

# Estimated Inventory of Smaller-Scale Fossil Fired Distributed Generation in New York

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# Outline

- Study Overview
- Objectives
- Regional Breakdown
- Data Analysis
- Deliverable Layout
- Examination Scenarios

# Overview of the Study

- Create an estimated Inventory of DG  $\leq$  2MWs
- Conjoined with a dataset of generator emissions characteristics
- Test the model with 2 plausible scenarios of increased run hours of DG
- Identify environmental effects of changes in run hours of DG



VS

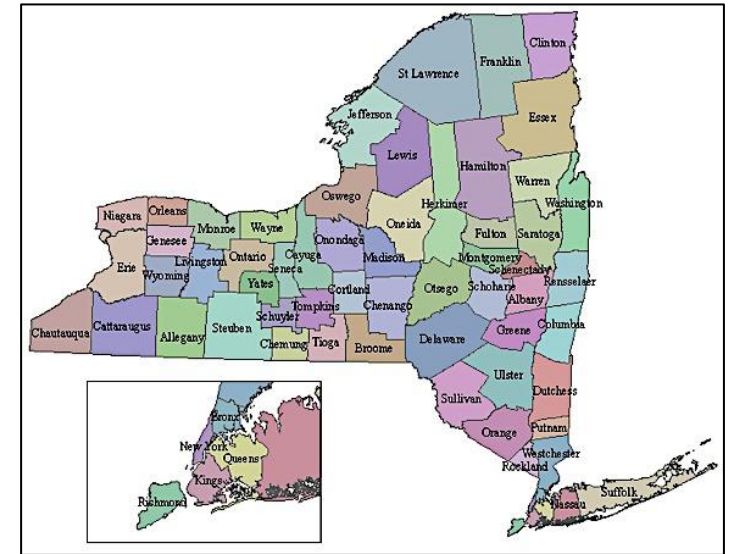


# Objectives of the Study

- Improve understanding of existing generator stock
  - Location
  - Power range
  - Fuel type and
  - Equipment vintage
- Enable Sensitivity Analysis of effects of increased operation
  - Changes in Criteria Pollutants
  - Changes in CO2 Emissions
- A tool to review emissions implications of policy changes

# Regional Breakdown

- NYC
- NYC and Westchester
- NYC, Westchester, and 62 upstate counties



# Data Analysis

- Starts from the foundation of the PartsLink Database
- Customize for business statistic profile of each region
- Corroborate and extend with:
  - Other datasets
  - Equipment manufacturers
  - Air and Power Sector experts and practitioners
  - Regional sales staff
  - O&M personnel

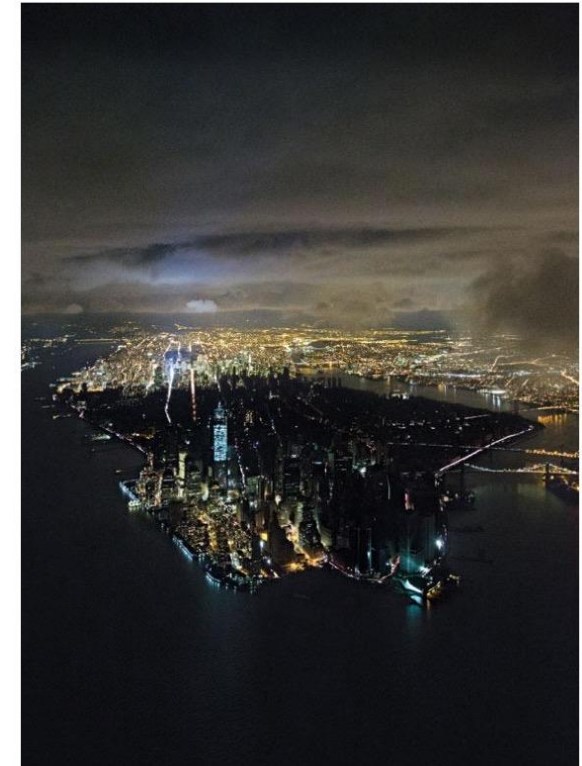
# Deliverable Layout

Geography	Fuel Type	Power Range	Units aggregated over this period	Year of Installation								Total In-Service Population 2016		
			1981-1990	1991	1992	1993	2011	2012	2013	2014	2015			
New York State	Gasoline	<25 kW	XX	XXX								XXX	XXX	XXXXX
New York State	Gasoline	25 - 150 kW	XX	XXX								XXX	XXX	XXXXX
New York State	Gasoline	150 - 300 kW	XX	XXX								XXX	XXX	XXXXX
New York State	Gasoline	450 - 560 kW												
New York State	Gasoline	1000 - 2000 kW												
New York State	Natural Gas	<25 kW												
New York State	Natural Gas	25 - 150 kW												
New York State	Natural Gas	150 - 300 kW												
New York State	Natural Gas	450 - 560 kW												
New York State	Natural Gas	1000 - 2000 kW												
New York State	Diesel	<25 kW												
New York State	Diesel	25 - 150 kW												
New York State	Diesel	150 - 300 kW												
New York State	Diesel	450 - 560 kW												
New York State	Diesel	1000 - 2000 kW												



# Examination Scenarios

- Reference case
- Outages of extended duration
  - Weather Related
  - Electromagnetic Pulse
- Effects of Dynamic Pricing





# Thank you!

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