



Connecticut Department of Energy and Environmental Protection



ADM Meeting

August 24, 2017
1:30 — 3:30 p.m.



Connecticut Department of Energy and Environmental
Protection

Agenda

1:30

Welcome & Announcements
DEEP Commissioner Klee

1:05

Review REMI inputs, assumptions, and analysis of the transportation and building sectors to date
Stanley McMillen, Consultant

1:35

Discuss and provide guidance on REMI inputs and assumptions

3:00

Public Comments

Review REMI inputs, assumptions, and analysis of the transportation and building sectors to date



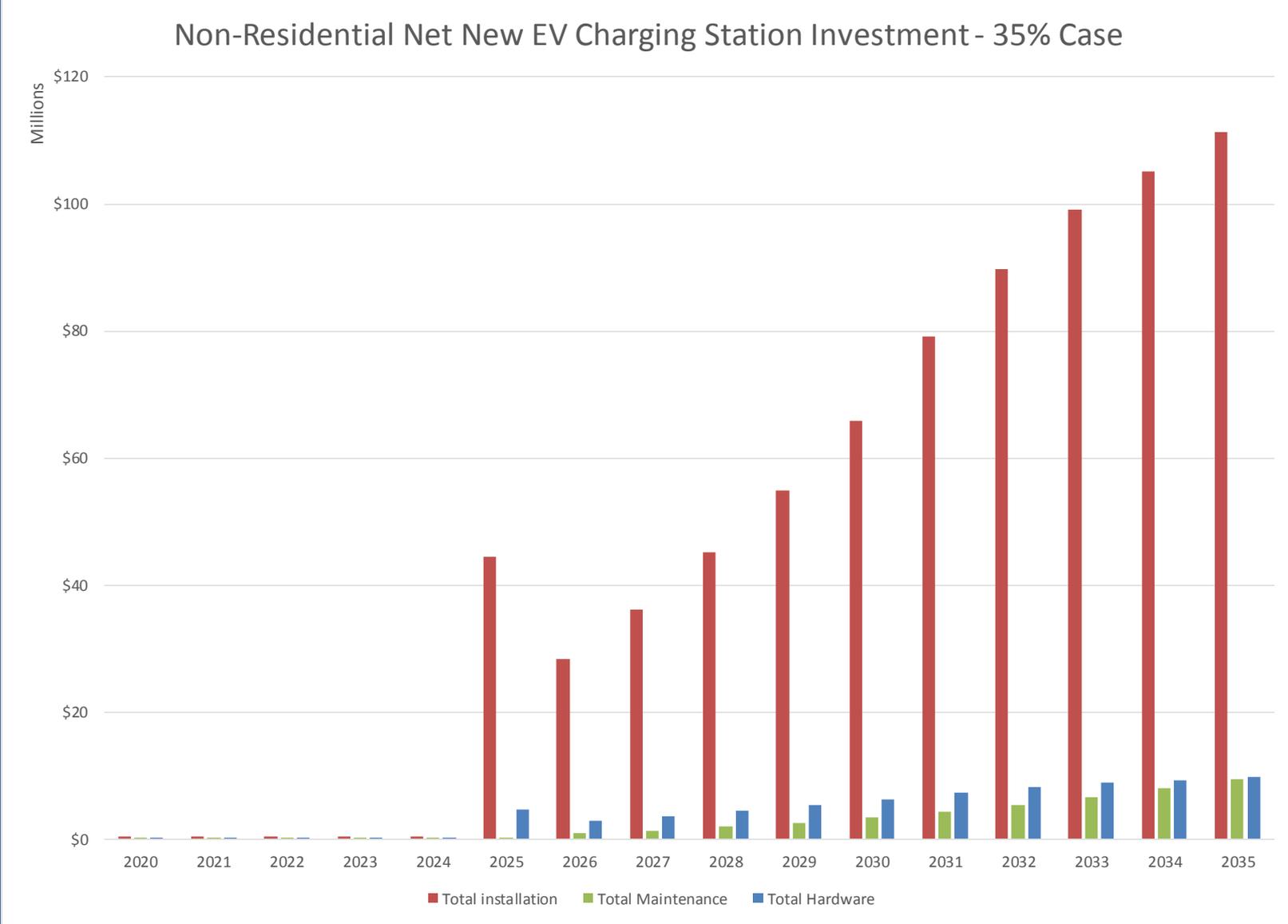
Summary of Scenarios Modeled in REMI

- Compare relative costs of 35% and 55% GHG mid-term reduction targets in 2030 on the way to 80% reduction by 2050
- The current REMI analysis focuses on transportation and buildings

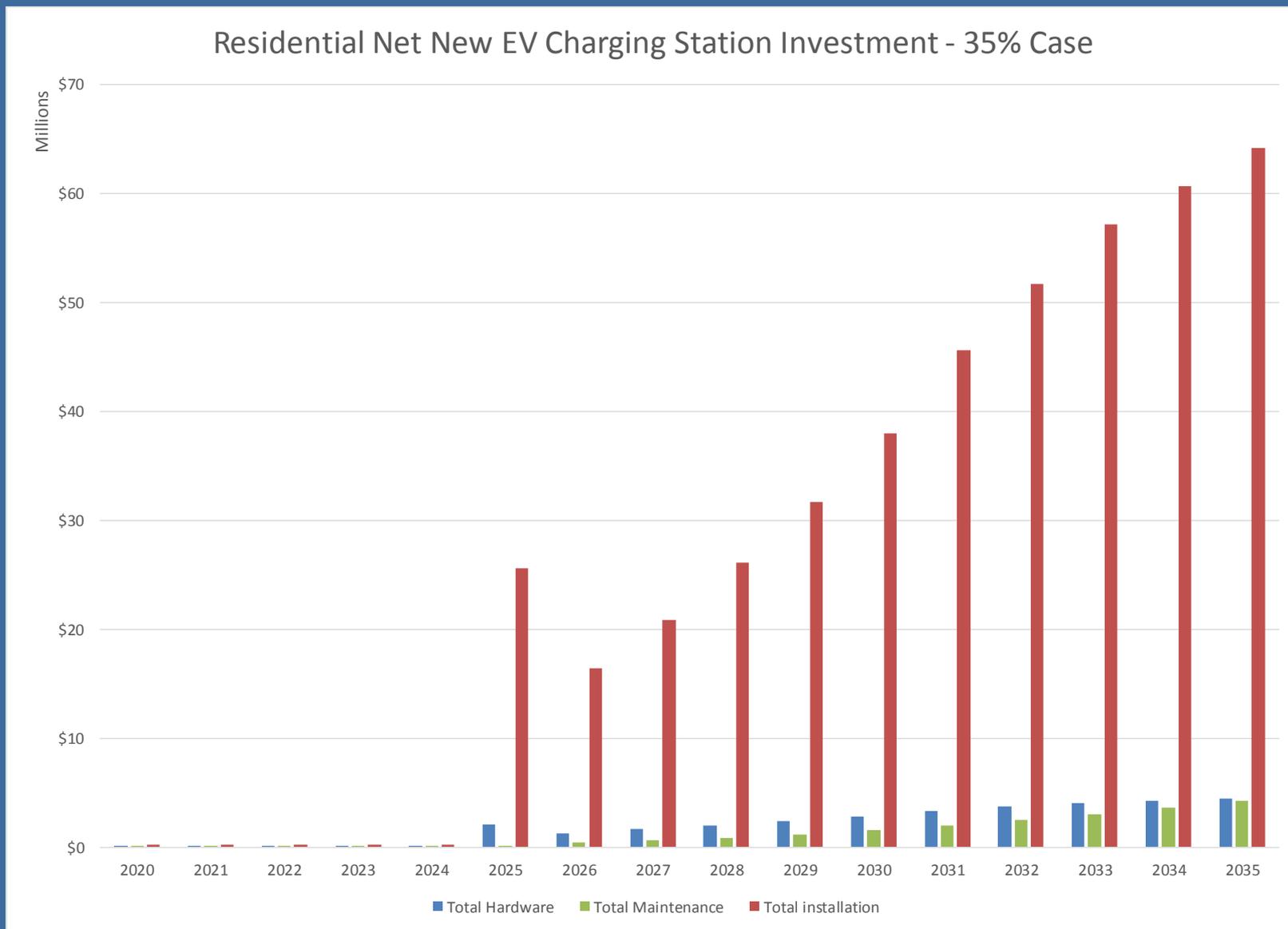
LEAP Outputs Used in the Transportation Sector REMI Analysis

- Changes in vehicle purchases relative to the reference case
- Changes in transportation fuel consumption relative to the reference case

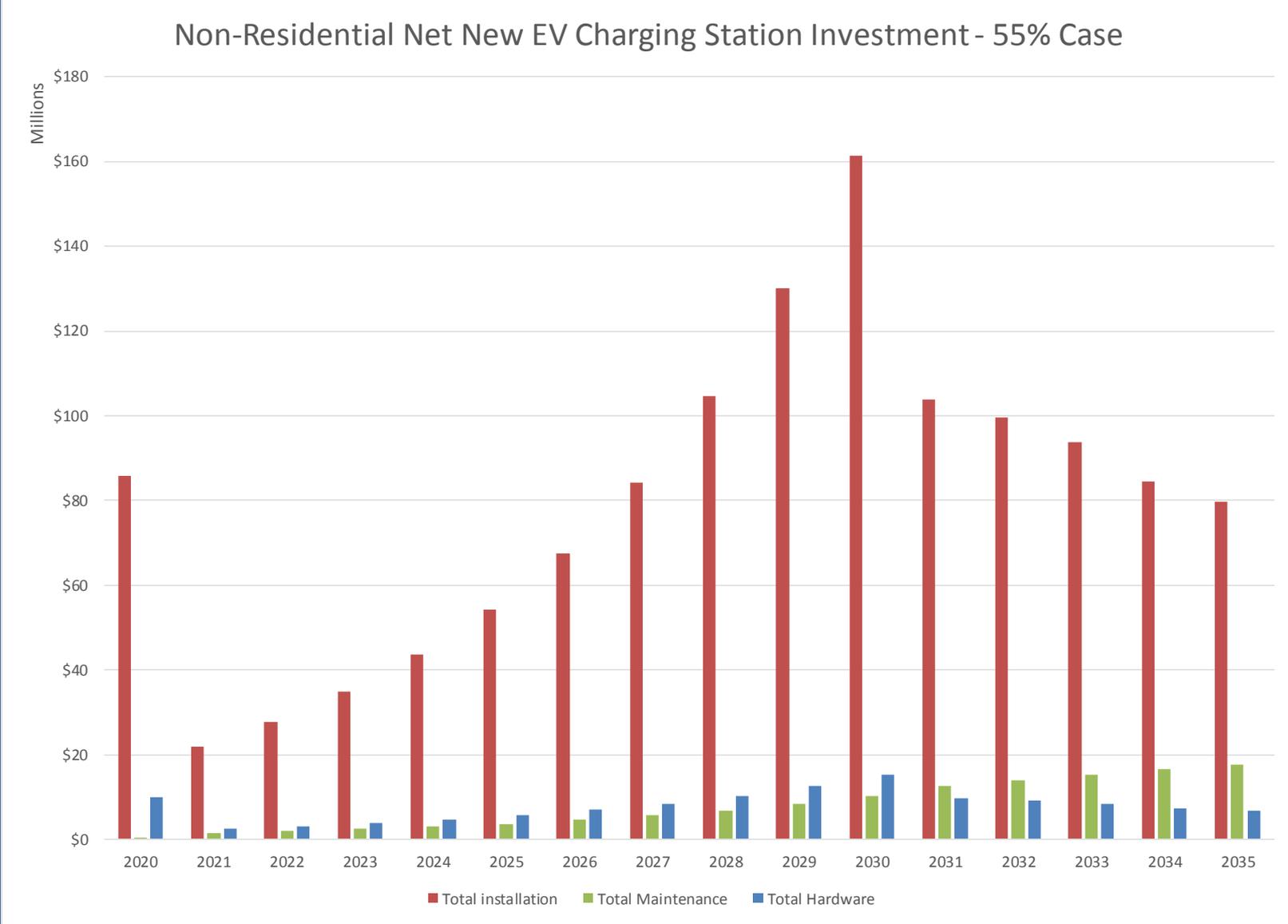
Non-residential EV Charging Station Investment, 35% Case



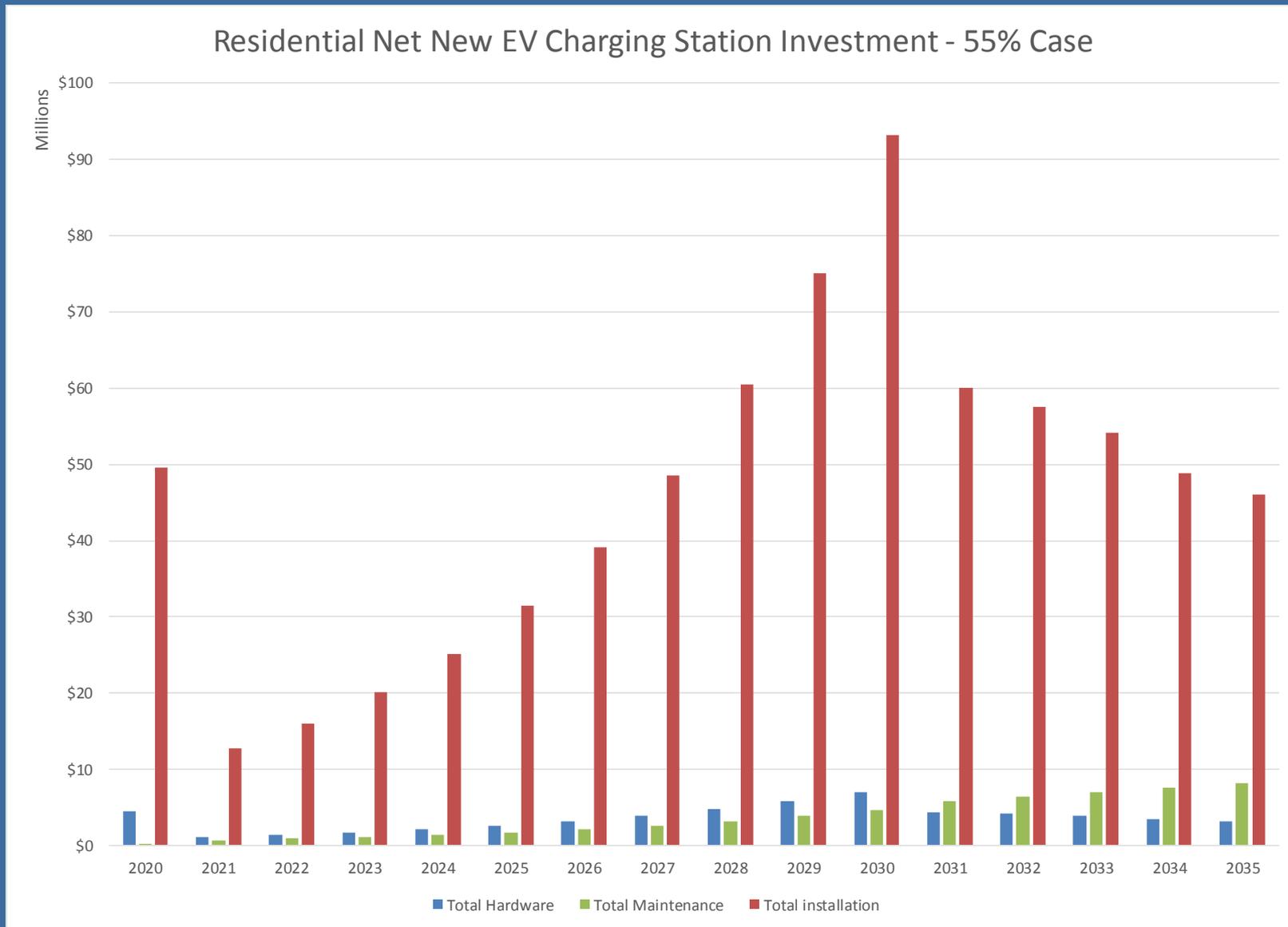
Residential EV Charging Station Investment, 35% Case



Non-residential EV Charging Station Investment, 55% Case

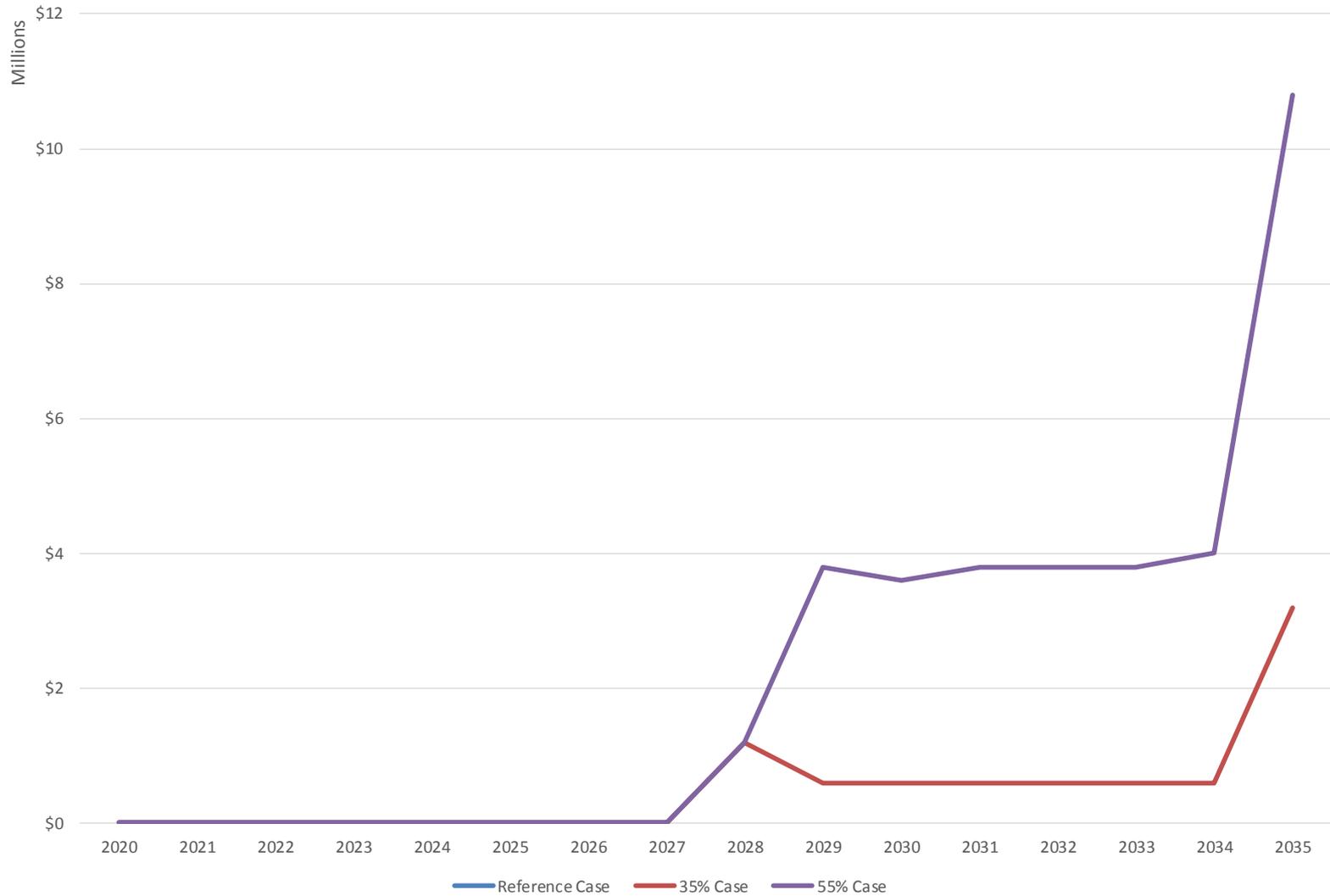


Residential EV Charging Station Investment, 55% Case



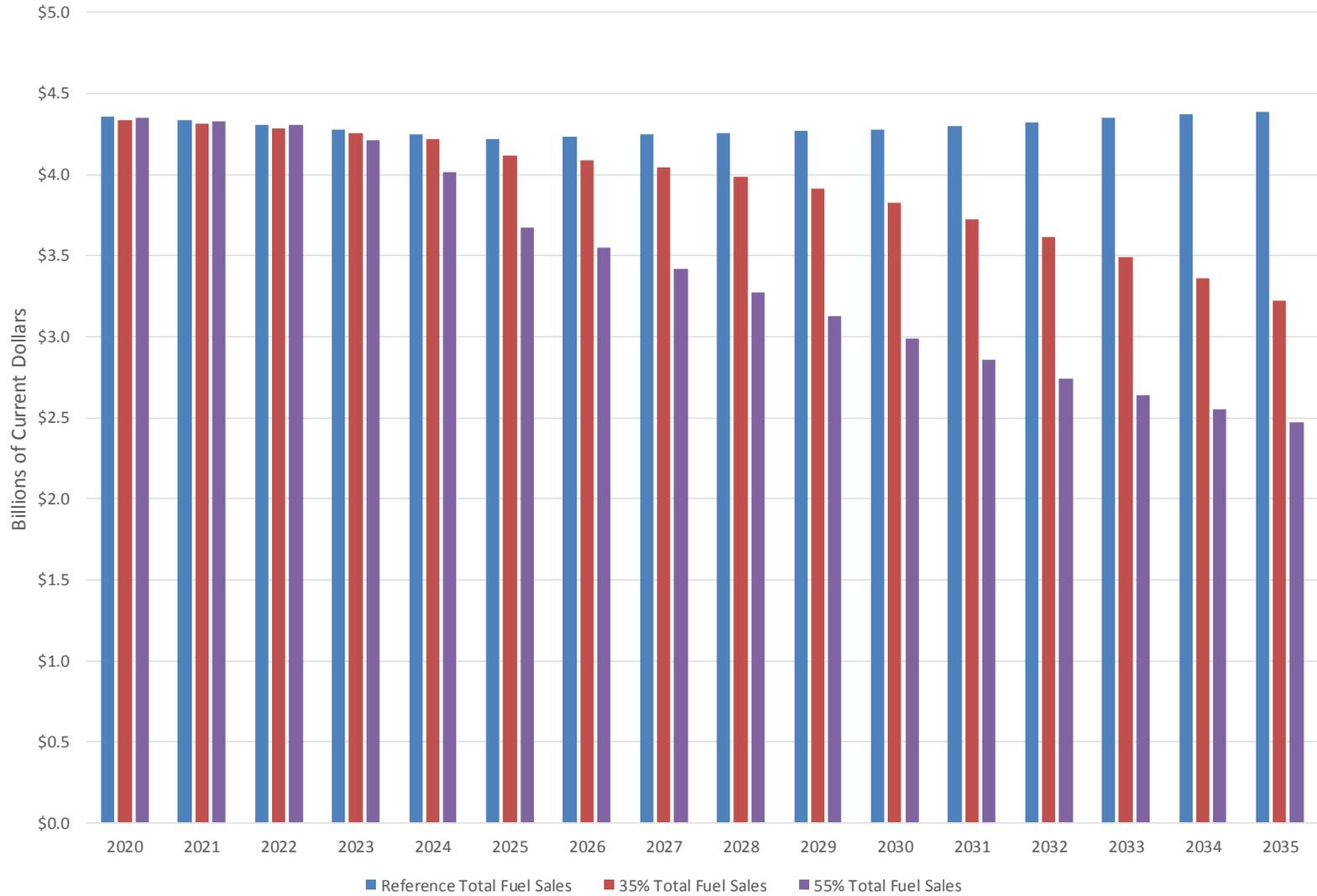
Hydrogen Filling Station Investment

H2 Filling Station Net New Investment in Current Dollars

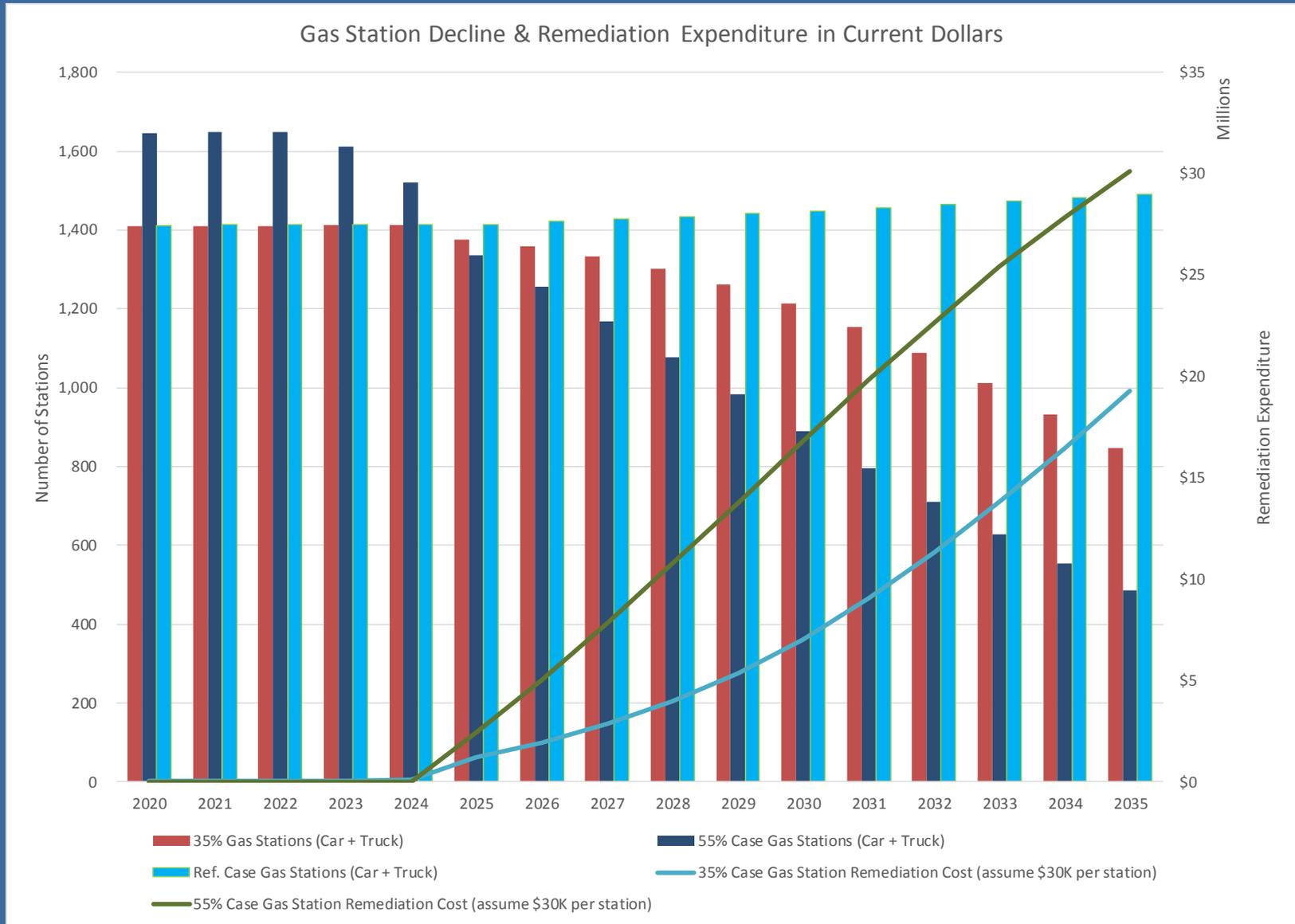


Total Retail Fuel Sales

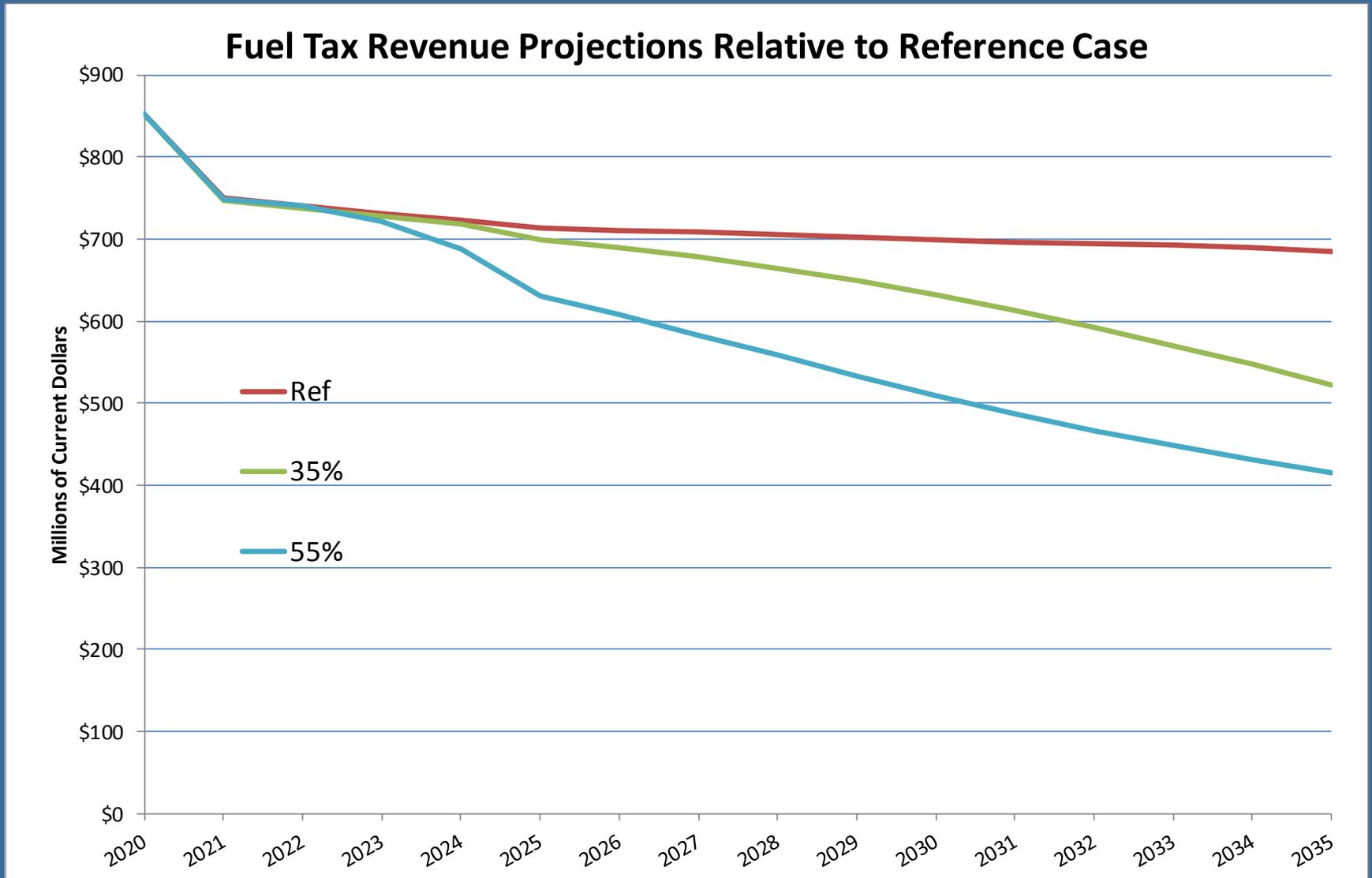
Total Fuel Sales for Reference, 35%, 45% and 55% Cases



Gas Station Market Exit & Remediation Costs

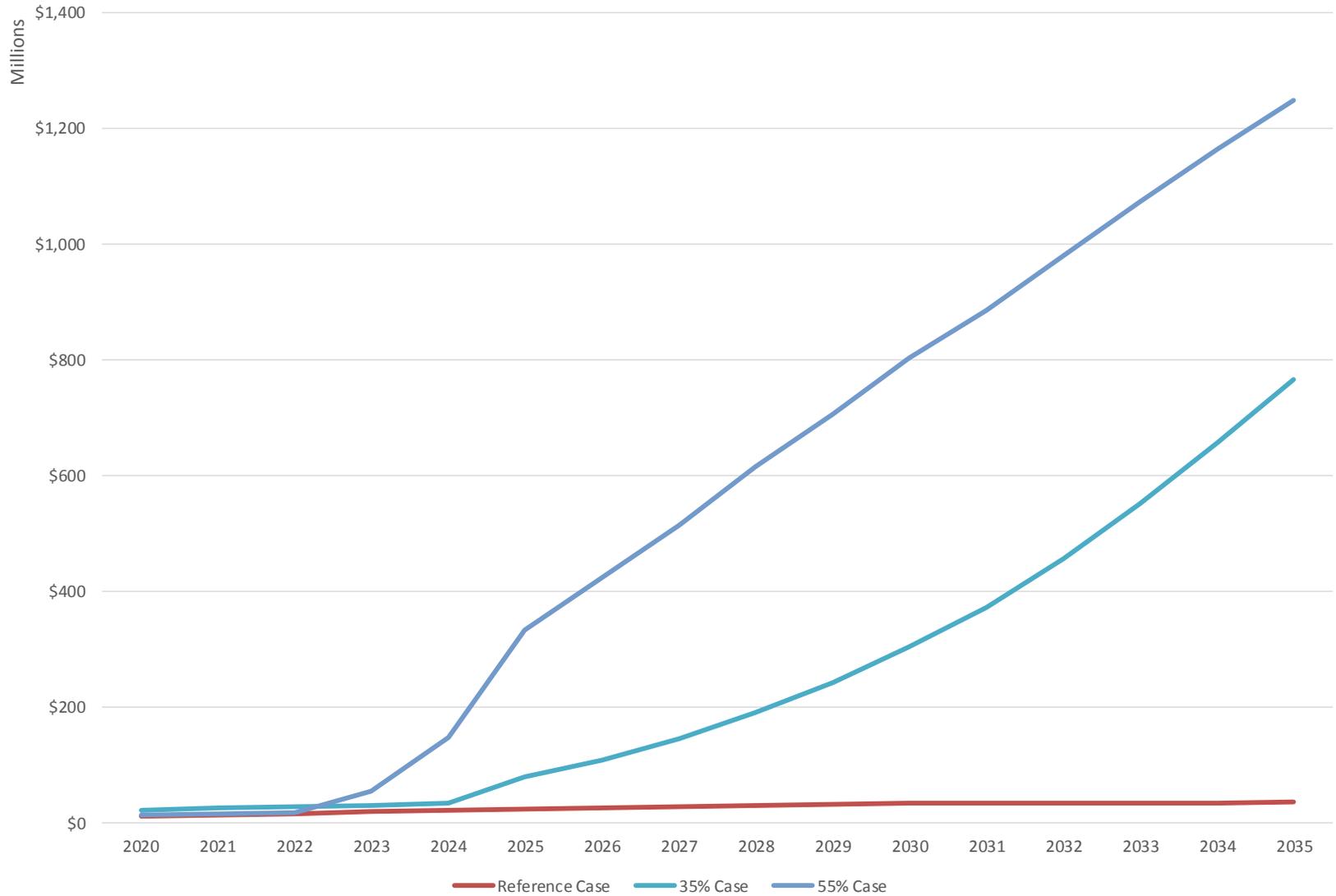


Gas Tax Shortfall From Reference Case (Included in REMI)



Electricity Demand

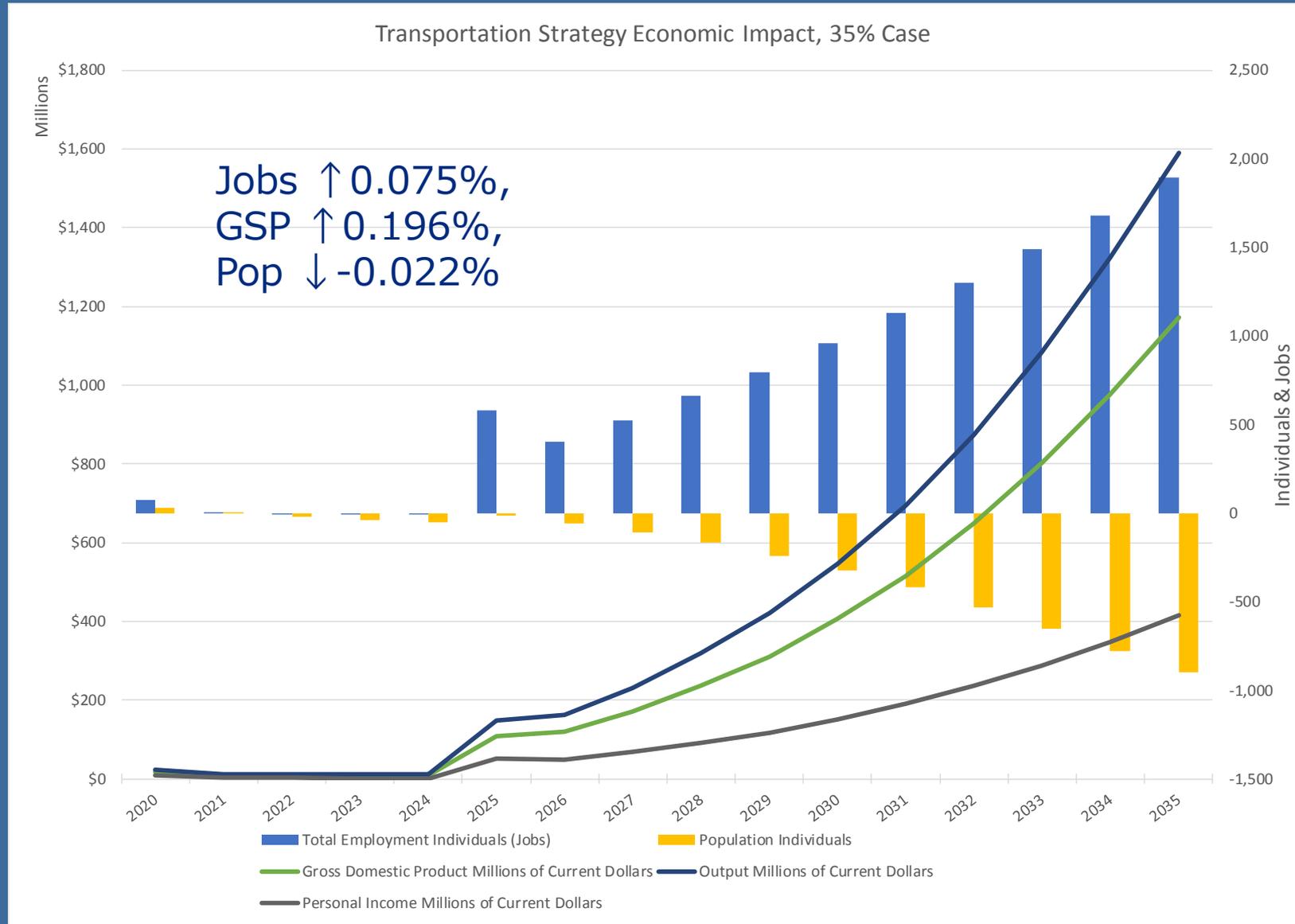
Electricity Sales (2013 Constant Dollars)



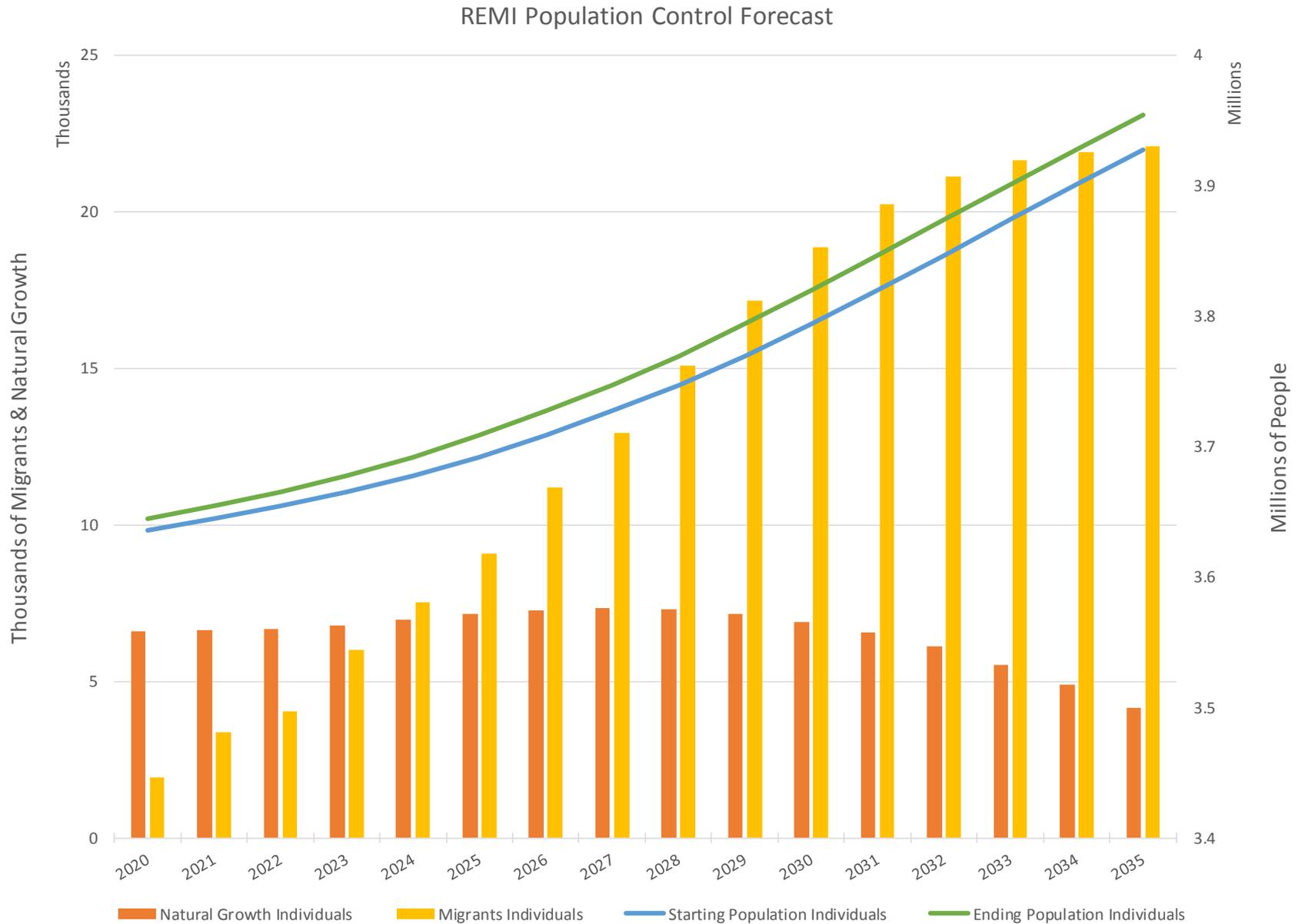
CHEAPR Incentive & Health Benefits, All Cases

- CHEAPR continues at an average of \$1.5 million per year through 2021 and induces a switch to EVs (about 600 vehicles per year).
- We assume consumers buy replacement vehicles that cost more.

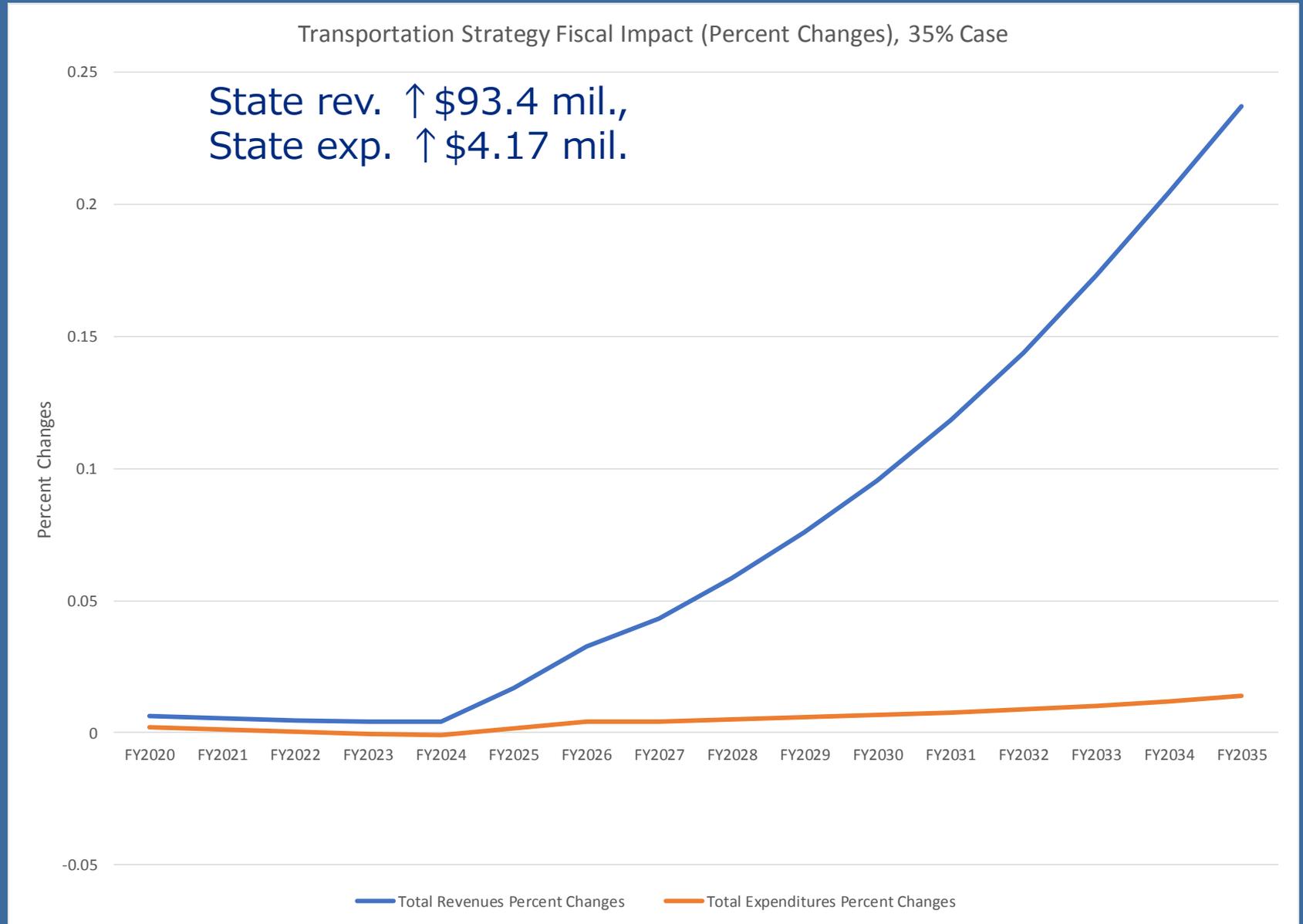
Transportation Sector Economic Impact, 35% Case



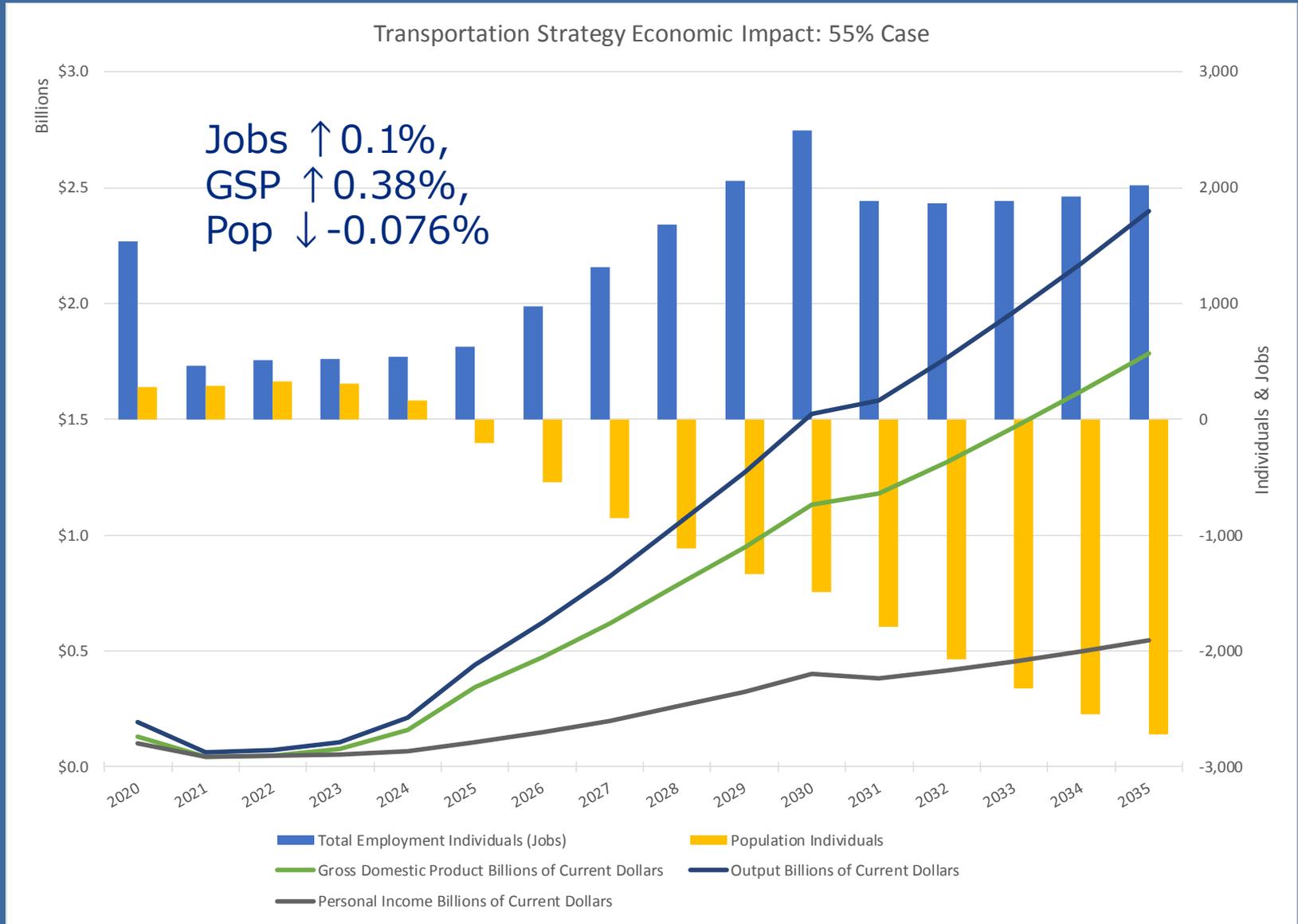
REMI Population Forecast



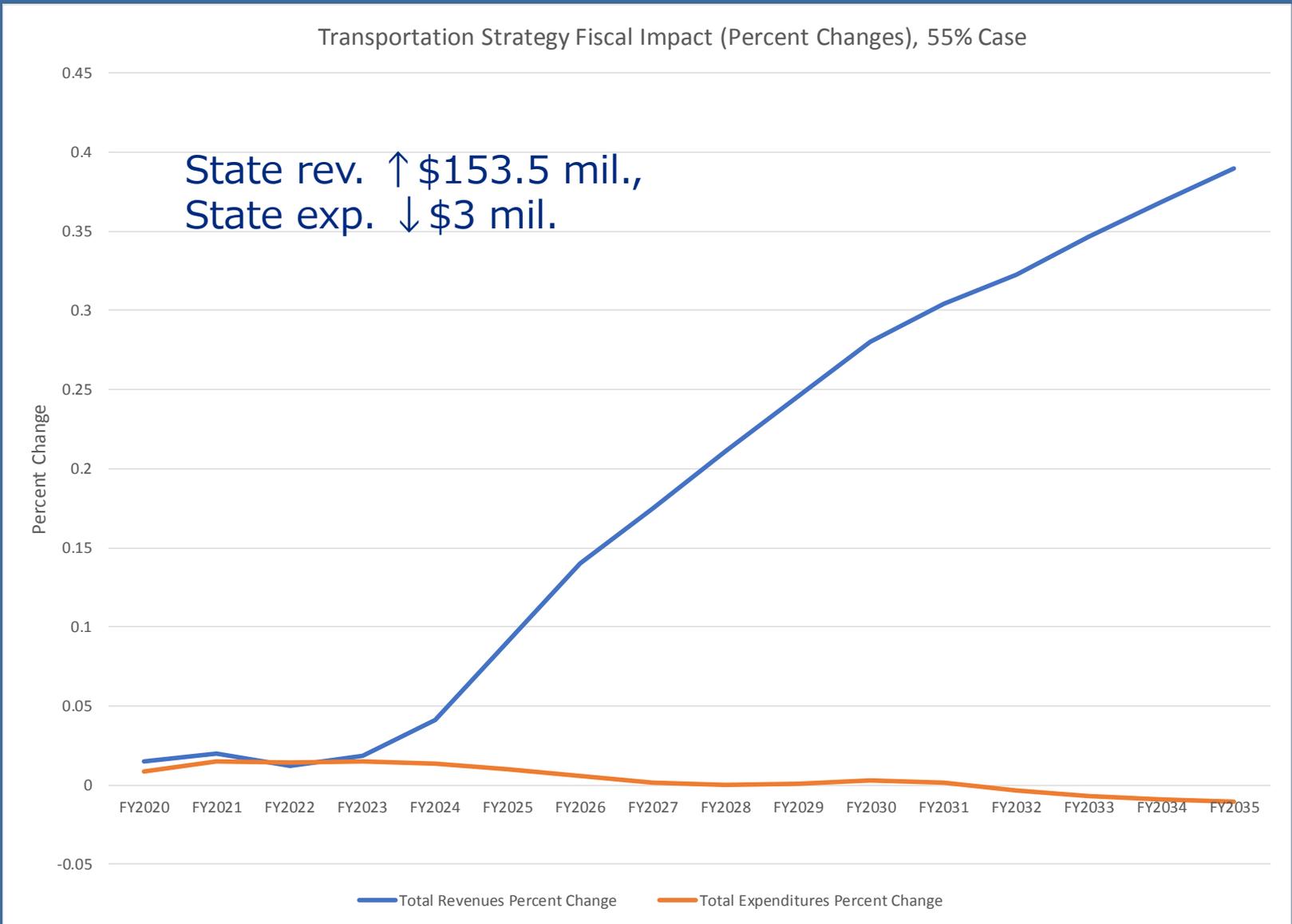
Transportation Sector Fiscal Impact (% Changes), 35% Case



Transportation Sector Economic Impact, 55% Case



Transportation Sector Fiscal Impact (% Changes), 55% Case

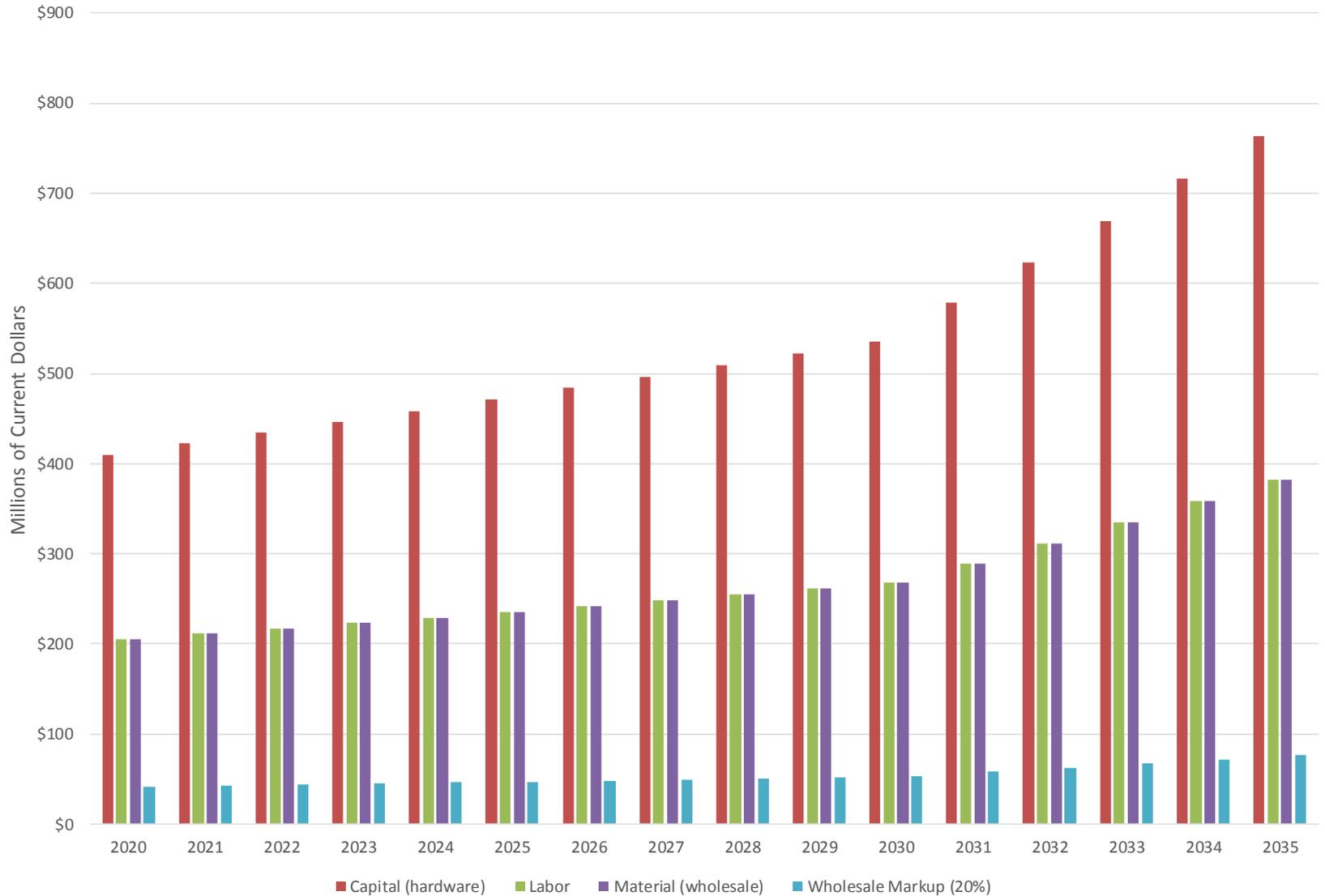


LEAP Outputs Used in the Building Sector REMI Analysis

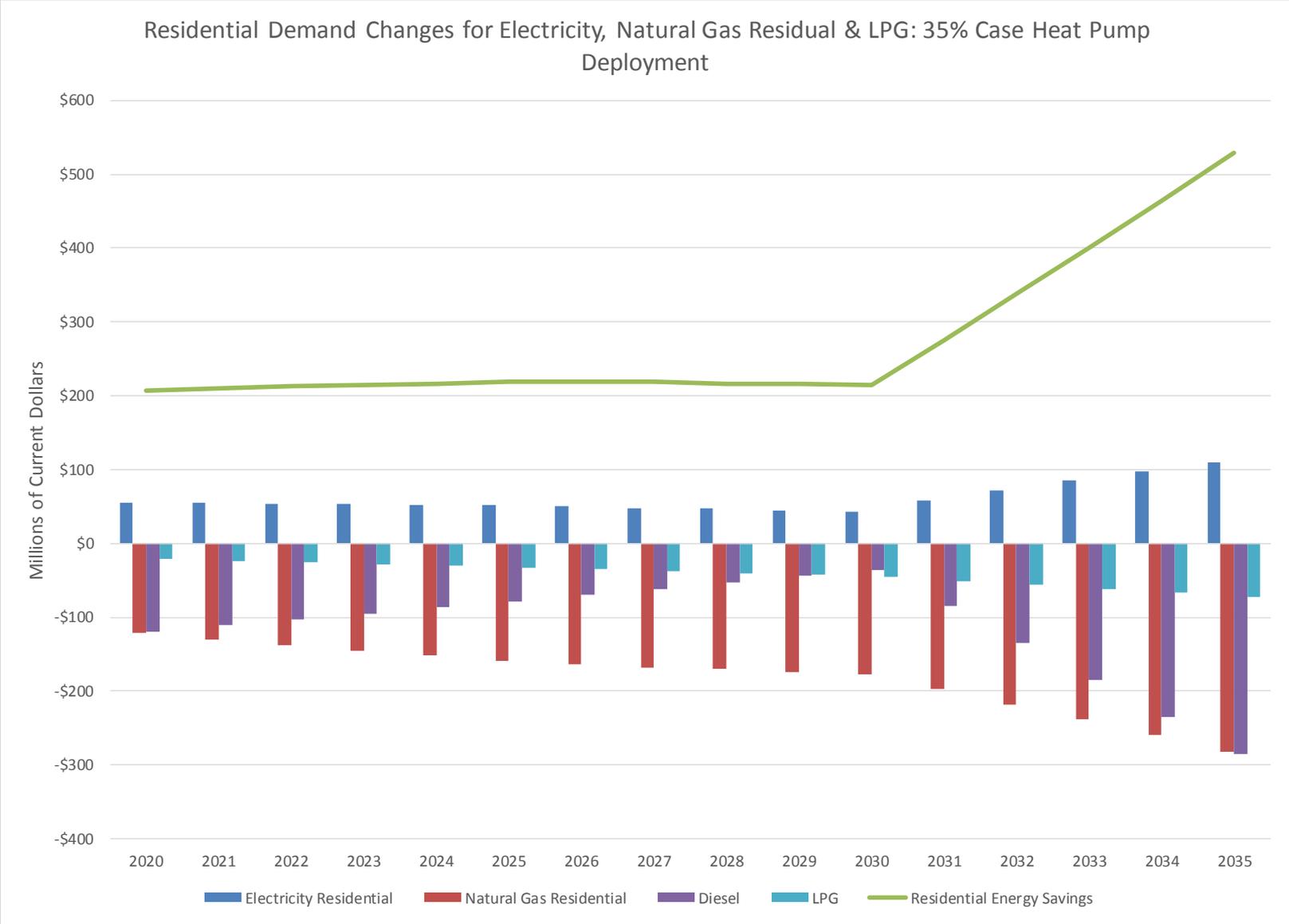
- Changes in electric demand relative to the reference case
- Changes in the adoption of heat pumps relative to the reference case
- Changes in energy efficiency relative to the reference case

Building Sector Heat Pump Investment, 35% Case

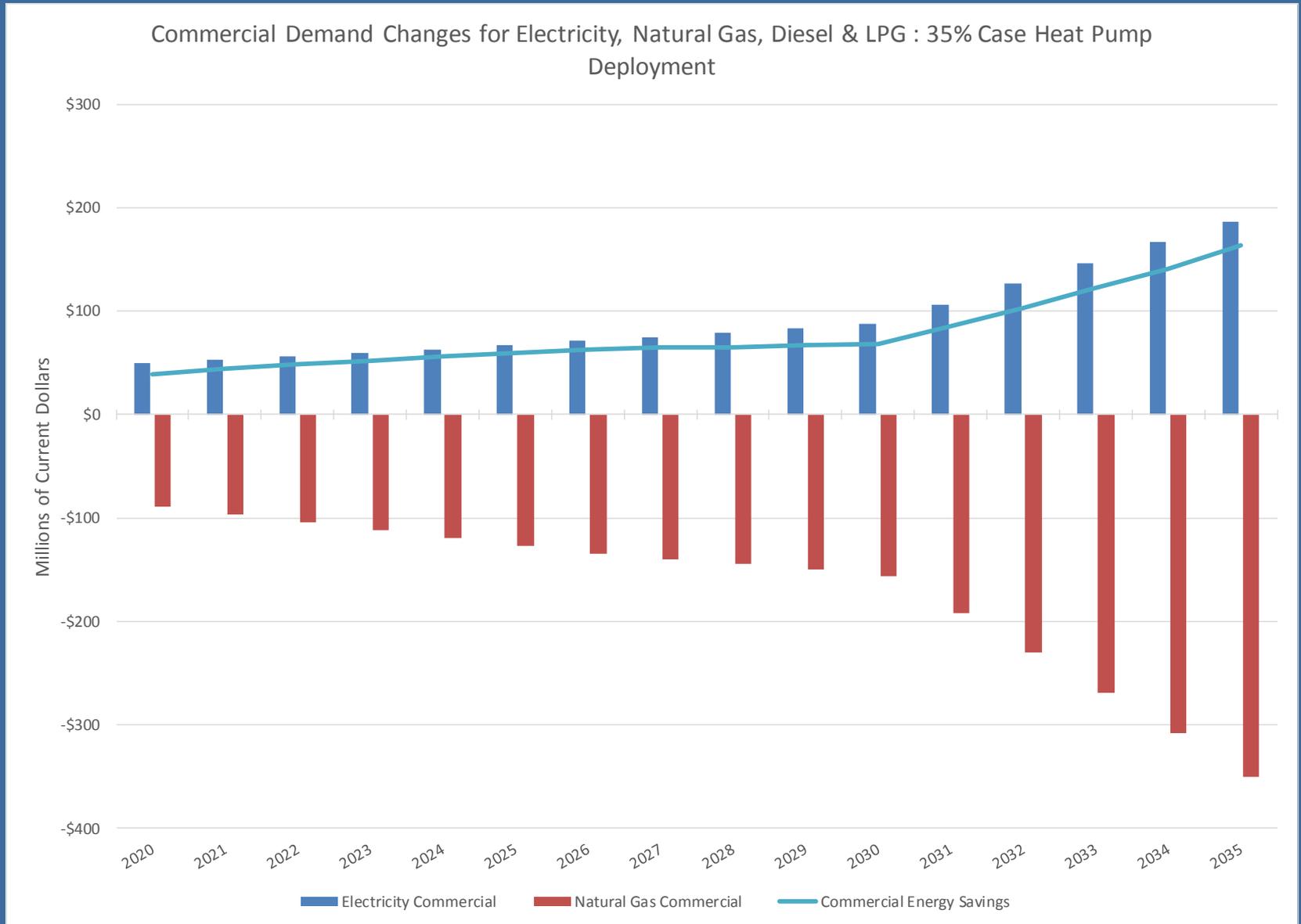
Combined Residential & Commercial Heat Pump Investment: 35% Case



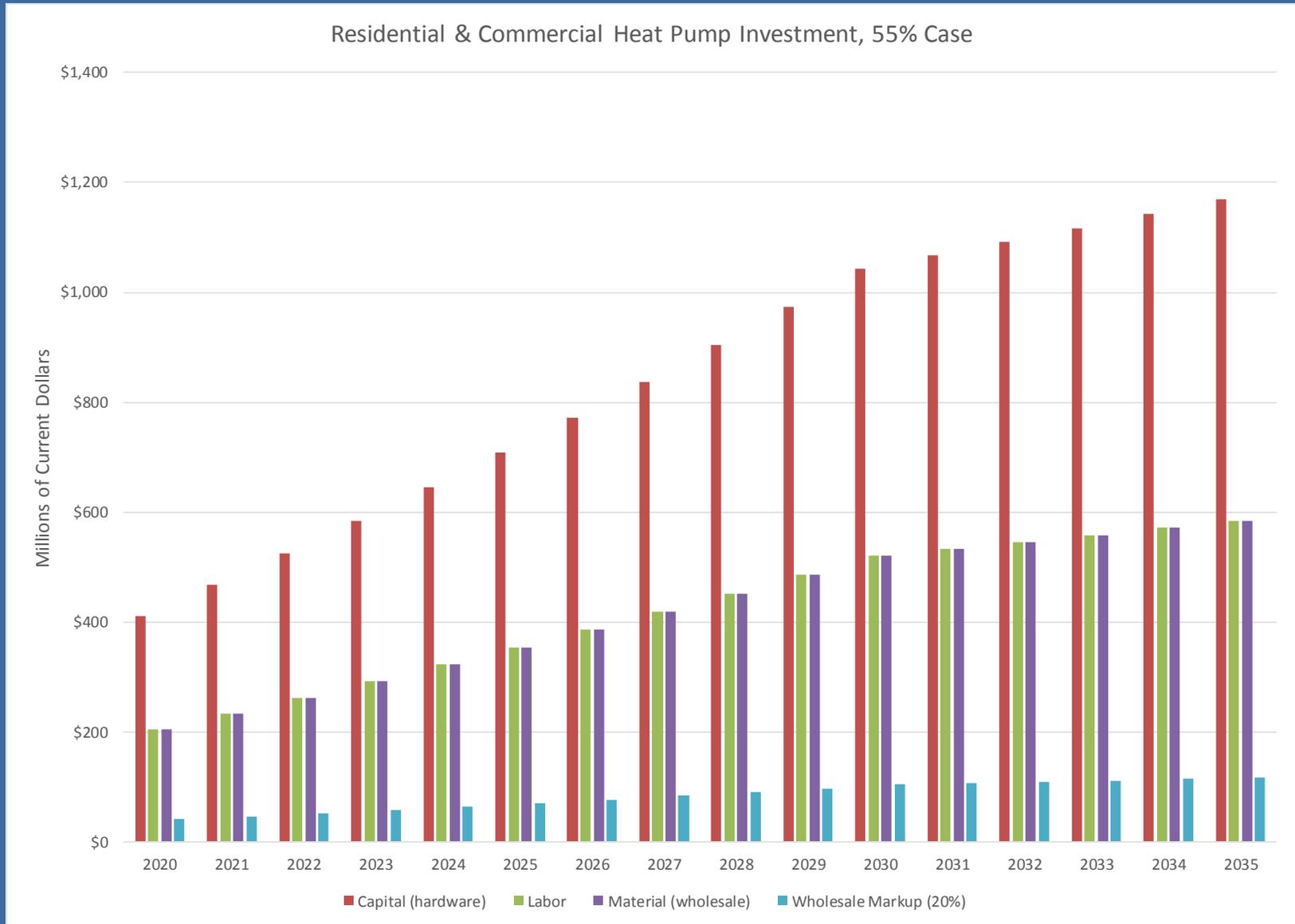
Residential Building Sector Heat Pump Deployment, 35% Case



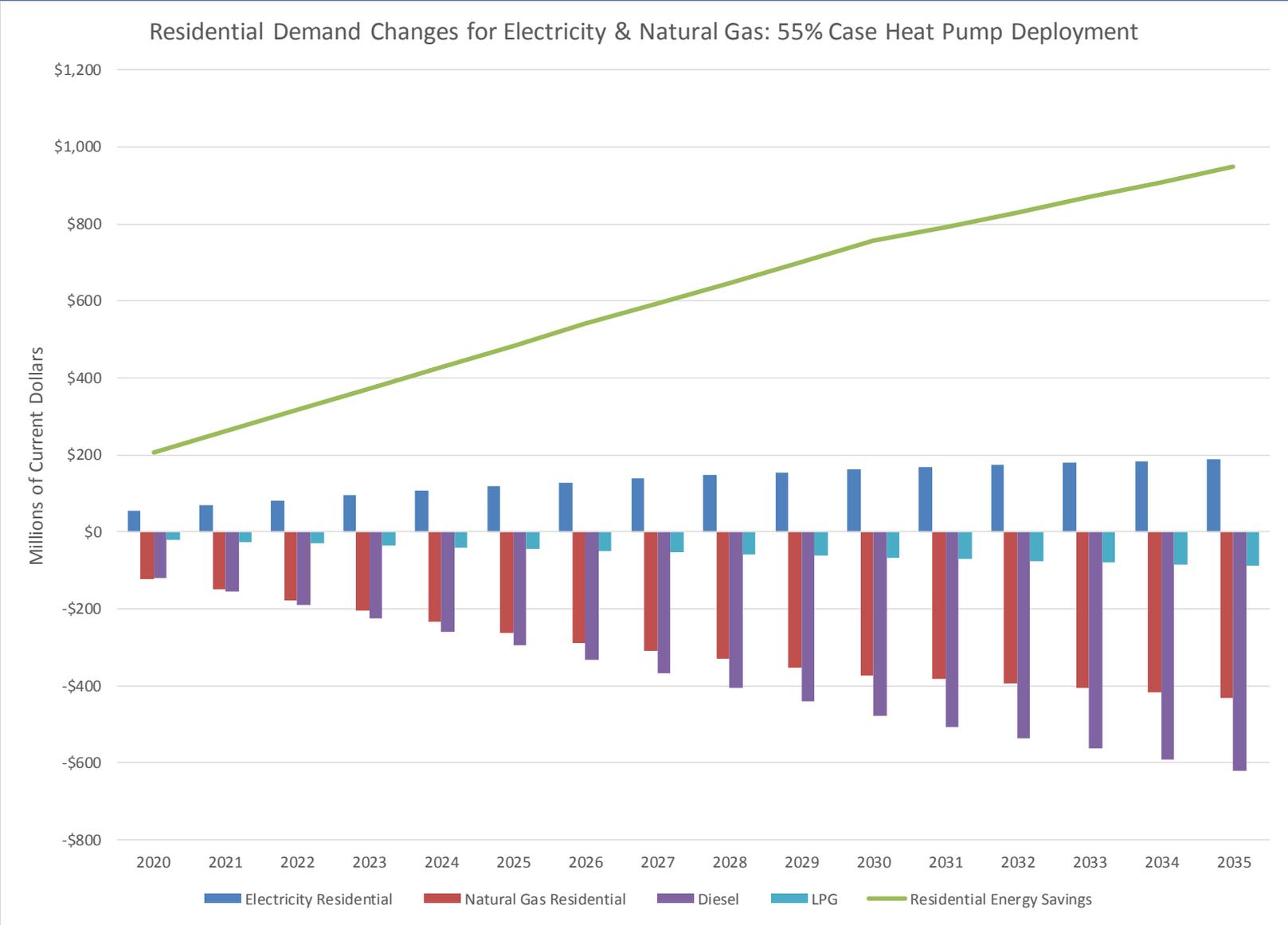
Commercial Building Sector Heat Pump Deployment, 35% Case



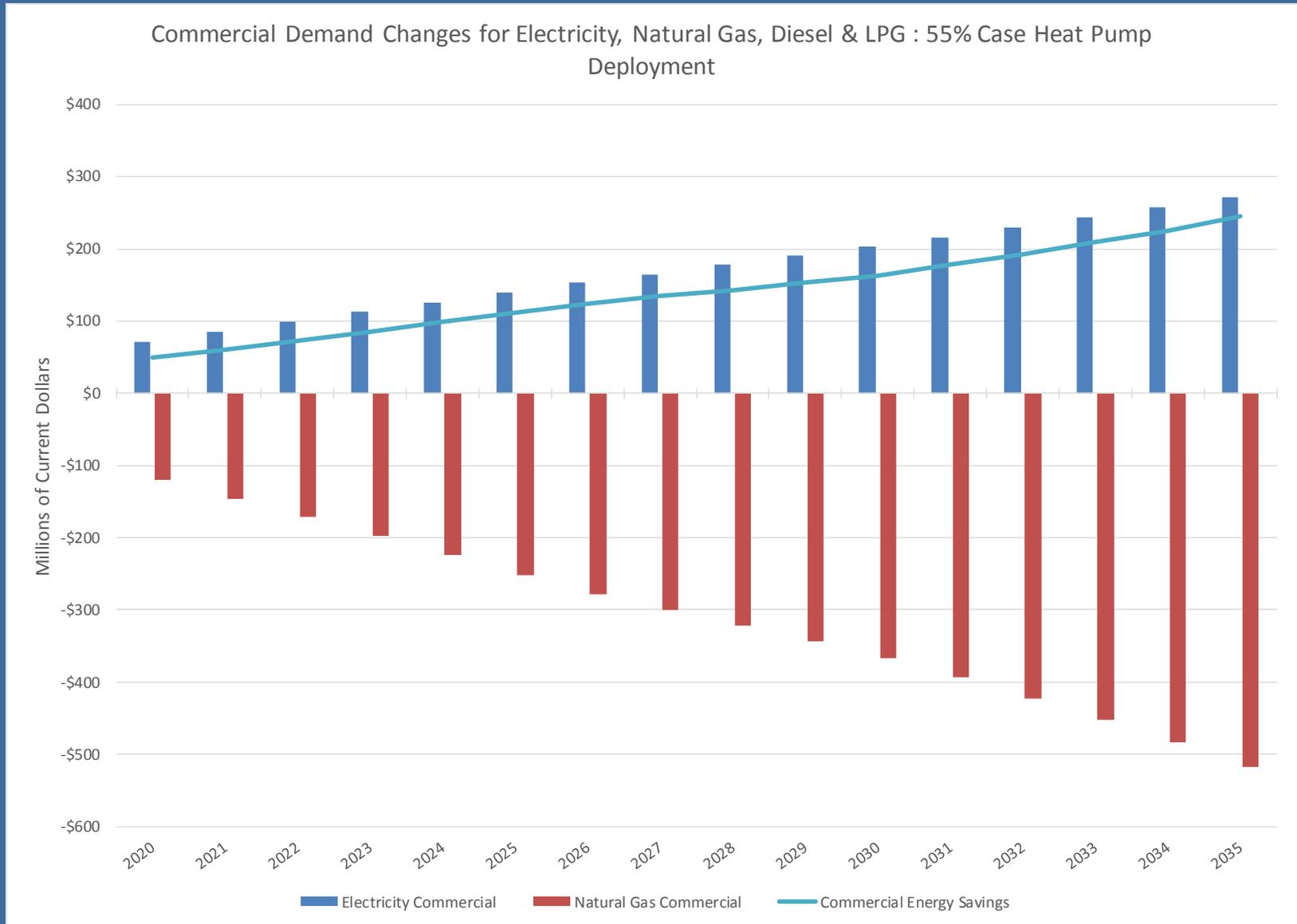
Building Sector Heat Pump Investment, 55% Case



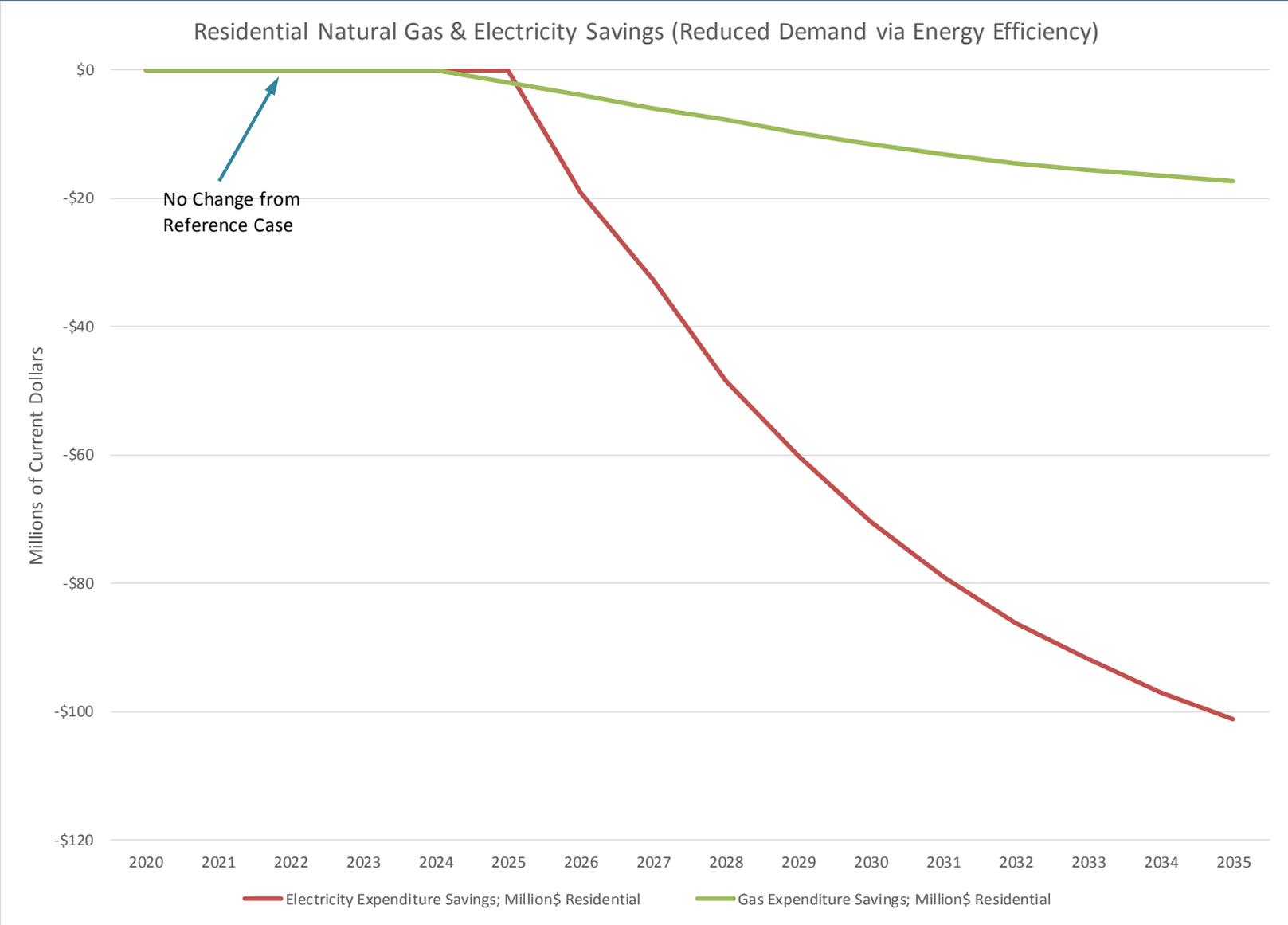
Residential Building Sector Heat Pump Deployment, 55% Case



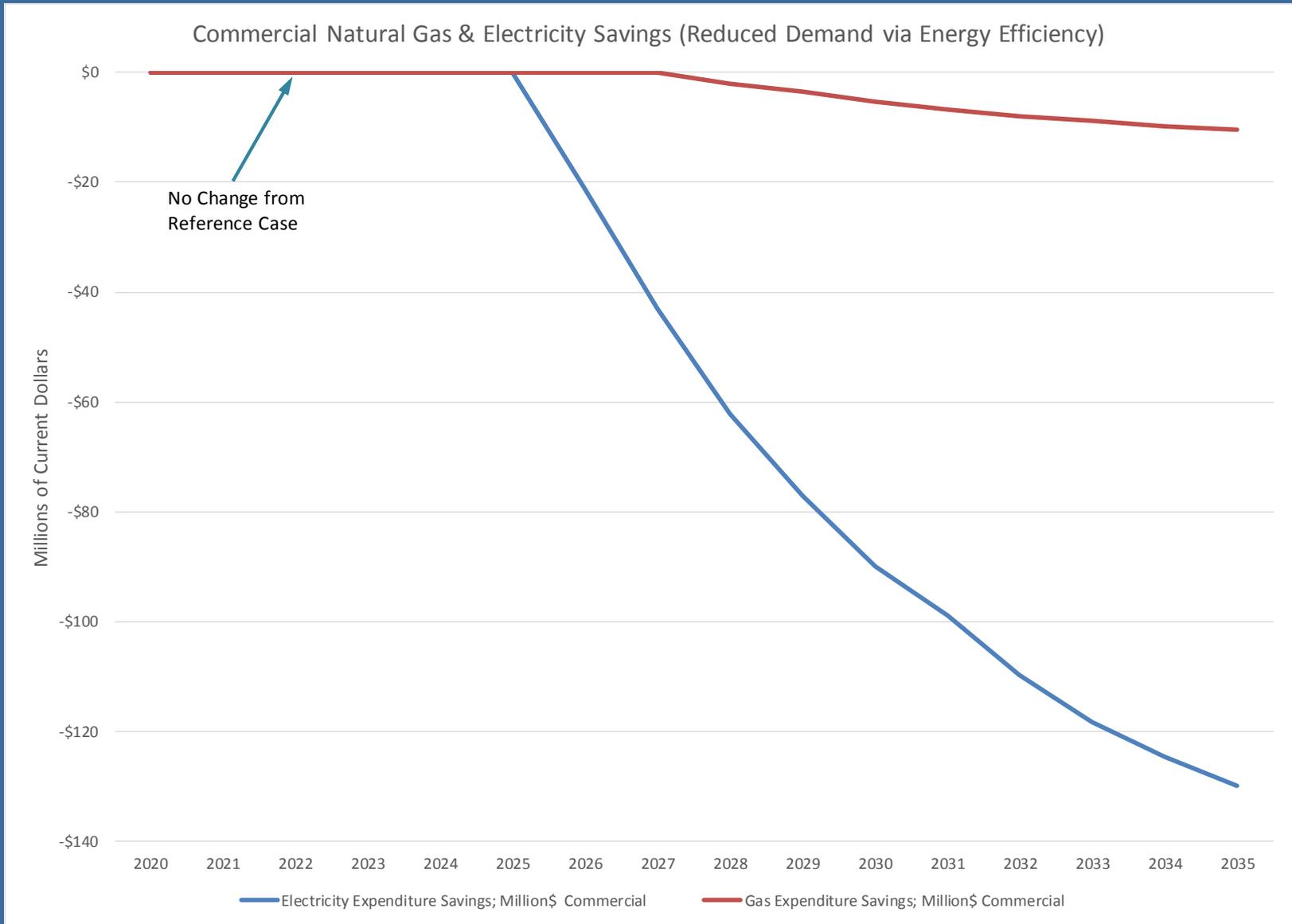
Commercial Building Sector Heat Pump Deployment, 55% Case



Building Sector Residential Savings from Energy Efficiency

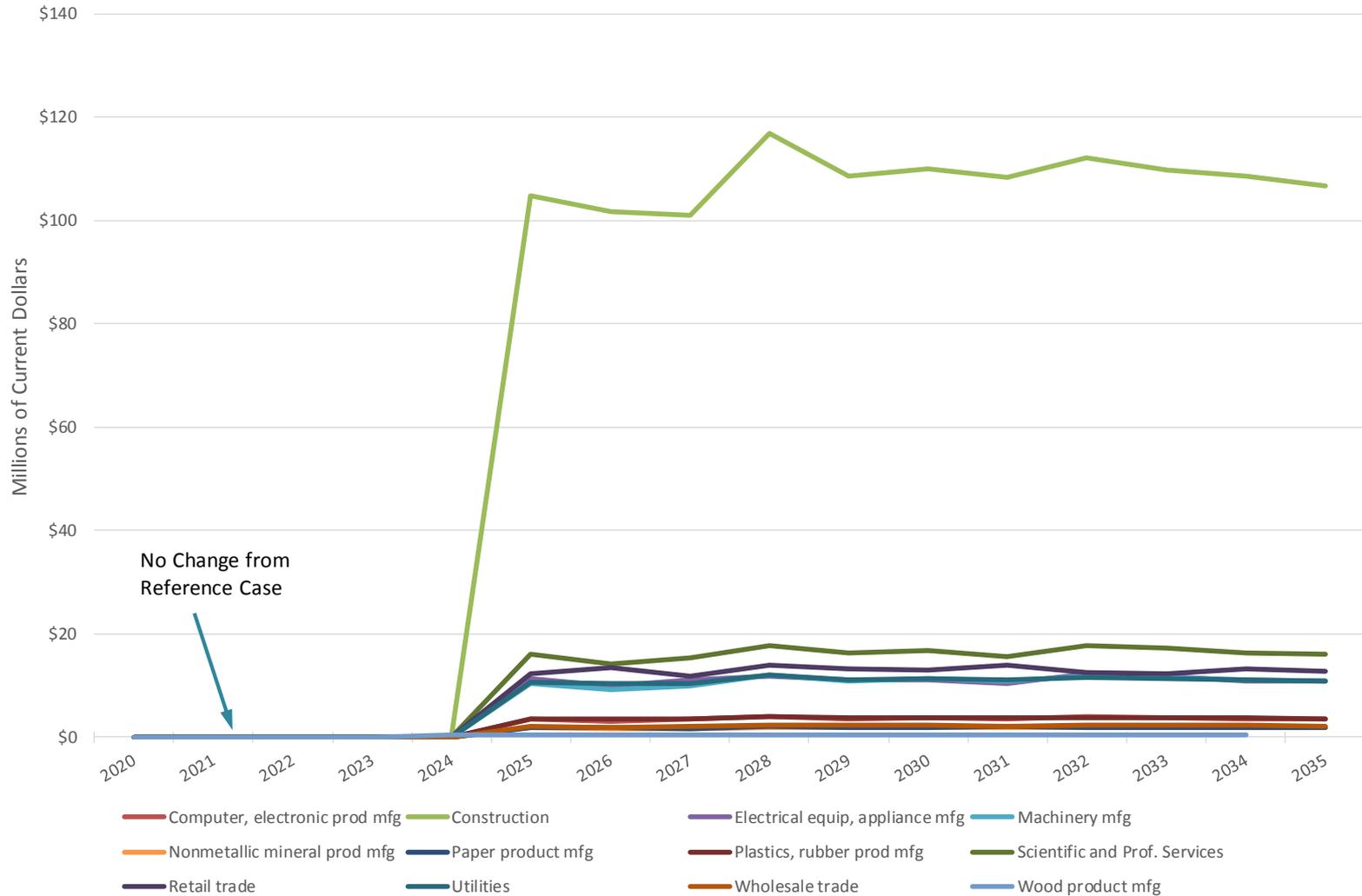


Building Sector Commercial Savings from Energy Efficiency

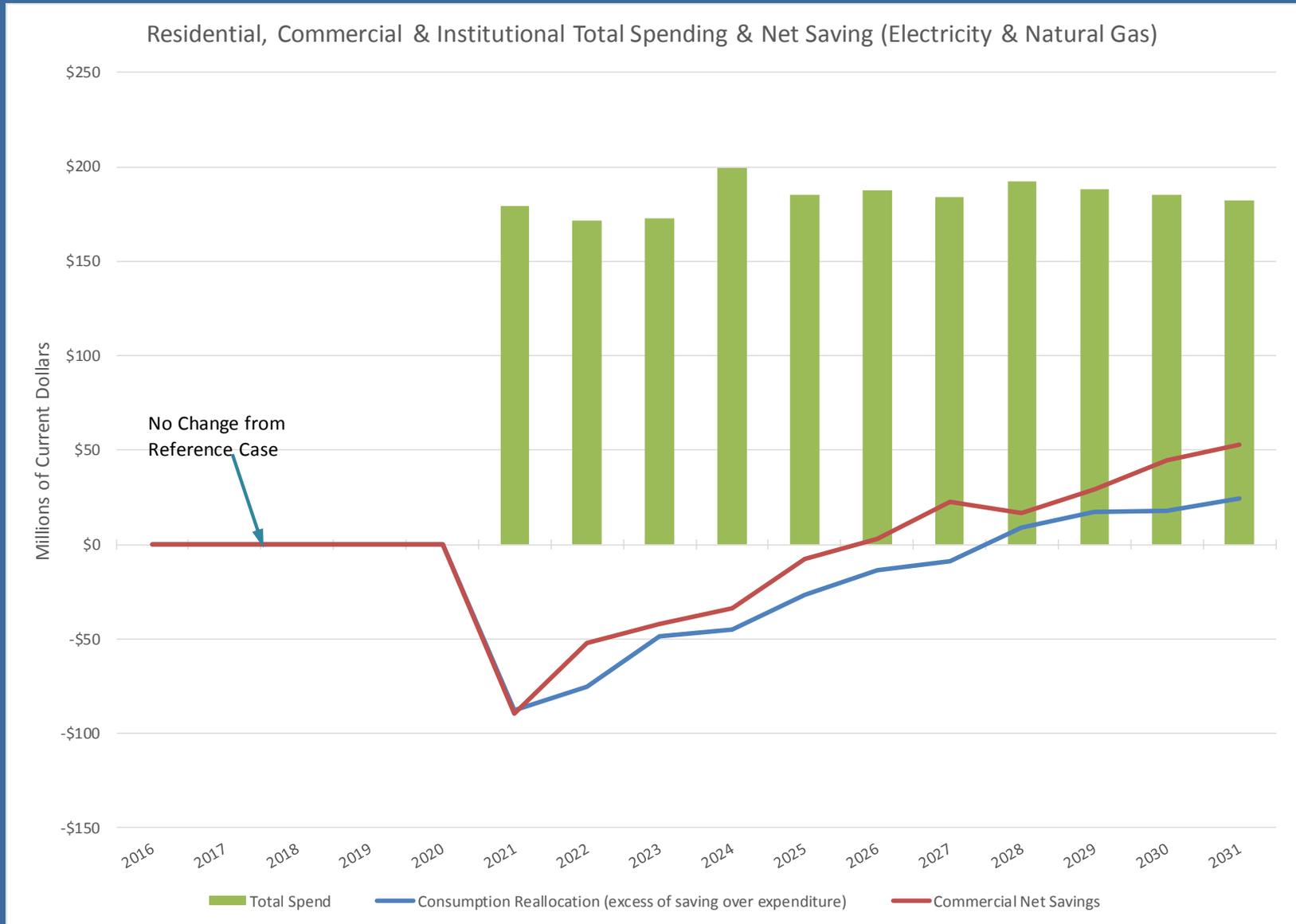


Building Sector EE Expenditure

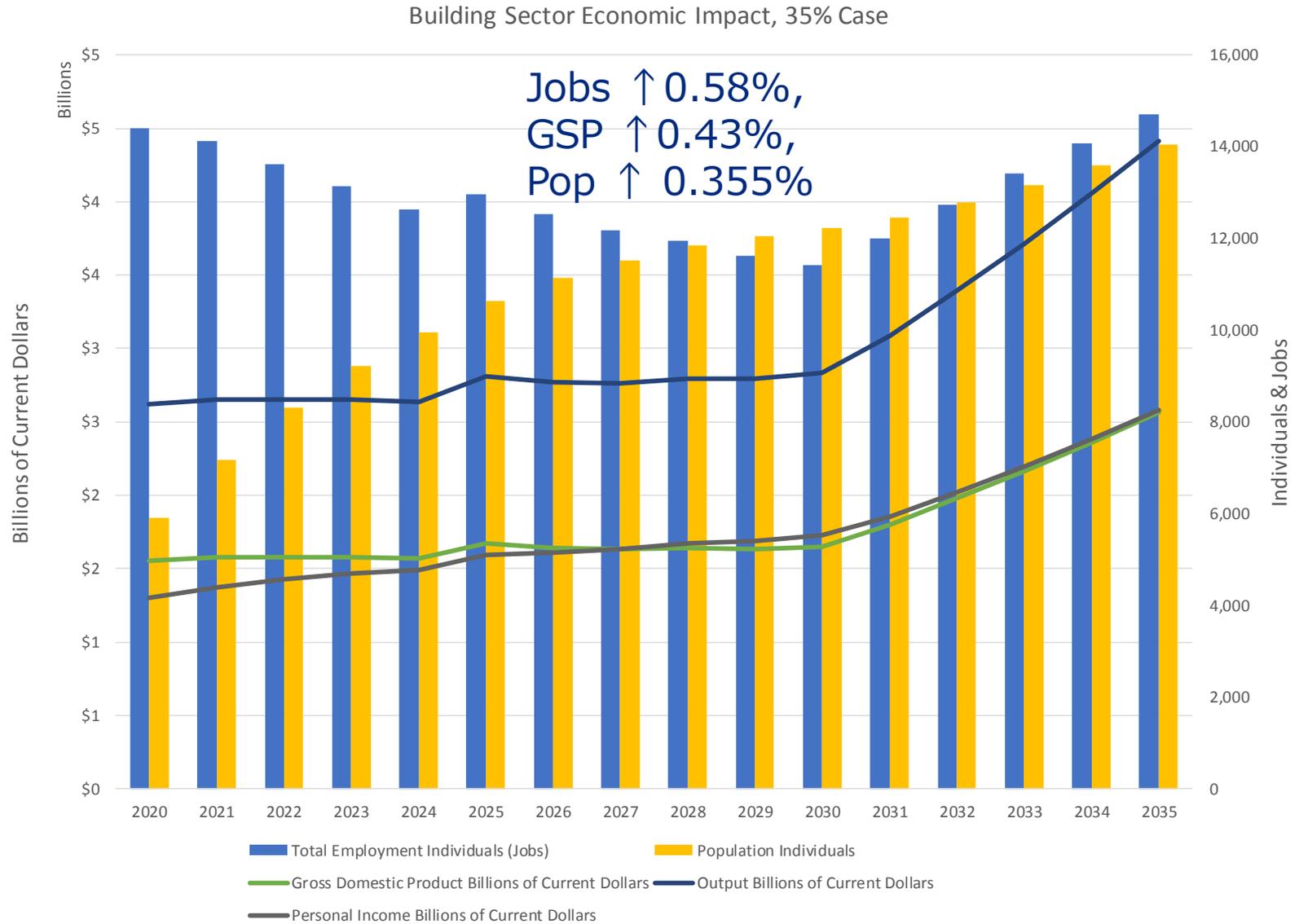
Combined Residential, Commercial & Institutional Energy Efficiency Spending (Electricity & Natural Gas)



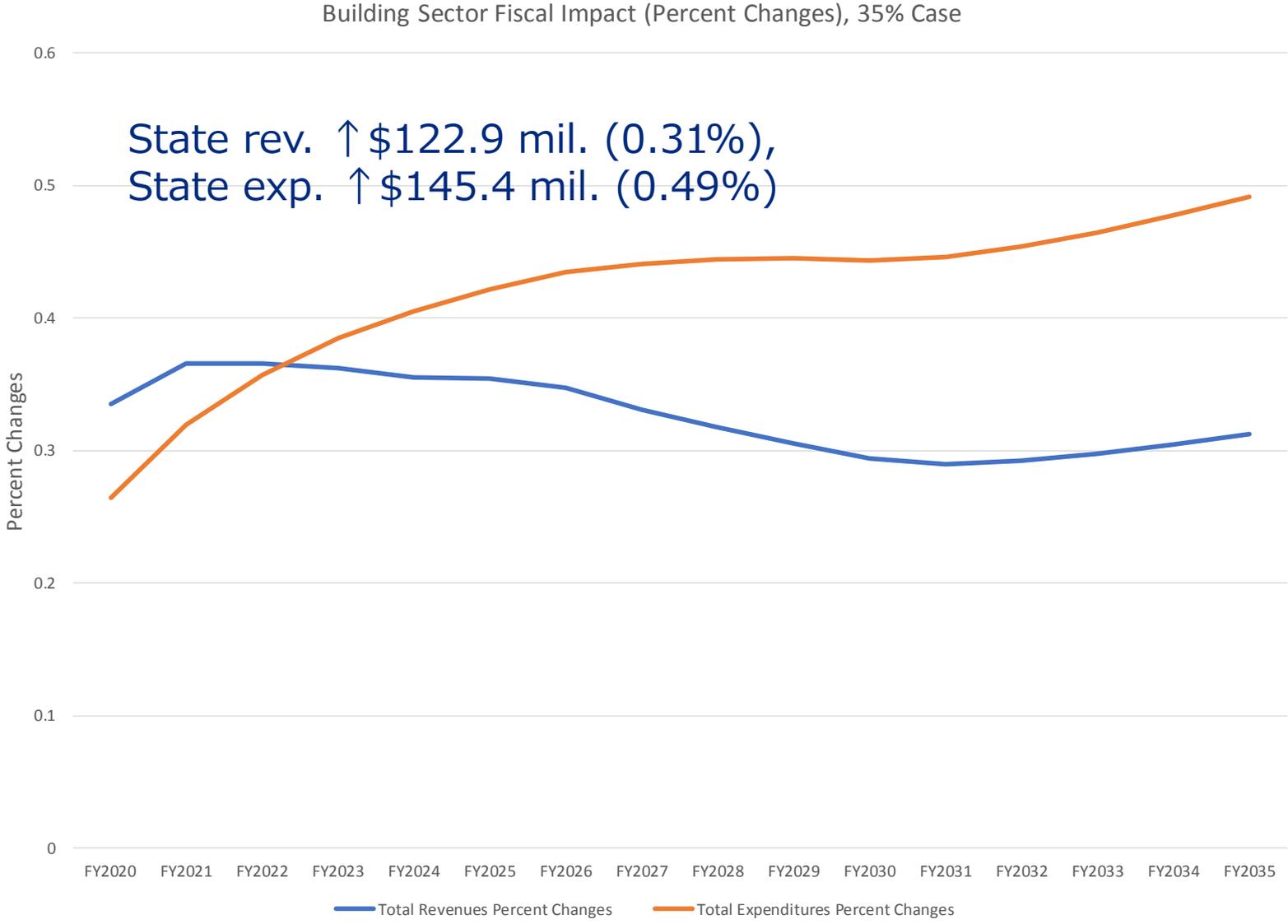
Building Sector EE Expenditure & Net Savings



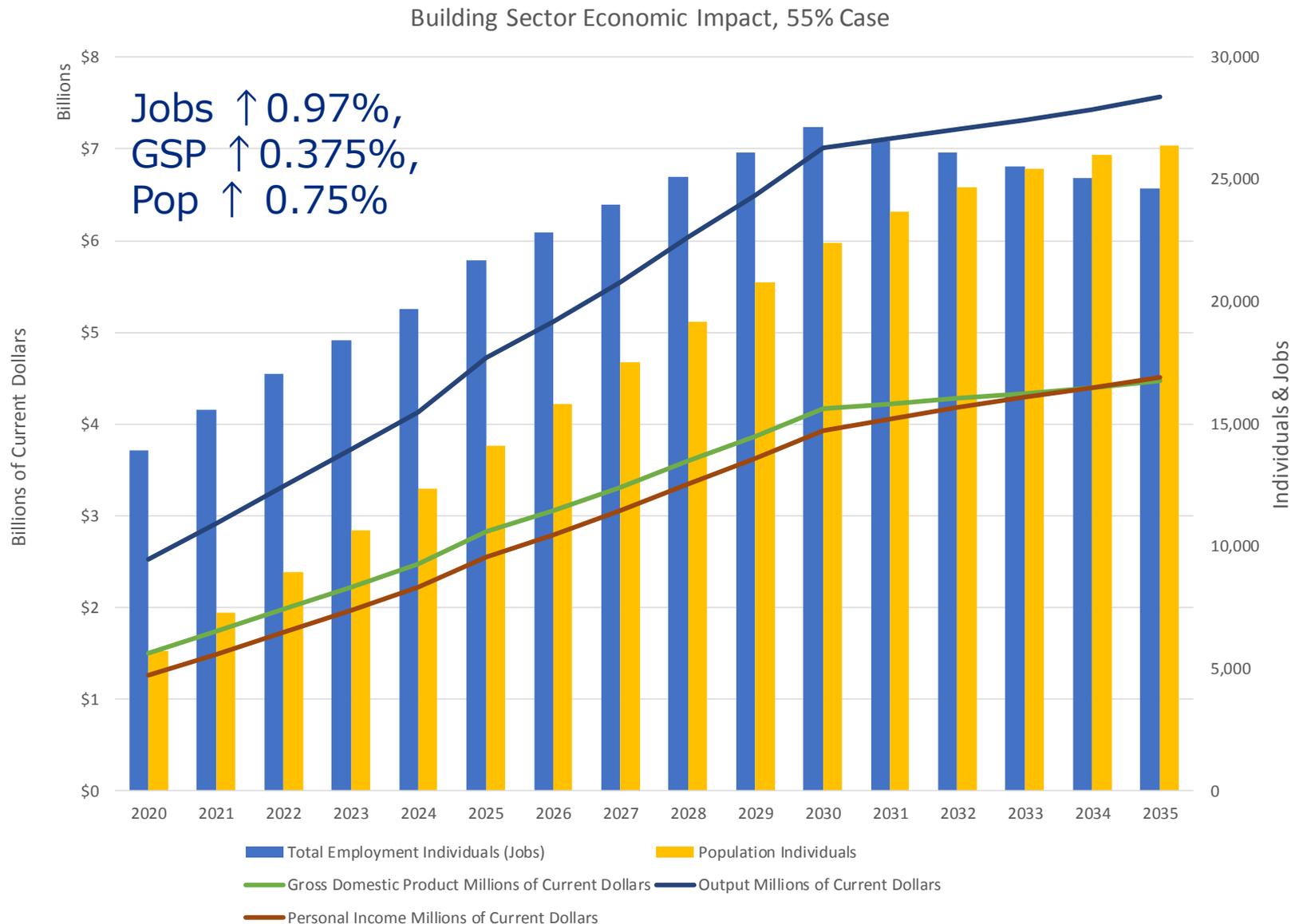
Building Sector Economic Impact, 35% Case



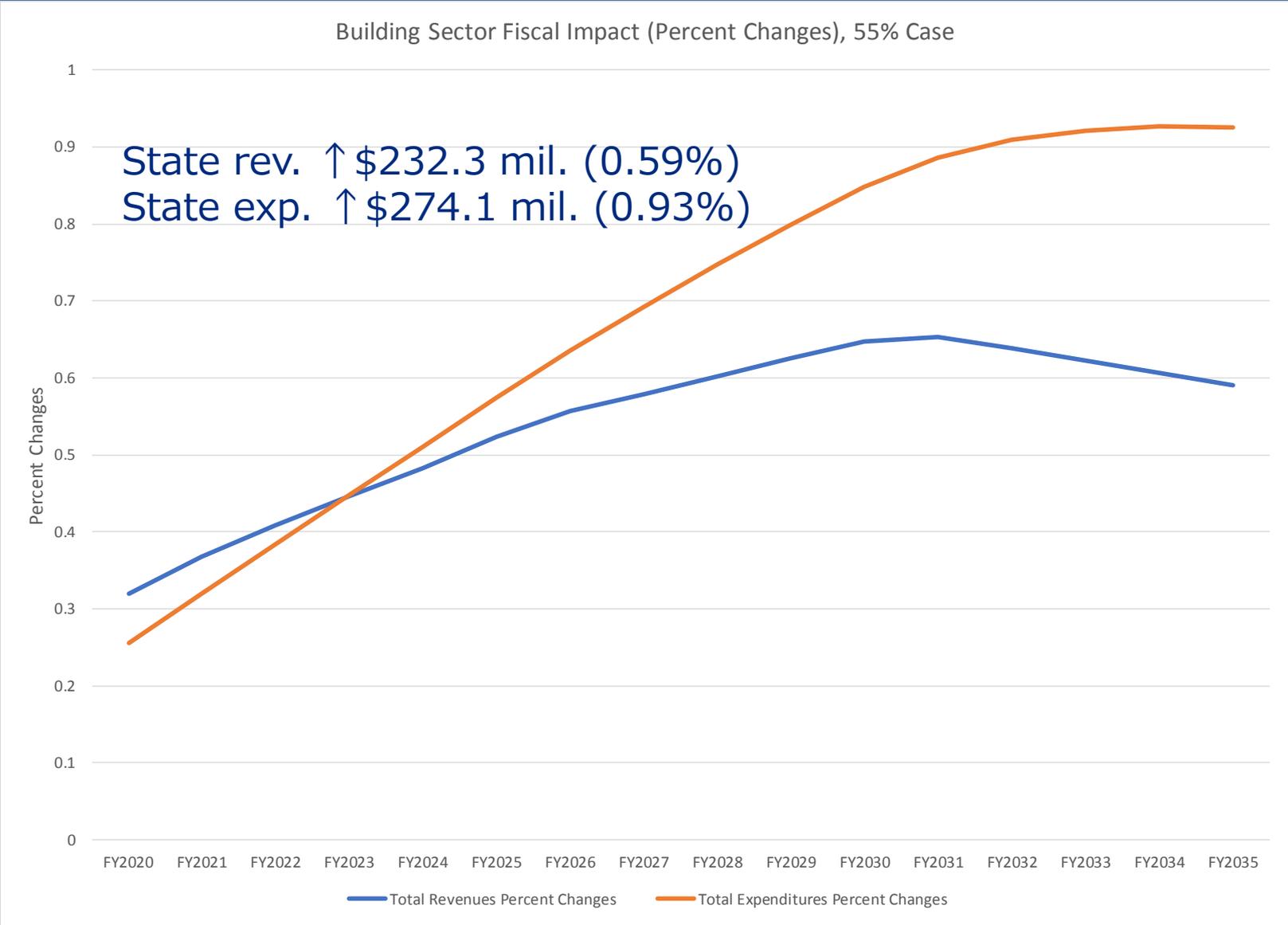
Building Sector Fiscal Impact (% Changes), 35% Case



Building Sector Economic Impact, 55% Case



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Public Comments



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