Children's Environmental Health Network

110 Maryland Avenue NE, Suite 402
Washington, DC 20002
202.543.4033 www.cehn.org
cehn@cehn.org

July 21, 2014

U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

RE: Docket ID No. EPA-HQ-OAR-2013-0602

Submitted via http://www.regulations.gov.

The Children's Environmental Health Network appreciates the opportunity to comment on the U.S. Environmental Protection Agency's (EPA) proposal to decrease harmful carbon emissions from existing power plants by 30% by 2030.

Climate change is one of the most important environmental issues facing the planet, with the potential to significantly alter the global environment. It presents major challenges to the health and welfare of children. Children in communities that are already disadvantaged will be the most harmed. We commend the Agency for its efforts to reduce harmful carbon emissions.

The Children's Environmental Health Network (CEHN) is a national multi-disciplinary organization whose mission is to protect the developing child from environmental hazards and promote a healthier environment. The Network's Board and committee members include internationally-recognized experts in children's environmental health science and policy who serve on key Federal advisory panels and scientific boards. We recognize that children, in our society, have unique moral standing.

The Network was created to promote the incorporation of basic pediatric facts such as these in policy and practice:

- Children can be more susceptible and more vulnerable than adults to toxic chemicals.
- Children are growing. Pound for pound, children eat more food, drink more water and breathe more air than adults. Thus, they are likely to be more exposed to substances in their environment than are adults.
- Children have higher metabolic rates than adults and are different from adults in how their bodies absorb, detoxify and excrete toxicants.
- Children's systems, including their nervous, reproductive, digestive, respiratory, and immune systems, are developing. This process of development creates periods of

vulnerability. Exposure to toxicants at such times may result in irreversible damage when the same exposure to a mature system may result in little or no damage.

- Children behave differently than adults, leading to a different pattern of exposures to the world around them. For example, they exhibit hand-to-mouth behavior, ingesting whatever substances may be on their hands, toys, household items, and floors. Children play and live in a different space than do adults. For example, very young children spend hours close to the ground where there may be more exposure to toxicants in dust, soil, and carpets as well as low-lying vapors such as radon, mercury vapor or pesticides.
- Children have a longer life expectancy than adults; thus they have more time to develop diseases with long latency periods that may be triggered by early environmental exposures, such as cancer or Parkinson's disease.
- Though the process of child growth and development does not change, the world in which today's children live has changed tremendously from that of previous generations. One of these changes is the phenomenal increase in substances to which children are exposed. As reported by the EPA, 83,000 industrial chemicals are currently produced or imported into the United States. The Centers for Disease Control and Prevention's National Human Exposure Report has amply demonstrated that such chemicals often are ubiquitous, appearing in the vast majority of blood and urine samples taken at random from the general population in the U.S. Many of these are readily passed across the placenta to the fetus or to the infant via breast milk.

Climate change exacerbates existing environmental problems, having especially detrimental effects on air pollution and air quality. Children are especially vulnerable to the effects of air pollution. The airways of young children are smaller than those of adults. Inhalation of air pollutants that would produce only a slight respiratory response in an adult can result in potentially significant obstruction in the airways of a young child. Children also have increased oxygen needs compared to adults. They breathe more rapidly and inhale more pollutants per pound of body weight than adults, and they often spend more time engaged in vigorous outdoor activities.

According to the Centers for Disease Control and Prevention (CDC), approximately 14% of U.S. children under the age of 18 have been diagnosed with asthma at some point in their lifetime and 11% of U.S. children under the age of 18 suffer from respiratory allergies.[1] Asthma in children can be the result of respiratory infections, often caused by exposure to harmful air pollutants in the regions in which they live. This exposure is especially problematic when issues of environmental justice arise, where socioeconomically diverse and disadvantaged children are living and/or playing in close proximity to polluting power plants.[2]

While this proposal relates to air emissions and the impact of air pollutants on pediatric respiratory health is well documented, it is vital to recognize that the health impacts of global climate change go far beyond air quality and related respiratory health, as important as they are. Recent studies that detail how children's physical and social health may be harmed include these additional concerns:

- Atmospheric changes associated with greenhouse gases can lead to:
  - melanoma and sunburn; and
  - immunosuppression.
- Climate change may directly cause:
  - heat stroke
  - injury and death from extreme weather events and natural disasters
  - gastrointestinal diseases (such as through increased water contamination); and
  - psychosocial maldevelopment
- Ecologic alterations triggered by climate change (such as severe drought and severe precipitation) may lead to:
  - increased rates of malnutrition
  - increased rates of allergies
  - increased exposure to mycotoxins
  - increased exposure to certain toxicants
  - increased range of some vector-borne diseases (malaria, dengue, encephalitides, Lyme disease); and
  - emerging infectious diseases
- The displacement, water and food insecurity, and forced migration caused by drought, increased rain and severe storms, and rising sea levels may lead to:
  - international conflict and political unrest
  - increased stress on families, leading to neglect or abuse of children; and
  - interruption in a child's education due to forced migration or the need to work to help support the family.

Thus, it is imperative that humans take action to mitigate the anthropogenic sources of climate change to make the world a safer, cleaner, and healthier place for present and future generations.

As your Agency has pointed out, addressing climate change brings both health and monetary benefits, and it is our children who will be among the premier beneficiaries. Your plan offers estimated climate and health benefits of between $55 billion to $93 billion in 2030. This estimate includes avoiding 2,700 to 6,600 premature deaths and 140,000 to 150,000 asthma attacks in children per year by the year 2030.

It is essential that a greater importance be placed on the value to providing children with a healthy future. We urge the Agency, as it proceeds with this rulemaking, to assure it follows its policy to consistently and explicitly consider the risks to infants and children -- the policy which was adopted in 1995 and which the Administrator recently reaffirmed. When measuring costs and benefits to children under this proposal, we must take into account that we are considering health effects to children that will occur over a number of years and across generations. Traditional cost-benefit analyses and discounting methods systemically reduce the value of long-term benefits such as preventing a health effect in the future. This is not correct or acceptable in measuring the true value of this proposal.

The Network commends and supports the Agency for its efforts to take a stand against climate change. We strongly support the Agency's proposal to reduce harmful carbon emissions from existing power plants by 30% by 2030. This proposal will also cut pollution that leads to soot and smog by more than 25% by 2030. We believe these proposed new standards are justified and necessary. We urge the Agency to adopt these stronger standards, with several suggested improvements.

The proposed rule discusses the important consideration of timing with regard to the determination of best system of emission reduction (Page 138). While the ruling discusses timing with regard to effectiveness of emission reduction, it is also important to consider timing with regard to the impact on children's health. Children are more vulnerable than adults and as a result of their developing bodies, are more susceptible to environmental contaminants. It is imperative that effective emissions reductions be implemented as expeditiously as possible, since achieving the greatest portion of the emissions reductions in the least amount of time would be most beneficial for the health of children. While any improvement in and reduction of air pollution resulting from power plants would be beneficial to the health of children, the more rapid implementation of these improvements would allow for the earliest and widest protection of children's health.

Thank you for the opportunity to comment on the proposed ruling. The Network commends the Agency for its efforts to address this issue and urges expeditious action. It is vital that the EPA resist efforts to weaken or delay the implementation of this proposed ruling. The adoption of these standards would have positive effects on air quality, environmental health, and the health and future of all of our children.

If you have questions or comments on this statement, please contact Carol Stroebel at the Children's Environmental Health Network, 703-963-8374.

Sincerely,

Cynthia Bearer, M.D., Ph.D.
Board Chair
Children's Environmental Health Network

[1] U.S. Department of Health and Human Services. 2013. Summary Health Statistics for U.S. Children: National Health Interview Survey, 2012. Series 10, Number 258.
[2] Cutter, S.L. 1995. Race, class and environmental justice. Progress in Human Geography. 19 (111): 111-122.