



# **Managing Gas System Growth**

IPPNY Fall Conference 2019

Christopher Raup



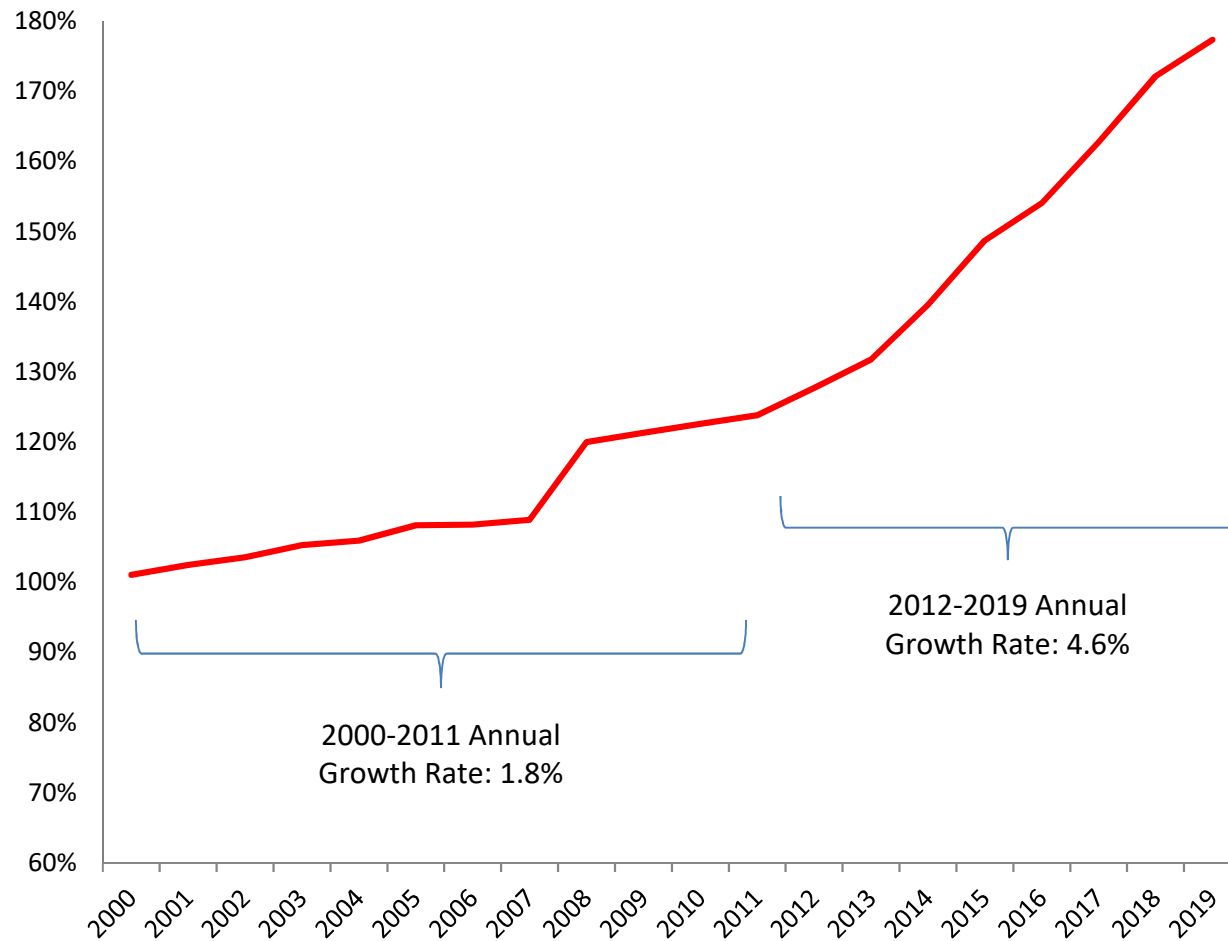
# Consolidated Edison Co. of New York, Inc.

- 3.5 million electric customers
- 1.1 million gas customers
- 1,600 steam customers



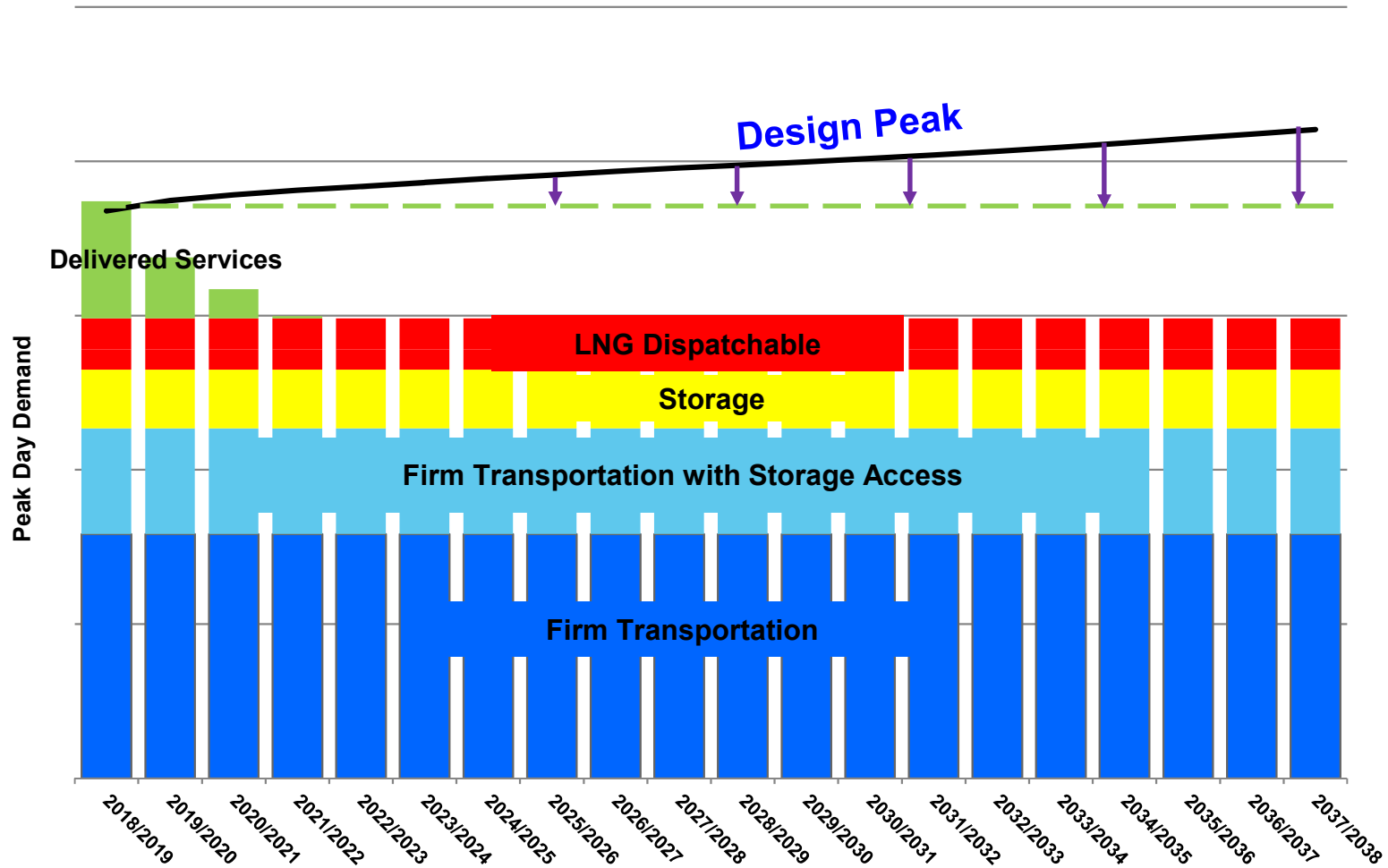
# Significant Recent Growth in Gas Demand

Con Edison Peak Day Natural Gas Demand  
(Weather-Normalized, Compared to 2000)

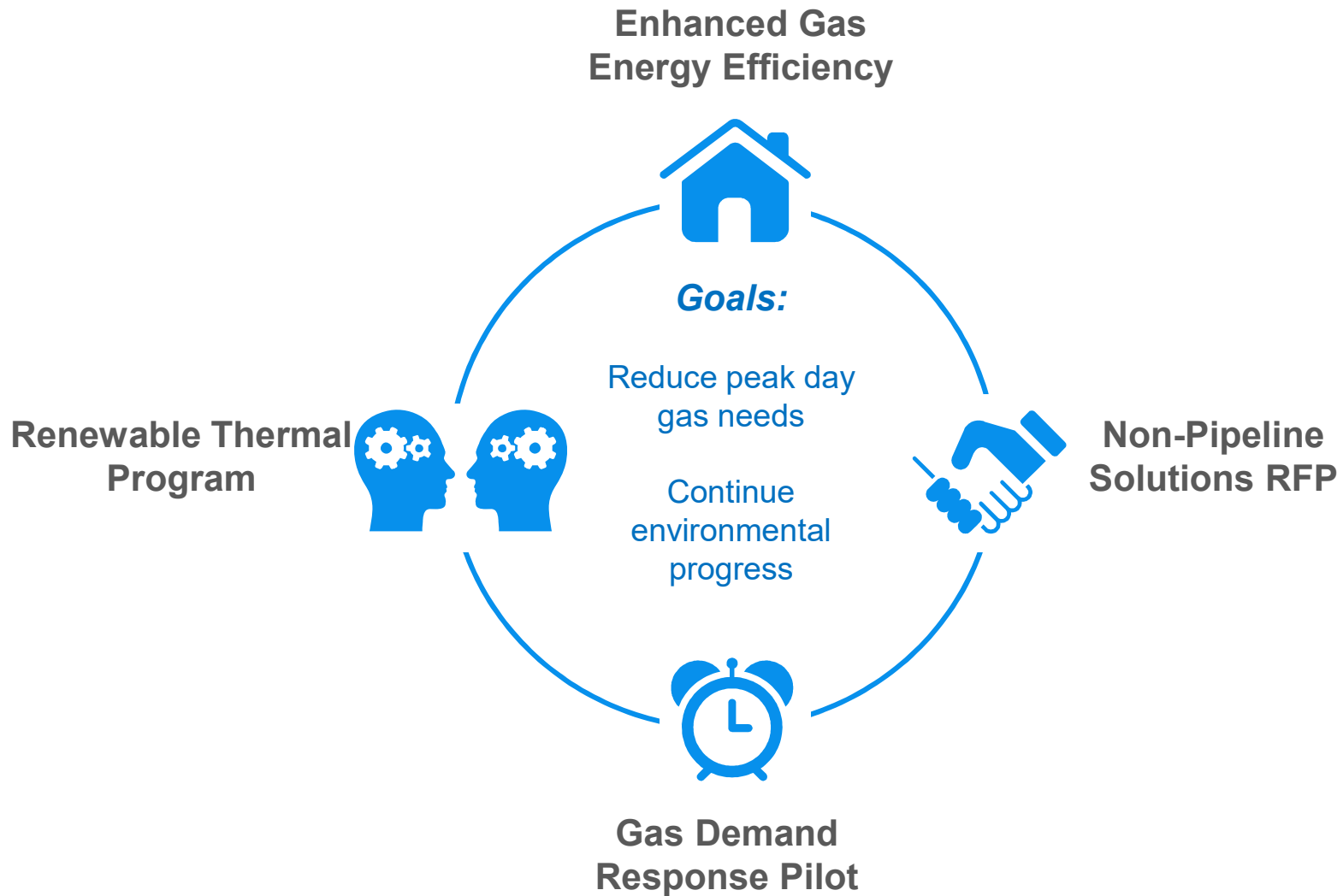


# Challenges in Meeting Future Gas Demand

Con Edison Peak Day Gas Needs (Dekatherms)



# Smart Solutions for Natural Gas Customers



# Enhanced Gas Energy Efficiency

- Expanded in-house programs
- Approved by PSC in July 2018
- On-track to meet goals for 2018 and 2019

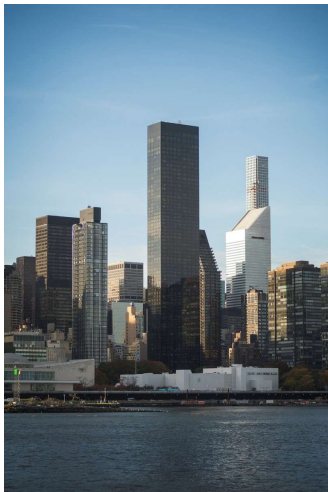


Condensing Gas Boilers

# Gas Demand Response

## Direct Load Control

- 400+ small customer accounts with smart t-stats (7 Dt)
- Customer paid for signing up
- 4-8 hour activations, triggered at 18°
- Issues: snapback and opt-out levels



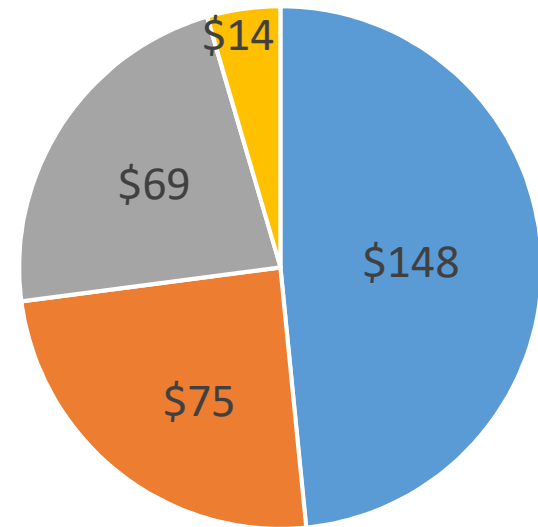
## Performance-based Program

- 39 large commercial and residential buildings (150 Dt)
- Payments for pledged reduction and daily performance
- Performance measured over 24 hours, triggered at 18°
- Issues: familiarity, metering, baselines, and oil use

# Non-Pipeline Solutions (NPS) Portfolio

- Sought regulatory support for \$305M for selected proposals
- PSC approved demand-side funding
- EE and heat pump programs moving ahead, with initial focus on Westchester County
- CNG moving forward under regular gas supply practices
- RNG discussed in Con Edison rate filing

Requested Funding  
(\$305 million\*)



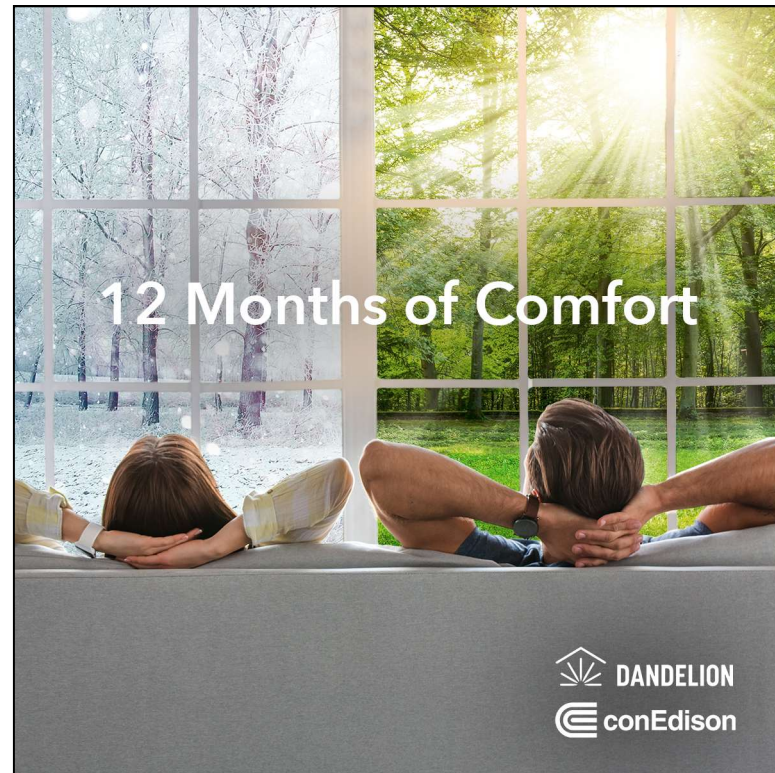
- Energy Efficiency
- Electrification
- Renewable Natural Gas
- CNG/LNG Trucking

\* Excludes commodity costs



# NPS Example: Geothermal Heat Pump Incentives

- Direct mail, email and social campaigns active
- Average system cost ~\$18,000 after ITC, NYSERDA & Con Edison Incentives
- On-track for 50 home goal for 2019
- Challenges to scale



# Renewable Thermal Demonstration Projects

Two-stage solicitation seeking new business models for renewable thermal technologies:

1. **Geothermal Heat Pumps (Single-family Resi)**
  - Clustering, rate for use of geothermal loops
2. **Air-Source Heat Pumps (Small/Medium C&I)**
  - Platform for financing and maintenance products
3. **Heat Pump Water Heaters (Large Multifamily)**
  - Replicable model for domestic water heater HPs

Proposing as REV Demonstration Projects



Steven Winter Associates, Inc.

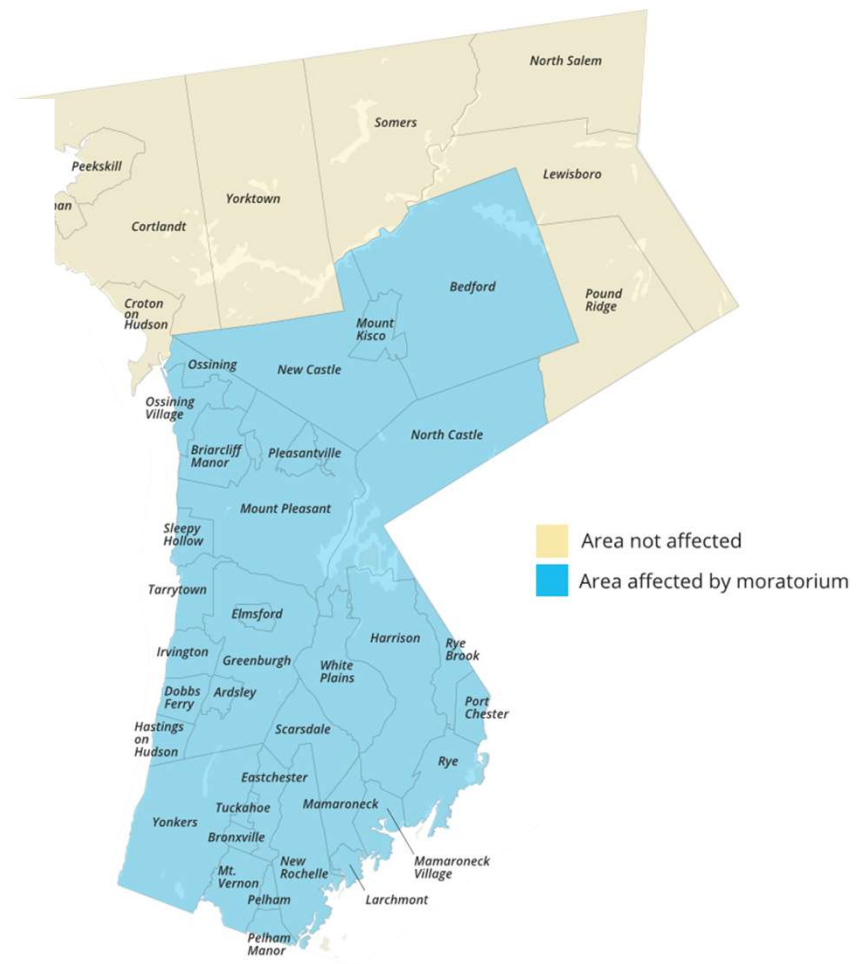
# Next Steps

**Short-term** Trucked CNG; continue to invest in gas safety

**Medium-term** Proposed pipeline compression expansions and RNG

**Long-term** Load reductions

### Westchester Gas Moratorium Area



# Implications of Seeking Alternatives to Gas

- Electric generation
  - Growth in bulk generation portfolio will be needed eventually
  - To achieve carbon goals, must be renewable
  - Peak may shift to early morning, later evening hours – role for storage?
- Electric distribution
  - Winter peaking eventually
  - Delivery system investments
- Customer
  - Affordability of alternatives; retrofit challenges
  - Rate design
  - Ancillary impacts (e.g. refrigerant leakage; customer actions when gas is not available)
  - Impact of temporary supply measures (CNG)

# Thank you!

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