



AEG New York Stakeholder Challenge: Grid Modernization



Introduction



NYSERDA Mission Statement - Advance clean energy innovation and investments to combat climate change, improving the health, resiliency, and prosperity of New Yorkers and delivering benefits equitably to all.

Climate Act - New York's Nation-Leading Climate Targets

- 85% Reduction in GHG Emissions by 2050
- 100% Zero-emission Electricity by 2040
- 70% Renewable Energy by 2030
- 22 Million Tons of Carbon Reduction through Energy Efficiency and Electrification
- Working to ensure **ALL New Yorkers** are represented in the State's transition to a cleaner energy future and benefit from investments and opportunities provided by this historic transition

Critical Problem

The transportation sector accounts for approximately one third of GHG emissions in NYS & decarbonizing medium and heavy-duty vehicles (MHDV) will be a key strategy. To de-carbonize the most at-risk disadvantaged communities such as **Hunts Point**, we need to transition to beneficial electrification

The challenge: Critical portions of the distribution network cannot accommodate required clean energy technologies necessary to reach New York's Climate Act goals. We need to coordinate all stakeholder's efforts and needs to accomplish the transition to a cleaner transportation industry.

Key Obstacles to Overcome

Hunts Point – Largest Food Market in the Country

- 15,000 diesel trucks into Hunts Point food market per day - however Many of the trucks have been replaced in last 5 years with newer diesel trucks
- ~80% of trucks are refrigeration units (TRUs) & no manufacturer exists to support the market
- Produce market alone has 1,600 diesel TRU's idling 24/7 onsite ~20,000-30,000 daily gallons of diesel

Existing electrical infrastructure is insufficient to electrify trucks or TRUs

- To be able to charge 500 trucks at a time would require 40+ MW of electricity
- Hybrid TRUs that can plug in when stationary are available; electrify TRUs would require more than 12 MW of electricity

Complex ownership and organizational dynamics

- Hunts Point property owned by New York City Economic Development Corporation
- Facilities owned by collaboratives; Vendors rent space from collaboratives; many trucks are operated by independent fleets
- ConEd serves produce and fish markets; NYPA serves meat market

Potential role for NYSERDA: Help coordinate and bring together all necessary parties to create a phased holistic plan - provide resources, technical support and innovative ideas.

What are the Benefits & Consequences of Addressing or not Addressing this Obstacle?

Benefits

- Improved air quality and health impacts for the local community
- Fleet operators can save on fuel and maintenance costs by reducing idling
- Solving this challenge at Hunts Point could serve as a model of how to electrify for fleets and facilities in the rest of NYC and beyond
- Helps reach State and City goals

Consequences

We need to have the ability and tools to address NYC health disparity: **“The ability to live a long and healthy life is not equally available to all New Yorkers”** - *New York City Department of Health and Mental Hygiene*

- Hunts Point has the **highest: levels of harmful air pollutant, fine particulate matter, pre-mature births, child asthma emergency visits, avoidable hospitalizations, high blood pressure & absence of health insurance**
- Medium household income is 60% less than citywide

Final Statement

Regarding Grid Modernization, to achieve New York's 2050 Carbon & Equity goals, one critical obstacle for NYSERDA to overcome is: Aligning city and state goals with markets, industry & all stakeholders to expedite critical grid upgrades to enable beneficial electrification projects, such as Hunts Point.