Clean Power Plan People's Hearing
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Good afternoon. My name is Vijay Limaye, and I work for the Natural Resources Defense Council as an environmental epidemiologist who studies the health effects of climate change. I am here today with my colleagues Kevin Steinberger, Bruce Ho, and Khalil Shahyd to oppose the repeal of the Clean Power Plan on behalf of NRDC's 3 million members and online activists, which include over 180,000 New Yorkers. I am also a former U.S. Environmental Protection Agency scientist. There is no graver, far-reaching, or urgent public health challenge than climate change, a global threat with impacts that reach into our local communities at this moment, not in some distant future. To reduce this threat, we must oppose the repeal of the Clean Power Plan.

The health risks stemming from climate change are numerous and serious. First, flooding risks threaten many of our state's residents here in New York. The evidence is clear that climate change is fueling sea level rise. Since 1900, the sea level near New York City has risen 1 foot, nearly twice as rapid as the global average. With unmitigated climate change, sea level rise in NY Harbor could reach as high as 6 feet by the end of this century.[1] This sea-level rise means that storm surge heights in New York City will increase. Floods that occurred only once every 500 years during pre-industrial times now happen about every 25 years, and by the 2030s could occur every 5 years.[2] Higher seas mean a greater frequency and intensity of coastal flooding, with as much as a 10- to 15-fold increase in the frequency of the current "100-year flood" by the 2080s.[3] As we saw with Hurricane Sandy, when sea rise increased the height of flooding by more than a foot, storm events pose substantial near-term threats to individual health as well as longer-term barriers to community and economic recovery, sometimes for several years.

A second major climate change-driven health concern is exposure to extreme heat, which is linked to early death on both short-term and seasonal timescales.[4] In this country, extreme heat events cause more deaths each year than all other extreme weather events combined, but this impact is often overlooked.[5] High temperatures interfere with the body's respiratory and circulatory systems and disrupt thermal equilibrium. This thermal stress, coupled with an increase in blood thickness and cholesterol levels, increases the risk for cardiovascular and respiratory deaths.[6] Average annual temperatures in NY State increased by about 6°F from 1900 to 2013. But climate change boosts that rate of warming by increasing the frequency, magnitude, and duration of extreme heat events: by the 2080s, New York City's average temperature could be nearly 9°F hotter, and the frequency of heat waves could triple—this represents a nearly unrecognizable climate pattern to many New Yorkers.[7] In fact, climate modeling of mid-century conditions suggests that across the eastern U.S., summer temperatures are likely to be warmer than even the warmest summers ever recorded.[8] As a result, researchers estimate that the probability of mega-heat waves, those which break centuries-long seasonal temperature records, will increase by a factor of 5-10 within the next forty years.[9] While some New Yorkers may be able to temporarily and partially cope with extreme heat by using more air conditioning and staying indoors, climate change could present us with oppressive extreme heat conditions that

cannot be avoided, especially for our most vulnerable neighbors (the very young, the elderly, and the economically disadvantaged).

One recent study estimated that reducing greenhouse gas pollution could cut the numbers of future heat-related deaths in half, showing the importance of our energy choices and greenhouse gas emissions reductions today. Parts of New York City experience even higher daytime temperatures and less nighttime cooling due to the Urban Heat Island effect, which happens when built-up urban areas with more dark, impermeable surfaces capture and later re-radiate heat, posing greater health risks to local residents. For example, parts of Central Harlem in Manhattan, central Brooklyn, and the South Bronx have been identified as especially heat-vulnerable, with hotter urban temperatures, less shade tree canopy, and risk factors like economic disadvantage and high percentages of residents of color.[10] Climate change is an environmental justice challenge that especially threatens the health and well-being of our most vulnerable neighbors.

But there is hope. These sobering facts about climate change also offer an important, unprecedented opportunity --- the chance to avoid the very worst health and economic harms from climate change. When we commit to moving decisively toward cleaner, healthier, energy sources and expanded energy efficiency, we can achieve several tremendous gains. First, we improve local and regional air quality and health today, because burning fossil fuels pollutes the air we breathe with health-harming pollution (like fine particles and ozone precursors), as well as heat-trapping greenhouse gases such as carbon dioxide. Because carbon dioxide has an atmospheric lifetime of about a century, our mitigation actions today such as the Clean Power Plan can also stave off the worst effects of climate change tomorrow. That's a win-win for public health and the economy that can save us billions of dollars in avoided healthcare costs and productivity losses, with thousands fewer cases of respiratory illness, heart attacks, and air pollution-related premature deaths.

Global momentum is building on the side of actions to mitigate climate change. It is important for New York state to continue to lead in matters of regional, national, and global importance -– even more important with the absence of such leadership in Washington. But New York State cannot solve this problem alone; all parts of the US must do their fair share. And if they do, all parts of the US will share in the job growth and health benefits of the clean energy economy. The nation and indeed the world watch what happens in New York state. Strongly supporting the original terms and the goals of the Clean Power Plan will benefit the health and economic vitality of our residents, today and for future generations.

Thank you for the opportunity to testify on this urgent issue.

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