



RGGI

Electricity Sector Modeling Results

Updated Reference and Sensitivity Results

September 8th , 2005

ICF Consulting

Outline

➤ RGGI High Emissions Cases

- High Gas only
- High Emissions (High Gas + Coal in RGGI)
- RGGI High Emissions Policy Scenarios
 - RGGI High Emissions w/ Package
 - RGGI High Emissions w/ Package + Federal CO₂ Policy

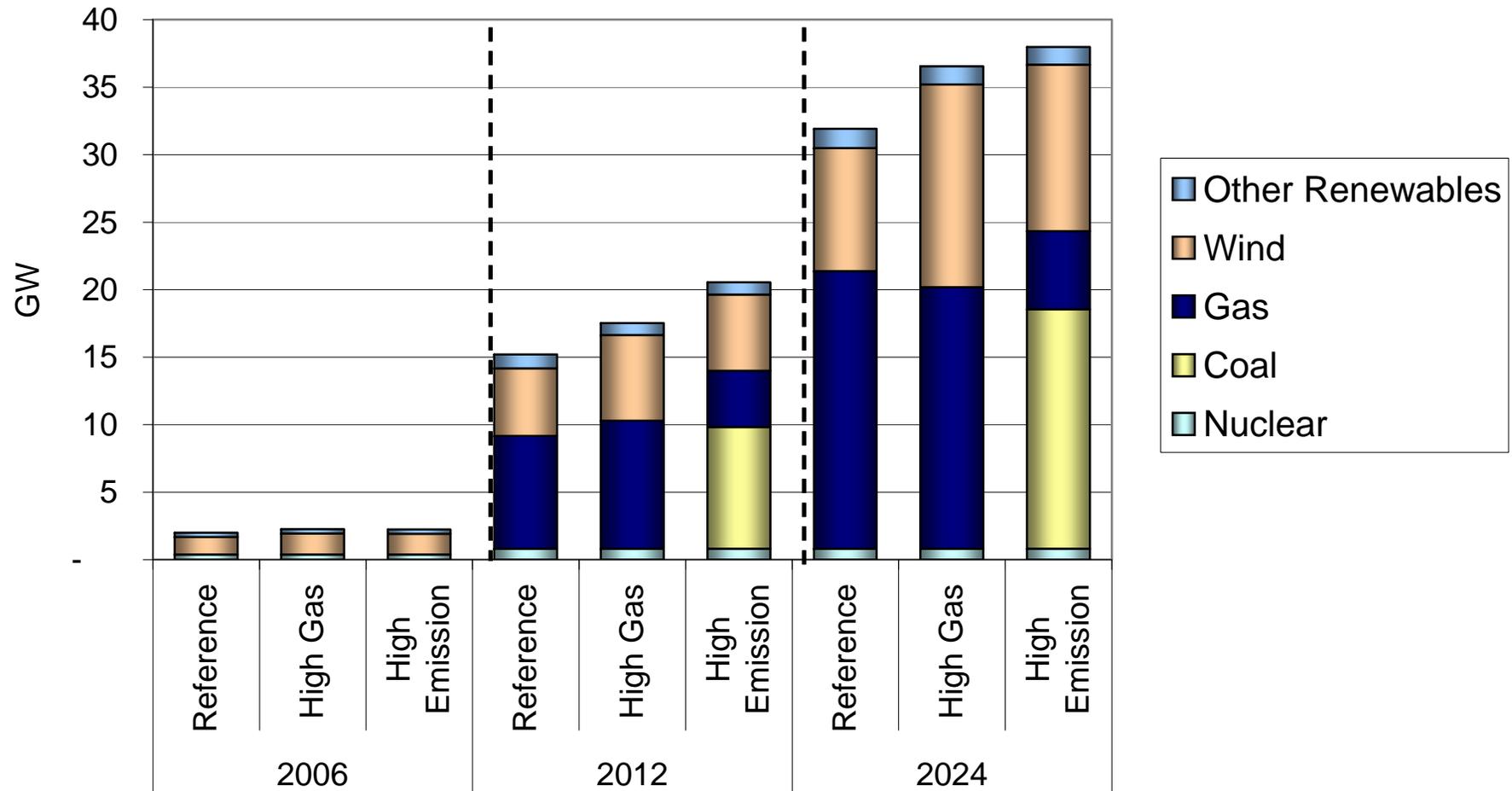
➤ RGGI Low Emissions Case

- 2X Efficiency
- Unlimited Efficiency

RGGI High Emissions Cases

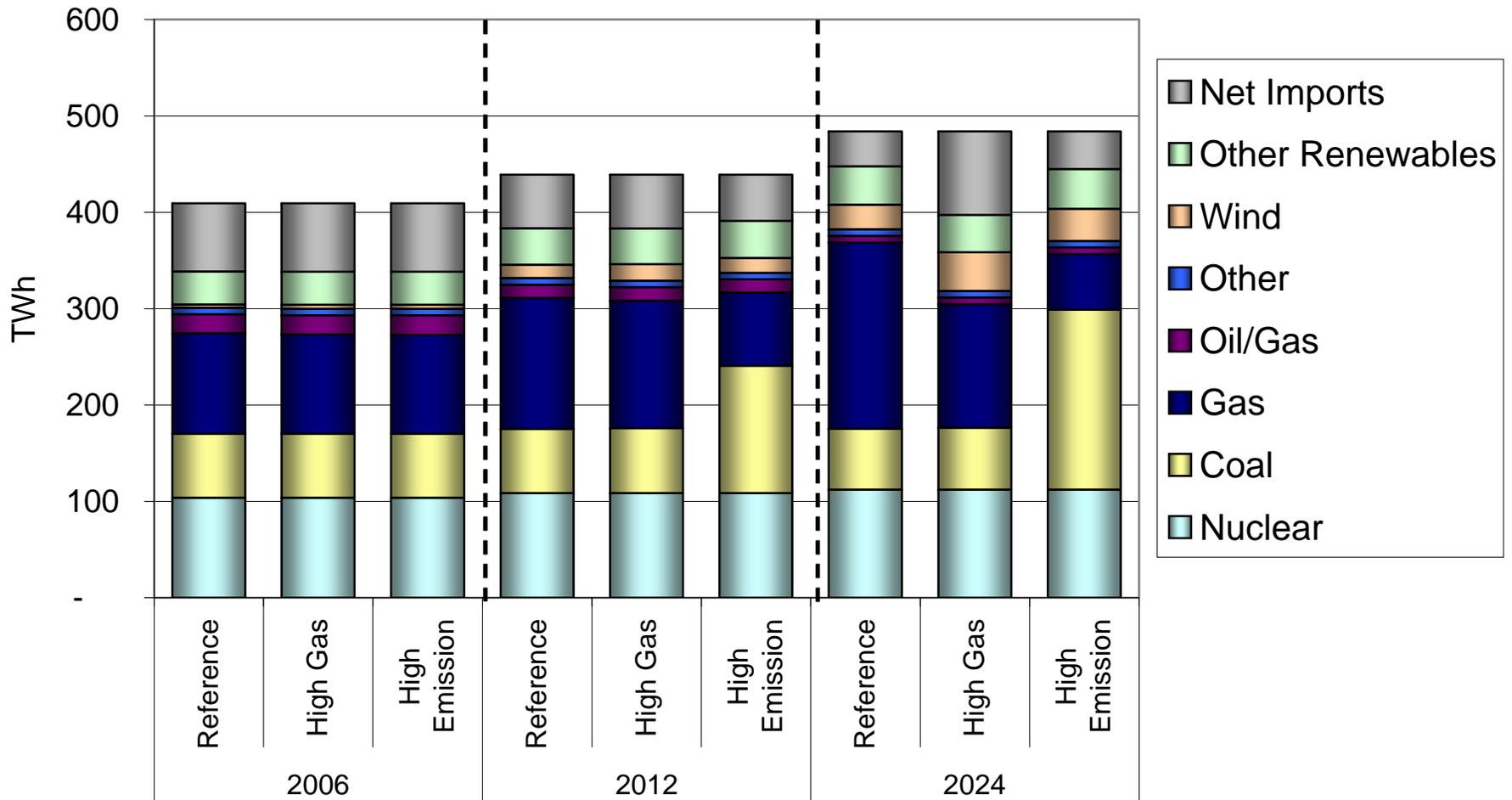
RGGI Cumulative Capacity Additions

Reference v. High Gas v. High Emissions



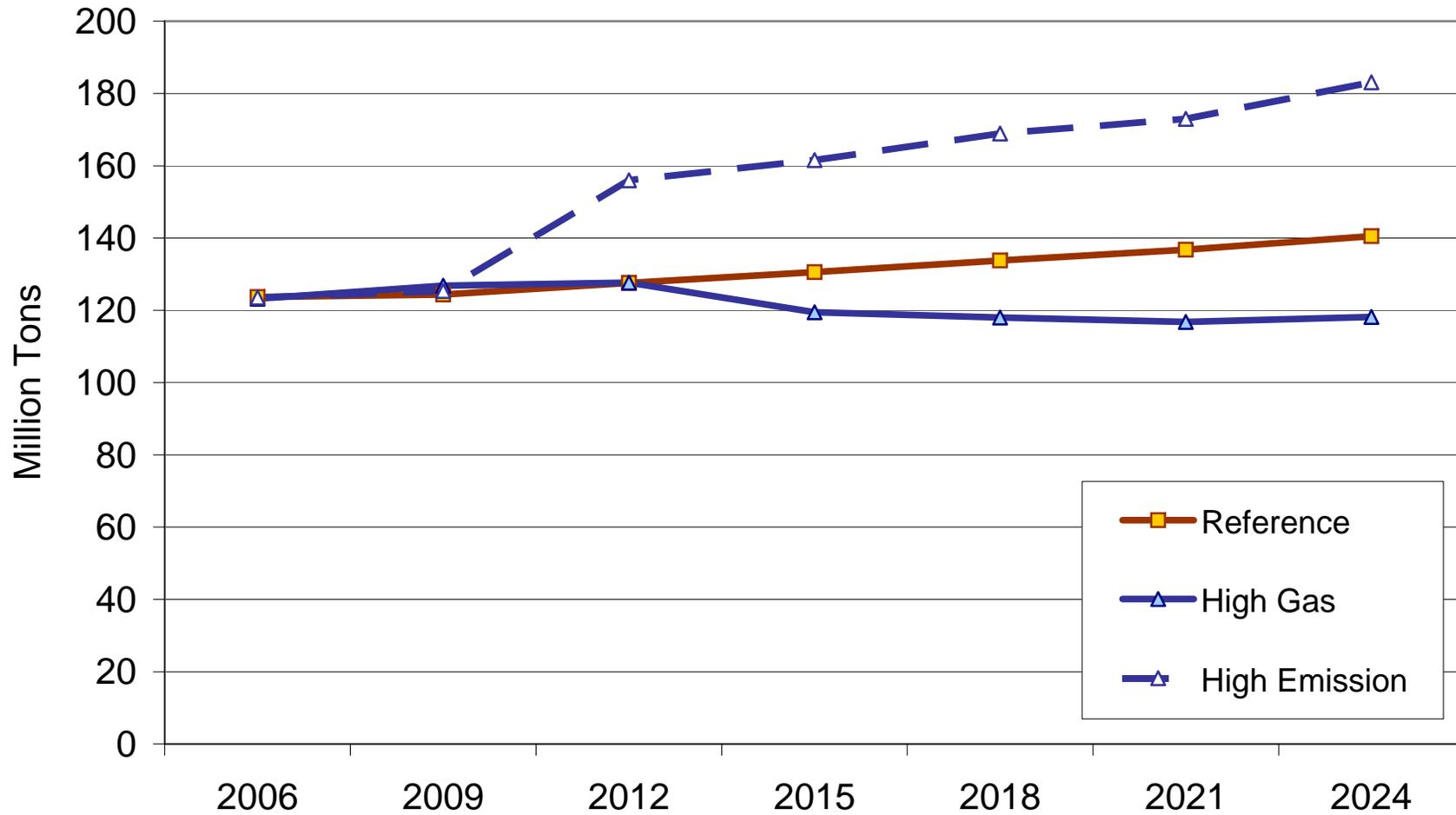
RGGI Generation Mix

Reference v. High Gas v. High Emissions



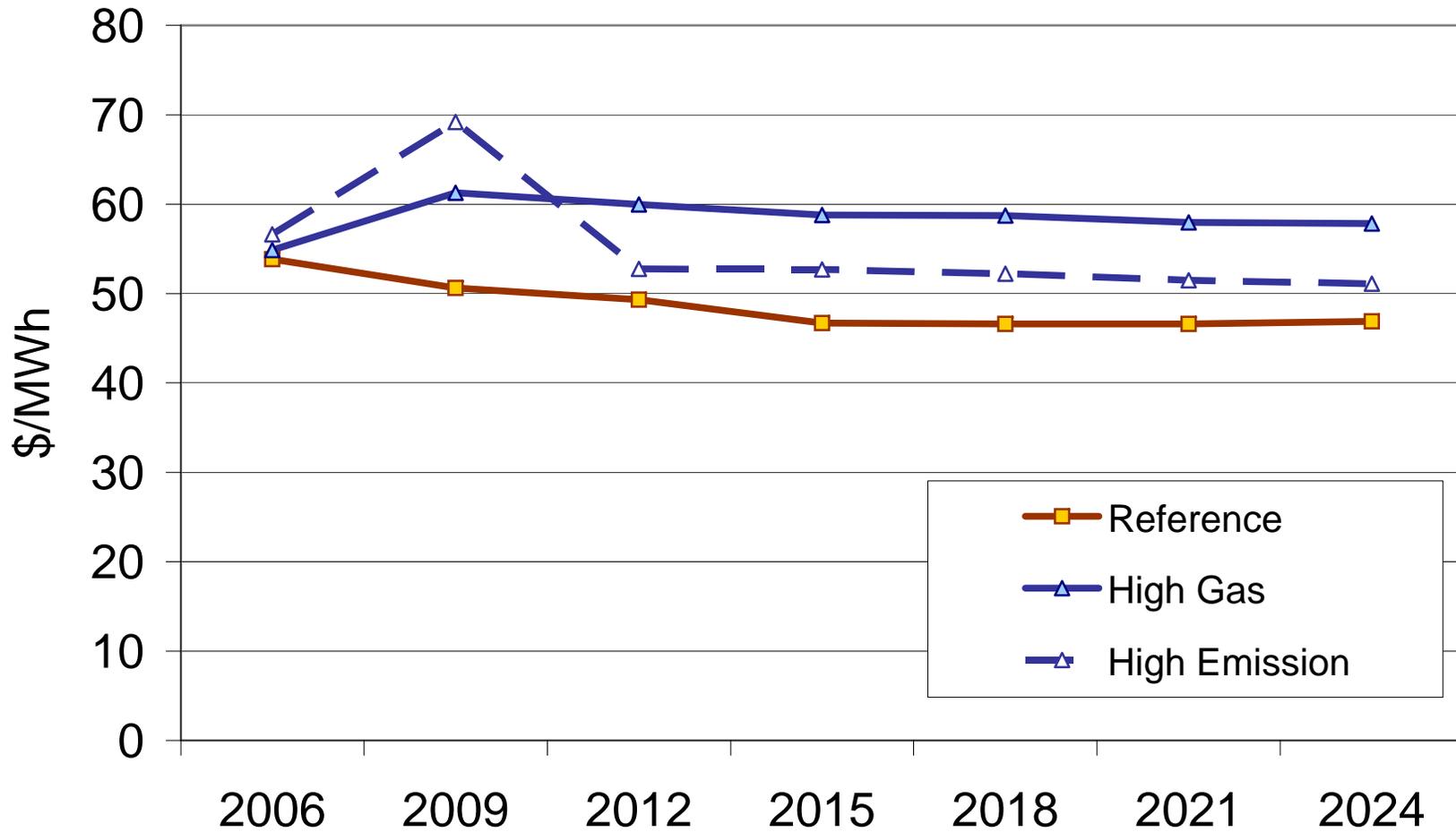
CO₂ Emissions

Reference v. High Gas v. High Emissions



RGGI Average Annual Energy Prices

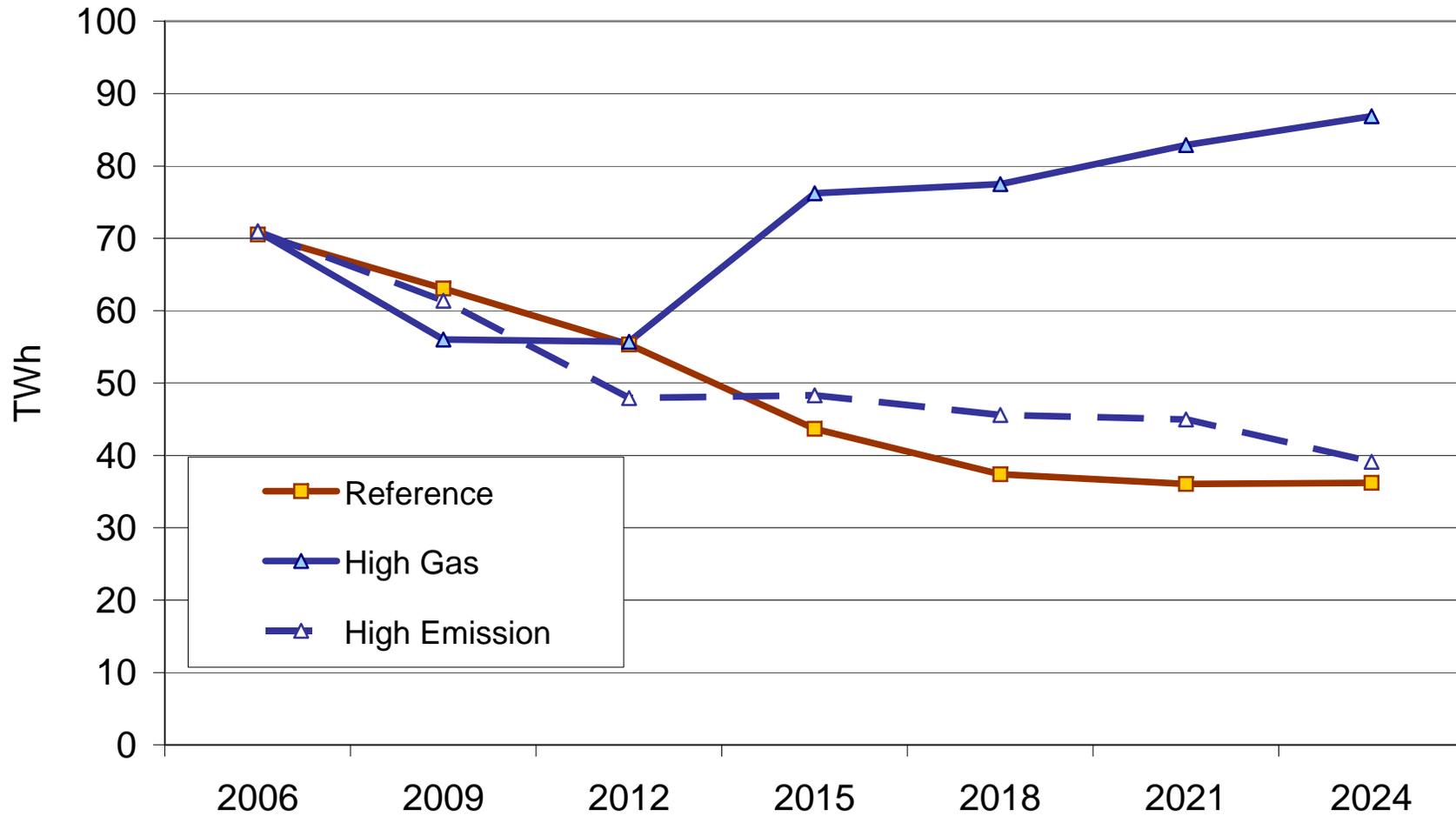
Reference v. High Gas v. High Emissions



NOTE: Energy prices include annualized capacity prices.

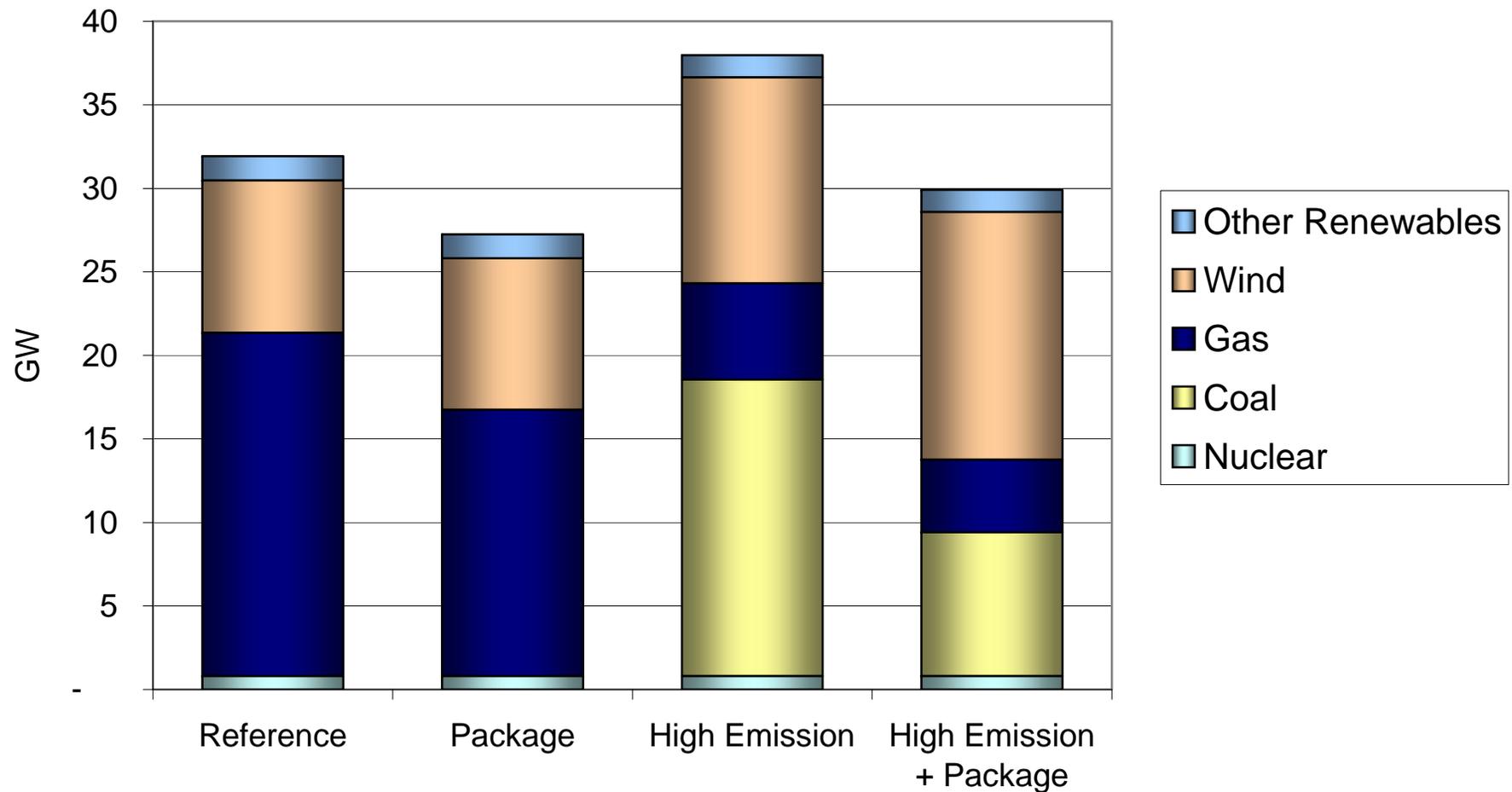
RGGI Net Imports

Reference v. High Gas v. High Emissions

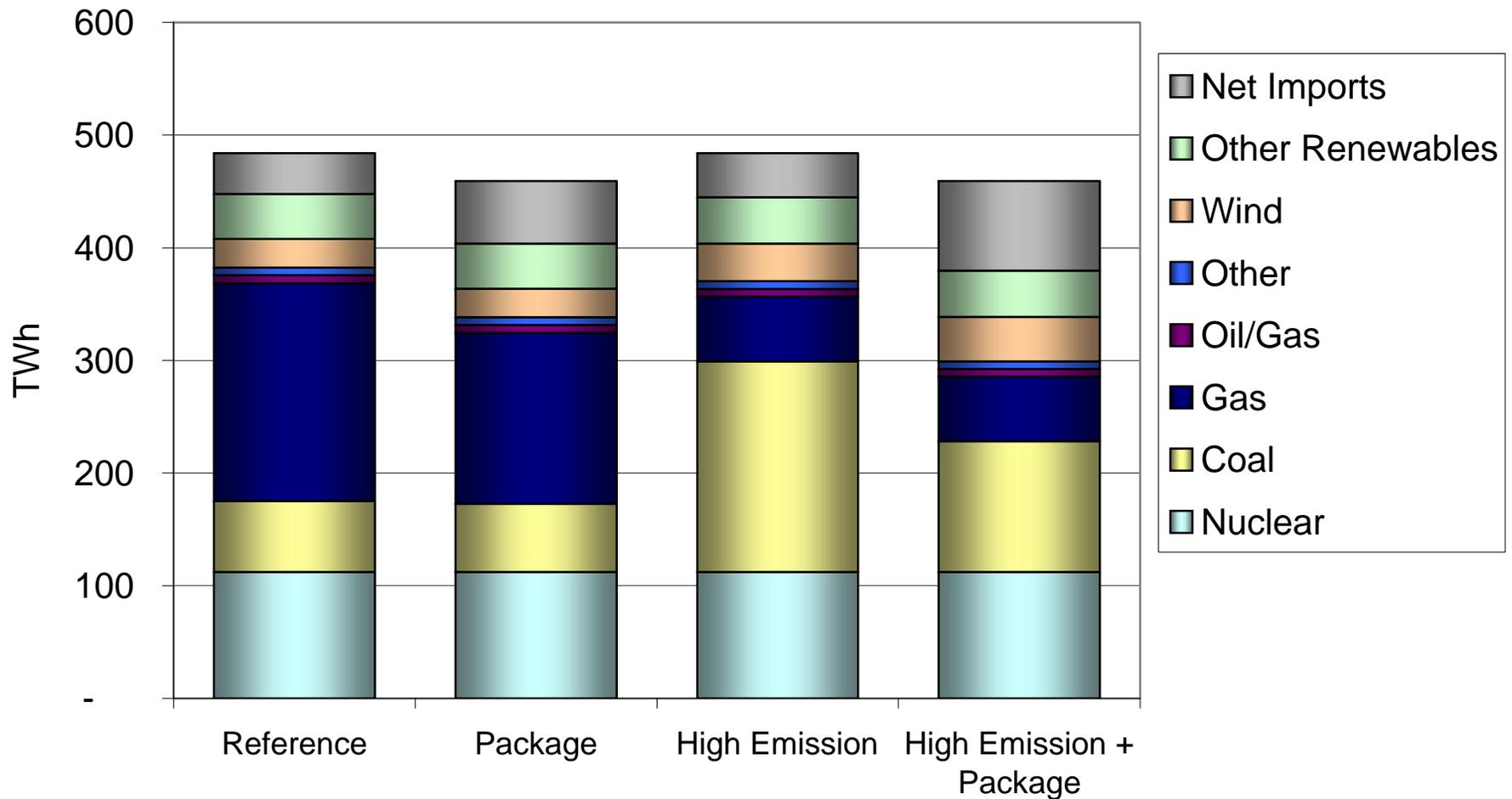


RGGI Package Scenario
compared to
High Emissions Reference Case

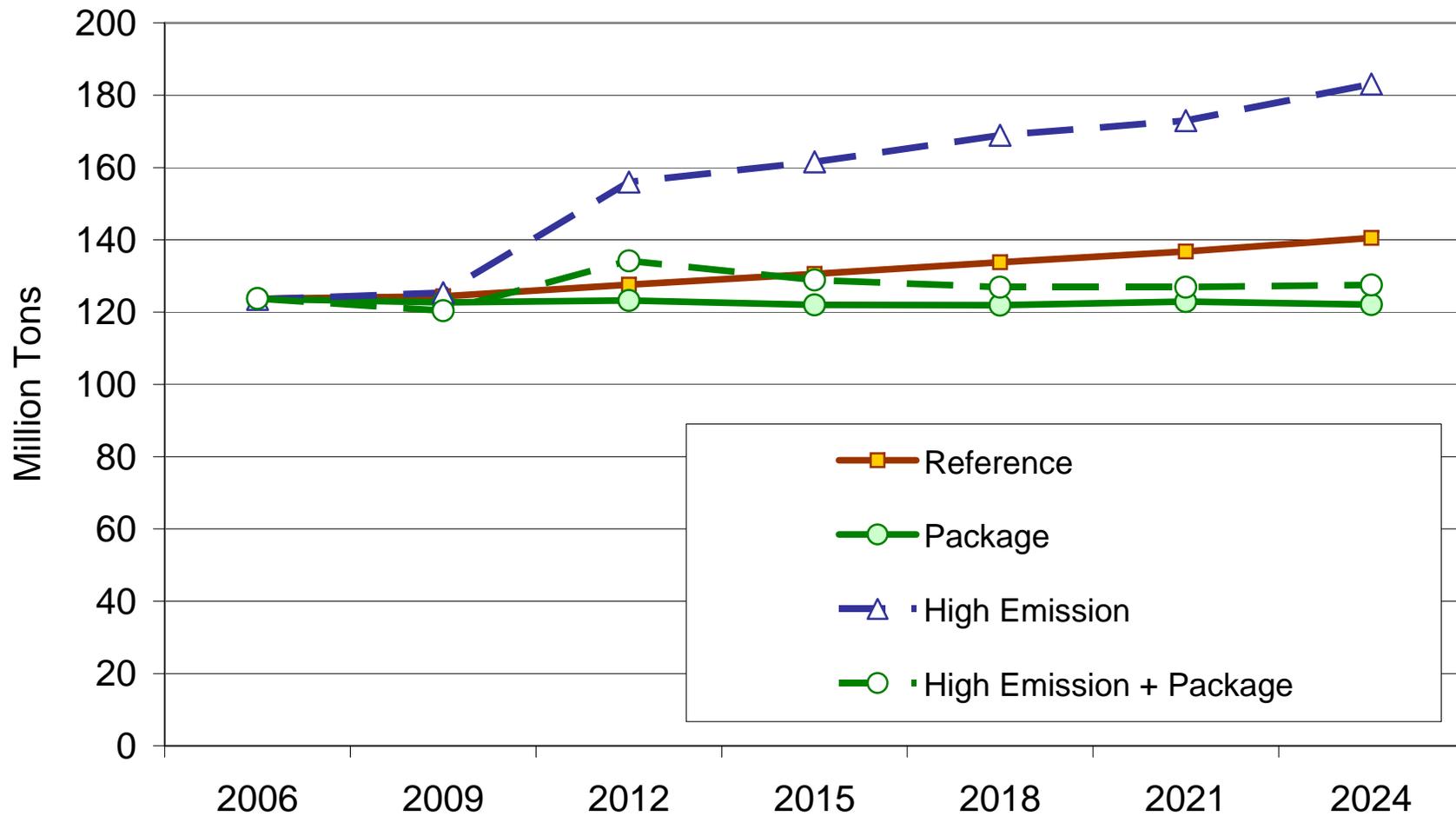
RGGI Cumulative Capacity Additions by 2024



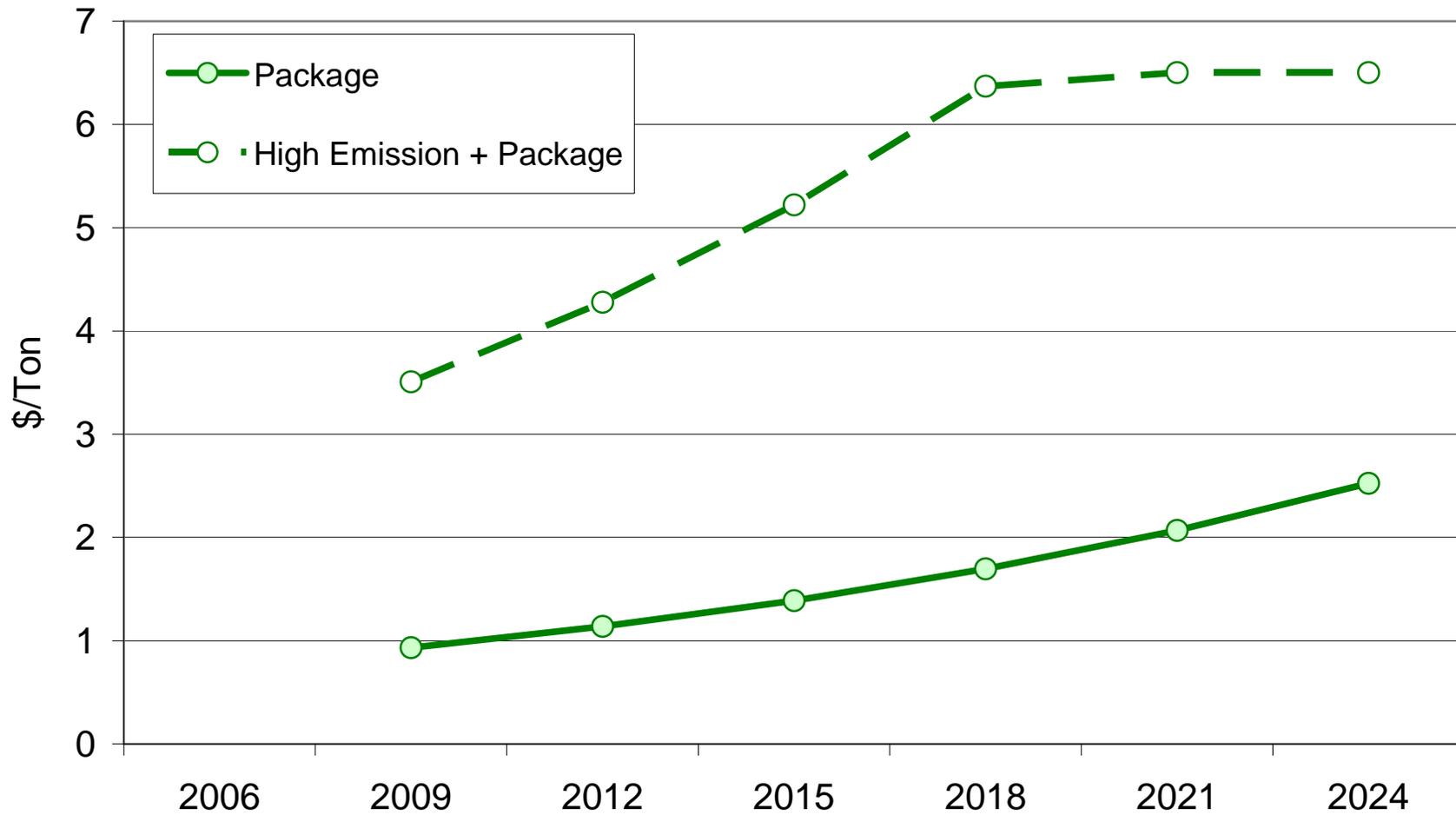
RGGI Generation Mix in 2024



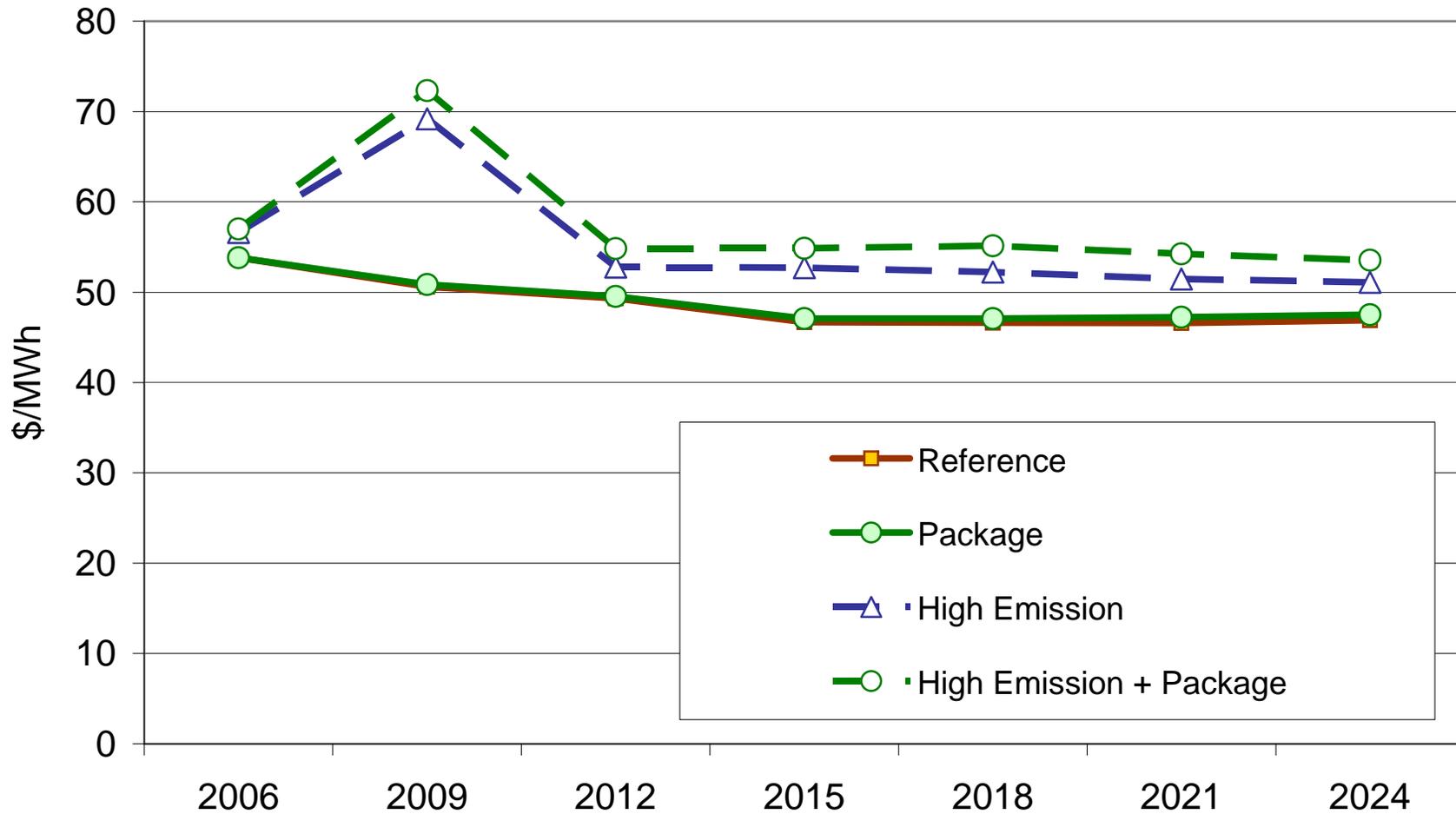
CO₂ Emissions Trajectories



CO₂ Allowance Prices



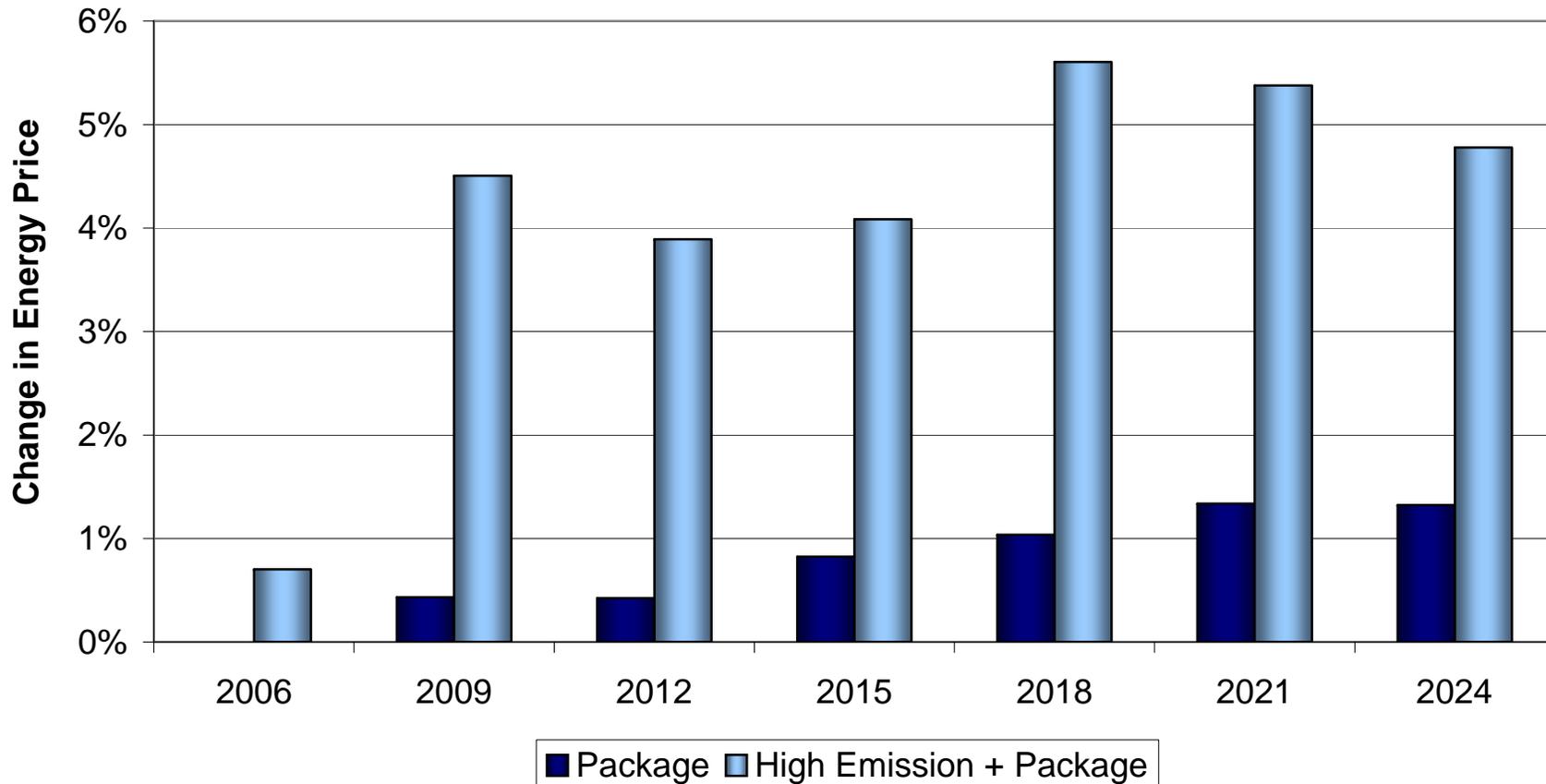
RGGI Average Annual Energy Prices



NOTE: Energy prices include annualized capacity prices.



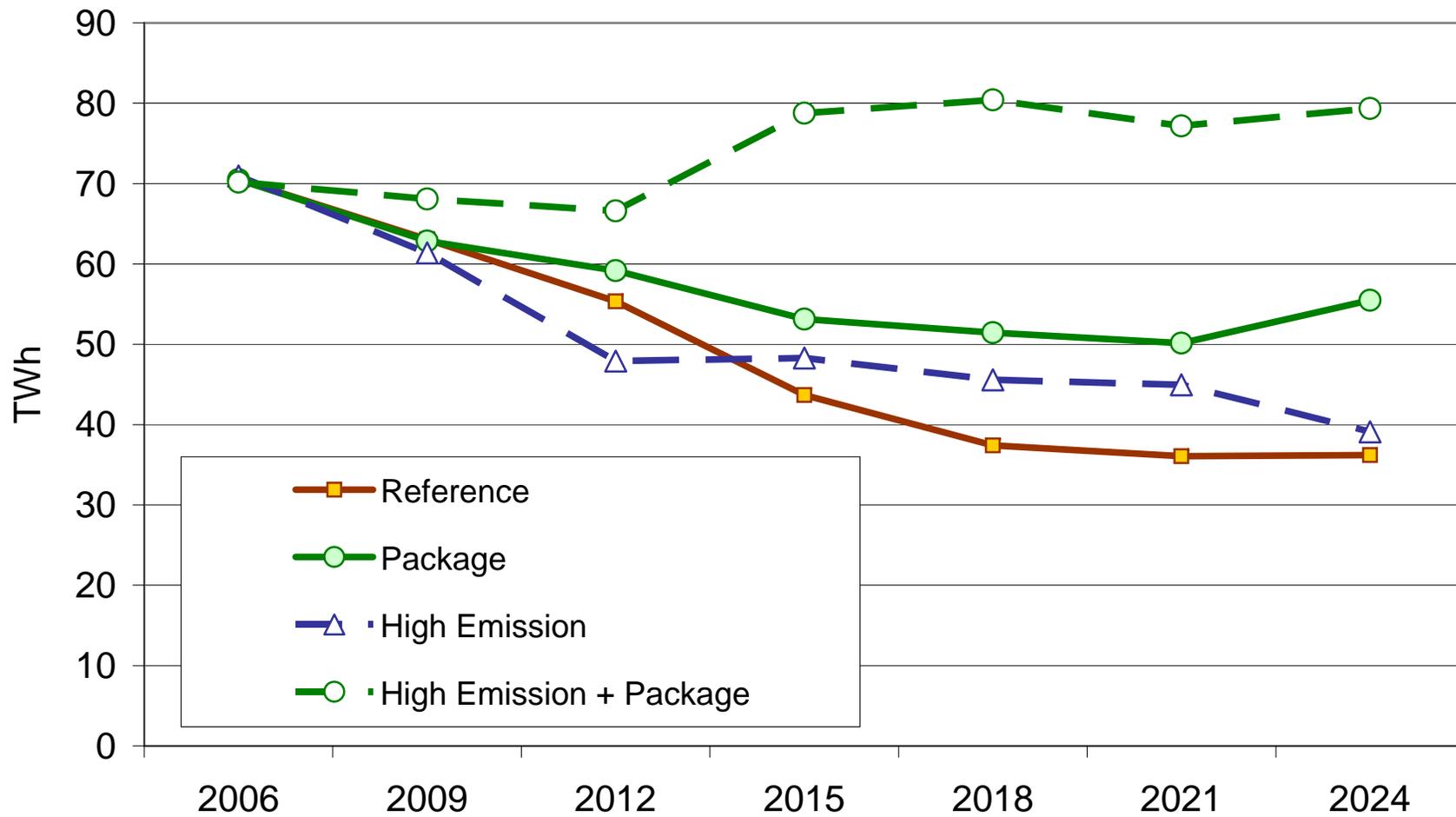
Change in RGGI Average Annual Energy Prices



NOTE: Energy prices represent wholesale market prices and include annualized capacity prices. Note that the RGGI Package Scenario assumes that current levels of annual state expenditures for public benefit programs continue through 2025. While these types of programs cause lower wholesale prices by reducing electricity demand, they are paid for by consumers through a line item charge at the retail level, and are therefore not reflected in the wholesale price changes shown above. Current retail electricity prices already include the annual costs of these programs.

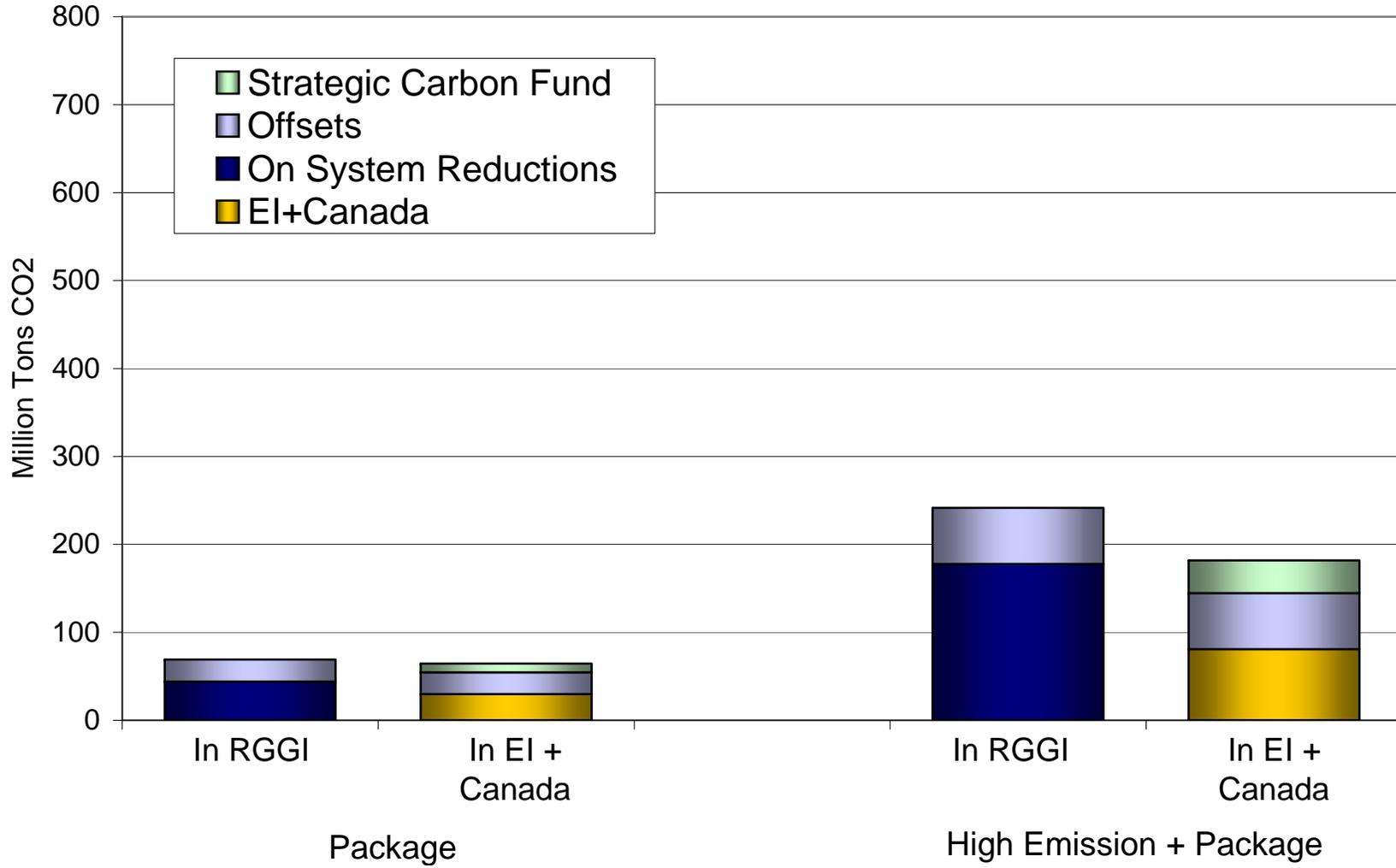
While the modeling assumes that end-use energy efficiency is implemented entirely by public benefit programs, it is recognized that energy efficiency could also be implemented by actions such as appliance standards and building codes that do not require state funding and could possibly be done at lower costs.

RGGI Net Imports



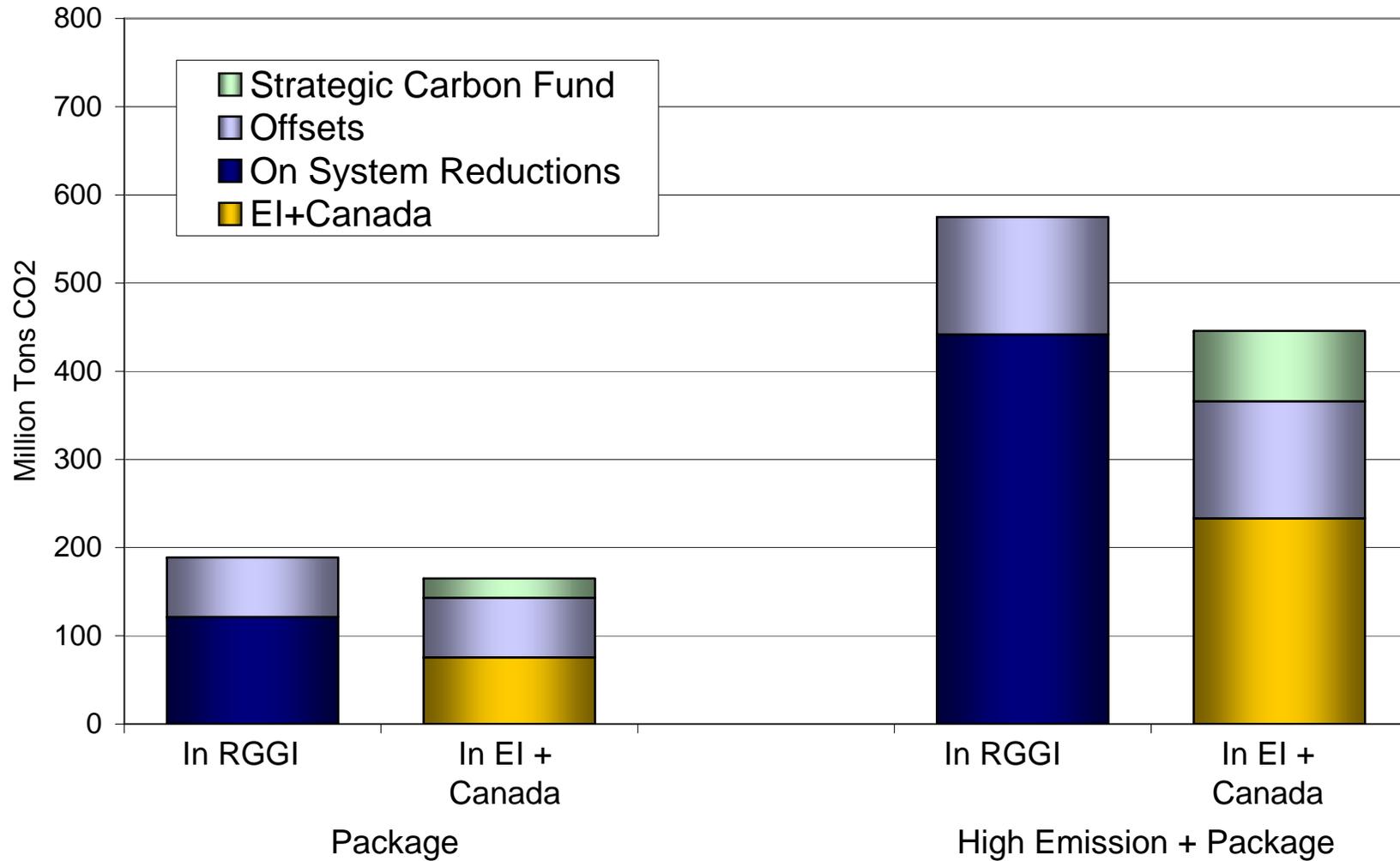
Cumulative CO₂ Reductions by 2015

RGGI and Eastern Interconnect/Canada



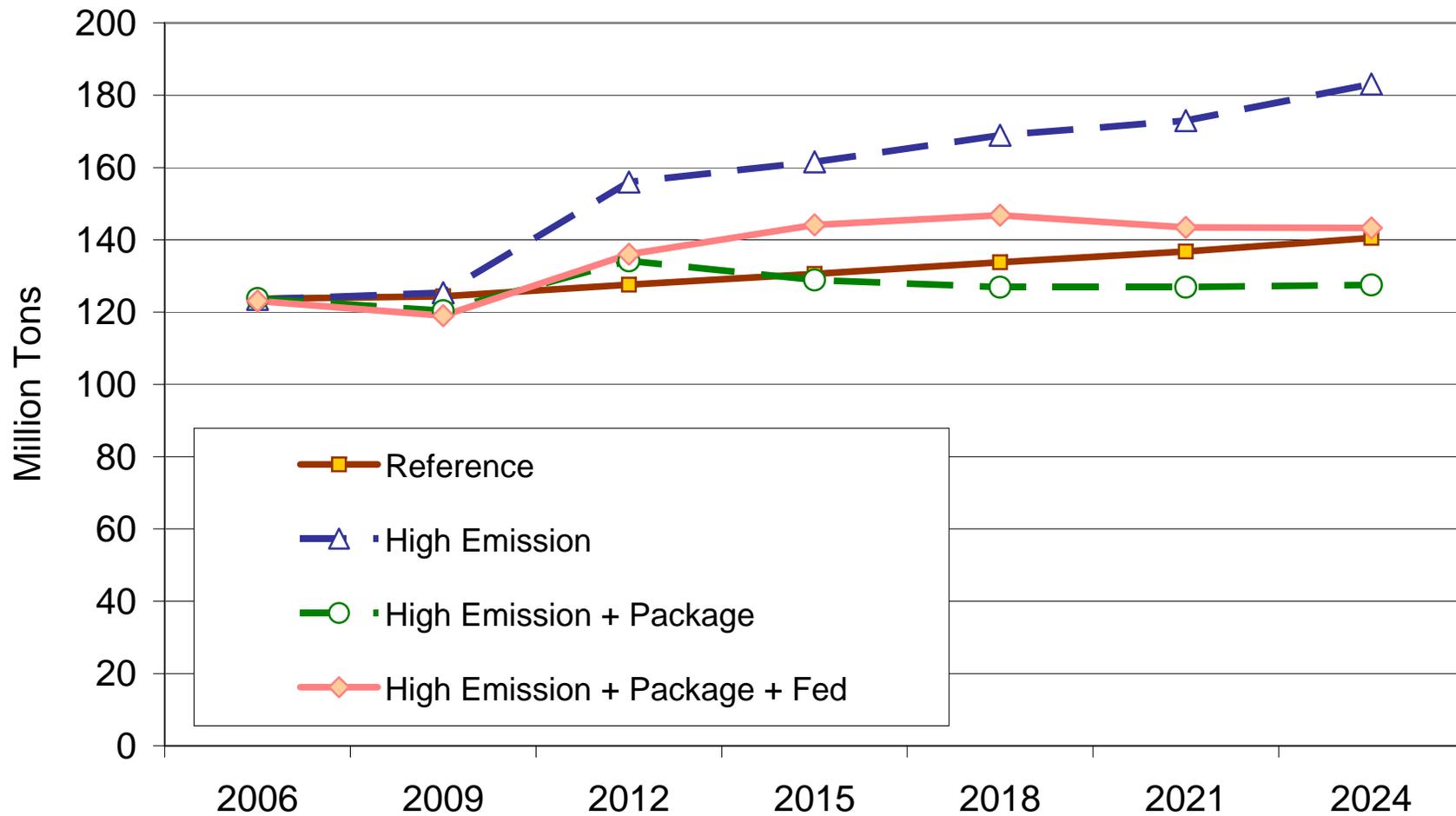
Cumulative CO₂ Reductions by 2021

RGGI and Eastern Interconnect/Canada

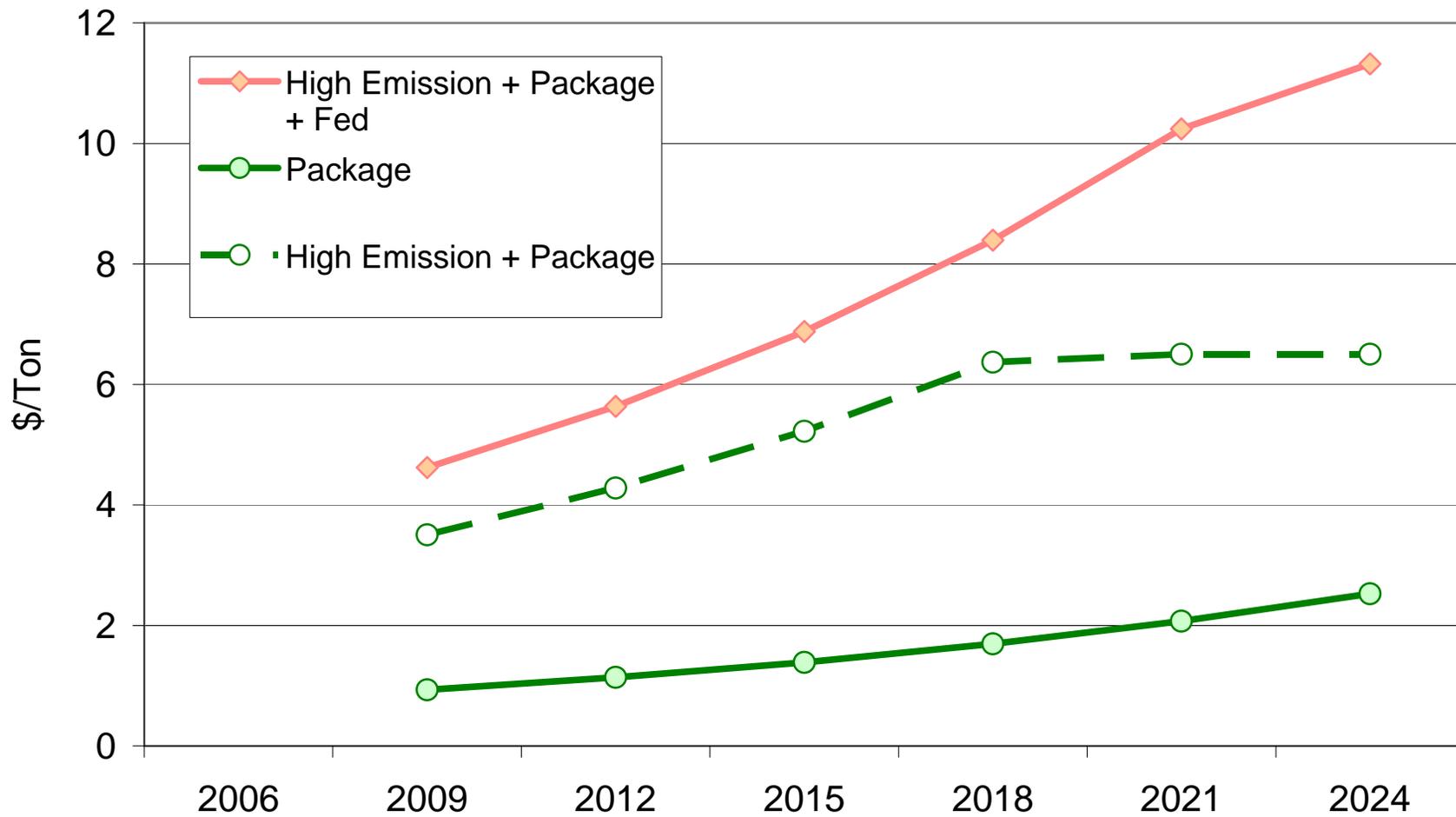


Package Scenario with US/Canada Policies

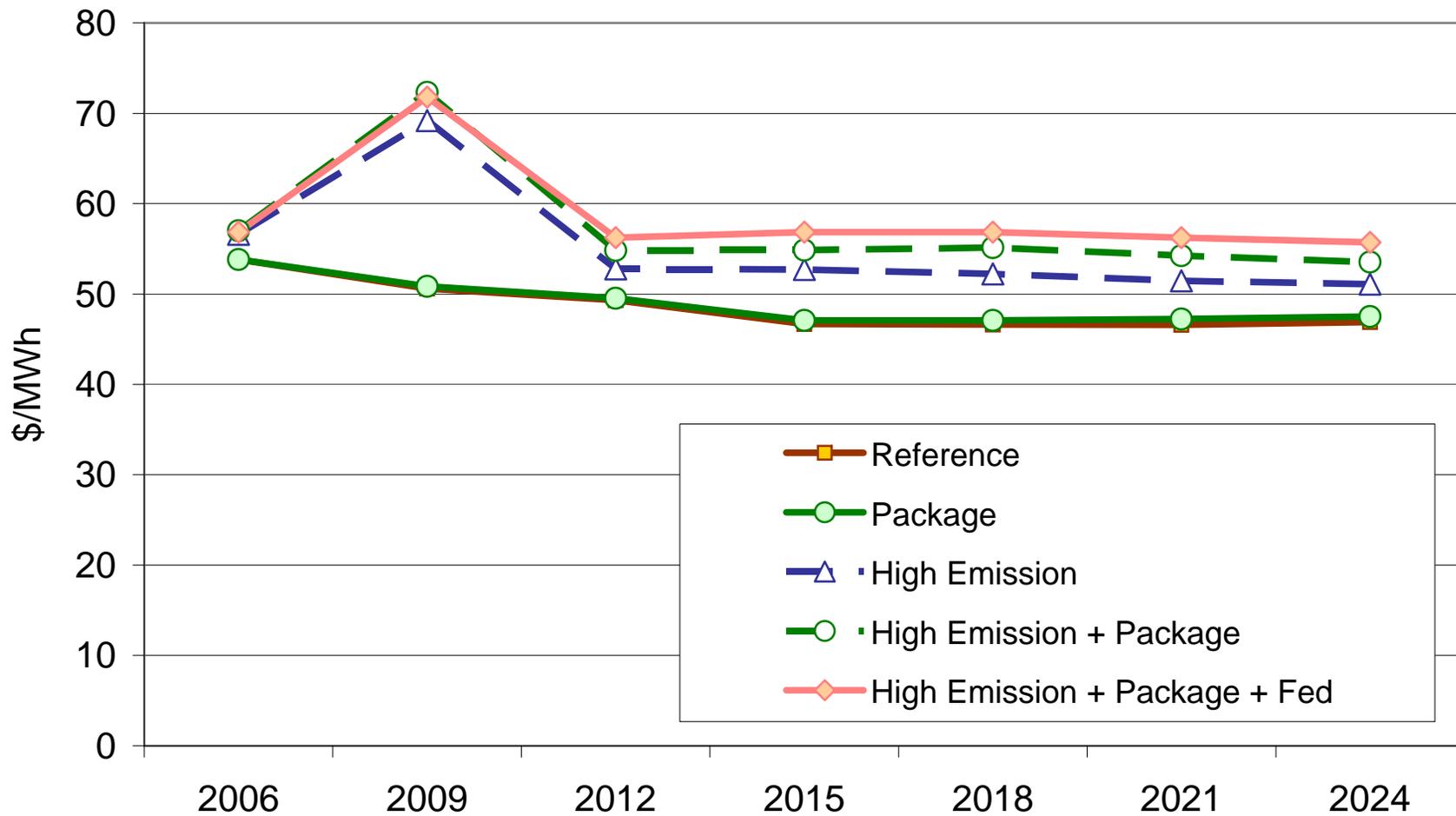
CO₂ Emissions Trajectories



CO₂ Allowance Prices

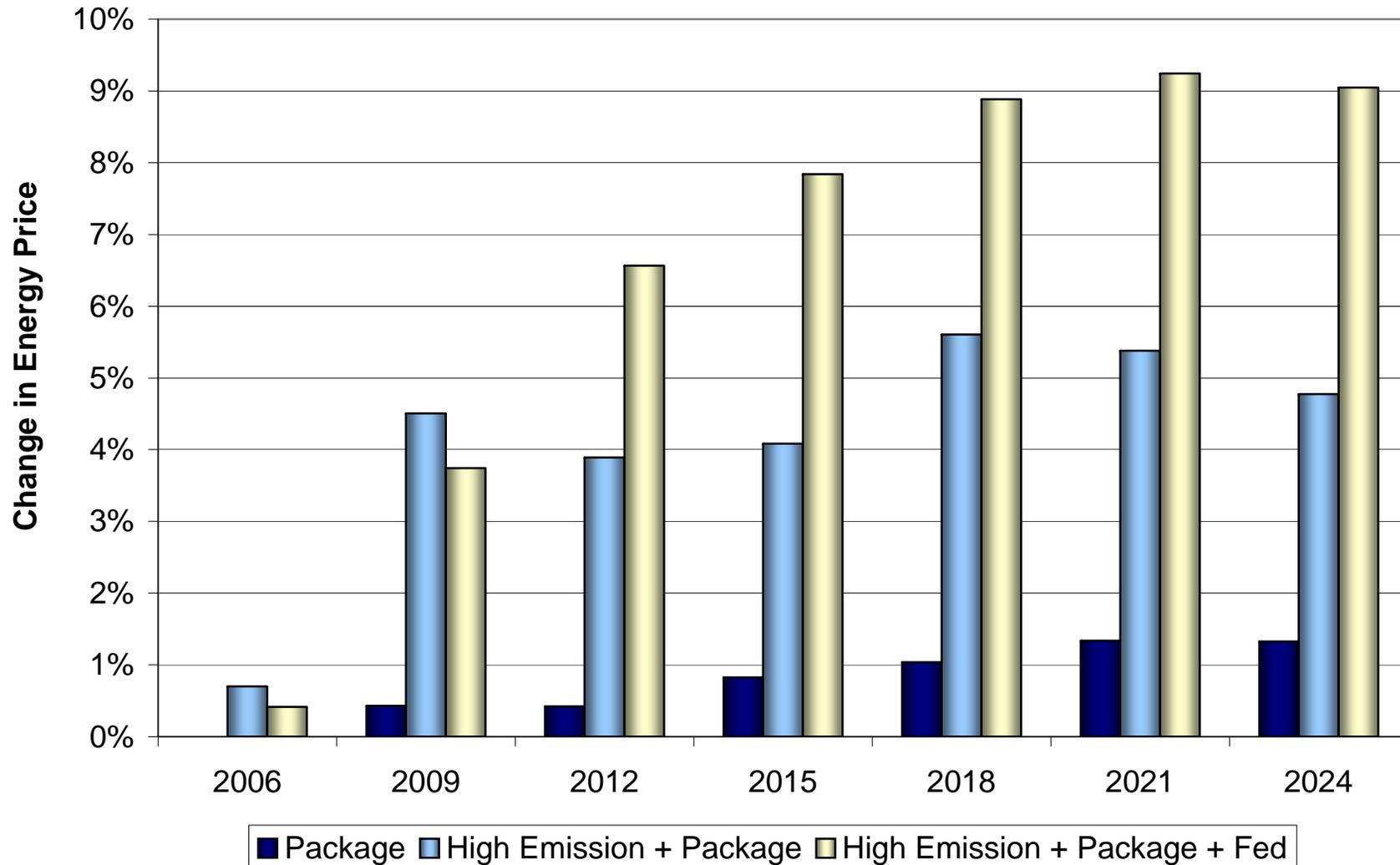


RGGI Average Annual Energy Prices



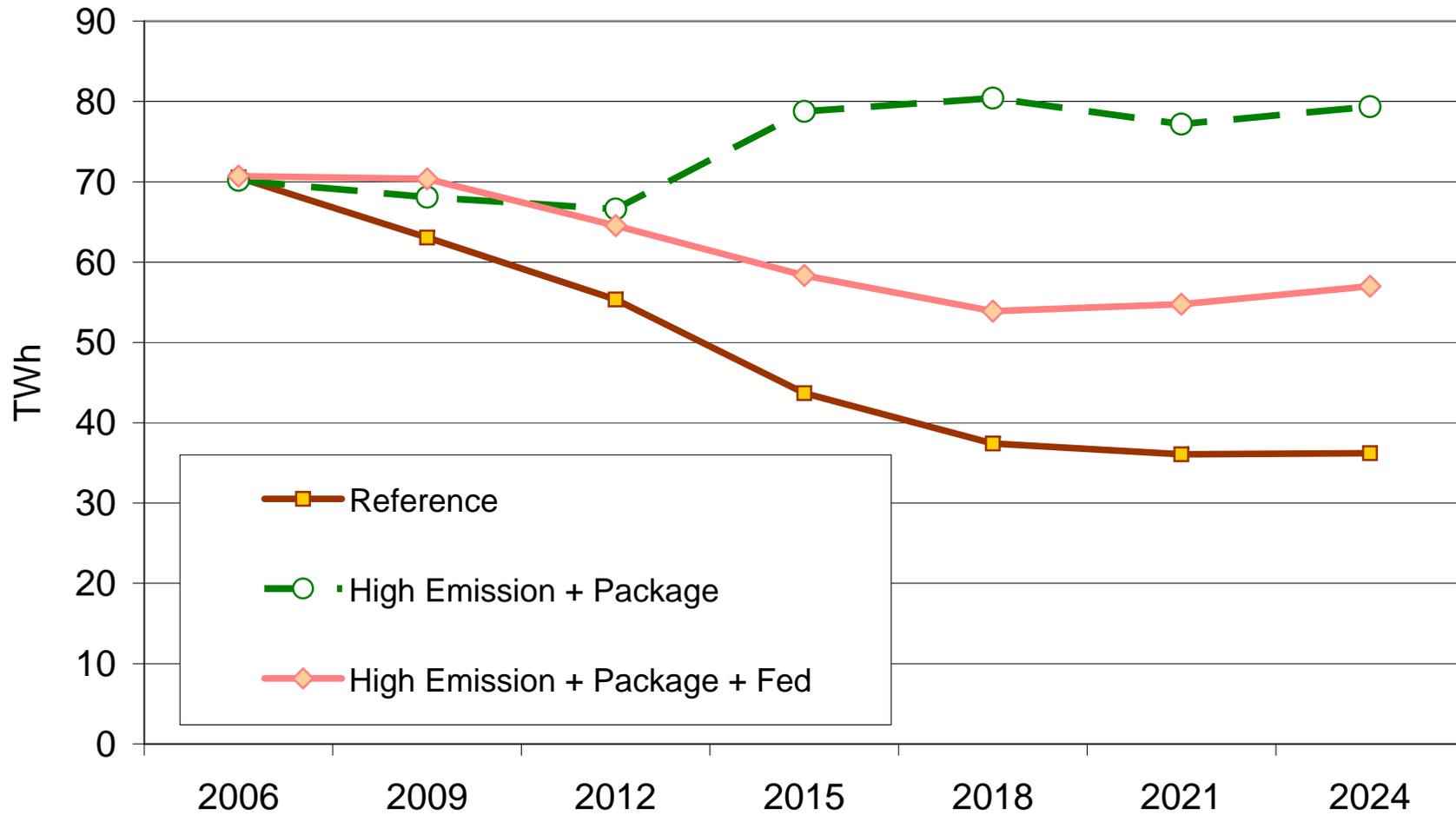
NOTE: Energy prices represent wholesale market prices and include annualized capacity prices.

Change in RGGI Average Annual Energy Prices



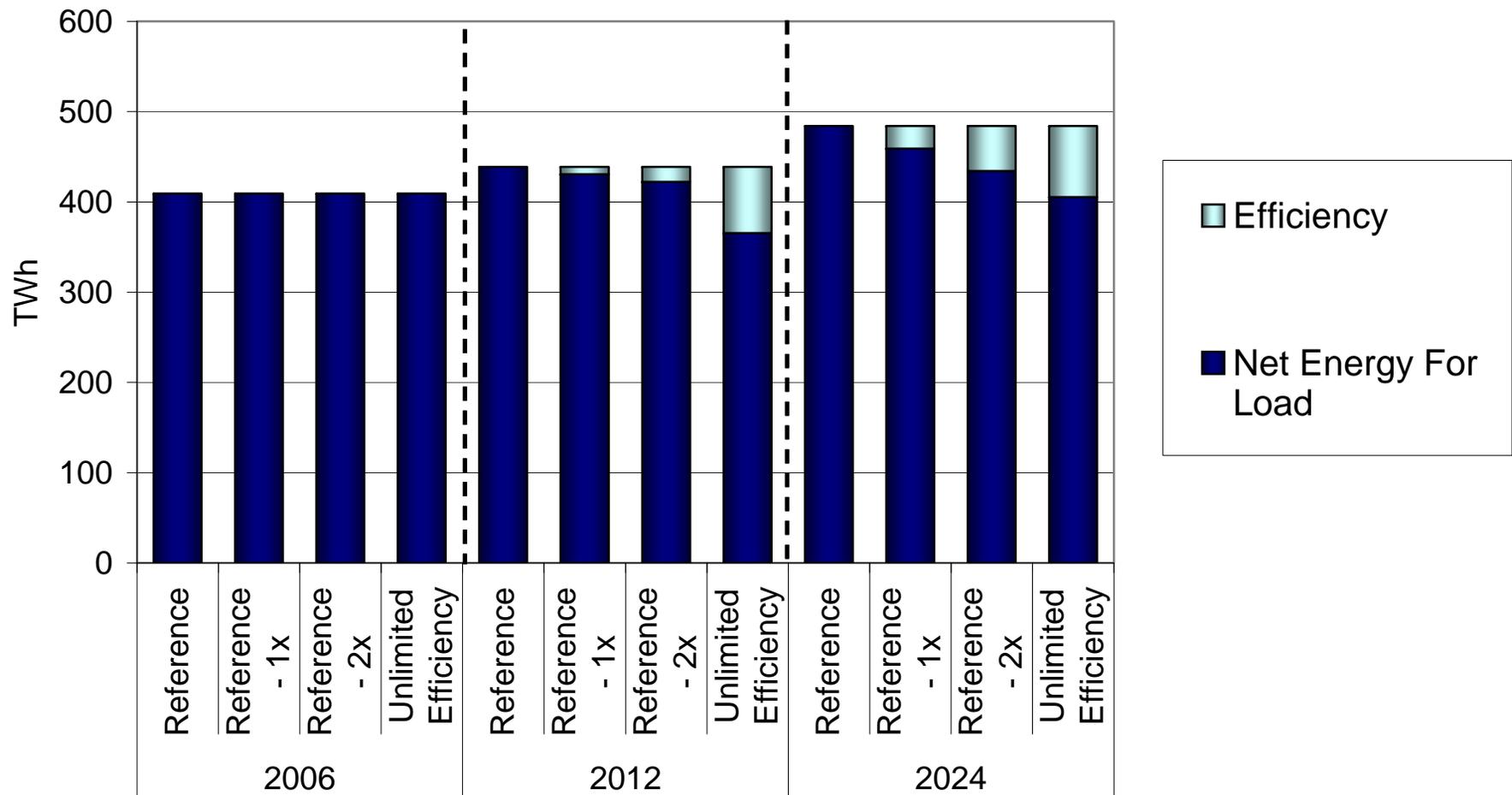
NOTE: Energy prices include annualized capacity prices.

RGGI Net Imports

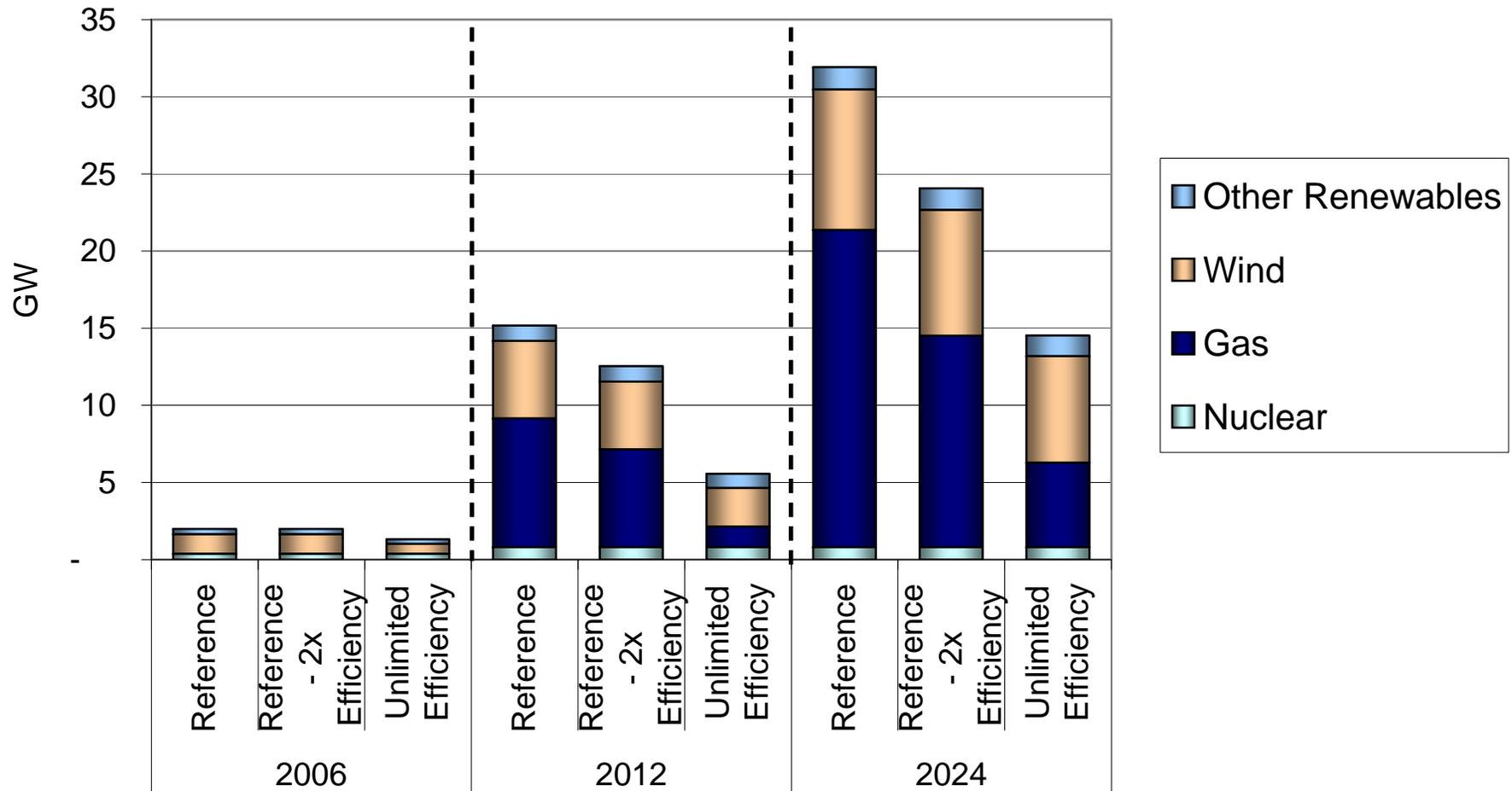


RGGI Efficiency Reference Cases

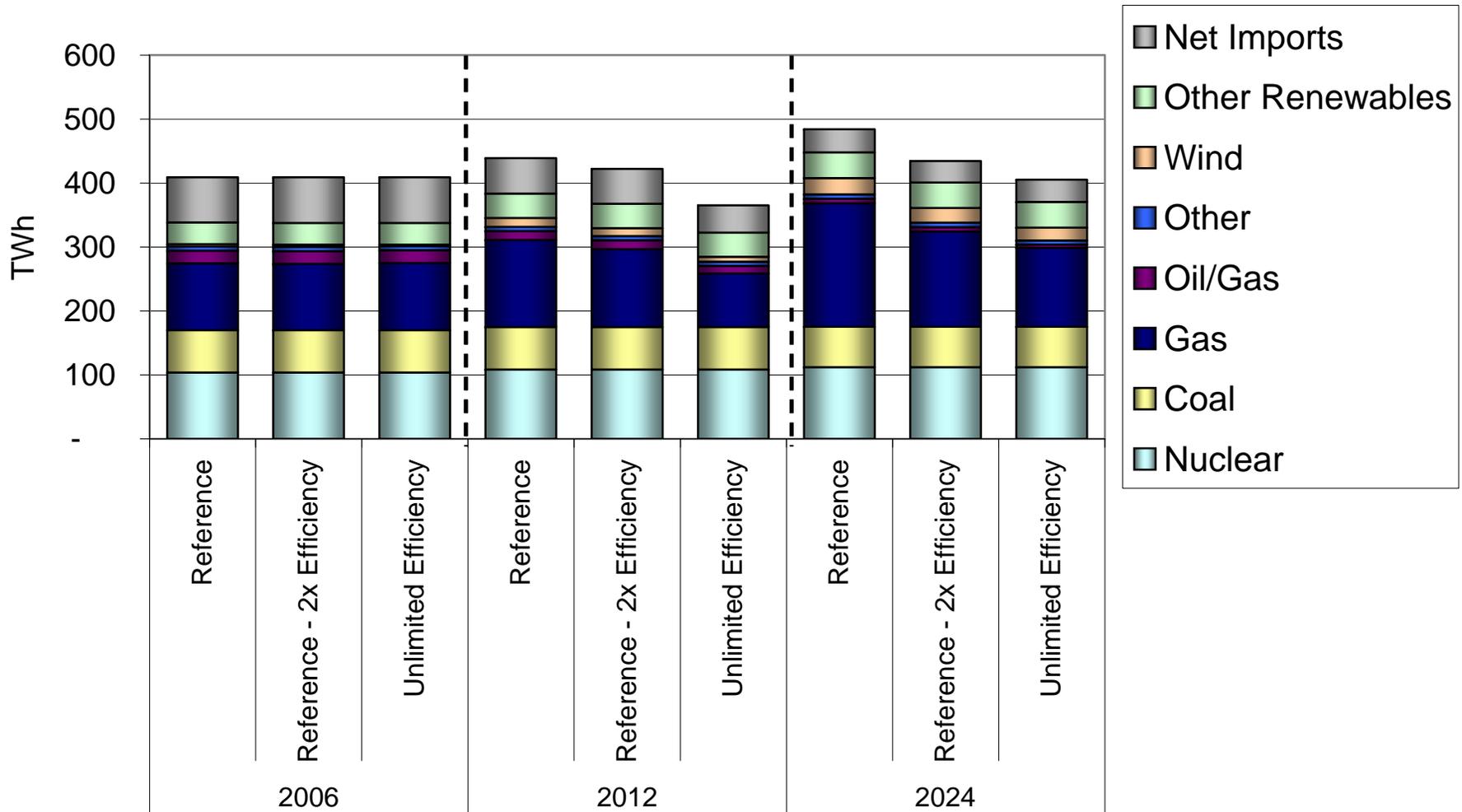
RGGI Load Growth Comparison



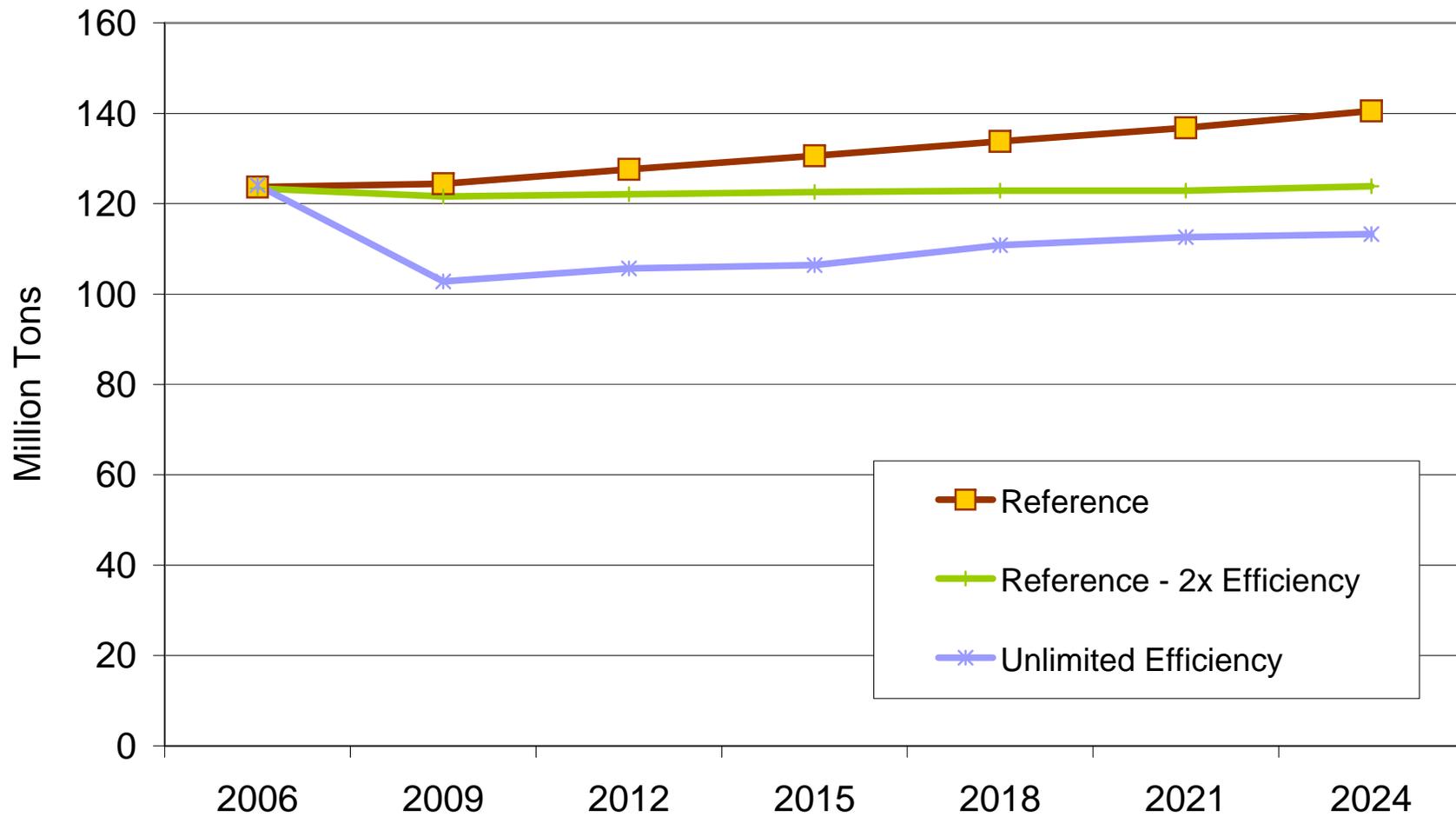
RGGI Cumulative Capacity Additions



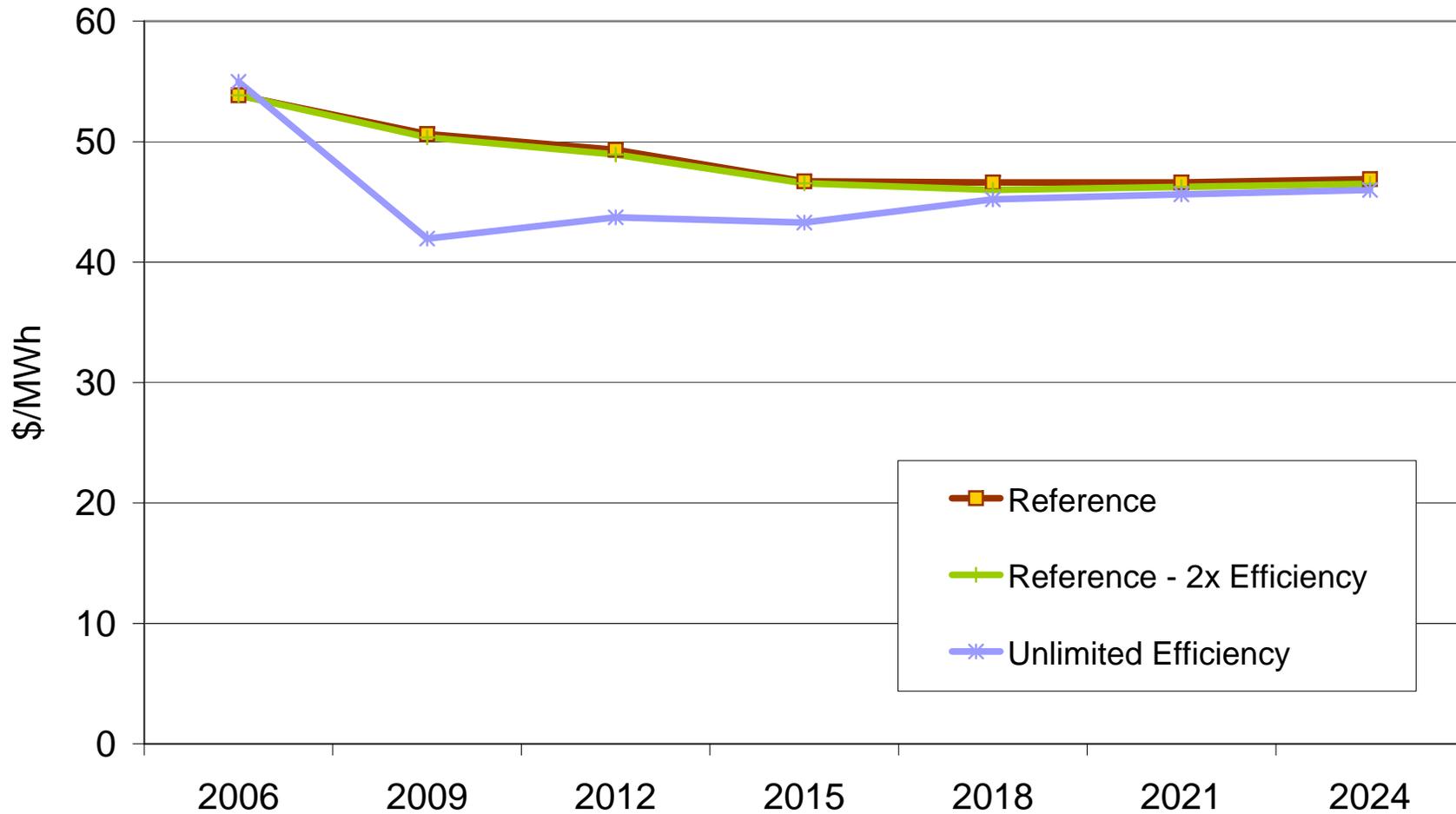
RGGI Generation Mix



CO₂ Emissions



RGGI Average Annual Energy Prices



NOTE: Energy prices include annualized capacity prices.

RGGI Net Imports

