

# Grey-to-Green Energy Transition Studio

Urban Planning Studio | Spring 2020

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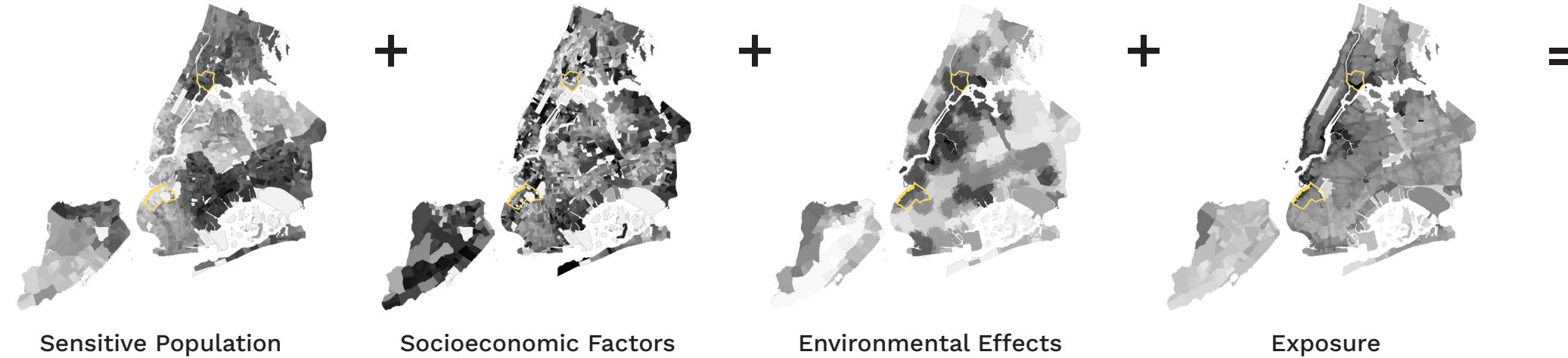
## Abstract

As the coming energy transition begins to accelerate, how can we reimagine the energy infrastructure in a way that serves environmental justice communities? The Climate Leadership and Community Protection Act not only mandates reducing carbon emissions and transitioning to renewable energy, but also ensures benefits and investments to communities that have been suffering from poor socioeconomic conditions and environmental pollution.

The Grey-to-Green Energy Transition studio is challenged to identify strategies and opportunities related to the eventual closure of peaker power plants in New York City, specifically balancing community priorities with future energy-related demands. In doing so, the studio analyzed 311 complaints to understand community concerns, created an index to identify 'disadvantaged communities,' developed strategies for 'benefits of spending,' conducted feasibility studies on solar and batteries, and proposed repurposing scenarios demonstrating new ideas of energy infrastructure on 3 peaker power plant sites in Port Morris and Sunset Park.

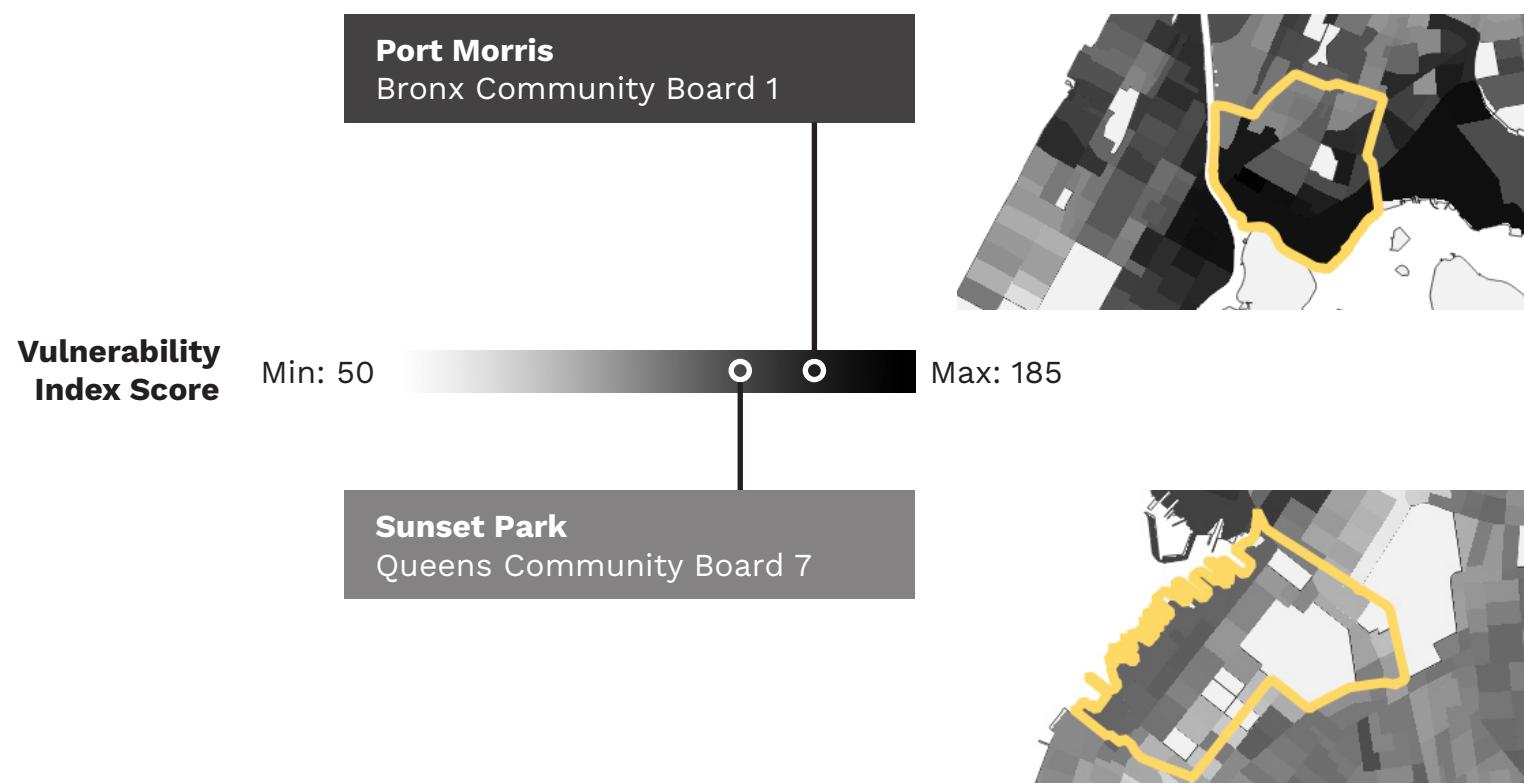
# Assessing Disadvantaged Communities

NYC Communities & Environmental Screening Index



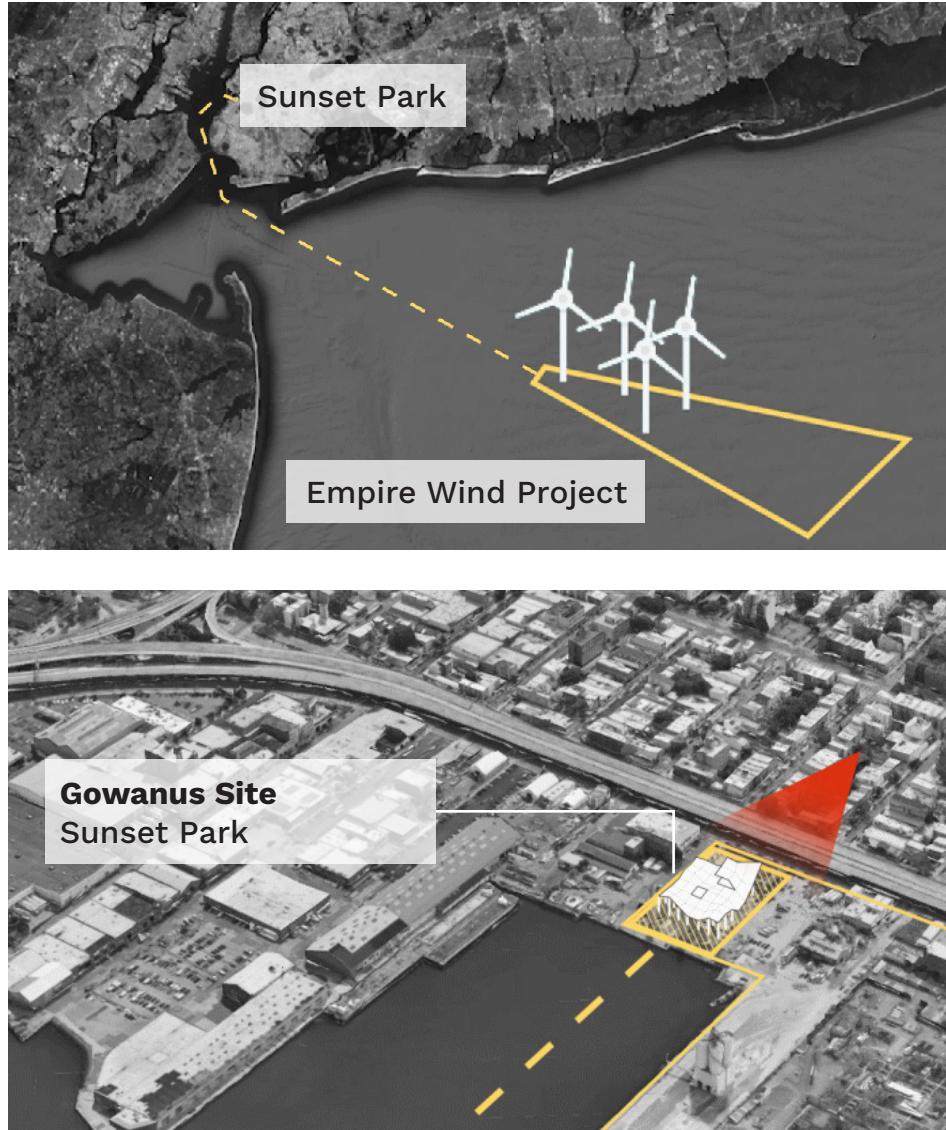
Population Characteristics

Pollution Burden



## Repurpose: Connecting to Power

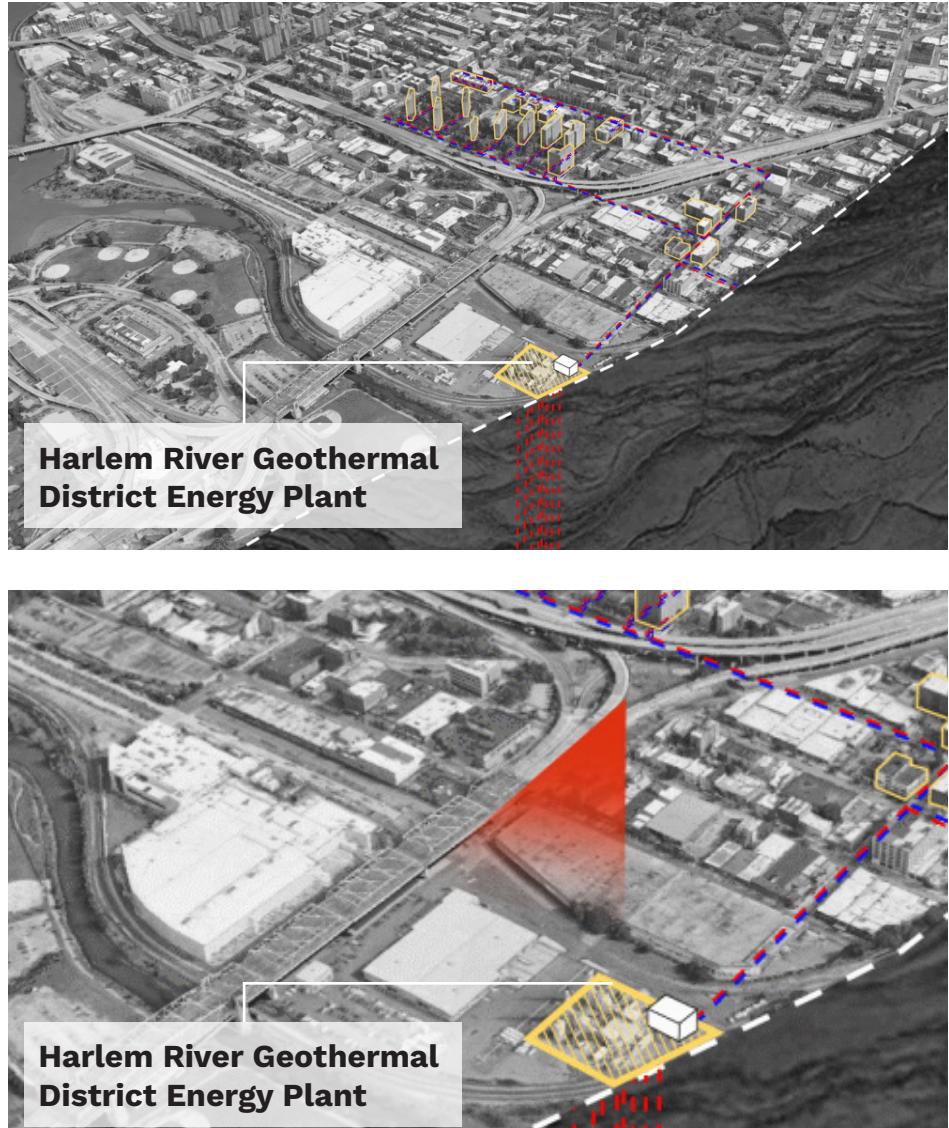
Gowanus Peaker Plant Site in Sunset Park, NYC



With the Empire Wind project connects to the Gowanus peaker plant site in Sunset Park, we propose that the site is turned into a viewing platform that connects communities to a working waterfront and is part of the community resiliency plans.

## Repurpose: Generating Power

Harlem River Peaker Plant Site in Port Morris, NYC



We propose that the Harlem River plant be converted into the first node in a network of district heating and cooling systems throughout the city, focusing first on delivering heat, hot water and cooling from renewable sources to the 3,567 residential units nearby.

## Repurpose: Manifesting Power

Hell Gate Peaker Plant Site in Port Morris, NYC



Building on the existing Haven Project which envisions a park centered on historical industrial structures, we propose that the Hell Gate Peaker Plant be used to house a gravity storage battery which uses gravity, recycled concrete, and software to provide dense energy storage that also creates a spectacle of power.