



May 2, 2016
Westchester County Legislature
Testimony Regarding Proposed Heating Oil Legislation

My name is Abbey Brown, and I am a Project Manager at Environmental Defense Fund. Thank you for accepting my written testimony.

EDF is a leading national nonprofit organization, headquartered in New York, representing more than 700,000 members and supporters nationwide, including more than 70,000 in New York State. Since 1967, EDF has linked science, economics, law, and innovative private-sector partnerships to create breakthrough solutions to the most serious environmental problems.

As stated in previous testimony given to this legislature, I have worked on the NYC Clean Heat program to accelerate the elimination of No. 6 and No. 4 heating oils in New York City. After the passage of Local Law 43, which set a schedule to phase out these polluting heating sources over time, the City of New York and its partners – EDF key among them – created NYC Clean Heat to help buildings make a faster transition to cleaner fuels and achieve health benefits sooner. When EDF managed NYC Clean Heat, I was charged with overseeing the contract between EDF and the City of New York, and coordinating the day-to-day operations of the program.

In 2008, EDF published a report titled, *The Bottom of the Barrel*, which found heating oil used in buildings was the cause of black smoke coming from chimneys. This black smoke, or soot, carried harmful pollutants like nickel and sulfur dioxide, as well as fine particulate matter called PM2.5. When inhaled, PM2.5 becomes lodged in the lungs, creating or exacerbating respiratory and cardiovascular diseases. EDF found that at the time the report was published, under 10,000 buildings in New York City burned this type of fuel causing more soot pollution than all the cars and trucks in the city combined. It was an alarming realization that spurred us into action.

There are three types of heating oils used in the Northeast – No. 6 oil, Low-sulfur No. 4 oil, and Ultra-low Sulfur No. 2 oil. No. 6 and No.4 heating oils are called “residual oils”, which essentially means that they are made with the material that is left over at the end of the oil refining process. The New York City Department of Health and Mental Hygiene found that

wintertime PM2.5 concentrations were, on average, 30 percent higher in neighborhoods where residual oil use is prominent compared to those where it is not.

At the same time we were learning about these issues, the City of New York had begun to study air pollution as well, and issued a report within a month of our *Bottom of the Barrel* report. Through the New York City Community Air Survey (NYCCAS), the New York City Department of Health was able to measure street-level air quality, and they found a strong correlation between areas with high concentrations of PM2.5 and buildings burning No. 6 or No. 4 oils. This led to a partnership between EDF and the City of New York, and the creation of the NYC Clean Heat program.

The regulation, Local Law 43, passed in 2011. No. 6 oil was phased out in 2016, and No. 4 oil is scheduled to be discontinued by 2030. The NYC Clean Heat program was established to accelerate the conversions to cleaner fuels and ensure that buildings have the tools and resources to convert by the deadlines. The program helped buildings navigate the varied and complex steps in the conversion process, and served as a hub of resources. By contacting the team of experts available through Clean Heat, buildings could access technical assistance, information about financing and incentives, and receive help in coordinating with utilities. All of this helped make the switch to cleaner fuels faster and easier while saving money and improving New York's air quality.

Since its launch, NYC Clean Heat helped nearly 6,000 buildings convert to cleaner fuels. New York City has reached 100 percent compliance with the elimination of No. 6 oil, and as of 2014, New York State finally complied with the federal air quality standard for the first time.

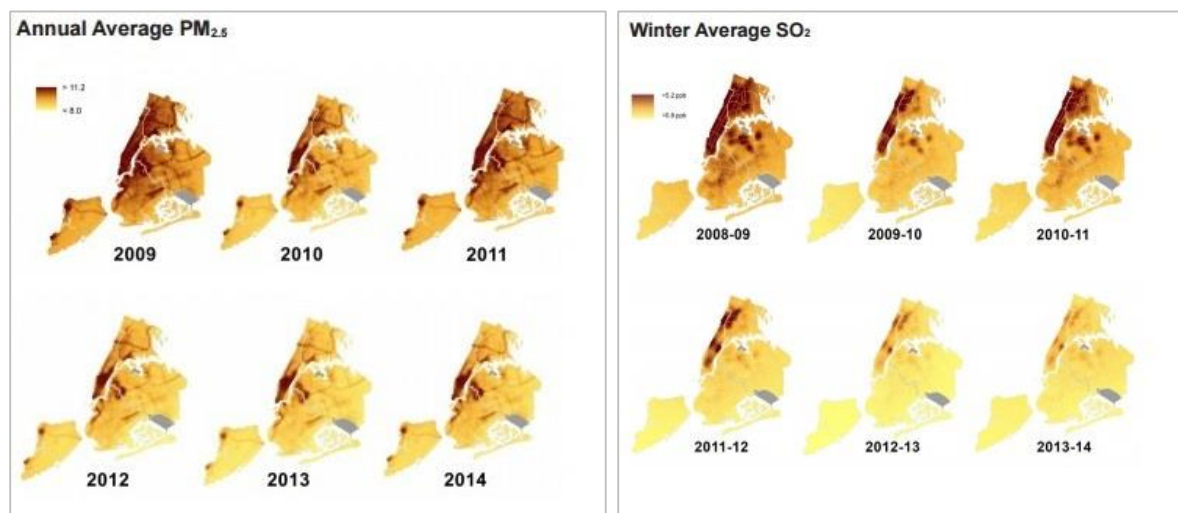
Just last week, a new NYCCAS report was released, detailing the continued improvements to air quality between 2008 and 2014. Here are some of the results:

- Wintertime averages of sulfur dioxide (SO₂) have declined by 68%
- Annual average nitrogen oxide (NO) levels declined by 24%
- Annual average nitrogen dioxide (NO₂) levels declined by 21%
- Annual average fine particulate matter (PM_{2.5}) levels declined by 16%

The decline in sulfur dioxide, in particular, is due in large part to the heating oil regulations and work of the NYC Clean Heat program. Sulfur is linked directly to heating oil pollution, so getting rid of the most polluting heating oils has resulted in this tremendous reduction in sulfur pollution. To quote the report itself, "Across the pollutants evaluated in this report, sulfur dioxide has shown the greatest decline, owing to State and Local efforts to phase out high sulfur heating oils through elimination of Nos. 6 and 4 oils, and reducing the allowable sulfur content of No. 2 heating oil" (p. 21).

The new NYCCAS report has not yet quantified health benefits for these new numbers, but the report from 2013 estimates that 800 deaths and 2,000 emergency room visits and hospitalizations from lung and cardiovascular diseases were prevented annually as a result of air quality improvements. This regulation directly benefited all New Yorkers by improving the air we all breathe. Children have fewer asthma attacks, and parents have to take fewer days off to care for their children or themselves. That means more time spent in school and at work, which benefits us all.

The maps below are from the NYC Community Air Survey report, and show a clear improvement in air quality through the reduction of PM_{2.5} and SO₂:



Though there are fewer buildings in Westchester County that burn No. 6 and No. 4 oils, it is still incredibly valuable to help them improve their efficiency and better the health of Westchester County's population. To put things in perspective, the 6,000 buildings converted through NYC Clean Heat represent less than one percent of the building stock in New York City. Yet, they accounted for a significant share of the pollution.

The backbone of the work done in New York City is Local Law 43, which provided the necessary support for NYC Clean Heat to move forward. New Yorkers are now enjoying the cleanest air the City has ever had since the 1960s. We would not be seeing the significant health benefits we have today if this bill had not passed.

Westchester County can benefit from the lessons learned in New York City, and enact rules to phase out residual heating oil over time. This could dramatically improve the county's air quality while encouraging buildings to upgrade their own efficiency and save money in the long run.

EDF supports the proposal of this legislation, and looks forward to the work done by the Westchester County Legislature in the future.