



Replacing NYC's Peaker Plants with Clean Alternatives: Progress, Barriers, and Pathways Forward

February 6, 2024

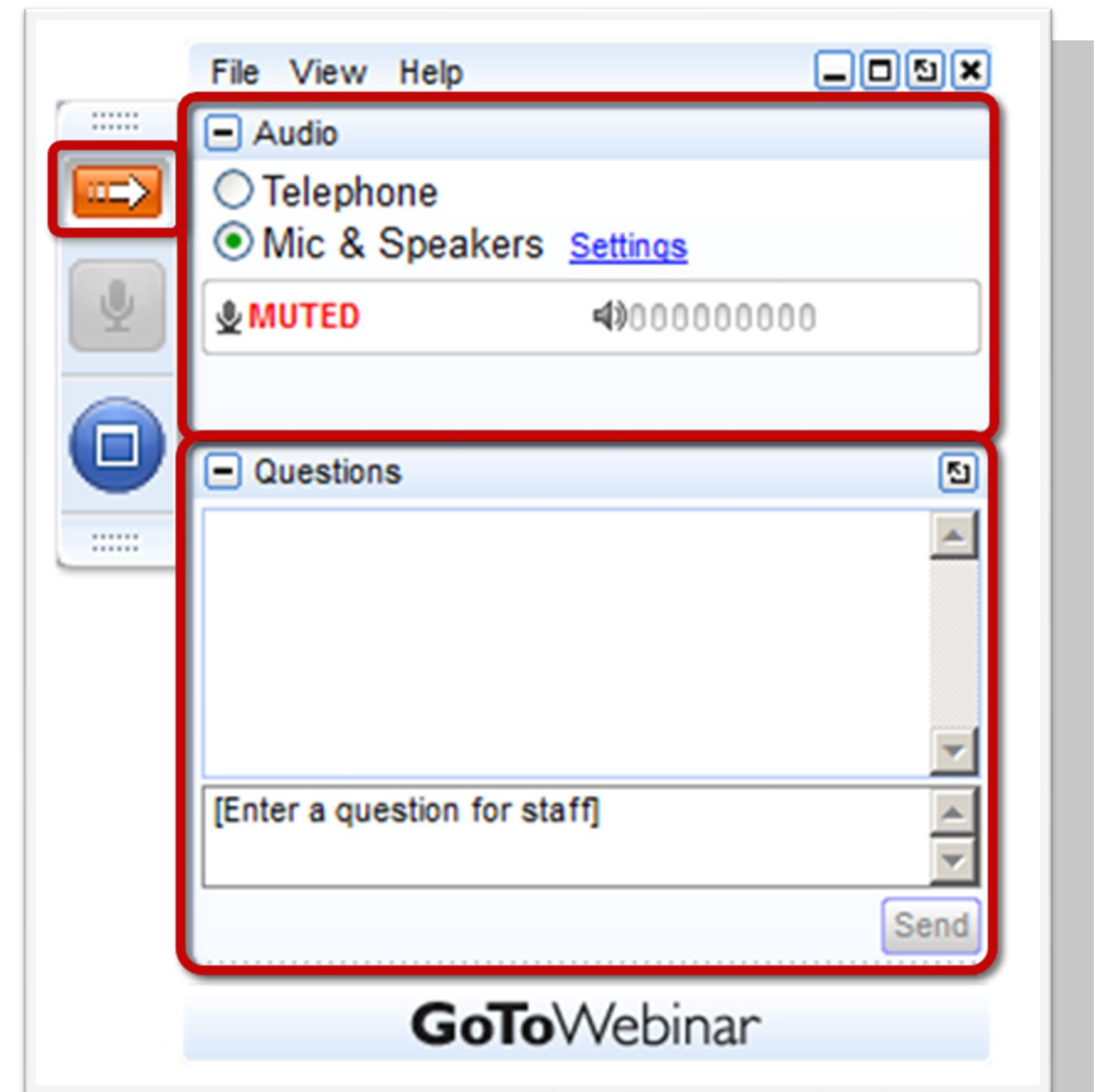
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Affordable, reliable, clean energy for all.



**Climate Resilience and
Community Health**



**Distributed Energy Access
and Equity**



**Energy Storage and Flexible
Demand**



Fossil Fuel Replacement

Phase Out Peakers

Replacing peaker power plants with clean alternatives in environmental justice communities.



Ravenswood Generating Station in Queens, NY. Credit: Bigstock

JANUARY 2024

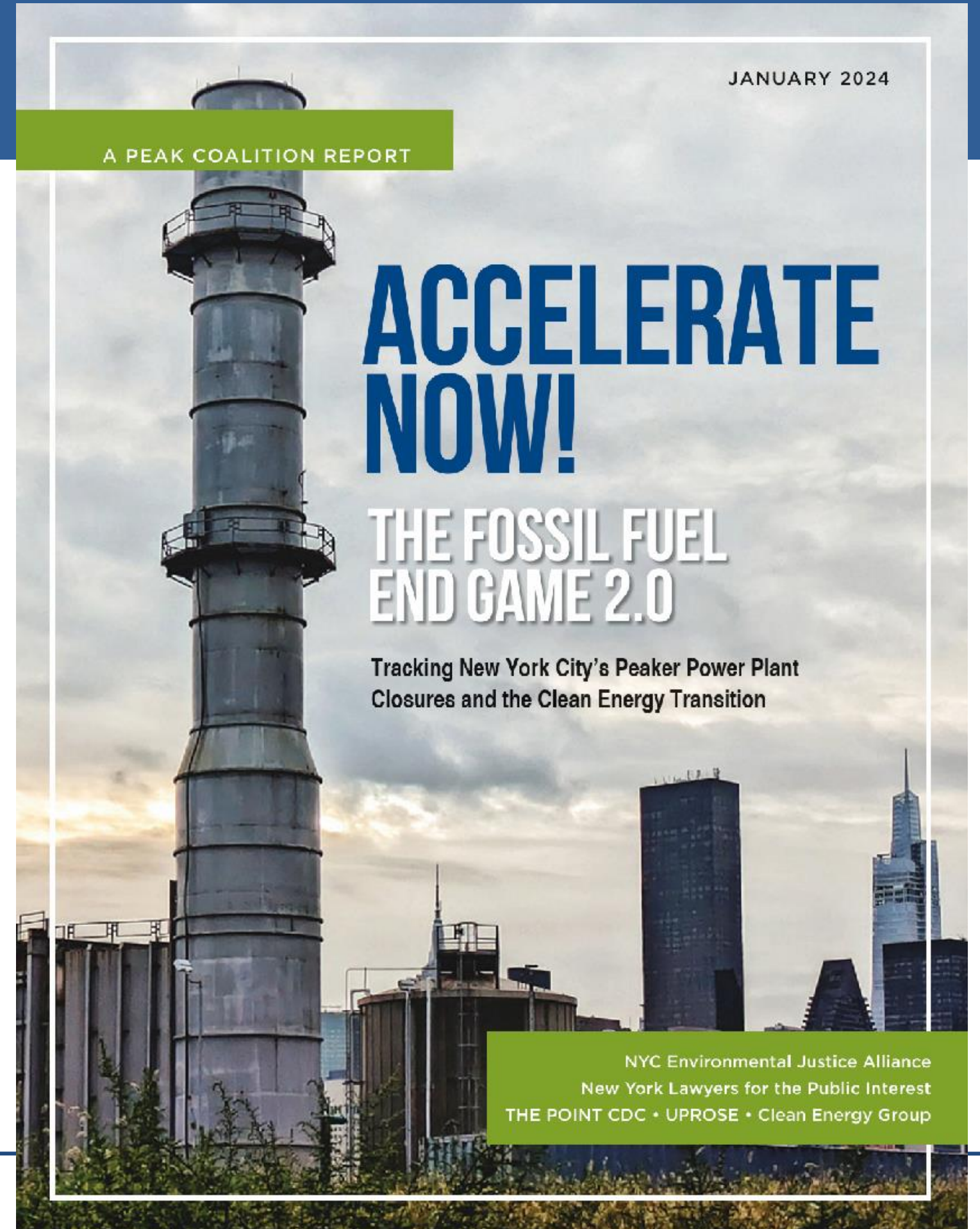
Accelerate Now! The Fossil Fuel End Game 2.0

UPROSE, THE POINT CDC, NYC Environmental Justice Alliance, New York Lawyers for the Public Interest, Clean Energy Group | The PEAK Coalition

Available at:

<https://www.cleangroup.org/publication/accelerate-now-the-fossil-fuel-end-game-2-0/>

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Webinar Speakers

Replacing NYC's Peaker Plants with Clean Alternatives: Progress, Barriers, and Pathways Forward



Seth Mullendore

President and Executive
Director
Clean Energy Group



Victor Davila

Community Organizer
THE POINT CDC



Sebastian Baez

Just Transition
Coordinator
UPROSE



Daniel Chu

Energy Planner
NYC-EJA



Megan Carr

Skadden Fellow –
Environmental Justice
Program
NYLPI



Upcoming Webinar

Solar Adopter Income and Demographic Trends: An Update from Berkeley Lab
(February 15)

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PEAK COALITION

Replacing NYC's Peaker Plants with Clean Alternatives: Progress, Barriers, and Pathways Forward

February 6, 2024



ABOUT THE PEAK COALITION

The PEAK coalition—UPROSE, THE POINT CDC, New York City Environmental Justice Alliance (NYC-EJA), New York Lawyers for the Public Interest (NYLPI), and Clean Energy Group (CEG)—aims to end the long-standing pollution burden from power plants on the city's most climate-vulnerable people.

Our collaboration brings technical, legal, public health, and planning expertise to support organizing and advocacy led by communities harmed by peaker plant emissions.

Together with communities, we are advocating for a system of localized renewable energy generation and battery storage to replace peaker plants, reduce GHG emissions, lower energy bills and make the electricity system more resilient in the face of increased storms and climate impacts.

JANUARY 2024

A PEAK COALITION REPORT

ACCELERATE NOW!

THE FOSSIL FUEL END GAME 2.0

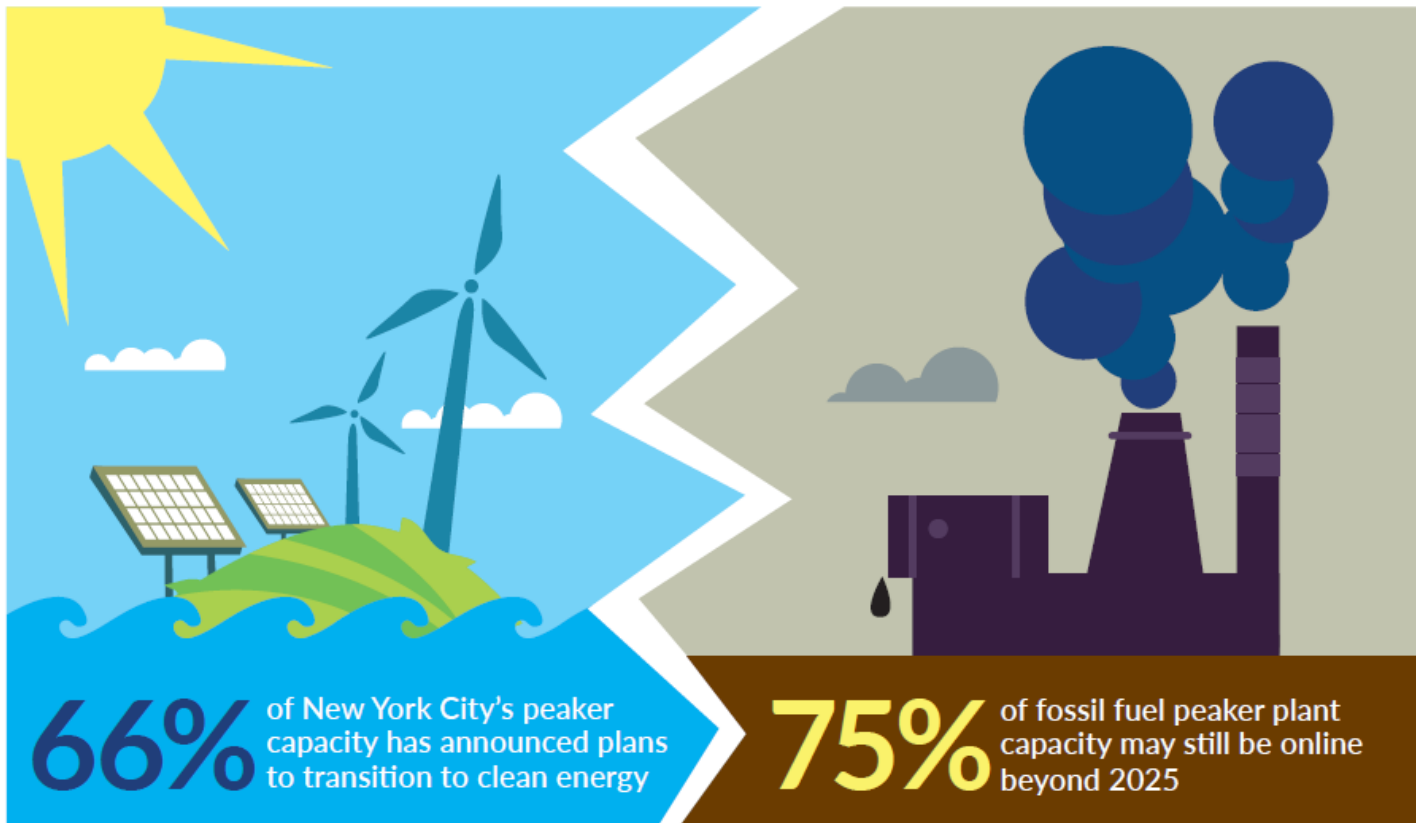
Tracking New York City's Peaker Power Plant
Closures and the Clean Energy Transition

NYC Environmental Justice Alliance
New York Lawyers for the Public Interest
THE POINT CDC • UPROSE • Clean Energy Group

Accelerate Now! examines progress made toward transitioning New York City's fleet of fossil fuel peaker power plants to clean alternatives over the past four years – detailing progress to date, challenges impeding the pace of the transition, and proposed actions to accelerate the phase out of polluting peaker plants.

The report serves as a companion to PEAK's 2021 report, *The Fossil Fuel End Game*, which detailed a strategic roadmap to reliably and cost effectively replace all of New York City's peaker plants with offshore wind, distributed solar, energy efficiency, and battery storage by 2030.

Clean Energy is Replacing New York City's Peaker Power Plants, but the Transition is Moving Too Slowly



LAYING THE GROUNDWORK FOR A JUST TRANSITION: POLICY AND REGULATION

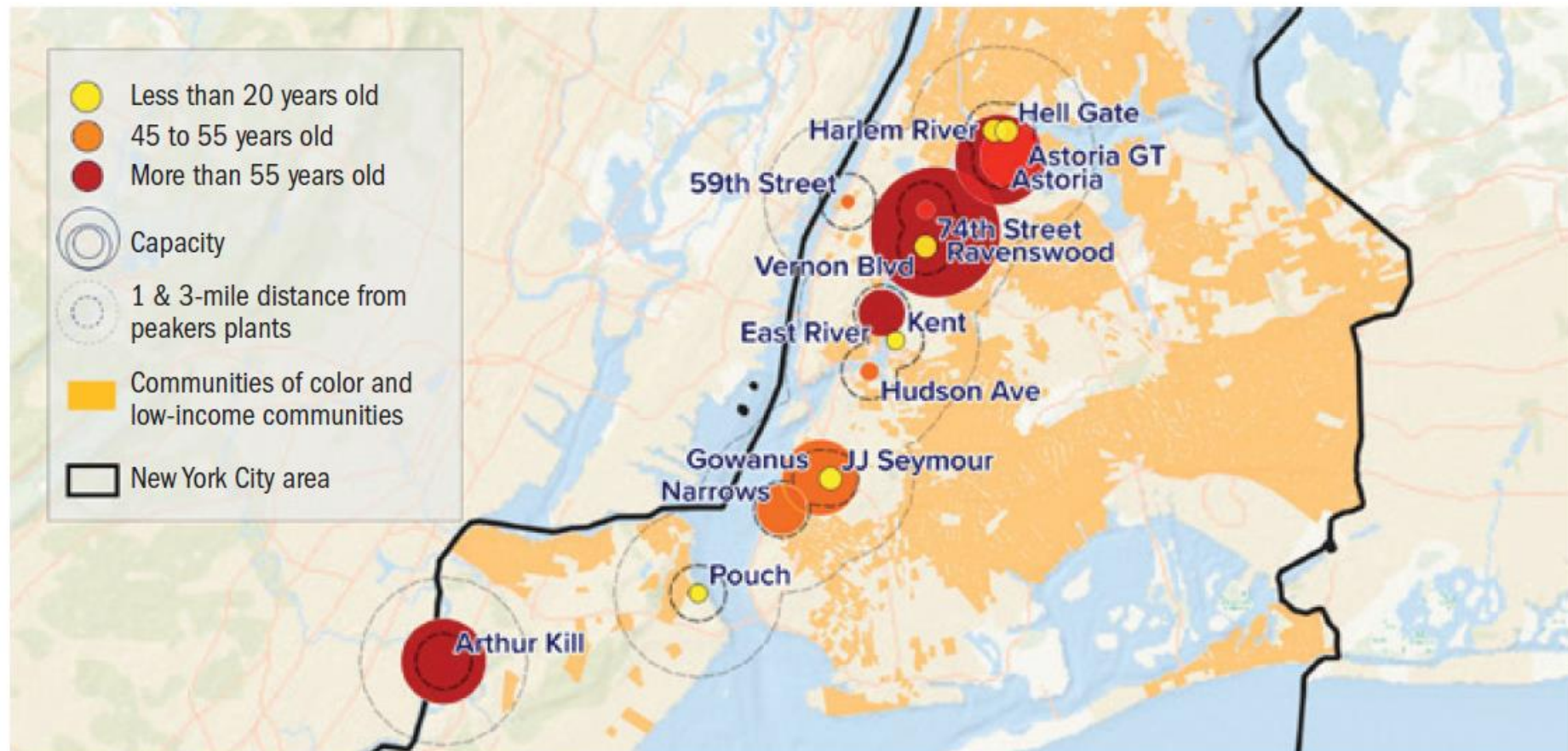
Climate Leadership and Community Protection Act (CLCPA):

- New York must reduce economy-wide greenhouse gas emissions by 40 percent by 2030 and 85 percent by 2050
- 70 percent renewable electricity system by 2030 and fully zero-emission electric grid by 2040
- established significant solar, energy storage, and offshore wind deployment targets
- achieving a healthy and thriving future is dependent on equitable access to clean energy and clean air for all residents, especially those living in historically disadvantaged communities that have borne the brunt of fossil fuel infrastructure and air pollution

Department of Environmental Conservation Peaker Rule:

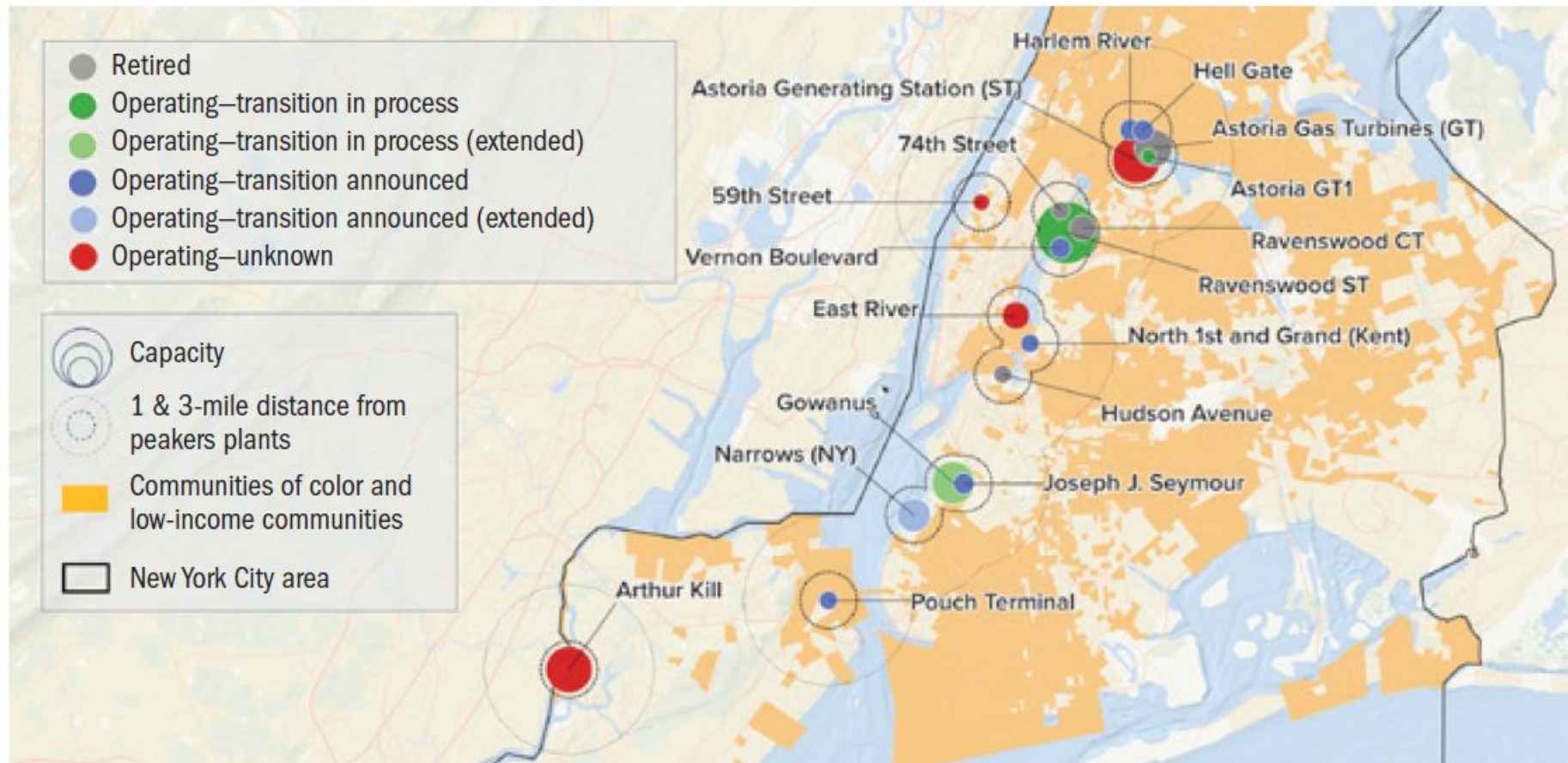
- established more stringent ozone season nitrogen oxide (NOx) emissions limits for simple cycle and regenerative combustion turbines
- affected units must either retire, suspend operations during ozone season, or retrofit with emission controls to reduce emissions

FIGURE 2: **New York City Fossil Fuel Peaker Power Plants (2019)**



Source: Strategen

FIGURE 3: New York City Fossil Fuel Peaker Power Plants Transition Status



Source: Strategen

NRG Energy

Arthur Kill	Staten Island	20	Operating	Planned transmission line may result in closure
Arthur Kill Steam Turbines	Staten Island	912	Operating	Unknown
Astoria Gas Turbines	Queens	558	Retired	Site being redeveloped for offshore wind interconnection



Eastern Generation (AlphaGen)

Astoria Generating Station	Queens	16	Operating—transition in process	Approved plan to build 135-MW battery storage system, deactivation notice submitted
Astoria Steam Turbines	Queens	943	Operating	Unknown
Gowanus	Brooklyn	640	Operating—partial transition in process	Announced plan to develop battery storage at site, deactivation notice submitted for 320 MW, NYISO designated remaining 320 MW as needed for continued reliability past 2025
Narrows	Brooklyn	352	Operating—transition announced	Announced plan to develop battery storage at site, NYISO designated full capacity as needed for continued reliability past 2025

New York Power Authority (NYPA)

Harlem River	Bronx	94	Operating— transition announced	Directed by the state to phase out peaker facilities by 2030, planned replacement with energy storage
Hell Gate	Bronx	94		
Kent	Brooklyn	47		
Joseph J. Seymour	Brooklyn	94		
Pouch	Staten Island	47		
Vernon Boulevard	Queens	94		



Rise Light & Power

Ravenswood	Queens	69	Retired	Site being redeveloped for offshore wind interconnection
Ravenswood Steam Turbines	Queens	1827	Operating—partial transition in process	Planned offshore wind interconnection expected to close one 400-MW peaker turbine, announced plan to retire remaining capacity through additional offshore wind development and upstate renewables transmission line



Consolidated Edison (ConEd)

59 Street	Manhattan	17	Operating	Planned transmission line may result in closure
74 Street	Manhattan	37	Retired	Planned transmission line facilitated closure
East River Steam Turbine	Manhattan	200	Operating	Unknown
Hudson Avenue	Brooklyn	33	Retired	Site being redeveloped for offshore wind interconnection



Community Perspectives

UPROSE: An Overview

We are an intergenerational, multi-racial, nationally-recognized, women of color-led, grassroots organization that promotes sustainability and resiliency through community organizing, education, leadership development and cultural/artistic expression in Brooklyn, NY.



Community Perspectives – Sunset Park

- Working class industrial waterfront community of 135,000 in Brooklyn
 - 38% Latino, 27% Asian
 - 23% poverty rate
- Unfairly sited polluting infrastructure near homes
 - Interstate highway (I-278/Gowanus Expressway)
 - Several waste management facilities
 - Last mile truck distribution centers
 - 3 peaking power plants
- Result: poor air quality, especially nitrogen oxides



Timeline of Sunset Park Peaker Plants

- Gowanus (640 MW) and Narrows (352 MW) built in early 1970s
- NYPA Joseph J. Seymour peaker (94 MW) built early 2000s, separate 520 MW peaker defeated
- NYS Department of Environmental Conservation finalizes NOx rule (2019)
- Sunset Park fights Gowanus repowering
 - Proposal announced in 2019
 - UPROSE and resident opposition organize
- Community celebrates after proposal was withdrawn in 2021 when permits for other NY peakers were denied

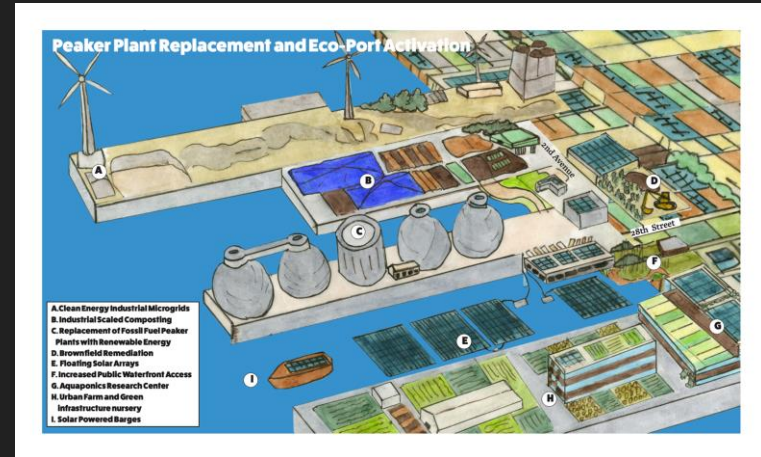


Joseph J. Seymour NYPA peaker plant.
Source: Urban Omnibus

Unwelcome News: Renewable Future Halted

- Previously expected to retire 1 May 2025
- NY Independent System Operator reliability announcement November 2023
 - 446 MW gap expected in 2025
 - Reliability-Must-Run contract
- Part of Gowanus (320 MW) and all of Narrows in operation until 1 May 2027
- Why?
 - ConEd issued a request for proposals
 - Inadequate solutions generated by private sector and ConEd
- People will continue to breathe disparately polluted air

Our vision:



Their vision:







Cross bronx expressway

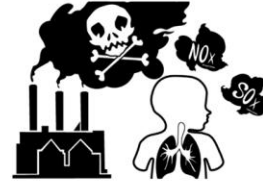
Community health impacts of NOx pollution:

- NOx pollution degrades lung tissue in developing children. 1 in 3 children have asthma in their lifetime.
- NOx pollution increases risk of stroke, thickening blood, constricting veins, and increasing blood pressure.
- NOx pollution impacts the cognitive development of children.

NEW YORK IS LOOKING TO CHANGE HOW WE HANDLE ENERGY FOR THE BETTER!

We need to replace Peaker Plants with battery storage!

Peaker Plants are currently used to generate electricity in New York State. One of the many problems with Peaker Plants is that they generate energy by burning dirty fossil fuels. The fumes produced by that power generation are toxic and dangerous.



How do fossil fuel Peaker Plants cause harm?

Peaker Plant pollution impacts the health and happiness of everyone living nearby. Kids growing up within a few miles of a Peaker Plant are more likely to develop asthma and mental health issues. There are over 750,000 people living near Peaker Plants in NYC. These facilities are bad for everyone and they are expensive – costing taxpayers \$450 million every year.



What is battery storage?

Battery storage, also known as battery energy storage systems (BESS), are devices that allow energy from renewable sources such as solar and wind to be stored and then released when needed.



We need to replace Dirty fossil fuels with clean green energy

We can make Peaker Plants a thing of the past by adopting emission-free battery storage across New York state. Together let's spread the word about battery storage so we can keep our children safe while keeping the lights on.



To find out more and join our efforts to make the city green and breathable please visit-

<https://www.peakcoalition.org/>



Barriers to the Clean Energy Transition

Rising Demand



Uncertain
Renewable
Energy
Economics



False Solutions



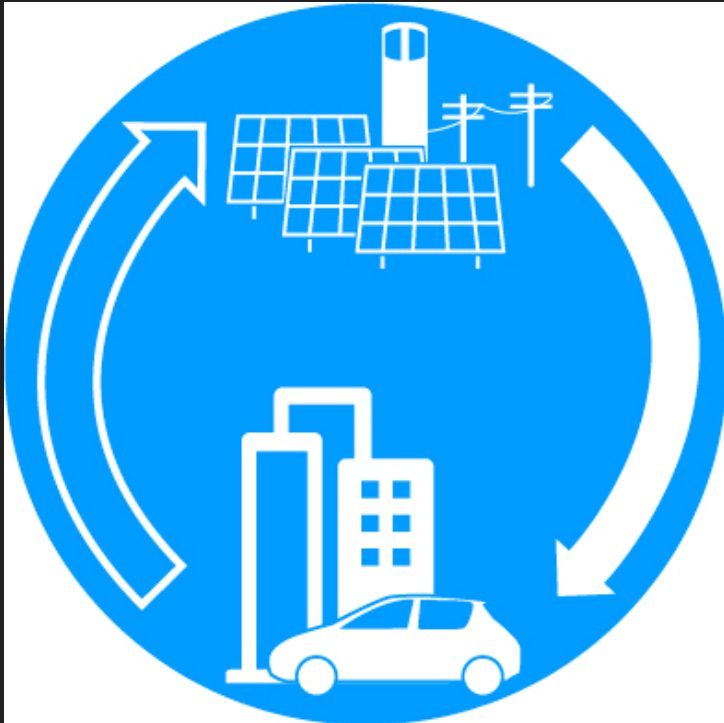
Maintaining
Reliability



Regulatory
Barriers



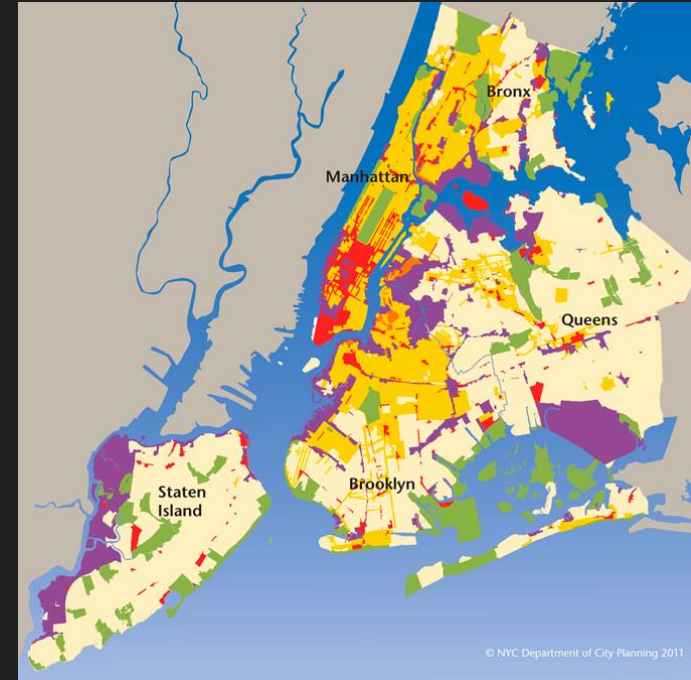
Rising Demand & Creating a Responsive Grid



- Electrification of buildings and vehicles creates new demands on the electric grid & reshapes peak demand
 - *E.g.* Local Law 97, NYC's Building Decarbonization Law
- Increased demand does not have to jeopardize reliability
- Robust demand response systems and virtual power plants allow grid customers to adjust energy usage during times of peak demand

Regulatory Barriers - Streamlining Renewable Energy Citing

- NYC copes with limited space as well as strict building codes & zoning regulations
- Misinformation over various types of battery storage has resulted in overly broad restrictions
- Renewable energy development and storage does not receive the tax incentives that other developers already receive



Path Forward: Envisioning a Just Transition

- A strategic transition to renewable energy and battery storage resources can accompany an increase in sustainable careers and local wealth.
- Proactive investments in workforce retention and development
- EJ communities lead the way to decentralizing and democratizing energy
- Community-led and community-owned infrastructure



1. Center the transition process as a **vehicle for justice**
2. Respect local communities' **self-determination** in the peaker phase-outs
3. Ensure **universal energy access and affordability**
4. Provide **career opportunities at every level**
5. Pursue responsible use of energy resources **without false solutions**
6. Allow **community governance** in renewable energy and battery storage
7. Foster energy **reliability and resiliency**
8. **Remediate relationships** with historically impacted communities
9. Foster community and intergenerational **wealth building**
10. Repair relationships with **ecosystems and nature**



Roadmap to Success

NYC's effort to phase out peaker plants needs to strategically balance between energy demand, community priorities, regulatory challenges, and renewable energy and energy storage development.

Roadmap to Success

- Governor | Address short-term reliability
- Legislature | Fund and mandate new solutions
- NYSERDA | Large scale RFPs
- PSC | Push regulated utilities
- NYC | Halt new peakers, permit reform
- Con Edison | Opt-out demand response



Continuing our work of ensuring a community-led process to spur renewable energy and battery storage development, improve energy efficiency, and democratize energy management for health and justice.

Q&A