

Special Committee on the Climate Crisis
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Dear Members of the Special Committee on the Climate Crisis,

As the Executive Director of the Center for Earth, Energy and Democracy, I appreciate the opportunity to provide written testimony to the Special Committee on the Climate Crisis. These comments also support and affirm the Principles of Environmental Justice, the Principles of Climate Justice, and a human rights framework that includes the the United Nations Declaration on the Rights of Indigenous Peoples, and the United Nations Guiding Principles on Internal Displacement.

Environmental justice advocates across the United States recognize that climate change has already resulted in important environmental and health impacts. To what degree these will worsen depends upon how complex environmental processes and societal activities unfold. As we are becoming more aware, climate change is impacting a wide range of conditions in our communities including human health, water availability, energy systems, food and agriculture, ecosystems, transportation, and social networks. We also know that change is happening and that the effects of climate change are interrelated with other environmental, social and economic conditions, which create disproportionate vulnerabilities on Indigenous, low---income and communities of color, herein referred to as environmental justice communities. These include demographic increases in younger and senior populations of color which present higher sensitivities to changes in air quality exacerbated health concerns including high rates of asthma and respiratory illness in already high---risk populations; income disparity trends, as we have recently witnessed low---wage workers experience the largest drop in wages which are impacted by increasing energy burdens at the household level; energy access as low and moderate---income households already pay a higher percentage of their income for energy and the widening energy affordability gaps; housing, where for example, affordable housing has reached crisis proportions and neighborhood social capital, as historically poor neighborhoods have been more vulnerable than affluent areas to effects of reduced public spending.

These community differences can contribute to health disparities given the disproportionate access to energy and environmental sustainability resources and exposures to unhealthy conditions. Living near toxic facilities, freeways and other sources of exposures that are harmful to health is highly correlated with race as well as socioeconomic status. 9Racial segregation and past U.S. Indian policy also means that

Indigenous, Black, and Latino peoples are more likely than Whites to live in poor---quality housing, posing a greater risk of cumulative exposure to environmental conditions that can contribute to poor health. Additionally, approximately 40% to 45% of Black, Latino, and Native individuals live in poor neighborhoods.

The problem of climate change is the result of decades of operations of a carbon-based economy. Because of the continued delay to act at the scale needed to curb carbon pollution, the risks to communities at home and around the globe are increasing at unprecedented levels. To achieve our goals, we will need to overcome past failures that have led us to the crisis conditions we face today. These past failures include the perpetuation of systemic inequalities that have left communities of color, tribal communities, and low-income communities exposed to the highest levels of toxic pollution and the most burdened and affected by climate change. The defining environmental crisis of our time now demands an urgency to act. Yet this urgency must not displace or abandon the fundamental principles of democracy and justice. Some of the most severe climate change---related weather disasters in the U.S. have had a disproportionate impact on low-income communities. Clearly, many aspects of the current system have failed to meet the needs of vulnerable populations in the U.S. Already vulnerable communities pose a unique challenge for mitigating climate change.

To effectively address climate change, the national climate policy agenda must drive actions that result in real benefits at the local and community level, including pollution reduction, affordable and quality housing, good jobs, sustainable livelihoods, and community infrastructure. This will require holistic nonmarket-based regulatory mechanisms that explicitly account for local impacts. It will also require a combination of policy tools. Because of combustion of fossil fuels that produces carbon also produces harmful local pollutants it is critical that climate mitigation policy tools are designed to achieve both local and national emissions reductions of carbon and other forms of pollution.

The shift to a non-greenhouse gas future will require substantial new forms of capital investment by both the public and private sectors to build a new national infrastructure as well as democratic community participation to help set infrastructure investment priorities. Unless justice and equity are central components of our climate agenda, the inequality of the carbon-based economy will be replicated in the new economy. Carbon trading and other market-based policies cannot ensure reduction in pollutants in communities that are already pollution burdened, i.e., they do not guarantee emissions reduction in EJ communities, and can even allow increased emissions in communities that are already disproportionately burdened with pollution. This is unacceptable and legislation that does not address these inequities will contribute to greater inequality.

We recommend the following:

1. Environmental Justice Review and Analysis

Any federal legislation and rulemaking on climate change should ensure that environmental justice communities (the most vulnerable), receive just and equitable benefits from reduced carbon and co-pollutant emissions; the benefits of increased energy efficiency and renewable energy; and are not disproportionately burdened or affected by potential increases in costs such as increases in co-pollutant emissions and/or energy burdens. It is critical that all climate related legislation and rules provide adequate assessments of the distribution of costs and benefits on environmental justice communities.

2. Reduction in cumulative impacts.

History demonstrates that environmental regulation does not effectively translate into healthy environments for all communities. Research has shown over and over again that disparate pollution burdens exist, and that race and income are important variables in determining these disparities. Indigenous, communities of color and low-income communities suffer from the cumulative effects of multiple pollution sources. Federal climate legislation that addresses climate pollution ***must not abandon or diminish*** the important goal of reducing toxic pollution in all its forms. Climate solutions must be part of a comprehensive approach to reducing legacy environmental and economic impacts on communities and be designed intentionally to ensure that they do not impose further risks. ***Market-based policies do not guarantee emissions reduction in EJ communities and can even allow increased emissions in communities that are already disproportionately burdened with pollution and substandard infrastructure.*** In order to ensure climate solutions are equitable, Strategies to address climate change must not disproportionately benefit some communities while imposing costs on others. In fact, federal policy should be used to reduce the disproportionate amount of pollution that is often found in EJ communities and that is associated with cumulative impacts, public health risks, and other persistent challenges.

3. No Nuclear energy

The pathway to a sustainable and equitable national future does not support the use of nuclear energy, either through extension of existing plant operations or new plant construction. The nuclear power industry has managed to re-classify itself as a “clean” energy source because of its low--- and zero---carbon emissions. However, nuclear costs, the extensive legacy and future environmental issues associated with nuclear power make it an unacceptable option for long---term health and environmental sustainability.

A Union of Concerned Scientist study reported that subsidies for nuclear power ranged from \$.29 to \$1.08 per kWh (13% to 70% share of the market price) for investor owned

utilities and \$1.53 to \$5.77 (26% to 98% share of the market price) for public owned utilities.⁴² The report found that in total, the estimated “value of legacy subsidies to nuclear power were at least 7.5 ¢/kWh— equivalent to nearly 140 percent or more of the value of the power produced from 1960 to 2008” (Koplow, 2011). Legacy subsidies ranged from 139% to 142%. These extensive public subsidies identified by the report which include capital formation, shifting of accident risks, and the costs of waste management make it clear that nuclear a viable zero or low carbon alternative is not based on efficient market--based determinations for energy options. More importantly, the public obligation to protect the health and environment, a non---market governmental obligation, makes nuclear power unacceptable as an alternative.

The pollution legacy of historical and ongoing nuclear power has not yet been addressed. Continued Nuclear Regulatory Commission actions allowing for continued “temporary” storage of nuclear waste paving the way for nuclear plant license extensions do not adequately resolve the critical problem of permanent waste storage. In Indian Country, the effects of uranium mining and milling activities from as early as the 1950s are still unresolved and pose present health risks to these communities, including an undetermined number of abandoned uranium mines exist with thousands of mine features such as pits, trenches, holes, etc., and homes and drinking water sources with elevated levels of uranium, radium and other radionuclides. In conjunction with the naturally elevated levels of uranium, selenium, arsenic, and other elements associated with mine and mill sites on the Navajo nation means that the health and environmental effects due to exposure to these elements can include lung cancer, bone cancer, and impaired kidney function. Until these nuclear legacy issues are adequately addressed, any further expansion in nuclear generating capacity that results in increased nuclear waste should not be included in a post-carbon national climate agenda. While climate change is a critical environmental issue that demands legislation and regulation, to utilize nuclear power, which requires a waste storage system that must be managed for 10,000 years is not a suitable alternative.

In addition, according to physicist and researcher M.V. Ramana, nuclear energy is fading in importance globally. The peak in nuclear power’s share of global electricity generation was 17.5 percent in 1996. Since then, this fraction has steadily declined reaching 10.1 percent in 2018 and the downward trend is expected to continue. The most important reason for the decline is that nuclear plants are no longer financially viable. In the last decade, it has become clear that nuclear power has ceased to make economic sense. This is because alternatives to nuclear energy, in particular renewable sources of electricity like wind and solar energy, have become drastically cheaper. It is for this reason that many utilities in the United States have required government subsidies to keep operating. Nuclear plants have a long track record of proving more expensive than initially projected. New nuclear reactor designs too are likely to be much more expensive in reality than paper studies project. What

are called Small Modular Reactors (SMRs) start off with an economic disadvantage because they lose out on economies of scale. SMR proponents hope that this can be compensated through mass manufacture and learning, but even under optimistic assumptions about the rates of learning, hundreds if not thousands of SMRs would have to be constructed before they break even in costs with large reactors, which are themselves not economical. These economic challenges add to the other well-known problems associated with nuclear energy, in particular, the absence of any demonstrated solutions to managing radioactive waste in the long run and the potential for catastrophic accidents. No reactor design is immune to these problems. Efforts to ameliorate one of these problems typically makes other problems worse.

Dr. Ramana also finds that inasmuch as intermittent renewables such as solar photovoltaics and wind turbines are becoming a more important part of the electricity supply, technologies like nuclear power that are best suited for baseload power are going to become more redundant. Instead, the need is for flexible sources of power and storage capacity. For all these reasons, and more, it does not make sense for the United States to embark on a nuclear energy path to address climate change.

3. Pollution-free energy options

Climate solutions must be built upon an inclusive, just, and pollution-free energy economy. The shift to a sustainable, just, and equitable energy future requires innovative forms of investment and governance that distribute the benefits of this transition equitably and justly. This includes investing in the development of innovative decentralized models of energy provision; community governance and ownership; incorporation of social and health benefits into energy systems planning; incentivizing the inclusion of equity into future energy investment through public programs; and supporting public and private research and development to include equity considerations in new technology development.

Climate legislation must drive a rapid shift toward a pollution-free, inclusive, and just economy as well as create high-quality jobs with family-sustaining wages and safe and healthy working conditions. Breaking down the barriers that produce unemployment and underemployment must be a priority. Workers must be treated fairly and supported through investments in workforce and job training programs, especially in communities with disproportionately high underemployed and unemployed populations and in communities that have been historically reliant on fossil fuel extraction and energy production.

It is for this reason, that a number of environmental justice and environmental organizations have developed the Equitable and Just Climate Platform ([Ajustclimate.org](https://ajustclimate.org)).

The Platform outlines the essential elements that are required for comprehensive climate federal and state action in which equity and justice is the foundation. It includes a cross-sector approach, which if followed, will commit the U.S. to implementable and effective climate policy that will not result in increases in pollution, and will distribute the costs and benefits equitably and justly.

4. Funding and research.

Federal climate legislation must include funding for climate research on equity and climate issues. This research must effectively address equity and justice in climate planning and policy and be at a scale and level of rigor that has been historically invested in previous carbon-mitigation policies and programs. Public and private supporters of these past efforts have a moral obligation to also invest in the needs of communities that have been made vulnerable by past environmental, energy, and economic policies. If we do not sufficiently fund and perform EJ and equity research as it relates to climate change, then climate change policy and research has a significant potential to perpetuate and even exacerbate inequalities rooted in race and income.

Notes

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