2025 IEPR: Preliminary Data Center Forecast

October 30, 2025

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Methodology

Methodological framework is similar to 2024 IEPR:

1. Request application data from utilities
2. Apply assumptions to account for:
   - Utilization Factor (67%)*: Requested capacity vs actual peak
   - Confidence Level: Probability of project completion
   - Ramping: Years to reach full capacity
3. Use existing AMI data to create 8,760 load factor profile

*Unchanged from CEDU 2024

Data Request Process

- Data request sent to:
  - PG&E, SCE, SVP, Palo Alto, VEA
- Additional conversations held with:
  - SDG&E, Burbank, San Jose
- Next steps:
  - In Nov-Dec, CEC will check if the data center application queue has changed significantly before finalizing the forecast for proposed adoption in January
  - In Q1 2026, CEC will request information to disaggregate data center load impacts to busbar to support the CAISO's transmission planning

Treatment of VEA data centers

- VEA load growth is in Nevada
- Will *not* be included in the statewide annual electricity load
- Will be included in:
  - CAISO hourly load
  - LSE/BA tables

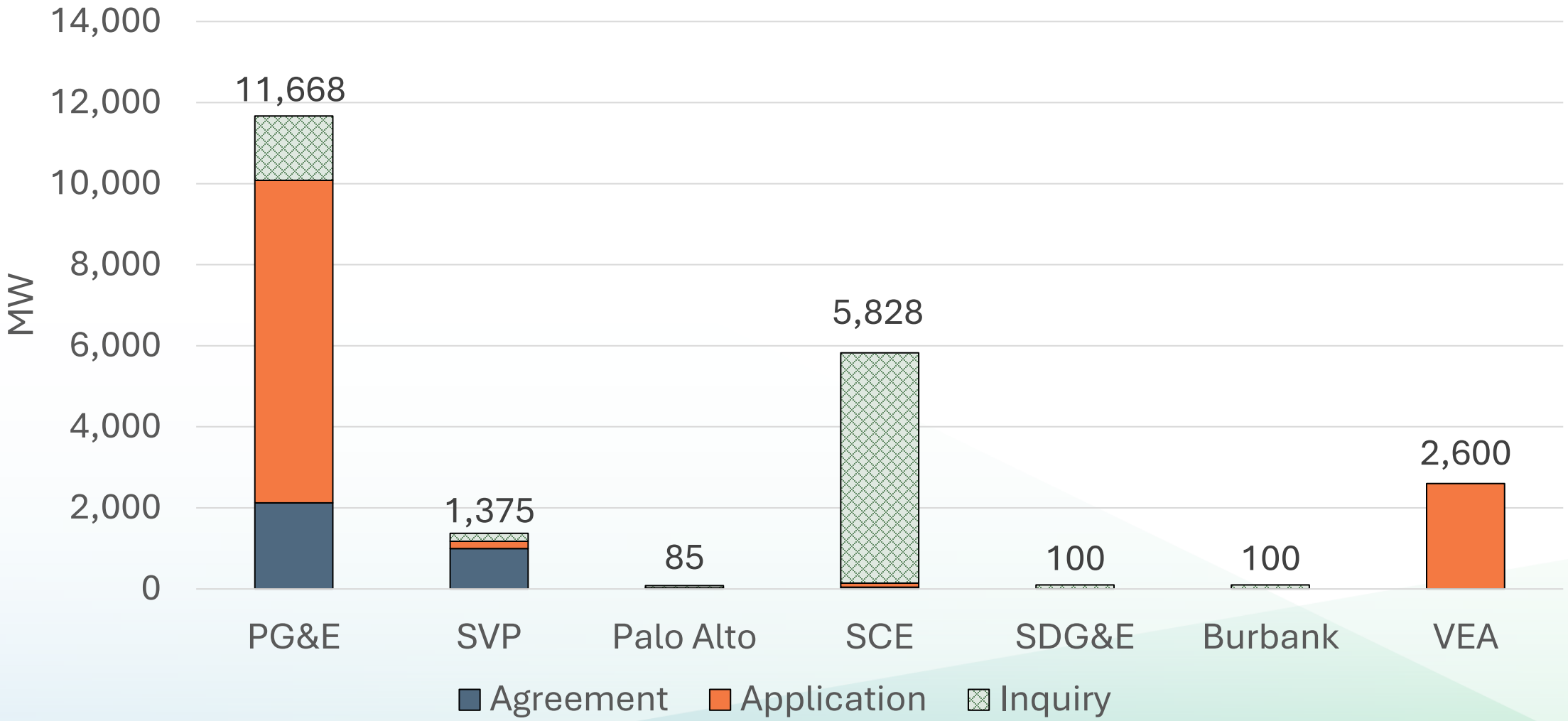
Group Definition Change

	2024 IEPR	Draft 2025 IEPR
Group 1	Active applications with completed or to-be completed engineering studies	Signed agreement for electric service
Group 2	Active applications prior to initiating engineering studies	Active application for electric service
Group 3	Inquiries	Inquiries

Source: CEC

- 2025 Group 1 projects have more certainty than the 2024 Group 1 projects, since they signed an agreement with the utility
- 2025 Group 2 definition combines what was defined as Group 1 and Group 2 in 2024

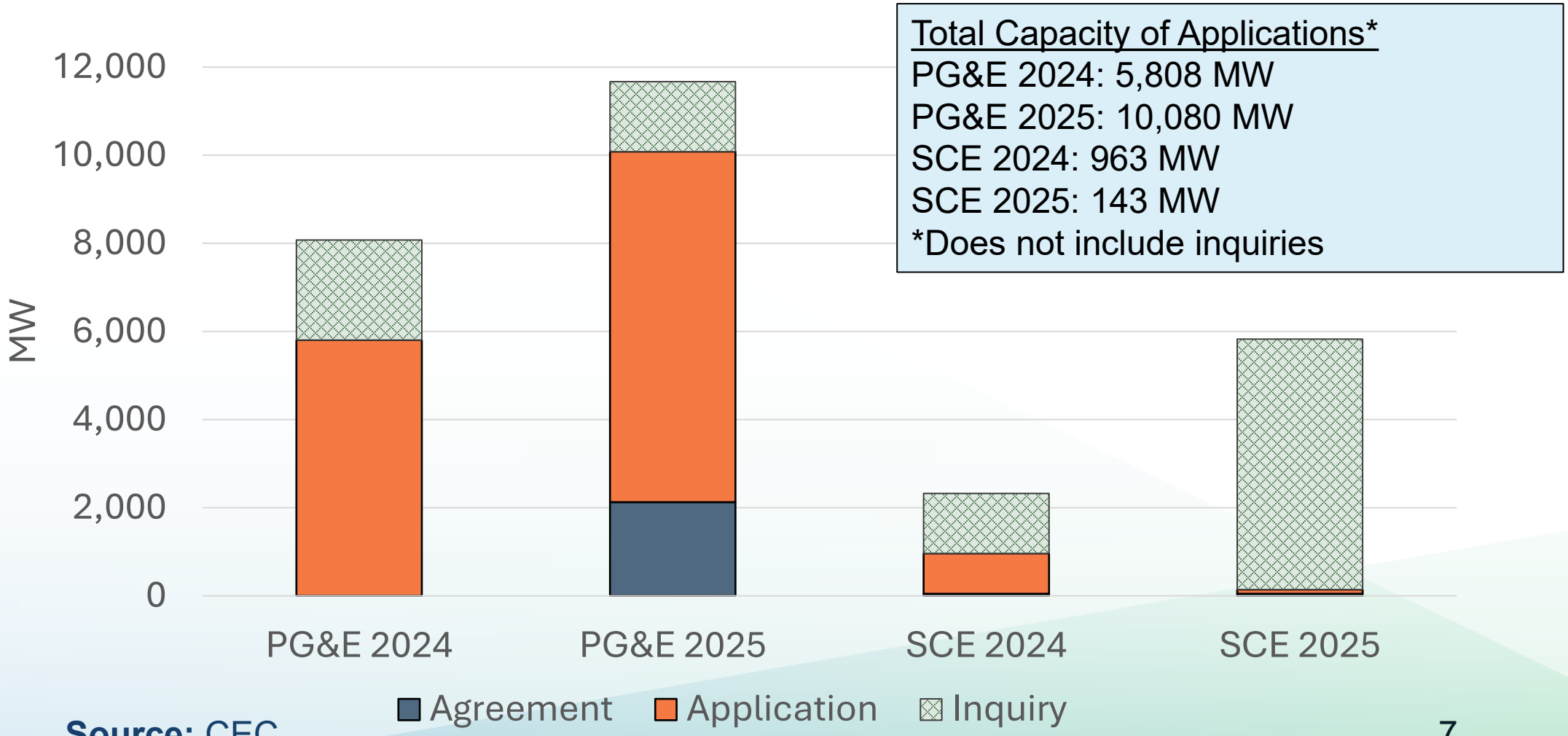
2025 Capacity Requested



Source: CEC

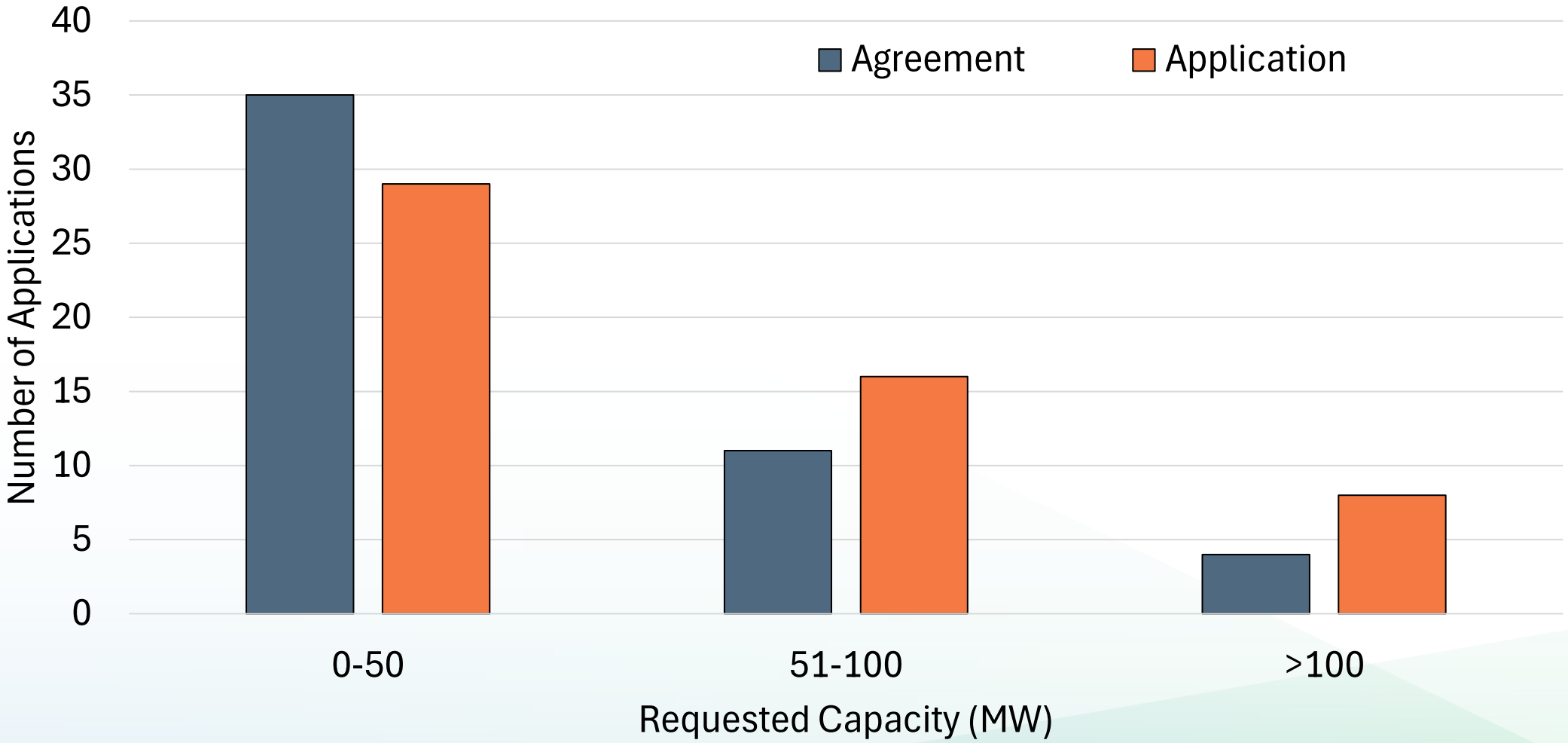
PG&E and SCE Capacity Requests: 2024 and 2025

December 2024 compared to summer 2025 data



Source: CEC

Data Center Sizes



Source: CEC

Proposed Confidence Levels

2024 IEPR

PG&E	Low	Mid	High
Group 1	50%	70%	70%
Group 2	-	-	50%
Group 3	-	-	10%

SCE	Low	Mid	High
T&D planning	100%	100%	100%
Group 1	50%	70%	70%
Group 2	-	50%	50%
Group 3	-	-	10% - 50% per SCE

Source: CEC with data inputs from PG&E and SCE

2025 IEPR

Assumptions match what was used for PG&E last year, except the red values

All (except SVP)	Low	Mid	High
Group 1	50%	70%	100%
Group 2	-	33%	50%
Group 3	-	-	10%

Source: CEC

Mid: Baseline & Planning Scenario
High: Local Reliability Scenario

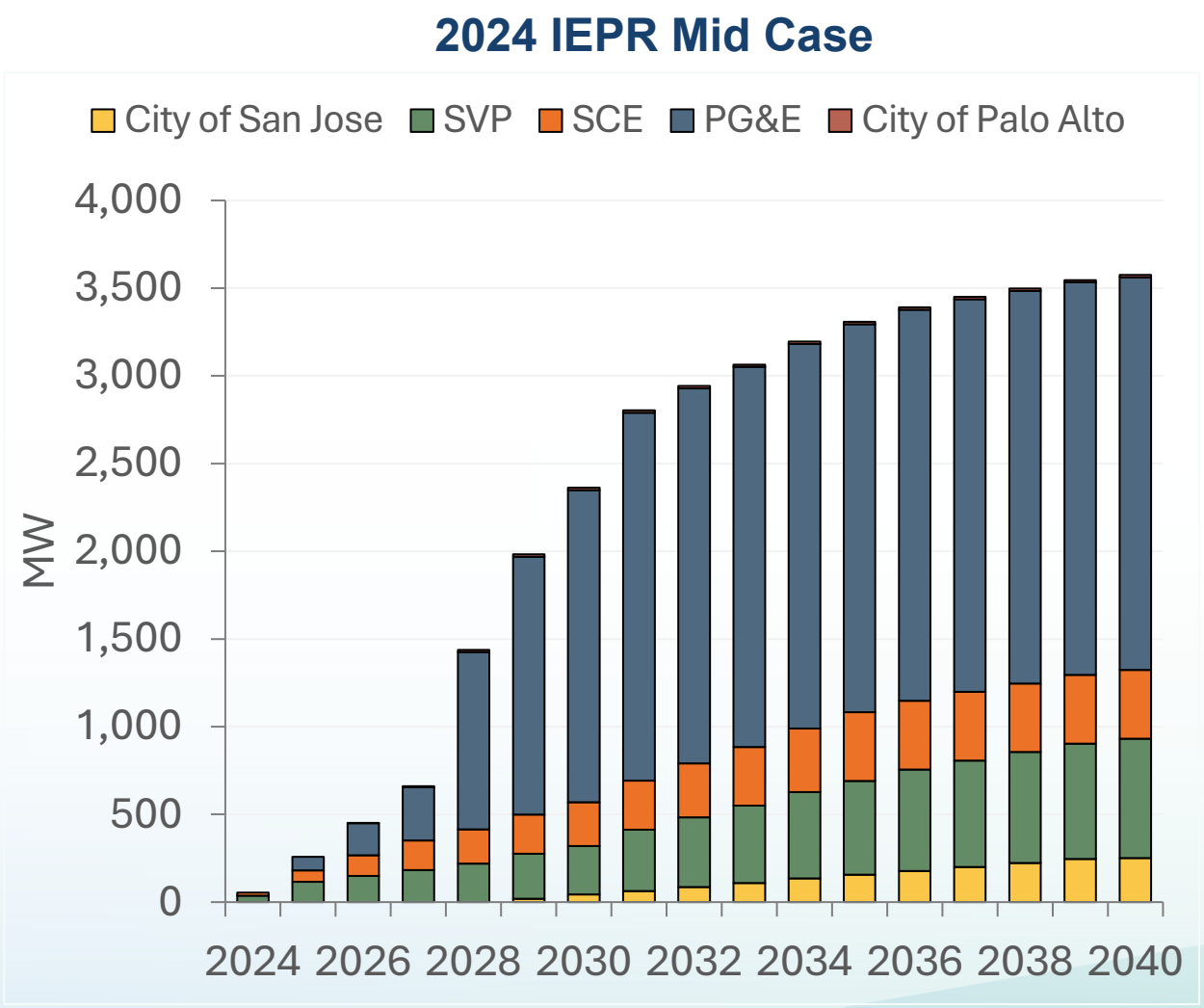
Ramping Assumptions

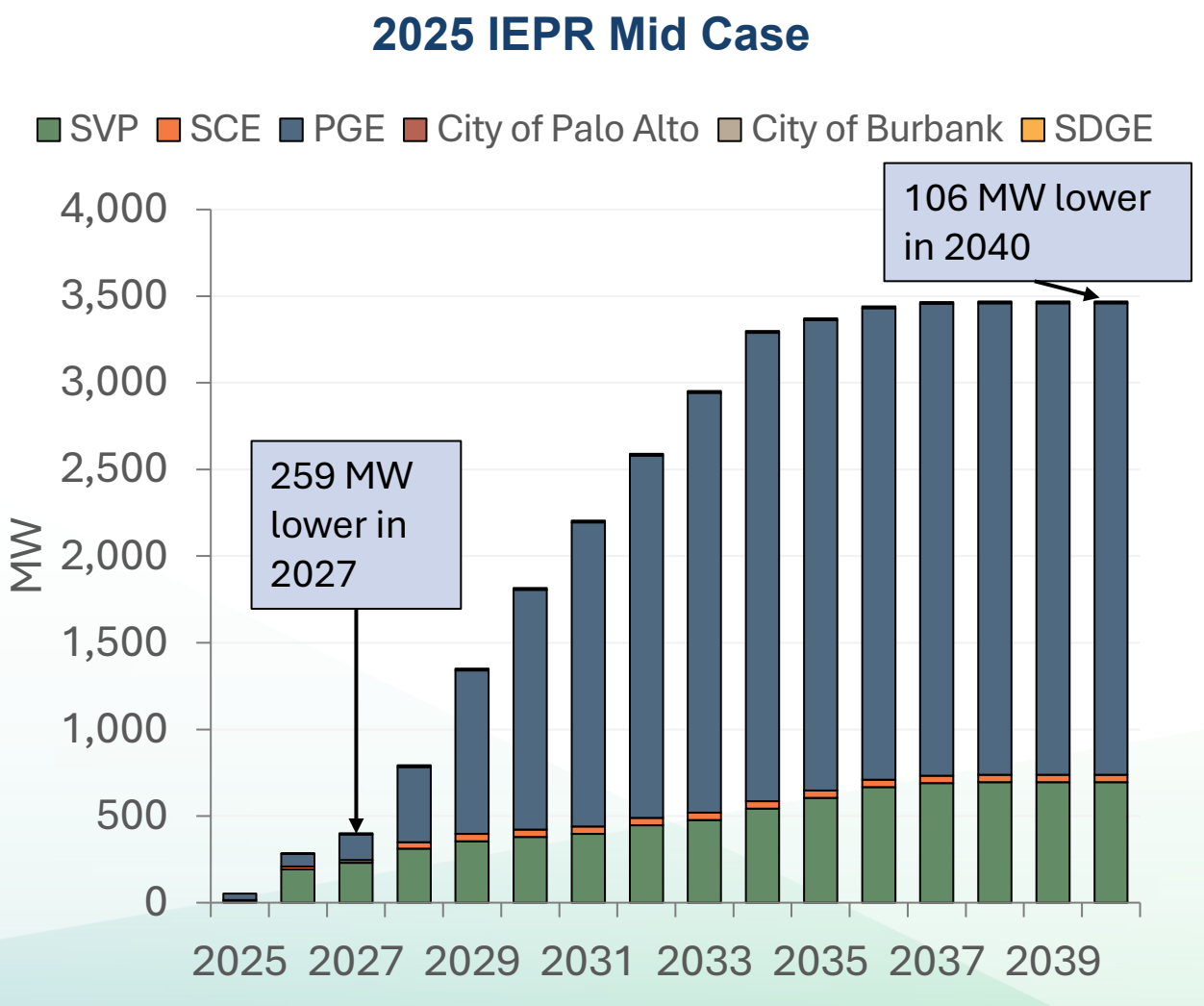
	2024 IEPR	Draft 2025 IEPR
Ramping	Year 0-5: 149% Year 6+: 113%	Linear ramp over 7 years

Source: CEC with data from SVP

- Ramping applied to:
  - Projects without ramping information
  - Projects with unrealistically large first year capacity
- Group 2 and 3 project schedules shifted to 2028+

Statewide Data Center Peak Demand Mid Case

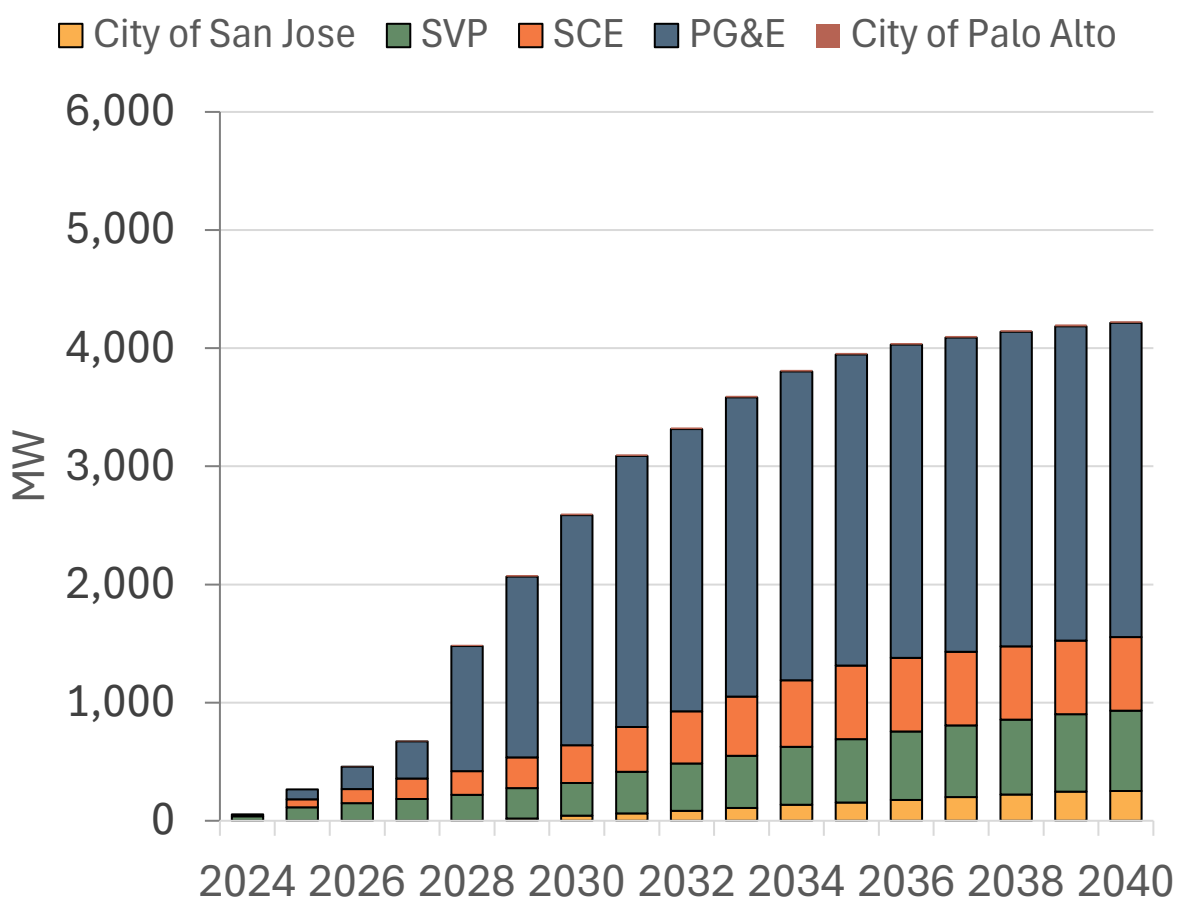




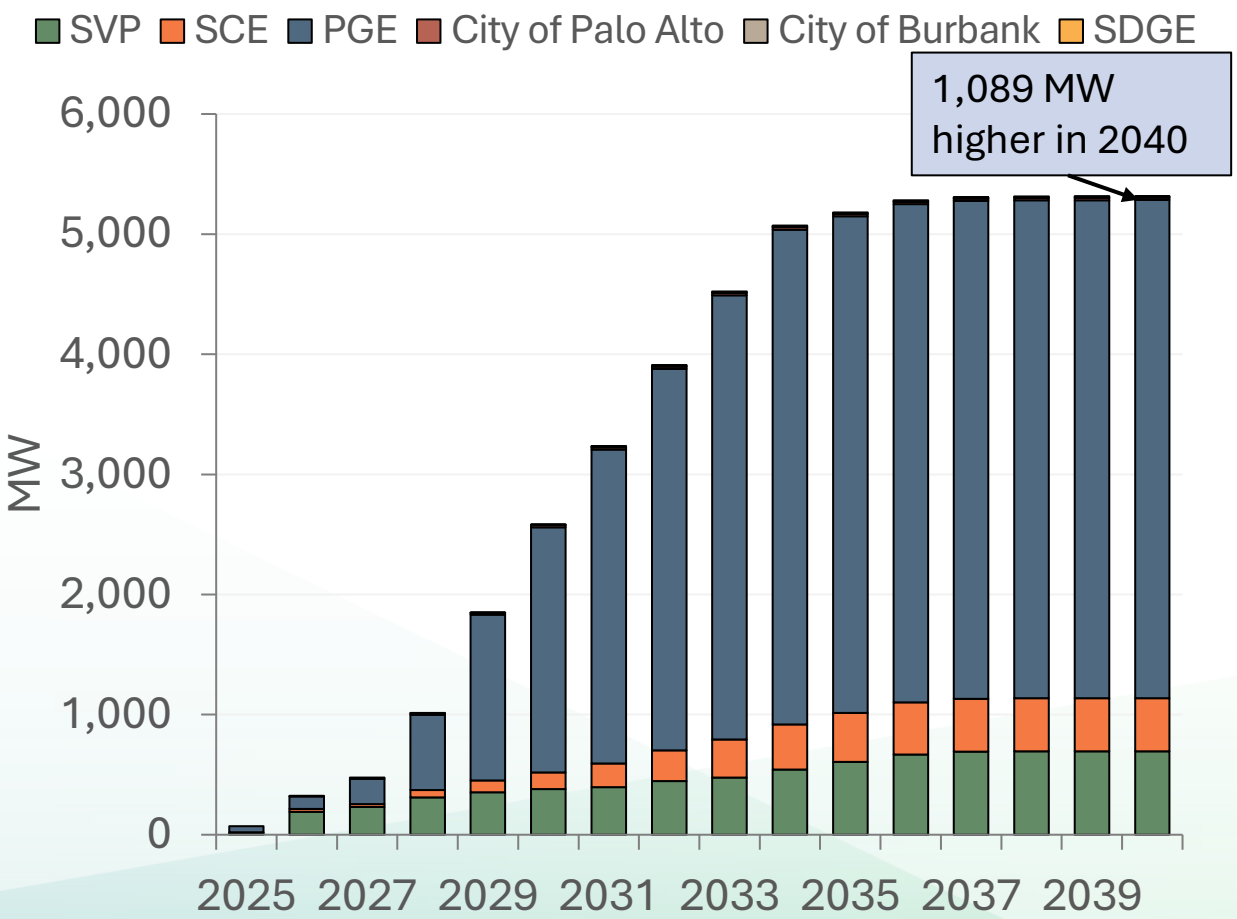
Source: CEC

Statewide Data Center Peak Demand High Case

2024 IEPR High Case

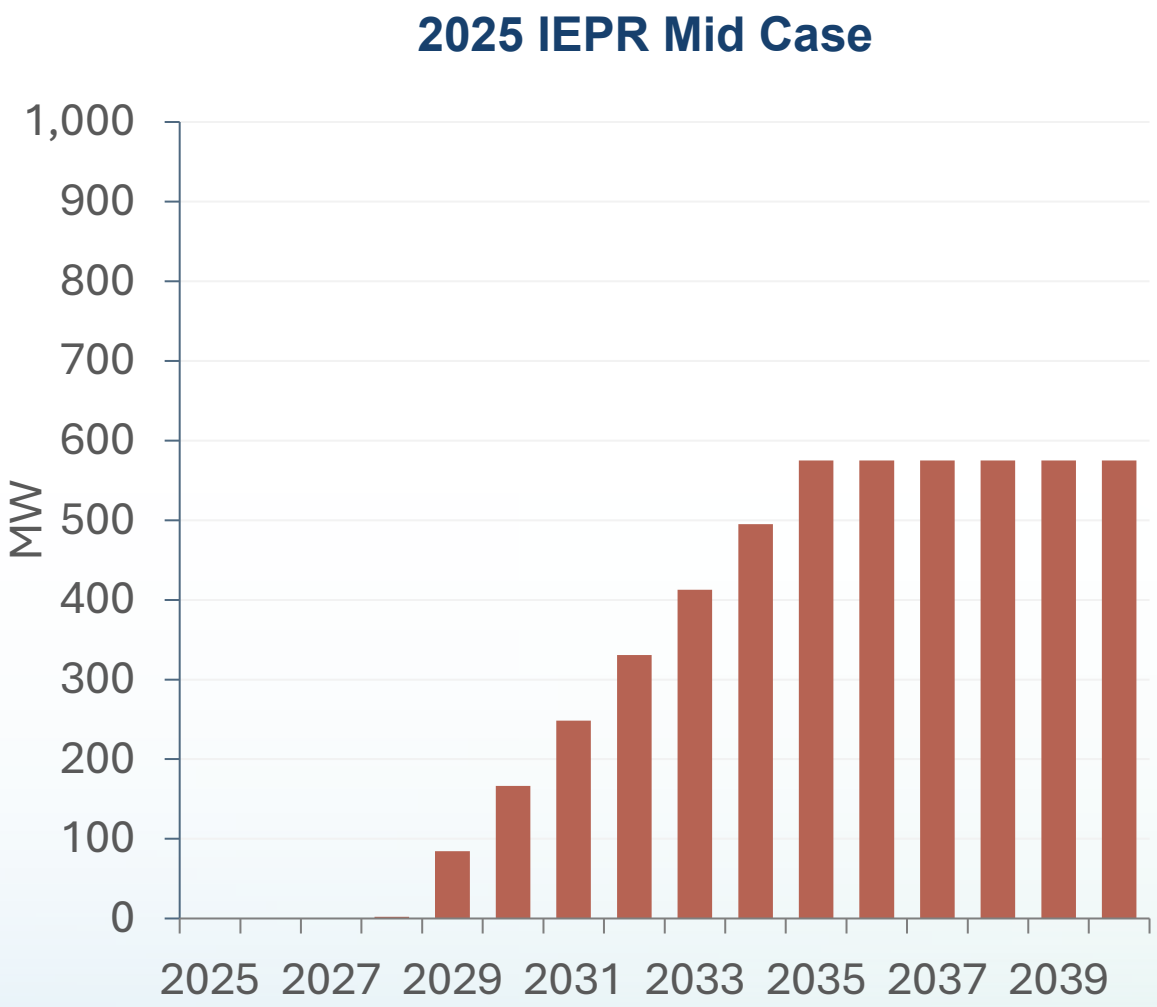


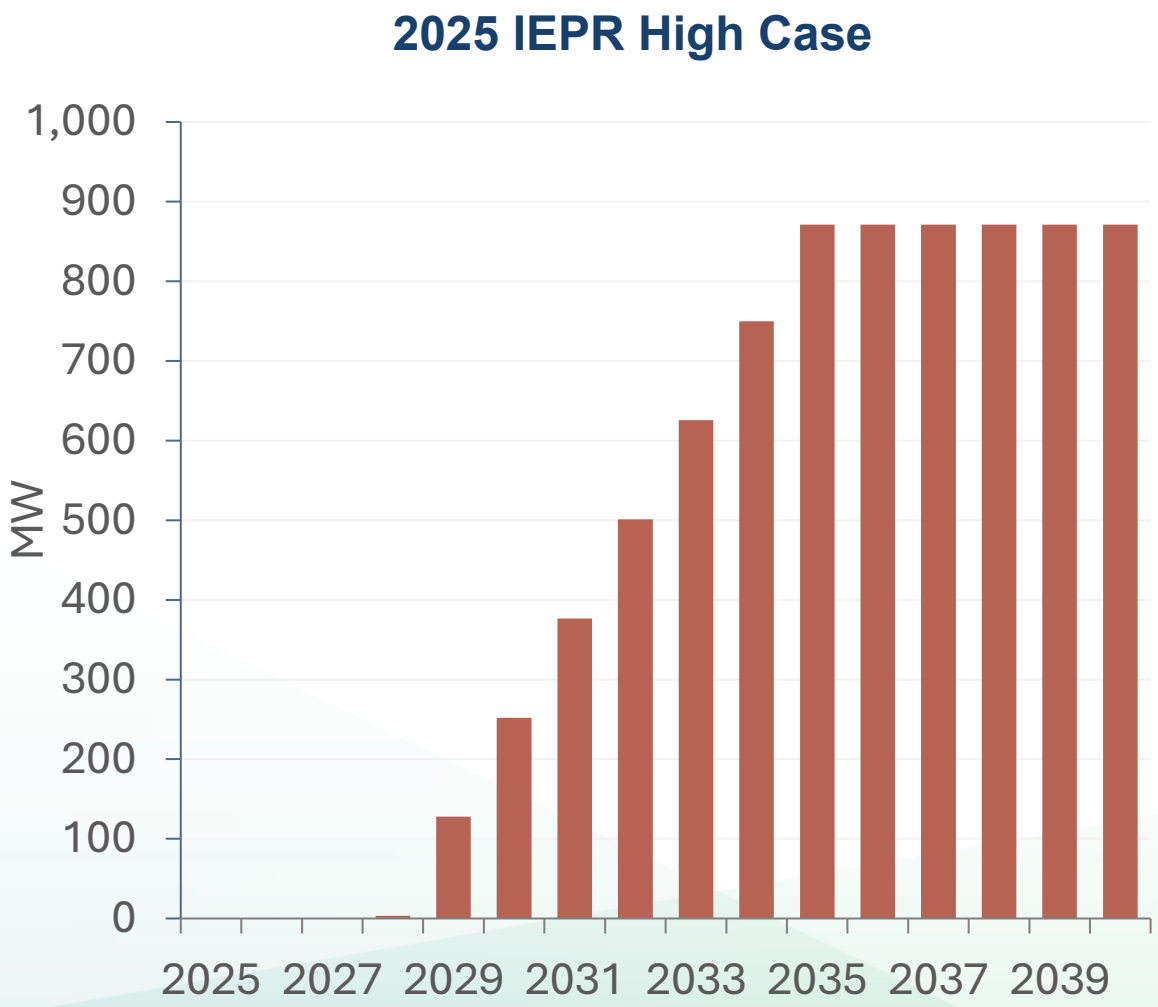
2025 IEPR High Case



Source: CEC Staff

VEA Data Center Peak Demand





Source: CEC Staff

Thank You!

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2025 IEPR: Preliminary Hourly Data Center Forecast

October 30, 2025

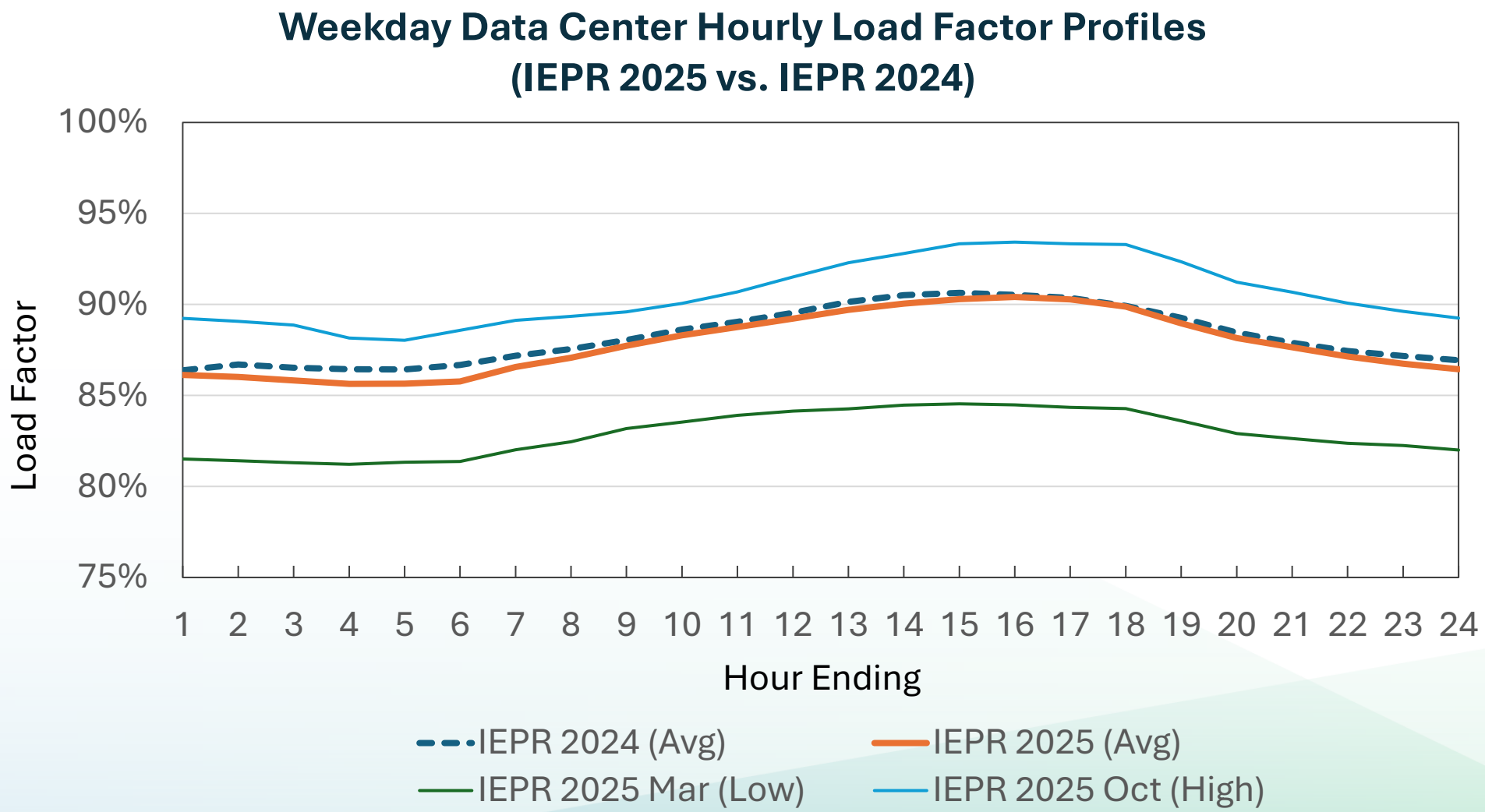
Jeremy Smith

Deputy Director, Energy Assessments Division

Hourly Methodology

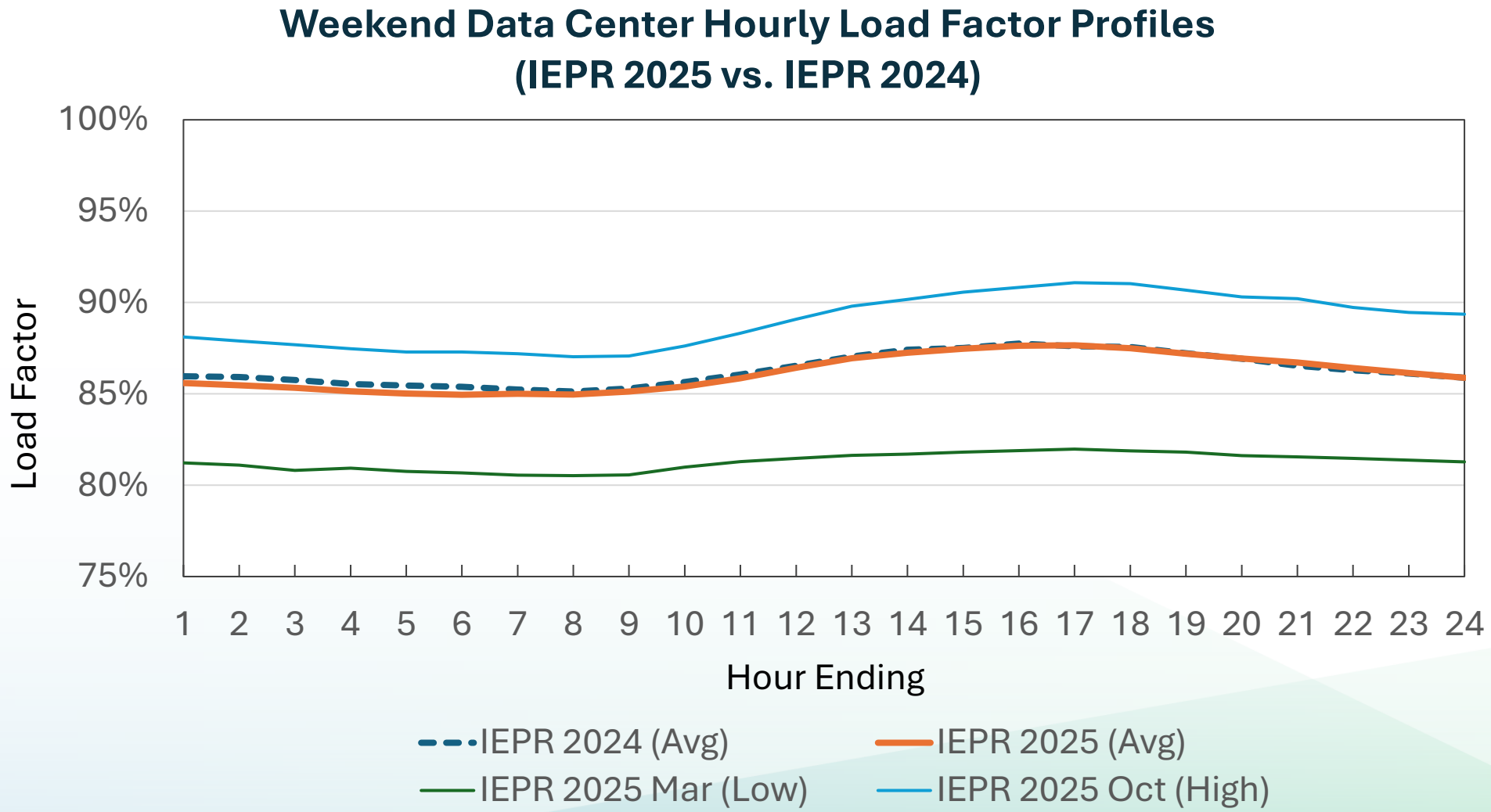
	2024	2025
Data Source	AMI data from sample of 50 data centers	AMI data from sample of 50 data centers
Sample Service Territory	PG&E	PG&E
Aggregation Method	Weighted-average load factor profile	Weighted-average load factor profile
Unique Profiles	Daytype	Month and Daytype

IEPR 2025 vs. 2024 (Weekday)



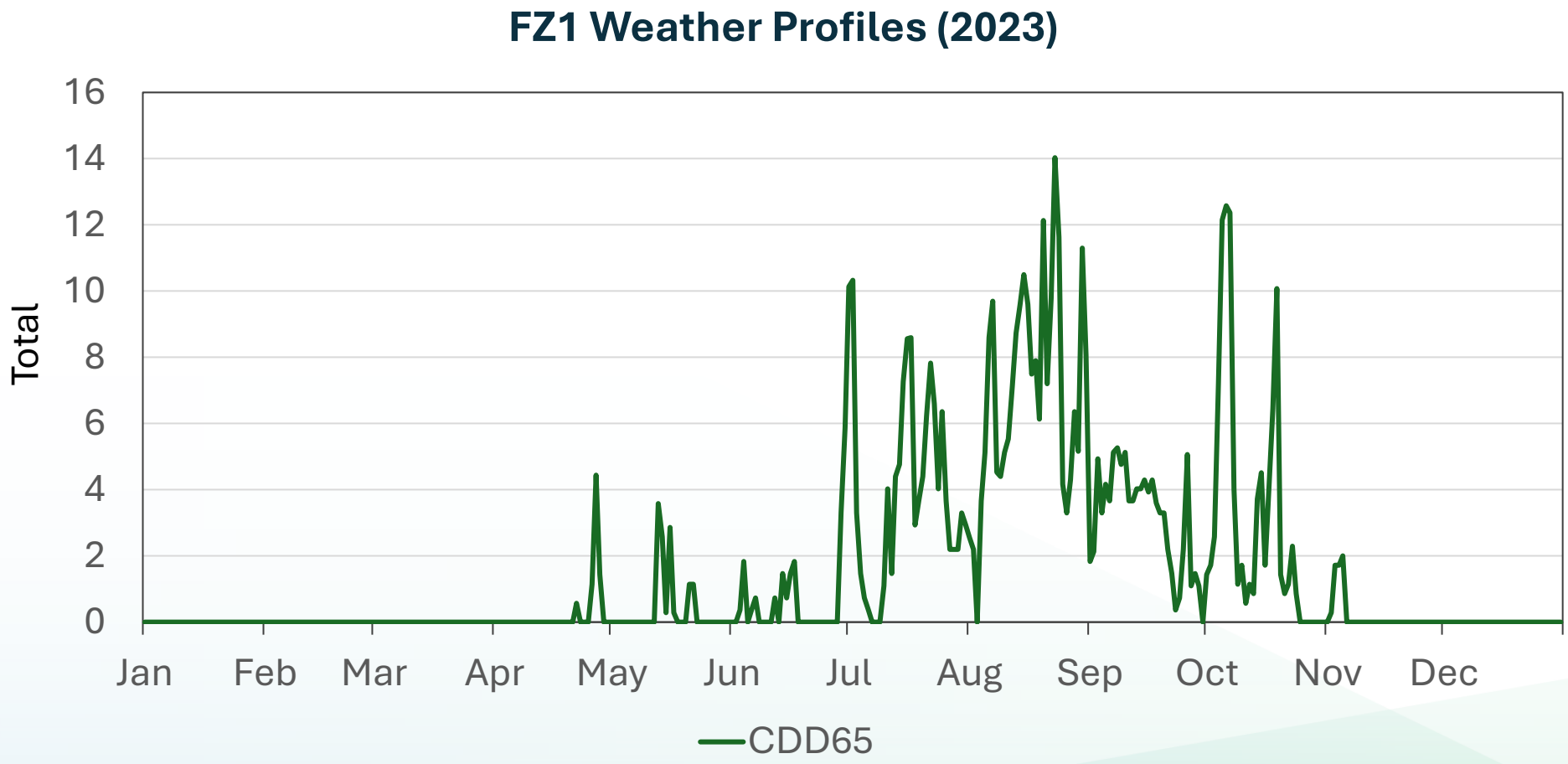
Source: CEC

IEPR 2025 vs. 2024 (Weekend)



Source: CEC

Historical Weather



Source: CEC

Next Steps

- Validate methodology and assumptions
- Develop regression framework to quantify weather sensitivity
- Explore differences between hyperscale and smaller data center load profiles
- Expand dataset to create a more robust sample
- Integrate hourly data center profiles into the statewide demand forecast

Questions

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