

Health benefits of climate action are bigger than previously thought

By Robert Byron, MD and Jerry Hinkle

September 3, 2020

Cleaning up the air we breathe will make us healthier—that's pretty intuitive. But thanks to a new study by leading scientists, using more detailed information, we now know that the health benefits of reduced air pollution are bigger than previously thought.

With a climate policy as effective as the [Energy Innovation and Carbon Dividend Act](#), the reduced air pollution will save 70,000 lives a year, more than twice the prior estimate. Those benefits are also worth \$700 billion a year, close to three times the prior estimate.

This means the “health co-benefits” of the Energy Innovation Act are far more valuable than we had understood: the policy not only saves lives, it pays for itself on day one, many times over!

These new findings were discussed in [testimony](#) before the House Committee on Oversight and Reform on August 5, 2020. Lead IPCC author Dr. Drew Shindell explained that he and his team at Duke University were able to enhance models from NASA's Goddard Space Institute to “represent air pollution at a relatively high resolution.” They simulated U.S. emission reductions consistent with a policy to achieve a 2°C temperature target, a level of reductions that the Energy Innovation Act meets or exceeds.

They found that the reduced air pollution would prevent nearly 4.5 million premature deaths, 3.5 million hospitalizations and emergency department visits and 300 million lost workdays in the U.S. over 50 years. These include 50,000 fewer hospitalizations related to childhood asthma, as many as 2 million cases of bronchitis in children, and 200,000 deaths from heat exposure.

Many of the health benefits begin to accrue immediately. Reduced deaths from heart attacks, stroke and respiratory diseases, as well as impacts on pregnant women and their fetuses, are due to the effects of air pollution from greenhouse gas emissions, especially particulate matter and ground level ozone, and these will quickly show improvement as we shift to a low carbon economy. As a result, 1.4 million lives are saved in the first 20 years. As Rep. Robin Kelly (D-IL) stated during the hearing, “that is nearly three times the number of people we lose in car accidents each year.” (Rep. Kelly is an Energy Innovation Act cosponsor.)

To hear Jerry Hinkle discuss these findings more, [check out this CCL Training video.](#)

Shindell estimates the value of the benefits from improved health and labor at \$700 billion per year using standard EPA analysis (Footnote 1). This is an extraordinary sum, and is far higher than the prior estimate of \$250 billion, which relied on less detail. This value dwarfs estimated economic or administrative costs of the policy (2), so that the policy accrues significant net benefits even if we ignore the enormous value of stabilizing climate risk.

So consider that, even without mentioning climate change, there is a strong argument for transitioning away from fossil fuels based on the health benefits alone. When one realizes that warmer temperatures will not only worsen air pollution, but also amplify the negative health impacts listed above, increase the number of heat-related deaths, displace millions of people due to sea level rise, storm damage, and more prolonged droughts, and lead to more widespread infectious diseases as mosquitoes, ticks and other vectors expand their range, addressing climate change becomes even more urgent.

Footnotes

1: See Footnote 1 from Shindell's testimony for the source of the estimate.

2: For example, in Noah Kaufman's December [testimony](#) to Energy and Commerce, the economic cost of a similar CFD policy was estimated at \$100 billion in 10 years, and CCL estimates the administrative costs of H.R. 763 at less than \$5 billion a year.

Dr. Robert Byron is a co-leader of CCL's Health Action Team. Jerry Hinkle is a research coordinator for CCL.