035, the mitigation potential reaches 1.2 Gt CO_2 eq/year for improving material efficiency in industry and 1 Gt CO_2 eq/year for enhancing recycling in industry, at costs below USD 200/t CO_2 eq.

73. A total of 86 per cent of Parties communicated measures for transitioning to sustainable lifestyles and sustainable patterns of consumption and production in their NDCs, such as increasing local food production and enhancing agricultural sustainability to promote food security while reducing the carbon footprint associated with food transportation. When reporting such measures in their NDCs, 17 per cent of Parties made direct references to contributing to efforts towards transitioning to sustainable lifestyles and sustainable patterns of consumption and production, including through circular economy approaches.

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[104] In its contribution to the AR6, Working Group III projects that the share of natural gas in total energy supply will decline by 10 (0–30) per cent by 2030 and 45 (20–60) per cent by 2050, respectively, below the 2019 levels on 1.5 ºC pathways with no or limited overshoot. It further projects that the use of natural gas without CCS will decline by 70 (60–80) per cent by 2050 below the 2019 levels on 1.5 ºC pathways with no or limited overshoot. IEA projects in its World Energy Outlook 2024 that total global energy supply from unabated natural gas will decrease from 137 EJ in 2023 to 113 EJ in 2030, 62 EJ in 2035 and 7 EJ in 2050 on its 1.5 °C pathway with no or limited overshoot.

[105] The contribution of Working Group III to the AR6 states that there is variability in the role gas would play in future scenarios based on national climate commitments and availability of cheap renewables.

[106] As footnote 18 above.

[107] As footnote 93 above.

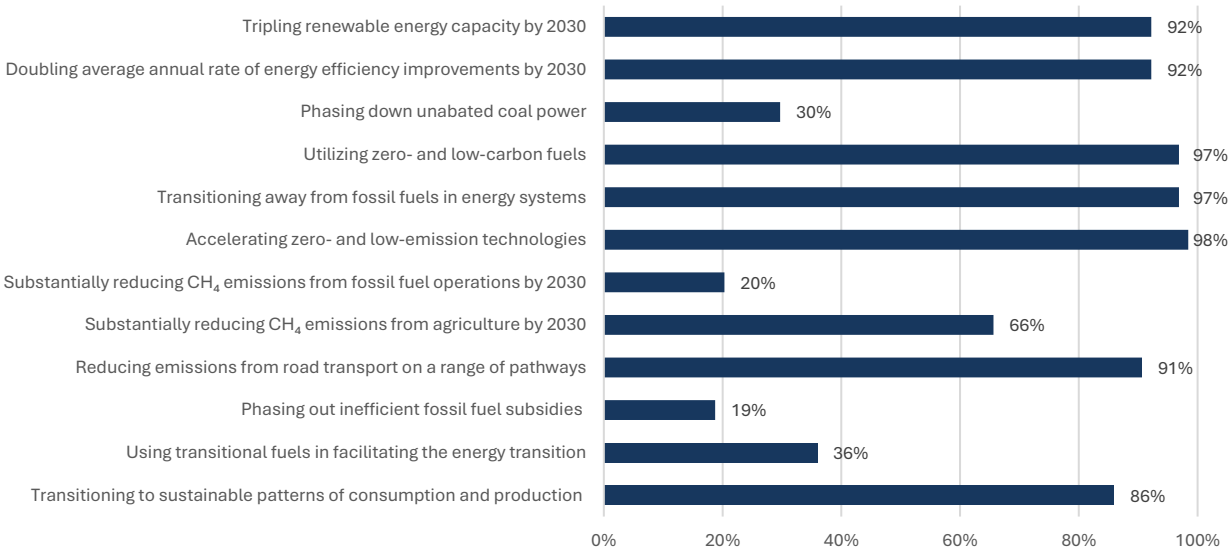
74. According to the contribution of Working Group III to the AR6, circular economy approaches, such as material efficiency improvements and circular material flows, can help significantly reduce emissions by avoiding the large amount of energy required to process virgin materials and can help mitigate material supply risks for critical minerals for clean energy applications. In its 2023 update to the Net Zero Roadmap, IEA projects that demand for critical minerals for clean energy applications will quadruple by 2030 compared with the 2022 level.

75. A total of 28 per cent of Parties indicated measures for improving material efficiency in industry, such as developing a range of resource and energy efficiency measures aimed at reducing 11 Mt CO_2 eq from the industry sector. Additionally, 38 per cent of Parties reported measures for promoting cross-sectoral circular economy approaches, including developing a national circular economy roadmap based on the circular economy law. These figures represent significant increases compared with the previous NDCs assessed in the 2024 edition of this report, where the corresponding shares were 13 and 22 per cent, respectively.

V. Status of domestic mitigation measures relevant to the global efforts and mitigation options

76. For two-thirds of the 12 global efforts and mitigation options covered in recent CMA decisions (8 efforts and options), almost all Parties (86–98 per cent), accounting for 31–32 per cent of total global energy supply from fossil fuels in 2023,[108] reported corresponding measures in their NDCs (see Figure **4**). Meanwhile, Parties most frequently communicated measures aimed at fully or partially conditional mitigation targets in relation to these 8 efforts and options. These include utilizing zero- and low- carbon fuels and accelerating zero- and low-emission technologies (70 per cent of Parties), followed by tripling renewable energy capacity by 2030, doubling the average annual rate of energy efficiency improvements by 2030, and transitioning away from fossil fuels in energy systems (69 per cent, respectively). This is an indication of Parties' greater absolute need for support in implementing these efforts and options.

Figure 4
Share of Parties referring to domestic mitigation measures relevant to the global efforts and mitigation options referred to in recent CMA decisions



Note: As notes (2) to Figure **2**.

77. Further, a conditionality gap was identified for three-questers of the 12 global efforts and mitigation options (9 efforts and options). The largest gaps were observed in relation to substantially reducing CH_4 emissions from agriculture by 2030 (31 percentage points),

[108] As footnote 18 above.

followed by tripling renewable energy capacity by 2030 (28 percentage points) and reducing emissions from road transport on a range of pathways (25 percentage points), suggesting that these efforts and options could face greater implementation challenges in the absence of support, compared with other efforts and options. Together with the findings in paragraph 76 above, this indicates a greater need for support for these global efforts and mitigation options, particularly for tripling renewable energy capacity by 2030.

VI. Coherence and synergies with development priorities

78. CMA 5 noted the importance of aligning NDCs with LT-LEDS and encouraged Parties to align their next NDCs with LT-LEDS. In addition, it noted that the global transition to low emissions and climate-resilient development provides opportunities and challenges for sustainable development and poverty eradication.[109]

79. A total of 87 per cent of Parties, representing a sharp increase from 58 per cent in their previous NDCs, highlighted policy coherence and synergies between their mitigation measures and development priorities.

80. Nearly half of these Parties (or 41 per cent of Parties), representing a sharp increase from 30 per cent in their previous NDCs, identified domestic mitigation measures that contribute to longer-term measures or targets set out in their LT-LEDS and/or other national long-term low-emission development strategies or laws. Examples include identifying measures for NDCs on the basis of programmes of action or mitigation options set out in the LT-LEDS; legally requiring the Government to develop mitigation measures for the NDC emission target and to report, at least once every five years, on how these measures contribute both to the NDC target and the 2050 net zero target; and establishing an independent statutory body that advises the Government on setting mitigation targets and measures for the NDC in the context of a legally binding net zero target.

81. In addition, the same share of Parties (41 per cent of Parties), representing a sharp increase from 30 per cent in their previous NDCs, clarified the alignment between their mitigation measures and efforts towards achieving the SDGs, highlighting multiple co-benefits of their measures for sustainable development and the cost-effectiveness of their measures in relation to sustainable development under fiscal constraints. For example, 25 per cent of Parties, a sharp increase from 16 per cent in their previous NDCs, communicated one or more SDGs in relation to which there are synergies with their priority areas or mitigation measures (see Figure **5**), with energy supply measures contributing to achieving SDG 7 (affordable and clean energy), AFOLU measures contributing to achieving SDG 15 (life on land) and AFOLU measures contributing to achieving SDG 2 (zero hunger) most frequently indicated.

Figure 5
Share of Parties referring to synergies between efforts in mitigation priority areas and efforts towards the Sustainable Development Goals identified in their nationally determined contributions

	SDG																
Mitigation priority area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Energy supply	3%	0%	3%	2%	5%	2%	22%	11%	16%	2%	13%	11%	14%	0%	2%	0%	2%
Transport	0%	2%	6%	0%	3%	3%	17%	8%	16%	2%	13%	9%	13%	5%	0%	2%	3%
Buildings	2%	2%	5%	0%	6%	3%	17%	9%	13%	3%	14%	9%	14%	2%	3%	2%	3%
Industry	0%	0%	3%	2%	5%	3%	6%	5%	9%	0%	5%	8%	6%	0%	2%	2%	2%
AFOLU	9%	19%	3%	3%	8%	6%	5%	8%	8%	3%	2%	14%	16%	5%	20%	3%	3%
Waste	0%	0%	11%	2%	2%	9%	6%	9%	9%	0%	14%	16%	9%	3%	2%	0%	2%
Cross-cutting/other	2%	2%	2%	2%	3%	3%	5%	3%	3%	3%	3%	2%	5%	0%	2%	2%	3%

Note: The shading reflects how frequently synergies were identified by Parties: the darker the shading, the more frequently synergies were identified.

[109] Decision 1/CMA.5, paras. 40 and 9 respectively.