

BEFORE THE ENVIRONMENTAL PROTECTION AGENCY

**Petition Seeking A Phaseout of New and  
Removal of Legacy Fossil Fuel Greenhouse Gas Emissions**

TO

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**Submitted on Behalf of Petitioners**

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Climate Science, Awareness and Solutions (CSAS), a non-profit organization,

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John Birks, and

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Submitted for pre-filing review on December 23, 2021  
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## I. EXECUTIVE SUMMARY

Petitioners are two nonprofit education and advocacy groups, and three scientists. They petition here for action by the federal Environmental Protection Agency (“the Agency”) to eliminate the imminent and unreasonable risk of serious or widespread injury to health or the environment stemming from additional and legacy fossil fuel GHG emissions.

The Agency’s authority and obligation to undertake the work demanded by petitioners stems from the Toxic Substances Control Act (TSCA, or “the Act”).<sup>1</sup> Timely Agency action under the Act also would uphold the nation’s obligation under international law, as articulated in the US government’s recent Nationally Determined Contribution (NDC) submission to the United Nations Framework Convention on Climate Change (UNFCCC), namely to reduce net US greenhouse gas (GHG) emissions 50-52 percent below 2005 levels, by 2030, and to achieve “100 percent carbon pollution-free electricity” by 2035.<sup>2</sup>

Petitioners agree with the President that present and anticipated impacts from global warming and ocean acidification pose an “existential threat,”<sup>3</sup> and petition here for action to ensure that the atmospheric and oceanic concentrations of relevant GHGs no longer present imminent and widespread risks of serious or widespread injury to health or the environment. In the judgment of Petitioners, this at minimum requires a reduction of atmospheric CO<sub>2</sub> to a concentration below 350 ppm, and a corresponding reduction in the global concentration of methane.

The instant petition is based on one central factual predicate and two legal suppositions. As to the first, Petitioners aver that the atmospheric concentrations of key greenhouse gases, including carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>), are already in the danger zone and must be dialed back to eliminate their unlawful imposition. As to the second, under the TSCA the Agency is authorized, upon certain determinations, to take actions to (i) require the phase-out of new emissions and (ii) compel the removal of legacy fossil fuel GHG emissions.

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<sup>1</sup> 15 U.S.C.A. §§ 2601 to 2697, as amended by 130 Stat. 448 (June 22, 2016) (the “Frank R. Lautenberg Chemical Safety for the 21<sup>st</sup> Century Act”).

<sup>2</sup> *The United States of America Nationally Determined Contribution: Reducing Greenhouse Gases in the United States: A 2030 Emissions Target*, submitted pursuant to Article 4 of the Paris Agreement to the United Nations Framework Convention on Climate Change, April 21, 2021, at pages 3 and 6. Available at:

<https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/United%20States%20of%20America%20First/United%20States%20NDC%20April%2021%202021%20Final.pdf>.

<sup>3</sup> Fact Sheet, *President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies*, The White House, April 22, 2021. Available at <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>.

## II. PETITIONERS

Petitioners are Climate Protection and Restoration Initiative (CPR Initiative), Climate Science, Awareness and Solutions, Inc. (CSAS), Dr. Donn J. Viviani, Dr. John Birks, and Dr. James E. Hansen.

[CPR Initiative](#) is a public interest non-profit organization with headquarters in Eugene, Oregon.

[CSAS](#), is a public interest non-profit organization with headquarters in New York, NY.

Donn J. Viviani, PhD, is a retired U.S. Environmental Protection Agency scientist. He was the Director of EPA's Climate Policy Assessment Division in the Office of Policy, Economics and Innovation; served as Chairman of the Great Lakes Water Quality Board's Toxic Substances Committee; and served as a member of the Science Coordinating Committee for the International Joint Commission for the Great Lakes. Dr. Viviani serves as Board President of the Climate Protection and Restoration Initiative.

John Birks, PhD, is Chief Scientist at 2B Technologies, a company he co-founded in 1998 that develops and manufactures new products for air quality measurements. He is Professor Emeritus of the University of Colorado where he and his graduate students carried out research in atmospheric chemistry for 25 years. He is best known for his work in quantifying the rates of chemical reactions that cause the Antarctic Ozone Hole, his co-development of the "nuclear winter" theory with Paul Crutzen in 1982, and the development of miniaturized instruments for air pollution measurements. His current research is focused on the use of low-cost sensors for mobile monitoring of air pollutants in cities, an outgrowth of the AQTreks educational outreach programs his company implemented in several hundred schools around the US. Dr. Birks also serves on the CPR Initiative Board of Directors.

James E. Hansen, PhD, is the former Director of the NASA Goddard Institute of Space Studies. He is the author of the books *Storms of My Grandchildren* and the forthcoming *Sophie's Planet*, and the principal author or co-author of numerous papers on the subject of climate change and Earth's energy imbalance. Dr. Hansen serves as Director of Climate Science, Awareness and Solutions, a program of the Earth Institute, Columbia University, New York, New York, and also as Director of the non-profit organization CSAS. Dr. Hansen also serves on the CPR Initiative Board of Advisors.

Petitioners are represented by attorney Dan Galpern, to whom inquires for further information should be addressed: Law Office of Daniel M. Galpern, 2495 Hilyard Street, Ste. A, Eugene Oregon 97405. (541) 968-7164. [dan.galpern@gmail.com](mailto:dan.galpern@gmail.com).

### **III. ACTION REQUESTED**

This petition is brought pursuant to the First Amendment of the US Constitution, the Administrative Procedure Act (5 U.S.C. §553(e)), and Section 21 of the Toxic Substances Control Act (TSCA), 15 USC §2620.<sup>4</sup> By it, the undersigned request Agency action to eliminate the imminent and unreasonable risk of serious or widespread injury to health or the environment caused by the ongoing disruption of the climate system by fossil fuel GHG emissions.

Accordingly, the undersigned here petition the Administrator for action under Sections 6 (regulatory restrictions), 7 (Imminent Hazards), and 9 (Utilization of Other Law) of the Toxic Substances Control Act, 15 USC §§ 2605, 2606, and 2608 respectively, in order, at minimum, to compel manufacturers (including producers and importers) of fossil fuels to:

(i) phaseout their production, importation, distribution, use and disposal of fossil fuels, as required to ensure the phaseout of associated greenhouse emissions from the intended use of oil, gas and coal, on a timetable consistent with protection and restoration of a habitable climate system, and

(ii) verifiably remove and securely sequester from the environment excess atmospheric greenhouse gases including, at minimum, surfeit atmospheric carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>) or, in the alternative, to pay into an atmospheric carbon abatement fund that EPA shall establish, in an amount sufficient to ensure, with adequate verification, that such removal and secure sequestration will be timely accomplished, again on a timetable consistent with protection and restoration of a habitable climate system.

### **IV. STATUTORY AUTHORITY**

In 1992, in the United Nations Framework Convention on Climate Change (“UNFCCC” or “the Convention”) the United States, along with, eventually, 196 other parties,<sup>5</sup> based on the concern that increasing GHG concentrations will result in “additional warming of the Earth’s surface and atmosphere” and “adversely affect natural ecosystems and humankind,” committed

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<sup>4</sup> Any person may petition the Administrator to initiate a proceeding for the issuance, amendment, or repeal of a rule under section 2603, 2605, or 2607 of this title or an order under section 2603 or 2604(e) or (f) of this title. 15 US Code 2020.

<sup>5</sup> In total there are 197 signatories, comprised of 196 nations and one regional economic integration organization (the European Union). *See* [https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=IND&mtdsg\\_no=XXVII-7&chapter=27&Temp=mtdsg3&clang=\\_en](https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=IND&mtdsg_no=XXVII-7&chapter=27&Temp=mtdsg3&clang=_en).

itself “to achieve. . . stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.”<sup>6</sup>

In particular, by its signing of the Convention, the United States assumed the obligation to take “precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects,”<sup>7</sup> particularly “threats of serious or irreversible damage,” including by “limiting its anthropogenic emissions of greenhouse gases.”<sup>8</sup> To secure the Convention’s fundamental objectives, in 2015 the US (along with virtually every other nation) signed onto the Paris Agreement to the UNFCCC. We thereby committed to action that would hold “the increase in the global average temperature *to well below* 2°C above pre-industrial levels” and to “efforts to limit the temperature increase to 1.5°C above pre-industrial levels.”<sup>9</sup> President Biden’s 2021 filing under the Paris Agreement process,<sup>10</sup> then committed the US to achieve an “economy-wide target” for net greenhouse gas emissions of “50-52 percent below 2005 levels in 2030.” That US Nationally Determined Commitment also announced a US “goal to reach 100 percent carbon pollution-free electricity by 2035.”<sup>11</sup>

The present petition is in furtherance of these international commitments, yet it is based squarely on existing federal law. In particular, Petitioners aim to establish a firm foundation for an effective US decarbonization program. That firm foundation may be constructed pursuant to the clear terms of the Toxic Substances Control Act (TSCA), as amended in 2016, along with

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<sup>6</sup> UNFCCC Article 2. The full text is available, in English and five other languages, at <https://unfccc.int/process-and-meetings/the-convention/status-of-ratification/status-of-ratification-of-the-convention>.

<sup>7</sup> UNFCCC Article 3.3.

<sup>8</sup> UNFCCC Article 4.2

<sup>9</sup> Paris Agreement Article 2(1)(a). The full text of the Agreement is available, in English and five other languages, at <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>. In Article 4.1 of the Agreement, nations must reach global peak GHG emissions “as soon as possible,” and “undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century.”

<sup>10</sup> The United States of America Nationally Determined Contribution Reducing Greenhouse Gases in the United States: A 2030 Emissions Target (filed April 20, 2021), available at <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/United%20States%20of%20America%20First/United%20States%20NDC%20April%202021%202021%20Final.pdf>,

<sup>11</sup> *See also* <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>.

related statutes administered in whole or in part by the federal Environmental Protection Agency. On the basis of their review of the relevant science (*see* Part II of the instant petition) Petitioners aver that there is simply no question that additional and legacy fossil fuel GHG emissions present an imminent and unreasonable risk of serious or widespread injury to health or the environment, as must be addressed by the Agency under TSCA.

Congress enacted the Toxic Substances Control Act in 1976 in recognition that certain chemical substances impose serious risks to health or the environment but are not “single media” problems, and thus require a holistic approach to mitigation and control.<sup>12</sup> In particular, Congress aimed to ensure that the federal Environmental Protection Agency retained “adequate authority to regulate chemical substances . . . which present an unreasonable risk of injury to health or the environment.” TSCA §2; 15 USC §2601(b)(2).

Under the Act, “chemical substances” include those with a particular molecular identity, whether occurring in nature or as the result of a chemical reaction. TSCA §3; 15 USC §2602(2). The greenhouse gases CO<sub>2</sub> and CH<sub>4</sub>, as well as nitrous oxide (N<sub>2</sub>O) and certain fluorinated gases, fit squarely within that definition of chemical substances.<sup>13</sup>

TSCA conveys express authority to the Agency to action where it determines that “the manufacture, processing, distribution in commerce, use or disposal of a chemical substance or mixture, or that any combination of such activities, presents “an unreasonable risk of injury to health or the environment,” TSCA §6, or an “imminent and unreasonable risk of serious or widespread injury to health or the environment.” TSCA §7. Fossil fuel GHG emissions manifestly present just such imminent and unreasonable risks. Accordingly, the statute, without question, is directly on point.

That GHG emissions present an unreasonable risk of widespread injury to health or the environment has been exhaustively established in credible reports and documents available to the Agency, including many adopted by the Agency or the US Government itself. Petitioners here nonetheless present evidence to support the determinations they request, albeit with the stipulation that the Agency should also credit information available to it, where warranted by their merits, of relevant GHG risks that Petitioners, for reasons of manageability and brevity, do not expressly address nor, by reference, incorporate.

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<sup>12</sup> David Markell, An Overview of TSCA, Its History and Key Underlying Assumptions, and Its Place in Environmental Regulation, 32 WASH. U. J. L. & POL’Y333 (2010), at [https://openscholarship.wustl.edu/law\\_journal\\_law\\_policy/vol32/iss1/11/](https://openscholarship.wustl.edu/law_journal_law_policy/vol32/iss1/11/).

<sup>13</sup> See US EPA, **Overview of Greenhouse Gases**, available Aug. 5, 2021 at [www.epa.gov/ghgemissions/overview-greenhouse-gases](http://www.epa.gov/ghgemissions/overview-greenhouse-gases).

### A. Petition for Civil Action

Pursuant to TSCA §7, 15 USC §2606, the Administrator is authorized to commence a civil action against producers of oil, gas and coal wherein the production and intended use of these fuels release imminently hazardous chemical substances into the environment. 15 USC §2606(a)(1)(B). CO<sub>2</sub>, CH<sub>4</sub> and other GHGs are fit subjects for such action since they “present an imminent and unreasonable risk of serious or widespread injury to health or the environment, without consideration of costs or other nonrisk factors.” 15 USC §2606 (f).

Where presented with such an action, the court will retain authority to “grant such temporary or permanent relief as may be necessary to protect health or the environment from the unreasonable risk” associated with the manufacture, processing, distribution, use or disposal of fossil fuels and their associated greenhouse gas emissions. 15 USC §2606 (b)(1). Seizure of the oil, gas and coal -- as articles containing the imminently hazardous GHGs -- is also within the court’s authority. 15 USC 2606(a)(1)(A).

EPA’s authority to commence such a civil action to phase out production, release and disposal of imminently hazardous substances is not affected by any prior determination under TSCA Section 6, 15 USC §2605. 15 USC §2606 (a)(1)(C).

Upon its filing of a civil action for relief against the imminent and unreasonable risk of serious or widespread injury presented by legacy, current, and otherwise-anticipated greenhouse gas emissions, or “as soon thereafter as may be practicable,” the Administrator is required to “initiate a proceeding for the promulgation of a rule” pursuant to 15 USC §2605. 15 USC §2606 (a)(1)(C).<sup>14</sup>

**Petitioners here request that the Agency commence a civil action to seek temporary and permanent relief, as necessary, to protect public health and the environment from the unreasonable risk associated with the manufacture, processing, distribution, use and disposal of fossil fuels and their associated greenhouse gas emissions.**

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<sup>14</sup> In addition, upon the commencement of such civil action against fossil fuel producers, the release of the GHG emissions associated with intended use of fossil fuels, with the possible exclusion of the release or emission of CH<sub>4</sub>, become cognizable hazardous substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERLA), 42 USC 9601 (14), with responsible parties then subject to such orders and actions as the President may take “as may be necessary to protect public health and welfare and the environment.” 42 USC 9606(a); 42 USC 9601 (22)(“release” means “any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment,” albeit with certain exclusions).

## B. Petition for Rulemaking

Irrespective of any such EPA civil action and consequential Agency initiation of rulemaking, as discussed *supra*, Petitioners are entitled, where fossil fuel emissions impose an “unreasonable risk to health and the environment,” to petition the Administrator, pursuant to TSCA §21, 15 USC §2620, for a rule, pursuant to TSCA §6, 15 USC §2605, to render the unreasonable risk determination and then for action to constrain and eliminate that risk.

### *(i) Mandatory duty to take action upon a determination*

Pursuant to TSCA §6, 15 USC §2605, where the Administrator determines that “the manufacture, processing, distribution in commerce, use, or disposal of a chemical substance . . . presents an unreasonable risk of injury to health or the environment, the Administrator *shall* by rule” (emphasis added) impose requirements, as necessary, so that the chemical substance “no longer presents such risk.”

As employed in the above two paragraphs and herein, the statutory term “manufacture” includes within its meaning “import” and “produce.” 15 USC § 2602(9). The term “manufacturer” in this petition therefore includes producers and importers.<sup>15</sup> As also employed there and herein, the statutory term “environment” includes “water, air, and land and the interrelationship which exists among water, air, and land and all living things.” 15 USC § 2602(6).

### *(ii) Evaluation of risk*

As indicated, *supra*, the Administrator, in determining whether the production, distribution, use or disposal of a chemical substance “presents an unreasonable risk of injury to health or the environment,” must evaluate that risk “without consideration of costs or other nonrisk factors. . . .” 15 USC 2605(a) and 2605(b)(4)(A).

Following that determination, however, the Agency “shall propose” a rule, 15 §2605(c)(1)(A), that considers the effects of such substance on health and the environment, and that considers “the reasonably ascertainable economic consequences of the rule” including, again, impacts on public health and the environment, as well as impacts on the national economy, small business, and technological innovation. 15 §2605(c)(2).

These considerations may be factored in by the Administrator “[i]n selecting among prohibitions and other requirements” for a final rule, §2605 (c)(2)(B), including in evaluating prohibitions or restrictions of use, in assessing whether there are preferable feasible alternatives, and “in setting an appropriate transition period for such action.” §2605 (c)(2)(C).

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<sup>15</sup> For completeness, here, we note as well that the term “commerce” includes within its meaning “trade, traffic, transportation.” 15 USC § 2602(3).

*(iii) Immediate Effect and Unreviewability of Proposed Rule*

The Administrator is authorized to declare a proposed rule effective upon publication in the Federal Register where necessary to protect the public interest from a chemical substance whose production, distribution, use, or disposal imposes an unreasonable risk of serious or widespread injury to health or the environment and where, pursuant to 15 USC §2606, a court has granted relief. In this circumstance, the proposed but effective rule will not be considered final agency action for purposes of judicial review. 15 USC §2605(d)(3)(A).

c. Agency Action

If the Agency determines that the risk to health or the environment from past, present and future fossil fuel GHG emissions “could be eliminated or reduced to a sufficient extent” by EPA action *under other statutory authority*, then EPA *must* utilize such other authority. 15 USC §2608(b). On the other hand, if it is in the public interest to take action under TSCA *rather* than under those other authorities, then Agency action under TSCA *must* be undertaken. *Id.*

Where, as pertains here, eliminating the risk to health or the environment to a “sufficient extent” requires action under both such “other statutory authority” and under TSCA, then the Agency should so proceed.

*(i) Agency action under TSCA*

Pursuant to TSCA, the Agency is able to impose a range of requirements including:

- “prohibiting or otherwise restricting the manufacturing, processing, or distribution in commerce of such substance.” 15 USC §2605 (a)(1), and
- prohibiting or otherwise regulating any manner or method of disposal of such substance. 15 USC §2605(a)(6) and 15 USC §2606.<sup>16</sup>

EPA is also able to require manufacturers or processors “to give notice . . . to distributors in commerce” that the agency has determined that fossil fuel GHG emissions present an unreasonable risk of injury to health and the environment.” 15 USC 2605(a)(7). As well, under the same subsection of TSCA, EPA can mandate that manufacturers or processors give notice to the public of such determination. *Id.*

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<sup>16</sup> Under TSCA, the Agency is also able to prohibit, restrict or limit the production or distribution of a substance for a particular use; limit the volume or concentration of the chemical produced; prohibit or regulate the manner or method of commercial use; require warning labels and/or instructions on containers or products; require record-keeping by producers; and require replacement or repurchase of products already distributed.

(ii) *Agency Action under other authority*

In general, TSCA commands the Agency to “coordinate actions” taken under TSCA “with actions taken under other Federal laws” that it administers. Petitioners here list several such statutory provisions outside of TSCA about which rulemaking by the Agency would substantially complement efforts under TSCA to eliminate or substantially reduce the substantial risk of injury to health and the environment presented by new and legacy fossil fuel GHG emissions.

Petitioners caution, however, that the present listing is partial, and they reserve the right to supplement as the instant rulemaking proceeds.

Independent Offices Appropriations Act

Under this statute, 31 U.S.C. §9701 (as amended in 1982), EPA or any other federal Agency is authorized to impose “a charge” for “a thing of value” that is provided to any person.<sup>17</sup> This may include “a charge for using the public’s air to dispose of carbon dioxide and other wastes,” as one former EPA General Counsel has put it.<sup>18</sup> Such a user fee may be based not only on “the costs to the Government,” but also the “value of the service or thing to the recipient,” the “public policy or interest served” and “other relevant facts.” 31 U.S.C. §9701. The full cost to the government component of the user fee should include “all direct and indirect costs.”<sup>19</sup> Imposition of a meaningful and rising fee on oil, gas and coal would induce utilities and consumers to switch to carbon-free energy.<sup>20</sup> The International Monetary Fund advises that a

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<sup>17</sup> The term “person” must be read to include the term “corporation.” Historical and revision note, US Code, 31 USC §9701 (“The words “(including groups, associations, organizations, partnerships, corporations, or businesses)” are omitted as being included in ‘person’,” in the statute). See: [https://uscode.house.gov/view.xhtml?req=\(title:31%20section:9701%20edition:prelim\)#sourcecredit](https://uscode.house.gov/view.xhtml?req=(title:31%20section:9701%20edition:prelim)#sourcecredit).

<sup>18</sup> E. Donald Elliott, *EPA’s Existing Authority to Impose a Carbon “Tax,”* 49 ELR 10919 (2019), available at <https://www.eli.org/sites/default/files/docs/49.10919.pdf>.

<sup>19</sup> OMB Circular No. A-25 at §6(d). Available at <https://www.whitehouse.gov/omb/information-for-agencies/circulars/>. It may also be based on the “market price” for the resource where “based on competition in open markets.”

<sup>20</sup> J. Hansen and D. Galpern, *President Biden Should Impose a Carbon Fee Immediately*, Boston Globe (June 1, 2021), available at <https://cprclimate.org/biden-should-impose-a-carbon-fee-immediately/>. See also Petition to the President at <https://cprclimate.org/take-action/>.

carbon price may need to rise to at least \$75 per ton of CO<sub>2</sub> emissions to induce such meaningful action as is required under the Paris Agreement limits.<sup>21, 22</sup>

Petitioners note that a rising carbon fee in itself would not *directly* prohibit or restrict “the manufacturing, processing, or distribution in commerce, use or disposal” of the fossil fuel GHG emissions, as may be contemplated by Agency action taken pursuant to TSCA, 15 USC 2605(a). However, a rising user fee, depending in part on the use of its revenues, may at least partly compensate the government (and the public) for the period of time in which EPA continues to provide a special benefit to fossil fuel producers by its forbearance – that is, the Agency’s decision not to immediately exercise its authority to prohibit fossil fuel GHG emissions. During that period of forbearance, the user fee will, if substantial and growing, function in fact to constrain emissions as producers and consumers attempt to minimize costs.

**Accordingly, Petitioners urge that EPA commence a parallel rulemaking to impose a rising fee on the manufacturing, distribution, use and disposal of oil, gas and coal, on the basis of foreseeable GHG emissions, and to align that rule if warranted with the one in development with respect to the instant petition.**

Clean Air Act §§108-110

Pursuant to the Clean Air Act, EPA’s Administrator is required to periodically revise ambient air quality standards for air pollutants the “emissions of which, in his (sic) judgement, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare.” 42 USC 7408(a)(1). The Agency must then issue air quality criteria, 42 USC 7408(a)(1), and publish national ambient air quality standards (NAAQS) for such pollutants, 42 USC 7408, which standards are then enforced largely through state implementation plans, 42 USC §7410, and via citizen suits. 42 USC §7604.

The materials in Part II of this petition, in conjunction with other material already within the grip of the Agency, more than amply demonstrate that fossil fuel GHG emissions “cause or

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<sup>21</sup> In order to ensure that low and moderate-income families are not disadvantaged by fossil fuel companies that pass on their user fees in the form of increased fuel prices, user fee revenues might be returned to consumers as lump-sum rebates on a roughly per capita basis. Such a scheme would more than offset the higher price burden for low and moderate-income taxpayers. Ian Parry, *Putting a Price on Pollution*, International Monetary Fund (Dec. 2019) available at <https://www.imf.org/external/pubs/ft/fandd/2019/12/the-case-for-carbon-taxation-and-putting-a-price-on-pollution-parry.htm>.

<sup>22</sup> Rosenberg et. al, “Distributional Implications of A Carbon Tax,” Columbia Center on Global Energy Policy (2018), available at [https://www.energypolicy.columbia.edu/sites/default/files/pictures/CGEP\\_Distributional\\_Implications\\_CarbonTax.pdf](https://www.energypolicy.columbia.edu/sites/default/files/pictures/CGEP_Distributional_Implications_CarbonTax.pdf).

contribute to air pollution which may reasonably be anticipated to endanger public health or welfare.”

In 2009 the citizen groups 350.org and Center for Biological Diversity petitioned the Agency for a rulemaking to develop a NAAQS for GHG emissions.<sup>23</sup> On the last day of the Trump Administration, EPA rejected that petition, but the Biden Administration is taking another look. For reasons well outlined in a recent article by Eric Laschever,<sup>24</sup> whose reasoning we incorporate by reference here, **Petitioners urge that EPA grant the 350/ CBD petition and commence a parallel rulemaking to develop air quality standards for CO<sub>2</sub>, CH<sub>4</sub> and other GHGs and to align that rule if warranted with the one in development with respect to the instant petition.**

#### Clean Air Act §115

Fossil fuel GHG emissions readily mix in the atmosphere, and the ensuing impacts from such emissions stemming from US sources perforce affect every nation. The Clean Air Act anticipated the possibility that such US emissions might impact other nations and that, just as we would wish to have a say in “foreign” emissions that impact the US, the interests of other nations should matter in the formation of US air pollution regulatory policy. Accordingly, in §115 of the Clean Air Act, Congress provided that upon its receipt of information that sources of air pollution in the US cause or contribute to pollution that endangers the health or welfare of a foreign jurisdiction, the Agency then needs to compel states to amend their implementation plans “to prevent or eliminate the endangerment.” 42 USC §7415(b).

The materials in Part II of this petition, in conjunction with other material already with the Agency, more than amply demonstrate that fossil fuel GHG emissions from within the United States “cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country.”

In 2013, the New York University School of Law’s Center for Public Integrity petitioned the EPA for rulemaking to limit such US-based GHG emissions that endanger public health and

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<sup>23</sup> *Petition to Establish National Pollution Limits for Greenhouse Gases Pursuant to the Clean Air Act* (Dec. 2, 2009), [http://www.biologicaldiversity.org/programs/climate\\_law\\_institute/global\\_warming\\_litigation/clean\\_air\\_act/pdfs/Petition\\_GHG\\_pollution\\_cap\\_12-2-2009.pdf](http://www.biologicaldiversity.org/programs/climate_law_institute/global_warming_litigation/clean_air_act/pdfs/Petition_GHG_pollution_cap_12-2-2009.pdf).

<sup>24</sup> Environmental Law Institute, *Rebutting Administrator Wheeler’s Denial Of A Naaqs For Greenhouse Gases* (2021) available at <https://www.eli.org/sites/default/files/files-pdf/51.10923.pdf>.

welfare in foreign nations.<sup>25</sup> **Petitioners here urge EPA to grant the Center’s petition so as to commence a parallel rulemaking pursuant CAA §115, and to align that rule if warranted with the one in development with respect to the instant petition.**

Comprehensive Environmental Response, Compensation and Liability Act

As was discussed *supra*, pursuant to TSCA §7, 15 USC §2606(a), the Administrator is authorized to commence a civil action against producers of oil, gas and coal wherein their manufacture, processing, distribution, use or disposal presents an “an imminent and unreasonable risk of serious or widespread injury to health or the environment, without consideration of costs or other nonrisk factors.” *Id.* and 15 USC §2606(f)(definition of “imminently hazardous chemical substance or mixture”). The release of the GHG emissions associated with intended use of such fossil fuels, with the possible exclusion of the release or emission of CH<sub>4</sub>, become cognizable hazardous substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERLA), 42 USC 9601 (14), with responsible parties then subject to such orders and actions as the President may take “as may be necessary to protect public health and welfare and the environment.” 42 USC 9606(a); 42 USC 9601 (22)(“release” means “any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment,” albeit with certain exclusions).

Independently of TSCA §7, however, the Agency is obligated, pursuant to CERLA §101, 42 USC §9602(a), “to promulgate and revise as may be appropriate regulations designating as hazardous substances . . . such elements, compounds, mixtures, solutions, and substances which, when released into the environment may present substantial danger to the public health or welfare or the environment.”

The materials in Part II of this petition, in conjunction with other material already with the Agency, more than amply demonstrate that fossil fuel GHG emissions “may present substantial danger to the public health or welfare or the environment.

**Petitioners here urge EPA to promulgate a rule establishing that fossil fuel GHG emissions are hazardous substances under CERCLA in that, when released into the environment, they substantially endanger the public health or welfare or the environment.**

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<sup>25</sup> Institute for Policy Integrity, *Petition for Rulemakings and Call for Information under Section 115, Title VI, Section 111, and Title II of the Clean Air Act to Regulate Greenhouse Gas Emissions* (Feb. 19, 2013) available at [https://www.epa.gov/sites/default/files/documents/policy\\_integrity\\_omnibus\\_ghg\\_petition\\_under\\_caa.pdf](https://www.epa.gov/sites/default/files/documents/policy_integrity_omnibus_ghg_petition_under_caa.pdf).

On the basis of the scientific and economic considerations they outline in Part II, *infra*, as well as that which they may later adduce, Petitioners here requisition the Administrator to initiate rulemaking in two phases: (1) for the Agency’s determination that fossil fuel GHG emissions present an unreasonable risk to health and the environment, and (2) for the development of a comprehensive set of actions under TSCA or other law administered by the Agency aimed to both (a) phase out, as is feasible and over time, the lion’s share of the production, manufacture, processing, and distribution in commerce of fossil fuels and the GHG emissions stemming from their intended use, and (b) to restrict the extent and length of the disposal in the atmosphere and oceans by compelling the timely removal of legacy GHG emissions.

*(iii) EPA referral to other agencies for exercise of other authority*

If the Administrator determines that action under federal law not administered by EPA *may be sufficient* to eliminate the risk to health and the environment presented by the manufacture, processing, distribution, use or disposal of fossil fuel greenhouse gases, the Administrator *must* inform such other agency or agencies by report that “describes such risk and includes . . . a specification of the activity or combination of activities that the Administrator has reason to believe so presents such a risk.” 15 USC § 2608(a). Petitioners aver that there is no reason to think that the authorities administered by other agencies may be sufficient in this regard. Nothing in TSCA, however, precludes the Administrator from so informing any other agency, by report, wherein the control of such activities as they regulate is *necessary, even if insufficient*, to eliminate the risk, **and Petitioners here request that the Agency so inform such agencies by such reports where warranted.**

#### IV. SUMMARY OF ARGUMENT

This Petition summarizes the relevant factual basis for its conclusion that unabated legacy, current, and otherwise-anticipated fossil fuel emissions are imminently hazardous and present an unreasonable risk of injury to health and the environment.

As discussed more fully within its main body, levels of atmospheric greenhouse gas, most importantly CO<sub>2</sub> and CH<sub>4</sub>, have climbed well into the danger zone, placing Earth into a state of energy imbalance that is disrupting the climate system – raising ambient temperature; inducing drought and wildfire in some regions and flooding in others; threatening the inundation of coastal cities and communities; altering atmospheric and oceanic circulation, heat transfer and weather patterns; disturbing ocean-based and terrestrial ecosystems; and driving many already-stressed species to extinction.

The still-enlarging maelstrom of climate impacts was anticipated early on by the U.S. fossil fuel industry but, in any event, it derives largely and unequivocally from fossil fuel emissions.

The basic scientific facts were reaffirmed on August 9, 2021 in the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC). Accordingly, we hereby incorporate by reference, unless expressly distinguished, the relevant conclusions provided in the Summary for Policymakers of *Climate Change 2021: The Physical Science*

*Basis*, Contribution of Working Group I to the IPCC Sixth Assessment Report. See Exhibit 1 to the Petition.

Because of their continued accumulation in the atmosphere, fossil fuel GHG emissions now present a more severe threat than in 2007, when the Supreme Court denominated them to impose a risk that is “serious and well recognized.” *Mass v. EPA*, 549 U.S. 497, 521, 127 S. Ct. 1438, 1455 (2007). For his part, as denoted *supra*, President Biden has recognized that the risk these chemicals impose on our nation and the planet is of an “existential” order.

In light of their grievance that legacy, current, and otherwise-anticipated fossil fuel emissions present an imminent and unreasonable risk of serious or widespread injury to health or the environment, Petitioners herein request that the Agency commence a civil action to compel fossil fuel manufactures to timely phase out their production or importation of oil, gas and coal, so as to ensure the phase out of associated greenhouse gas emissions, including from their intended use.

Further in light of those grievances, Petitioners here petition the Administrator for a rulemaking aimed to phase out over time and on a practical schedule the production, manufacture, processing, and distribution in commerce of fossil fuels where substitutes either are, or reasonably can be, made available, so as to phase out the greenhouse gas emissions stemming from their production and intended use, and compel removal of fossil fuel legacy emissions to as to restore and protect the climate system. The actions sought by Petitioners, that is, to phaseout and remove legacy, ongoing, and anticipated fossil fuel greenhouse gas emissions, must continue at least to the point that their atmospheric concentration no longer presents an unreasonable risk of injury to health or the environment.

## **V. Procedural History, and Petitioners’ Burden**

This section addresses both TSCA Section 21 requirements and EPA’s earlier rejection of a petition by Donn Viviani, one of the current group of Petitioners.<sup>26</sup> The earlier Viviani petition asked the Agency to regulate an aspect of the ocean problem, i.e., ocean acidification caused by CO<sub>2</sub>, whereas the current petition seeks the Agency’s action with respect to all fossil fuel emissions, and particularly CO<sub>2</sub> and CH<sub>4</sub>, for their impact on health and the environment – of which impacts to the ocean comprise one important aspect.

EPA’s rejection of the earlier Petition was predicated on the supposition that CO<sub>2</sub> is a mere by-product of industrial activity that does not move in the stream of commerce, that the earlier petition did not provide a coherent regulatory path with its own risk assessment, and that

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<sup>26</sup> [https://www.epa.gov/sites/production/files/2015-09/documents/co2\\_tzca\\_21\\_petition\\_response\\_pre-pub\\_2015-09-25.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/co2_tzca_21_petition_response_pre-pub_2015-09-25.pdf). See also: <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca>

the earlier petition did not prove unreasonable risk.<sup>27</sup> The Agency's own guidance for section 21 petitions<sup>28</sup> does not support the imposition of that burden on petitioners to<sup>29</sup> (*vide infra*) but, in any event, Petitioners here provide more than a sufficient basis for the determination that the manufacture, processing, distribution in commerce, use, or disposal of CO<sub>2</sub> and CH<sub>4</sub> presents an unreasonable risk of injury to health or the environment,

#### A. Stream of Commerce

The notion that CO<sub>2</sub> can't be both a substance that moves in the stream of commerce and a byproduct of global industrial activity is flatly erroneous.

Fossil fuels are produced and distributed in the stream of commerce in light of their CO<sub>2</sub> production potential. CO<sub>2</sub> is therefore not an inadvertent byproduct, but rather the chemical product deriving from the intended utilization of fossil fuels products. Energy released from its combustion materializes only when its carbon-oxygen double bonds are formed. It is therefore in the instant that CO<sub>2</sub> is formed that the energy deriving from the formation of its double bonds can be captured. After that occurs, the residual CO<sub>2</sub> is either emitted to the atmosphere, there to undermine the prospect of continued human survival, or else recaptured for re-use in the stream of commerce – including for enhanced oil recovery, sustainable fuel generation, other commercial ventures – and for carbon capture and sequestration efforts that aim to satisfy state or federal or international regulatory goals and requirements that increasingly condition the market for fossil fuels.

Petitioners note, as well, that CO<sub>2</sub> is the product that drives the pistons in an internal combustion engine. The pistons are moved only when the carbon in the fuel (gasoline, diesel, or natural gas) is combined with oxygen to form CO<sub>2</sub> – thereby increasing the number of moles of gas and thus the pressure in the pistons, and thus powering the engine to do the required work. In addition, the heat released from forming the carbon-oxygen double bonds expand all the other gases (principally, the N<sub>2</sub>) in the piston as well. Again, the CO<sub>2</sub> may then be discarded as (increasingly dangerous) exhaust – but only after it has been employed to power the internal combustion engine.

Petitioners, moreover, challenge the notions that TSCA reaches only chemical substances that are “in commerce” or present no global scale challenge. PCB-contaminated rags and sewage sludge for example, are the subject of TSCA rules, yet neither chemical or mixture is in

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<sup>27</sup>Although not required under section 2620, we have included a more robust discussion of both the risk/economic costs and benefits, regulatory path/ options in this petition, as well.

<sup>28</sup> <https://www.complywithtsc.com/tscaonline/pdfs/vol5/sectionV/chapterB/ChBdoc2.pdf> Also 50 FR 46825

<sup>29</sup> Policy Letter 11–01, Performance of Inherently Governmental and Critical Functions Office of Management and Budget.

commerce – at least not to the extent of CO<sub>2</sub>. And as to global scale, CFCs and dioxin were properly regulated at one time pursuant to TSCA, and were also produced on a global scale. Again, by its terms, TSCA is not constrained to bite-sized problems.

## B. Risk assessment

EPA has previously granted, in part, a TSCA Section 21 petition asking that formaldehyde be regulated.<sup>30</sup> That petition did not contain its own risk assessment sufficient to determine an “unreasonable” risk, but in light of the significant risk identified there EPA “decided to initiate a proceeding to investigate whether and what type of regulatory or other action might be appropriate to protect against risks posed by formaldehyde emitted from pressed wood products.”<sup>31</sup>

Other risks that have been considered sufficiently “significant” to regulate under TSCA section 2605 are risks from mixed mono and diamides of an organic acid,<sup>32</sup> Triethanolamine salt of a substituted organic acid,<sup>33</sup> Triethanolamine salt of tricarboxylic acid,<sup>34</sup> and Hexavalent chromium-based water treatment chemicals in cooling systems.<sup>35</sup>

The undersigned notes that, at the very least, fossil fuel greenhouse gas emissions impose a risk of injury (not to mention actual injury) to health and the environment that is orders of magnitude greater and more far-reaching than the off-gassing of wood products and the other above-referenced risks. EPA therefore may proceed, at minimum, in no less an expedited fashion to reduce and eliminate the risks from greenhouse gases – unless EPA establishes, in response, that Congress under TSCA sought exclusively to tinker at the margins of public health and environmental risk.

EPA and OMB guidance documents may serve as a guide for determining what is required in a Section 21 petition seeking regulation under TSCA Section 6(a), 15 USC §2606(a) (“unreasonable risk of injury to health or the environment). Irrespective of the merits of the earlier petition, the present petition abundantly meets the requirements of that guidance – as well as the dictates of policy in the public interest.

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<sup>30</sup>July 27, 2016 -- EPA finalized a rule to reduce exposure to formaldehyde vapors from certain wood products produced domestically or imported into the United States. *See* <https://www.epa.gov/formaldehyde/formaldehyde-emission-standards-composite-wood-products>.

<sup>31</sup> *Id.*

<sup>32</sup> CFR 747.115

<sup>33</sup> 40 CFR 747.195

<sup>34</sup> 40 CFR 747.20

<sup>35</sup> 40 CFR 749.68

The guidance states, relevant here, that: “EPA must find that there is a reasonable basis to conclude that the manufacture, processing, distribution in commerce, use, or disposal of a chemical substance or mixture presents or will present an unreasonable risk of injury to health or the environment. The key findings relating to unreasonable risk must be made both when a new regulation is proposed, and when an existing regulation is amended or repealed. Petitioners should provide data to support these findings and describe how the requested section 6 controls would help resolve the problem.” 50 FR 46825 (Nov. 13, 1985).

Importantly, here, Petitioners note that the instant petition asks that rulemaking *be initiated*. It is not Petitioners’ burden to prescribe in detail the proposal that EPA should issue in response to its findings. Rather, Petitioners are obliged to provide facts to support the unreasonable risk they urge be found by the Administrator. Upon this petition’s submittal, EPA is at an early stage in the rule making process,<sup>36</sup> as discussed below, so that EPA here must decide only the question whether it should grant the petition. Much less information, at this stage, is required than that which is needed to assess the full range of alternatives required for final policy choices. Thus, to be clear, Petitioners seek Agency action in two phases: (1) the risk determination, and then (2) a second proceeding on relief and schedule.

EPA section 21 Guidance states that a Petitioner “is *encouraged*,”<sup>37</sup> to supply information that enables *EPA* to determine the unreasonableness of the risk (emphasis added). Accordingly, the failure in a petition to provide any specific piece or type of information cannot serve as a basis for its rejection – particularly where relevant facts as to substantial risks of injury to health and the environment are also reasonably available to the Agency. The instant petition nonetheless provides robust information on risk, costs and benefit, but anything missing can and must – given the enormity of the manifest risks – be ascertained by the Agency in response to its notice of rulemaking and utilizing its ample information-gathering authority.

This petition provides the type of information that EPA routinely uses in cost/benefit assessments: e.g., quantitative estimates of damages such as economic loss; mortality and morbidity from unmitigated climate change and ocean warming and acidification; cost/ton for carbon sequestration and emission reduction; options for CO<sub>2</sub> emissions reduction and sequestration, CH<sub>4</sub> destruction, etc. Climate benefits are included because OMB guidance<sup>38</sup> for cost/benefit analysis specifically calls for the inclusion of ancillary or co-costs and benefits, as

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<sup>36</sup> EPA’s Action Development Process. Guidance for EPA Staff for Developing Quality Actions (Revised 2011).

<sup>37</sup> 50 FR 46825

<sup>38</sup> OMB Circular A-4, 2003. President Biden signed Executive Order 14008 on January 27, 2021, reversing the previous Administration requirement that co-benefits be reported separately; accordingly, EPA is now required to take into account in such a rulemaking all global and domestic benefits and effects from fossil fuel greenhouse gases on health and the environment.

do EPA economic assessment guidelines,<sup>39</sup> and these benefits have been included in prior Agency rules.<sup>40</sup>

As Petitioners noted *supra*, the Agency's determination as to "whether a chemical substance presents an unreasonable risk of injury to health or the environment" must be done "without consideration of costs or other nonrisk factors. . . ." 15 §2605(b)(4)(A). This specification was added by amendments signed into law approximately 9 months after the Agency's denial of the earlier petition on acidification submitted by Petitioner Viviani.<sup>41</sup> Nonetheless, to assist with the Agency's subsequent consideration of factors, including cost, that are relevant to an appropriate rule, Petitioners here provide facts deriving not only from scientific studies of major risks to health and the environment imposed by fossil fuel GHG emissions, but also information that may aid EPA's evaluation of possible methods of risk reduction, including options for reducing atmospheric concentrations of CO<sub>2</sub> and CH<sub>4</sub> through economic incentives, trading, and regulation.

Again, this petition asks EPA to initiate rule making. Only EPA can make the findings required to promulgate a rule, as the courts have determined,<sup>42</sup> and here, under Section 2606 (imminent hazard) the Agency can initiate, develop, and promulgate a proposed rule that will be effective upon promulgation. Specifically, Petitioners here also request that Agency review of the risk presented by fossil fuel GHG emissions to health and the environment be quickly tiered since it is clear that "some type of action" is required.<sup>43</sup> The risks petitioners describe herein clearly meet the Tier 1 Criterion since a proper Agency response requires not only "top actions" by the Administrator, but also by the Assistant, Associate and Regional Administrators.

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<sup>39</sup> Guidelines for Preparing Economic Analyses National Center for Environmental Economics USEPA, May 2014.

<sup>40</sup> See e.g., mercury and air toxics (MATS) regulations.

<sup>41</sup> Frank R. Lautenberg Chemical Safety For The 21st Century Act (June 22, 2016), Sec. (3) amending TSCA §6, adding subsection (b)(Risk evaluations), including (b)(4) of which provides, "(A) IN GENERAL.—The Administrator shall conduct risk evaluations pursuant to this paragraph to determine whether a chemical substance presents an unreasonable risk of injury to health or the environment, without consideration of costs or other nonrisk factors. . . ." Available at <https://www.congress.gov/114/plaws/publ182/PLAW-114publ182.pdf>.

<sup>42</sup> *Citizens for a Better Environment v. Thomas* No. 85 C 8000 (704 F. Supp. 149, 28 ERC 1841) (N.D. Ill. January 10, 1989) ("Section 2620 was adopted by Congress to allow citizens to prod the EPA into action by petitioning for the initiation of rulemaking procedure which must be carried out under the Administrative Procedures Act (APA)<sup>42</sup> and Section 2603(b)(5) procedures.").

<sup>43</sup> EPA's Action Development Process. Guidance for EPA Staff for Developing Quality Actions (Revised 2011). [https://yosemite.epa.gov/sab/sabproduct.nsf/5088B3878A90053E8525788E005EC8D8/\\$File/adp03-00-11.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/5088B3878A90053E8525788E005EC8D8/$File/adp03-00-11.pdf)

Unabated global warming deriving from emissions of CO<sub>2</sub> and CH<sub>4</sub> present not merely significant unreasonable risks,<sup>44</sup> but existential risks. EPA has at its disposal overwhelming material, some cited previously, that these risks are significant, including publications of the Intergovernmental Panel on Climate Change, the US Geologic Survey (USGS),<sup>45</sup> the Government Accountability Service (GAO),<sup>46</sup> the Congressional Budget Office (CBO)<sup>47</sup>, the US Council of Economic Advisors,<sup>48</sup> the National Center for Atmospheric Research (NCAR),<sup>49</sup> the National Air and Space Administration (NASA),<sup>50</sup> the National Oceanic and Atmospheric Administration (NOAA)<sup>51</sup> and EPA itself,<sup>52, 53</sup> as recently as this year.<sup>54, 55</sup> These agencies, offices and departments have recognized the significant risks imposed by ongoing and legacy fossil fuel emissions, in light of their effect on the land and marine environment, associated human and natural systems and services, human health and welfare, and the economic security of the United States. That material, in combination with those in Part II of the instant petition, overwhelmingly establishes risk that is significant, unreasonable and imminent.

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<sup>44</sup> “Significant risk” is a necessary condition for triggering rule making under the highest Tier of Action EPA’s Action Development Process. *Id.*

<sup>45</sup> USGS Fact Sheet 2012 3058

<sup>46</sup> GAO-14-736 Ocean Acidification 2014

<sup>47</sup> Potential Impacts of Climate Change in the United States, CBO. May 2009.

<sup>48</sup> The Cost of Delaying Action to Stem Climate Change, US Council of Economic Advisors, EOP, 2014

<sup>49</sup> Long, Matthew C., Curtis Deutsch, and Taka Ito. "Finding forced trends in oceanic oxygen." *Global Biogeochemical Cycles* 30.2 (2016): 381-397.

<sup>50</sup> <https://climate.nasa.gov/evidence/> last visited 2/20/21

<sup>51</sup> Ocean Acidification, State of the Science Fact Sheet, March, 2013

<sup>52</sup> <https://www.epa.gov/ocean-acidification/effects-ocean-and-coastal-acidification-ecosystems>

<sup>53</sup> <https://www.epa.gov/ocean-acidification/effects-ocean-and-coastal-acidification-marine-life>

<sup>54</sup> <https://www.epa.gov/climate-indicators/oceans>

<sup>55</sup> <https://www.epa.gov/cre/sea-level-rise>

### C. Global Reach

We respond here briefly to a potential objection, if only for completeness, namely that because US sources account for a minor share of worldwide emissions, action within the United States under TSCA and related authorities may not suffice to lower atmospheric and oceanic concentrations of greenhouse gases, so that the unreasonable risks of injury to health and the environment stemming from global warming and ocean acidification may not be resolved even by diligent action within the nation.

First, Petitioners entirely concede the specific point and yet it simply fails to tell against the petition. While diligent action within the US *may not be* sufficient, it nonetheless *may be sufficient* – depending on the strength of climate action in other major emitting nations (and that of multi-national corporations).

Second, the Toxic Substances Control Act does not so readily let responsible parties, whether it is the government or manufactures of harmful substances, off the hook. Upon the Agency’s determination, as here, that fossil fuels and the GHG emissions stemming from their production, distribution, use, or disposal (or any combination of such activities) “presents an unreasonable risk of injury to health or the environment,” 15 USC 2605(a), the Agency must apply one or more requirements to such substance or mixture. That obligation is not relaxed where there is no guarantee of success. Rather, it must be done “to the extent necessary so that the chemical substance or mixture no longer presents such risk.” *Id.*

A strong suite of climate actions by the United States, undergirded by TSCA and associated other statutes administered by EPA, may be *necessary*, even if insufficient, to stem the tide. Thus, if other nations in total muster a barely sufficient proportionate response, the continuing failure by the US to phase out new GHG emissions and remove a proportionate share of excess legacy GHG emissions will *itself* substantially undermine prospects of keeping the present overshoot to a minimum. Importantly, this consideration is independent of Petitioners’ earlier observation, also relevant in the full picture, that the US bears the most responsibility of any nation for the present surfeit of atmospheric CO<sub>2</sub>.

## CONCLUSION

By use, reference, and incorporation of some of the relevant literature, Petitioners herein have established that, while additional research is always useful, sufficient information exists to state with high certainty that there are present, imminent, severe, widespread, and increasing injuries to health and the environment from legacy and continuing fossil fuel GHG emissions. The injuries include emissions-induced energy imbalance, heat waves, wildfire, wildfire smoke, drought, ecosystem degradation, species loss, ocean acidification, ocean deoxygenation, ocean warming, ice melt and sea level rise, marine food-web disruption, and increased disease vector. This listing is partial.

Petitioners therefore request the Administrator to undertake legal action pursuant to TSCA §7, 15 USC §2606 (a), to ensure commencement of a timely phase out and removal of continuing and legacy fossil fuel GHG emissions. Petitioners also therefore request the Administrator to initiate a rulemaking proceeding pursuant to 15 USC §2606 (d).

Moreover, Petitioners here request, in the event that the Administrator does not timely act on their request that the Agency itself initiate a rulemaking, that the Agency grant Petitioners' own §2620 petition requesting the Agency to commence rulemaking under §2605. That proceeding must commence with the Agency's determination that the manufacture, processing, distribution in commerce, use, or disposal, "or any combination of such activities," with respect to legacy, current and anticipated fossil fuel GHG emissions present an unreasonable risk to health or the environment, §2605(a), without consideration of costs or other non-risk factors. §2605(b)(4).

Upon the Agency's determination of unreasonable risk, Petitioners here request that the Agency commence a second phase of rulemaking to determine requirements (a) under TSCA to prohibit or otherwise restrict fossil fuels and their GHG emissions, including with respect to their manufacture, processing, distribution in commerce, use, and disposal, and (b) pursuant to other authority that the Agency administers, including but not limited to the IOAA, the CERCLA, the CAA, and the CWA.

If, on the other hand, the Agency deems that the evidence provided herein (including in Part II) does not support Agency action under TSCA, or related federal authorities, then Petitioners request that the Agency explain why not.

And finally, if, in spite of the evidence, the Agency deems TSCA to be legally inapposite or inadequate to ground strong action under which it will (a) phase out new fossil fuel greenhouse gas emissions, and (b) compel removal, or payment for removal, of legacy fossil fuel GHG emissions, then again, Petitioners request that the Agency explain itself. In detail.