

DOCKETED	
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2024 IEPR Forecast Overview

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Why does CEC forecast energy demand?

Warren-Alquist Act

Established the CEC

Public Resources Code 25301(a)

Requires the CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices."





CA Energy Demand Forecast

- Foundational for procurement and system planning in the state
- Informs:
 - Resource adequacy requirements
 - Integrated resource planning
 - Reliability assessments
 - Transmission system planning
 - Distribution system planning



IEPR Forecast Products

- Updated annually, with a full refresh in odd years
- 15+ year system-level forecast of electricity demand
 - Annual electricity demand
 - 8760 hourly electricity loads for a 1-in-2 year
 - Scenarios for distributed generation, energy efficiency, building electrification, and transportation electrification
 - 1-in-5, 1-in-10, and 1-in-20 year net electricity peak
- Final results posted in mid-January
- Single Forecast Set agreement between CPUC, CAISO, and CEC documented in IEPR



Forecast Approach Overview





Electricity Forecast Planning Areas

1. Pacific Gas and Electric
2. Southern California Edison
3. San Diego Gas & Electric
4. Northern California Non-California ISO (NCNC)
5. Los Angeles Department of Water and Power
6. Imperial Irrigation District
7. Burbank/Glendale
8. Valley Electric Association



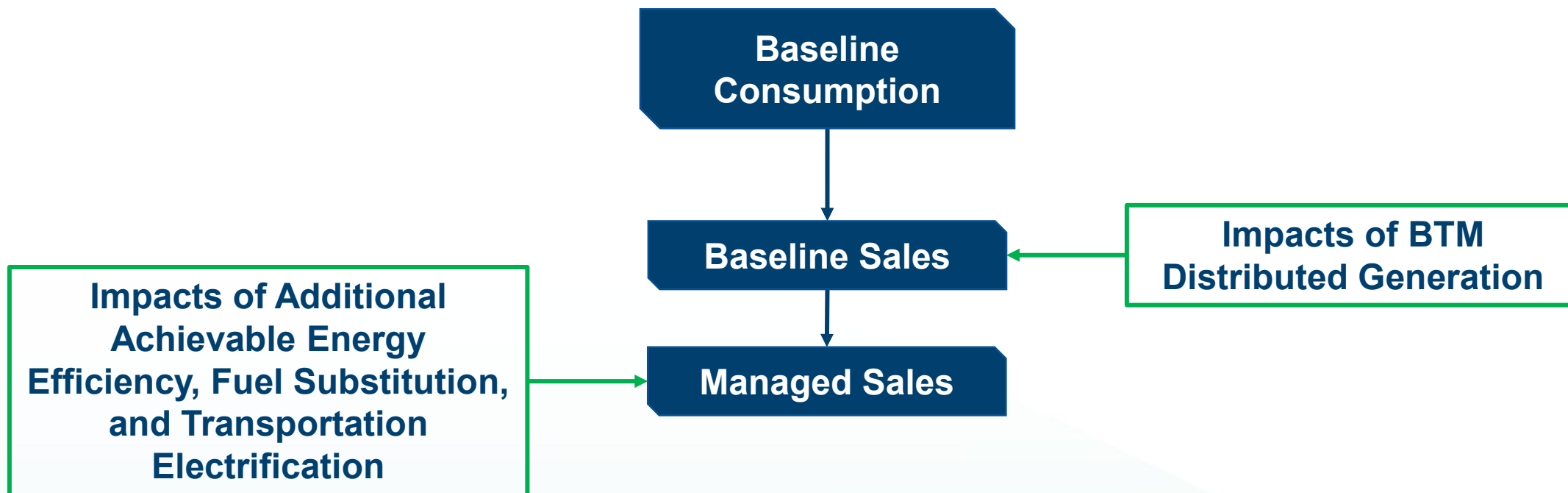
Forecast Zones

Planning Area	Forecast Zone
PG&E TAC Area	1. Greater Bay Area
	2. North Coast
	3. North Valley
	4. Central Valley
	5. Southern Valley
	6. Central Coast
SCE TAC Area	7. LA Metro
	8. Big Creek West
	9. Big Creek East
	10. Northeast
	11. Eastern
Northern California Non-California ISO (NCNC)	13. SMUD
	14. Turlock Irrigation District
	15. Remainder of BANC



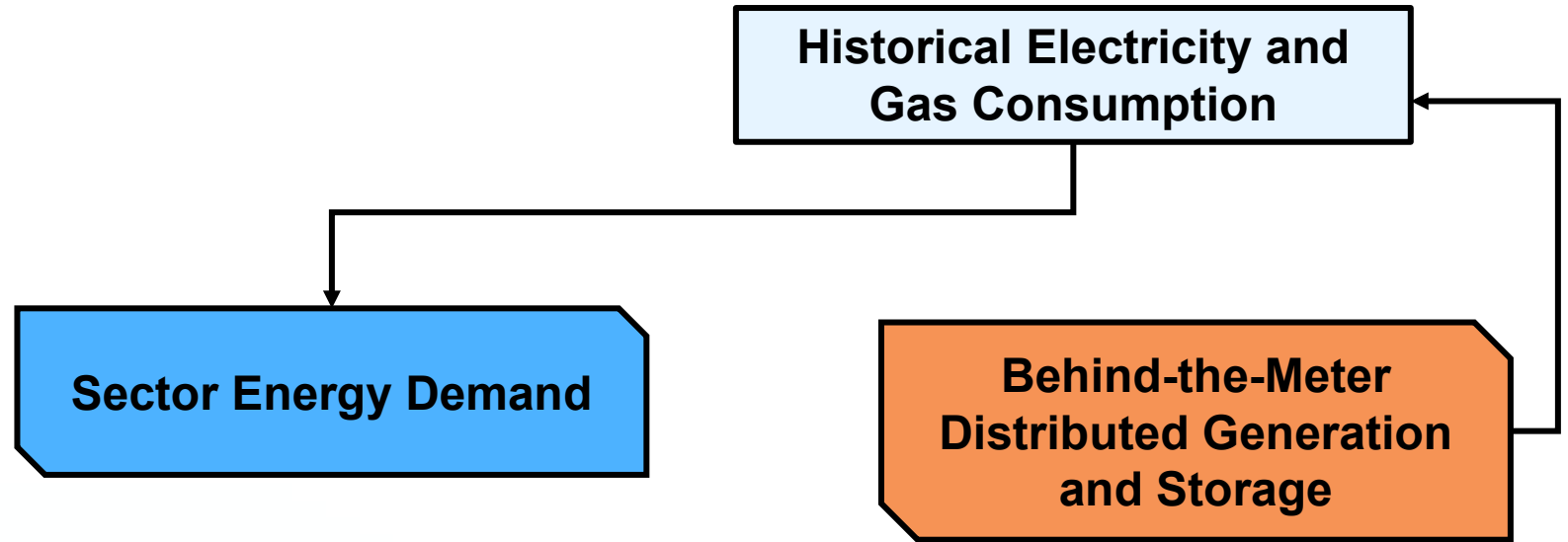


Forecast Terminology





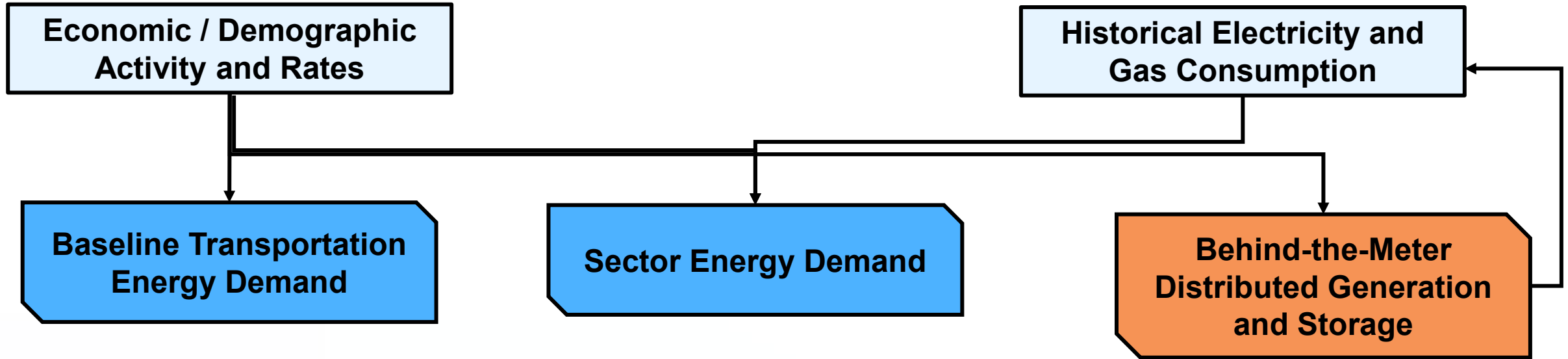
Energy Demand Model System (1)



- Historical energy demand starts with latest sales data from QFER
- Estimates of historical distributed generation are added to historical sales data to estimate historical consumption
- Historical consumption data are provided to end use and NAICS based forecast models



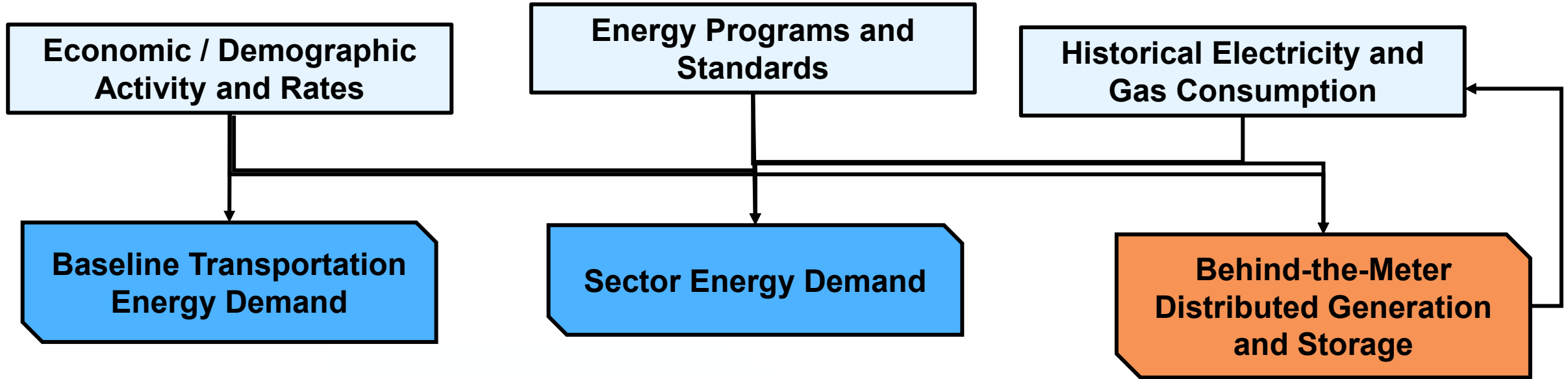
Energy Demand Model System (2)



- Economic and demographic assumptions along with rate forecasts are inputs to the sector, distributed generation, and transportation models



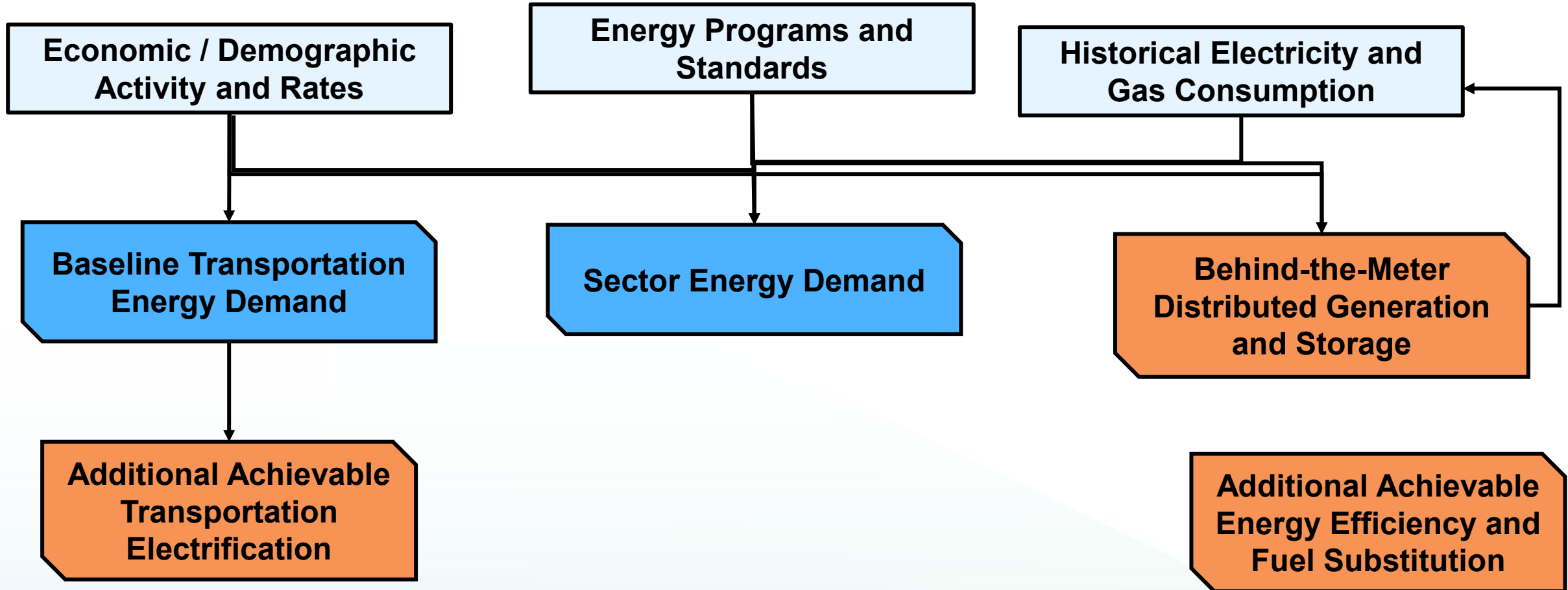
Energy Demand Model System (3)



- Latest energy programs and standards estimates are provided to sector end use models
- BTM PV and storage projections consider Title 24 mandates for new construction



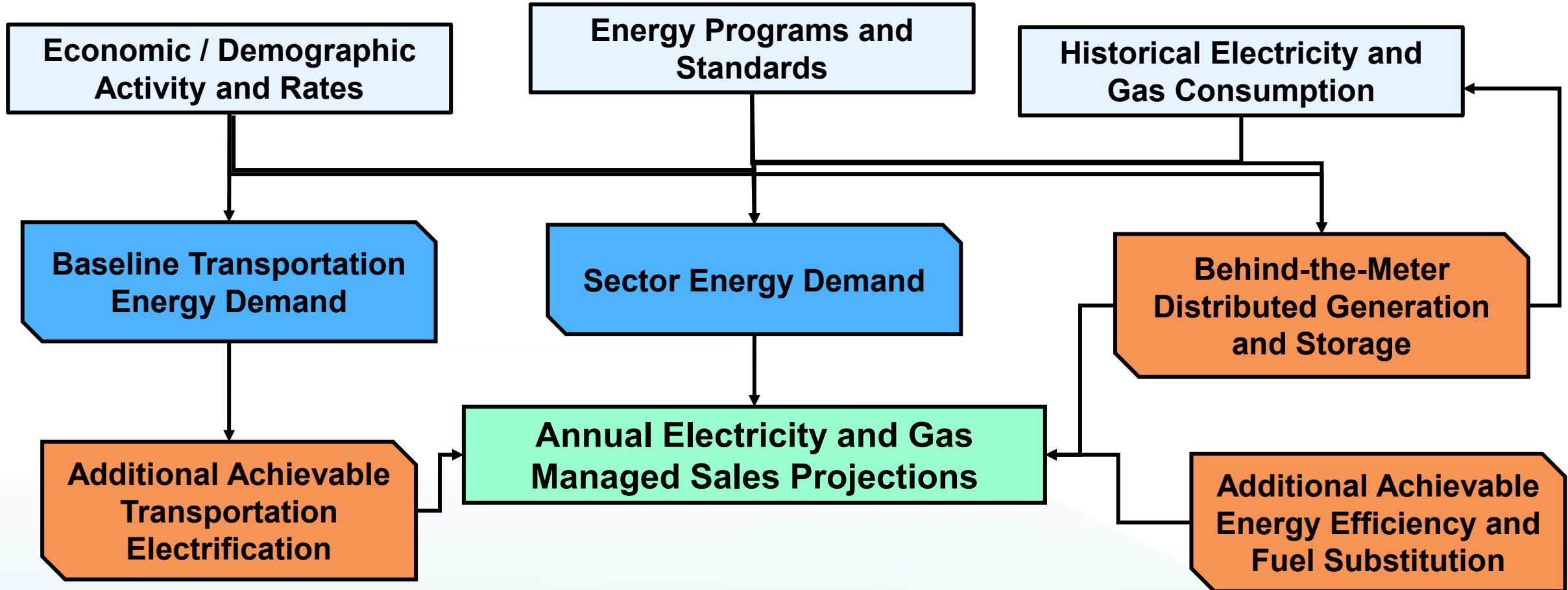
Energy Demand Model System (4)



- Additional Achievable scenarios are developed for Energy Efficiency, Fuel Substitution, and Transportation Electrification



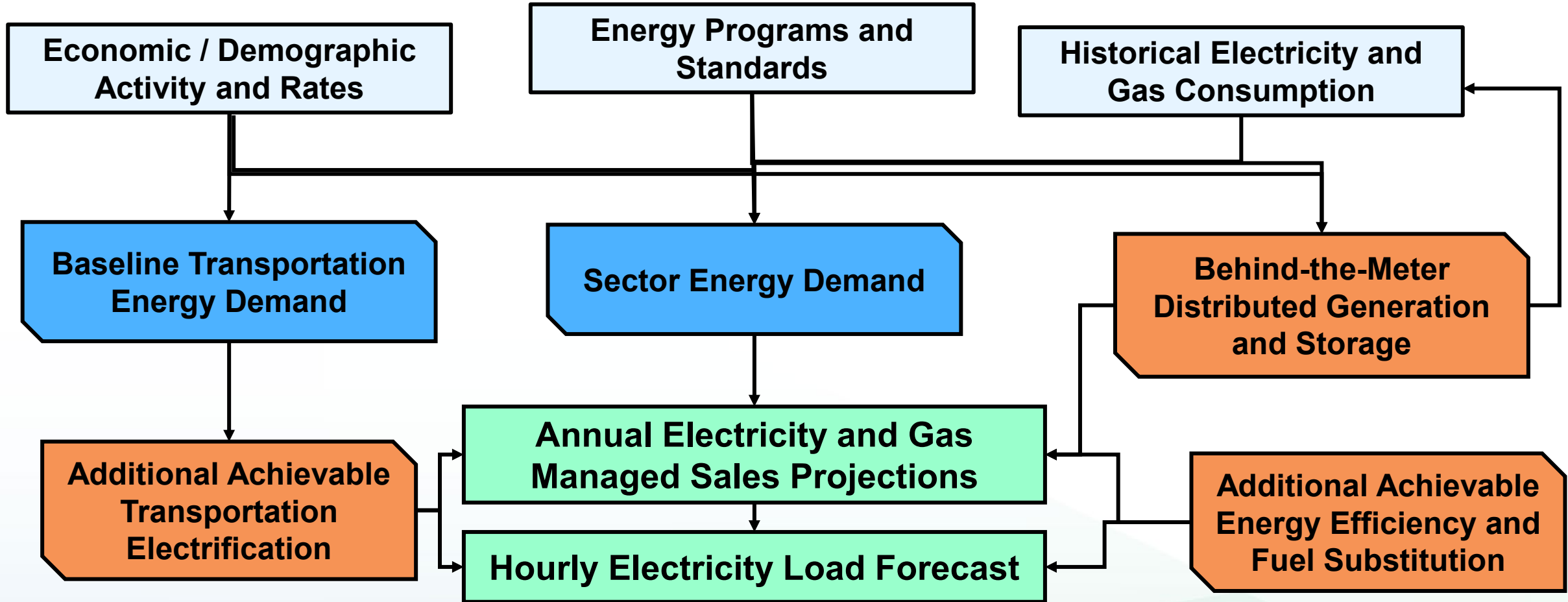
Energy Demand Model System (5)



- Load modifier results are combined with baseline consumption to create managed sales forecast scenarios



Energy Demand Model System (6)



- Electricity Results are fed into the hourly electricity load forecast
- Hourly load modifier profiles are integrated to create the managed hourly load forecast



2024 IEPR Forecast Status



2024 IEPR Forecast Timeline

Meeting Type	Topic	Date
IEPR Workshop	Electricity Load Growth Areas	May 16
IEPR Workshop	Forecast Methodology Updates	July 30
DAWG Meeting	BTM DG Updates, Econ/Demo Inputs, AAEE/AAFS Updates	August 21
IEPR Workshop	Forecast Use in Electricity System Planning	October 2
DAWG Meeting	Draft Load Modifier Results	October 21
IEPR Workshop	Draft Load Modifier Results	November 7
DAWG Meeting	Draft Overall Forecast Results	November 21
IEPR Workshop	Draft Overall Forecast Results	December 12
CEC Business Meeting	Forecast Adoption	January 21, 2025



2024 DAWG Meetings on Inputs, Assumptions, and Methodology

Forecast Area	Aug 21	Oct 21	Nov 21
Economic / Demographic Inputs	X		
Electricity Rates		X	
Transportation		X	X
Additional Achievable Fuel Substitution	X	X	
Behind-the-Meter Distributed Generation	X	X	X
Data Centers		X	X
Draft Annual and Hourly Electricity Forecast Results			X

[Demand Analysis Working Group \(DAWG\)](#)



Next Steps

- Draft hourly forecast results are posted for review at [24-IEPR-03](#)
- [Draft IEPR](#) posted for public comment
 - Does not contain forecast results
- Review and consider comments and feedback on the forecast
- Jan 21, 2025: Final forecast results posted and proposed for adoption



Summary of Comments Received

- Community solar and storage
- Year-to-year variability
- Federal policy uncertainty
- Data centers
- Other large loads
- BTM PV