

Attachment 3: Net Zero Transition Tracker Update

Net Zero Transition Indicators

This attachment provides a 5-year lookback on high-level indicators that align with the four key net zero themes staff has identified that are believed to impact and influence the global economy's transition to net zero. For each theme, staff provides a color-coded status on the degree of “net zero momentum” represented by the indicators, as well as a brief analysis of the indicators within each theme.

Net Zero Indicators						
Emissions Indicators						
	2019	2020	2021	2022	2023	Signal
Global greenhouse gas emissions (gigatonnes CO ₂ equivalents) ⁽¹⁾	59.1	55.8	59.6	60.4	60.9	
Global coal demand (millions of metric tonnes) ⁽²⁾	7,801	7,477	7,929	8,415	8,536	
Global oil demand (millions of barrels per day) ⁽³⁾	100.7	91.9	97.5	99.5	101.7	
Status						↓
<i>Explanatory note: The IEA estimates 44% of global emissions come from coal combustion and 32% come from oil combustion⁽⁴⁾</i>						
Physical Risk Indicators						
	2019	2020	2021	2022	2023	Signal
Temperature - Global Land and Ocean Change vs. 1901-2000 ave. ⁽⁵⁾	0.98°C	1.02°C	0.87°C	0.90°C	1.19°C	
Globally insured losses from natural disasters (in 2023 \$ billions) ⁽⁶⁾	\$ 94	\$ 122	\$ 153	\$ 151	\$ 118	
Status						↓
Transition Risk - Policy Indicators						
	2019	2020	2021	2022	2023	Signal
Share of global GHG covered by national net zero pledges ⁽⁷⁾	18%	58%	74%	88%	82%	
2100 Warming Projections (degrees Celsius) - Policies and Action ⁽⁸⁾	3.00	2.90	2.70	2.70	2.70	
Status						↔
Transition Risk - Technology Indicators						
	2019	2020	2021	2022	2023	Signal
Wind & solar share of global electricity generation ⁽⁹⁾	7.8%	9.1%	10.2%	11.8%	13.2%	
Electric vehicles % of global light vehicle fleet ⁽¹⁰⁾	0.6%	0.8%	1.3%	2.1%	3.1%	
Status						↑
Color Key				Strong Momentum ↑	Limited Progress ↔	Off Course ↓

⁽¹⁾ [The MSCI Net-Zero Tracker - MSCI](#)
⁽²⁾ [IEA Coal 2023 - Analysis and forecast to 2026 \(windows.net\)](#)
⁽³⁾ [Bloomberg](#)
⁽⁴⁾ [Greenhouse Gas Emissions from Energy Data Explorer – Data Tools - IEA](#)
⁽⁵⁾ [Global Time Series | Climate at a Glance | National Centers for Environmental Information \(NCEI\) \(noaa.gov\)](#)
⁽⁶⁾ [climate-and-catastrophe-insights-report.pdf \(aon.com\)](#)
⁽⁷⁾ [Net Zero by 2050 - A Roadmap for the Global Energy Sector \(windows.net\)](#)
⁽⁸⁾ [Temperatures - Climate Action Tracker](#)
⁽⁹⁾ [Electricity – Renewables 2023 – Analysis - IEA](#)
⁽¹⁰⁾ [Bloomberg New Energy Finance](#)

Emissions Indicators: Off course

- Global greenhouse gas emissions continue to rise, up 0.5 gigatons from 2022 to 2023, and up 5.1 gigatons in the aggregate since 2020.
- Demand for coal and oil also continues to rise. Coal demand rose 121 million metric tons from 2022 to 2023 and oil demand rose 2.2 million barrels per day over the same time.
- Since 2020, coal demand has risen by over 1 billion metric tons and oil demand has risen by over 10 million barrels per day.
- Global greenhouse gas emissions, and demand for coal and oil, all dropped between 2019 and 2020 but those drops were likely due to the COVID 19 pandemic.

Physical Risk Indicators: Off course

- Relative to the 20th century average temperature, land and ocean temperatures rose nearly 0.3 degrees Celsius between 2022 to 2023.
- Land and ocean temperatures did drop substantially between 2020 and 2021 but that drop is most likely due to the COVID 19 pandemic.
- Insured losses due to extreme weather events did decline significantly from 2022 to 2023, but data from 2019 to 2022 shows an upward trend in this indicator.

Policy Indicators: Limited progress

- Net zero pledges, as a percentage of GDP, declined by 6% between 2022 and 2023 after growing from 18% to 88% between 2019 and 2022.
- This year-over-year decline in net zero pledges could be a reaction to the anti-ESG effort.
- Warming projections for the year 2100, based on aggregate net zero commitments and actions, held steady from 2022 to 2023 with a continued predicted rise in temperature of 2.7 degrees Celsius.
- Since 2019, projections on the degree of global temperature rise by the year 2100 have dropped from 3.0 degrees Celsius to 2.70 degrees Celsius.

Technology Indicators: Strong momentum

- Renewable energy penetration continues to grow. Wind and solar energy, as a share of global electricity generation rose 1.4% between 2022 and 2023.
- Since 2019, the percentage of wind and solar energy has grown from 7.8% to 13.2%.
- Electric vehicles penetration, measured as a percentage of global light vehicles fleets, also continues to grow, up 1.0% from 2022 to 2023.
- Since 2019, the percentage of electric vehicles in light vehicle fleets has risen from 0.6% to 3.1%.

The Transition Tracker continues to be a “strawman” prototype used internally to assess the speed and direction of the transition to a net zero economy. Staff is sharing this concept with our investment partners as many of them are also considering methods of tracking the net zero transition. Staff envisions working collaboratively with partners to build and refine our net zero tracking capabilities.