
November 3, 2025

Authors:

Mahmoud Mobir

Shweta Movalia

Hannah Pitt

Alfredo Rivera

Emma Rutkowski

Kate Larsen

Rhodium Climate Outlook 2025: Probabilistic Global Emissions and Energy Baseline Projections

Energy & Climate



What Is the World on Track for?

Today, a decade into implementation of the Paris Agreement, there has already been meaningful decarbonization progress. Renewable electricity and electric vehicle technologies are being deployed at scale around the world, and newer technologies to address some of the hard-to-abate sectors of the economy are ready for commercialization. The global policy environment for clean energy has generally improved, and capital markets have matured to help scale clean technology investment. Progress to date has flattened global greenhouse gas (GHG) emissions but has yet to deliver an absolute decline in emissions.

Understanding what the world and nations are on track for today is a critical starting point for charting a path to where we need to go from here to avoid the worst impacts of climate change. To date, the global community has largely relied on models to project global GHG emissions pathways in order to assess the necessary ambition of global and national emissions pledges and illustrate how the economy would need to adjust to achieve those targets. Now, a much wider array of actors are trying to understand how the economy will transform as the global energy transition continues to unfold and how they can accelerate that progress even further.

Many motivated investors, companies, and policymakers are finding it increasingly challenging, however, to find the signal of where new action and investment can most effectively accelerate the global energy transition. Existing global and regional outlooks for baseline GHG emissions and energy outcomes describe potential future scenarios in which global decarbonization action will either: 1) accelerate to meet global goals; or 2) fail to evolve from today's dynamics, locking in the current fossil economy for the foreseeable future. These illustrative scenarios require the user to choose their own adventure—based solely on a belief of whether the world will change dramatically or not—when selecting a starting point to assess where additional investment or policy action is needed. These outlooks are limited by the following features:

- **Single, deterministic scenarios:** Most outlooks report outcomes under a single scenario (or set of scenarios) that are based on deterministic input assumptions for key variables that are, in reality, highly uncertain. The pace of economic growth, for example, is one of the most important drivers of emissions growth, yet most outlooks rely on a single deterministic GDP projection. Other important uncertainties that drive emissions include population growth, fuel prices, clean technology costs, and the pace of learning for emerging decarbonization technologies.
- **Policy scenarios untethered to reality:** Because of the inherent uncertainty in how policy will evolve over time, modelers are left to construct stylized emission projections that follow one of two possible policy stories: 1) countries keep policies in place today, but there is no further evolution of policy beyond that; or 2) countries fully implement the pledges they have announced, whether their near-term NDCs under the Paris Agreement, mid-century net-zero emissions targets, or global emissions scenarios consistent with keeping temperature rise below 1.5°C. The reality is likely somewhere in between those two extreme policy stories. The range of 2035 NDCs submitted to date by countries under the Paris Agreement illustrates this point well, especially when you consider the world's two largest emitters: China and the US. The US under the Biden administration submitted a very ambitious NDC in January

2025 that the current Trump administration has disavowed, and is therefore a gross overestimate of US emission reductions over the coming decade. On the other hand, China took a conservative approach, setting 2035 targets that many experts assess as less ambitious than the likely pace of clean energy deployment and pace of emission reductions. As a result, scenarios that show global emission reductions consistent with 2035 NDCs will not provide useful information about what path the world is likely to take in the coming decade.

- **Partial emissions picture:** The majority of outlooks have focused to date on the energy transition, reporting emissions of carbon dioxide (CO₂) from energy combustion. But energy CO₂ contributes only two-thirds of global greenhouse gas emissions. The rest is emitted as methane (CH₄) from oil and gas production, agriculture and waste; nitrous oxides (N₂O) from agricultural production; hydrofluorocarbons (HFCs) and other fluorinated gases used in refrigeration, cooling, and industrial uses; and CO₂ from industrial processes, forests, and other land uses. Without an integrated understanding of the potential trajectory of emissions of the other third of GHGs, we are left with only a partial picture of what we are on track for.
- **No integrated temperature rise outcomes:** Other available emissions scenarios project out to 2030 or 2050—the edge of known or announced policy pledges. This makes it impossible to provide an integrated set of global temperature rise projections, which require annual data through at least the end of the century. As a result, other modeling efforts do their best to align their 2030 (or 2050) projections with aggregate, global long-term emissions scenarios developed by other groups. This introduces cross-model structure and assumption inconsistency and provides limited information about what geographic, sectoral, or technological developments are most important in shaping global temperature outcomes.

Rhodium Climate Outlook

The [Rhodium Climate Outlook](#) (RCO) seeks to address these shortcomings with probabilistic energy, emissions, and temperature projections of use to a wide range of global stakeholders. We've done this by incorporating the following innovations, which to our knowledge have not been combined in a single modeling platform to date:

- **Probabilistic global and regional emissions and energy projections** that capture uncertainty in economic and population growth, oil and gas prices, and clean energy technology costs.
- **Econometrically-based policy projections** based on real-world evidence of country-level policy drivers to construct a baseline projection of how policy is likely to evolve going forward, absent a major acceleration from current trajectories.
- Emissions projections for **all greenhouse gases**, not just CO₂.
- **Probabilistic temperature projections** derived directly from our emissions projections but including climate system uncertainty as well.

The Rhodium Climate Outlook (RCO) is produced using an integrated modeling platform that combines these critical features: Rhodium's Global Energy Model (RHG-GEM). [RHG-GEM](#) captures uncertainty in economic and population growth, coal, oil, and natural gas

prices, and clean energy technology costs under likely policy evolution (see the [Technical Appendix](#) for more detail).

The result is our **RCO Baseline**, which provides probabilistic GHG emissions and energy outcome ranges based on the most up-to-date outlook for key drivers through the end of the century. This RCO Baseline illustrates what the world is likely on track for, absent a major acceleration in the pace of climate policy ambition or accelerated innovation and investment in emerging technologies beyond their current trajectory. It is the starting point for assessing what additional action is needed to go above and beyond what the world is already on track to achieve, and specifically:

- What regions and sectors of the economy are making the most progress in the clean energy, low-GHG transition, and what are the potential barriers to further progress;
- Which regions and sectors are falling behind, and where is an acceleration of policy, investment, and deployment most needed;
- Where expected cost reductions in mature clean technologies don't go far enough to deploy at scale in regions with slow-to-evolve climate policy;
- How the emergence of new technologies that are nearing maturity can further reduce emissions; and
- Where additional technology innovation is most needed, and where new technologies would have the largest impact on future GHG emissions.

Key Findings

In this 2025 edition of the Rhodium Climate Outlook, we find that:

Although we've avoided the most catastrophic projections, the world is on track to exceed 2°C of temperature rise.

In the lead-up to the 2015 Paris Agreement, the Intergovernmental Panel on Climate Change (IPCC) projected that, without stronger climate action, global temperatures could rise between 2.5°C and 7.8°C by 2100 (a 90% confidence range). Since then, advances in policy and technology have significantly improved the global temperature outlook. In our RCO Baseline, we now project a very likely range of 2.0–3.9°C by the end of the century, with a likely (67% confidence) range of 2.3–3.4°C and an average outcome of 2.8°C (Figure 1). While the world has likely avoided the dire predictions of a decade ago, if current trends persist, the probability of limiting warming below 2°C before the end of the century—the Paris Agreement target—remains below 5%. Achieving that goal will require a much faster pace of policy action and technological deployment.

Under the 2025 RCO Baseline scenario, we find that global GHG emissions are likely to stay constant or decline through 2060 before leveling off or reversing and gradually increasing through the end of the century.¹ Accounting for uncertainty in key emissions drivers, global GHG emissions are *likely* to fall within a range from a 1-gigaton increase to an 11-gigaton decline in CO₂e by 2050—equivalent to a 2% rise to a 21% reduction from

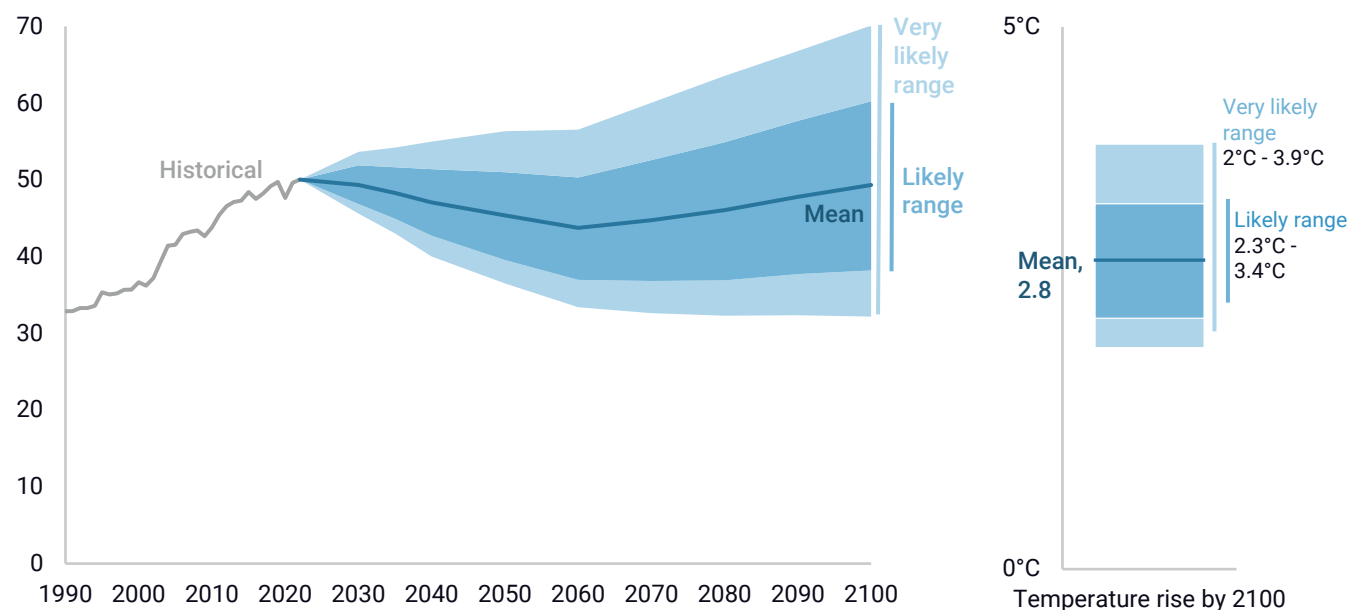
¹ Projections are decadal, with 2030 as the first projected year. We model existing policies through 2030 only apply our uncertainty framework from 2030 onward.

today's levels. It is *very likely* that emissions in 2050 will fall between 37 and 56 gigatons, corresponding to an increase of about 13% to a decrease of 27%. By 2100, uncertainty grows as the influence of economic and technological factors expands, with global GHG emissions *very likely* between 32 and 70 gigatons CO₂e, and *likely* between 38 and 60 gigatons.

FIGURE 1

Global greenhouse gas emissions and temperature rise

Net emissions including removals (billion metric tons of CO₂e) under the RCO baseline scenario

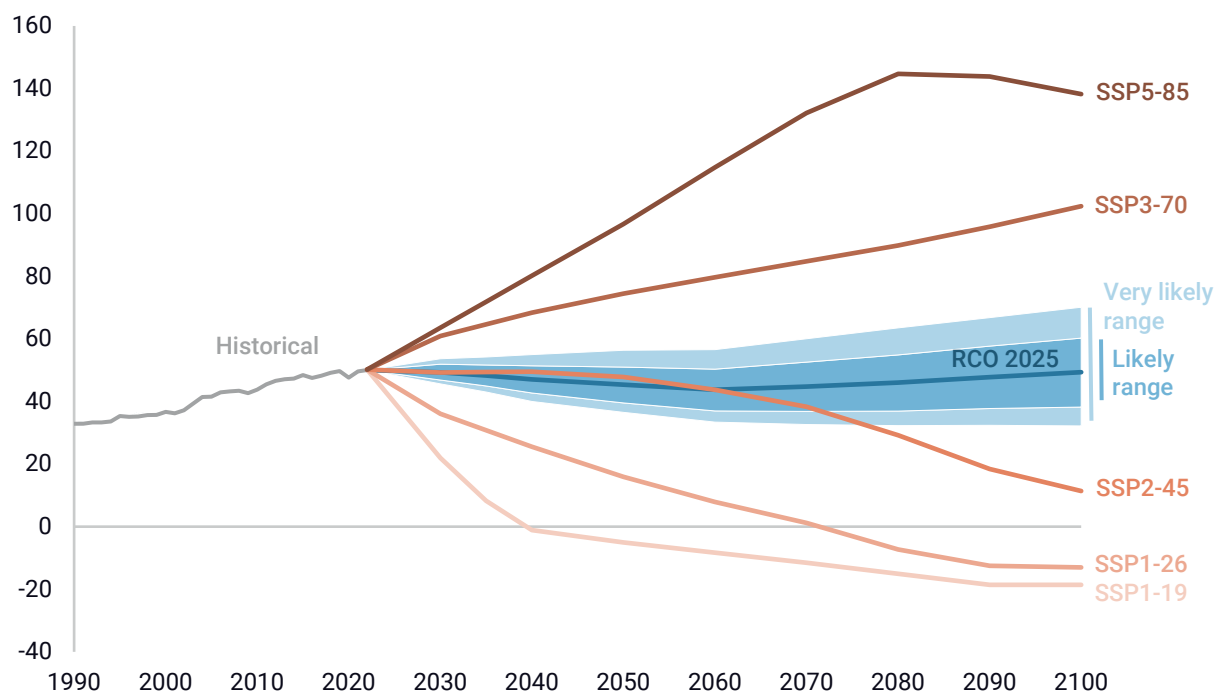


Source: Rhodium Climate Outlook, AR5 100-year GWP values. Following IPCC conventions, this report uses *very likely* to indicate a 90% probability of occurring and *likely* to indicate a 67% probability.

Even when accounting for a wide range of potential futures—including socioeconomic trends, fossil fuel prices, clean energy costs, and climate policy—the RCO Baseline projects a much narrower range of emissions than those used by global climate modelers to simulate future changes in temperature, precipitation, and other climate variables. These emissions projections, known as “Shared Socioeconomic Pathways,” each map out a stylized potential global future.² In the highest, SSP5-85, global GHG emissions grow from 50 gigatons of CO₂e today to a peak of 145 gigatons in 2080, nearly 2.3 times higher than the highest emissions point in our very likely range that year (Figure 2). At the lower end, SSP1-19, global net GHG emissions fall to -18.6 gigatons by the end of the century, 50.8 gigatons lower than the bottom of our very likely range that year. While the RCO Baseline represents significant progress compared to high-emissions modeling scenarios—as well as pre-Paris Agreement IPCC projections—our outlook still falls short of the Paris Agreement’s goal to limit warming to well below 2°C.

² For the sixth round of the Coupled Model Intercomparison Project (CMIP6) used to inform the IPCC’s Sixth Assessment Report, global climate modelers were provided with “marker” emissions scenarios developed by the Integrated Assessment Modeling Consortium (IAMC). These emissions scenarios are shown in Figure 2.

FIGURE 2

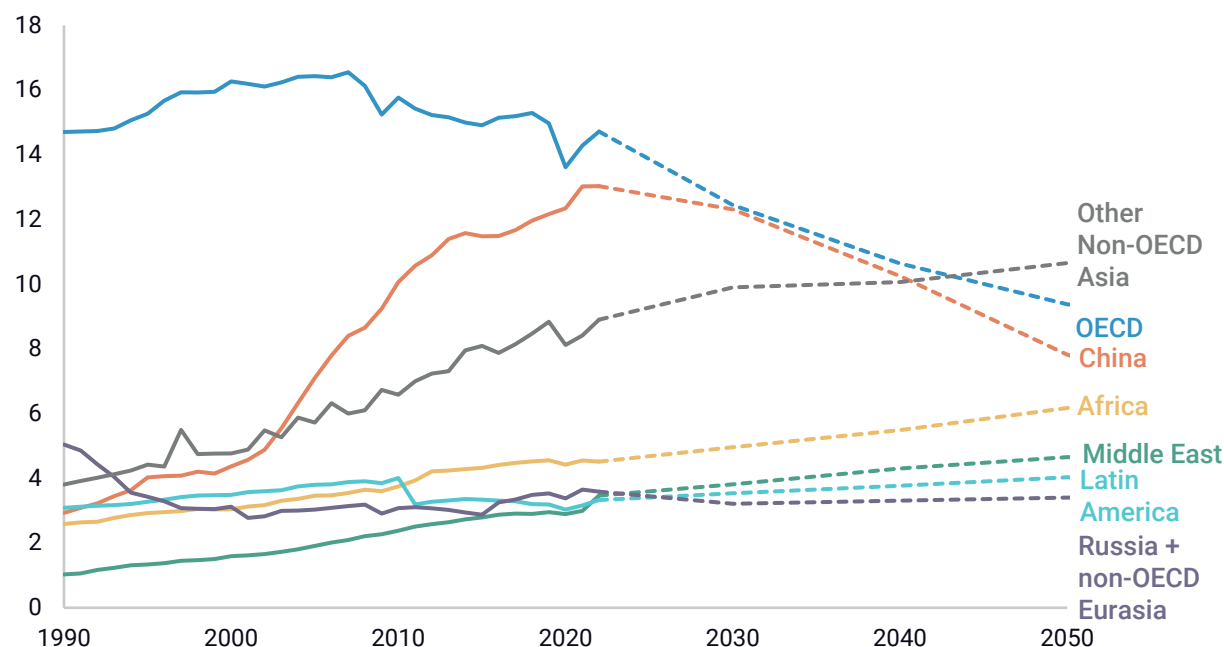
Global GHG emissions scenario comparisonBillion metric tons of CO₂e, 100-year GWP, national inventory basis

Source: Rhodium Climate Outlook, IIASA SSP Database. SSP emissions are adjusted to match national inventory-reported emissions for comparability with Rhodium Group's historical and projected emissions. Following IPCC conventions, this report uses *very likely* to indicate a 90% probability of occurring and *likely* to indicate a 67% probability.

The regional distribution of emissions is poised to shift dramatically.

Throughout the 20th century, developed countries—defined here as members of the OECD—were responsible for most of the world's emissions growth. Since 2000, however, that dynamic has shifted sharply: China alone has accounted for more than half of global emissions growth, while emissions from India and other non-OECD economies have also risen, though more modestly (Figure 3).

FIGURE 3

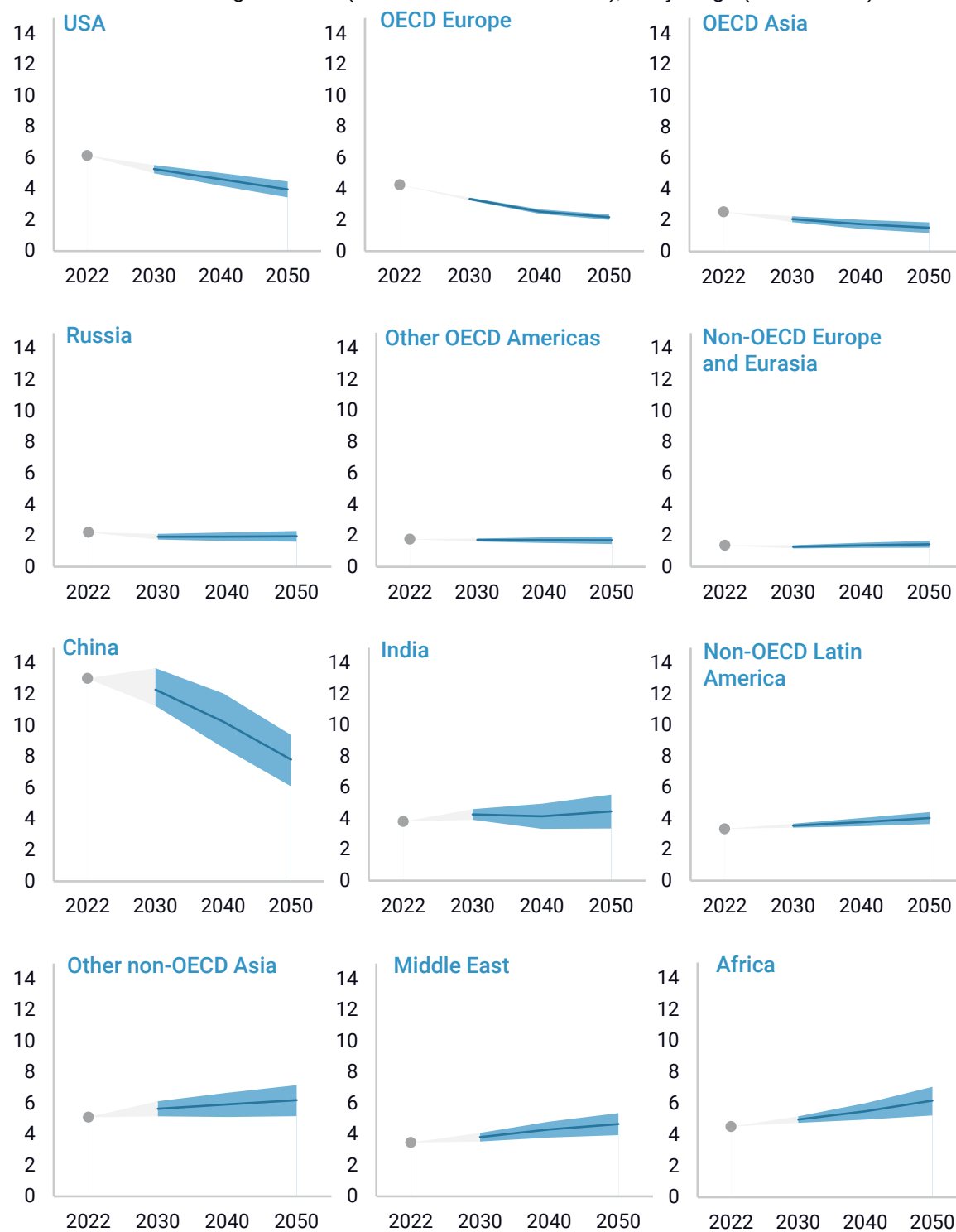
Mean GHG emissions by regionNet emissions including removals (billion metric tons of CO₂e)

Source: Rhodium Climate Outlook. Note: These outcomes represent the average emissions outcome across our projection range. Historical GHG emissions data through 2022 are reported here, followed by projected values for 2030, 2040, and 2050, with unmodeled trend lines connecting historical and projected values.

This trend is expected to change significantly in the coming decades. China's emissions are expected to peak by 2030 or sooner and are projected to enter a long-term decline, driven by structural economic shifts, a shrinking population, and rapid deployment of clean energy. Emissions from OECD countries are also expected to continue falling, reflecting decades of policy support and investment in decarbonization.

Meanwhile, most future emissions growth is expected to come from Africa, the Middle East, India, and other non-OECD countries in Asia, fueled primarily by rapid economic development (Figure 4). Achieving sustained global progress toward net-zero emissions by mid-century will require extending the same kind of decarbonization advances seen in OECD countries and China—through greater access to investment, technology, and innovation—across all regions.

FIGURE 4

GHG emissions by regionNet emissions including removals (billion metric tons of CO₂e), likely range (67% chance)

Source: Rhodium Climate Outlook. Note: The blue range represents the likely (67% chance) emissions outcome across our projection range, line indicates projected mean. Historical GHG emissions data through 2022 are reported here, followed by projected values for 2030, 2040, and 2050, with unmodeled grey range connecting historical and projected values.

Some sectors make faster progress than others.

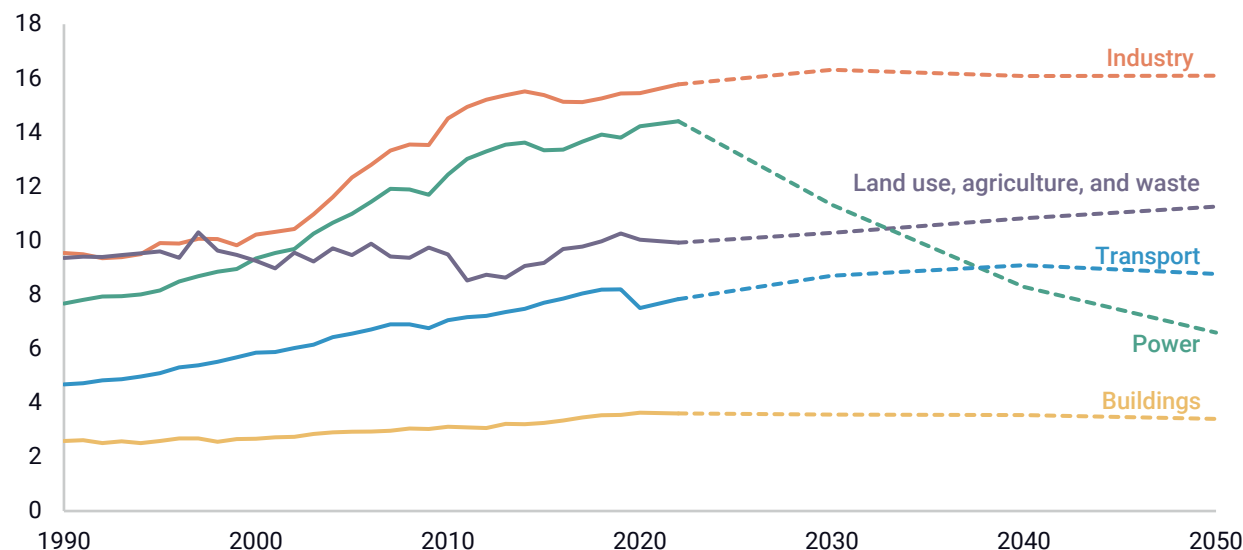
Global emissions from all major sectors have either grown or fluctuated around a long-term average since 1990. Looking ahead, we anticipate that progress across sectors will be uneven. Global emissions from the electric power sector have nearly doubled since 1990, but we anticipate steep declines in the coming decades thanks to technological advances in wind, solar, and battery deployment (Figure 5). Looking across our *likely* range, the RCO Baseline projects that global power emissions will peak in the coming decade and fall by 35-73% by 2050 from today's levels (Figure 6). Global transportation emissions—which have risen by more than two-thirds since 1990—*likely* continue to grow through 2030 before slowing or declining as the electrification of road transport expands. In the buildings sector, we anticipate a more than 50% chance that emissions fall modestly from today's levels by mid-century, driven primarily by reductions in HFCs from air conditioning and refrigeration under the Kigali Amendment.

By contrast, there has been less policy and investment in clean alternatives for the industrial sector—including production of iron and steel, cement, chemicals, and oil and gas. In the absence of additional policy and innovation, global emissions in the sector remain closely tied to overall economic and population growth. The result is a wide spread of potential emission futures, ranging from a 12% decline to 16% growth by 2050 from today's levels in our *likely* range. Similarly, with few cost-effective solutions today, emissions from land use, agriculture, and waste are *likely* to gradually rise through 2050.

FIGURE 5

Global GHG emissions by sector

Net emissions including removals (billion metric tons of CO₂e), projection mean

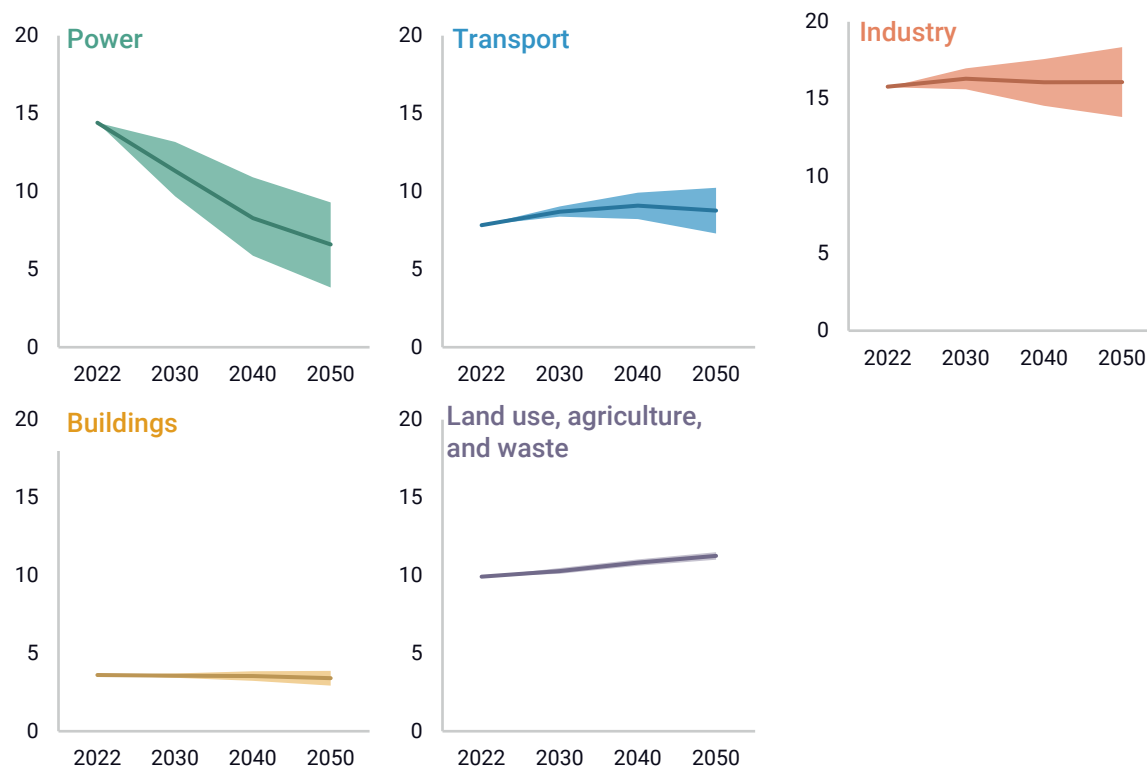


Source: Rhodium Climate Outlook

FIGURE 6

Range of *likely* global emissions for key sectors

Billion tons of CO₂e, *likely* range (67% chance)

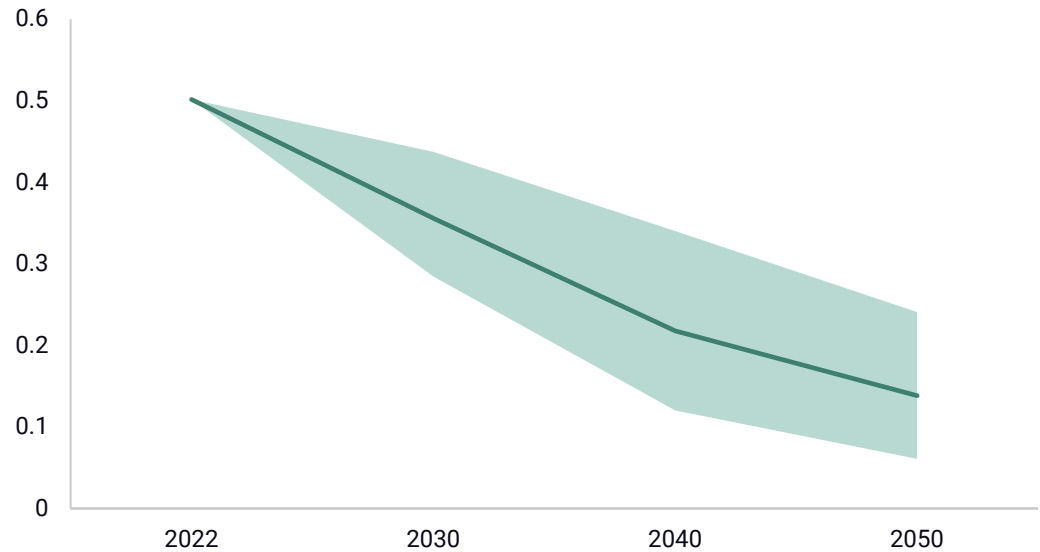


Source: Rhodium Climate Outlook

The world has made progress in decarbonizing electricity, but barriers remain.

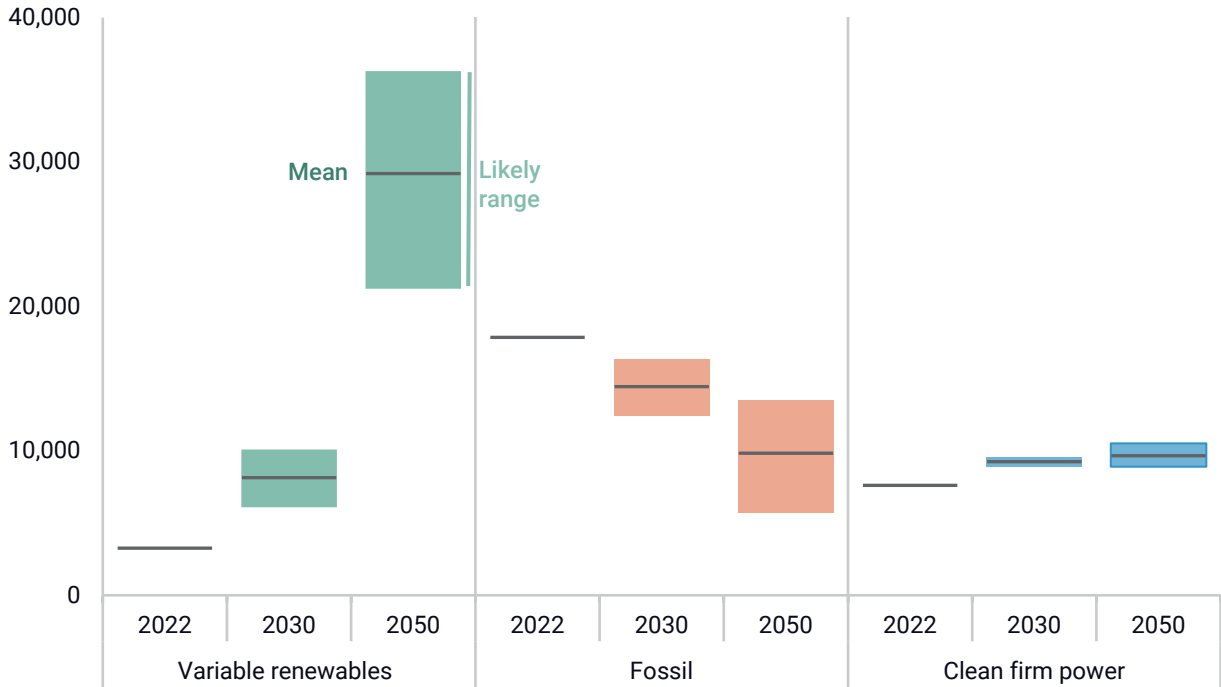
Decades of policy and innovation have driven down the costs of wind, solar, electric vehicles, and batteries, which are needed to decarbonize power generation and transportation. The global average emission intensity of electric power *very likely* falls through 2050 in the RCO Baseline (Figure 7), as variable renewable electricity (VRE) generation—namely wind and solar—rises by seven to eleven times today's levels by 2050 (Figure 8). Over the same period, fossil-powered generation *likely* falls a quarter to two-thirds below today's levels. Clean firm power generation—including from nuclear, hydroelectric, and geothermal sources—grows by 17-38% compared to current levels, supporting the expansion of variable renewables and maintaining grid reliability. Driving this growth in low-carbon electricity generation are falling technology costs coupled with surging demand for electricity. By 2050, global power demand likely grows by 40-94% from today's levels, driven by the electrification of transportation, industry, and buildings, along with rising demand from data centers and AI.

FIGURE 7
Emissions intensity of global electric power
Million metric tons of CO₂e per Terawatt hour (TWh), very likely range (90% chance)



Source: Rhodium Climate Outlook

FIGURE 8
Global electric power generation by source
TWh, *likely* range (67% chance)



Source: Rhodium Climate Outlook. Bars indicate *likely* range, line indicates projected mean.

These global trends in the power sector hide important regional differences. Today, OECD countries and China lead in generating power from VRE. However, as costs continue to fall, deployment in the rest of the world is expected to narrow this gap by 2050 (Figure 9). This convergence is driven by rapid VRE scale-up outside of today's core markets, where generation from wind and solar is projected to *likely* increase by a factor of 12 to 30 between 2022 and 2050—compared with 5 to 8 times growth in the OECD and 5 to 10 times in China. Growth in clean firm generation grows faster in China and countries outside of the OECD, driven in large part by the deployment of nuclear power, of which many plants are already under construction.

At the same time, the surge in clean electricity is expected to coincide with persistent fossil fuel use in many parts of the world. In OECD countries and China, fossil-based generation likely falls to between one-fifth and one-half of current levels by 2050. In contrast, in the rest of the world—where clean energy investment and policy ambition have generally been lower—future fossil fuel use remains highly uncertain and closely tied to economic activity and the power demand that follows. Projections range from significant declines to meaningful increases by midcentury.

These regional differences are reflected in generation mixes. By 2050, zero-carbon sources—including variable renewables and clean firm generation—are projected to supply over 85% of total electricity in OECD countries and China, up from roughly 50% and 40% today, respectively (Figure 10). In the rest of the world, this share rises from about 30% to 67% over the same period.

The rapid global expansion of clean electricity supply is essential not only to decarbonize the power sector, but also to reduce emissions in other sectors that depend on electrification—especially in fast-growing economies. Achieving this will require continued support for mature renewable technologies alongside faster deployment of emerging clean firm solutions. In emerging economies, success will hinge on access to affordable and reliable financing, strengthening policy frameworks, and accelerating the buildout of supporting grid infrastructure. Advanced economies—despite their faster progress—still face barriers to power-sector decarbonization. These include streamlining transmission development and siting processes in OECD countries and advancing grid and power market reforms in China.

FIGURE 9

Electricity generation from variable renewable energy, fossil fuels, and clean firm power TWh, mean projection and *likely* range (67% chance)

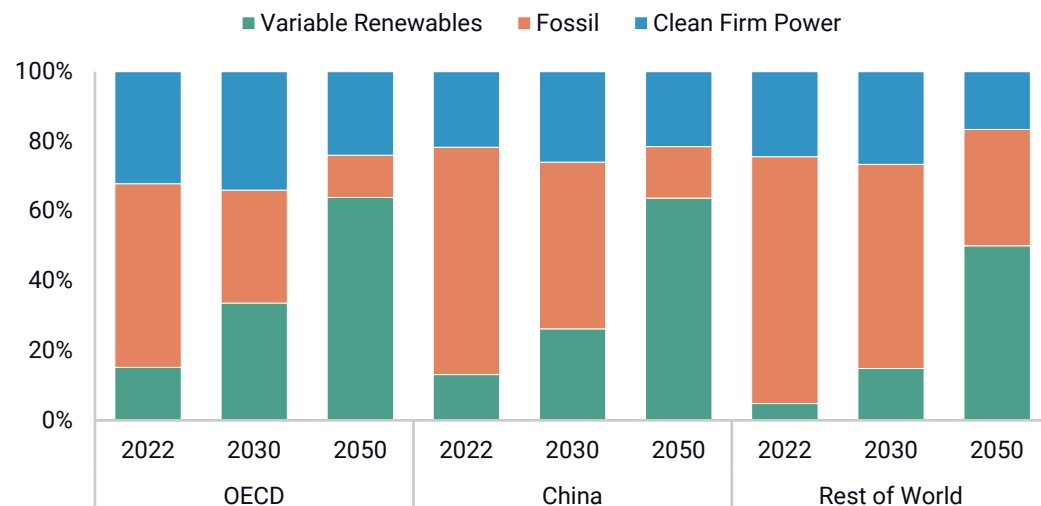


Source: Rhodium Climate Outlook. Fans indicate *likely* range; line indicates projected mean.

FIGURE 10

Electricity generation shares in OECD countries, China, and the rest of the world

Percent share of total electricity generation, mean projection

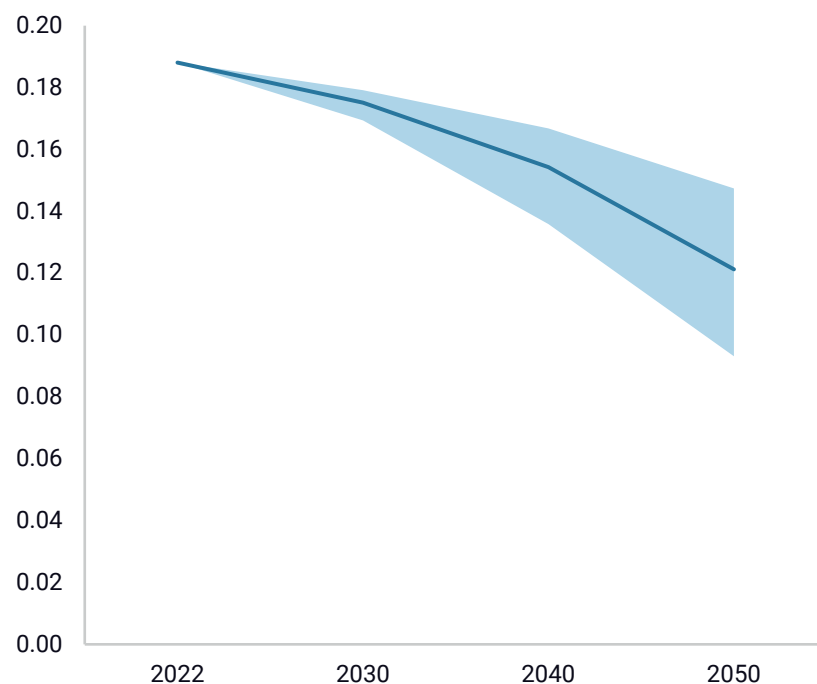


Source: Rhodium Climate Outlook

Electric vehicles are bending the emissions curve in on-road vehicles, but tackling heavy-duty transport is further behind.

As in the power sector, the world is making steady progress in scaling the technologies needed to decarbonize on-road transport. Decades of targeted policies and investment have lowered the cost of electric vehicle (EV) batteries and accelerated EV adoption globally. With battery prices expected to keep falling, the outlook for continued growth in the EV market remains strong. In fact, we find that EVs account for the majority of new passenger sales in every region by 2050 in our mean projection. Even looking across a range of futures for oil prices, EV battery costs, policy ambition, and charging infrastructure, EVs are *very likely* to account for at least half—and potentially above 80%—of global passenger vehicle sales in that timeframe. As a result, the emissions intensity of global passenger vehicles *very likely* falls through 2050 (Figure 11).

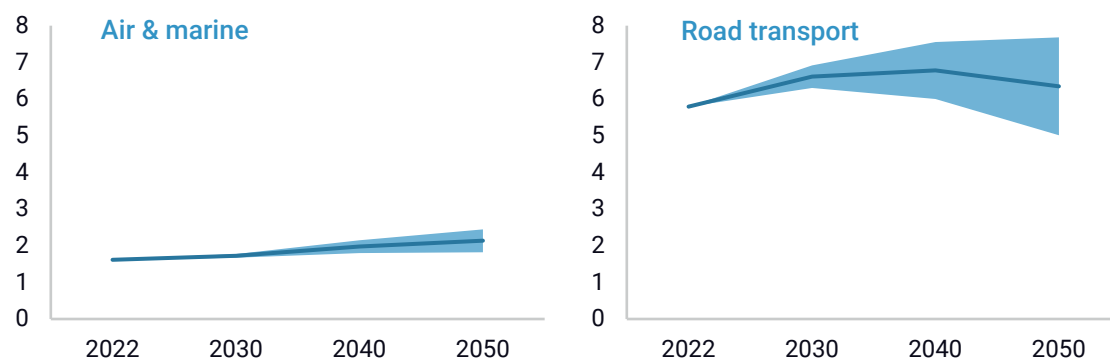
FIGURE 11

Emissions intensity of global passenger vehicles
GHGs (tons CO₂e) per mile, *very likely* range (90% chance)

Source: Rhodium Climate Outlook

The challenge of decarbonizing transportation extends beyond passenger vehicles: decarbonizing the rest of road transport—including heavy-duty vehicles—makes enormous progress but faces steeper infrastructure, cost, and logistical barriers than passenger vehicles in fully electrifying. As a result, growth in emissions from all on-road vehicles combined is likely to decelerate but not meaningfully decline through 2050 (Figure 12). And while road transport technologies are increasingly mature, tackling emissions from aviation and marine shipping will require further innovation and scale to reduce costs. These two modes of transportation likely see growth in demand (and emissions) over the coming decades.

FIGURE 12

Global GHG emissions by transport modeMillion metric tons of CO₂e, *likely* range (67% chance)

Source: Rhodium Climate Outlook

Industrial emissions remain stubbornly high, despite some glimmers of hope.

While the technologies exist today to decarbonize vast swaths of the power and transport sectors, opportunities to transition the industrial sector are more limited. In the RCO Baseline, emissions progress in the industrial sector comes largely from demographic change and already established technologies in major-emitting sectors, including iron and steel and cement production. In iron and steel, emissions *likely* fall through 2050 as demand slows in China, and as virgin iron is increasingly replaced with recycled steel as more scrap becomes available globally (Figure 13). Falling demand in China also drives down emissions from cement production by mid-century in our *likely* range, along with a global reduction in the amount of clinker—the emissions-intensive core ingredient—used in each ton of cement. Novel technologies, including using clean hydrogen-based iron production and installing carbon capture equipment on iron or clinker facilities—play only a limited role.

In both steel and cement production, mature decarbonization pathways deliver significant reductions through 2050 but face inherent limits. Recycled scrap cannot meet all rising steel demand, leaving a continued need for ore-based production. Similarly, while new cement formulations are advancing, the clinker ratio can only be reduced so far without compromising structural integrity. Without further action, continued decarbonization in these sectors could stall as material demand rises in regions outside the OECD and China later in the century.

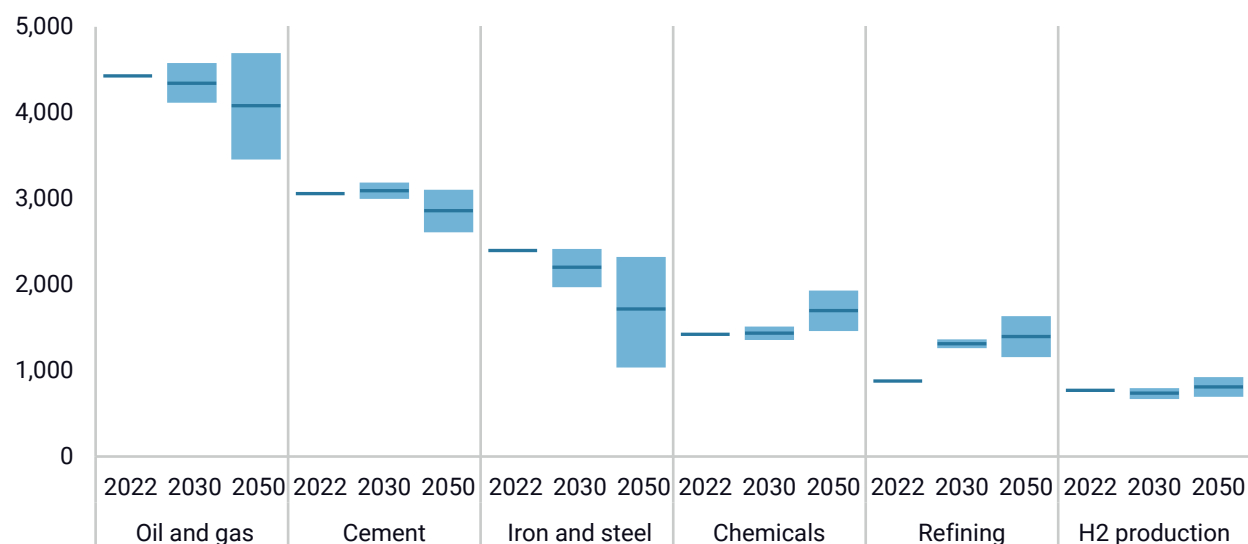
In industrial sectors outside of steel and cement, meaningful emission reductions are less likely in the coming decades. Oil and gas production represents the single largest source of emissions in industry, including fugitive methane emissions from the production, transmission, and distribution of natural gas. Emissions are also highly uncertain, driven by underlying uncertainty in oil and natural gas demand across the global economy. As a result, emissions from oil and gas production are anywhere from 22% lower to 8% higher than today by 2050 in our *likely* range.

Emissions from chemicals *likely* stay flat or grow through mid-century, following demand for plastics and industrial chemicals. Plastic use has surged in recent decades, but without affordable technologies and interventions, production and associated emissions will continue to climb as economies expand. Emissions from oil refining *likely* rise through 2050 before projections diverge, mirroring uncertainties in global oil demand. Emissions from hydrogen production are more likely than not to grow slightly by 2050 as low-carbon hydrogen production pathways fail to keep pace with rising demand from key sectors, including fertilizer, chemicals, and refining.

FIGURE 13

Global GHG emissions by industrial sub-sector

Million metric tons of CO₂e, *likely* range (67% chance)



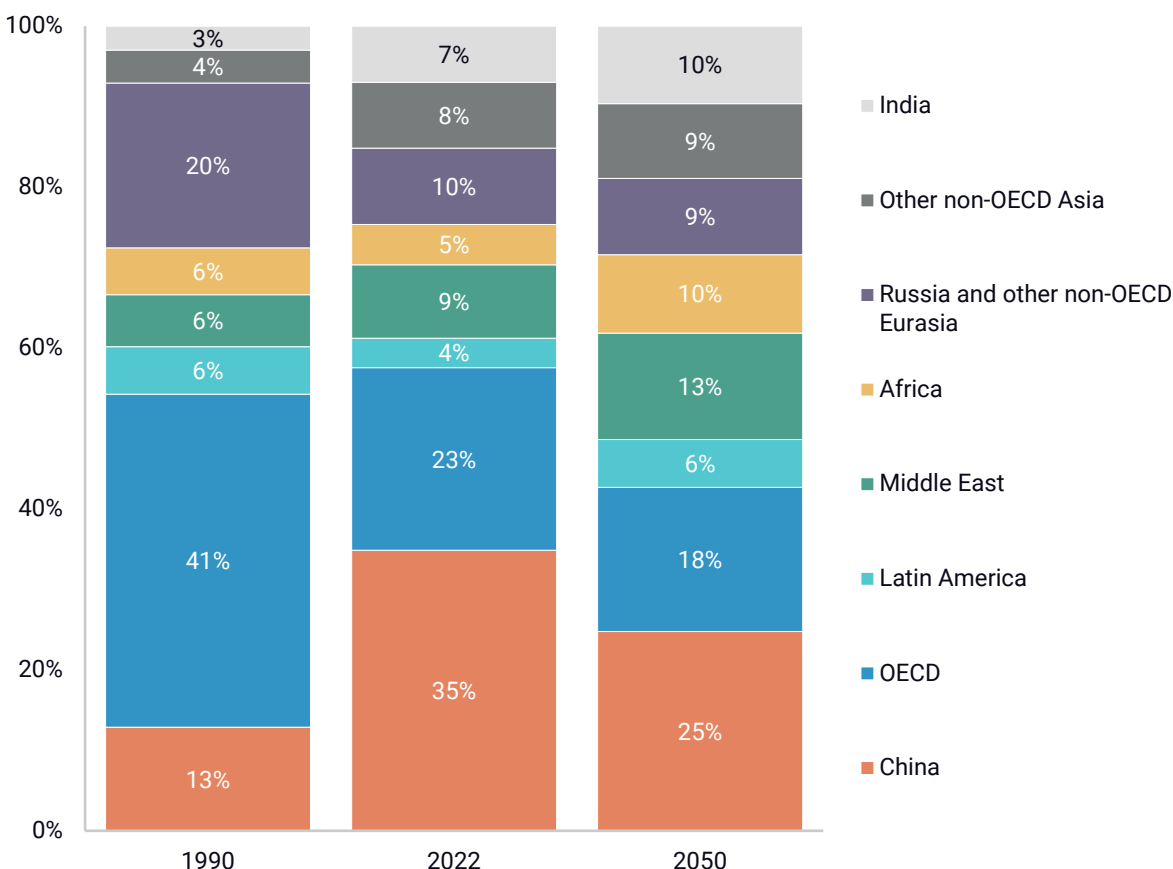
Source: Rhodium Climate Outlook

Underlying the global industrial emissions trends are stark regional shifts. China currently accounts for over one-third of global industrial emissions, but its share declines to one-quarter by 2050 as industrial activity slows, urbanization levels off, and the population contracts (Figure 14). OECD countries also see their share fall, while rapidly growing regions fill the gap. India's industrial emissions rise sharply alongside economic and population growth, with similar increases across Africa, the Middle East, and other non-OECD regions. As emissions become more widely distributed, decarbonizing industry will depend on making low-carbon technologies accessible and affordable well beyond today's major emitters.

FIGURE 14

Regional share of industrial GHG emissions

Percent, projection mean



Source: Rhodium Climate Outlook

Peak fossil fuel use is possible but not assured.

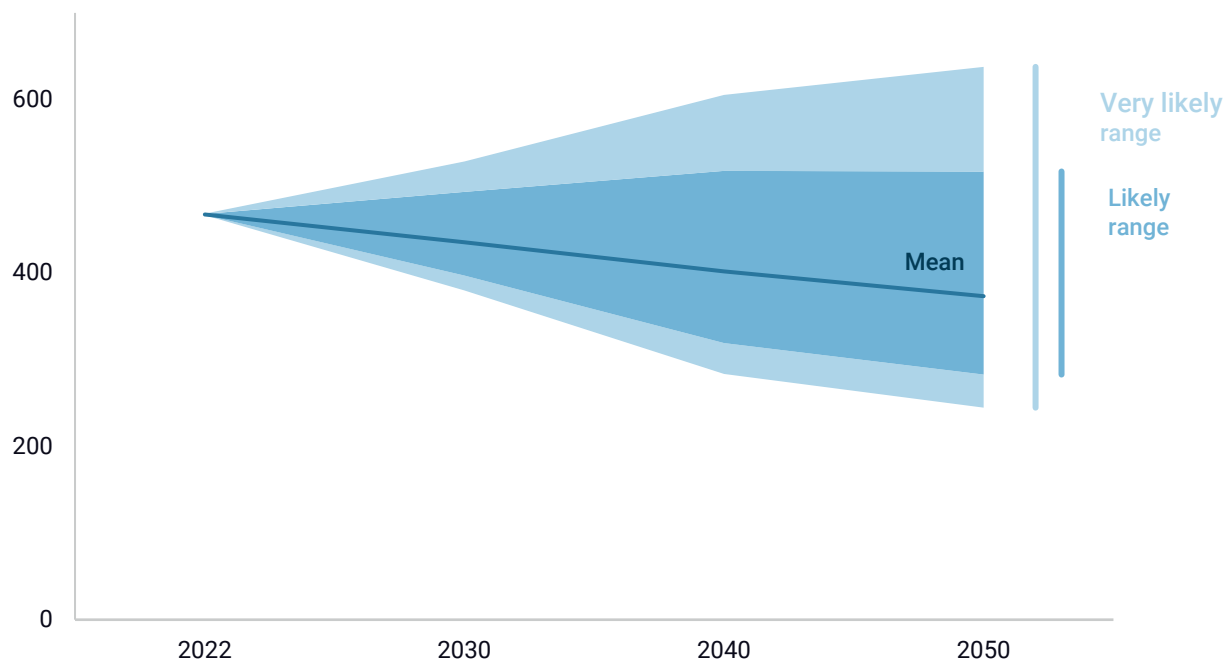
Meeting the Paris Agreement goal of keeping temperature rise below 2°C will undoubtedly require a swift transition away from fossil fuels. There is ongoing debate over whether global fossil fuel demand will peak this decade, with energy outlooks ranging from imminent decline to a prolonged plateau or continued growth.

The RCO Baseline provides some useful nuance to this discussion. Given the many factors shaping the outlook for fossil fuels, an approach that accounts for the major sources of uncertainty provides valuable insight into the likelihood, timing, and conditions under which a global peak in fossil fuel use could occur. We find there's a 59% chance that overall fossil fuel consumption—including for coal, natural gas, and oil— will peak this decade, and a 62% chance consumption peaks before 2050 (Figure 15).

FIGURE 15

Global fossil fuel consumption

Quadrillion British Thermal Units (BTUs), *very likely* (90% chance) and *likely* (67% chance) range, projection mean



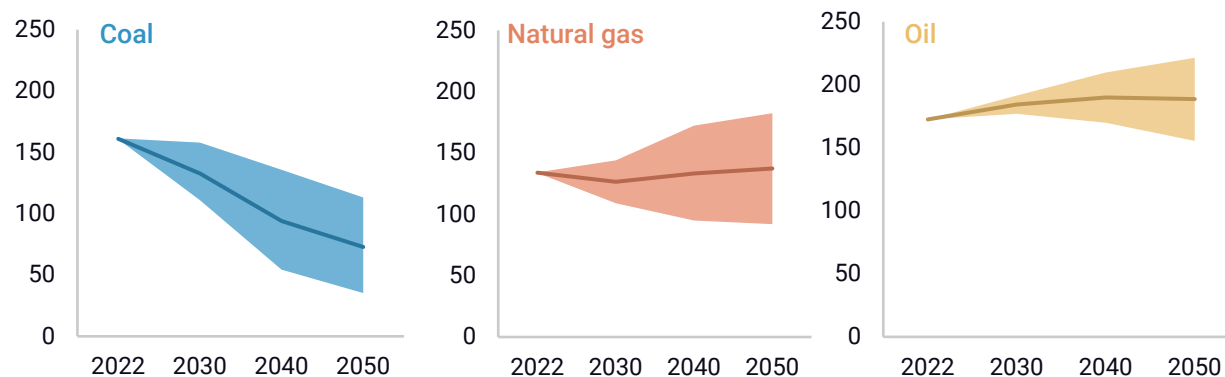
Source: Rhodium Climate Outlook

A closer look reveals distinct trends across fossil fuel types (Figure 16). The good news: there is over a 90% chance that coal consumption will fall by 2050, driven primarily by the sharp decline in coal-fired power generation.

The outlook for oil is more mixed. The shift to EVs eats into oil consumption from passenger vehicles, but demand from trucks, air, marine, and industry is highly uncertain. Global oil consumption in 2050 lands anywhere from 10% lower to 28% higher than today in our likely range.

The outlook for natural gas remains highly uncertain, growing or shrinking by a third from today's levels in our likely range. In the power sector, gas continues to serve a key role—providing flexible, dispatchable generation to balance the growing share of intermittent renewables and to meet rising electricity demand in rapidly developing markets. However, future demand depends heavily on policy stringency, the cost trajectory of wind and solar, and overall economic growth, especially in emerging economies. As a result, natural gas use in the power sector could rise or fall by as much as 50% relative to today's levels by 2050 in our likely range. In industry, gas demand is similarly tied to economic trends, with likely projections ranging from about 9% below to 45% above current consumption.

FIGURE 16

Global fossil consumption by fuelQuadrillion BTUs, *likely range (67% chance) and projection mean*

Source: Rhodium Climate Outlook

Conclusion

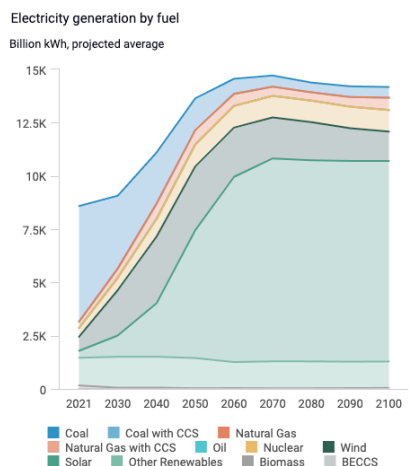
Each year, the Rhodium Climate Outlook provides an updated look at what the world is on track for in terms of energy use, emissions, and temperature rise, given a wide range of developments with impacts on key drivers. As we narrow down uncertainty, add emerging technologies that have reached sufficient maturity, and incorporate new policies as they are adopted, we hope to see the outlook for global emissions and temperature rise align more closely with a path to global decarbonization around mid-century and global mean temperature rise well below 2°C. In the years ahead, the RCO will continue to be an important barometer to assess what really matters, where the world must focus, and how our efforts are paying off.

Access RCO data on the ClimateDeck

All of the underlying data from the RCO is available on the [ClimateDeck](#), our free interactive data platform that enables you to explore global and US 50-state greenhouse gas (GHG) emissions data and projections and energy market outlooks.

Unlock insights with Rhodium Climate Outlook data

Dive into the Rhodium Climate Outlook dashboards to answer your global and regional climate-related questions. Whether you are analyzing emissions trends, forecasting energy market shifts, or assessing the potential for emerging climate technologies, the ClimateDeck offers the tools to customize your analysis. The ClimateDeck equips users with comprehensive datasets, unique and responsive insights, and a robust set of tools. Users are empowered to track pathways to climate targets and understand the implications of major developments at the international, national, and state levels.



Explore, customize, and share

All of the underlying data from the Rhodium Climate Outlook is available to explore and download from the ClimateDeck. Use its intuitive interface to tailor data visualizations by adjusting inputs such as timeframe, geography, sector, greenhouse gas, and uncertainty ranges. The adjustable datasets can be exported as production-ready visualizations and CSV files to seamlessly integrate into your work. Incorporate ClimateDeck data in your own analysis and external publications, with attribution to Rhodium Group. Access the full suite of Rhodium Climate Outlook data for free. For access and more information, please email climatedeck@rhg.com.

About Rhodium Group

Rhodium Group is an independent research provider with deep expertise in policy and economic analysis. We help decision-makers in both the public and private sectors navigate global challenges through objective, original, and data-driven research and insights. Our key areas of expertise are China's economy and policy dynamics, and global climate change and energy systems. More information is available at www.rhg.com.

Acknowledgements

Funding for the Rhodium Climate Outlook is provided by Breakthrough Energy as part of their support for the ClimateDeck, a partnership of Rhodium Group and Breakthrough Energy.

The authors would like to acknowledge the contributions of Rhodium team members that supported this work, including Jaspreet Sohal, Maggie Young, Kelly McCusker and Trevor Houser.

Disclosures

This material was produced by Rhodium Group LLC for use by the recipient only. No part of the content may be copied, photocopied, or duplicated in any form by any means or redistributed without the prior written consent of Rhodium Group.

Our publications are intended to provide clients with general background research on important global developments and a framework for making informed decisions. Our research is based on current public information that we consider reliable, but we do not represent it as accurate or complete. The information in this publication is not intended as investment advice and it should not be relied on as such.

© 2025 Rhodium Group LLC, 5 Columbus Circle, New York, NY 10019. All rights reserved.

New York | California | Washington, DC | Paris

Website: www.rhg.com

