

# Con Edison, Inc.

March 21, 2013

Energy Efficiency & Power  
Demand Growth - Electrical  
Equipment & U.S. Utilities  
Long View Conference





# Forward-Looking Statements

This presentation includes certain forward-looking statements intended to qualify for safe-harbor provisions of the Federal securities laws. Forward-looking statements are statements of future expectation and not facts. Words such as "expects," "estimates," "anticipates," "intends," "believes," "plans," "will" and similar expressions identify forward-looking statements. Forward-looking statements are based on information available at the time the statements are made, and accordingly speak only as of that time. Actual results might differ materially from those included in the forward-looking statements because of various factors including, but not limited to, those discussed in reports the company has filed with the Securities and Exchange Commission.

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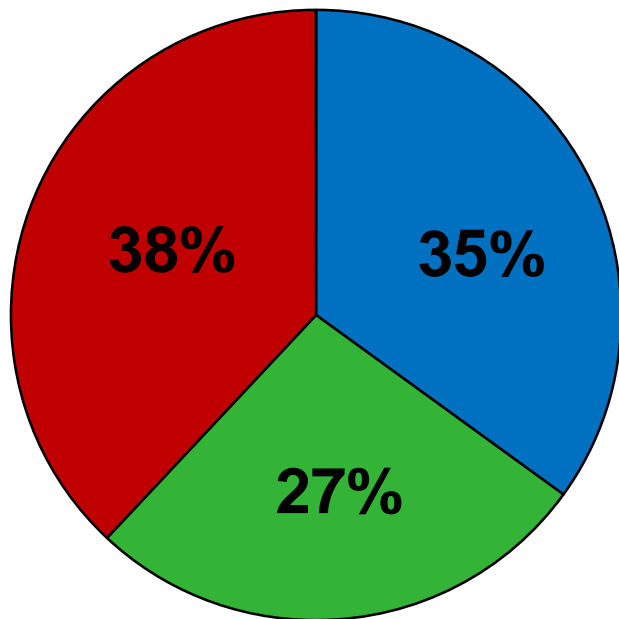
# 5-Year Annualized Growth Rates in Peak Usage Consolidated Edison Company of New York (CECONY)



	<b>5-Year Historical 2002-2007 (Pre-Recession)</b>	<b>Current 5-Year Forecast</b>
Electric	1.8%	1.3%
Gas	1.0%	4.3%

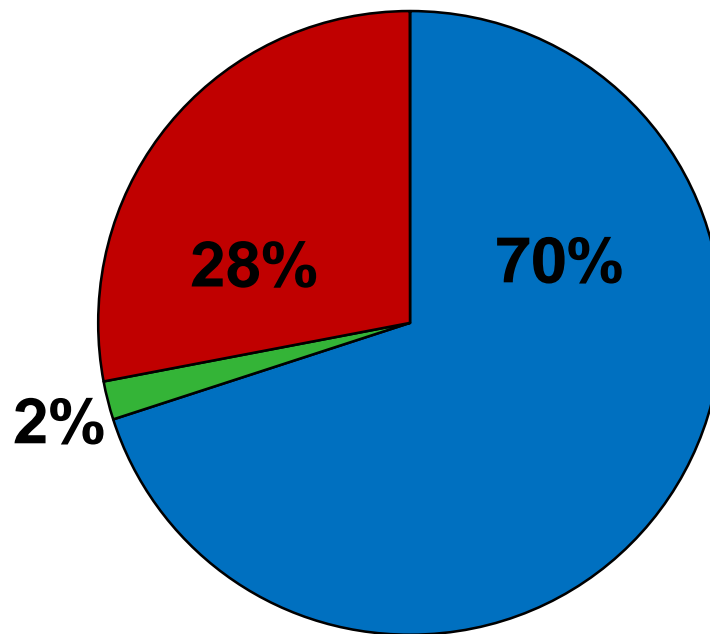
# Electric Consumption by Customer Class – CECONY vs. U.S.

## U.S.



■ Commercial ■ Industrial ■ Residential

## CECONY

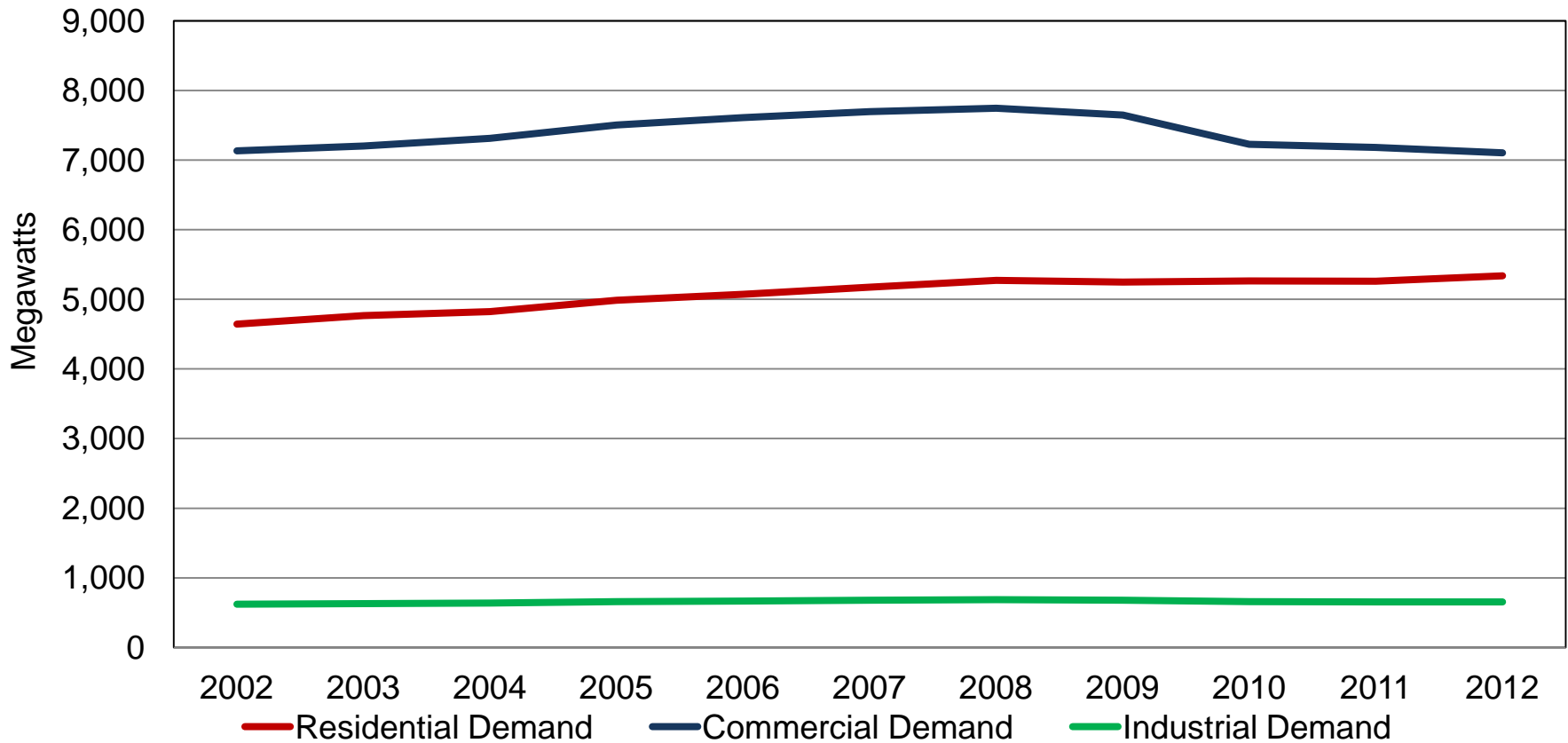


■ Commercial ■ Industrial ■ Residential

Source: Bernstein Research, Consolidated Edison Company of New York

# Residential vs. Commercial Peak Demand Growth

Commercial demand has responded to economic activity more than residential demand

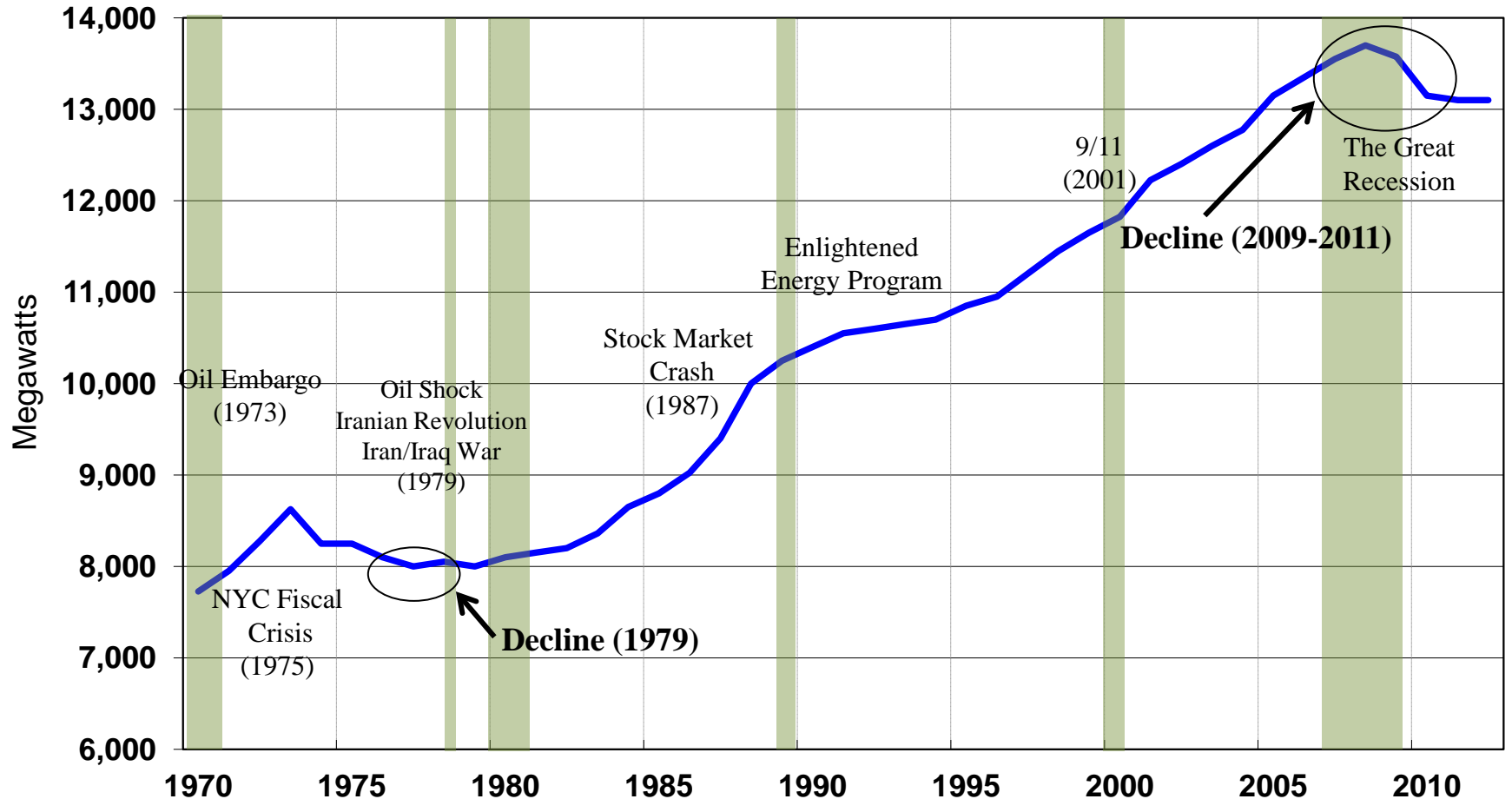


Source: Consolidated Edison Company of New York



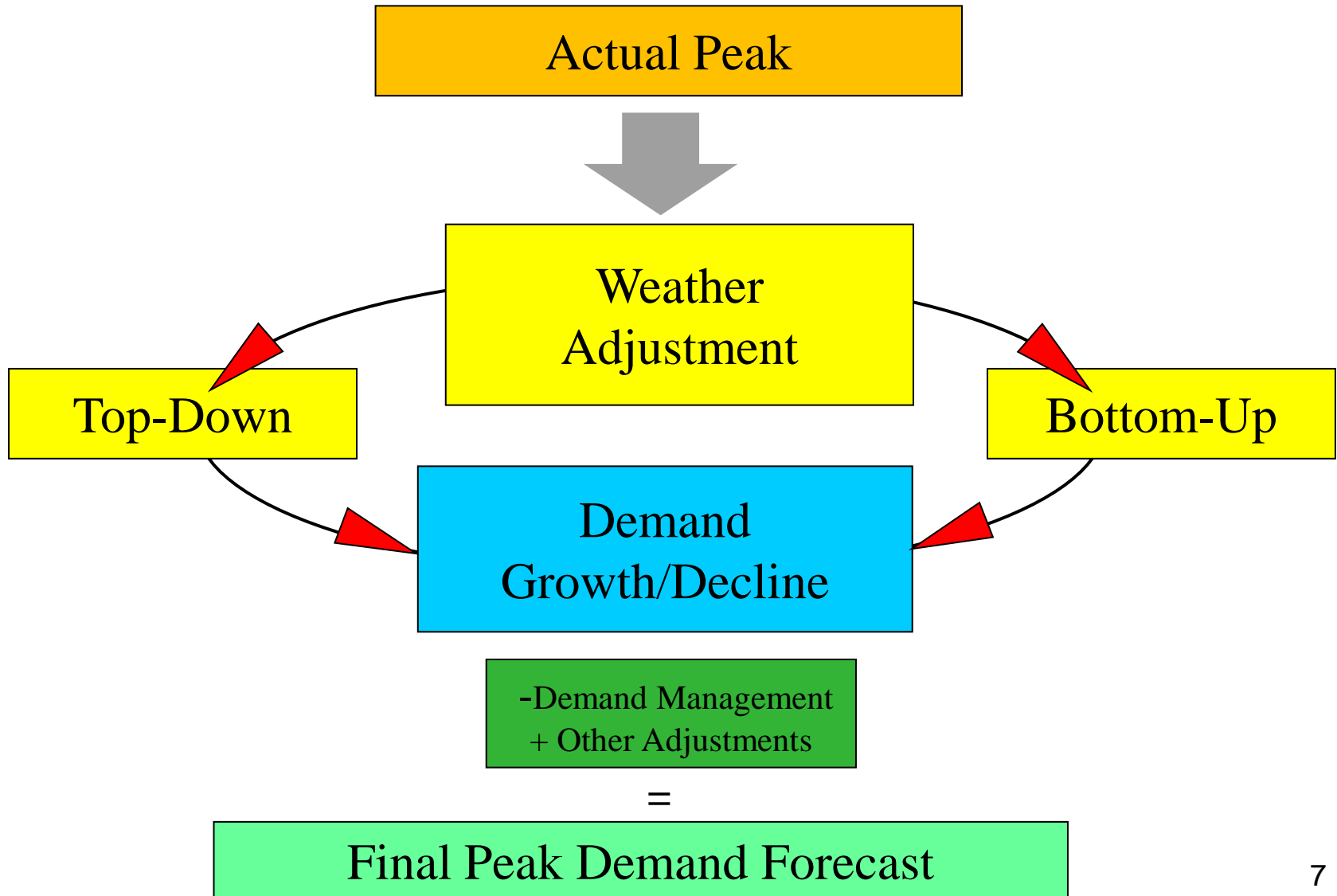
# Historical CECONY Electricity Demand

Despite many U.S. recessions, CECONY has only seen four years of decline since 1970, three of which were consecutive years during The Great Recession.



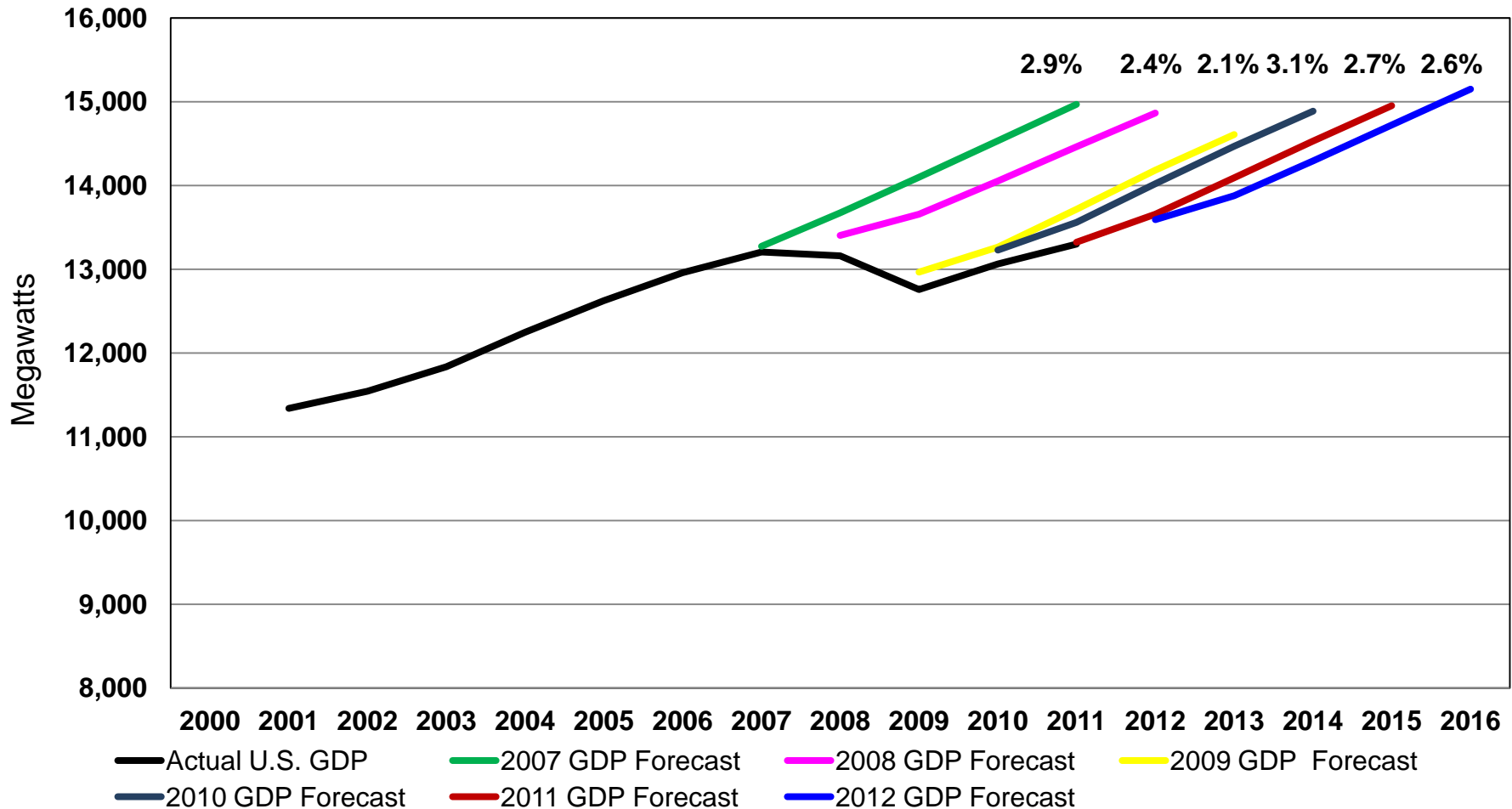
Source: Consolidated Edison Company of New York

# Peak Forecasting Process



# U.S. GDP Forecast Vintages (2007-2012)

Historical long-term GDP forecasted growth rates have not changed significantly over time



Source: Bureau of Economic Analysis & Moody's Analytics








# Growth Forecasts for Peak Demand for 82 CECONY Electric Networks

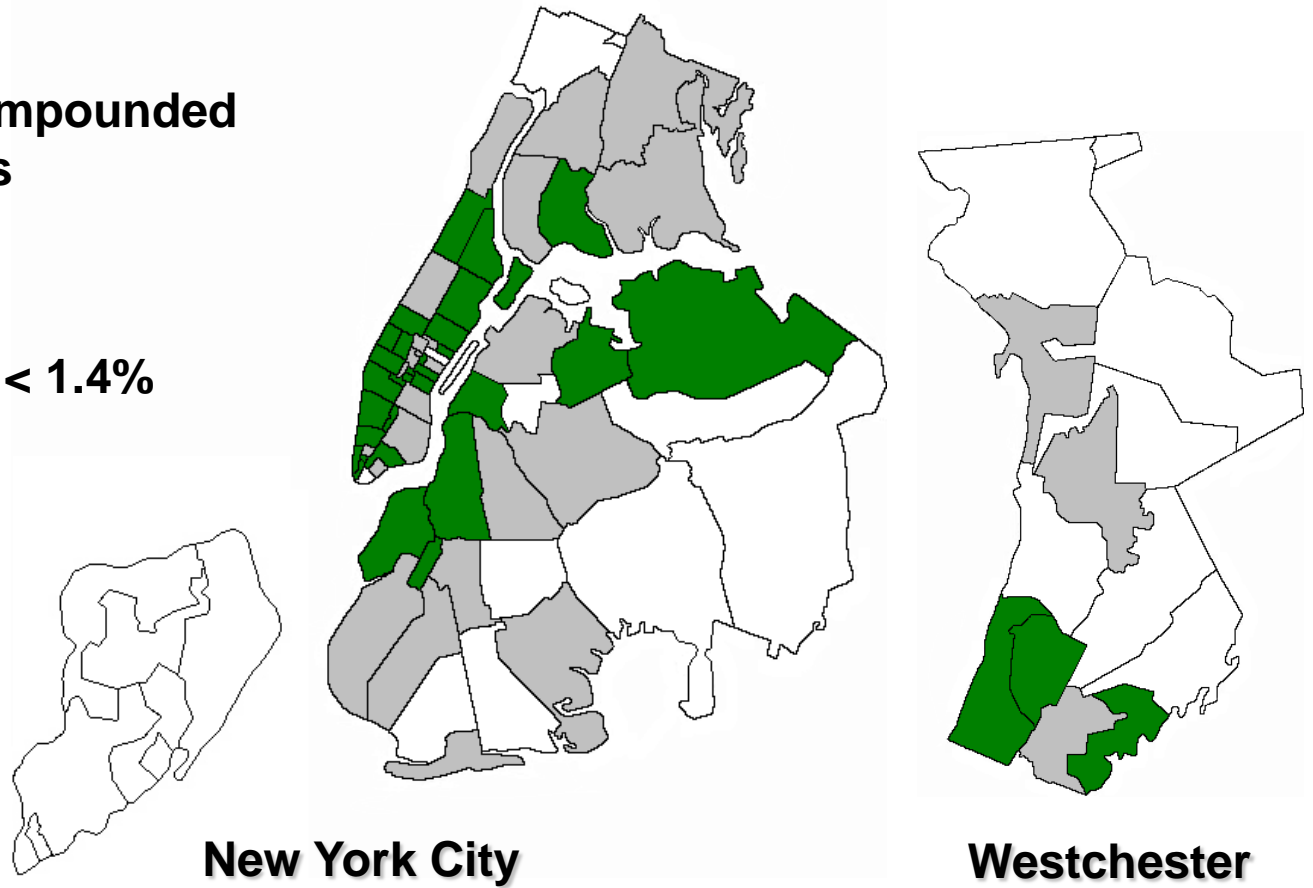
## Bottom-up Forecast

### Five-Year Compounded Growth Rates

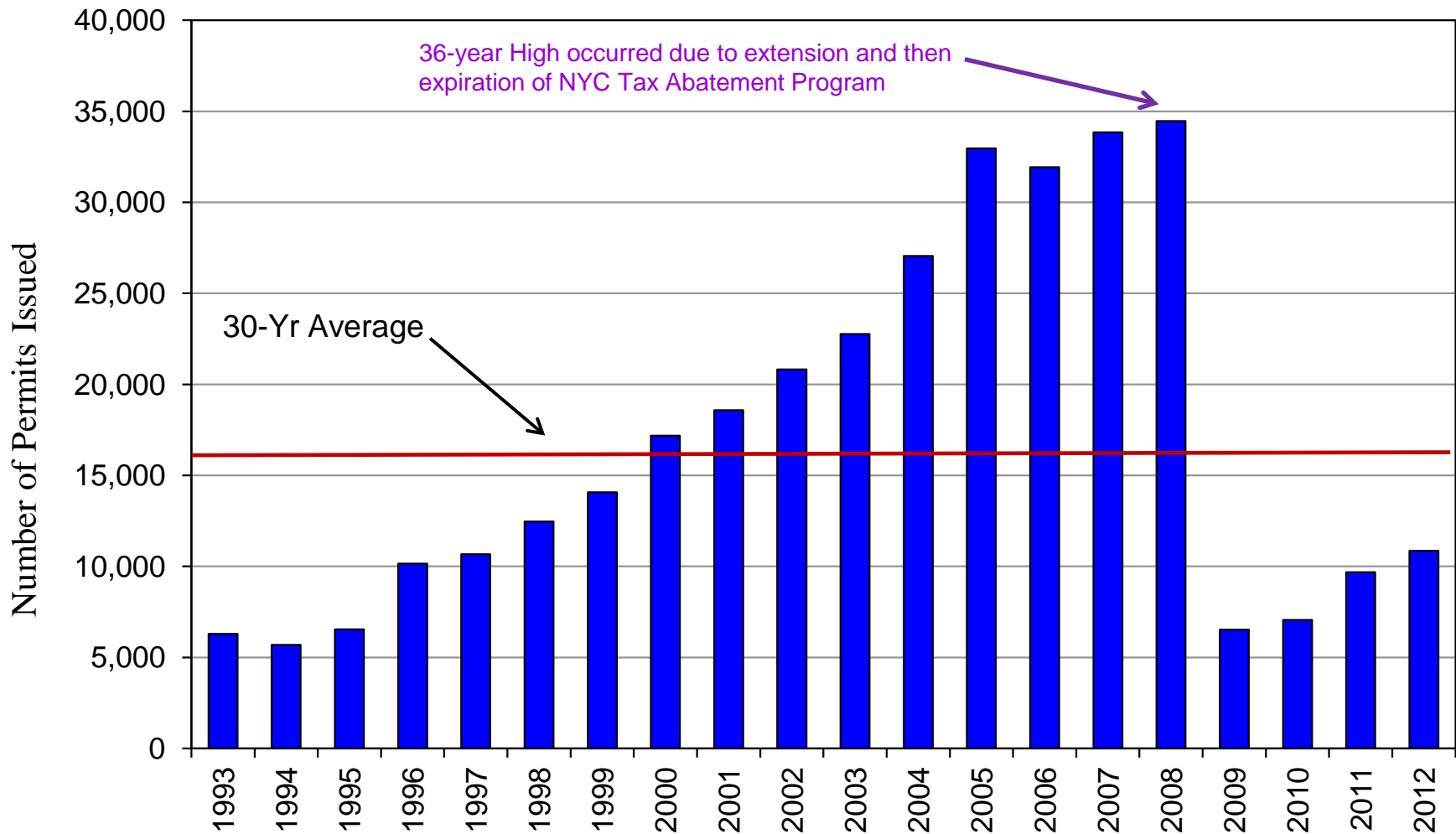
 > 1.4%

 > 0.7% & < 1.4%

 < 0.4%



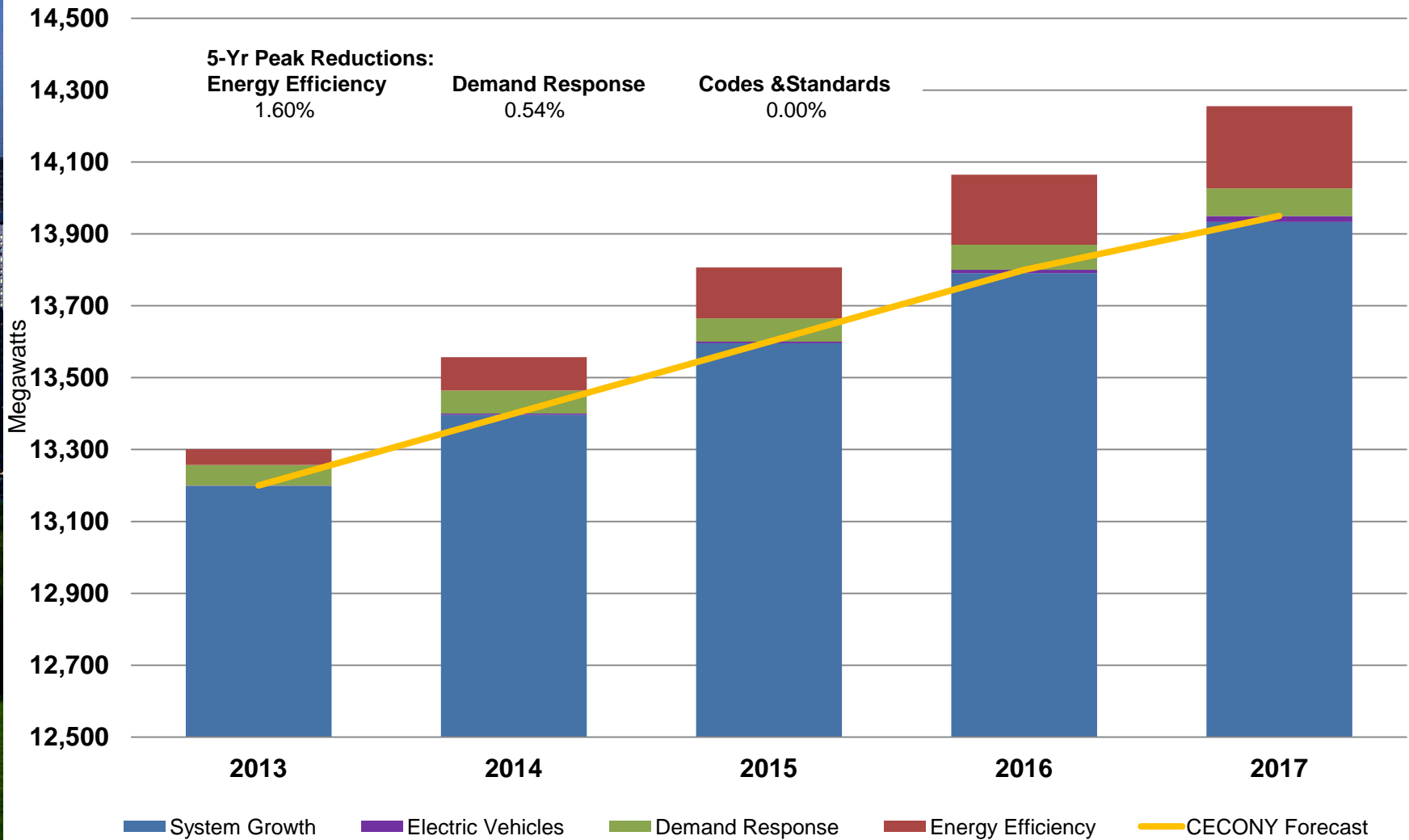
# CECONY Residential Building Permits



Source: Bernstein Research, Consolidated Edison Company of New York

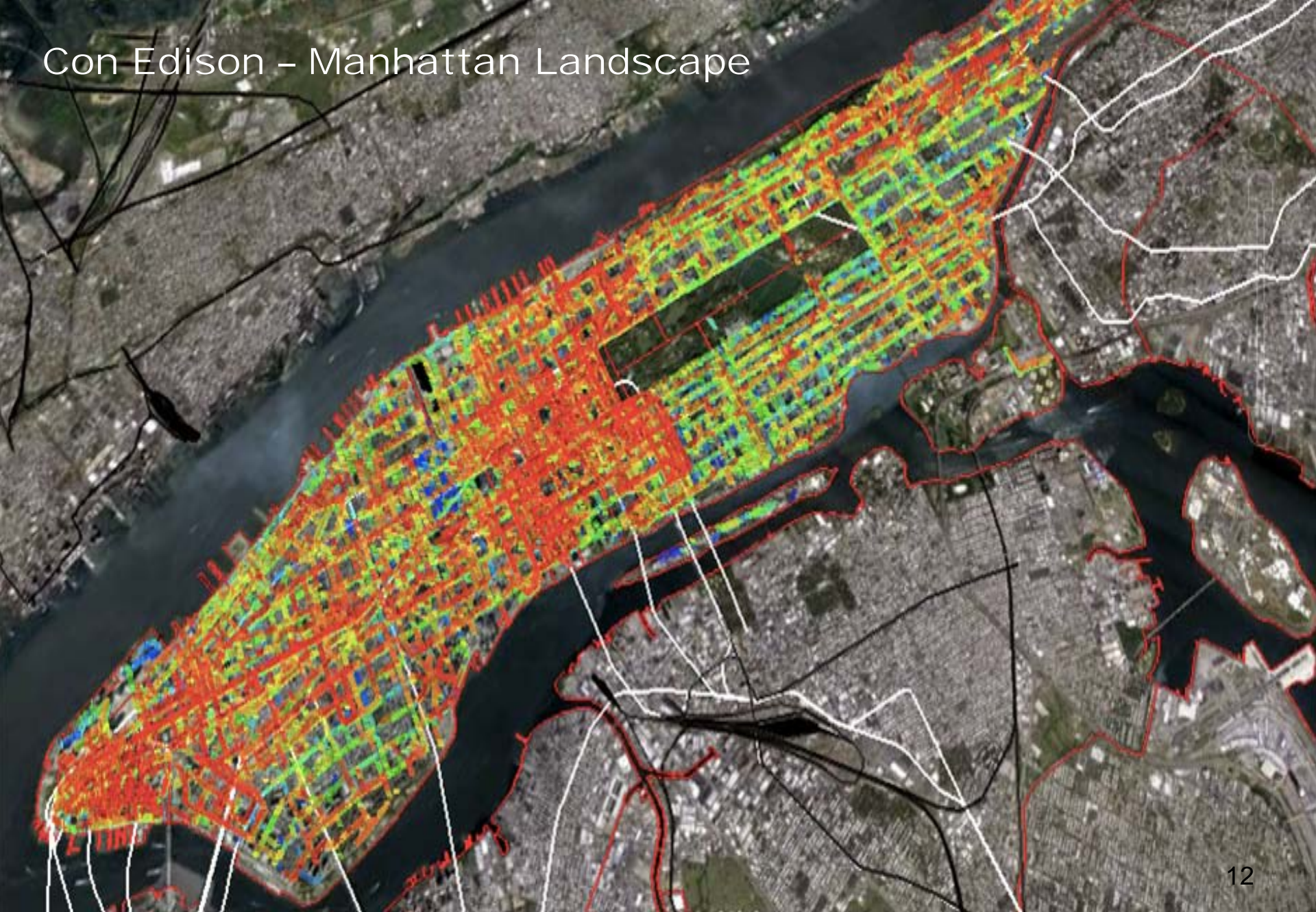
# CECONY Peak Demand Illustration with Components

Energy Efficiency measures contribute significantly to slower future growth

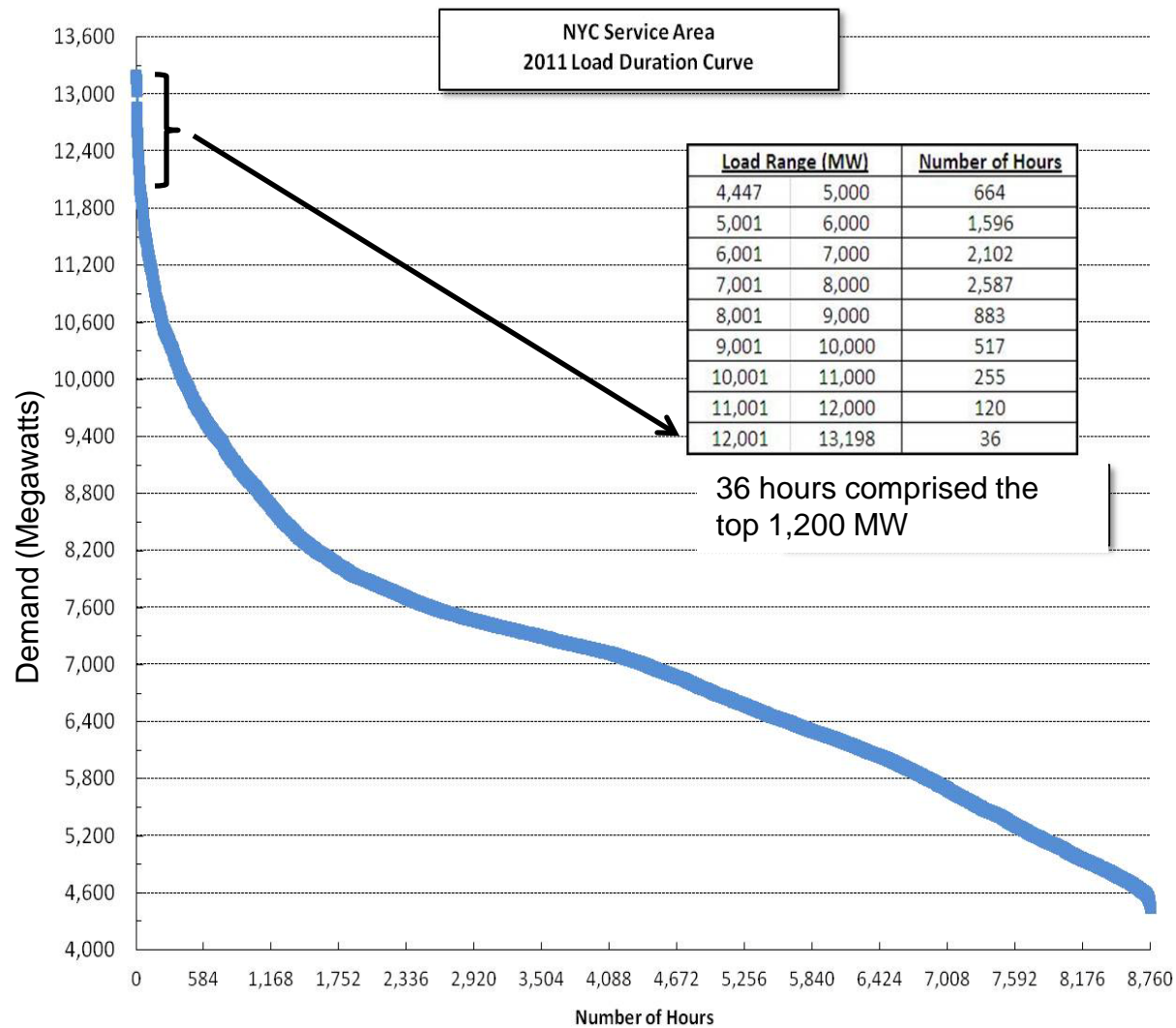


Source: Consolidated Edison Company of New York

# Con Edison – Manhattan Landscape



# Demand Reduction Significance

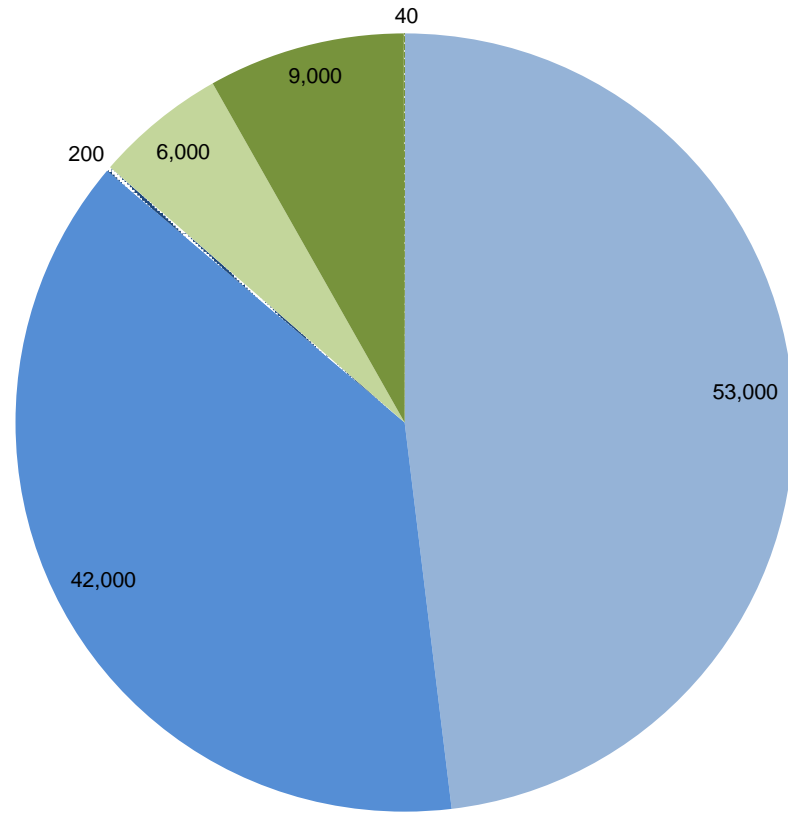


# Energy Efficiency and Demand Management Overview

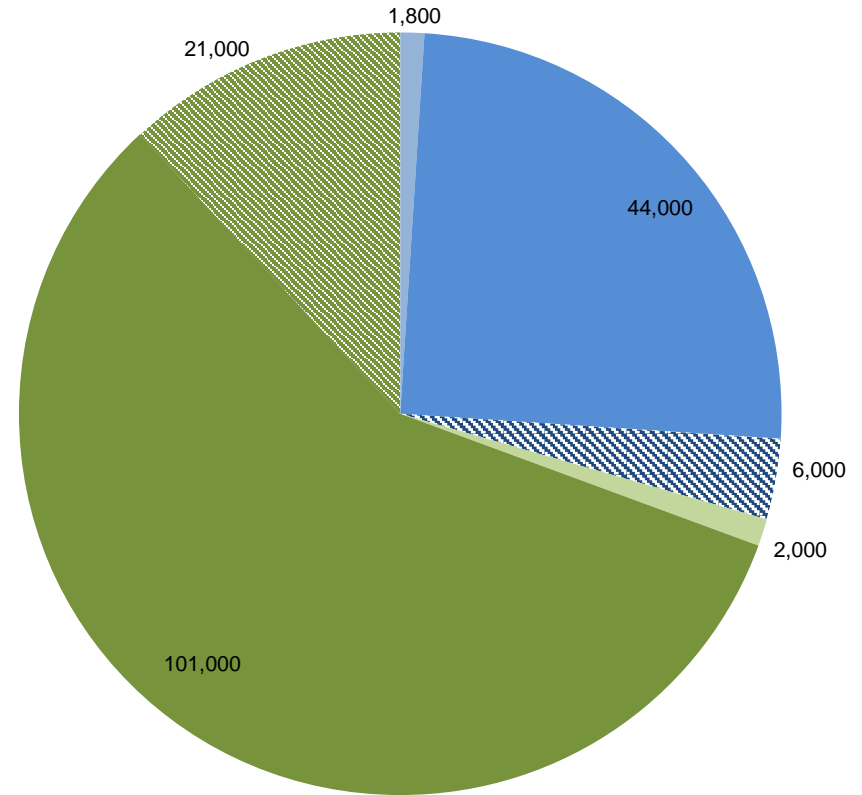
- 13 Energy Efficiency electric and gas programs for large commercial, small business, residential, and multifamily customers
  - Funded through system benefits charges on customer electric and gas bills
  - Programs to date have resulted in saving 173,000 tons of carbon, 411,000 MWh, and 468,000 Dth
- 4 Demand Response Contingency and Peak Shaving programs for residential, small business, large commercial and multifamily customers
  - Overlap with NYISO market based programs
  - Funded through the monthly adjustment charge
  - Some residential equipment is reimbursed by NYSERDA
- 1 Targeted Demand Side Management (DSM) program
  - Funded through the monthly adjustment charge
  - Infrastructure costs deferred or permanently saved




# Energy Efficiency and Demand Response Programs by Customer Segment (2009 – 2012)




**Savings/Enrollment (MWh)**



**Participation (Number of Customers)**



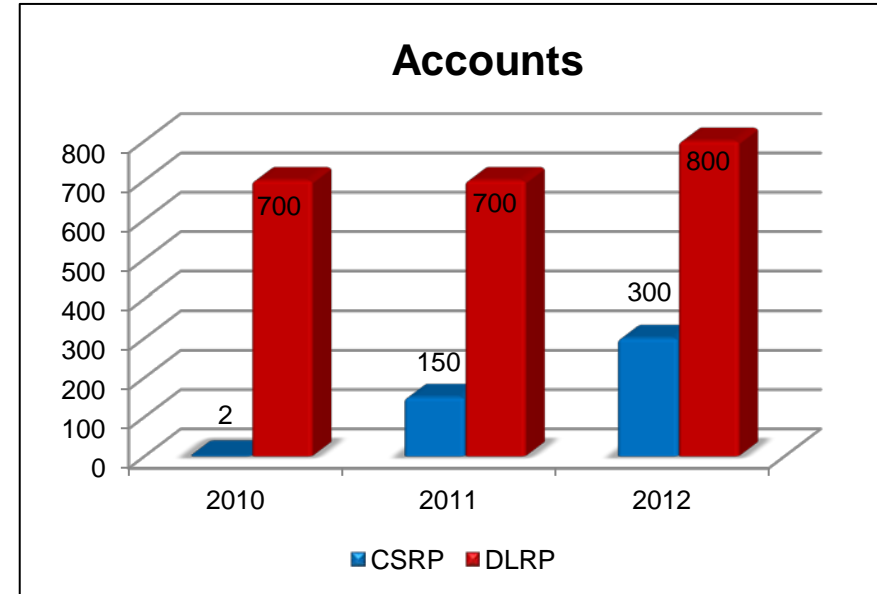
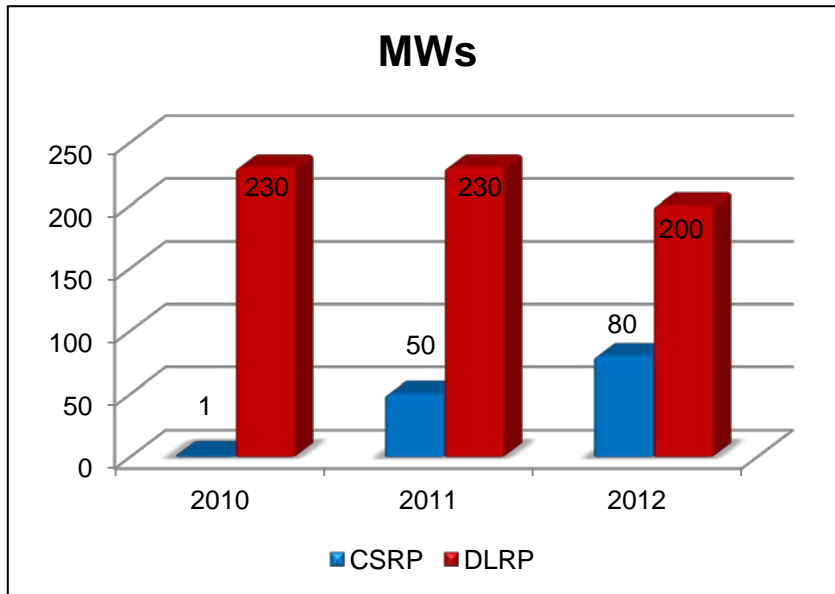
-  Commercial and Industrial Energy Efficiency Programs
-  Small Business Energy Efficiency Program
-  Demand Response – Commercial Programs

-  Multifamily Energy Efficiency Program
-  Residential Energy Efficiency Programs
-  Demand Response – Residential Programs

# Commercial Demand Response Enrollment

**Commercial System Relief Program – CSRP - Peak Shaving**

**Distribution Load Relief Program – DLRP - Contingency**



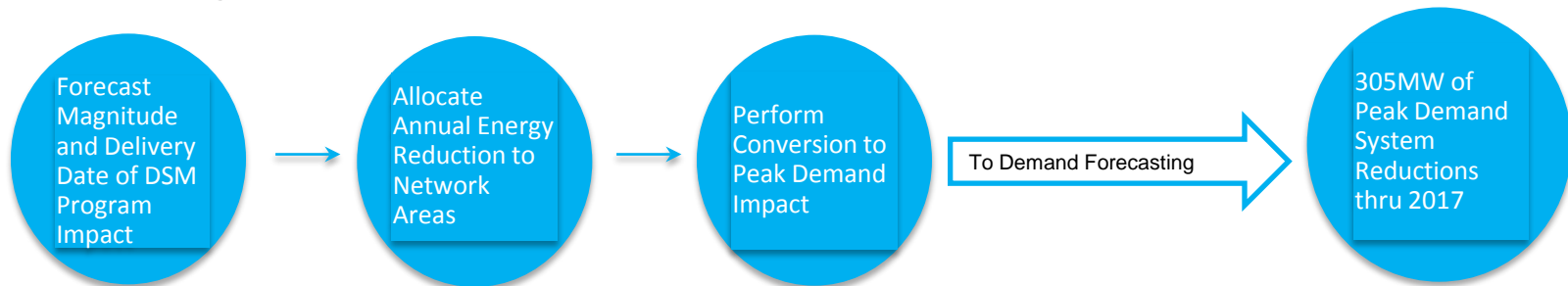
Customers may reduce their need for electricity by load curtailment, use of local generation or a combination of both. Customers may enroll in both CSRP and DLRP.



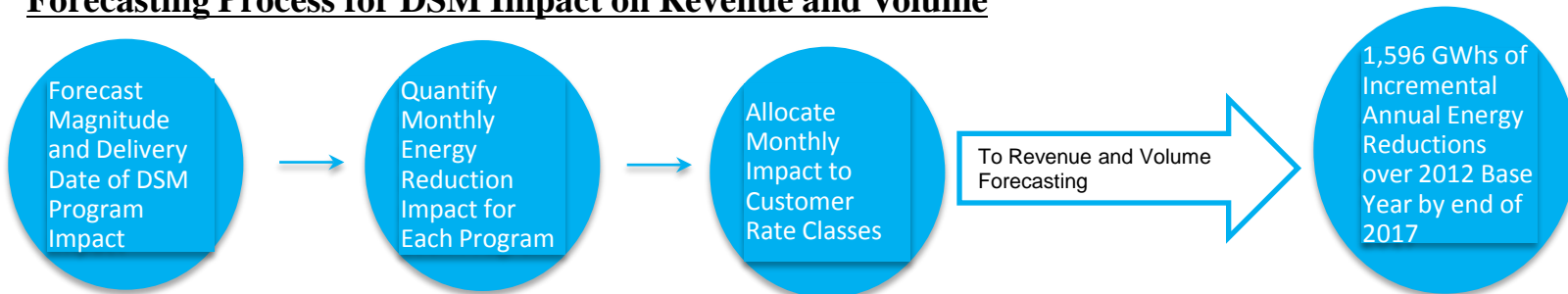
# Forecasting Energy Efficiency and Demand Management Programs

- We forecast the impact of energy efficiency and demand management programs to better assess future revenue requirements and capital planning needs.
- Programs in the forecast include: Con Edison EEPS, NYSERDA EEPS, NYPA DSM, Con Edison Targeted DSM, and mandatory Con Edison Demand Response Programs

## Forecasting Process for DSM Impact on Peak Demand



## Forecasting Process for DSM Impact on Revenue and Volume

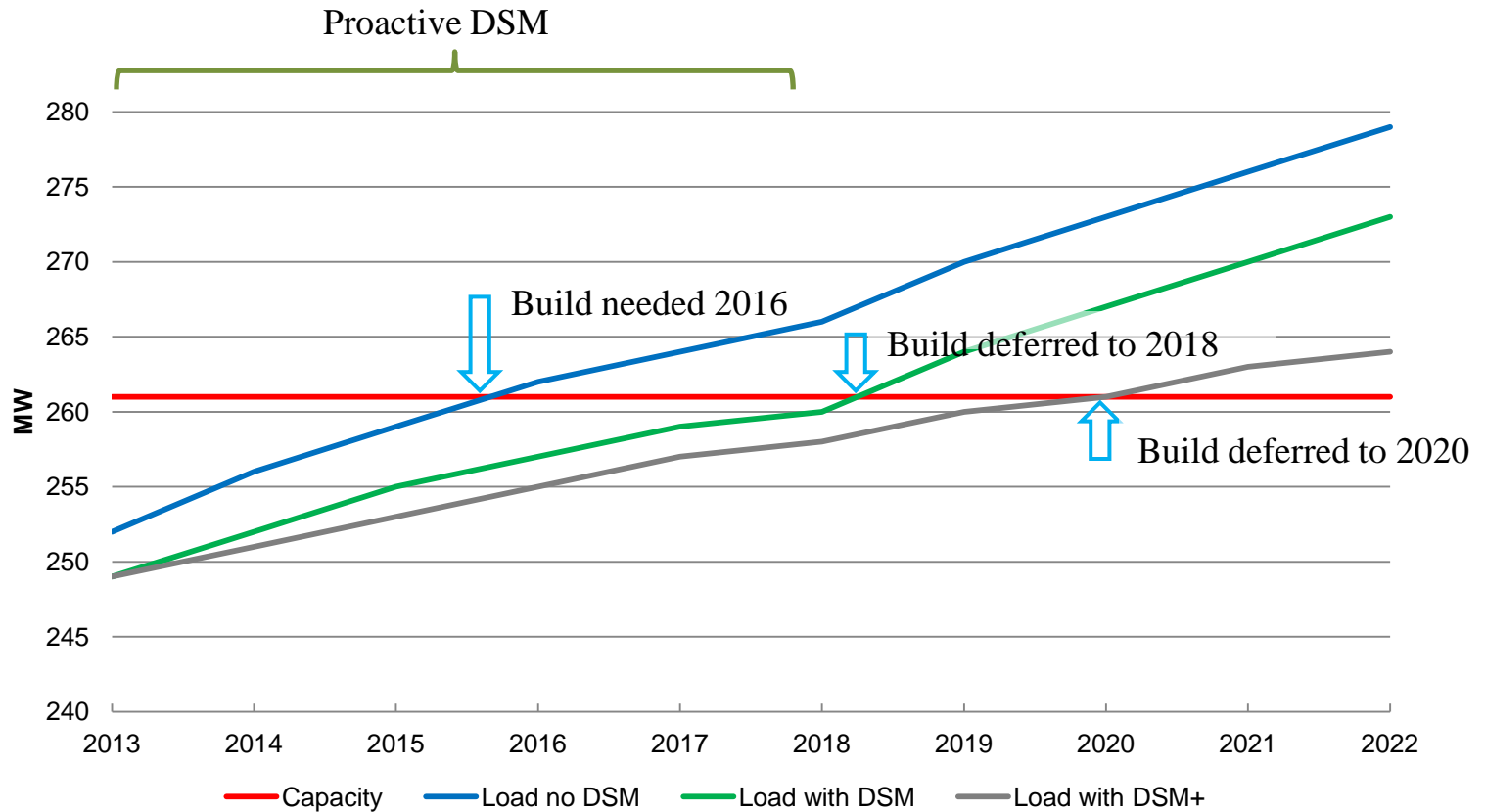




## Targeted Demand Side Management Program

- Targeted DSM provides incentives in select neighborhoods where electric capacity constraints exist
- From 2004-2012, the Targeted DSM program achieved 108 MW of demand reduction and 281 GWh of annual energy savings with a benefit cost ratio of approximately 3.3 times
- Targeted DSM is budgeted at \$100 million from 2011 through 2015
- Targeted Steam Air Conditioning Incentive Program: Currently incenting customers to stay on steam, or to switch from electric to steam, for cooling their buildings

# Forecasted Demand Management is Included in Electric System Planning



Six MW of permanent demand reduction by 2018 can defer capital investment (“Build”)



## Barriers to Short Term Forecasting of Energy Independence and Security Act (EISA) Impacts

- Changes to codes and standards often impact manufacturing or import standards, but rarely address the retail sales of off-spec materials from existing inventory
  - Half of all retailers in California still had 100 W incandescent light bulbs on their shelves one year after the ban went into effect
- Market research indicates that current socket saturation for efficient residential lighting is only around 20%, and it would take significant incentives to push past 60% saturation
- Incentives remain necessary in NY to counter-balance competing customer preferences and encourage standard compact fluorescent installation (CFL) installation
- The full demand-reduction effect of the EISA lighting standards unlikely to be felt until after 2015



## Value Proposition

- Changes to codes and standards, as well as State efficiency programs, result in protracted regulatory and implementation processes, but can have long-term impacts on reducing capital costs and customer bills
- Demand Side Management can produce peak demand reductions that:
  - benefit the electric transmission and distribution system,
  - are integrated into system planning, and
  - provide a hedge against forecast uncertainty
- Revenue decoupling does allow for implementation of reasonable energy efficiency programs without material impact to revenues, but program costs must be tightly controlled



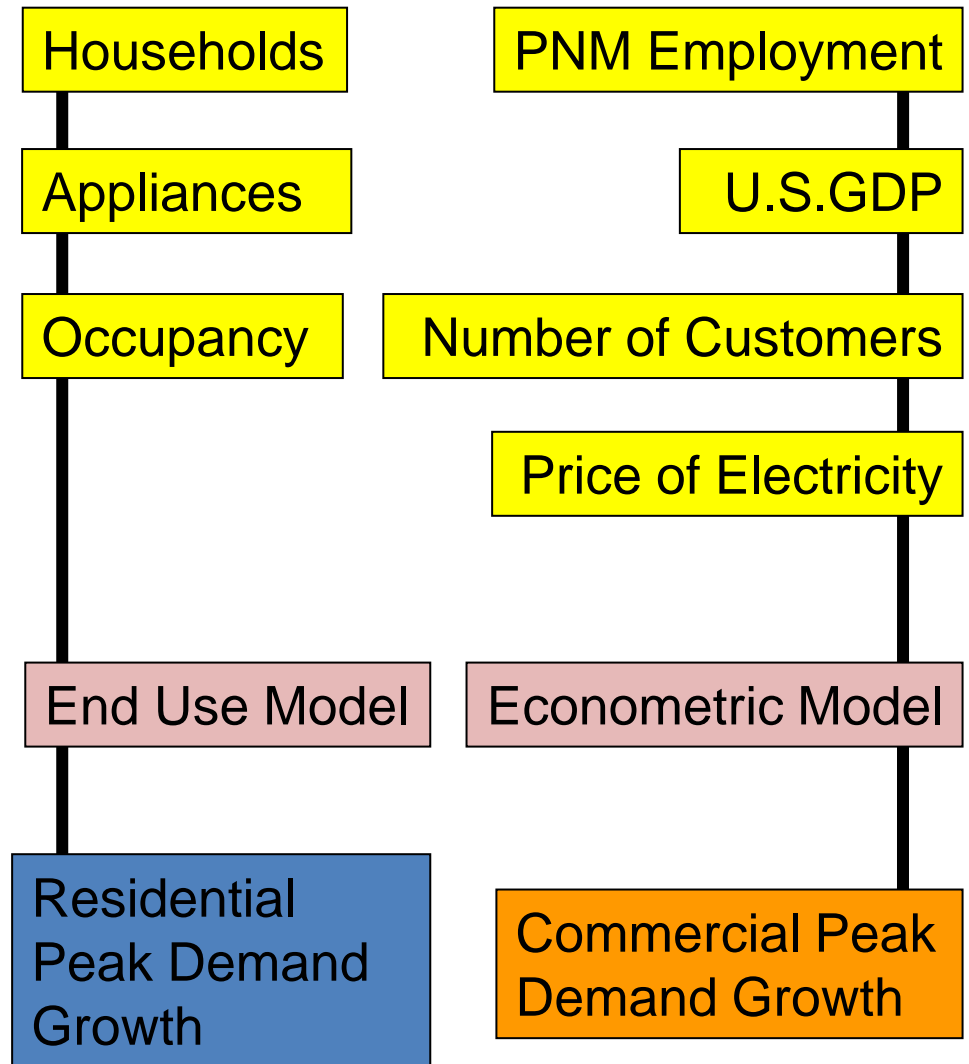
# Appendix

# System Peak Forecasting: Top-down Analysis

Households & population is expected to increase an average of 0.4% over the next 10 years

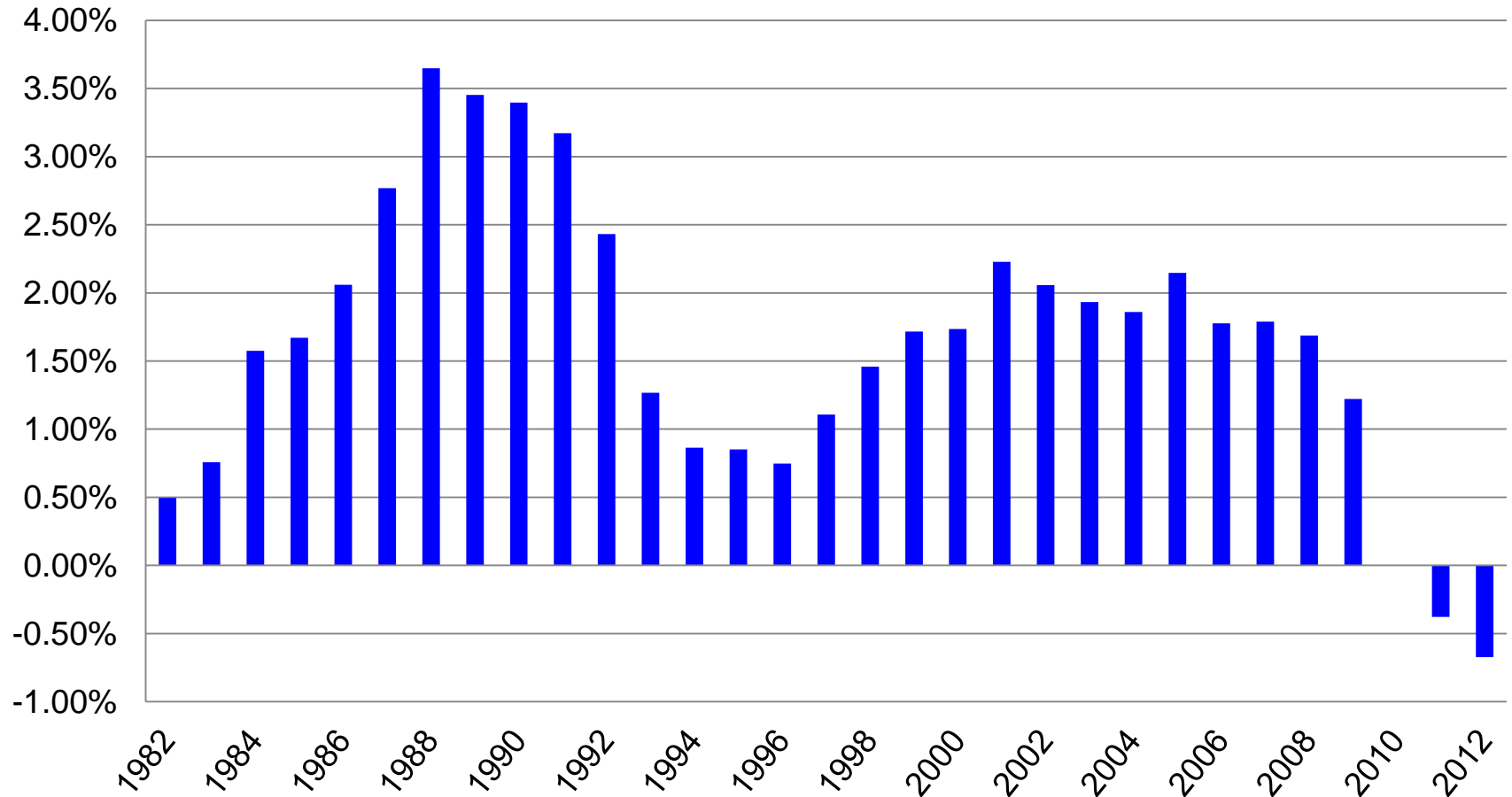
Employment is expected to increase 1.4% over the next 10 years

Customers have shown positive trends of increased uses of electronics and new technology including adding more A/C units



# CECONY Power Demand: Five-Year Compound Annual Growth (%)

Demand growth has ebbed and flowed with economy, much like the Nation

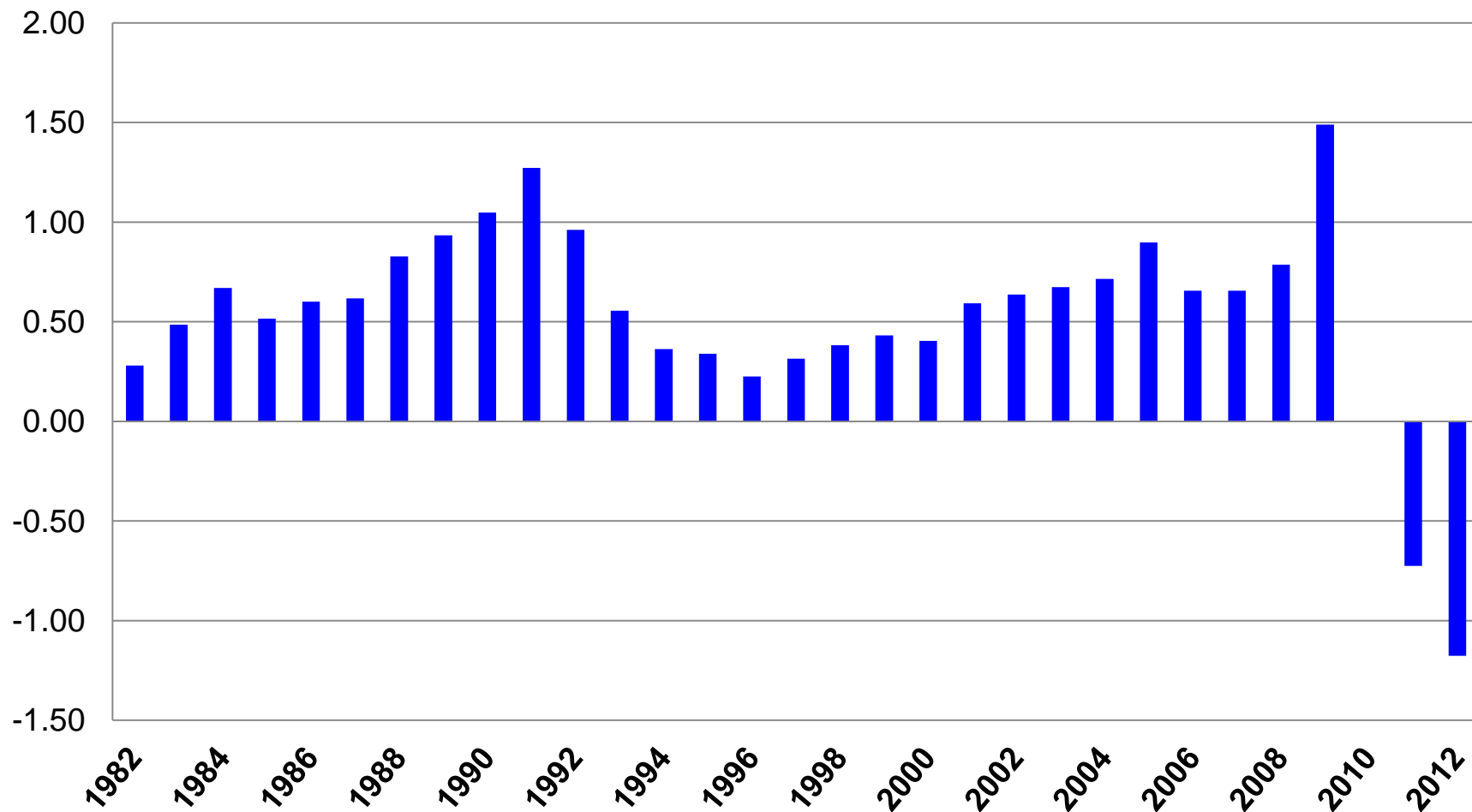


Source: Consolidated Edison Company of New York



# Ratio of 5-Year Compound Annual Growth in CECONY Power Demand to 5-Year Compound Annual Growth in U.S. GDP

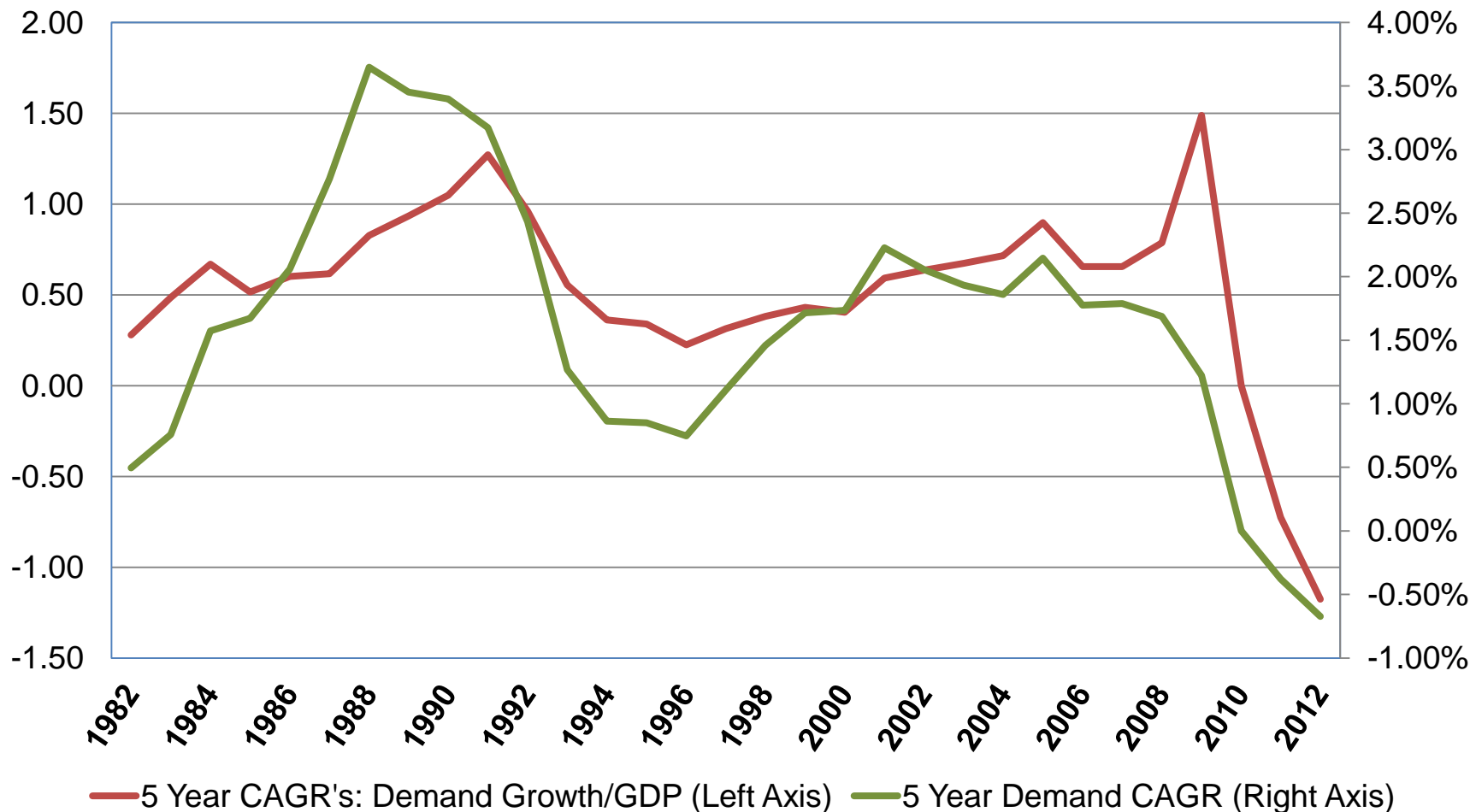
CECONY Demand growth has a similar relationship with U.S. GDP growth



Source: Consolidated Edison Company of New York & Bureau of Economic Analysis

# 5 Year CAGR: Demand/GDP vs. Demand Growth

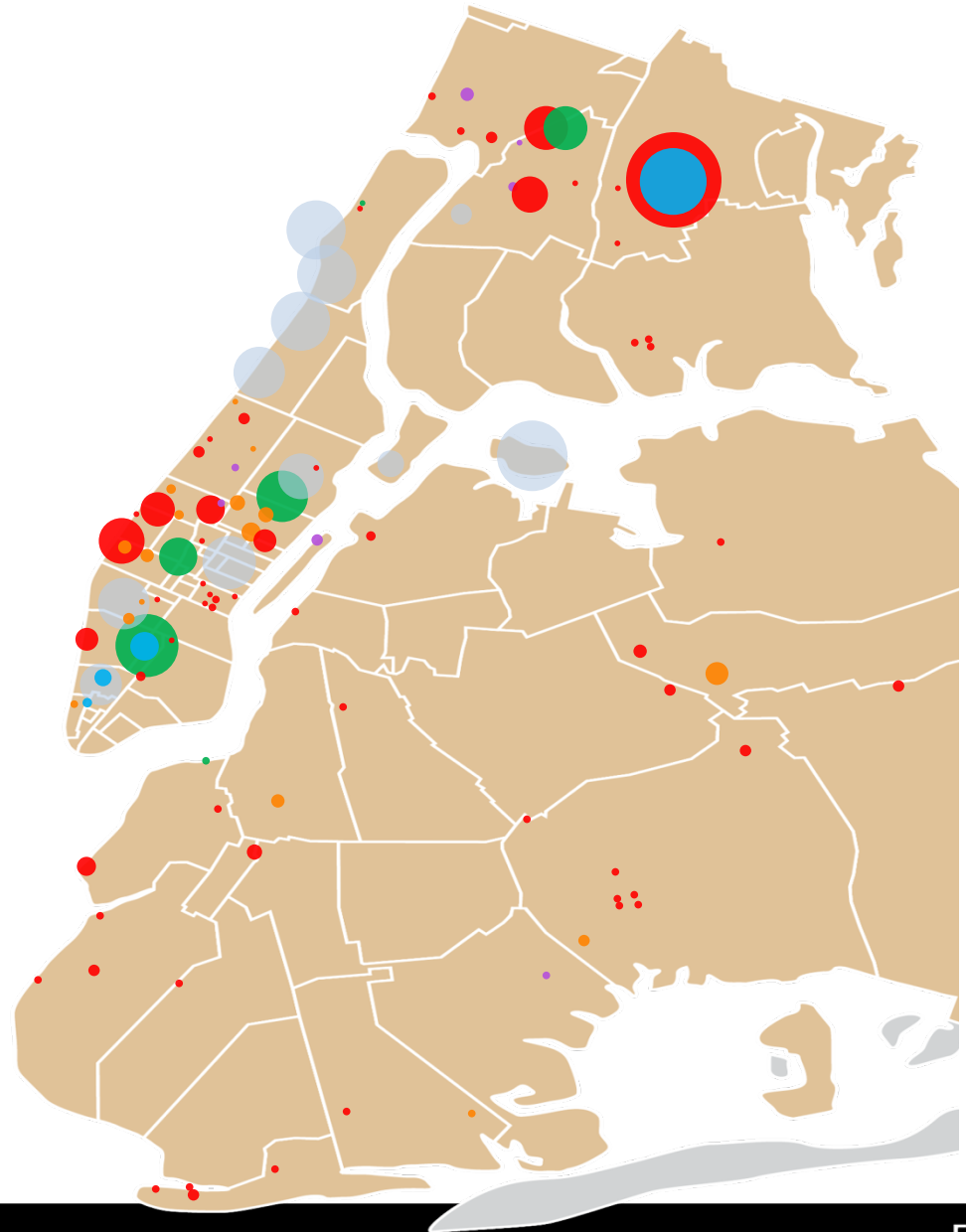
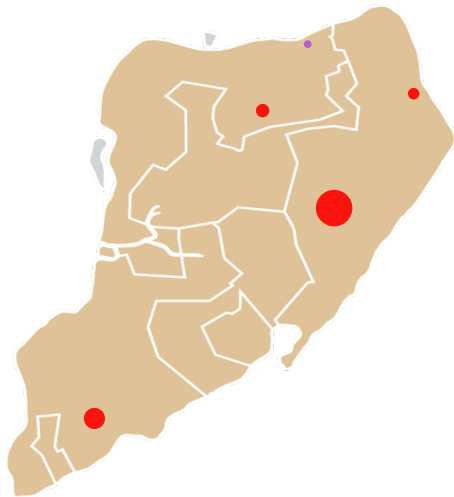
Both average annual demand and GDP growth has slowed in the last decade



Source: Consolidated Edison Company of New York & Bureau of Economic Analysis

# Current and Expected Combined Heat and Power (CHP)

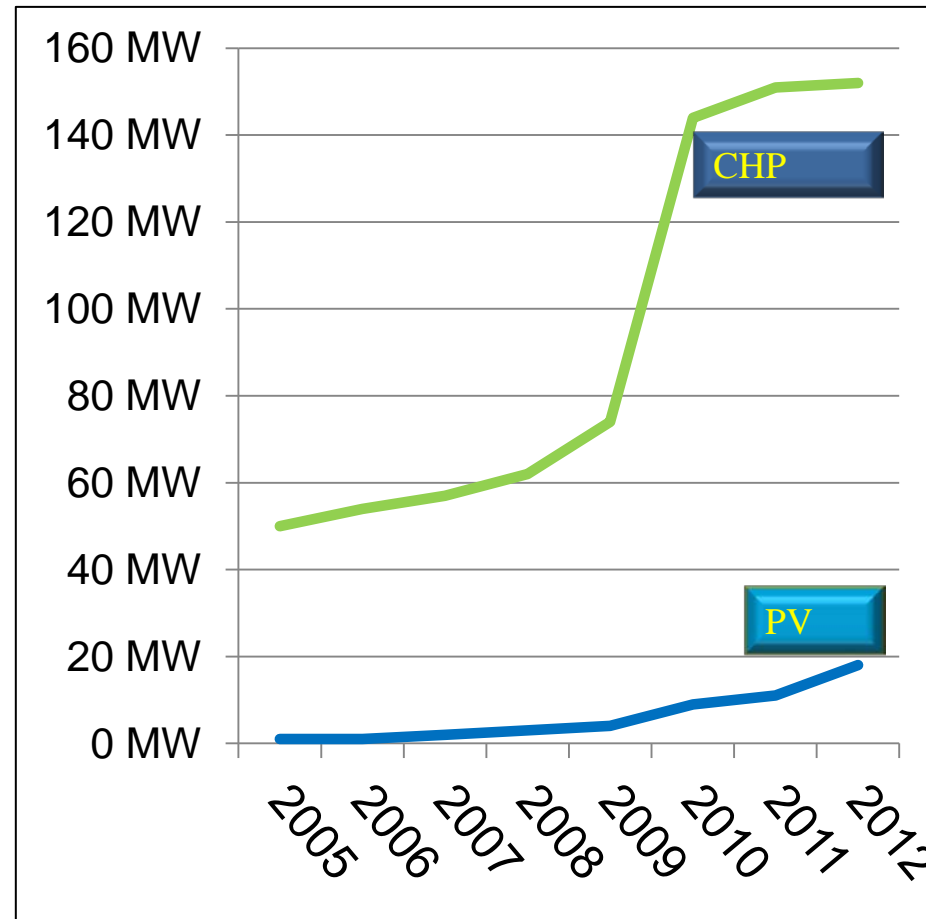
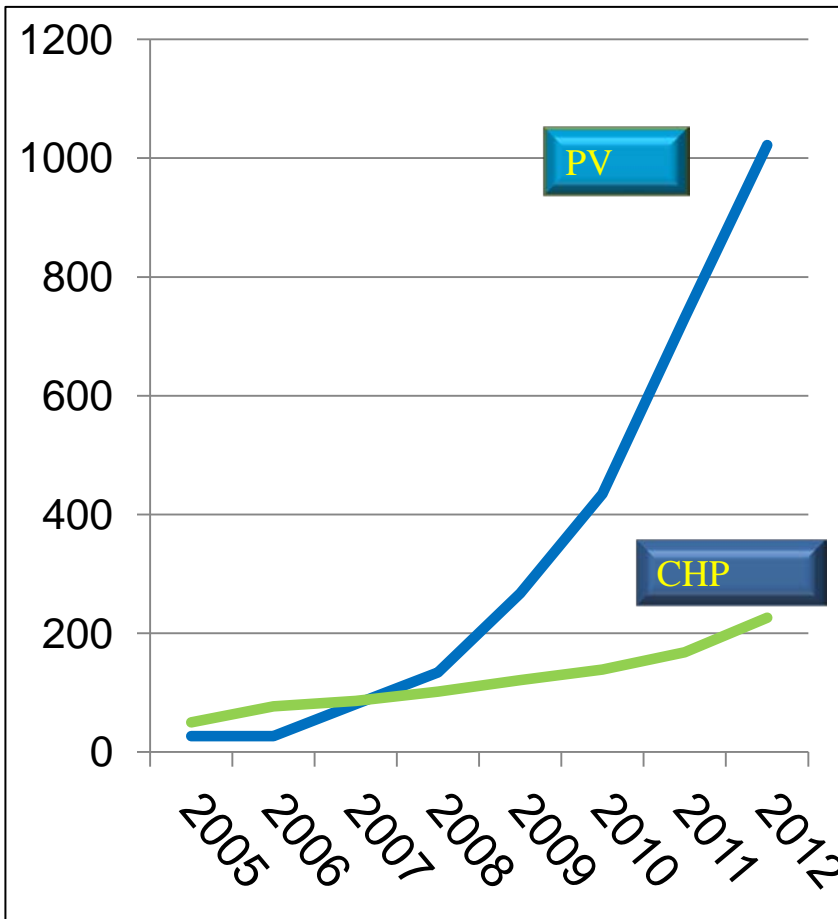
- Forecast CHP (2012 – 2018)
- Existing Internal Combustion Engine CHP
- Existing Gas Turbine CHP
- Existing Fuel Cell CHP
- Existing Steam Turbine CHP
- Existing Microturbine CHP



# Increasing Interest in PV and CHP

## Total Number of Customers by Technology

## Total Installed Capacity





## Glossary:

- CECONY: Consolidated Edison Company of New York
- DSM: Demand Side Management
- EEPS: Energy Efficiency Portfolio Standard
- NYISO: New York Independent System Operator
- NYPA: New York Power Authority
- NYSERDA: The New York State Energy Research and Development Authority
- PNM Employment: Private Non-Manufacturing Employment
- PV: Photovoltaic