

Natural Gas Long-Term Plan Technical Session

Gas and Electric Price Forecast Residential Bill Impacts

January 25, 2024



Case 23-G-0437

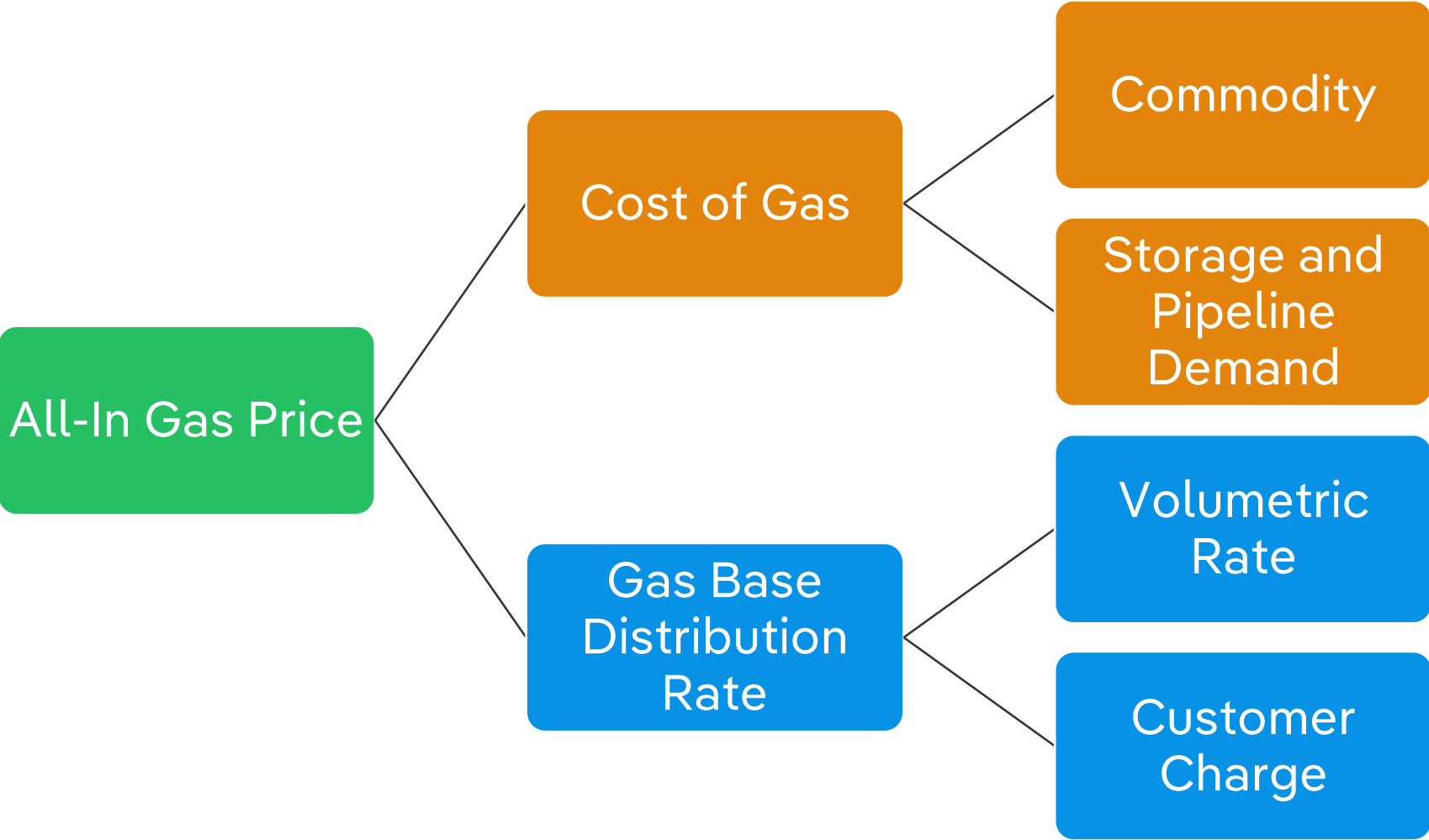


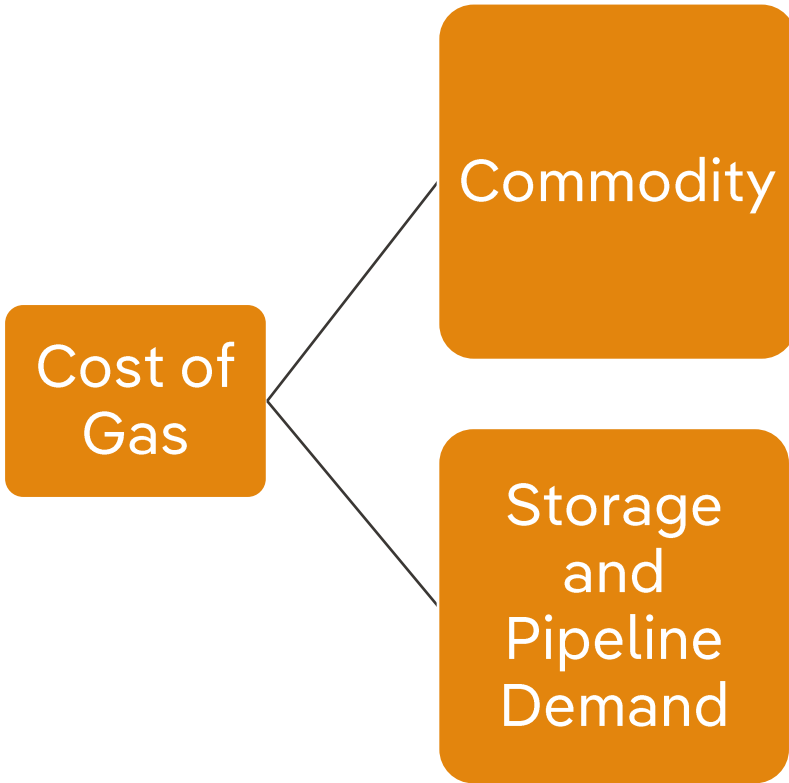
- Gas and electric price forecasts are impacted by the decarbonization actions included in each scenario and the LTP in 2 fundamental ways:
 - **changes in costs (numerator)**
 - **changes in billing determinants (denominator)**
- All analyses are performed separately for NYSEG and RG&E, unless otherwise noted
- Appendix B to the Companies' Initial LTP filing contains additional detail



Gas Price Forecast

Components of the Gas Price Forecast (\$/MCF)



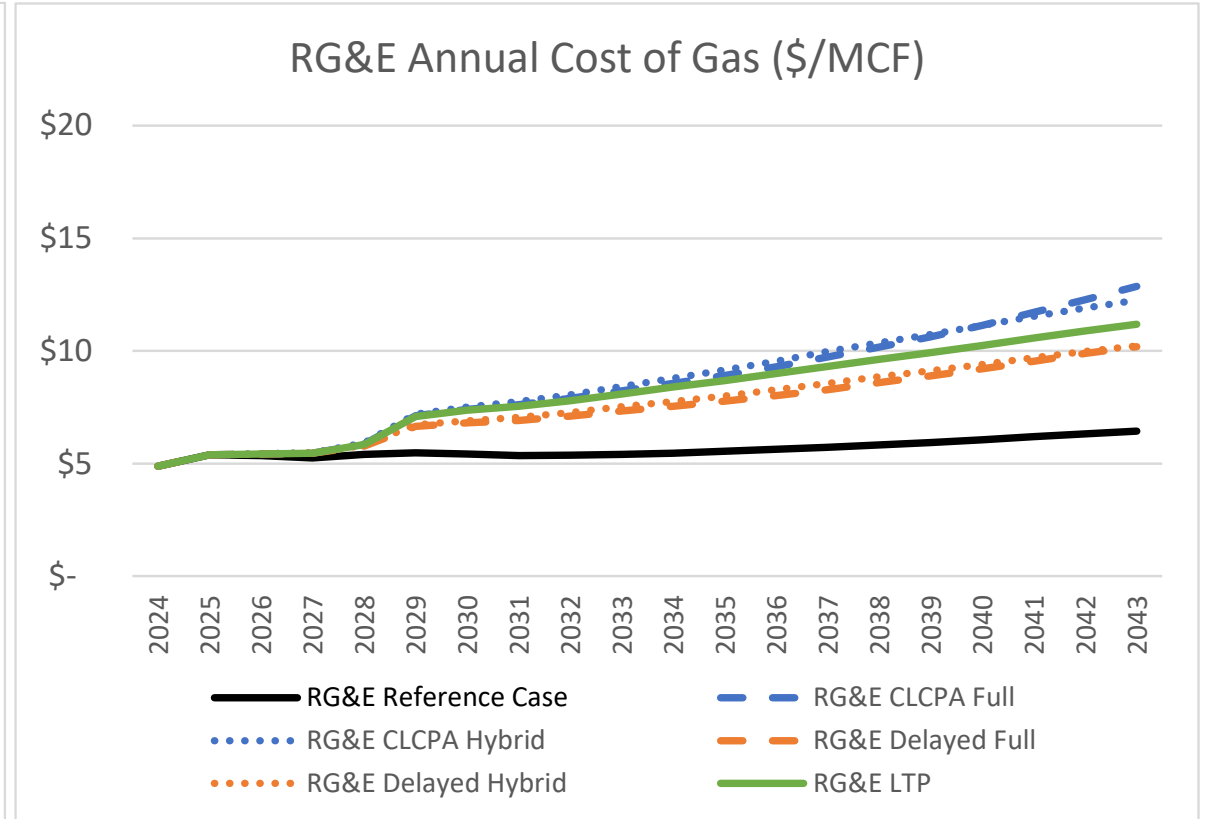
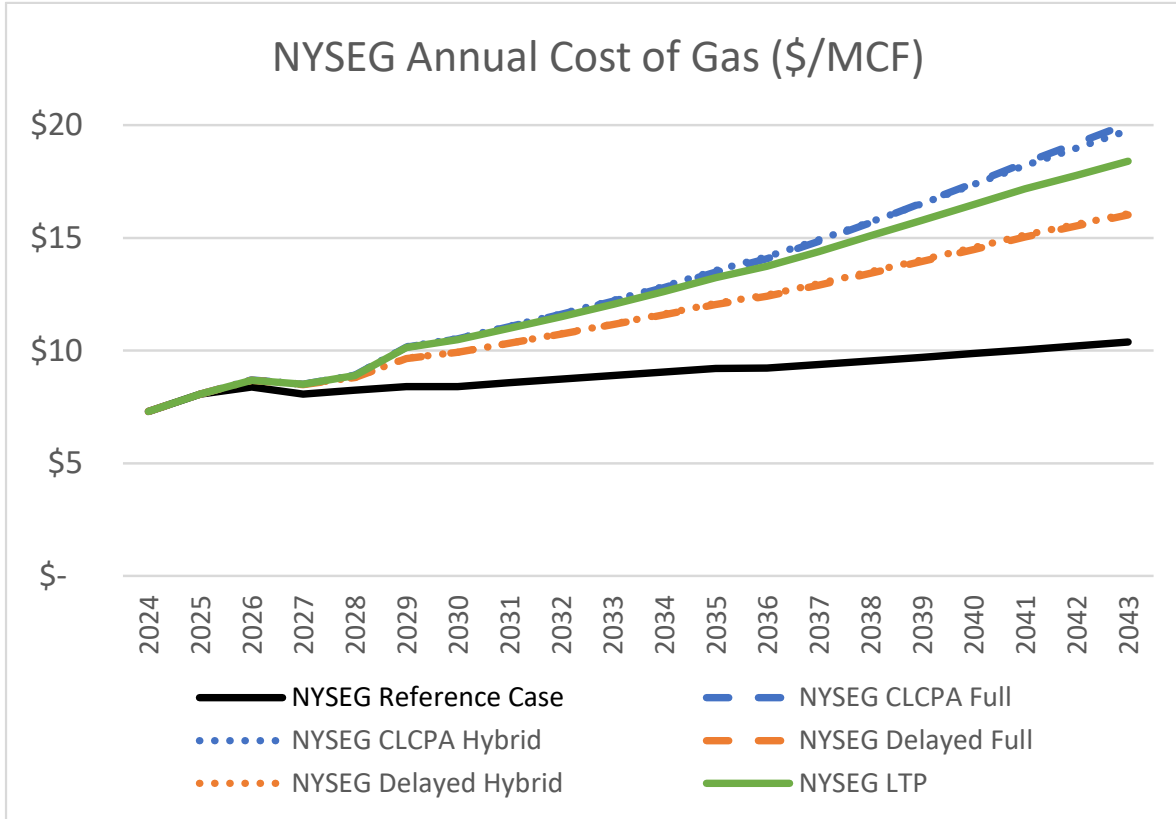


- **Traditional Supplies:** 2023 budgeted levels (\$/MCF), escalated by EIA AEO 2023 Henry Hub forecast annual growth rate.
- **RNG and Hydrogen:** Incorporate RNG and hydrogen specific cost premium for each unit included in each scenario and LTP.
- **Fixed Demand Costs:** 2023 budgeted levels (\$), assumed to remain constant over forecast period.
 - Each scenario and LTP results in different levels of increased per unit cost (\$/MCF) as fixed costs are spread over different amounts of lower throughput.

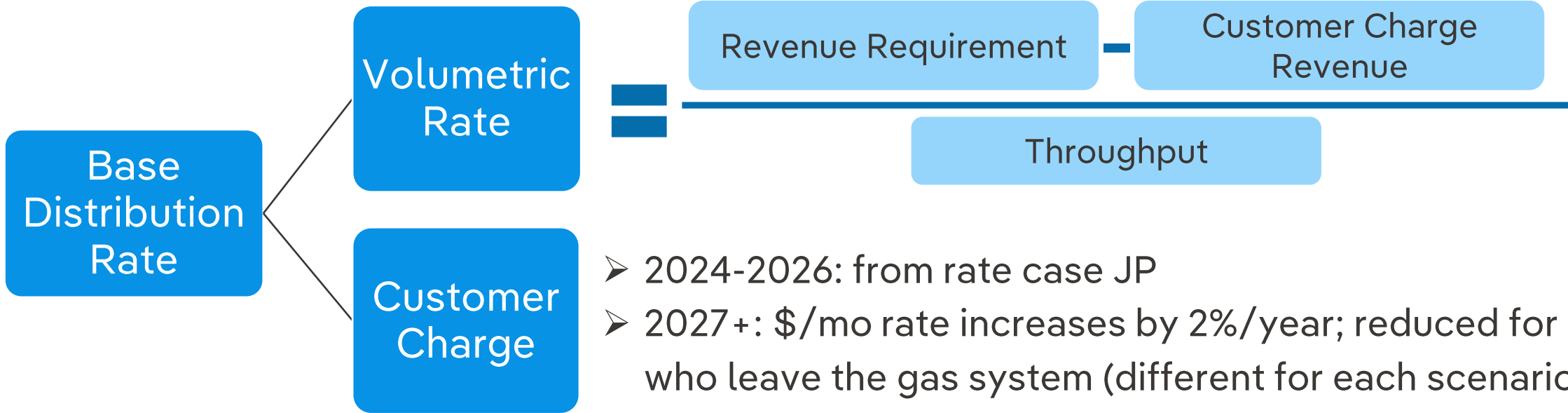
Cost of Gas



➤ Figure B-1



Gas Base Distribution Rate



- 2024-2026: from rate case JP
- 2027+: \$/mo rate increases by 2%/year; reduced for customers who leave the gas system (different for each scenario and LTP)

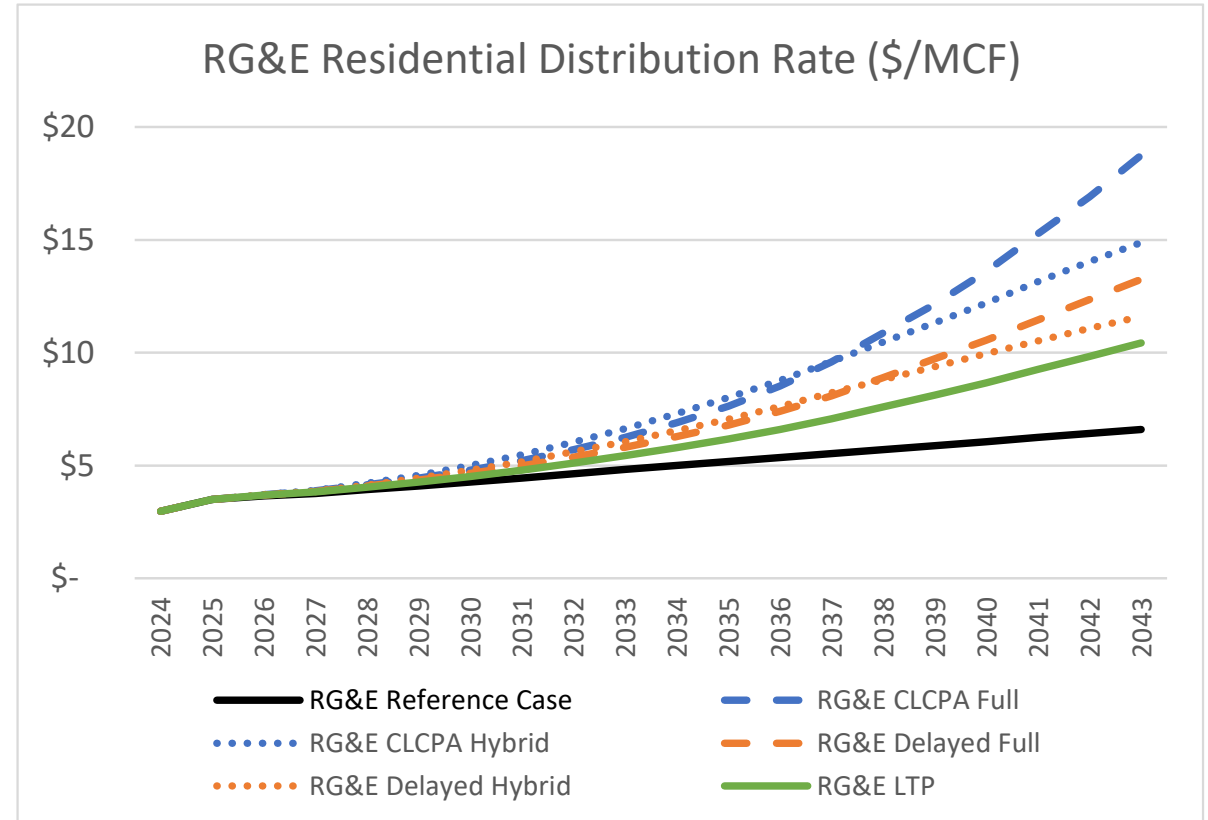
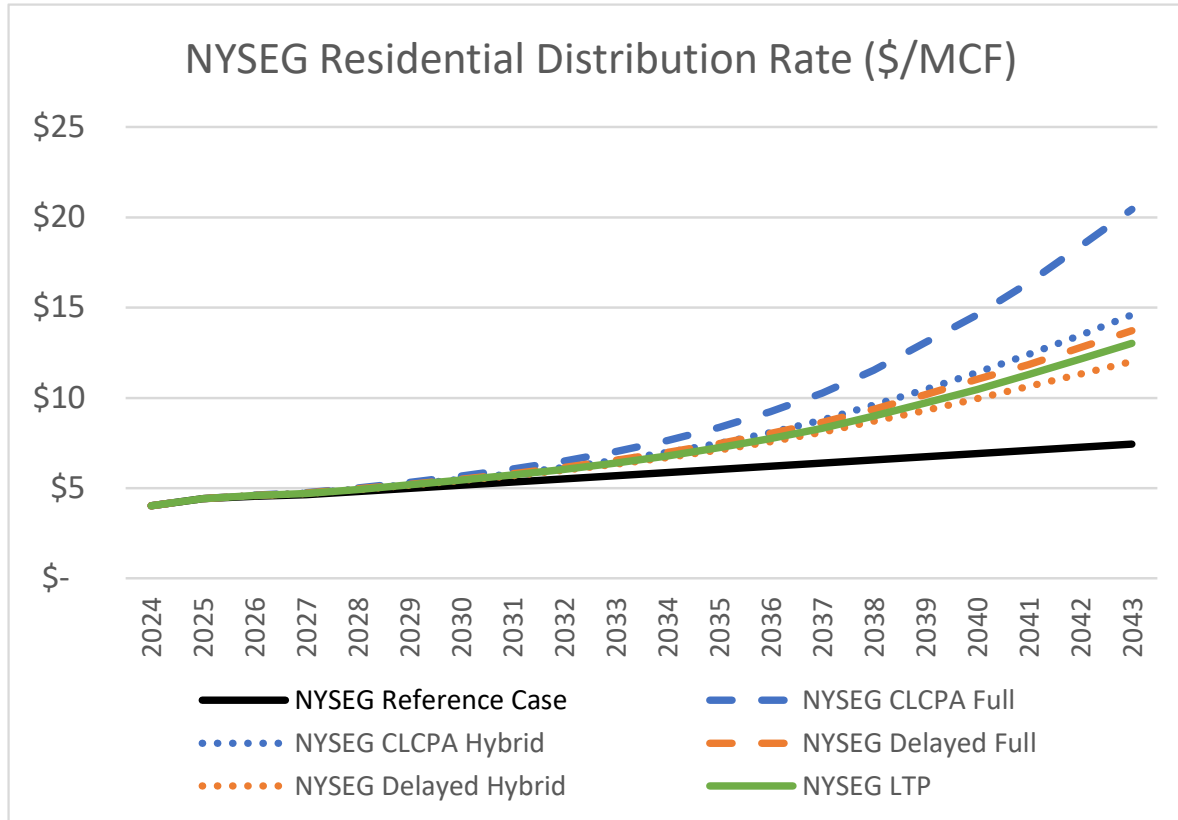
➤ Revenue Requirement:

- 2024-2026: from rate case JP
- 2027+: 2026 capex forecast escalated by inflation, investments adjusted to represent annual revenue requirements using standard ratemaking principles;
- For each scenario and LTP, revenue requirements decreased for avoided gas meters and services capital due to the full electrification of new construction customers.
- **Throughput:** Changes for each scenario and LTP based on reductions in gas use resulting from the specific decarbonization actions included.



Gas Base Distribution Rate - Residential

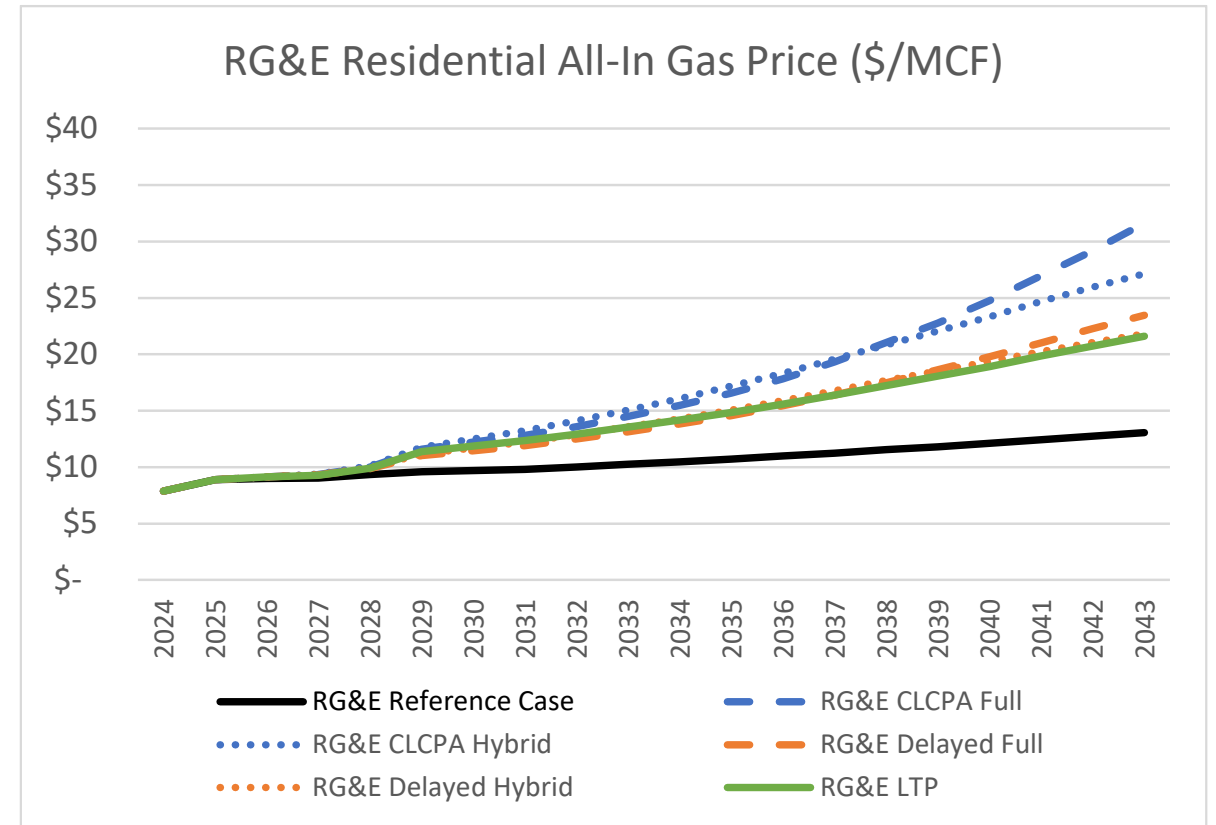
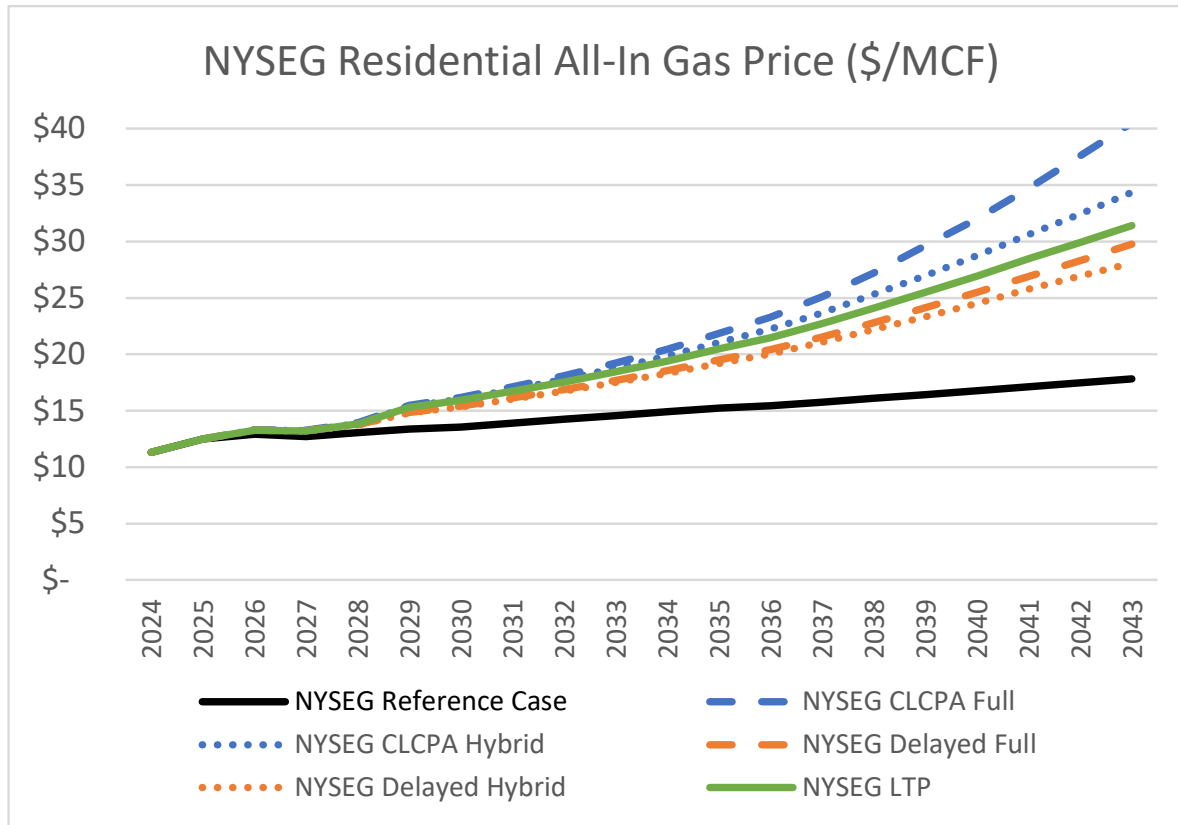
➤ Figure B-2





All-in Gas Price - Residential

➤ Figure B-3

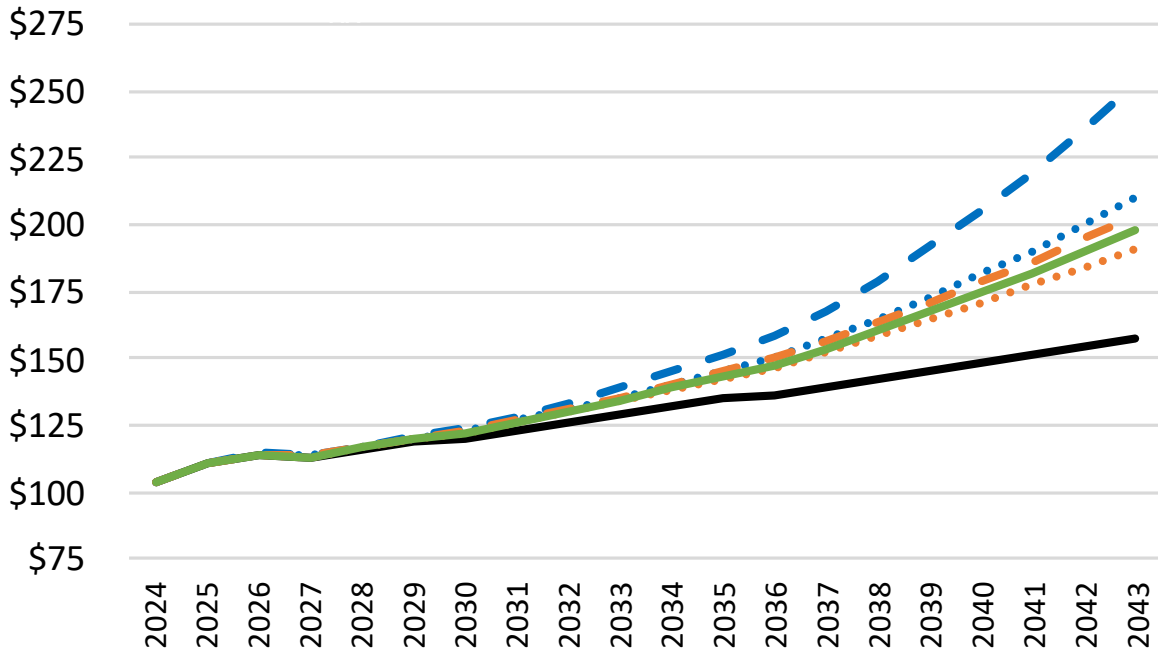




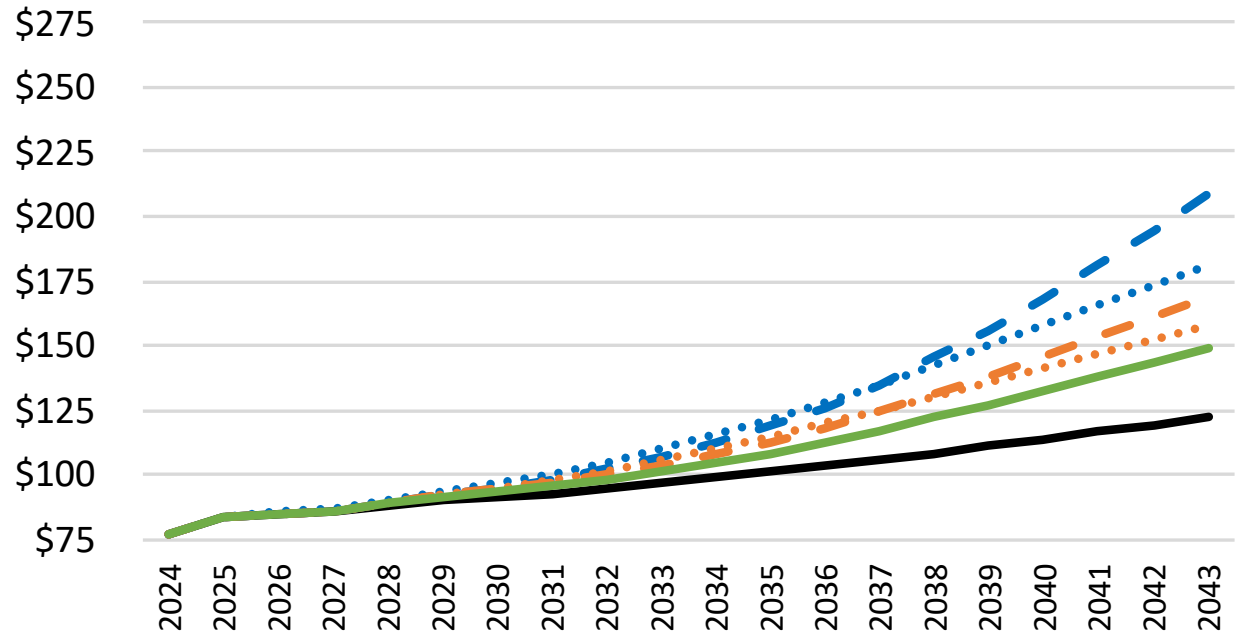
Residential Non-Participant Typical Monthly Gas Bill

- All-in Gas Price x Average Residential Use Per Customer
- Figure VI-3 (gas bill)

NYSEG



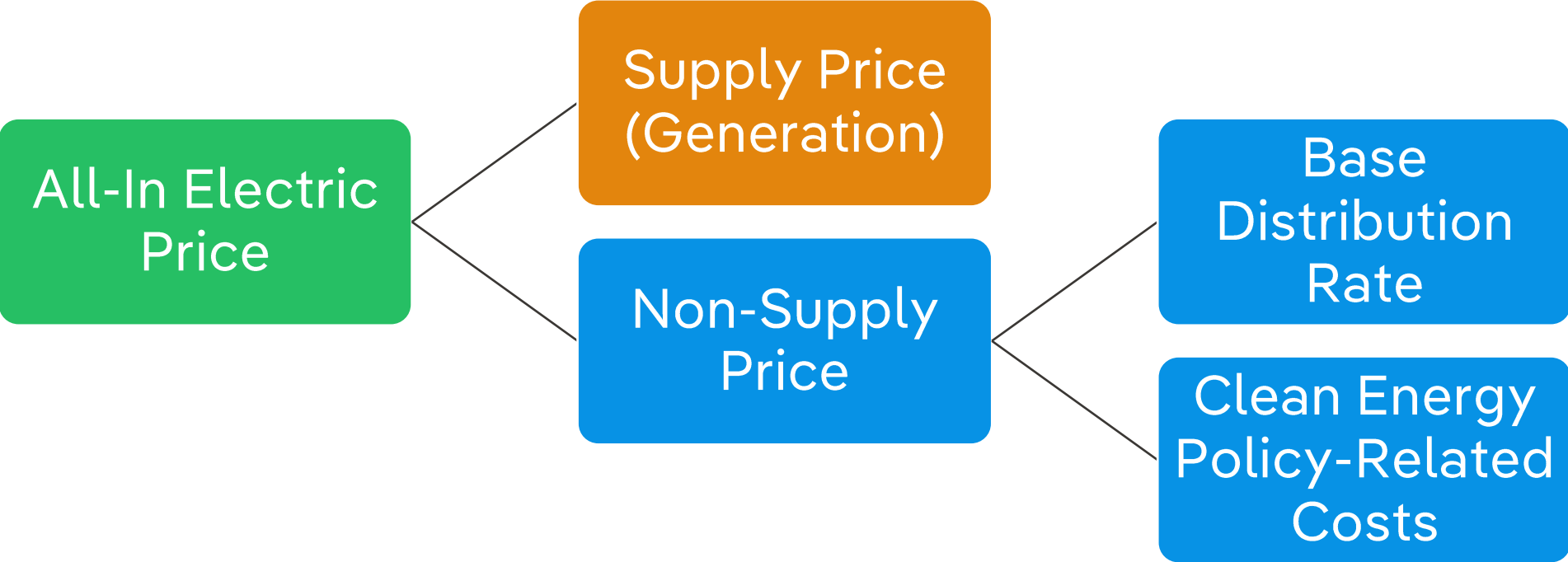
RG&E





Electric Price Forecast

Components of the Electric Price Forecast (\$/kWh)





Electric Supply Price Forecast

Reference Case
Supply Price



Clean Generation
Adjustment

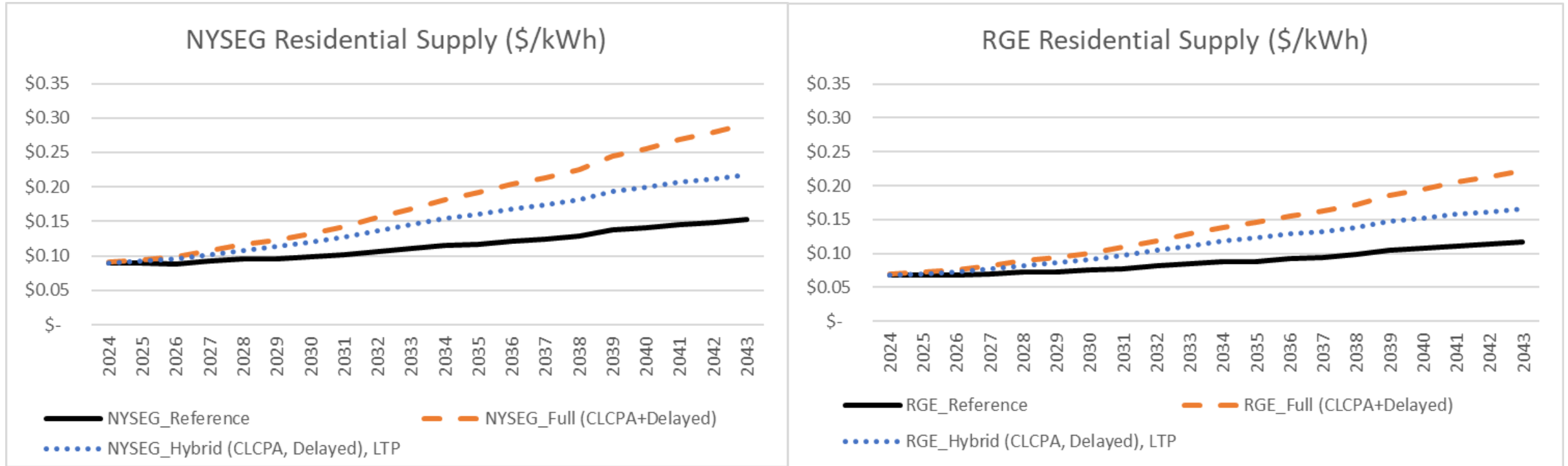


Supply
Electrification
Adjustment

Supply Price
(Generation)

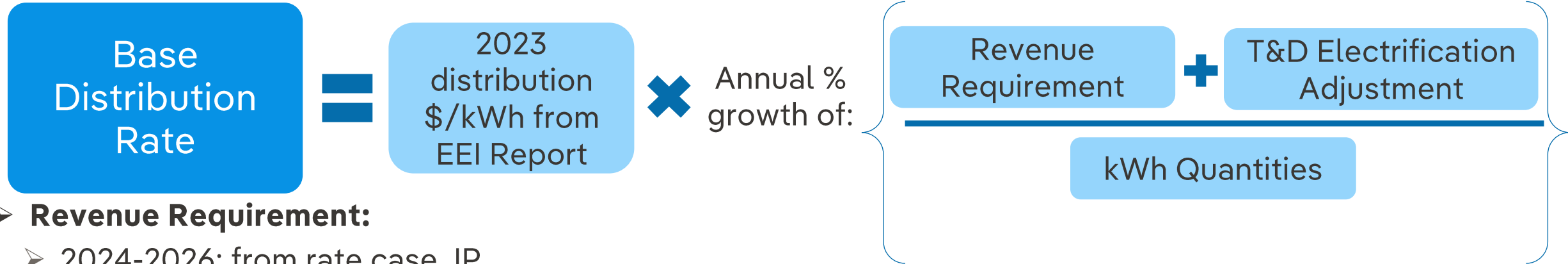
- Reference Case Supply Price:
 - 2021: generation \$/kWh from EEI Rate Report;
 - 2022-2024: Apply % change from NYISO LBMP historical and forward prices
 - 2025+: Apply % change from EIA 2023 AEO upstate NY electric price forecast
- Clean Generation Adjustment to account for zero-emission generation by 2040:
 - Multiplier based on NREL All Options Clean Energy Scenario
 - 2024: 1.00; 2035: 1.39; 2042: 1.42 (interpolate between)
 - Applies to all scenarios and LTP
- Supply Electrification Adjustment to account for increased electric capacity needs due to full electrification:
 - Multiplier based on NREL Accelerated Demand Electrification Case
 - 1.48% CAGR
 - Applies to Full Electrification scenarios only

Electric Supply Price Forecast





Non-Supply Price: Electric Base Distribution Rate



➤ Revenue Requirement:

- 2024-2026: from rate case JP
- 2027: capex from 5-year capital plan
- 2028+: grow capex consistent with 5-year capital plan CAGR
- Capital investments adjusted to represent annual revenue requirements using standard ratemaking principles

➤ T&D Electrification Adjustment:

- Represents utility T&D system investments necessary to meet projected increases in winter peak electric demand associated with electrification of gas demand (more detail on next slide)
- Capital investments adjusted to represent annual revenue requirements using standard ratemaking principles
- Changes for each scenario and LTP based on increase in electric demand kW

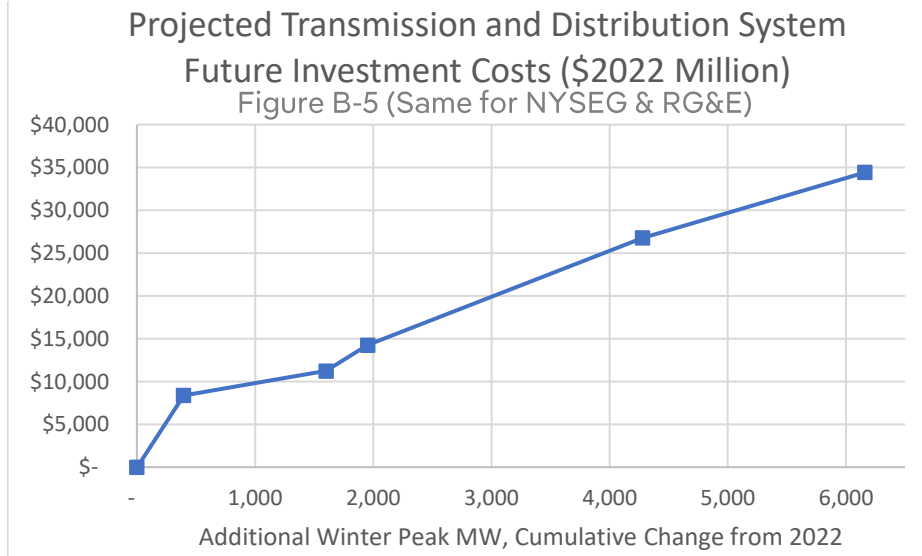
- **kWh Quantities:** Changes for each scenario and LTP based on increase in electric use resulting from the specific decarbonization actions included, scaled up to represent the entire electric territory.



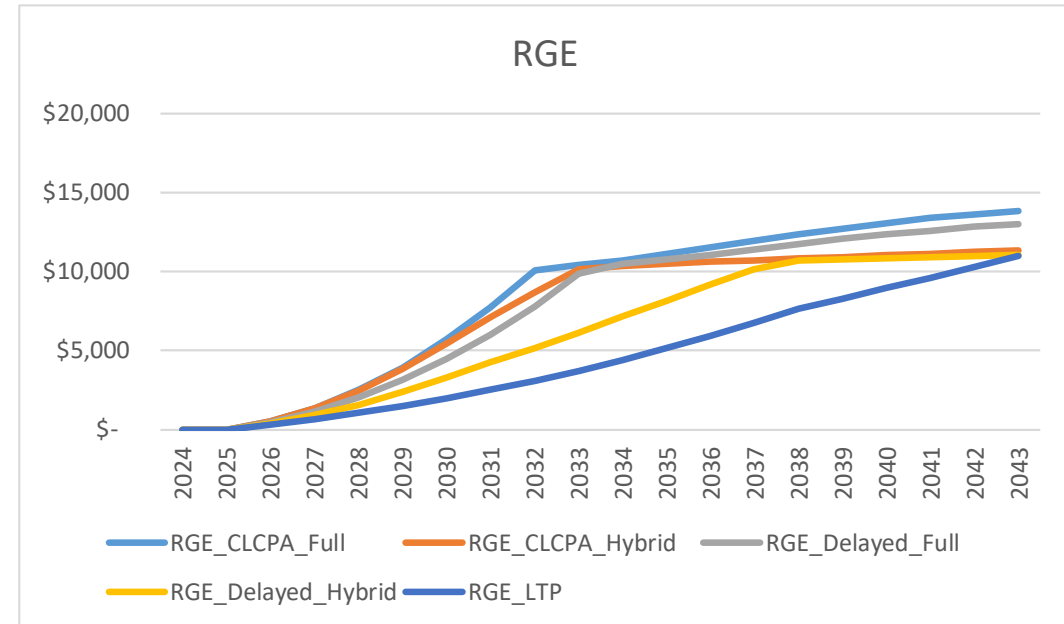
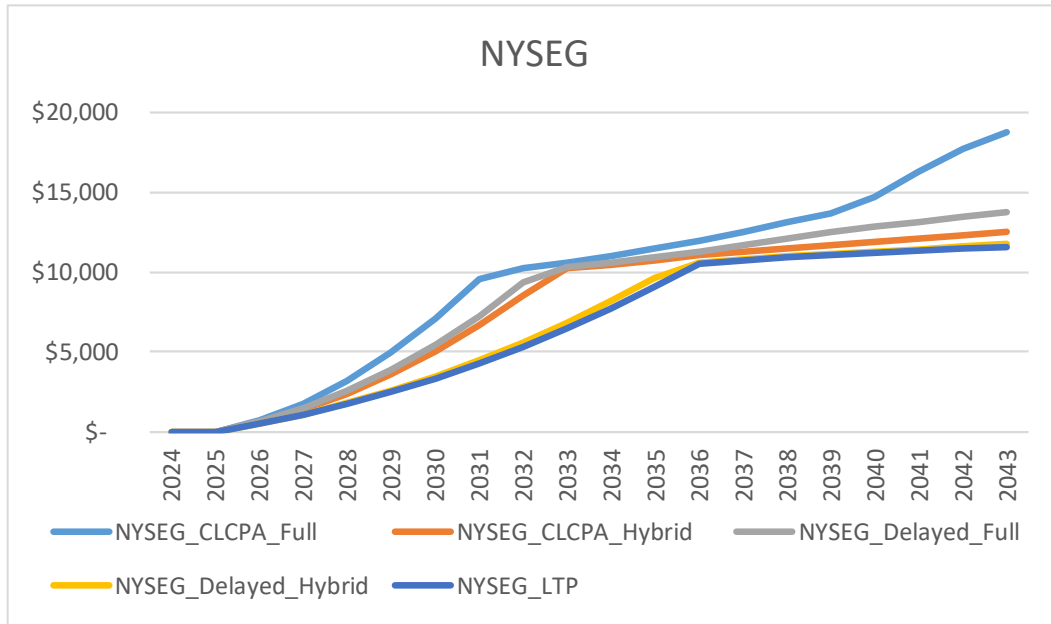
Electric Base Distribution Rate – T&D Electrification Adjustment

- Data from 2022 Natural Gas and Grid Modernization Study used to develop future T&D investment cost curve
- Cost curve used to estimate the T&D investment necessary to meet projected increases in winter peak demand due to electrification (scaled up to represent the entire electric territory, and adjusted for inflation)
- Different T&D electrification adjustment for each scenario and LTP

2043 Winter Peak Impact (MW)	NYSEG	RG&E
CLCPA-Full	879	1,302
CLCPA-Hybrid	464	568
Delayed-Full	662	1,041
Delayed-Hybrid	313	406
LTP	291	316



Cumulative T&D Investment for Each Scenario and LTP, \$M





Non-Supply Price: Clean Energy Policy-Related Costs

Clean Energy Policy-Related Costs

- Includes the following CLCPA-related program costs that have been committed to date, are not collected in base rates, and are not associated with procurement of energy:
 1. **Clean Energy Standard (“CES”)** (Includes RECS, ZEC, OREC and TIER 4)
 2. **Clean Energy Fund (“CEF”)**
 3. **Phase 2 Transmission**

- Annual revenue requirement amounts for these programs are estimated for NYSEG and RGE (See Table B-8)
- Total electric revenue requirement is divided by kWh quantities that differ by scenario and LTP to calculate rate impact.



Clean Energy Policy Cost Components

Clean Energy Standard (Includes RECS, ZEC, OREC and TIER 4)

- RECs: existing company-specific revenue requirement assumed to increase by 10% per year.
- ZEC: existing company-specific revenue requirement assumed to increase by inflation each year.
- OREC: \$6.9B statewide cost. Costs levelized using a 7% discount rate over 25-year contract period commencing in the in-service year of each offshore wind project. Costs are allocated to NYSEG and RG&E based on load-share basis.
- Tier 4: Champlain Hudson Express (2026) and Clean Path New York (2027) transmission projects. 25-year contracts estimated at \$12.2B, of which 20% will be funded by NYC with remaining 80% socialized to other NYS electric customers. Costs levelized using a 7% discount rate over the 25-year contract term. Payments start at beginning of in-service year with costs allocated to NYSEG and RG&E on load-share basis.

Clean Energy Fund

- NYSERDA operated programs including Market Development and Innovation and Research, NY Green Bank, and NY-Sun. Existing company-specific revenue requirement assumed to increase at rate of inflation.

Phase 2 Transmission

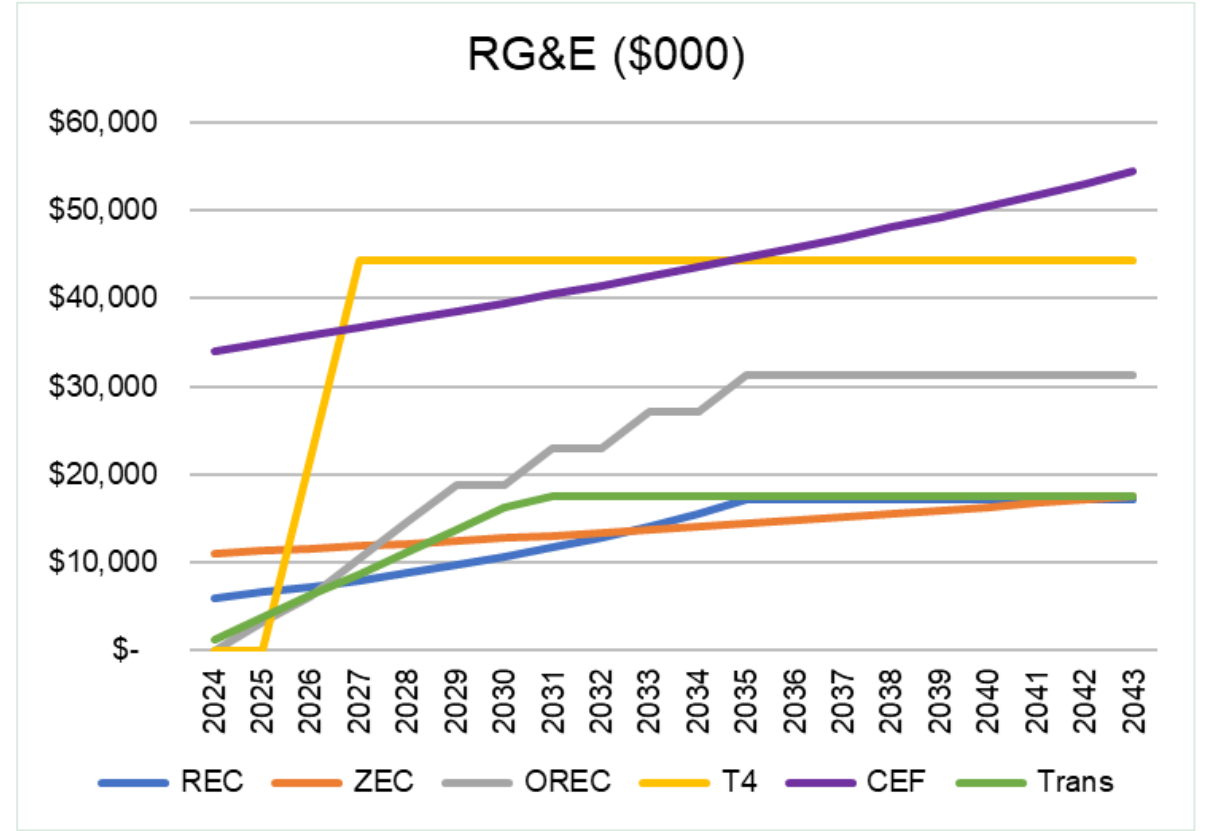
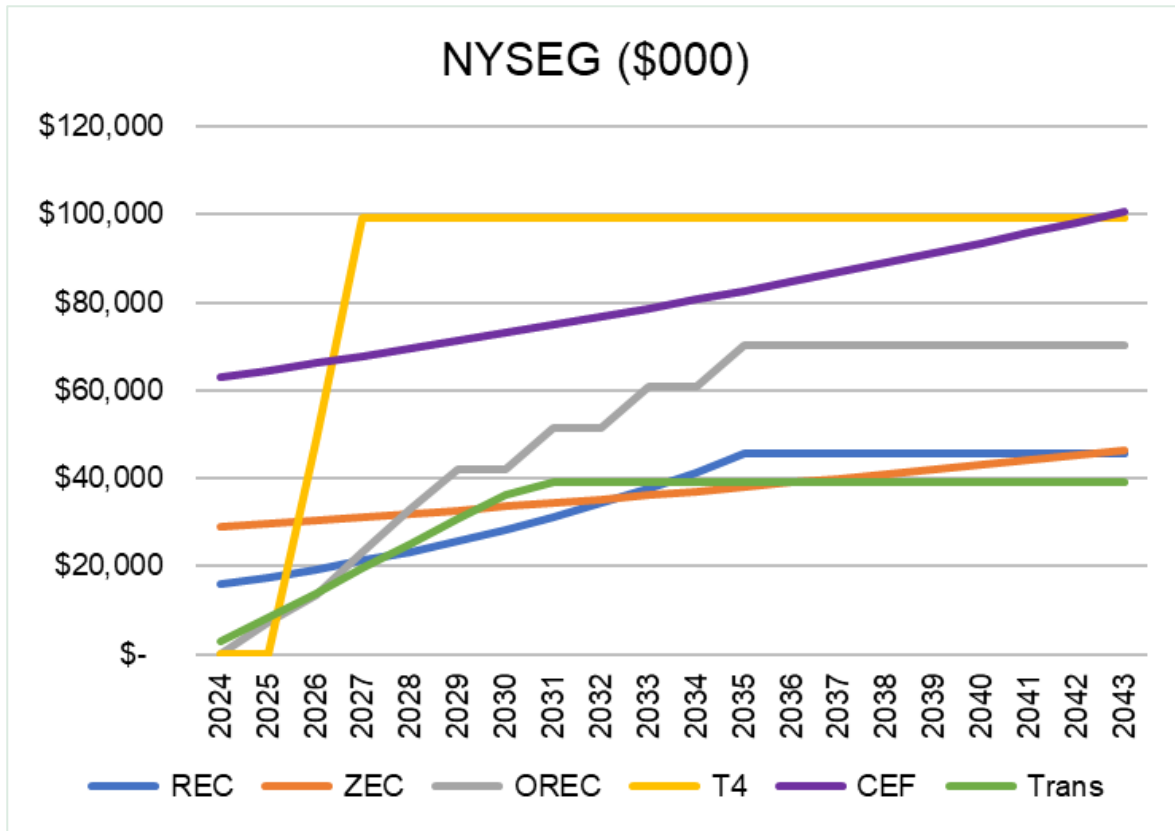
- Commission approved \$4.4B in projects statewide. Assume invested in equal amounts from 2024 through 2030. Levelized cost to customers computed based on a 30-year collection period and a 7% discount rate. Costs allocated to NYSEG and RG&E on load-share basis.

Clean Energy Policy Cost Components

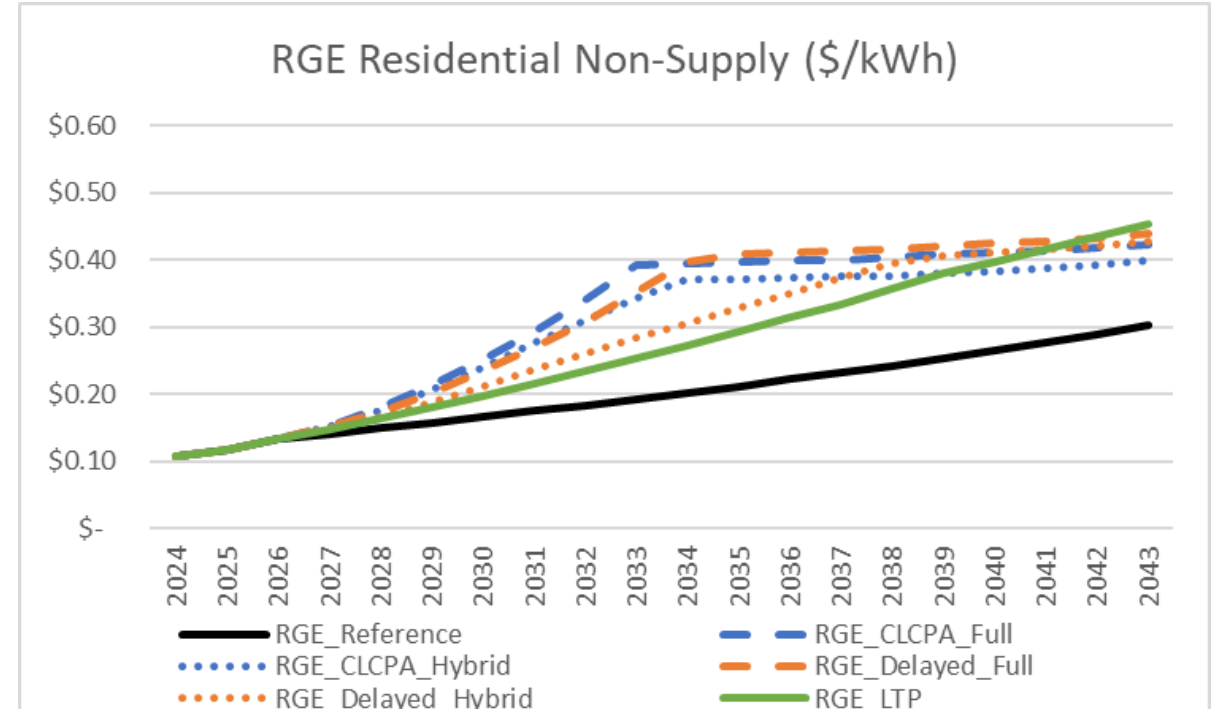
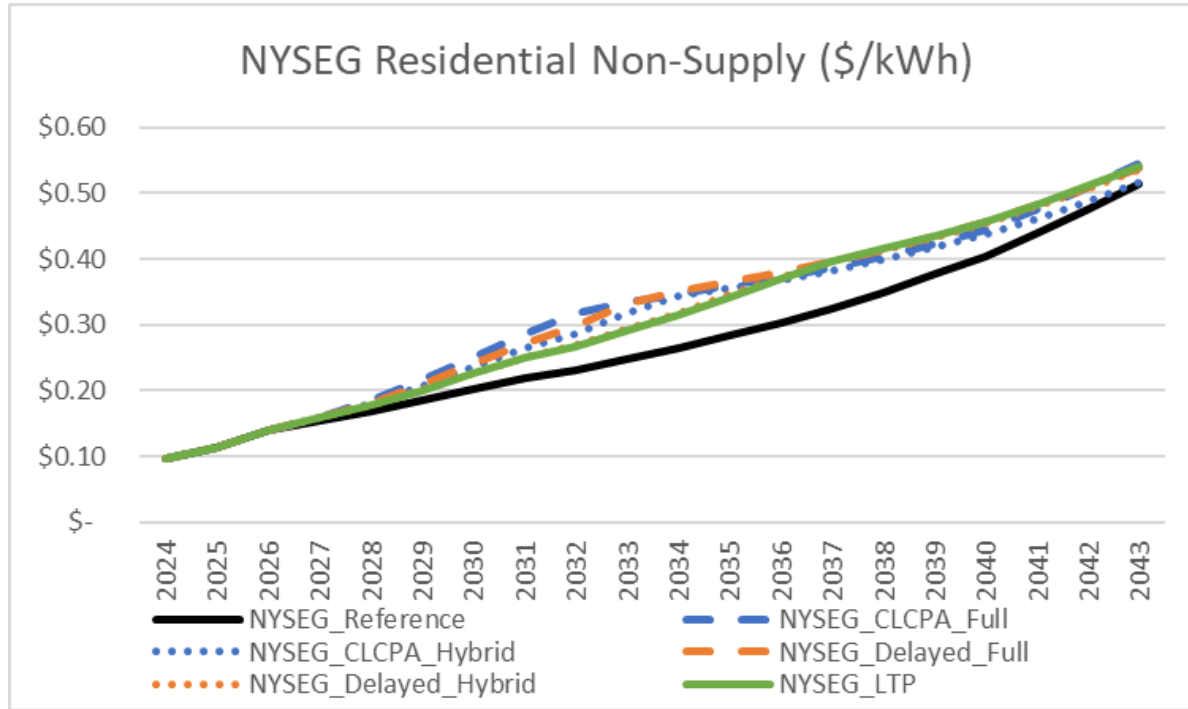


➤ Table B-8

Clean Energy Policy Adjustment Revenue Requirement



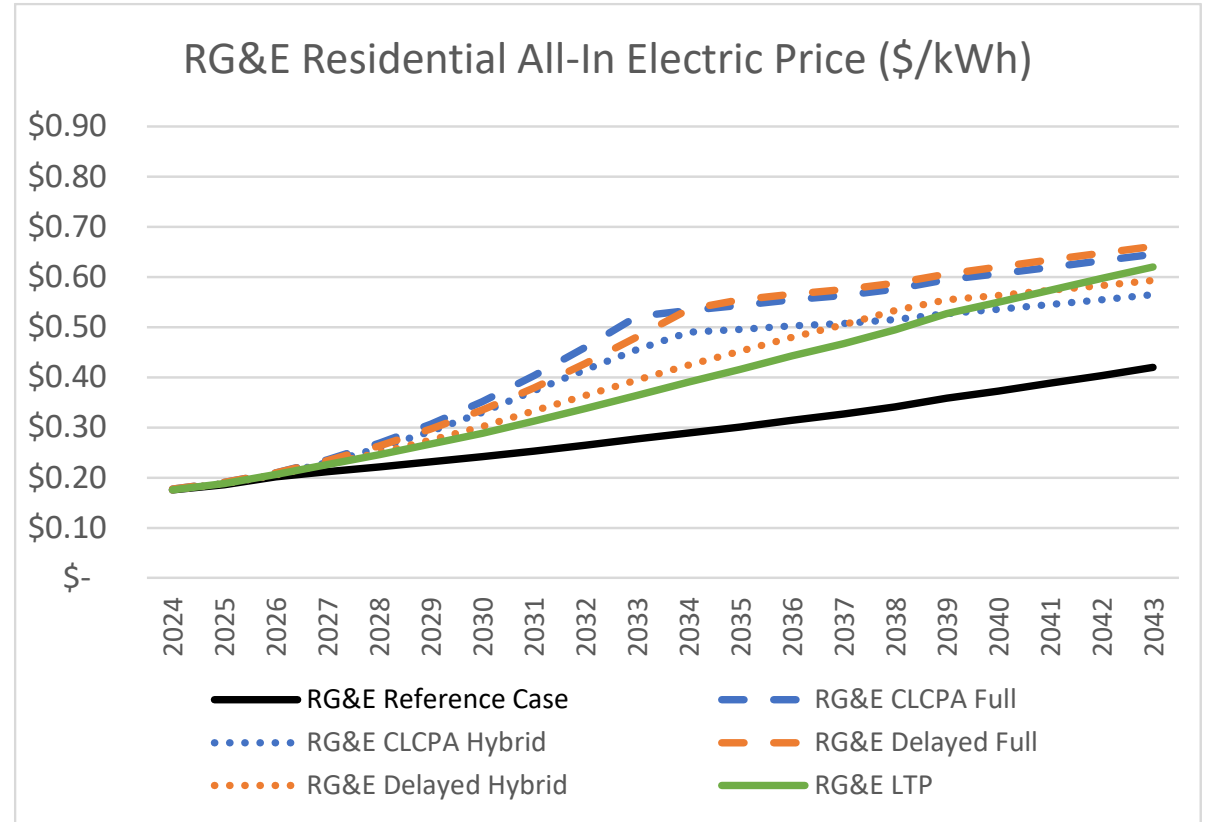
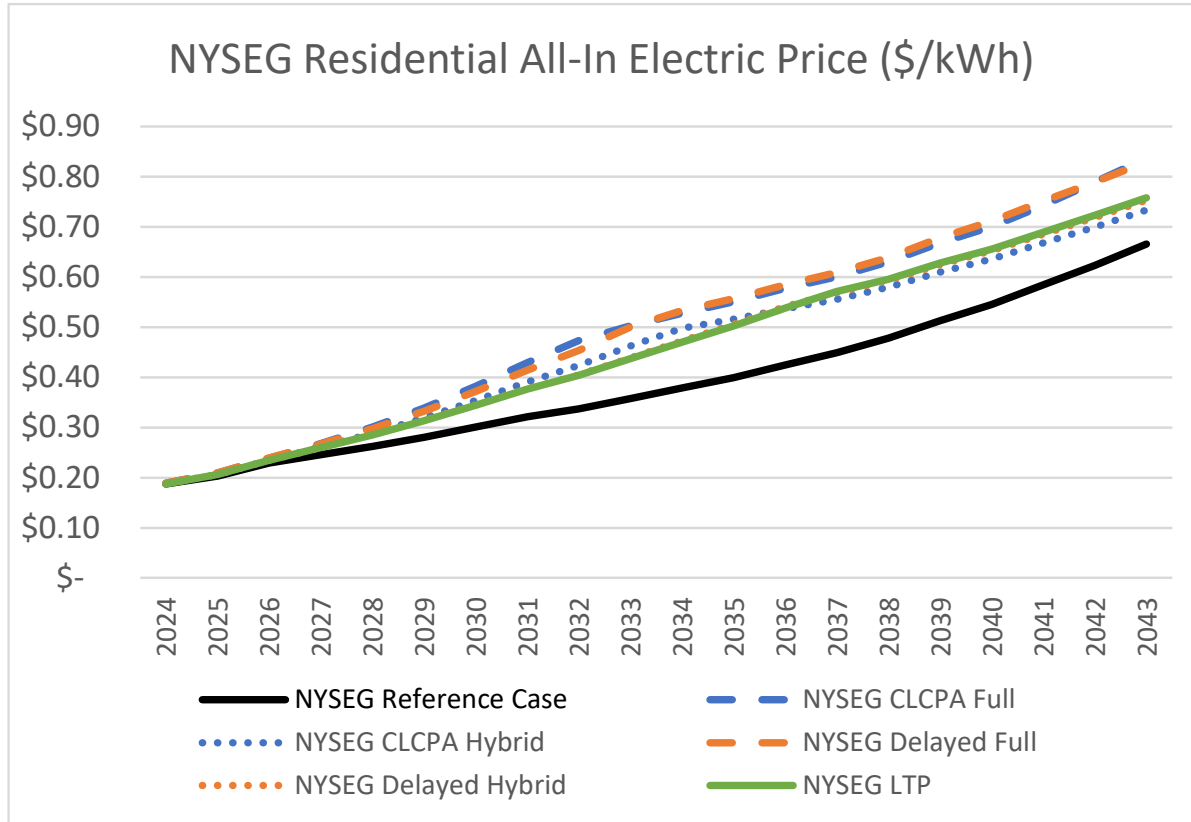
Electric Non-Supply Price Forecast





Annual Residential All-In Electric Price

➤ Figure B-4





Questions