BUILDING
DECARBONIZATION
COALITION

Building Decarbonization Policy in New York

About the BDC

Americans need safer, healthier, more affordable energy. The Building Decarbonization Coalition (BDC) harnesses the power of coalition to forge paths to upgrade and power homes and buildings with clean electricity.

We unite people, policy makers, stakeholders and environmental groups at every level to join in building decarbonization and build a sustainable future.

Join us! buildingdecarb.org/join

Thank you to our Trailblazer Members!

Upcoming Events

[Register Here]

Webinar Logistics

- Everyone is muted
- During Q&A you will have the opportunity to ask a question via the chat.
- This webinar is being recorded and will be placed in our Resource Library
- For information on future policy calls, sign up for our newsletter: buildingdecarb.org

Agenda

- Introductions
- Panel Presentations
- Discussion

Today's Panelists

Commissioner Jeanette Moy
New York State Office of General Services (OGS)

Jessica Azulay
Executive Director
Alliance for a Green Economy (AGREE)

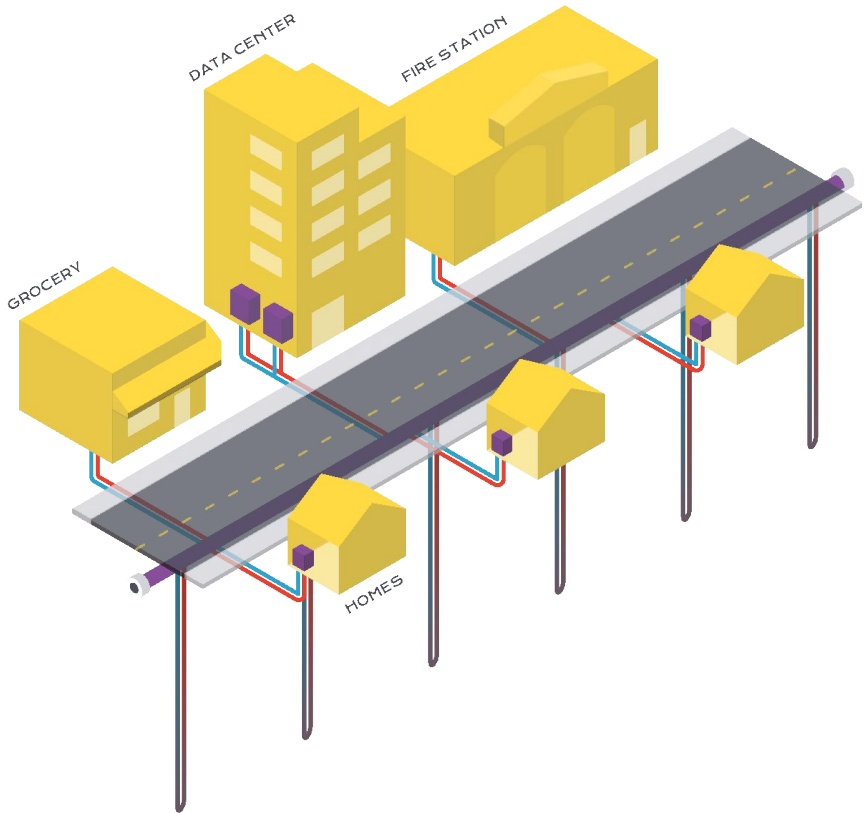
Greg Koumoullos
Department Manager
–Thermal Energy Networks
Con Edison

Brett Thomason
Political Director
Enterprise Association
Steamfitters Local 638

NY Policy Landscape

- **CLCPA:** In 2019, NY passed the Climate Leadership and Community Protection Act (CLCPA)
- **UTENJA:** Utility Thermal Energy Networks and Jobs Act of 2022
- **Executive Order 22** of 2022: Leading by Example: Directing State Agencies to Adopt a Sustainability and Decarbonization Program
- **Decarbonization Leadership Program** to Reduce Carbon Emissions at State Facilities
  - In 2023, New York Power Authority (NYPA) was authorized and directed to develop decarbonization action plans for 15 of the highest emitting State facilities including with thermal energy networks that would connect multiple buildings to carbon-free energy sources.
- **Local Law 97 (LL97)** of 2019: Reduce the emissions produced by the city's largest buildings 40 percent by 2030 and net zero by 2050.

Thermal Energy Networks (TENs) are water pipes connecting buildings and other thermal energy sources and reservoirs together.



Heat pumps inside each building extract or reject heat to the network in order to exchange thermal energy with other buildings in the neighborhood

Commissioner Jeanette Moy

New York State Office of General Services (OGS)

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NEW YORK STATE | Office of General Services

Empire State Plaza

Investing in Decarbonization

OCTOBER 7, 2024

About the Office of General Services

Office of General Services (OGS) manages **over 150 buildings & structures** of owned & leased property totaling **more than 30M sq. feet** across the State—from Watertown, to Buffalo, to NYC. Our buildings and structures are work sites for **30,000 State employees.**

New York State has bold goals related to decarbonization, including the Climate Leadership and Community Protection Act (CLCPA) target to **reduce economy wide emissions 85% by 2050.**

For the past decade, OGS has been significantly improving energy efficiency of our buildings, a **critical first step in the path to decarbonization**. We are now at **nearly 90% of our NYPA Buildsmart goal**.

The Resiliency and Sustainability Division, working through the GreenNY Council, **issued "Clean Concrete" guidance to reduce the embodied carbon of common construction materials** and are working to incorporate sustainability goals into the capital planning process.

Executive Summary

Strong progress has already been made towards decarbonization, including **electrifying one of the ESP's chillers** and **installing LED lighting across State facilities.**

The **ESP Energy Infrastructure Master Plan study**, released in July, advises on a phased approach **to effectively decarbonize the Plaza.** It was commissioned before the Decarbonization Leadership Program 15 (DL15), and it lays the groundwork for it.

Governor Hochul announced **$100 million in funding to OGS and NYPA** for **Phase One of the decarbonization** of the Empire State Plaza.

The completion of phase one improvements will result in an **elimination of over 20% of the GHG emissions** from the Empire State Plaza.

The report's recommended approach will provide a **more than 50% reduction in GHG emissions*** in the **first two phases**; a third phase will achieve an **additional 39% reduction.**

Achieving those potential gains will require **long-term investments, coordination,** and the **ability to prioritize** this work.

**emission reductions are based on a 2018-2019 baseline*

Empire State Plaza – Energy Baseline*

Central Plants that provide HVAC to ESP include:

- Sheridan Avenue Steam Generation Plant
- Central Air Conditioning Plant
- Riverfront Pump Station

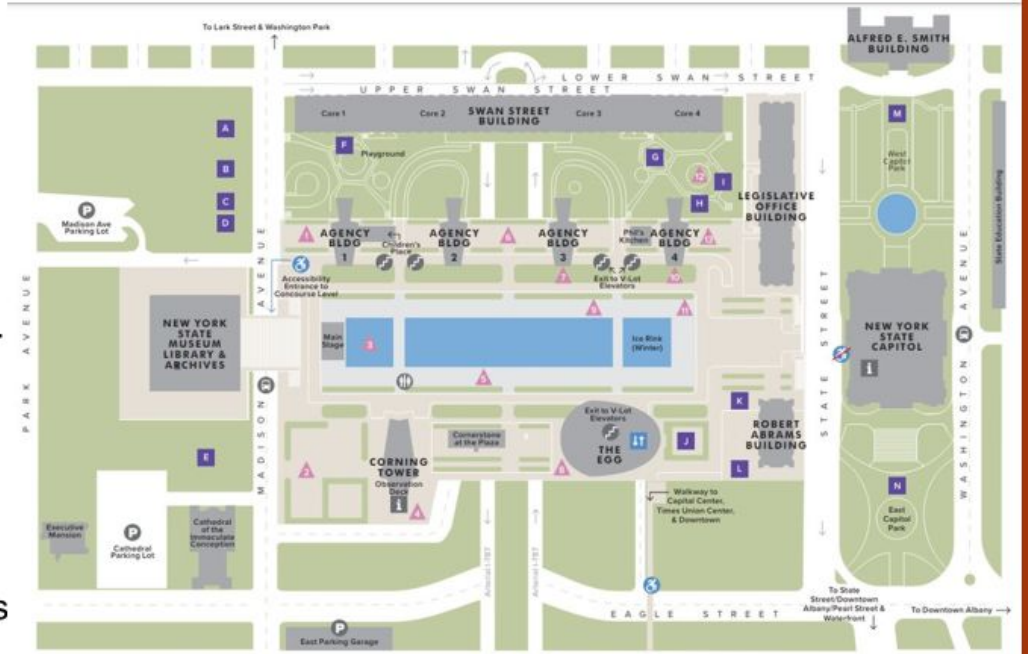
Buildings: 11.8 M SF

Peak Loads: National Grid estimates approx. 11 MegaWatts (MW) Electric

Annual Energy Costs: ~$20 Million

Empire State Plaza contributes:

- 78,000 Metric Tons (MT) Carbon Dioxide Equivalents (CO^2e)/year GHG (Natural Gas
- 12,000 MT CO^2e /yr GHG (Electricity)



calendar years of 2018 – 2019 were analyzed for the baseline measure; 2020 was excluded as non-representative

ESP Infrastructure & Scope of Work

Aging infrastructure and deferred maintenance **compound the costs and challenges** to decarbonization.

The ESP was constructed between 1965 and 1978; aging buildings and decades of underinvestment have resulted in facilities with multiple systems **at the end of their useful life.**

In 2020, OGS identified **$1.2B in needed critical repairs** at Empire State Plaza. In 2021, Governor Hochul committed $175 million for safety related repairs – and since 2020, additional repair needs have been identified.

Major renovations are required for modern code compliance and decarbonization at ESP.

In order to reach CLCPA goals, OGS, NYPA, and the Energy Master Plan included an analysis of OGS's energy infrastructure, the equipment's useful life and refurbishment, studied the plaza's energy usage.

Ultimately, this report developed a list of energy efficiency measures, evaluated the viability of different energy sources, and **created a comprehensive project phasing plan to fully decarbonize the Empire State Plaza.**

Draft Decarbonization Phasing Plan

Empire State Plaza GHG Emissions:
78,000 MT CO^2e/yr GHG (Natural Gas)
12,000 MT CO^2e/yr GHG (Electricity)

21% Reduction

Phase 1

- Install Electric Chillers
- Install Heat Recovery Chiller – river heat recovery

52% Reduction

Phase 2

- Modernization and energy efficiency upgrades to Health Laboratory including relocation and conversion to office space

91% Reduction

Phase 3

3.1 - Building Renovations

- Implement energy efficiency measures and low temperature heat conversion
- OGS anticipates energy efficiency measures would trigger code requirements leading to major renovations

3.2 - Thermal Energy Network

- Integrate thermal network into Empire State Plaza building systems

100% Reduction

Phase 4

- Electric peaking technology
- NYS clean electric grid
- *Steam Plant remains for emergency backup purposes only for Plaza buildings*

Phase 3 Decarbonization Options: Potential Thermal Energy Network Sources

Geothermal Well Field

Partner with City of Albany Lincoln Park
or Corning Preserve
*Approximately 15 acres

Wastewater Heat Recovery

Partner with County of Albany South Side Waste-Water Treatment Plant
Port of Albany

Industrial Heat Recovery

Partner with Empire Generating Co. Combined Cycle Gas Power Plant
Rensselaer

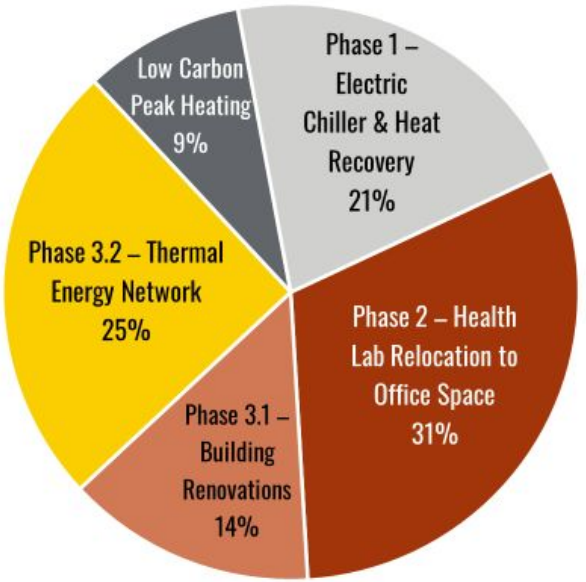
NYPA / OGS focus

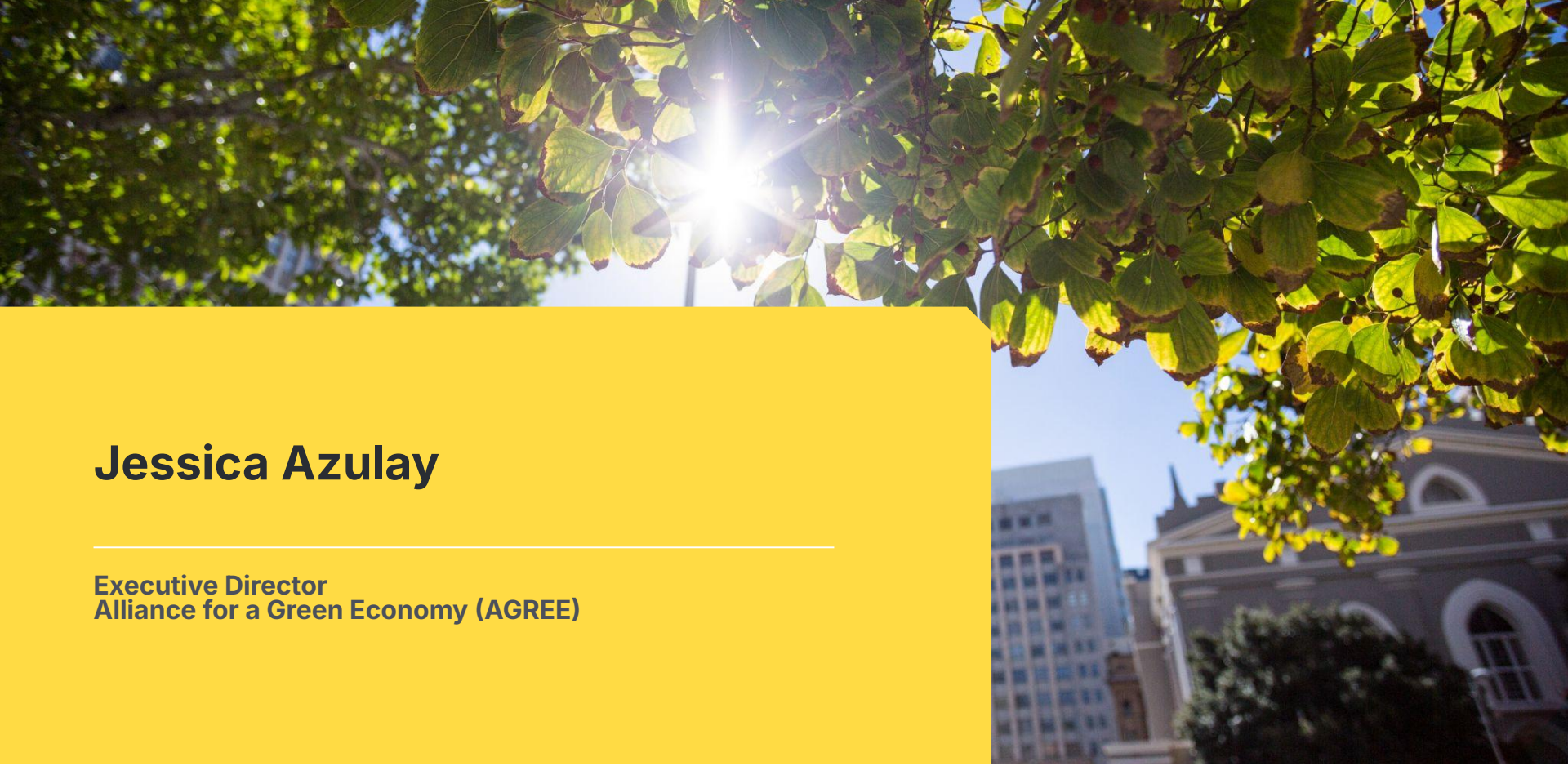
Key Findings & Next Steps

Phases 1 and 2 provide over 50% reduction in GHG emissions. Governor Hochul has announced $100 million to advance Phase 1. Design has already begun

Full decarbonization will require multiple phases, extensive investment and time due to deferred maintenance, and third-party partnerships for a thermal energy network.

In the coming months, OGS & NYPA will complete detailed design and release an RFP for Phase 1 and continue analysis for a thermal energy network.





Jessica Azulay

Executive Director
Alliance for a Green Economy (AGREE)

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www.upgradeny.org

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BUILDING DECARBONIZATION COALITION

WE ACT FOR ENVIRONMENTAL JUSTICE

ALIGN ALLIANCE FOR A GREATER NEW YORK

NEW YORK STATE BUILDING & CONSTRUCTION TRADES COUNCIL AFL-CIO

NYLCV NEW YORK LEAGUE OF CONSERVATION VOTERS

SIERRA CLUB ATLANTIC CHAPTER

AGREE Alliance for a Green Economy

Passing the policy is just the beginning

- 22-M-0429: Proceeding to Implement the Utility Thermal Energy Network and Jobs Act
  - Proceeding to implement initiated on September 15, 2022
  - Order with stages & requirements
  - Order with definitions
  - Initial rules adopted: Create fair market access, exempt small scale networks, train & transition utility workers, and encourage third party participation
- State Facility Decarbonization Action Plans
  - Progress report due January 2025

Barriers to advancing thermal energy networks

Barrier: New York's Gas Mandate - Public Service Law enshrines a utility's obligation to serve gas, even when the utility could meet customer needs more economically and ecologically with other options

Solution: The NY HEAT Act would enable New York to carefully transition away from gas to heat pumps and thermal energy networks by updating Public Service Law to enable to provide their customers with cost-effective clean heat solutions, such as heat pumps and thermal energy networks. The bill would also cap the cost of energy bills at 6% of a household's income, ensuring that low and middle-income households do not have to bear the burden of outdated gas distribution systems.

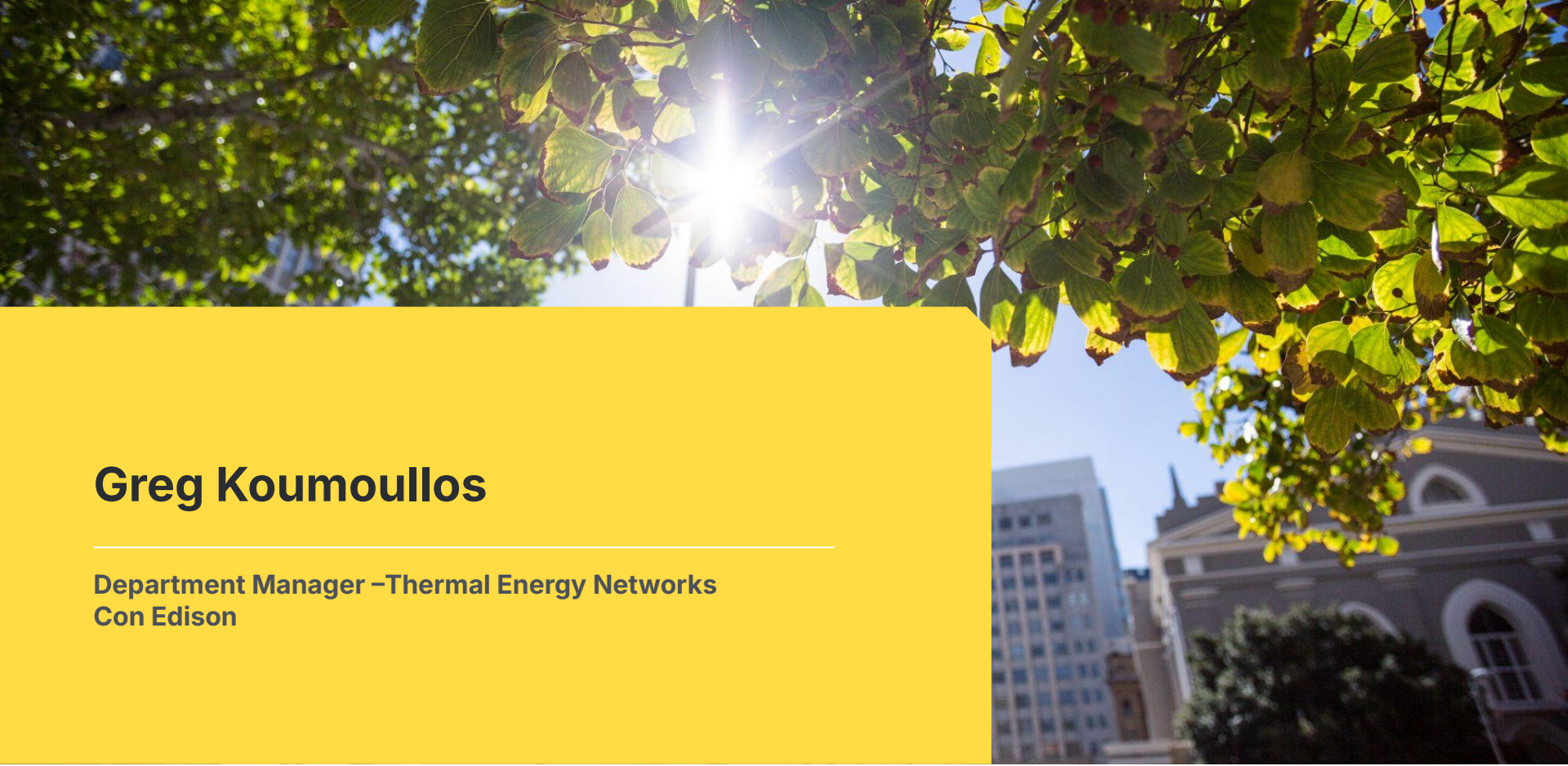
Opportunities for Thermal Energy Networks

Specific projects:

- Utility pilot projects
- NYPA projects

Policy openings:

- NYS Energy Plan
- Grid of the Future Proceeding



Greg Koumoullos

Department Manager –Thermal Energy Networks
Con Edison

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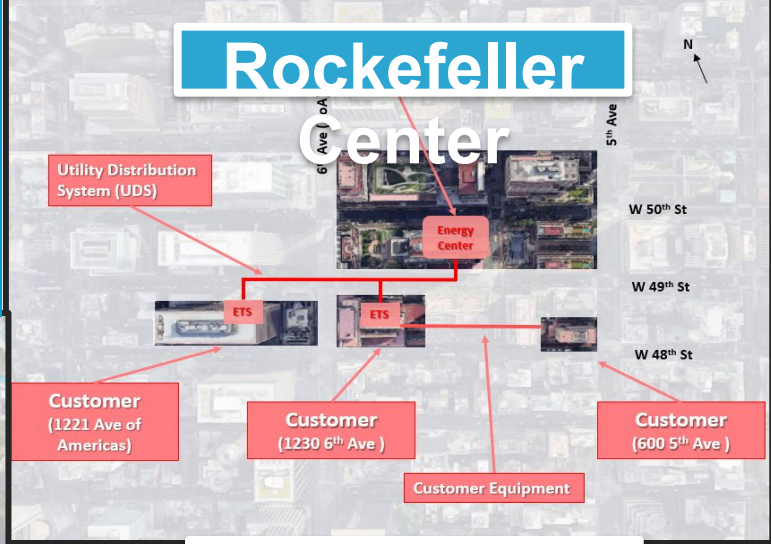
conEdison

Proposed UTEN Pilot Projects

TEN THERMAL ENERGY NETWORK

Mount Vernon

Rockefeller Center



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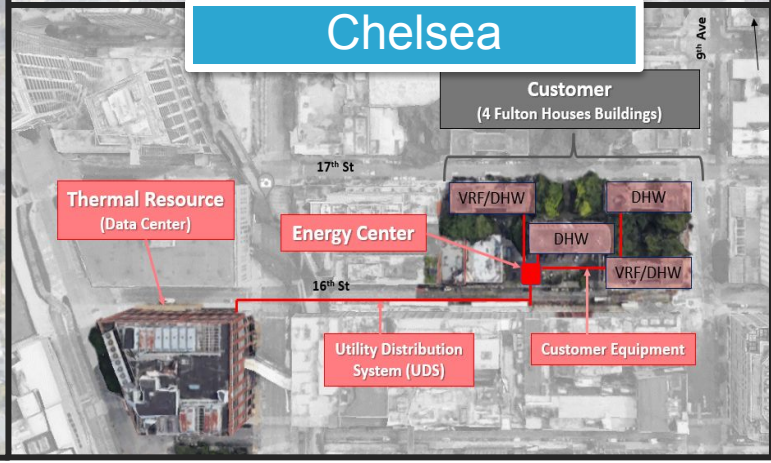

Brett Thomason

Political Director
Enterprise Association Steamfitters Local 638

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Discussion

- The host will ask the first question for the panelists
- Raise your hand to ask a question or enter your question in the chat to participate in the discussion

Thank you!

Slides and notes will be emailed to registrants later this week

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