No. 25-170

In the
Supreme Court of the United States

SUNCOR ENERGY (U.S.A.) INC., ET AL.,
Petitioners,

v.

COUNTY COMMISSIONERS OF BOULDER COUNTY, ET AL.,
Respondents.

On Writ of Certiorari to the Supreme Court of Colorado

BRIEF OF THE BREAKTHROUGH INSTITUTE AS *AMICUS CURIAE* IN SUPPORT OF PETITIONERS

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INTEREST OF *AMICUS CURIAE*

The Breakthrough Institute is a global environmental research center founded in 2008.[1] It focuses on identifying and promoting technological solutions to environmental and human development challenges. Breakthrough's work emphasizes empirically grounded climate science, technological innovation, and democratic governance as the foundations of effective climate policy. Breakthrough has published extensively on energy transitions and decarbonization, climate risk, extreme weather trends, and the scientific and legal limitations of attributing discrete harms to anthropogenic climate change, including critiques of the misuse of attribution science in litigation and regulatory contexts.

Breakthrough has a strong interest in ensuring that courts rely on robust, mainstream climate science and well-established principles of causation when adjudicating claims that sound in climate change. It has an equally strong interest in ensuring that novel scientific methodologies are not deployed in ways that distort their actual conclusions, that exceed the limits of what those methodologies can establish, or that undermine public trust in climate research.

Both concerns are present here, and they underscore why Petitioners are right that Respondents' claims are preempted. These state-law claims require

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[1] No counsel for a party authored this brief in whole or in part, and no person or entity other than amicus curiae or its counsel made a monetary contribution intended to fund the preparation or submission of this brief. Unless otherwise noted, all internal citations, quotations, and brackets are omitted.

attribution science to establish a causal link between emissions from Petitioners' products and Respondents' alleged injuries. But the attribution methodology Respondents invoke cannot, as a matter of its own internal logic, determine the effects of globally mixed emissions on any particular jurisdiction. That structural deficiency confirms that climate-emissions claims of this kind are inherently interstate and must be governed by federal law.

SUMMARY OF ARGUMENT

As Petitioners explain, Respondents' state-law tort claims operate in an area this Court has long recognized as inherently federal. That concept exists because some interstate controversies are, by their nature, incapable of resolution under any single state's law—one state cannot regulate conduct occurring in another, yet neither can the injured state be left without a neutral source of law to vindicate its interests. *See Tex. Indus., Inc. v. Radcliff Materials, Inc.*, 451 U.S. 630, 641 (1981) ("the interstate or international nature of the controversy makes it inappropriate for state law to control"). Interstate pollution is the paradigmatic example: when pollution flows across state lines through ambient air and water, the injured state cannot regulate conduct occurring in the emitting state, and the emitting state's law cannot be the only vehicle to determine whether or how the injured state obtains a remedy. *See Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410, 421–22 (2011) ("air and water in their ambient or interstate aspects" are "meet for federal law governance" because "borrowing the law of a particular State" would be "inappropriate"); Pet. Br. 27. For that reason, the Constitution's default rule for

interstate pollution is federal governance, and that default rule is overridden only if Congress does so expressly. *See Int'l Paper Co. v. Ouellette*, 479 U.S. 481, 492, 497 (1987).

This case is not about interstate pollution—it is about something even less susceptible to state-tort adjudication. *See* Alex Trembath, *Climate Change Is Not a Pollution Problem*, The Breakthrough Inst. (Nov. 2, 2021), tinyurl.com/34yk89v2 (explaining that greenhouse gas regulation "requires identifying a different kind of harm altogether" from what pollution statutes were designed to address). Respondents sued Petitioners for alleged "impacts of climate change" in Colorado based on their "production, promotion, refining, marketing and sale of fossil fuels." Pet. App. 2a (Colorado Supreme Court). The Constitutional default rule that places interstate pollution with the federal government applies with redoubled force to Respondents' claims, which seek to hold energy producers liable for the cumulative climatic effects of lawful global commerce.

The physical realities of climate science dictate why that default rule exists, why Congress rightly has never overridden it, and why court-fashioned climate policy would be among the worst imaginable ways to depart from the norm. Respondents invoke purported scientific expertise, but the very scientific mechanisms they rely on demonstrate that their claims inherently implicate the global atmosphere—a domain where state law has never been competent to operate.

First, the alleged harms on which Respondents' claims depend—wildfires, pests, droughts, extreme

heat, and flooding—cannot be attributed to anthropogenic climate change at the localized scale Respondents invoke. The extreme event attribution studies on which climate-tort plaintiffs rely give a systematically inflated picture of climate change's role in extreme weather. Those studies are pervaded by selection biases: researchers disproportionately study event types already expected to worsen, and methodological choices exclude countervailing climate influences. Indeed, the field was founded with the express aim of determining whether it would "ever be possible to sue anyone for damaging the climate." Patrick T. Brown, *Do Climate Attribution Studies Tell the Full Story?*, The Breakthrough Inst. (Jan. 7, 2025), tinyurl.com/5n7v7pff (quoting Myles Allen).

Comprehensive scientific assessments report no detected climate-change signal for many of the phenomena Respondents cite, including river floods, fire weather, and drought, over the historical period. *See id.* (reporting that standardized assessments find climate-change influence on multiple categories of extreme weather not yet detectable above natural variability). Natural variability remains the dominant driver of extreme weather. Respondents cannot ground tort liability in a scientific literature whose collective output reflects advocacy-driven bias rather than a representative accounting of climate change's actual influence on extreme events.

Second, even assuming Respondents could establish that climate change caused their alleged harms at the localized scale their claims require, "the chain of causation between [the alleged] conduct and the asserted in-state injuries here is attenuated," "to put it

mildly." Pet. Br. 36. Respondents cannot trace any individual defendant's contribution through the global atmospheric system to any specific localized harm. *See* Ted Nordhaus & Alex Trembath, *Against Climate Lawfare*, The Breakthrough Inst. (Mar. 23, 2026), tinyurl.com/2pv8f7a8 ("[E]ven harms that can in some part be attributed to climate change . . . cannot be credibly traced to any one policy, corporation, industry, government, or nation.").

Greenhouse gases are chemically fungible: once emitted, they enter a global pool and mix with emissions from every other source worldwide. *See Am. Elec. Power*, 564 U.S. at 422 ("[g]reenhouse gases once emitted become well mixed in the atmosphere" such that "emissions in New Jersey may contribute no more to [climate-related effects] in New York than emissions in China"). No science can connect the emissions attributed to a particular producer—however defined—to a particular temperature increment, weather event, or injury. *See* Nordhaus & Trembath, *supra* (calculating that even 505 million metric tons of additional annual CO_2 emissions translate to an increase of 0.0001–0.0003°C in global temperatures). And single-event attribution methodology (which compares the frequency of events across simulated worlds) does not supply the particularized causal proof tort law requires. It cannot identify which events were caused by warming as distinct from events that would have occurred regardless, and it cannot establish causation even for events it labels "attributable," because each such event was ignited, propagated, and reached the plaintiff through a chain of specific physical and human factors the methodology does not examine. *See* Peter Sherman, Peter Huybers & Eli Tziperman, *On the Attribution of*

Weather Events to Climate Change Using Empirically Fit Extreme Value Distributions, 38 J. Climate 2799, 2799 (2025) (demonstrating that internal climate variability and the uncertain relationship between global mean temperature and regional extremes "may lead to inaccurate attribution conclusions").

While prospective legislation can account for scientific uncertainty through transparent policy choices, retroactive tort liability would require each state's courts to treat advocacy-driven attribution science as established fact. Respondents seek the regulation of emissions through judicial fiat, but no state's tort law is competent to govern activity that is necessarily interstate and international.

ARGUMENT

Respondents' claims involve an area of inherent federal concern. Even ordinary interstate pollution disputes are incapable of resolution under any single state's law, and greenhouse gas emissions present this dynamic in its most extreme form: every emitter contributes to a global atmospheric pool that affects every jurisdiction on earth. Federal law has governed interstate emissions claims for as long as they have existed, *see* Pet. Br. 25, and only Congress can override that Constitutional default rule. Because the Clean Air Act does not authorize state tort claims against interstate emissions, and certainly not to remedy the alleged "impacts of climate change," Pet. App. 2a, Respondents' claims are preempted. *See Ouellette*, 479 U.S. at 492, 497 (holding that source-state law claims survived displacement because they were expressly authorized by statute while claims not expressly authorized were preempted).

Two independently sufficient scientific and structural deficiencies in Respondents' state-law claims underscore why they are preempted.

First, the alleged harms on which Respondents' claims rest are cannot be attributed to anthropogenic climate change at the localized scale Respondents invoke. *Second*, even assuming some attribution is possible in the aggregate, Respondents cannot trace emissions from any individual defendant's products through the global atmospheric system to any specific localized injury. Each independently confirms that Respondents' claims present the kind of inherently interstate controversy that the constitutional structure commits to federal governance.

I. THE ALLEGED HARMS CANNOT BE ATTRIBUTED TO CLIMATE CHANGE AT THE LOCALIZED SCALE RESPONDENTS INVOKE

A. The Attribution Literature Reflects Advocacy-Driven Bias

Respondents' claims depend on the factual predicate that the specific harms they allege—wildfires, heat waves, drought, flooding, snowpack reductions—were caused by anthropogenic climate change at the localized Colorado scale. The science does not support that predicate. The extreme event attribution literature on which climate-tort plaintiffs rely suffers from systematic selection biases that inflate the apparent role of anthropogenic warming in extreme weather, and the more comprehensive scientific assessments report no detected climate-change signal for many of the specific harm categories Respondents invoke.

The extreme event attribution field was not developed as a neutral scientific enterprise. Single-event attribution is an advocacy-driven framework designed to advance specific legal outcomes. The field's founder, Myles Allen, created it with the express motivation of answering the question whether it would "ever be possible to sue anyone for damaging the climate." Brown, *supra* (quoting Allen). The aim is the destruction of a central pillar of the American economy: If plaintiffs begin winning these suits, according to one of Respondents' lawyers, "every defendant in all of these cases immediately declares bankruptcy." The Federalist Soc'y, Can State Courts Set Global Climate Policy?, at 34:08 (YouTube, Oct. 8, 2025), youtu.be/1wyxaE4TC-A?si=bVof2ZAv3A_kSXeS (comments of David Bookbinder). A leading climate activist, Friederike Otto, has stated that the purpose of her supposedly scientific attribution work is to "hold countries and companies to account." Brown, *supra* (quoting Otto). Nor are these isolated actors. Climate Central, an advocacy organization whose self-described specialty is media placement and dissemination, recently led a fundraising appeal with this theme: "The influence our analysis had on media coverage of Hurricanes Helene and Milton before they even made landfall gives just a taste of what we can achieve with your support." *Id.* (quoting a Climate Central fundraising email).

Attribution theorists aim to answer the question whether climate change has altered the probability of events of a given type, but the literature is pervaded by four compounding selection biases that cause it to systematically overstate climate change's role in extreme weather. *First*, researchers disproportionately

study event types expected to worsen under warming (such as heat waves and heavy precipitation) and largely ignore event types expected to improve, including extreme cold and certain storm categories; the literature contains 3.6 times more studies on extreme heat than on extreme winter weather. *See* Brown, *supra*. *Second*, within each event type, methodological choices tend to amplify the apparent influence of climate change—that is, the degree to which anthropogenic warming has detectably altered the frequency or intensity of a given phenomenon—by excluding countervailing factors. *Id*. Third, null results (findings of no detectable climate influence) are less likely to be published, biasing the published literature toward positive findings. *Id*. And fourth, media coverage amplifies positive attribution findings while ignoring findings of no effect. *Id*.

The collective output of the field, therefore, implicitly contains two important caveats: it studies "mostly the kinds of extreme weather that we already know are made worse by human-caused climate change," using "mostly the sub-elements of human-caused climate change that we already know make the kind of extreme weather we are studying worse." *Id*. The second caveat, involving what Breakthrough Co-Director Patrick Brown calls "sub-elements," means that within any given event type, researchers model only the causal channels expected to worsen that event while omitting channels that cut the other way. For wildfires, for example, the standard approach models how warming dries fuels (increasing fire risk) but does not model how CO_2 fertilization increases vegetation moisture content or how precipitation shifts may

dampen fire conditions. The result is a methodology that, by design, finds what it is looking for.

The distortion is apparent when individual attribution studies are compared against broader scientific assessments. The most comprehensive assessment of climate-change detection across harm categories reports no detected signal over the historical period for river floods, fire weather, drought, severe wind storms, and tropical cyclones—several of the very phenomena Respondents allege as bases for tort liability. *See id.* (reporting that broad assessments find climate-change influence on these categories not yet detectable above natural variability). For drought, the discrepancy is not merely one of magnitude but of direction: individual attribution studies suggest warming has increased drought intensity by 18 percent, while the comprehensive assessments find warming decreased drought intensity by approximately 1 percent. *See id.* Respondents cannot ask state courts to adjudicate claims grounded in a body of science whose own comprehensive assessments do not support the conclusions climate-tort plaintiffs draw from it.

The complaint's claims about science illustrate the point. The complaint's localized projections—"49 days" with "temperatures of 95°F or above" for Boulder, "300 additional wildfires" for San Miguel, J.A. 42, 47—are model outputs derived from implausible scenarios and generated by models that systematically overpredict observed warming. *See* Ross McKitrick & John Christy, *Pervasive Warming Bias in CMIP6 Tropospheric Layers*, 7 Earth & Space Sci. e2020EA001281 (2020); Tim Palmer & Bjorn Stevens, *The Scientific Challenge of Understanding and Estimating Climate*

Change, 116 PNAS 24390, 24392 (2019) (explaining that climate models are "not fit for purpose" for regional-scale applications). Indeed, attribution literature has relied on emissions scenarios that the modeling community itself has now repudiated. Earlier this year, CMIP7, a project that coordinates global climate model runs, entirely eliminated the widely used RCP8.5 and SSP5-8.5 scenarios as "implausible, based on trends in the costs of renewables, the emergence of climate policy and recent emission trends." Van Vuuren et al., *The Scenario Model Intercomparison Project for CMIP7 (ScenarioMIP-CMIP7)*, 19 Geoscientific Model Development 2627, 2631 (2026). But RCP8.5 was widely used in climate literature, despite its widely acknowledged flaws, creating the impression that the dangers of climate change are much worse than they are. The persistence of RCP8.5 is itself a product of the same selection biases described above: a worst-case scenario that reliably produces dramatic findings was adopted as a baseline despite its implausibility and retained long after the modeling community recognized its flaws.

B. Even An Unbiased Attribution Study Could Not Identify Which Events Warming Caused

Recent peer-reviewed research has confirmed that the standard attribution methodology is unreliable even on its own terms. A study led by Harvard climatologists applied the methodology commonly used by Friederike Otto's World Weather Attribution consortium to preindustrial climate simulations (model runs with no greenhouse gases resulting from human activity that affect climate change) and found that the methodology still produces a strong apparent climate

signal. *See* Sherman et al., *supra*. In other words, the study came to the remarkable conclusion that the statistical test used to "attribute" extreme events to anthropogenic climate change returns positive results even in a world with no anthropogenic climate change. The reason is that internal climate variability (natural oscillations such as El Niño) can simultaneously influence both global mean temperature and regional extremes, creating a spurious appearance of anthropogenic influence where none exists. *See id.* (explaining that "internal climate variability" and "the uncertain relationship between [global mean surface temperature] and regional extremes may lead to inaccurate attribution conclusions"). The methodology cannot distinguish anthropogenic warming from natural variability, making it scientifically unreliable as a basis for tort causation.

Even setting aside these methodological defects, the attribution framework cannot, even by its own internal logic, supply the particularized causal proof that tort law requires. A finding that anthropogenic warming has increased the frequency of wildfires in a region from ten per year to thirteen does not identify which of those thirteen fires was "caused" by warming. The probability ratio is a population-level statement about how the frequency of a class of events changes across simulated worlds; it does not classify individual events into "warming-caused" or "natural." Every fire in the dataset—including those in the "additional" share that would not have occurred absent warming—was ignited by a specific source (a lightning strike, a downed power line, human activity), propagated by specific conditions (wind, fuel load, terrain), and

reached the plaintiff because of specific exposure factors (proximity, development patterns, fuel-management decisions, emergency response times).

Warming may have shifted background conditions that made ignition or spread marginally more likely, but it did not ignite the fire, direct its path, or place the plaintiff in its way. Tort doctrine requires tracing a specific defendant's conduct to a specific plaintiff's harm through specific physical mechanisms. *See Comcast Corp. v. Nat'l Ass'n of African Am.-Owned Media*, 589 U.S. 327, 331 (2020) ("textbook tort law" requires a plaintiff to prove that "but for the defendant's unlawful conduct, its alleged injury would not have occurred"). The probability-ratio framework is not a substitute for that inquiry, and Respondents' attempt to make it do that work asks this Court to accept a form of reasoning that tort law does not recognize and that states are not competent to address.

These deficiencies are not merely problems of tort doctrine—they are the very reasons federal law has always governed interstate pollution claims. The inability to attribute localized harm to specific emitters through the global atmospheric system is precisely the structural feature that makes state-by-state adjudication of these claims incompatible with the framework this Court recognized in *Ouellette*, 479 U.S. at 492.

II. RESPONDENTS CANNOT TRACE EMISSIONS FROM DEFENDANTS' PRODUCTS TO ANY SPECIFIC LOCALIZED HARM

A. No Science Can Trace Any Contribution From Any Defendant's Products To Any Harm In Colorado

Even assuming Respondents could establish that climate change caused their specific alleged harms in Colorado, they still cannot trace any defendant's conduct to any localized injury. Respondents' theory cannot account for the inherently multifactorial and interstate nature of climate risk, further confirming that these claims are beyond the competence of any single state's tort system. The chain from any emissions from a defendant's products to any plaintiff's injury runs through the entire global atmospheric system, and at every link it depends on contingencies and intervening causes that no defendant controls and that no science can attribute to any defendant.

Greenhouse gas emissions are chemically fungible. Once emitted, they enter a global atmospheric pool and become indistinguishable from emissions from every other source on earth. As this Court has recognized, "[g]reenhouse gases once emitted become well mixed in the atmosphere" such that "emissions in New Jersey may contribute no more to [climate-related effects] in New York than emissions in China." *Am. Elec. Power Co.*, 564 U.S. at 422. These gases persist in the atmosphere for centuries, commingling with the cumulative output of every other source worldwide. No science can isolate any particular emitter's contribu-

tion from this global pool and trace it to a specific temperature increment, weather event, or injury in a specific place.

This is structurally different from the identified-polluter paradigm that tort law was designed to handle. When a factory discharges a toxic chemical into a river and a downstream landowner is harmed, the causal chain is direct, local, and traceable. When Respondents allege that emissions from Petitioners' products entered a global pool of hundreds of billions of tons of atmospheric carbon and contributed to warming that marginally altered background conditions for extreme weather in Colorado, they are asking state tort law to do work it was never designed to do.

Respondents allege an attenuated daisy chain of causation: Petitioners are purportedly responsible for a small fraction of annual global emissions, which is responsible for a small share of total anthropogenic warming, which can account for an at most marginal intensification of some extreme climatic phenomena, phenomena whose human costs are driven overwhelmingly by factors other than the marginal climate signal. *See* Nordhaus & Trembath, *supra.* Anthropogenic climate change "simply remains a minor contributing factor in the frequency, intensity, and cost of natural disasters." Alex Trembath, Lauren Teixeira & Patrick Brown, *How Much Does Big Oil Owe Californians for the LA Fires?*, The Breakthrough Inst. (Mar. 19, 2025), tinyurl.com/yh44zky8. Natural variability "remains the driving force behind all extreme weather," and "the exposure of people and infrastructure remains the overwhelming determinant of disaster costs and impacts." *Id.* At each link in the chain,

the signal attributable to any individual defendant disappears into statistical noise. *Cf. Holmes v. Sec. Inv. Prot. Corp.*, 503 U.S. 258, 287 (1992) (Scalia, J., concurring in the judgment) ("Life is too short to pursue every human act to its most remote consequences; 'for want of a nail, a kingdom was lost' is a commentary on fate, not the statement of a major cause of action against a blacksmith.").

Each link in Respondents' causal chain is held together by conclusory, generalized assertions of "contribution" rather than any particularized scientific or evidentiary showing that any specific defendant is the source of Respondents' injuries. *See* J.A. 2 (alleging that Petitioners had a "substantial role" in "exacerbating alteration of the climate" without identifying any particularized causal link between those emissions and Respondents' specific injuries). Their theory must link the independent decisions of numerous third parties whose conduct collectively has a significant effect on the alleged injuries—including every other emitter on Earth, every government that has made energy-policy decisions over the past century, and every individual and entity whose conduct has influenced the specific weather event, the plaintiff's exposure to it, and the extent of the resulting harm. Establishing legal causation in this context is an impossible task. *See* Finbar Curtin & Matthew G. Burgess, *The Empirically Inscrutable Climate-Economy Relationship* (Univ. of Wyo. Dep't of Econ., Working Paper, Apr. 2026), tinyurl.com/yyth7znd.

The individual contributions allegedly at issue are vanishingly small—orders of magnitude below what

any instrument can detect at the geographic scale Respondents invoke. Even the most generous projections attribute 505 million metric tons of additional annual CO_2 emissions to the government energy policies that climate-tort plaintiffs have challenged in analogous litigation. That figure represents roughly ten percent of current U.S. emissions, less than one percent of current global emissions, and about 0.02 percent of total historic global emissions—"the latter being the emissions factor that actually determines the amount of anthropogenic warming that the world experiences at any given point in time." Nordhaus & Trembath, *supra*. That translates to an increase of between 0.0001°C and 0.0003°C in global temperatures. Even if that increase were to persist for a century, it would translate to between 0.01 and 0.03 degrees of additional warming. *See id.* The individual defendants' shares of that already-marginal increment are smaller still. Indeed, even under the most generous assumptions about liability, individual emitters' aggregate liabilities would "still only cover a few percentage points of the overall costs" of natural disasters. Trembath, Teixeira & Brown, *supra.*

Meanwhile, adaptation, enabled by economic growth, has outrun the alleged harms: the U.S. extreme-weather death rate fell from approximately 1 per million in the 1980s to approximately 1 per 1.7 million by the 2020s, and Colorado recorded only 13 heat-related deaths statewide in 2023. *See* Alan Barreca et al., *Adapting to Climate Change: The Remarkable Decline in the U.S. Temperature-Mortality Relationship over the Twentieth Century*, 124 J. Pol. Econ. 105 (2016) (finding 75% decline in hot-day mortality

after 1960, driven primarily by residential air conditioning adoption); Colo. Dep't of Pub. Health & Env't, *Extreme Heat Resources for Providers*, tinyurl.com/5h6k9f3u.

Discerning legal proximate cause amidst these issues would require ignoring the infinitely complex, global nature of climate change. When emissions commingle in a global atmospheric commons, no single state can identify a source, trace a particular emitter's contribution to localized harm, or apply its own tort rules without conflicting with every other state's attempt to do the same. *See* Pet. Br. 25–30. Permitting fifty states to attempt that exercise independently—each applying its own causation and damages rules to the same indivisible global phenomenon—is the unworkable patchwork that federal preemption exists to prevent.

B. If The Chain Works For Suncor, It Works For Everyone

If Respondents' theory were accepted, it would permit every state to regulate the same global emissions pool through its own tort law—precisely the unworkable regime that federal preemption exists to prevent. Any person alleging any weather-related injury could sue any emitter, anywhere, on the theory that the emitter's emissions entered the global atmospheric pool and marginally increased the probability of the type of event that caused the harm. Respondents have limited their pleadings to large fossil fuel producers, but that is a litigation choice, not a causation principle. The causal mechanism they invoke—emissions enter the global atmospheric pool and contribute to

warming—operates identically regardless of the emitter's size or industry. If the causal chain is sound for Suncor, it is sound for every automobile company, every airline company, and everyone driving an F-150 to work. CO_2 is CO_2 regardless of who emits it.

Respondents do not even attempt to show causation. Climate-tort plaintiffs' expert assertions typify the problem. Rather than establishing the but-for causation that tort law demands, such experts offer generalized claims that fossil-fuel combustion contributes to global warming, which worsens extreme weather, which causes plaintiff-specific harm. *See* Nordhaus & Trembath, *supra*. At no step in this chain does the evidence establish that eliminating emissions from any particular defendant's products would have prevented any particular plaintiff's injury. The assertions rest on contested assumptions and speculative projections about the magnitude, attribution, and distribution of climate-related risks. *See* Brown, *supra* (documenting how attribution researchers selectively study events expected to show a climate signal while ignoring those that do not). Allowing tort liability to rest on such foundations would lend judicial imprimatur to advocacy-driven science and risk distorting the integrity of climate research itself.

Respondents do not challenge a single identifiable act that caused a single identifiable harm. They challenge the cumulative effect of an entire industry's lawful participation in the global energy economy, and the regulation of such conduct necessarily implicates "energy production, economic growth, foreign policy, and national security." *City of New York v. Chevron Corp.*, 993 F.3d 81, 93 (2d Cir. 2021). "Try[ing] to force a

Rube-Goldberg financial liability through the courts" is "difficult to defend both intellectually and practically." Trembath, Teixeira & Brown, *supra*.

Respondents' theory also conflates the immediate, localized health risks posed by criteria air pollutants—such as particulate matter and ozone, which are regulated under the Clean Air Act and related statutes—with the long-term, global climatic effects of greenhouse gases. Greenhouse gases are not toxic to human, animal, or plant life at any normal concentration. *See* Trembath, *supra*. The harm comes not from any localized emission but from the cumulative global buildup of gases in the atmosphere over centuries—a phenomenon that is "simultaneously less immediately dangerous and far more pervasive to the industrial economy" than the criteria pollutants the Clean Air Act was designed to regulate. *Id*. And fossil fuel emissions "still undergird[] the modern industrial systems that allow for human societies to protect themselves from extreme weather." Trembath, Teixeira & Brown, *supra*.

Even accepting Respondents' attribution theory at face value, the alleged impact is too small to constitute a material contribution to global warming. The emissions Respondents attribute to Petitioners represent a vanishing fraction of cumulative global emissions. The relationship between that fraction and any measurable localized harm dissolves at every step: Emissions attributable to Petitioners' products are a small share of current U.S. emissions; U.S. emissions are a fraction of current global emissions; current global emissions are a fraction of total historic cumulative emissions; and total historic cumulative emissions are the

factor that determines the degree of anthropogenic warming the planet has experienced. At the end of that chain, the marginal warming attributable to any individual defendant's conduct is indistinguishable from zero at any geographic scale Respondents invoke, even on Respondents' theory of causation.

These structural impossibilities reinforce why the Clean Air Act and federal common law preempt Respondents' claims. Congress established a comprehensive federal framework for regulating interstate emissions precisely because no single state's tort system can sensibly allocate responsibility for contributions to a global atmospheric commons.

C. Relabeling The Claims Does Not Cure The Deficiency

Respondents' attempt to restyle these claims as deceptive-marketing or consumer-fraud claims, *see* BIO 20 (describing "the deceptive-marketing claims at the core of this case"), does not work. As an initial matter, the causal chain is even more attenuated where plaintiffs rely on alleged deception: their theory requires showing not only that emissions caused climate-related harm, but that alleged deception caused additional emissions that would not otherwise have occurred—an additional causal link atop an already impossible chain. And more fundamentally, before the Clean Air Act, federal common law—not state law—governed interstate air pollution disputes. The Act displaced that federal common law in the areas it addresses, but it did not create new room for state-law claims that had not existed before. If deception claims fall outside the Act's scope, as Respondents contend, then the preexisting federal common law with respect

to those claims was never displaced—and it preempts them for the same reason it always did: they have the obvious purpose and practical effect of permitting state-by-state regulation of interstate emissions.

Respondents' claims could be deemed actionable only if the products at issue contributed to the harms Respondents allege—and thus the claims necessarily "depend on harms stemming from emissions" no matter how they are framed. *City of New York*, 993 F.3d at 96–97. As the Second Circuit recognized, "[a]rtful pleading cannot transform" these claims "into anything other than a suit over global greenhouse gas emissions." *Id.* at 91.

* * *

The preemption Petitioners assert follows from this structural analysis. Federal law has governed interstate pollution claims for as long as they have existed. *See Missouri v. Illinois*, 200 U.S. 496 (1906). When Congress displaced federal common law, it changed the form of federal governance, not its scope. As the Second Circuit explained, "state law does not suddenly become presumptively competent to address issues that demand a unified federal standard simply because Congress saw fit to displace a federal court-made standard with a legislative one." *City of New York*, 993 F.3d at 98. To hold otherwise would produce an outcome "too strange to seriously contemplate": "if Congress were to pass legislation adopting verbatim a judge-made common law rule, that could potentially give birth to new state-law claims—claims that could not have existed in the absence of Congress's interven-

tion—even though the substance of the applicable federal rule has not changed." *Id.* at 98–99. The structural defects this brief describes are the very features that have always placed interstate pollution within federal governance and beyond the reach of States.

While the Clean Air Act preserves each state's authority to legislatively adopt prospective emissions standards that are stricter than federal requirements, *See* 42 U.S.C. § 7416; Pet. Br. 33, it does not preserve state common-law tort claims seeking to regulate out-of-state emissions through retroactive damages judgments, *see* Pet. Br. 33–34. If "*federal* judges" lack the scientific, economic, and technological resources to regulate interstate emissions, "it is implausible that Congress intended state common-law claims to proceed." *Id.* at 46; *see also id.* at 43 ("It is inconceivable that state courts and juries would be entrusted with that authority."). "Our Nation's climate policy should not be left in the hands of six jurors in Boulder, Colorado." *Id.* at 47.

CONCLUSION

This Court should reverse.

Respectfully submitted,

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