

October 19, 2020

Dear Senator:

On behalf of our millions of members and supporters, we write to request legislation to end the harms to the planet and public health caused by burning carbon to fuel vehicles. We urge you to require that 100% of new light-duty vehicles be zero emission by 2030.

The climate bills pending in Congress are inadequate to solve the climate crisis—or to avoid the 1.4 million preventable deaths expected from air pollution caused by burning carbon fuels over the next 20 years.<sup>1</sup>

The latest health effects research estimates that air pollution from burning carbon was expected to take an estimated 242,000 lives in 2020 assuming normal economic activity not slowed by the COVID pandemic.<sup>2</sup> As a proximate cause of death, air pollution from fossil fuel combustion would rank as the third-leading cause of death in the U.S. contributing to eight of the top ten causes—heart disease; cancer; chronic lower respiratory diseases; stroke (cerebrovascular diseases); Alzheimer’s disease; diabetes; influenza and pneumonia; and nephritis, nephrotic syndrome, and nephrosis.<sup>3</sup>

### **Urgent Action Needed to End the Air Pollution Pandemic—240,000 Lives Lost Annually.**

Year after year America is suffering an unacknowledged health crisis from air pollution as severe as the impact of COVID. We ask you to take action to save American lives from the air pollution pandemic linked to burning carbon fuels with the same urgency and focus that Congress has given to the COVID-19 pandemic. Ending the era of carbon fuels will also protect us from more extreme floods, heat waves, superstorms and firestorms caused by climate warming,

The combustion of coal, petroleum fuels, natural gas, alcohol and bio-fuels (wood, peat and agricultural wastes) emits not only carbon dioxide (CO<sub>2</sub>), but also a complex mixture of hazardous pollutants including carbon monoxide, nitrogen oxides, sulfur dioxide, black carbon, reactive organic compounds, benzene, toluene, xylene, aldehydes, 1,3 butadiene, polycyclic aromatic hydrocarbons, and toxic metals including mercury, arsenic and nickel. Together these carbon fuel-related pollutants create the deadly pall of ozone smog and fine particle soot that poison the air. Using the latest air pollution health research, Shindell found that particle soot causes an estimated 190,000 premature deaths and ozone smog another 50,000 deaths annually, impairing the health of millions of Americans by contributing to cardiovascular and respiratory diseases including heart attacks, asthma, COPD and lung cancer.<sup>4</sup>

### **The Air Pollution Pandemic is Especially Unjust for Communities of Color.**

The urgency for Congress to act is greatest for the residents of communities where the diseases of air pollution are greatest: the polluted neighborhoods near coal-fired power plants, petroleum refineries, chemical plants, heavily trafficked highways, rail yards, seaports and airports.

Like COVID, the air pollution pandemic affects low income and minority communities the most. EPA has designated 201 urban counties with 132 million Americans where national air quality standards for smog (ozone) and fine particles are violated.<sup>5</sup> Black and Latinx Americans comprise a much larger population of these urban counties than their share of the national population.

An estimated 65 million Americans live within the high pollution zone adjacent to major highways where exposures to the complex mix of pollutants emitted from diesel and gasoline engines is significantly greater than in other urban neighborhoods. Neighborhoods adjacent to interstate highways and freeways are home primarily to low-income communities of color. Increased exposure to the pollutants produced by burning carbon fuels helps explain why the prevalence of asthma is 25% greater for Blacks than Whites, and why asthma is more than twice as prevalent among Black than White children.<sup>6</sup> Air pollution, like COVID, kills more of the elderly than children, but it impairs health and diminishes lives in all age groups. An international report joined by the U.S. National Academies of Science and Medicine found that:

The scientific evidence is unequivocal: air pollution can harm health across the entire lifespan. It causes disease, disability and death, and impairs everyone's quality of life. It damages lungs, hearts, brains, skin and other organs ... affecting virtually all systems in the human body.<sup>7</sup>

### **The Deaths and Diseases from Air Pollution Will Not End with a Vaccine; Congress Must Enact the Solutions, Starting with the Transportation Sector.**

Lives will continue to be destroyed from exposure to air pollution, and the Earth's natural systems will be further disrupted by warming, until we stop burning carbon. Congress must set clear deadlines to accelerate the conversion of power generation from carbon fuels to renewable sources, and the replacement of fossil fueled engines in all modes of transport—cars, trucks, trains, ships and aircraft—with zero emission technologies.

We urge Congress to focus first on the sector that contributes most to emissions and their resulting climate and public health crises. Transport emits 35% of U.S. CO2 emissions, recently surpassing electric power generation as the largest source. Transport CO2 emissions are growing quickly, increasing nearly 3% annually for the last 5 years. These increases offset the gains from phasing out coal to generate electric power, preventing the U.S. from reducing its climate impact overall.

In our cities, vehicles are the largest emitters of the pollutants causing the air pollution pandemic. The rapid conversion of vehicle fleets to zero emission technologies will protect urban Americans from the ravages of urban smog and fine particle pollution. The crystalline blue skies seen over Los Angeles, Chicago, Houston, Dallas and other cities during the lockdown in March and April are a preview of how clean our cities will become when diesel trucks and gasoline cars join steam engines in museums.

Electric and H-fuel-cell vehicles are mature technologies, commercially available now. EVs now have life cycle costs (purchase price plus operating and maintenance costs) less than

internal combustion engines, and fuel-cell technologies are close to having lower costs. Congress needs to provide leadership for truck engine manufacturers and automakers, as it did in the 1970 Clean Air Act when Congress determined that protecting lives demanded that by 1975 new vehicles must reduce emissions by 95%. To end the air pollution pandemic and stabilize the climate, Congress must enact emission standards for new vehicles that require zero carbon emissions, beginning with 20% to 30% of light duty vehicle production in 2026, and for all new light duty vehicles no later than 2030.<sup>8</sup>

All new vehicles must be zero emission vehicles (ZEVs) no later than 2030 if we are to have any hope for on-road emissions to meet the 2050 zero emission target established by the International Panel on Climate Change. Both the CLEAN Future bill drafted for Energy and Commerce and the report of the House Select Committee on the Climate Crisis acknowledge the need to achieve the 1.5 C goal that drove the scientific analysis embodied in the IPCC report. To achieve the IPCC target by 2050, the 300 million fossil fueled vehicles expected to be on American roads in 2030 must be replaced with zero emission technologies. Given the normal passenger car replacement rate (98% in 20 years), we cannot achieve that goal if new fossil fuel vehicles are added to the national fleet after 2030.<sup>9</sup>

Enacting a zero CO<sub>2</sub> emission standard for all new light duty vehicles will give all automakers a level playing field in the competitive auto market, and a 10-year planning horizon to convert production facilities and build the parts and materials networks they need to make the transition. Equity for auto workers also demands actions to support on-shore production of ZEV parts and materials, and guarantees for auto industry retirement plans and job-retraining programs

To help low-income vehicle owners who do not benefit from tax credits make an equitable transition, we also urge enactment of a clean car replacement program that provides cash incentives greater than Blue Book value to fossil fuel vehicle owners to scrap (not trade or sell) polluting vehicles. This will accelerate reductions of both GHG and health-related pollutants while helping create demand for new and used ZEVs that will stimulate the auto industry back to health while preserving good paying autoworker jobs.

### **The American economy will boom if Congress ends the burning of petroleum fuels.**

NOAA reports that the cost of “Billion-Dollar Weather and Climate Disasters” has nearly doubled since 2010, rising from an average of less than \$80 billion annually early in the decade to \$153 billion for the three most recent years.<sup>10</sup> The National Climate Assessment estimates that the costs of climate disasters will rise to \$500 billion annually if GHG emissions are not reduced.<sup>11</sup> The current costs are inevitably the price we will continue to pay for past inaction, but the massive increase in future costs is avoidable if we act quickly to stop burning carbon.

The costs to the economy from lost lives and medical care for the victims of air pollution, together with the costs of lost work days resulting from the diseases of air pollution, are estimated by Shindell to average \$700 billion annually over the coming decades if we fail to act.<sup>12</sup> But unlike the costs of climate disasters that are “baked” into the current climate regime, the costs of the air pollution pandemic can be completely eliminated for future generations born

after we stop burning carbon. How many more of our children need to suffer the burden of air pollution before Congress acts?

In addition, converting the national vehicle fleet to zero emission technologies will create millions of new jobs. Most autoworker jobs will be guaranteed by the need to replace 300 million fossil fuel vehicles. New jobs will be created to buildout and maintain a ubiquitous electric vehicle charging network and the facilities needed to produce hydrogen for fuel cells.

A study of the economic consequences of converting 27% of the light duty fleet to EVs by the National Renewable Energy Lab concluded that “[t]he Aggressive and Low Cost scenarios are associated with an average (2015–2040) of approximately 51,500 to 108,400 additional jobs per year and an increase in GDP of \$6.6 billion to \$9.9 billion per year, respectively.”<sup>13</sup>

Jobs outside the transport sector are created from the economic activity stimulated by the fuel cost savings that accrue from switching to electricity in place of petroleum fuels. In 2016, U.S. drivers paid over \$300 billion to purchase more than 143 billion gallons of gasoline. Electric power to drive the same distance in EVs would cost between \$75 and \$125 billion depending on where the miles are driven. The \$175 to \$225 billion not spent on petroleum fuels would remain in the pockets of vehicle owners to spend in their local economy. These fuel-cost savings are estimated to create 16 times as many jobs in the local economy compared to jobs that will be lost in the oil industry.<sup>14</sup>

The net economic effect of switching to zero emission technologies will be to avoid the costs of more severe future climate disasters, reduce the national cost of health care, and inject hundreds of billions in fuel cost savings into local economies across America.

### **Climate Policy Should be Guided by USCAN’s Vision for Equitable Climate Action.**

Action will be needed on many fronts to transform the U.S. economy to achieve the zero GHG emission target by 2050 needed to stabilize the climate before a runaway climate disaster threatens the survival of human civilization. Action to launch that transformation in the vehicle sector must not be deferred because the benefits in saved lives, healthier cities and reduced transportation costs will far outweigh the costs of retooling the auto industry and scaling back oil production.

Recognizing the limitations of our political system to direct and manage this transformation, we urge you to focus first on transforming the transport segment of the economy responsible for the largest share of both GHG emissions and the air pollutants that cause widespread deaths and disease. Weaning this segment of the economy from dependence on fossil fuels must be a high priority for Congress.

Given the scope of the challenge we face, Congress must also preserve opportunities for the States and other actors to take effective action. For example, Congress must maintain California’s long-standing authority to set its own zero emission vehicle standards, and the ability of other states to opt-in to stronger California standards as provided by the Clean Air Act.

For the reasons discussed in the attached policy analysis,<sup>15</sup> We conclude that pending climate bills are not adequate to transform the transport sector to zero emissions by 2050 to meet the 1.5° C climate goal. U.S. Climate Action Network (USCAN) has recently issued its Vision

for Equitable Climate Action,<sup>16</sup> a joint effort of more than 100 organizations. VECA is a platform of targets and financing strategies for transforming each economic sector that contributes to carbon emissions – including transportation, agriculture, health, buildings and energy efficiency, manufacturing, and power generation. VECA’s goal: acting equitably and ambitiously, to achieve the GHG reduction targets described by the IPCC for keeping global temperature below 1.5° C: zero emissions by 2050, with half that reduction by 2030. Meeting these targets will exceed the U.S. commitments in the Paris Climate Agreement.

We ask Congress to implement the VECA recommendations for vehicle standards, beginning with enacting zero emission standards for new on-road vehicles, rail engines, water and air craft, setting deadlines to induce engine manufacturers and automakers to plan and make the investments needed to convert the transport sector to zero emission technologies, and creating incentives for states and metropolitan areas to transform their transport systems to provide affordable access to transportation for all travelers, including those who do not drive.

We look forward to hearing from you regarding the action you will take to protect all American families by ending the air pollution pandemic caused by carbon fuels that plagues all our metropolitan areas and the climate crisis that threatens life on the planet.

If you have any questions or would like to discuss this matter, please contact Bob Yuhnke of Elders Climate Action ([bob.yuhnke@outlook.com](mailto:bob.yuhnke@outlook.com)) and David Arkush of Public Citizen ([darkush@citizen.org](mailto:darkush@citizen.org)).

Respectfully submitted for your consideration,

Elders Climate Action

Public Citizen

Center for Bioloical Diversity

Center for Common Ground

Climate Hawks Vote

Earth Action, Inc.

ecoAmerica

Franciscan Action Network

Friends of the Earth US

GASP

Mothers & Others for Clean Air

Nuclear Information and Resource Service

People's Justice Council

Rachel Carson Council

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<sup>1</sup> See testimony Health and Economic Benefits of a 2°C Climate Policy presented by Dr. Drew Shindell, Nicholas School of the Environment, Duke University, to the House Oversight Committee (August 5, 2020):

[https://nicholas.duke.edu/sites/default/files/documents/Shindell\\_Testimony\\_July2020\\_final.pdf](https://nicholas.duke.edu/sites/default/files/documents/Shindell_Testimony_July2020_final.pdf).

<sup>2</sup> See Shindell testimony, Appendix: Methods, *Premature Mortality*, p. 10. Shindell uses the most recent risk factors for modeling the mortality caused by exposure to fine particles (soot) and ozone (smog) updating the earlier work of EPA staff who relied on 2014 and 2016 risk factors to estimate that total mortality attributable to burning carbon fuels in the U.S. is 110,000 annually. Kenneth Davidson, et al., 2020 *Environ. Res. Lett.* 15 075009.

<sup>3</sup> National Center for Health Statistics, Centers for Disease Control and Prevention, Leading Causes of Death, <https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm>.

<sup>4</sup> Shindell testimony, at 3; *Premature Deaths*, 10-11.

<sup>5</sup> EPA listed (October 31, 2019), all or a portion of 201 urban counties where ozone levels violate the current (2015) ozone national ambient air quality standard. See <https://www3.epa.gov/airquality/greenbook/jncty.html> (referenced Nov. 18, 2019). These ozone non-attainment counties included 120.5 million residents in 2010, 39% of all Americans. By 2019, the exposed populations in these areas had increased by an estimated 10% to 132 million.

<sup>6</sup> Centers for Disease Control, “Current Asthma Prevalence by Race and Ethnicity (2016-2018).” See [https://www.cdc.gov/asthma/most\\_recent\\_national\\_asthma\\_data.htm](https://www.cdc.gov/asthma/most_recent_national_asthma_data.htm) (referenced July 24, 2020).

<sup>7</sup> “Air Pollution and Health – A Science-Policy Initiative,” *Annals of Global Health*, 85, 140, 1-9 (2019).

<sup>8</sup> US Climate Action Network adopted a zero emission standard for new vehicles no later than 2030 as part of its *Vision for Equitable Climate Action*. A policy analysis explaining why the auto industry, auto workers and consumers need and will benefit from a 2030 standard will be available soon.

<sup>9</sup> See Appendix A, pp. 5, 7-8 (analysis of deadline date in Merkley bill).

<sup>10</sup> See National Oceanic and Atmospheric Administration, National Environmental Information Center; available at <https://www.ncdc.noaa.gov/billions/summary-stats> (accessed August 17, 2020).

<sup>11</sup> Fourth National Climate Assessment, *Report-in-Brief*, p. 170 (2018).

<sup>12</sup> Shindell testimony, p. 1.

<sup>13</sup> “National Economic Value Assessment of Plug-in Electric Vehicles,” p. xxiv, NREL (2016), available at <https://www.nrel.gov/docs/fy17osti/66980.pdf>.

<sup>14</sup> See “Plug-in Electric Vehicles: Economic Impacts and Employment Growth,” Energy and Environmental Research Associates, LLC (2017), <https://caletc.com/wp-content/uploads/2019/05/EERA-PEV-Economic-Impacts-and-Employment-Growth.pdf>.

<sup>15</sup> See Appendix A, pp. 7-9.

<sup>16</sup> See VECA at [www.equitableclimateaction.org](http://www.equitableclimateaction.org).