

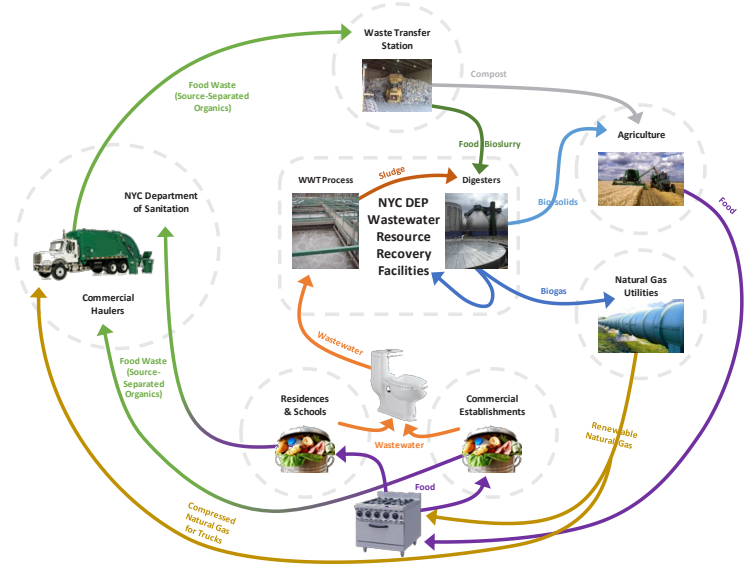
Special Guest *Commissioner's Corner*



Jane Gajwani
Director of Energy and Resource
Recovery Programs

Energy illuminates our lives, keeps us warm in the winter and cool in the summer, moves us around, and feeds our economy. Although humankind has relied mostly upon our planet's finite fossil fuel resources to provide our energy since the Industrial Revolution, nature offers a seem-

ingly limitless supply of clean renewable energy resources in the form of solar, wind, hydroelectric, geothermal, and bio-energies that we can harness, store, and continuously renew. We are now spending much of our own energy, time, and money on reversing and overhauling the deeply-ingrained systems that overused non-renewable energy resources for so long, so that we can ensure a sustainable future for the coming generations.



DEP is at the very center of the "circular economy of organics," a concept which aims to minimize organic waste sent to landfills and maximize the recovery and beneficial use of all resource streams.

Spotlight on Safety

The Danger of Gas Leaks

According to the Pipeline and Hazardous Materials Safety Administration, incidents involving natural gas pipelines occur once every two days in the United States. In 2015, gas leaks caused a huge explosion in the East Village that resulted in two deaths, nineteen injured people, and the destruction of three adjacent buildings on Second Avenue. Outdoor gas leaks can occur when pipes are damaged by construction work or from normal wear due to age. Indoor leaks can be caused by faulty appliances, leaky pipe fittings, corroded or cracked pipes, or as the result of construction. It is important to get home appliances serviced by a licensed technician. The following can help you recognize and stay safe during a gas leak:

- **Smell:** Natural gas is odorless on its own; however, the chemical mercaptan is added for the sole purpose of alerting you of a leak. This causes natural gas to smell a lot like rotten eggs.

- **Sound:** Sometimes leaks cause a low hissing sound. Gas stoves are the most common source of this sound when there is a leak.
- **Sight:** If you notice dirt or dust blowing in a space when there is no wind or breeze, there may be a leak.
- To avoid a spark **DO NOT:**
 - light a match or smoke
 - turn appliances or lights on or off
 - use a flashlight
 - start a car
 - use a telephone

If you suspect a leak in your home, leave immediately and use a phone away from the area to call 911. After your gas is turned off, you will need the help of experts to repair your gas leak and run tests to make sure the leaks and gas are gone. For more information, visit [Con Edison's website](#).

Here at DEP, we have an integrated energy management program that recently expanded to include biosolids and residuals management. In line with [DEP's 2018 Strategic Plan, "Enriching Our Legacy,"](#) we have rebranded DEP's Office of Energy to be the Office of Energy and Resource Recovery Programs, because these topics are intricately and intrinsically linked: The resources embedded in our wastewater contain bio-energy and nutrients for us to harness while holding significant carbon sequestration potential! Much of our work is focused on increasing recovery of these resources by improving anaerobic digestion and digester gas collection, as well as beneficial use programs, at all of our in-city wastewater resource recovery facilities. Though doing so is just one part of the "circular economy of organics," it will be virtually impossible to achieve energy and carbon neutrality without the beneficial use of biosolids.

It will be the role of DEP's energy and resource recovery programs to recognize and act upon the existential threat that climate

change poses to our city. The greenhouse gas emissions resulting from our over-consumption of fossil fuels is a top cause of global warming, and DEP will be a leader on the path to a more sustainable, healthier future. The work that the City of New York is doing to mitigate the worst effects of climate change is growing more important on a daily basis—it is literally a race against the clock, and [the recent Inter-governmental Panel on Climate Change Global Warming of 1.5°C report](#) shows that we are dangerously close to missing the mark on preventing irreversible climate catastrophe without dramatic changes to our energy mixes.

I am proud and excited to be at DEP, to face these global challenges head-on, and to re-envision and expand our approach by considering even more innovative solutions and partnerships. I would like to thank all DEP employees and readers of this year's "Energy Edition" for supporting these initiatives together as DEP takes the mantle of global leader at the forefront of pursuing energy and carbon neutrality.

At DEP, everyone is responsible for safety. If you or anyone on your team is concerned about your working conditions, it's okay to ask your supervisor or your bureau's EHS liaison how they can help. If you've still got questions, you can call the EHS Employee Concerns Hotline. It's DEP's responsibility to acknowledge and fix unsafe situations, procedures, and practices. With your help, we'll not only get the job done, we'll make it safer for ourselves, our coworkers, our families, and our city. CALL (800) 897-9677. HELP IS ON THE WAY.

Why Energy Matters to...



Jennifer McDonnell
Resource Recovery
Program Manager

About ten years ago, when I was the Green Mission Specialist for Whole Foods Market in the Northeast, anaerobic digestion of food scraps was just emerging as an option for recovery of this resource. Most of the material that we were diverting was going to compost, and anaerobic digestion was the next frontier. The ability of our wastewater resource recovery facilities to produce energy is not a new idea, but it makes a lot of sense. How cool is it that our facilities can be “power plants” dotted around the city? Our pilot at Newtown Creek co-digesting slurried food waste is leading this charge. Co-digestion not only produces more biogas, but also the nutrients embedded in both our wastewater sewage and food scraps can be recovered in our biosolids.

This is my favorite part of the story—elements like nitrogen,

phosphorous, and potassium are not lost or converted through the digestion process but remain and can be refined for use as a soil amendment. Our soils need these nutrients, and keeping them local has an added benefit of improving soil health and increasing carbon capture and sequestration while reducing the need to manufacture or mine these elements. This last step is our best defense against the atmospheric accumulations of greenhouse gas emissions that are still increasing despite all of our efforts in conservation, renewables, and efficiency.

The opportunity to work on organics recycling related projects that provide multipliers of benefit to New York City is why I moved here from Maine a year ago to work at DEP. This work is a source of positive energy for me—to keep looking for new ideas, innovative technologies, and creative solutions to enhance energy and resource recovery for all of our futures.

International Collaboration on Climate



In a Water Operators Partnership with the Asian Development Bank (ADB), DEP provides targeted guidance to the Water Authority of Fiji (WAF) and the Samoa Water Authority (SWA) as they seek to make their island nations more resilient against the worst effects of climate change. DEP and the Mayor's Office of Sustainability (MOS) recently hosted ADB, WAF, and SWA for a week-long workshop of learning and site visits across NYC and the upstate watershed, including presentations on cloudburst planning, green infrastructure, water supply and wastewater resiliency, sustainability in design/construction and capital planning, asset management, water demand management and affordability, emergency management, and more. Special thanks to the workshop organizers—**Mikael Amar, Allen Deur, and Nathaniel Kimball**—and to everyone else involved in making the week a valuable experience for WAF and SWA. DEP and MOS encourage you all to continue the conversation and collaboration. Climate change never sleeps!

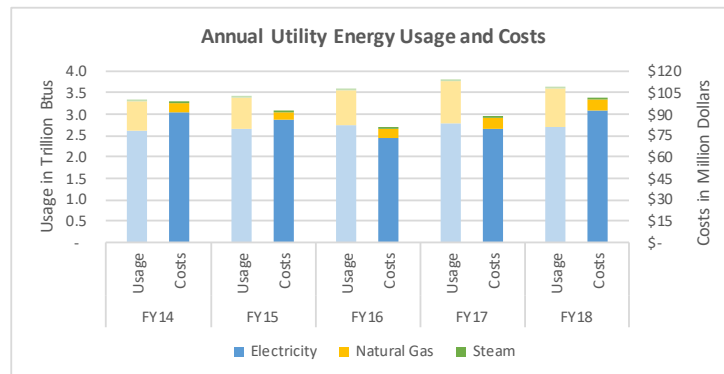
Kudos Corner



Zainool Ali (center) is presented the award by DCAS Deputy Commissioner Anthony Fiore (left) and DCAS Commissioner Lisette Camilo (right).

Zainool Ali, Plant Chief at Newtown Creek Wastewater Resource Recovery Facility (WRRF), was recognized by the Department of Citywide Administrative Services with the 2018 Energy Champion Award at the annual Citywide Energy Recognition Ceremony. Among Ali's outstanding accomplishments is his management of the plant's participation in the Demand Response Program, an electric grid reliability program that helps to prevent brownouts and blackouts on peak electric demand days, as well as the aggressive wet-weather peak demand management program, which has saved DEP more than \$532,000 in demand charges to-date. He is also involved in the daily supervision of the food waste co-digestion demonstration and the ongoing construction of the renewable natural biogas-to-grid conditioning system at Newtown Creek WRRF. For his continuous efforts to improve DEP energy management and citywide sustainability, we wish to congratulate him on receiving this award.

Utility Energy Use and Costs



In fiscal year 2018, DEP spent \$101 million on 3.6 trillion British Thermal Units of utility electricity, natural gas, and steam, a 5% decrease in usage and a 14% increase in cost this year versus last year. Costs increased despite the reduction in usage due to higher natural gas prices, which also drove up the cost of electricity production, along with an increase in electricity demand charges. In the face of a changing climate, and in light of the ambitious goals set by the OneNYC and 1.5°C Plans, DEP is committed to mitigating the impact of its rising heat, light, and power budget by reducing energy consumption, managing peak electricity demand, pursuing on-site energy net-neutrality, and incentivizing citywide water demand management.

We welcome your feedback! To submit an announcement or suggestion, please email us at: newsletter@dep.nyc.gov.