Construction & Development

## AEG Stakeholder Challenge on Critical Infrastructure

**MTA Construction & Development** 

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### Introduction



#### Climate Sustainability Goal: Reduce MTA operational GHG emissions 85% by 2040



Strategy 1: Update FacilitiesStrategy 2: Transition FleetsStrategy 3: Optimize Power Use

Million Metric Tons CO2e per year

# **Problem Statement: How do we take meaningful steps to advance the transition to zero-emission passenger rail?**

**MTA Operational GHG Emissions** 



#### **MTA Commuter Rail Territory**



## **Challenge: Building a coalition to pilot ZE alternatives**

- Key challenges:
  - Range, charging/fueling time and associated infrastructure needs
  - □ Safety
  - Ability to use, transport and store hydrogen
  - □ Cost
- Key stakeholders
  - Utilities, FTA, FRA, APTA, other transit agencies
- Lack of funding opportunities



## **Benefits**

- Potential to offer more one-seat rides to NYC, getting more cars off the road
- Eliminate air quality pollutants for local communities
- Advance progress toward NYS and Federal climate goals in a "difficult-todecarbonize" sector



Source: EPA EJScreen accessed Oct 11, 2023. Right: CMAQ Emissions Calculator Toolkit: Locomotive & Marine Engine Retrofit & Replacement Tool v7/2020. Far Right: Reuters, Sep 29, 2023 flooding in NYC

#### Annual Emissions (kg) per Locomotive



Existing MNR Locomotive
New Tier 4 Diesel
Zero-Emission

## Conclusion

Regarding Critical Infrastructure and Resilience, to achieve New York Climate, Health and Equity goals under the CLPA and EO22 a critical obstacle to collectively overcome in 12 months is \_\_\_\_\_:

....lack of support for the "hard to electrify" components of the transportation sector. Heavy duty and specialized applications pose significant climate impacts as well as local air quality impacts and are further away from the zero-emission transition.

