

## Reasons for Urgent Action to Reduce Fossil Fuel Burning.

There are two main reasons for individuals, local organizations and businesses to support reduction of fossil fuel burning: to reduce air pollution and other negative impacts on human and environmental health; and to reduce the risk of pushing the climate into a chaotic dangerous state. Reducing pollution and climate risk are especially important to protect vulnerable populations.



These pollution reduction actions also can save families money through energy efficiency, support the creation of safer streets, and generate green jobs.

And - importantly - these actions reduce the power of the fossil fuel industry, support policy change and investment, and they help create the new clean energy world we need. Fossil fuels – coal, oil and gas for electricity, heat and transport – are by far the largest contributor to global climate change, accounting for over 75 percent of global greenhouse gas emissions. 18% come from agriculture and land use ([Source](#)).

Below are some of the key climate and air pollution impacts and threats in the New Haven region.

### Climate Emergency

1 . We have already emitted a dangerous quantity of greenhouse gases, which has permanently damaged critical ecosystems and **shifted Earth climate systems into uncharted territory**. These systems are very complex and it's extremely hard to know how one change might cascade into other systems. Each year of adding more GHG emissions to the atmosphere creates **higher risk of setting off natural feedback loops** that will accelerate GHG emissions (Ex: global warming sparks more droughts and forest fires, fires produce more CO<sub>2</sub>, which then creates even more global warming).

2. The present level of warming is already doing **significant damage to marginalized communities** around the world who are not responsible for creating climate change. They are seeing increasing heat waves, extreme weather events, and droughts causing displacement, infectious disease, hunger, and death. The number of climate refugees around the world is growing every year.

3. Even at present GHG levels, the warming of the planet will continue for centuries and continue to melt ice sheets and glaciers and **raise sea level**. The findings in the journal *Science* show that ocean surface temperatures during the Earth's last warm period, some 125,000 years ago were similar to today, but sea level back then was 20-30 feet (six to nine meters) above what it is today. Connecticut expects sea level to rise in New Haven by nearly two feet by 2050. Even a small rise in sea level leads to a substantial increase in the risk of damaging floods.

4. Waiting to invest in climate solutions is creating more damage and **more costs through extreme weather events**, changes in ecosystems, and other long-term challenges that will be very expensive to remedy. Given that all human development (agriculture, city location, infrastructure, economies, etc.) is designed in response to the previous climate system, we need to keep the climate as stable as possible.

5. Ocean acidification, which is a result of CO<sub>2</sub> being absorbed into oceans, has made the oceans 30% more acidic, which is negatively impacting shellfish reproduction, accelerating the collapse of coral reefs, and threatening other key species. Estimates of future CO<sub>2</sub> levels, based on business as usual emission scenarios, indicate that **by the end of this century the surface waters of the ocean could have acidity levels nearly 150 percent higher**, resulting in a pH level that the oceans haven't experienced for more than 20 million years (NOAA). Healthy oceans are the source of 50-80% of Earth's oxygen.

6. **New weather records** are regularly being set across the country, including: 50 inches of rain in Houston, extensive drought in California, Hurricane Maria's destruction of Puerto Rico, etc. Globally we have seen the strongest typhoon ever with 200 mph winds and heat in India so high the government told people not to go out 10am to 4pm.

7. Climate change is accelerating species extinction with the present rate of extinction 1000 to 10000 times the normal rate (Center for Biological Diversity).

8. Climate change is **increasingly damaging our economy** by disrupting supply chains, interrupting work, destroying essential infrastructure, causing displacement of workers, costing huge sums for response and defense of communities, and risking a financial crisis related to the carbon bubble.

### **Health Impacts of Fossil Fuel Burning**

Air pollution from burning fossil fuels can cause multiple [health issues](#), including asthma, cancer, heart disease, and premature death. Combusting the [additives](#) found in gasoline—benzene, toluene, ethylbenzene, xylene—produces cancer-causing ultra-fine particles and aromatic hydrocarbons. Globally, fossil fuel pollution is responsible for one in five deaths. In the United States, [350,000 premature deaths](#) in 2018 were attributed to fossil fuel-related pollution, with the highest number of deaths per capita in states like Pennsylvania, Ohio, and West Virginia. The annual cost of the health impacts of fossil fuel-generated electricity in the United States is estimated to be up to [\\$886.5 billion \(EESI\)](#).

Climate change and fossil fuel burning both create significant threats to human health:

1. Air pollution, most significantly from burning the same fossil fuels that drive climate change, is causing more than seven million premature deaths each year (or 13 deaths every minute). Forest fires, waste burning, and harmful agricultural practices are also polluting our air and lungs;
2. Changes in the weather and climate are causing increases in food-borne, water-borne and vector-borne diseases;
3. Increasingly frequent extreme weather events, including heatwaves, storms and floods that are taking the lives of thousands and disrupting the lives of millions more each year. In 2021 alone, major climate change-related health disasters occurred in China, India, Pakistan, US, Vietnam, Canada, Germany, Belgium and many other nations;
4. Food systems are increasingly disrupted by extreme weather, which is exacerbating food insecurity, hunger, and malnutrition;
5. Rising sea levels are destroying homes and livelihoods, which are critical to supporting people's health;
6. Climate change impacts are taking a serious toll on peoples' mental health, causing post-traumatic stress disorder and anxiety, and worsening existing conditions ([Source](#)).

“The good news is that immediate changes to air pollution levels also have immediate effects. Quick action on reducing highly potent, short-lived climate pollutants - methane, tropospheric ozone, hydrofluorocarbons and black carbon—can significantly decrease the chances of triggering dangerous climate tipping points, like the irreversible release of carbon dioxide and methane from thawing Arctic permafrost” ([UN environment programme](#)).

