

NYC Bets on Natural Gas to Reduce Air Pollution

by Cristian Salazar and Sarah Crean
Monday, September 24, 2012 11:02 AM



NEW YORK — Plumes of black smoke rippling from rooftops are a common sight along the city's skyline — and have long unsettled public health experts.

The city has called for replacing the heavy heating oils used in buildings that are mostly responsible for the toxic dark smoke with substantially cleaner fuels by 2030.

And while there are a handful of alternatives for building owners to choose from, policymakers expect that natural gas will be among the most attractive options because of its low cost and decreased emissions.

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The city, in turn, has pushed to expand the capacity of infrastructure to handle natural gas through the construction of the first new pipelines in decades that will carry enough of the cleaner fossil fuel to power millions of buildings and households. But the construction of the pipelines has stoked the passions of residents along the paths where they will be built; environmentalists concerned about the impact of construction on delicate ecosystems; and opponents of hydraulic fracturing.

[One of those projects](#) got another boost Saturday when the U.S. Senate [passed legislation](#) that would allow the construction of a 3.17-mile natural gas pipeline and facilities going from the Atlantic Ocean off the Rockaways, through Jacob Riis Park and Gateway National Recreation Area.

Mayor Michael Bloomberg praised the passage of the New York City Natural Gas Supply Enhancement Act, saying it was "not just about the construction and operation of a natural gas pipeline and the jobs it will create."

"It is critical to building a stable, clean-energy future for New York City and improving the health of all New Yorkers," he said in a statement over the weekend.

Work on the [New Jersey-New York Expansion Project](#), as the other project is called, began on Manhattan's West Side earlier this summer.

"The administration is supporting those projects because they're being done responsibly, they're being done safely, and with minimal environmental impacts. And they ultimately are going to have a huge public health benefit," said Deputy Mayor for Operations Cas Holloway, in an exclusive interview with Gotham Gazette last week.

Some statistics long cited by the city state that 6 percent of annual deaths in New York City are attributable to poor air quality from pollutants.

Holloway, who testified for the administration in support of the bill that passed in Congress, said the goal of the city's program to convert buildings to cleaner fuels — known as [Clean Heat](#) —

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is to "accelerate" the "public health benefit" of reduced air pollution. By the end of 2013, the city hopes to reach a 50 percent reduction of the nasty emissions attributed to the burning of heavy oils by buildings.

To get a better sense of what the city's energy plan will mean in the years ahead and why the two pipeline projects are expected to play such an important role, we spoke with key policymakers, environmentalists and residents.

Over the next week, we will be publishing stories on both pipeline projects and taking questions and comments on [Facebook](#) and [Twitter](#).

The goal of modernizing and expanding the distribution of natural gas is one of hundreds of goals detailed under [Bloomberg's PlanNYC](#), originally released in 2007 and in updated form in 2011. The far-reaching blueprint calls for the transformation of how the city deals with everything from housing and water supply to its waterfront and air quality, with the aim of making the city sustainable as it grows by about one million people and faces changes from climate change.

Under the plan, the goal for energy is to reduce consumption and make energy systems "cleaner and more reliable." Under the plan for energy, one initiative called for increasing "natural gas transmission and distribution capacity to improve reliability."

"City regulations eliminating the use of highly polluting residual heating oil will increase demand for new gas service. With gas prices nearing historic lows and expected to remain below oil prices for some time, building owners have the unique opportunity to upgrade their heating systems while generating a return on their investment," the updated plan states.

In April 2011, the city's Department of Environmental Protection [issued regulations effectively requiring](#) that buildings stop using No. 6 and No. 4 heavy heating oils, and replace them with an alternative — natural gas, No. 2 heating oil, biodiesel or steam. Buildings were required to begin the process of converting to a cleaner fuel beginning in July.

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At the same time, the city also launched its Clean Heat program, saying that "just one percent of all buildings in the city produce 86 percent of the total soot pollution — more than all the cars and trucks in New York City combined" — by using heavy heating oils.

The city said the pollution from heavy heating oils contributed to the deaths of hundreds of people each year, and was one of the main contributors to high asthma rates among children.

In June 2012, [the city announced \\$100 million in financing](#) to help buildings convert to cleaner fuels.

Holloway said that "from the city's perspective," they were "agnostic" about which fuel is chosen, but "we think that natural gas will, ultimately, from an economic perspective, will be what more people choose."

The city is already a major consumer of natural gas, both to generate electricity and to heat homes and businesses. According to an [ICF International study](#) commissioned by the mayor's Office of Long-Term Planning and Sustainability, "Approximately 57 percent of NYC's energy use is fueled by natural gas, either directly through on-site combustion to heat and cool buildings, or indirectly through the use of gas at power plants to generate electricity."

Mark Brownstein, the chief counsel of the energy program at Environmental Defense Fund, said that "as a practical matter" natural gas "looks to be an attractive option."

But he said "the issue is not expanding the supply of natural gas. The issue is getting off #4 and #6 fuel oil."

(The EDF [received a \\$6 million grant from Mayor Bloomberg's private foundation](#) to examine how to strengthen the regulatory framework for hydraulic fracturing throughout the country and address public health concerns.)

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Jackson Morris, senior policy analyst at the Pace Energy and Climate Center, said, "Every piece of the puzzle contributes to air quality."

"The fact that there are a ton of old buildings that are still burning #6 oil is medieval," he continued. "It's inexcusable from a public health perspective. A lot of these boilers are at elementary schools. It's the dirtiest oil money can buy."

Natural gas is not without its emissions. There is a debate in the scientific community regarding the full greenhouse gas impact of natural gas, relative to other fossil fuels like oil and coal.

The ICF study reports that all major studies except for one (by Cornell University) found that natural gas has significantly lower (36-47 percent) life-cycle greenhouse gas emissions than coal. The Cornell study attracted a lot of attention and, according to ICF, used newer data than what is currently used by the International Panel on Climate Change.

ICF projects that 88.5 percent of natural gas entering New York City by 2030 will come from sources in the Northeast, including from the Marcellus and Utica shales. The extraction process for shale gas, hydraulic fracturing, has attracted considerable attention because of concerns regarding air pollution, industrialization of rural communities and possible contamination of water supplies.

The New York State Department of Environmental Conservation is weighing whether to allow fracking. The agency announced Thursday that the State's Health Commissioner, Nirav Shah, will assess the DEC's analysis of public health impacts associated with hydraulic fracturing. The agency has already agreed to ban the process within the boundaries of New York City's upstate watershed, which supplies the city's drinking water.

Asked about whether there were any concerns about gas extracted through hydraulic fracturing in Pennsylvania being piped to New York City, Holloway said, "Any industrial process without the right safeguards is something to be concerned about. "

Ross Gould, the air and energy project director at Environmental Advocates of New York, said

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the focus should be on energy efficiency, not changing the city's reliance from "one fossil fuel to another" — natural gas.

"The question you should be asking is, what have been the barriers and obstacles to energy efficiency and renewables," he said. "What has held us back?"

Holloway said the city is working on projects to increase the production of renewable energy through solar, wind, hydroelectric and other technologies. But he said the process of getting that to market was time consuming, and there was still a lot to be worked out in terms of connecting those sources to the grid.

"We need to get there. What do you do in the mean time? Do you keep burning dirty fuels? No," Holloway said.

In the meantime, with the city breaking records each year for peak demand, he said natural gas was the likely energy bridge for the next few decades. "I think that that is just the reality of it," he said.

Photo of gas burner by Flickr user [stevendepolo](#), used under Creative Commons license.