

DOCKETED	
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Description:	3B. Liz Pham, CEC
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Draft Transportation Energy Demand Forecast Hourly Results

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November 13, 2025

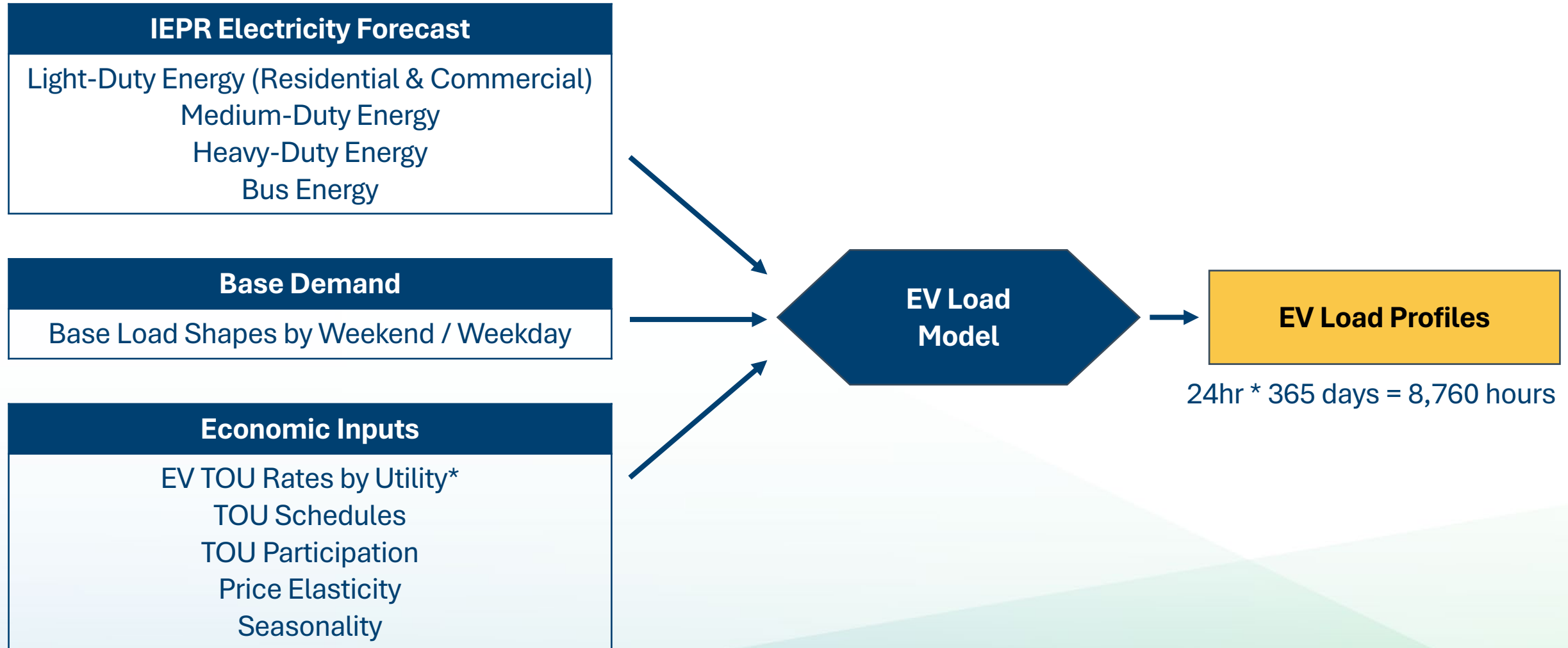


Load Shapes vs. Load Profiles

- Terms “load shapes” and “load profiles” are often used interchangeably
- “Shapes” = shape of the hourly load (i.e., normalized)
- “Profiles” = Both shape and magnitude (i.e., kilowatts) of load



Model Schematic



*Utilities Included: PGE, SCE, SDGE, LADWP, SMUD



Types of Load shapes

- Weekday and Weekend
- **Light-Duty Vehicles** (Source: 2017 - ChargePoint data)
 - Personal vehicles
 - Single family home
 - Multi-family home
 - Away-from-home charging (DCFC, L2 Destination, etc.)
 - Commercial vehicles
 - Government / Rental vehicles
- **Buses** (Source: Lawrence Berkeley National Lab)
 - School Bus, Urban Bus, Intercity Bus, Other Bus
- **Other Medium- and Heavy-Duty Vehicles** (Source: Lawrence Berkeley National Lab)



EV Load Model Assumptions

- Gasoline sales tax informs LD vehicle seasonal electricity demand
- Diesel sales tax informs MDHD vehicle seasonal electricity demand
- Input load shapes and price elasticity factor are the same for each utility
 - No region-specific load shapes at this time
- Today's charging behavior will stay the same into the future
- TOU rates (and hence the ratio between off peak and on peak hours) remain the same throughout the forecast years



EV Load Model Updates

Inputs

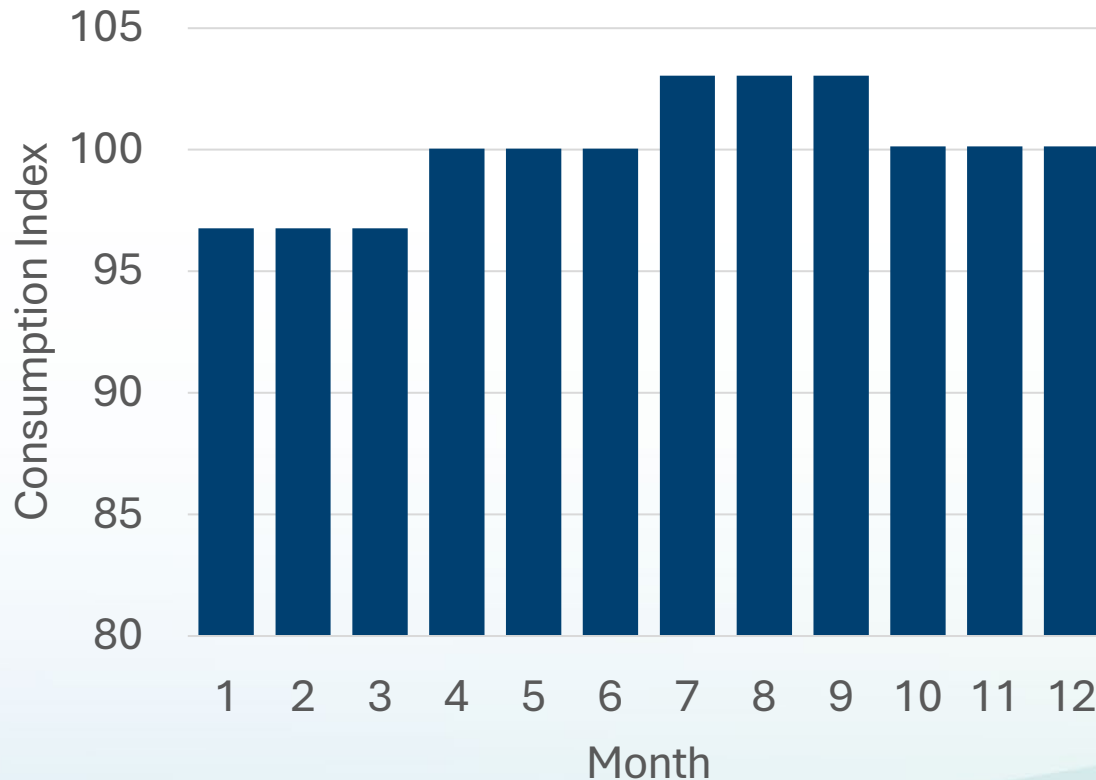
- EV TOU rates for each utility (updated as of October 2025)
- Seasonality – Gasoline/diesel sales tax records by quarter (updated)
- Input Load Shapes (LDV – 2017 ChargePoint, MDHD – LBNL) (same)
- Price Elasticity Factor (same)
- TOU participation (same)



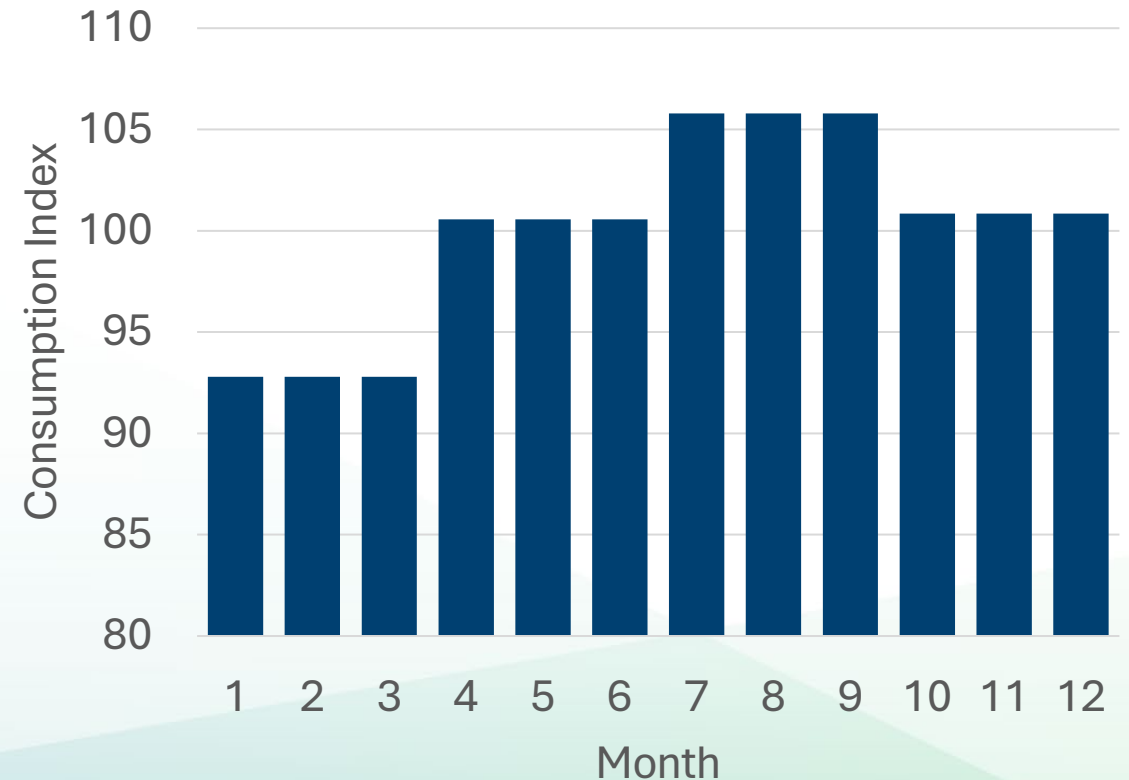
Load Profile Updates: Seasonality

Seasonality is based on quarterly gasoline and diesel sales tax from California Department of Tax and Fee Administration

LD Quarterly Consumption Index



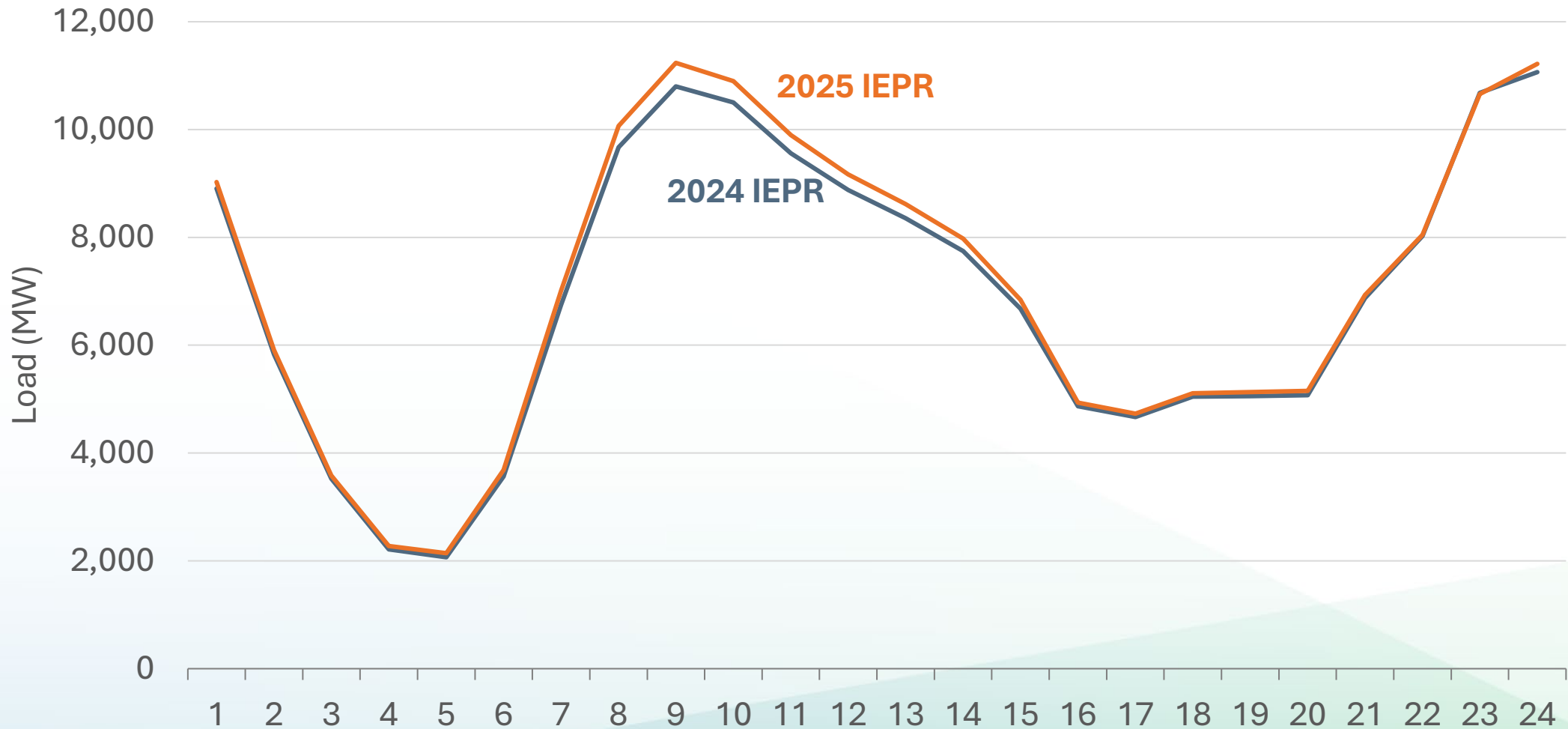
MDHD Quarterly Consumption Index





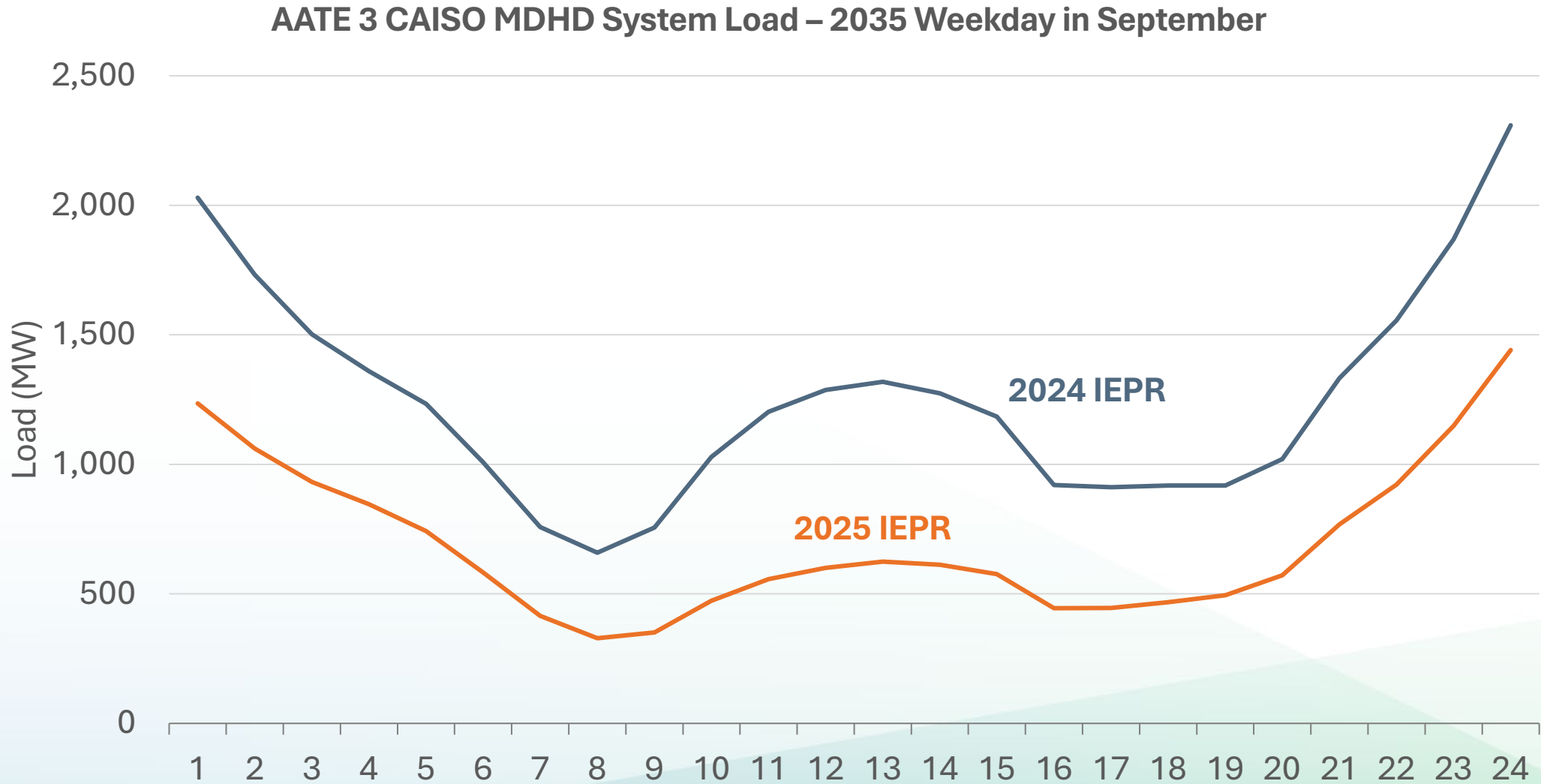
EV Load Profile – LD Vehicles

AATE 3 LD CAISO System Load – 2035 Weekday in September





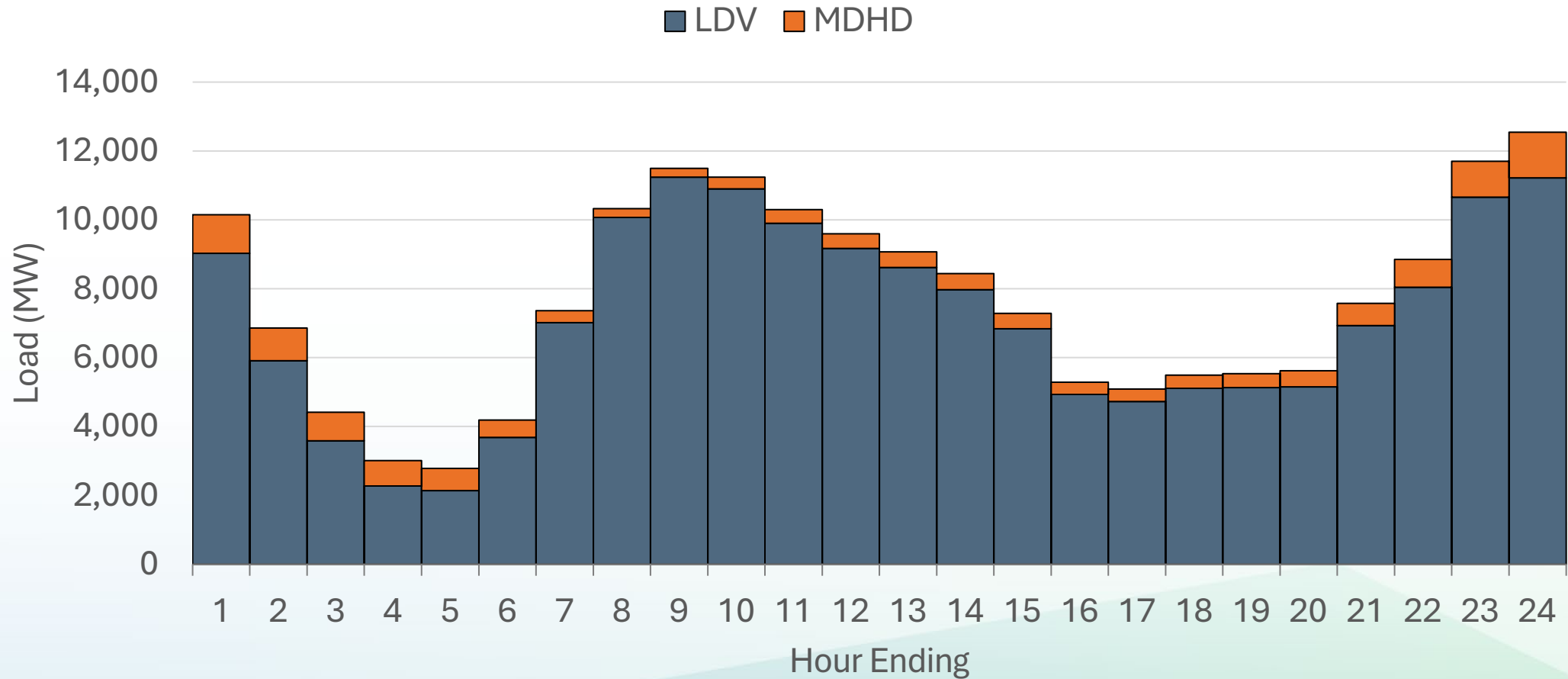
EV Load Profile – MDHD Vehicles





EV Load Profile – System Load

2025 IEPR AATE 3 CAISO
2035 Weekday in September



Thank You!

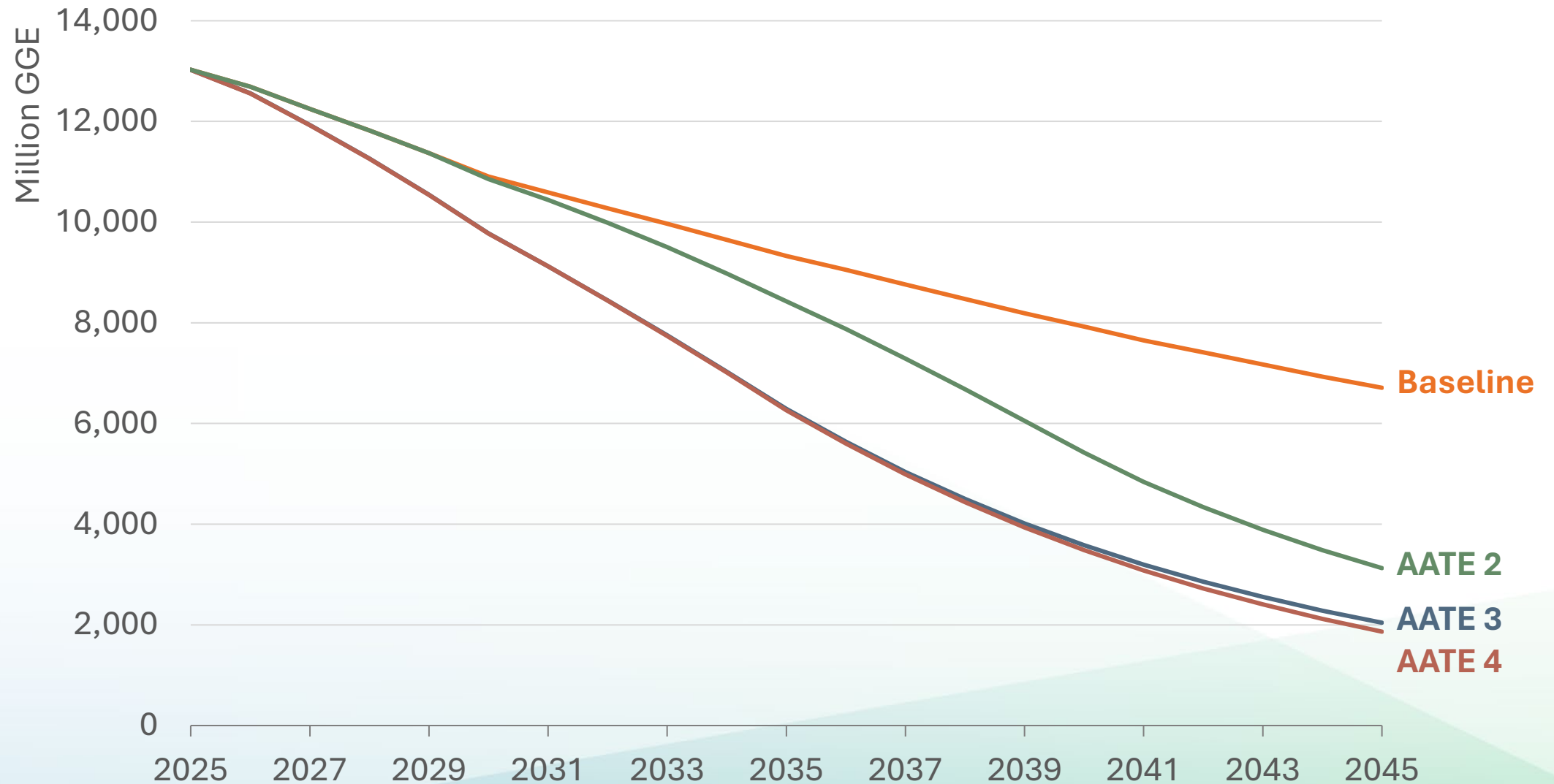


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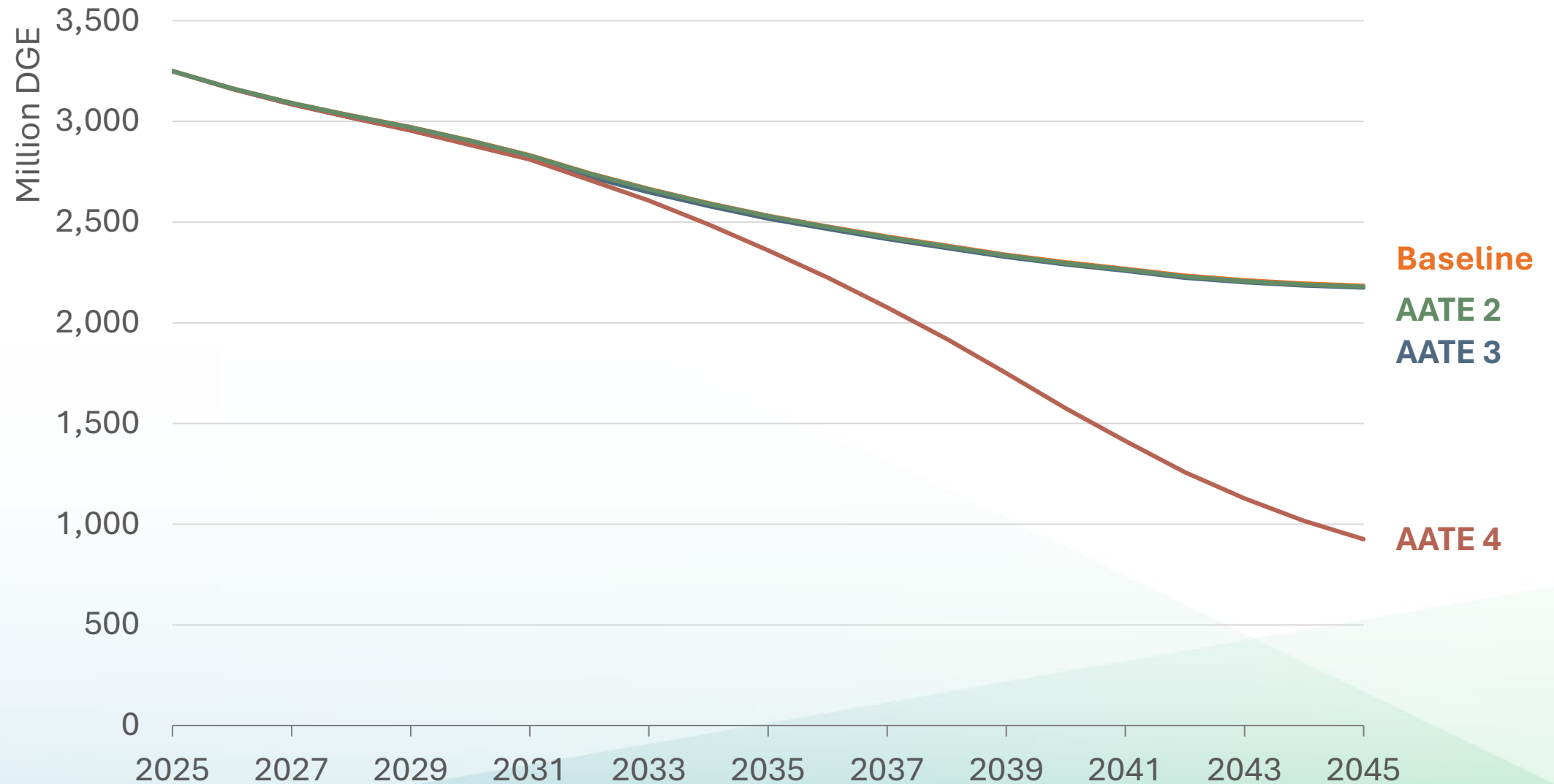


Gasoline Demand Forecast (Gasoline Gallon Equivalent)



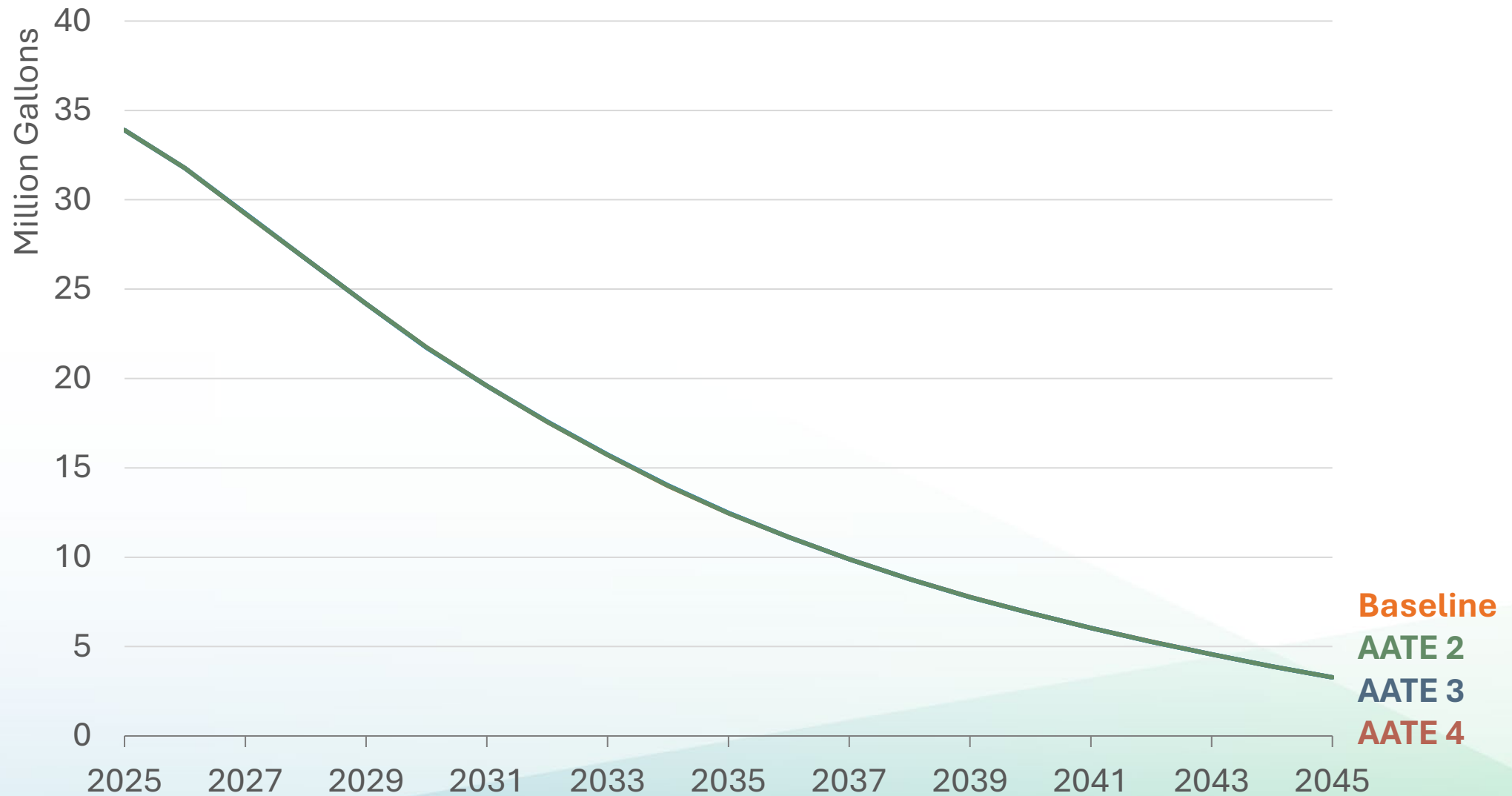


Diesel Demand Forecast (Diesel Gallon Equivalent)



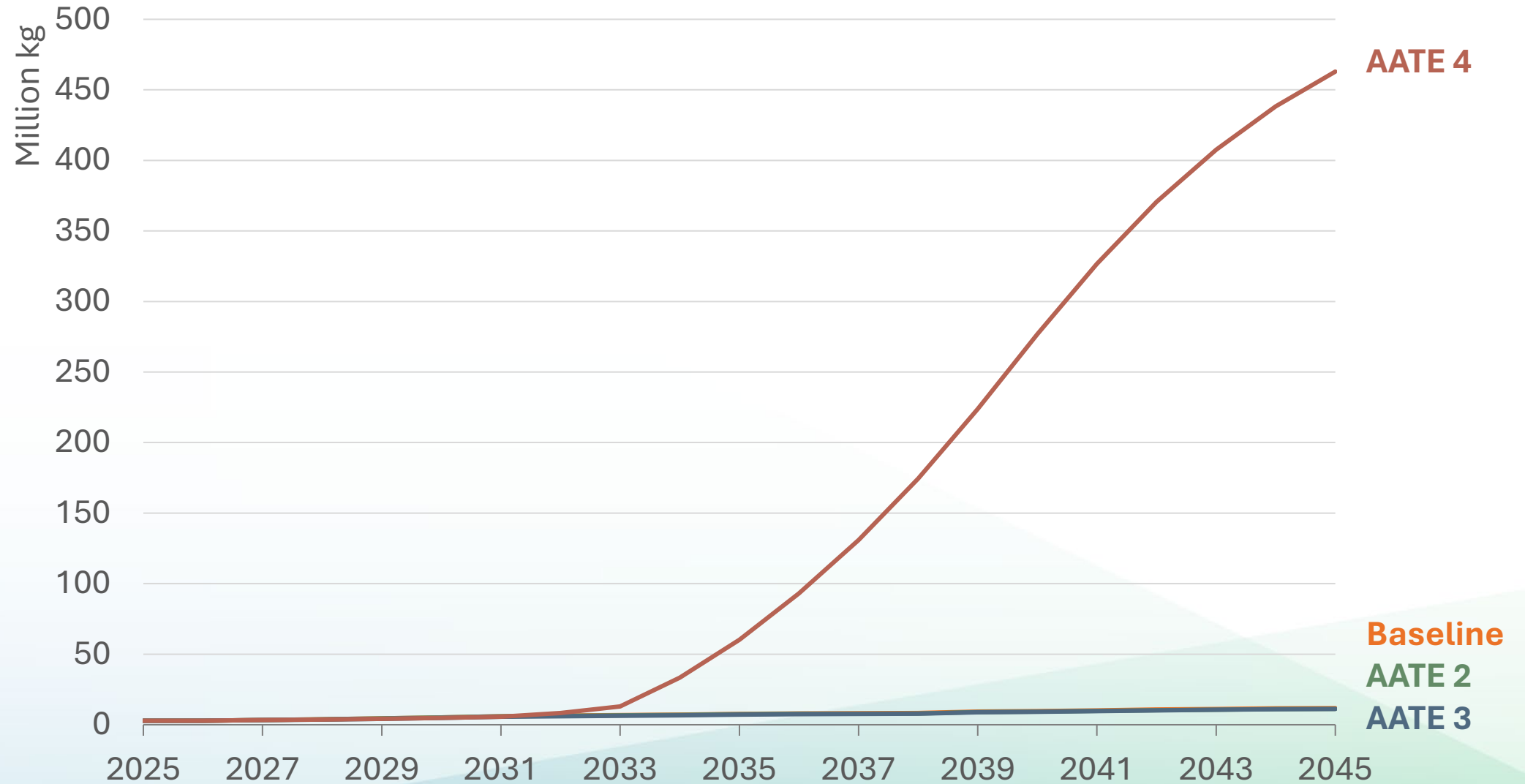


E85 Demand Forecast (Gallons of E85)



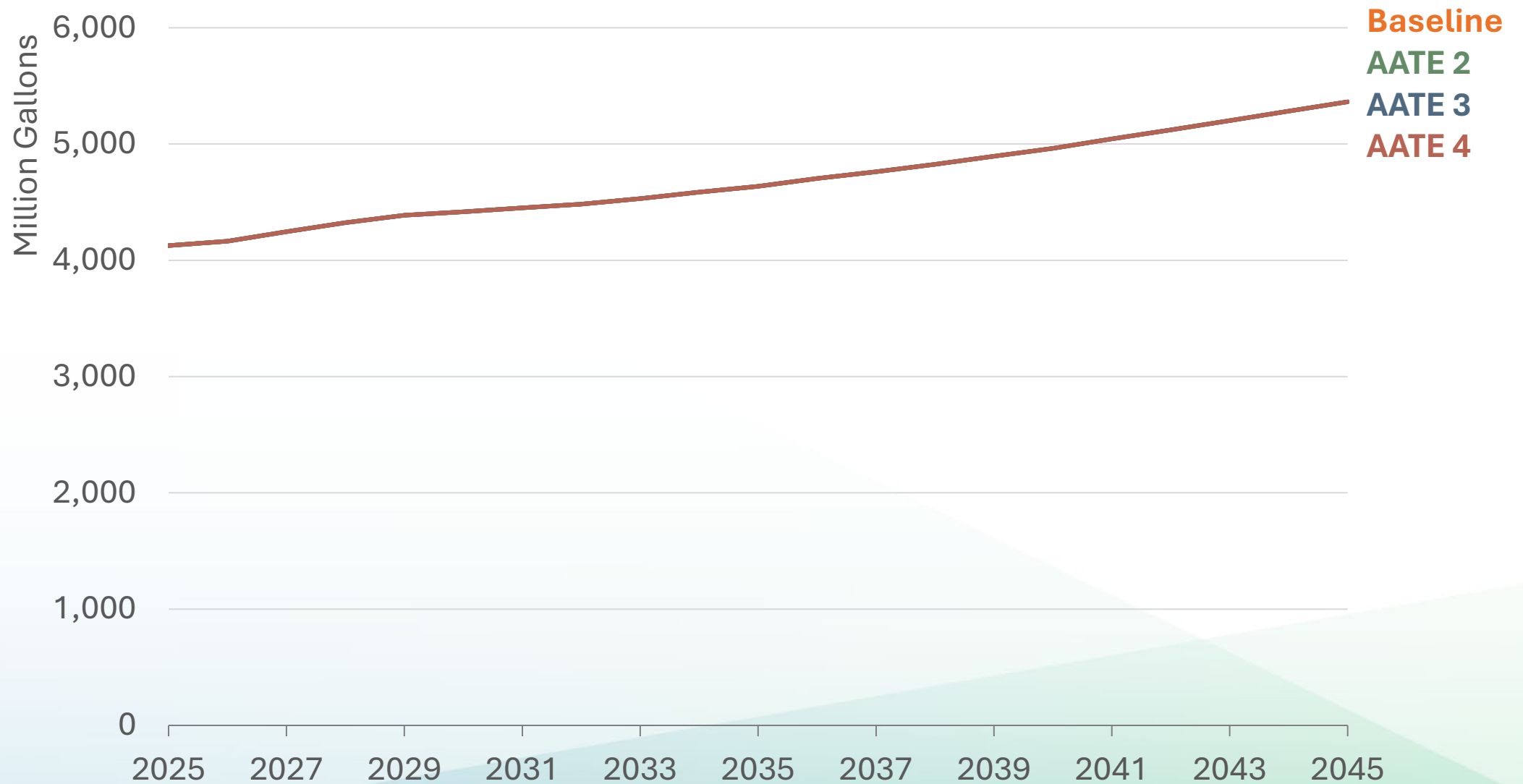


Hydrogen Demand Forecast (kg)





Jet Fuel Demand Forecast (Gallons of Jet Fuel)





Natural Gas Demand Forecast (Therms, Transportation Only)

