

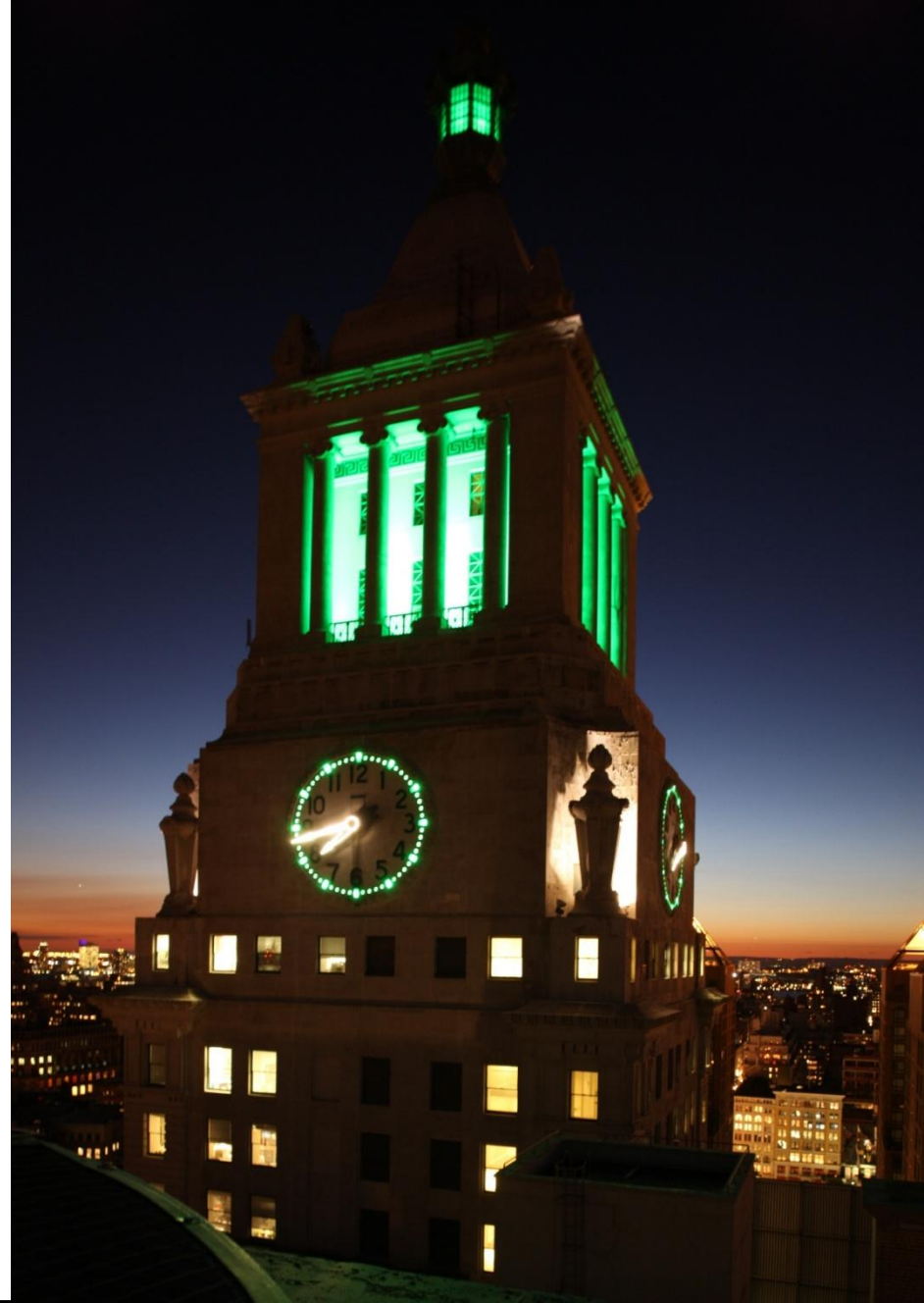
Targeting Energy Efficiency To Realize Network Deferrals

Rebecca Craft

Director

**Energy Efficiency and
Demand Management**

Con Edison

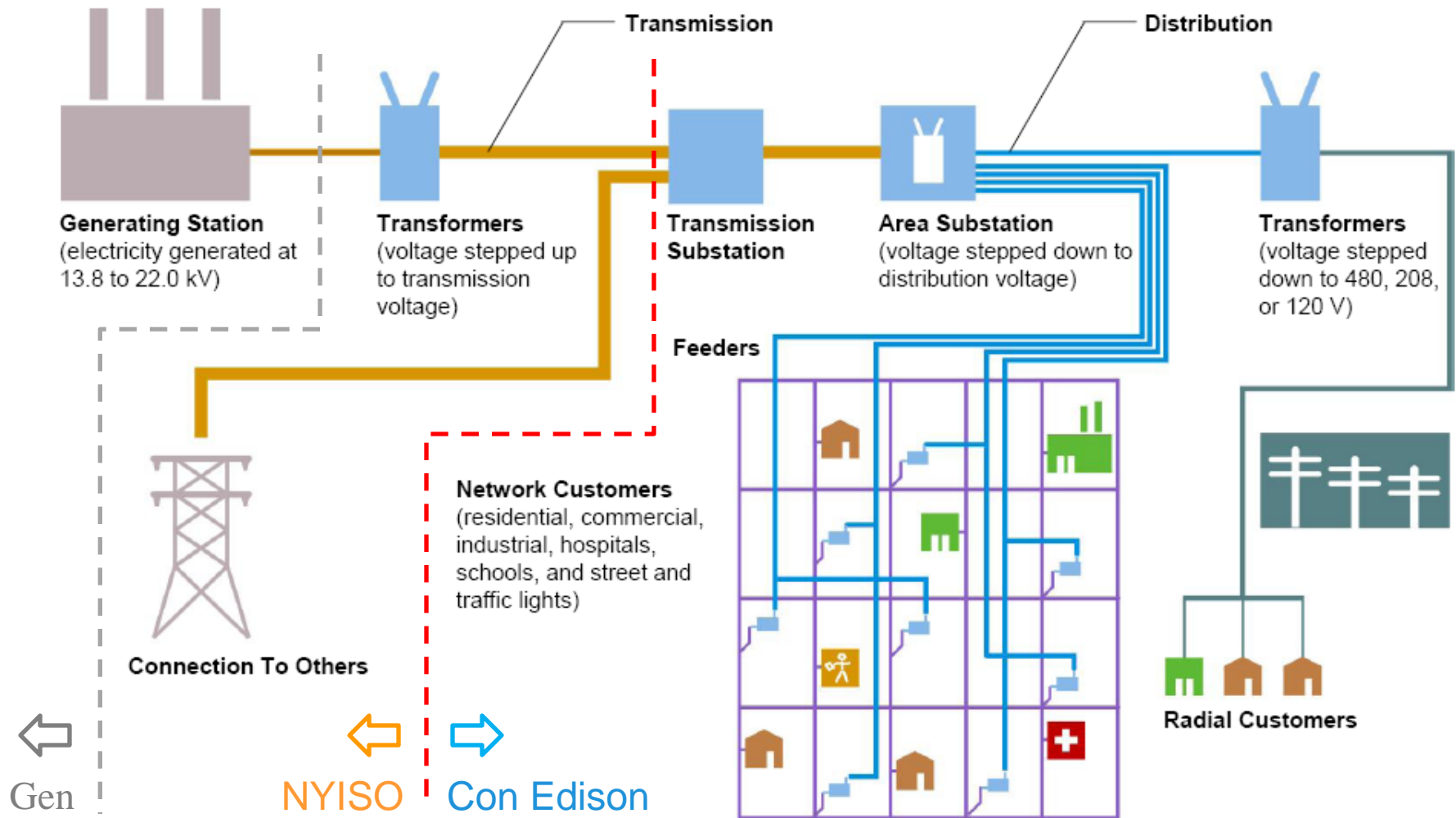


Agenda

- Con Edison System
- Forecasting and Planning
- Targeted Demand Side Management



The Electric System - Restructured



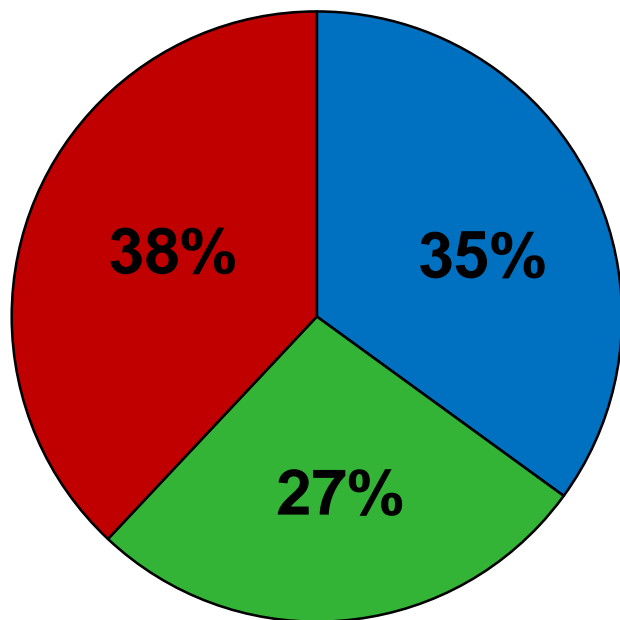
Con Edison – The Landscape

- 70,000 people/sq. mile
- 2000 MW/sq. mile

- 660 sq. mile service territory
- 133,000 miles of T&D cable (over 96,000 miles are underground)
- 13,825 people/sq. mile
- 20 MW/sq. mile but 235MW/sq. mile in NYC
- 3.3 million electric, 1.1 million gas, and 1,700 steam accounts; serve about 9.3 million people
- Over 650,000,000 sq. ft. of office space
- 462,000 businesses
- 900,000 residential buildings
- 58 billion kWh of electric consumption

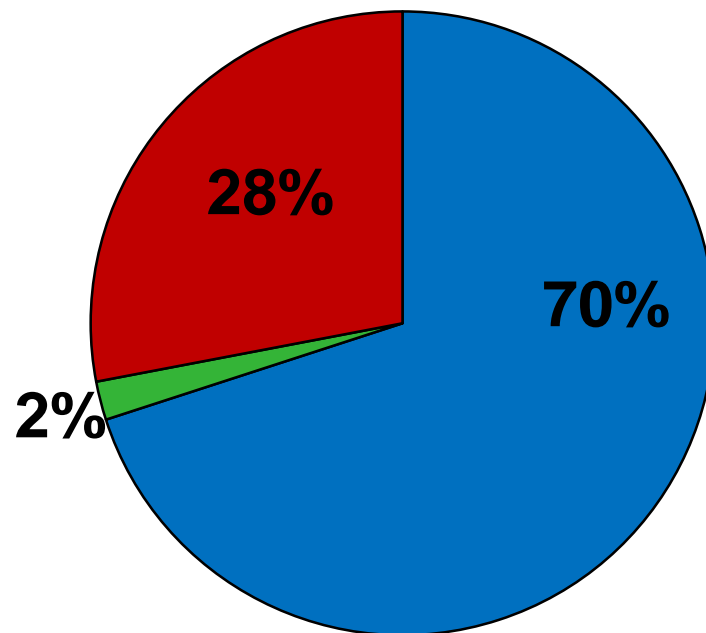
Electric Consumption by Customer Class – CECONY vs. U.S.

U.S.



■ Commercial ■ Industrial ■ Residential

CECONY

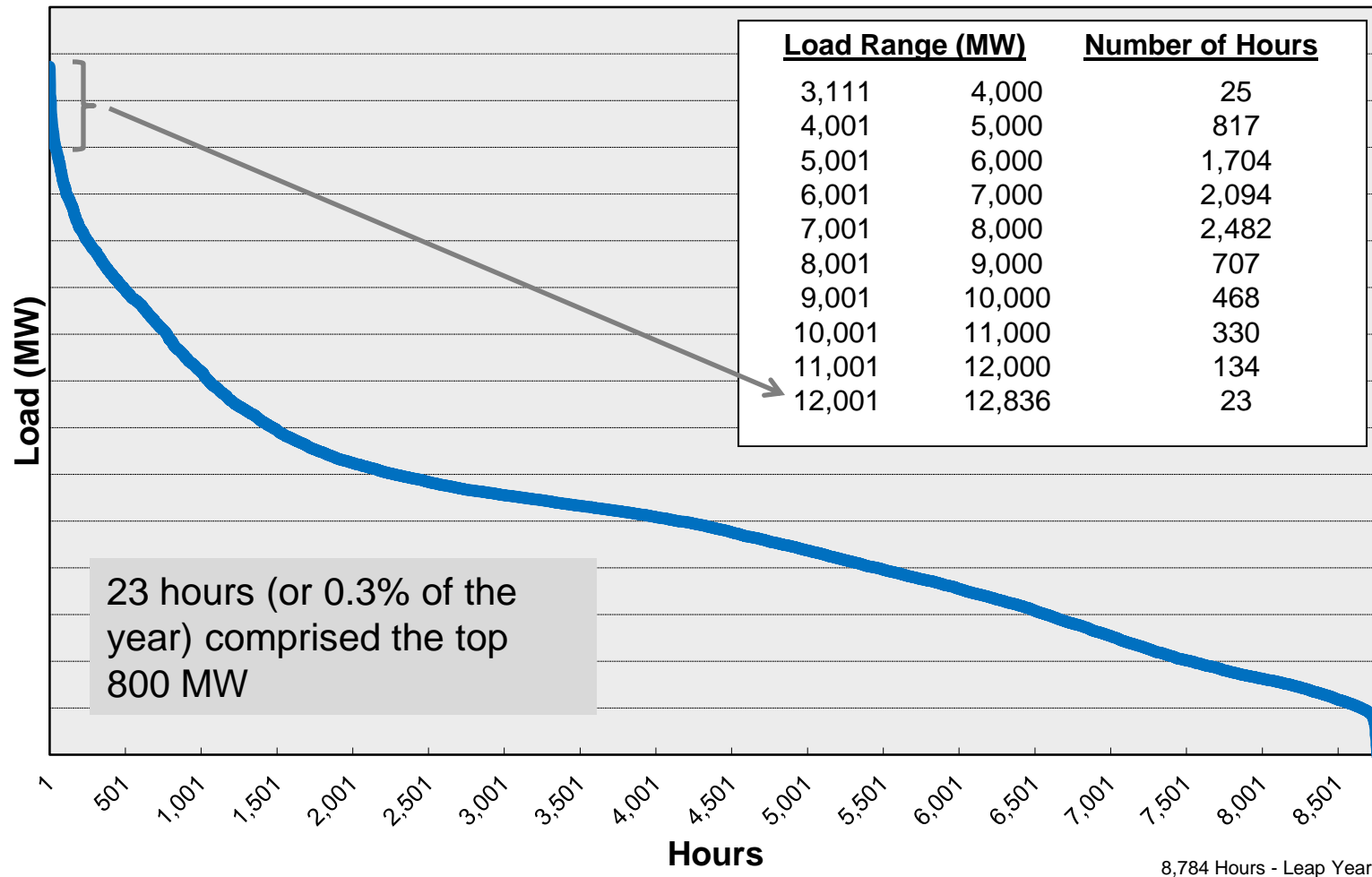


■ Commercial ■ Industrial ■ Residential

Source: Bernstein Research, Consolidated Edison Company of New York

High peak demand and low asset utilization = inefficient system

2012 System Load Duration Curve

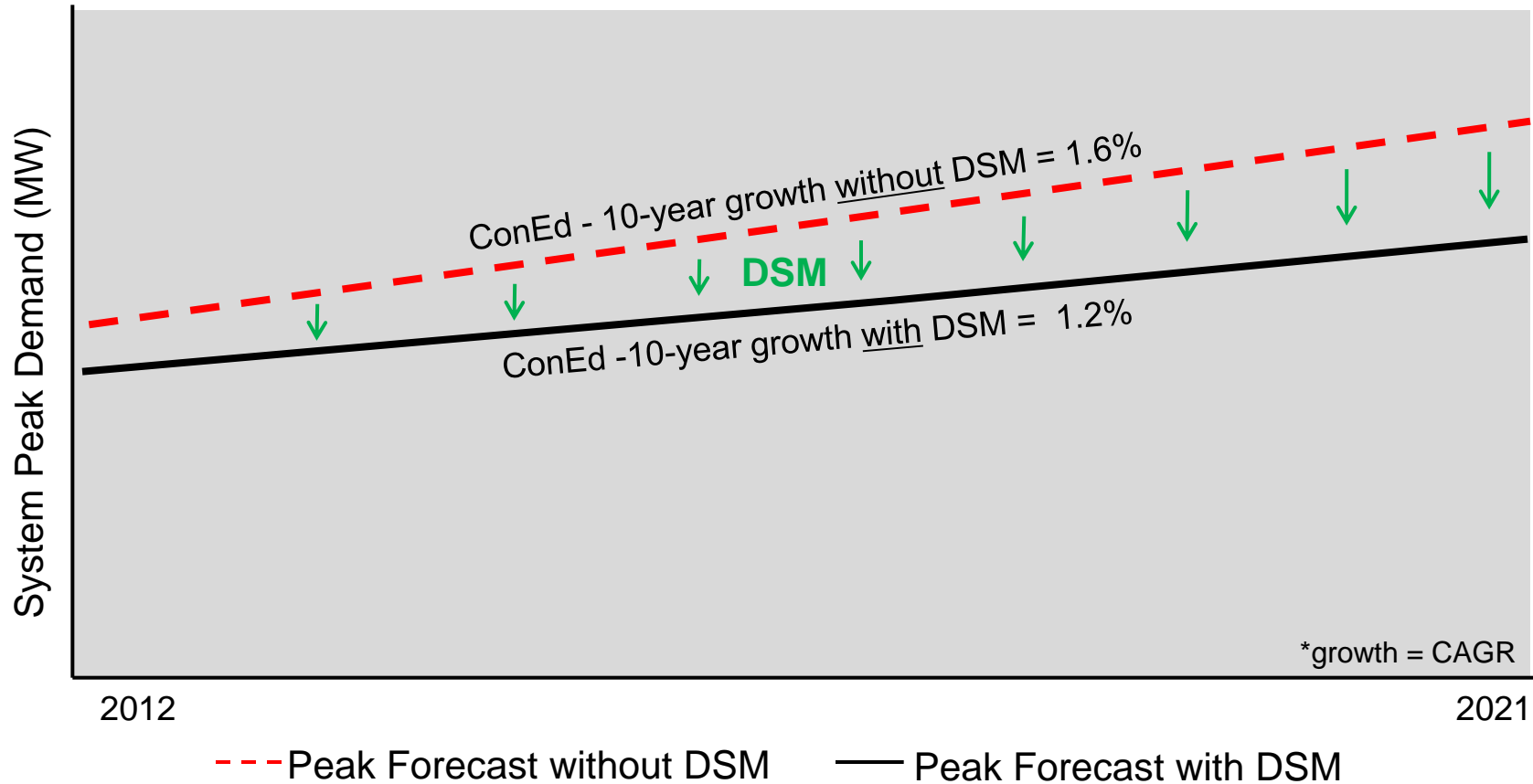


Forecasting and Planning

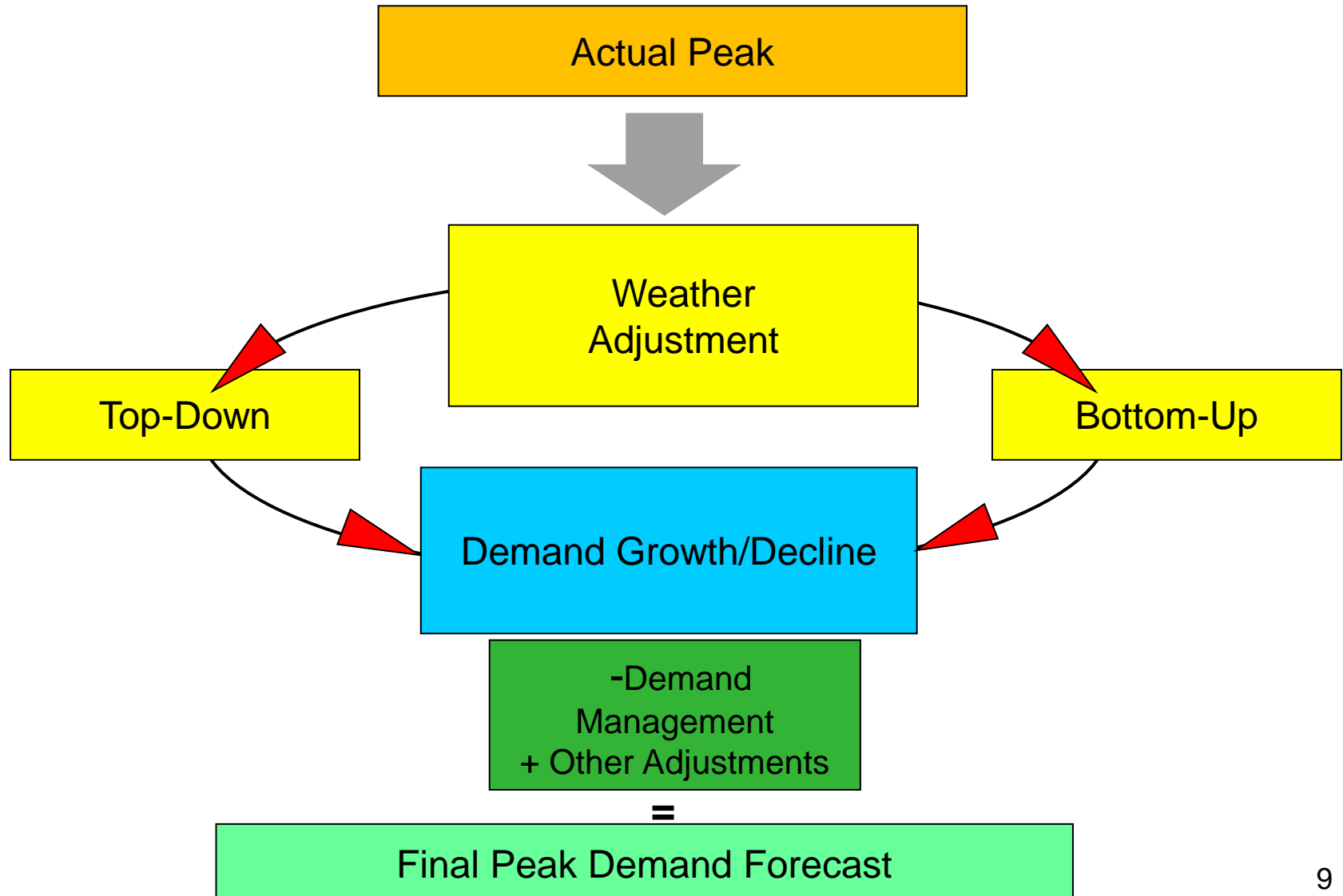
“Planning for Efficiency”, Public Utilities Fortnightly, August 2011

http://www.fortnightly.com/uploads/08012011_PlanforEff.pdf

Long-Term Impact of DSM = lower demand growth = lower costs = lower bills




Peak Forecasting Process




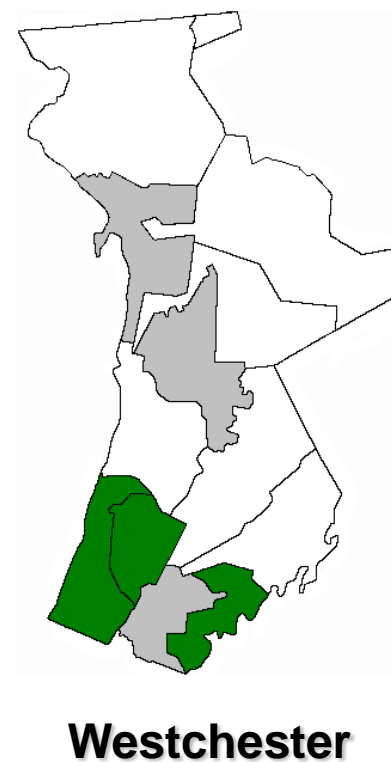
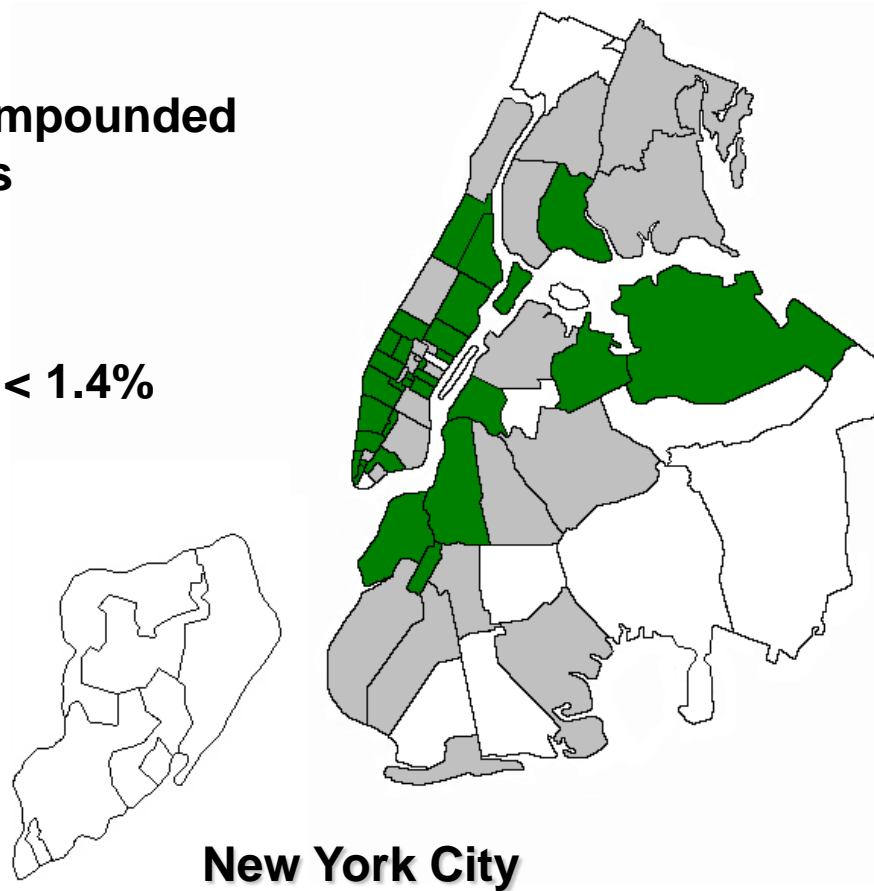
Growth Forecasts for Peak Demand for 82 CECONY Electric Networks

Five-Year Compounded Growth Rates

 > 1.4%

 > 0.7% & < 1.4%

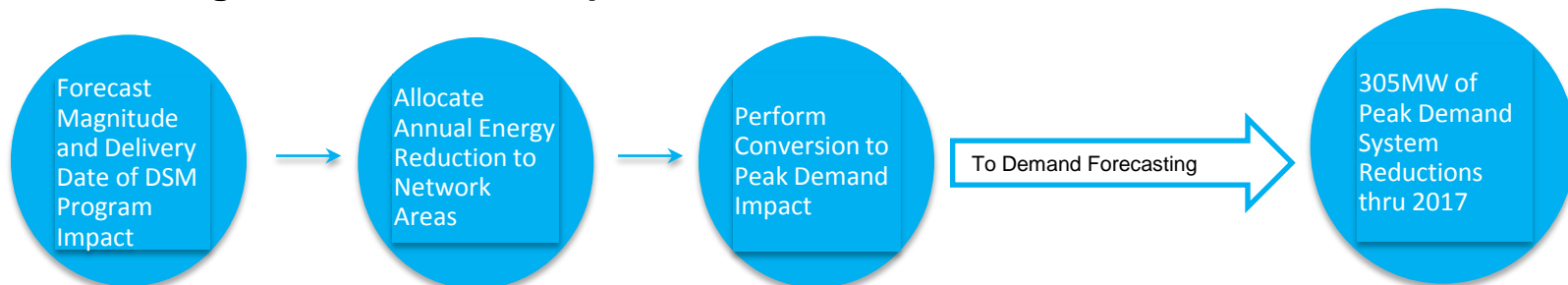
 < 0.4%



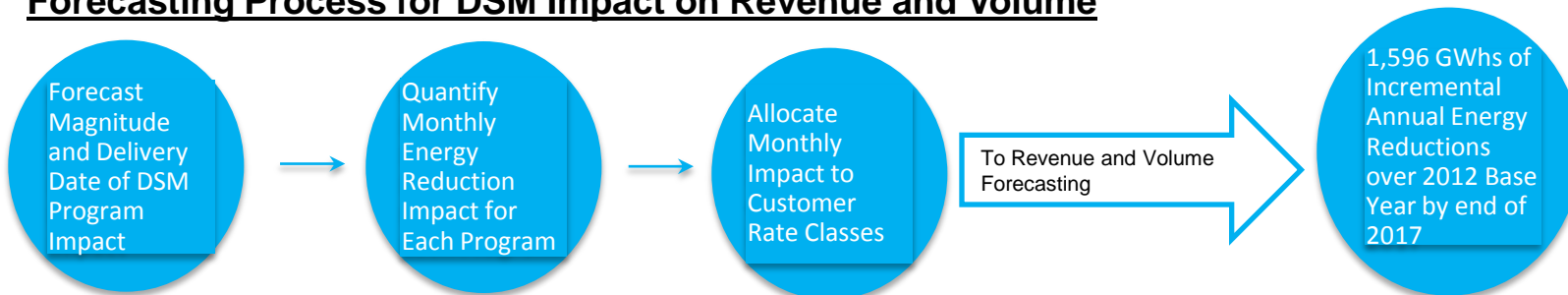
Forecasting Energy Efficiency and Demand Management Programs

- 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; also looking at DG

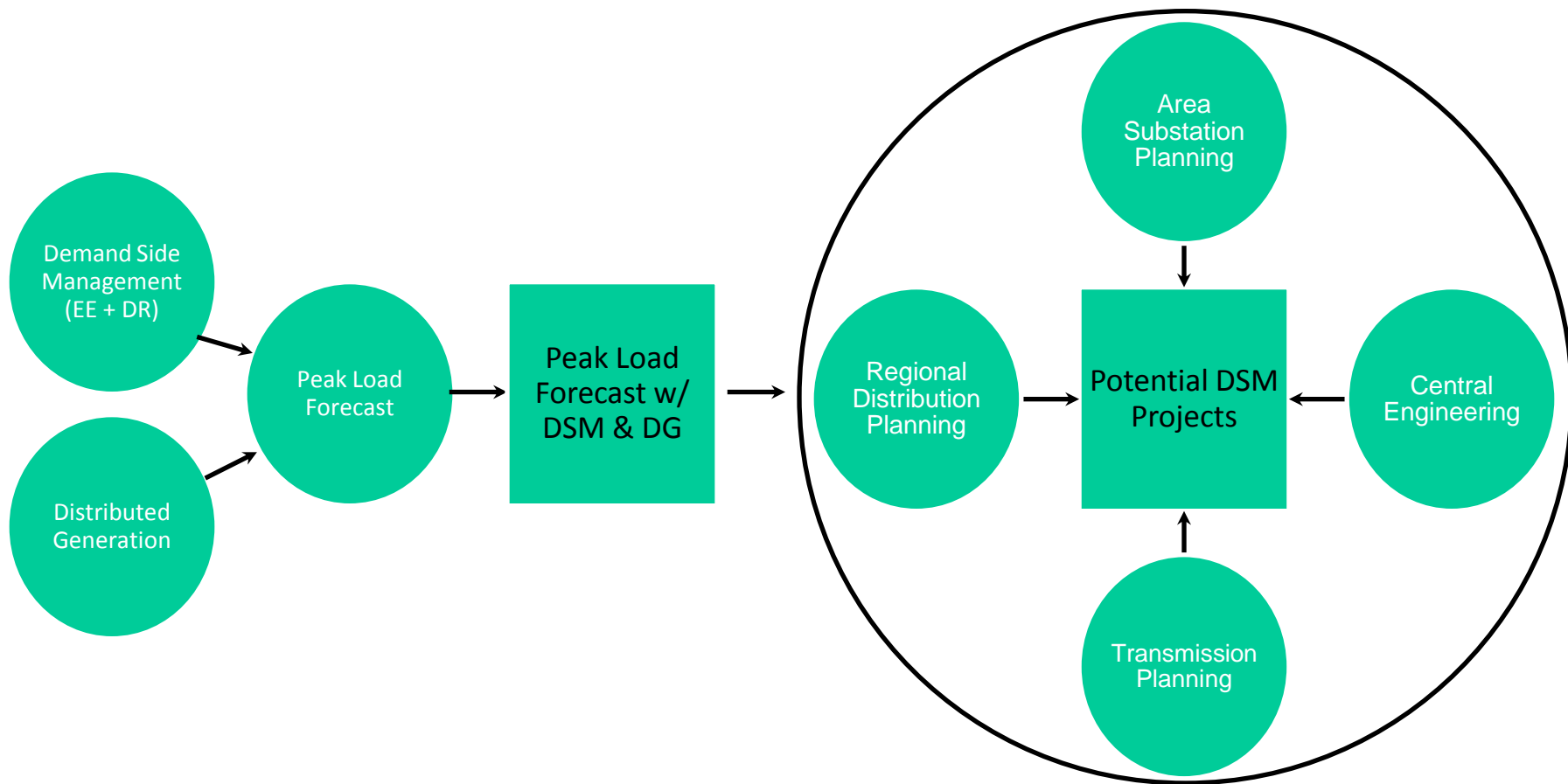
Forecasting Process for DSM Impact on Peak Demand



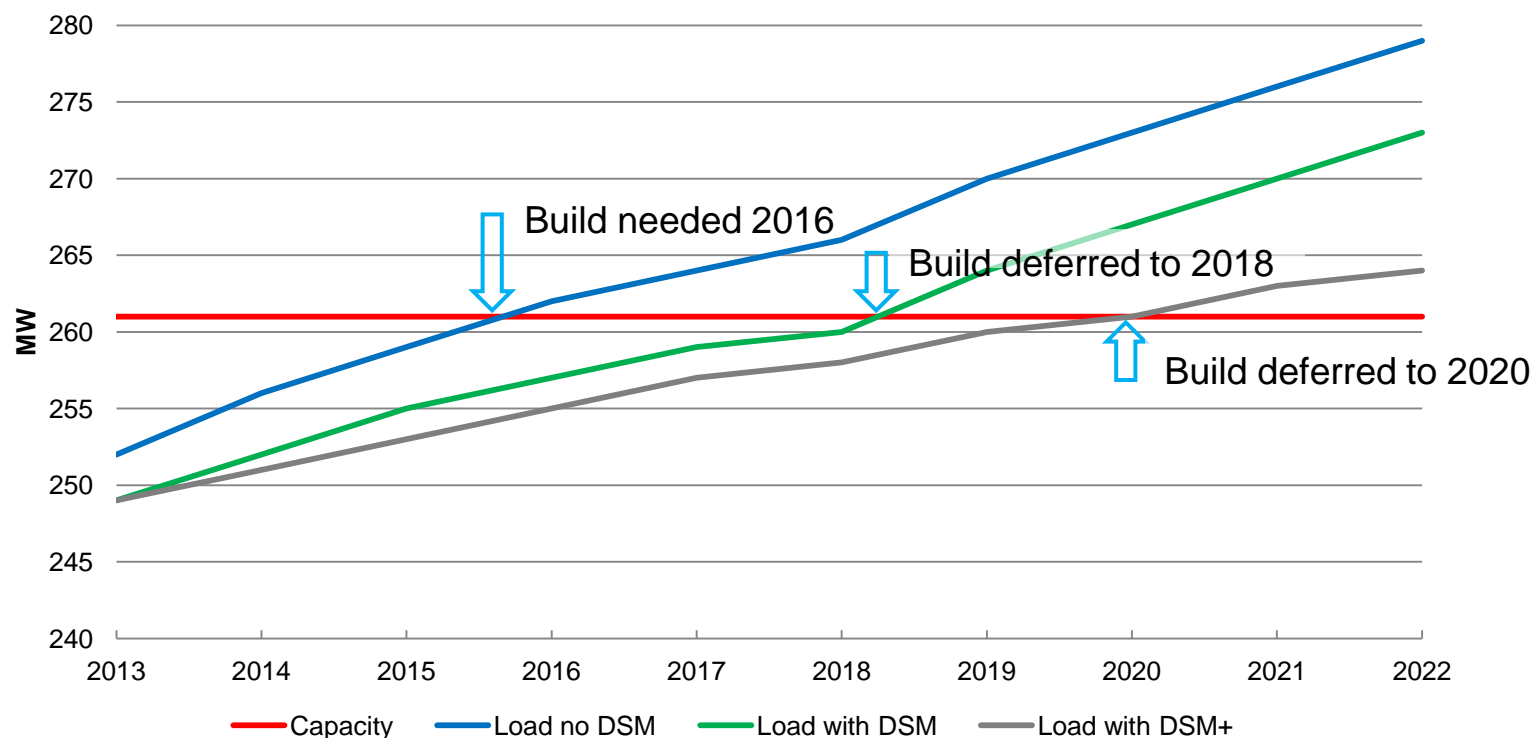
Forecasting Process for DSM Impact on Revenue and Volume



Planning Process – Using DSM to defer capital projects involves many internal stakeholders



Demand Management Included Electric System Planning



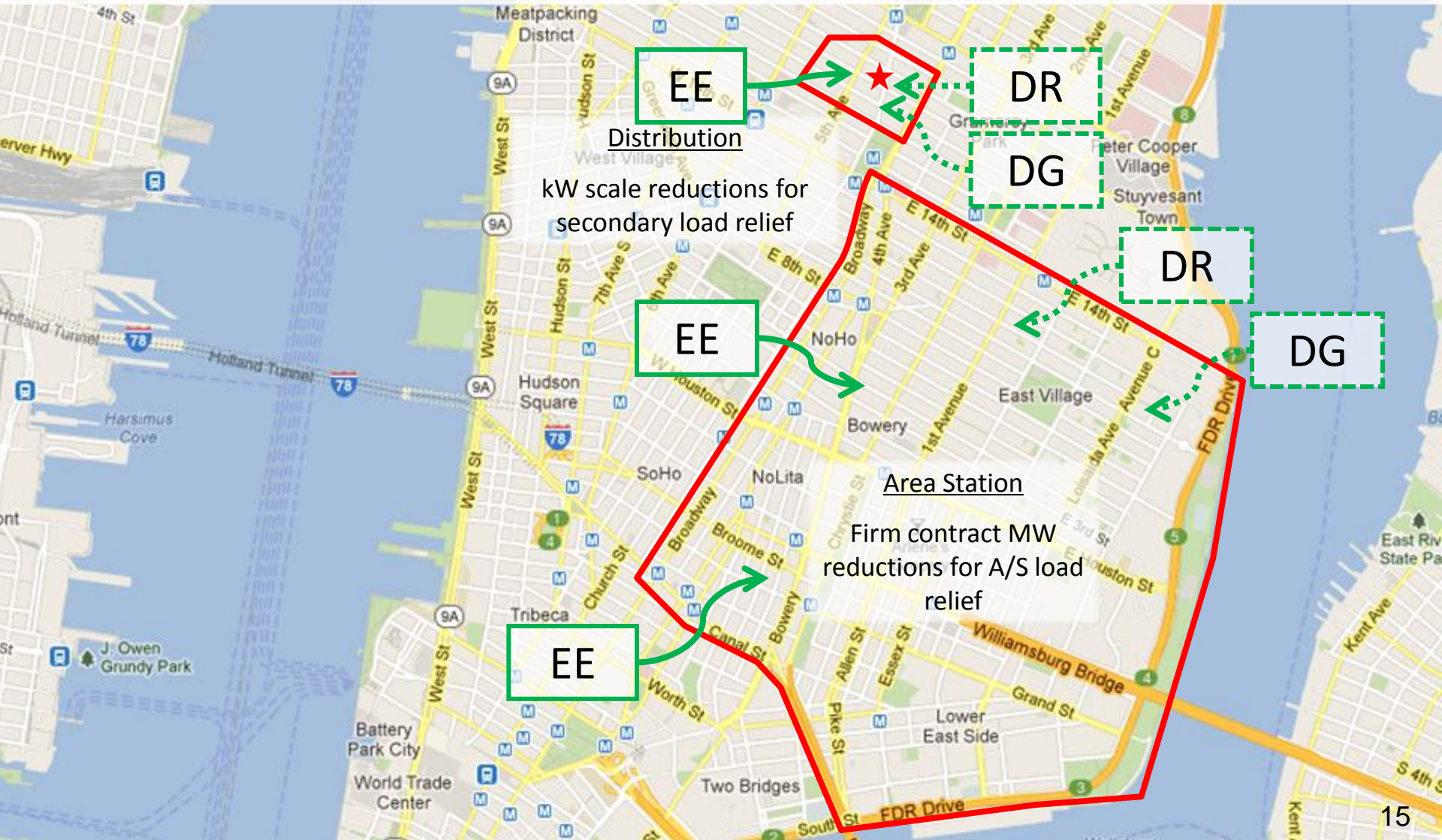
Permanent demand reduction by 2018 can defer capital investment

Targeted Demand Side Management

“Con Edison’s Targeted Demand Side Management Program: Replacing Distribution Infrastructure with Load Reduction”, ACEEE 2010

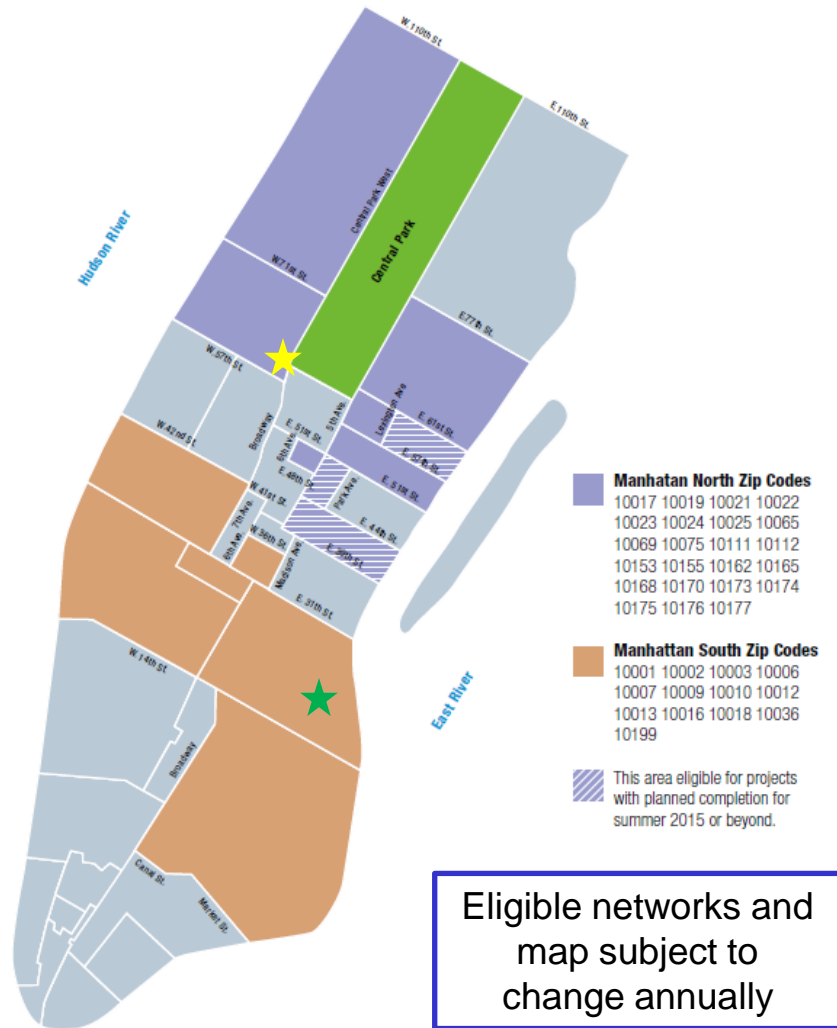
<http://eec.ucdavis.edu/ACEEE/2010/data/papers/2059.pdf>

Targeted DSM: How It Works



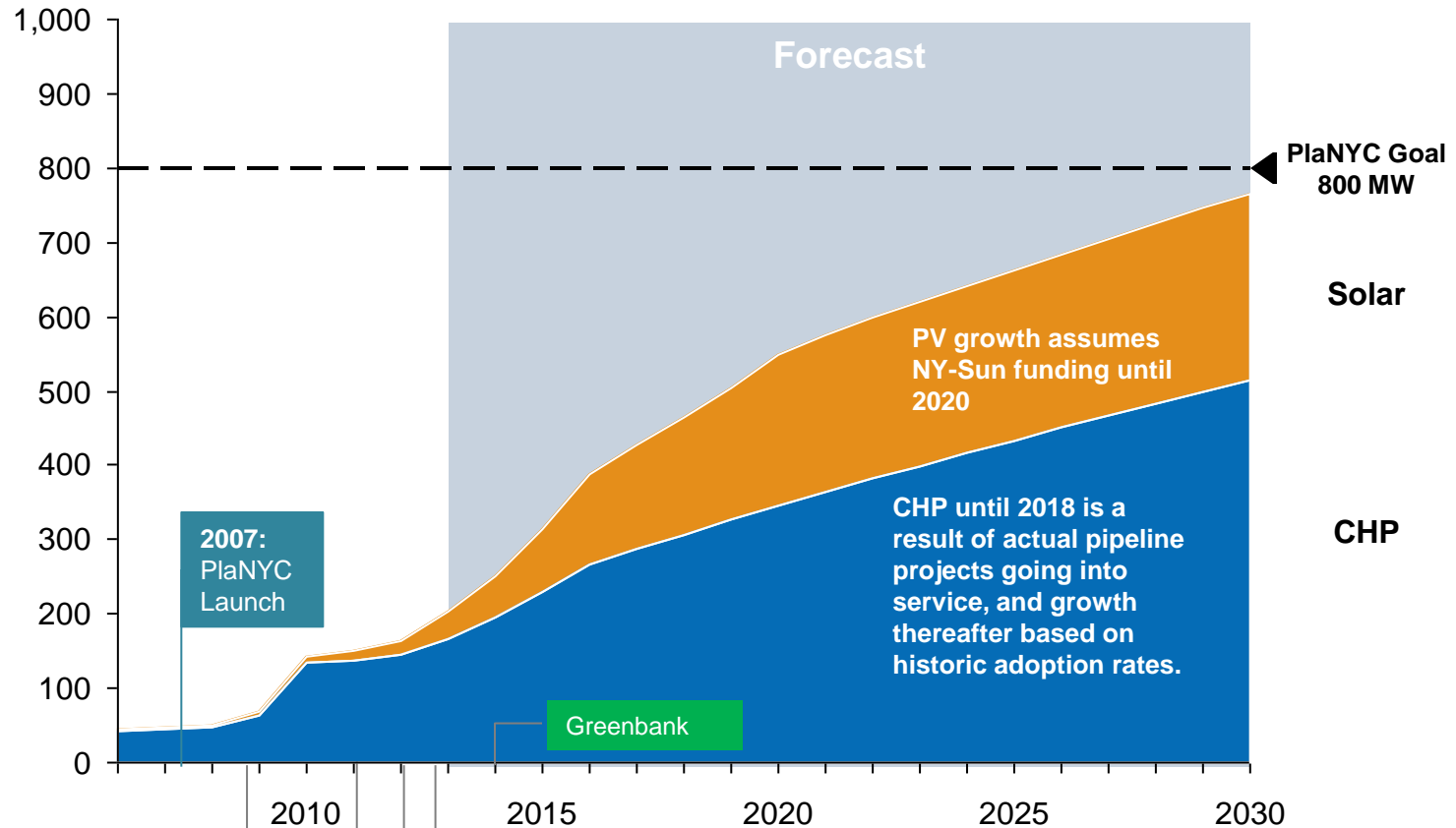
Targeted Steam A/C Program

- Incentives available in 15 networks
 - Install new steam chillers in lieu of electric
 - Replace electric chillers with steam
- All steam chiller plants and hybrid steam-electric
- Steam turbine and double stage absorption



DG is Playing a Greater Role in Planning

Cumulative Installed Capacity (MW)



Source: Con Edison, NYC Mayor's Office

NYSERDA CHP Market Acceleration Program

NYCEEC Financing Available

NYSERDA Downstate PV Funding, NY-Sun

NYC Solar PV Property Tax Abatement

NYSERDA is offering a 10% bonus incentive in “Targeted Zones”



CHP project transparency and telemetry will allow for performance monitoring for potential inclusion in Company DG forecasting and system planning