

Weekly Pipeline

⚡ ENERGY EDITION ⚡

This past year, the **Newtown Creek Wastewater Resource Recovery Facility** generated enough clean, renewable energy to **provide for the annual heating needs of over 7,000 Brooklyn homes.**

January 8, 2025

Guest Commissioner's Corner



Jane Gajwani

As we face the urgent need to address climate change, transitioning to clean energy is essential. Achieving a clean energy transition requires action on three key pillars: energy efficiency, electrification, and clean energy generation. The vast majority of greenhouse gas emissions in New York City are attributed to energy consumption in buildings and the transportation sector due to the reliance on fossil-fuel-generated electricity and the direct combustion of fossil fuels. Equally important to the shift away from fossil fuels is ensuring that current and future energy needs are met reliably. DEP is advancing projects within our agency to support the energy transition and extending its efforts to support city-wide initiatives.

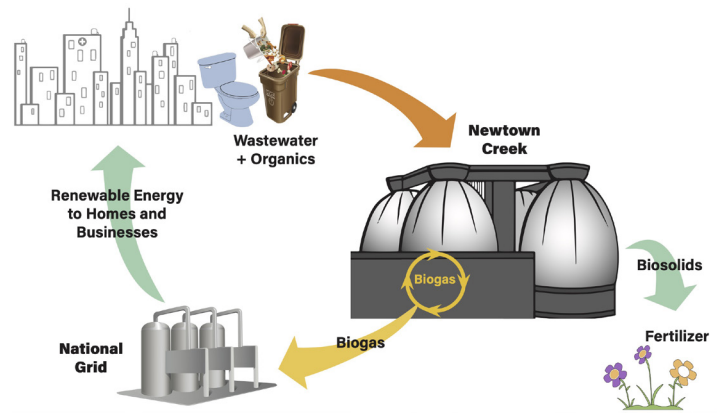
DEP is dedicated to advancing the clean energy transition and is playing a key role in moving the city towards a cleaner, more resilient future.



Every DEP project includes a review to ensure energy efficiency. Increasing energy efficiency means using less energy to perform the same tasks, reducing overall energy demand. Since 2015, DEP's Energy Office has worked with City partners to fund efficiency projects that have resulted in a significant reduction in energy use—enough energy to power two Empire State Buildings. Another way we use energy wisely is by shifting loads to times when there is less demand for electricity. DEP participates in citywide demand response programs, reducing energy usage during peak energy consumption periods such as the hottest days of the year to ensure the reliability of New York City's electricity grid.

Electrification requires switching from fossil fuel-powered buildings, vehicles, and machines to those that run on electricity. DEP is electrifying the loads that it can. As an example, the North River Wastewater Resource Recovery Facility is completing an electrification project that replaced the engines on the main sewage pumps with electric motors. Projects like this reduce DEP's fuel consumption and impact on local air quality.

Reducing emissions through electrification requires that electricity from the grid also be generated from renewable sources. DEP is playing a role in clean-energy generation, as



well. Projects that will generate clean electricity include six new solar installations and three new hydroelectric projects, which will substantially increase DEP's total solar and hydro capacity. Additionally, the City has committed to purchasing hydroelectricity from Quebec delivered by the Champlain Hudson Power Express transmission project, currently under construction, for government operations. Upon completion, 100 percent of DEP's purchased electricity will come from clean energy sources.

Where electrification is not feasible, we can utilize renewable fuels, which produce fewer emissions than fossil fuels. This past year, DEP began using renewable diesel in our heavy-duty trucks; switching fuels results in approximately a 60 percent reduction in emissions as compared to conventional diesel.

DEP doesn't just buy renewable fuel—we also make it! Our 14 in-city wastewater plants generate a large amount of biogas annually during anaerobic digestion, a critical stage of wastewater treatment. DEP has been using biogas since the 1930s to run engines and provide heating at our facilities. The electrification project at the North River facility also added cogeneration engines (anticipated online in 2025) that will turn our renewable

biogas into heat and electricity. This project is estimated to generate enough electricity every year to supply over a third of the facility's power needs, and over 40 percent of its heating needs. New technology allows us to clean excess biogas and upgrade it to pipeline quality, creating renewable natural gas, a direct replacement for fossil natural gas. This past year, the Newtown Creek plant generated enough clean, renewable energy to provide the annual heating needs of over 7,000 homes in Brooklyn.

Up next, DEP will explore the potential to make heat contained in wastewater available to large buildings and district energy systems. This heat can be harnessed from both sewers and treated water released at DEP plants. Water-source heat pumps can efficiently upgrade this heat to provide energy for heating and cooling, increasing energy efficiency and reducing the consumption of fossil fuels.

DEP is dedicated to advancing the clean energy transition and is playing a key role in moving the city towards a cleaner, more resilient future. These ongoing efforts not only reduce greenhouse gas emissions but also improve energy reliability, helping New York City meet its ambitious climate goals while preparing for future energy needs.

Why Energy Matters to Me



Mario De La Ossa

Energy's ability to change things and our journey to control and use it is a foundational narrative of human progress. To ensure many chapters to come, the hierarchy of abundance, affordability and security is working on welcoming sustainability to the club.

As an advisor, I see the terrific work the Office of Energy and Resource Recovery does to advance carbon neutrality goals while the DEP continues to safely and reliably meet the needs of over 8 million New Yorkers. The good news is that scaling existing technologies can get us most of the way to our decarbonization goals. Improving how we affordably measure, produce, use and recycle energy is as exciting as it is challenging. Energy efficiency, biogas initiatives and working across city agencies to advance wastewater heat recovery are

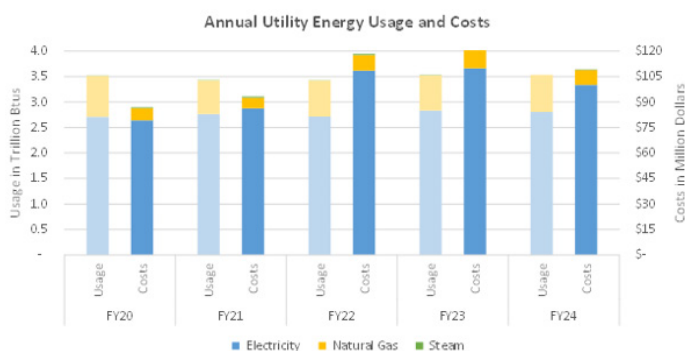
ways ongoing DEP work will help us reach our goals.

Getting to lower emissions while respecting the 24/7 demands of the core mission takes tremendous energy. The right mix of technical, operational, regulatory and commercial expertise plus a good dose of stubbornness to "wake up with a smile" changes energy's capacity to do work into meaningful work towards a decarbonized future.

It's 35 degrees outside, I turn a knob and clean, warm water lets me shower and make a nice coffee to take on the day. I've worked around energy systems for over 20 years, so I don't take it for granted. Just like a duck, I hope to use energy to look cool above water while paddling furiously underwater to do my bit for progress.

Mario works for FUSE, a national non-profit dedicated to increasing the capacity of local governments, and serves as an outside advisor to DEP's Energy Office.

DEP Energy Use and Cost



In FY24, DEP spent \$109 million on 3.5 trillion British Thermal Units of electricity, natural gas, and steam. This represents a 10% decrease in costs and a 0.3% decrease in usage compared to FY23. The main driver of the significant decrease in costs is decreased natural gas prices, which were 20% lower in FY24 than in FY23. Lower natural gas prices were due to a few factors: increased supply, increased exports of liquefied natural gas (LNG),

and moderate weather keeping stockpiles relatively full. Much of New York City's electricity is produced at natural gas powerplants, so decreased natural gas prices also led to lower electricity costs: electricity cost 8% less in FY24 than in FY23. Despite decreased electricity and natural gas costs, it is important for the agency to continue decreasing its energy usage via our energy efficiency and renewable energy production goals.

Kudos Corner



The Bureau of Wastewater Treatment is thrilled to announce that **Jayne A. Beckmann**, a process engineer at the Owls Head and Wards Island Wastewater Resource Recovery Facilities, has been chosen to be the agency's candidate for the Water Leaders Group's Next Generation initiative. Leading Utili-

ties of the World is offering this incredible opportunity in February to a select few as an extension of a program that will take promising future leaders to see the "water wonders of the world"—the most cutting-edge infrastructure that the global water sector has to offer. Eight participants under the age of 35 were selected from global member utilities and will receive a tour of infrastructure at host utilities in Asia and Australia. As well as a knowledge exchange with colleagues across the industry, this opportunity will inspire rising stars to imagine what the utility of the future will look like. The tour will be linked to the Next Generation project at the Global Water Summit 2025 in Paris.

Deputy Mayor Tours Watershed



Deputy Mayor of Operations **Meera Joshi** recently joined **Commissioner Aggarwala**, Water Supply Deputy Commissioner **Paul Rush**, and DEP Police Chief **Frank Milazzo** for a tour of DEP's vast upstate water supply system. The group got a first-hand look at increasing reservoir

levels amid improving drought conditions, as DEP Police pilots flew them over the six reservoirs that comprise the Delaware and Catskill systems, among other infrastructure spread across the watershed. Special thanks to the DEP Police and Chief Milazzo for the tour.

Mayor and DEP Lift Drought Watch



Cannonsville Reservoir, November 13, 2024



Cannonsville Reservoir, December 31, 2024

Mayor Adams and Commissioner Aggarwala on Friday [lifted the city's drought watch](#). Strategic decision-making by DEP, conservation efforts by New Yorkers, and favorable weather conditions have together contributed to the replenishment of the city's reservoir system—ensuring a stable water supply for millions of residents and eliminating the risk of a water shortage. November and December saw abundant precipitation levels 20 percent above average in the watershed, according to rainfall data. This recent rainfall, coupled with melting snowpack, has significantly boosted reservoir levels in the Catskills and the Hudson Valley. Even

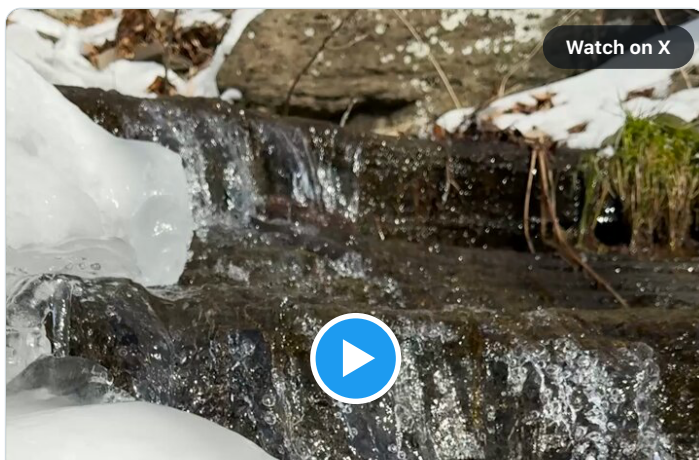
during the drought watch and warning, DEP reaffirmed its commitment to delivering high-quality drinking water to nearly 10 million residents, including 8.3 million in New York City. “The lifting of the drought watch underscores the critical role of DEP’s strategic planning and adaptive management of New York City’s

critical water resources,” said Commissioner Aggarwala. “I’m grateful to our fellow city agencies for their partnership and to all New Yorkers for their conservation efforts, which helped us save water. Let’s continue to use water wisely to ensure the resilience and reliability of the city’s water supply system.”

Social Media Highlight



The [@NYCMayorsOffice](#) has declared the drought over! DEP's strategic decision-making, New Yorkers' conservation efforts & favorable weather all helped replenish the city's reservoir system. on.nyc.gov/4iZk6al



Be sure to like us on [Facebook](#), or follow us on [X, formerly known as Twitter](#), and [Instagram](#).

Out of the Archives



This month marks 100 years since the Catskill Aqueduct first operated at full capacity in January 1925! It brought clean water to the City in 1917, but later construction of Schoharie Reservoir and additional steel pipe siphons like this increased supply and ability to deliver. You can view more images from the DEP Archives on [Flickr](#).