APS RPAC Meeting

11/14/2025

MEETING AGENDA

Welcome & Meeting Agenda
Adam Constable
APS

All-Source RFP Update
Jill Freret / Mike Eugenis
APS

Large Customer Subscription Program Update
Patrick Bogle
APS

Break

2026 IRP Resource Pricing
Mike Eugenis
APS

Load Forecast Update
Ross Mohr
APS

Next Steps & Closing Remarks
Adam Constable
APS

Meeting Guidelines

Member Engagement

RPAC Member engagement is critical. Clarifying questions are welcome at any time. There will be discussion time allotted to each presentation/agenda item, as well as at the end of each meeting.

Action Items

We will keep a parking lot for items to be addressed at later meetings.

Meeting Minutes

Meeting minutes will be posted to the public website along with pending questions and items needing follow up. We will monitor and address questions in a timely fashion.

Preliminary Content

Meetings and content are preliminary in nature and prepared for RPAC discussion purposes.

September Meeting Recap

- APS kicked the meeting off by sharing an update on current procurement activity.
- APS announced that Derek Seaman accepted another position within the company, and that Jill Freret, the new Director of Resource Acquisition, will manage the RFP process.
- APS presented its updated clean energy objective and invited feedback from the RPAC.
- APS shared initial findings from its most recent resource adequacy study.
- APS provided an overview of the process that led to the decision to sign a contract for Transwestern's Natural Gas Pipeline Expansion project.
- Following the September RPAC, APS held a follow-up meeting to continue the Transwestern natural gas pipeline conversation on September 24th.

Following Up

- Action Items from Previous Meetings:
  - 2026 IRP Timeline
  - Resource Adequacy Study ELCCs
- Ongoing Commitments:
  - Distribute meeting materials in a timely fashion
  - Transparency and dialogue
  - Respectful participation by all participants

All-Source RFP Update

Jill Freret & Mike Eugenis, APS

All-Source RFP (ASRFP) Overview

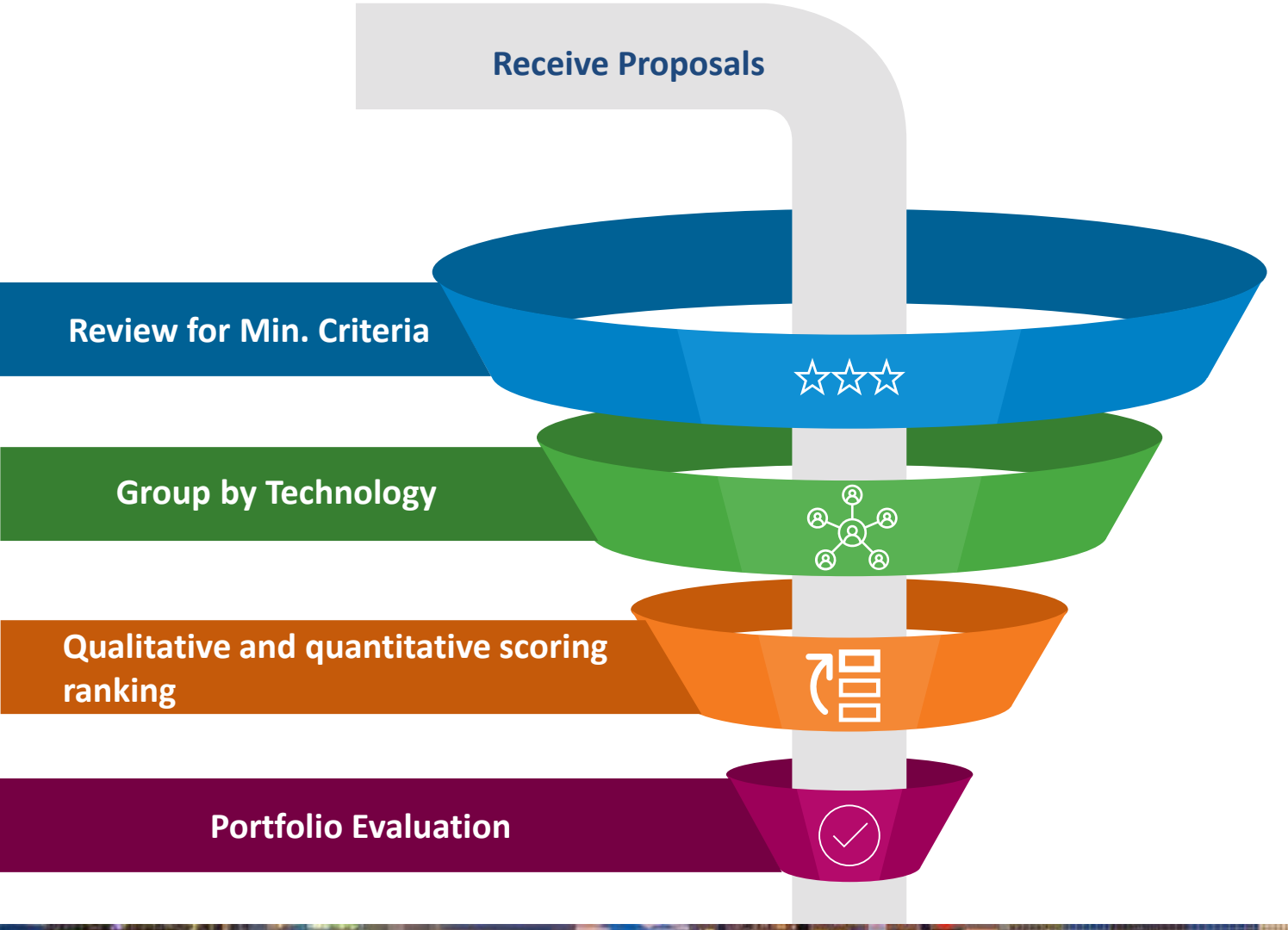
2024 ASRFP

- Sought 2 GW of resources
- Final negotiations are ongoing

Upcoming ASRFP

- Resource need is still being determined but will likely be close to the 2024 ASRFP in scope
- Seeking resources in:
  - Near term (2029 – 2031)
  - Mid to long-term (2031+)
- Specific developments will be identified for APS ownership

Desert Sun ASRFP Evaluation



Desert Sun Power Plant

- October 30th, APS announced plans to develop a site west of Gila Bend, Ariz., capable of adding up to 2,000 megawatts (MW) of reliable, flexible generation to the state's energy portfolio.
- Firm, dispatchable resources continue to provide value into the future.
- Process will look similar to other resource development at APS sites.

Notes

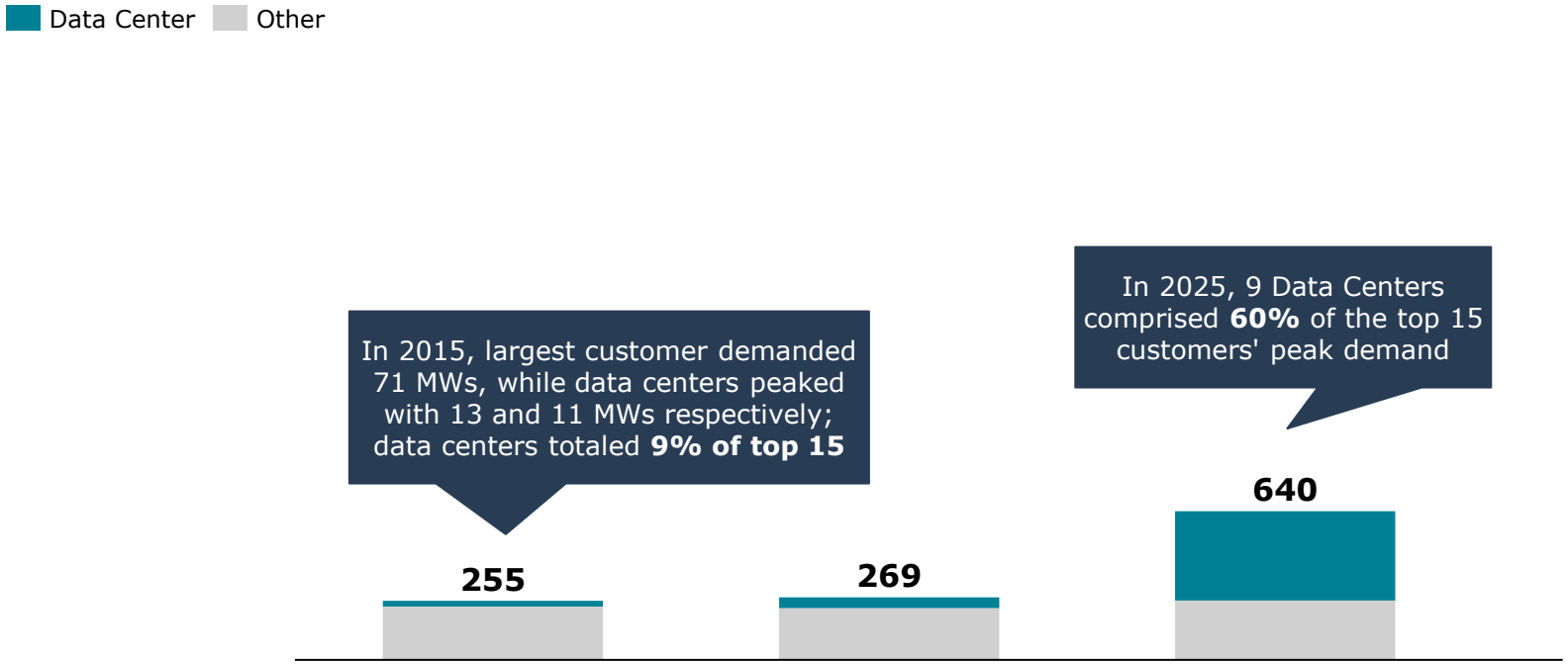
- Key project metrics are reliability, customer cost, and resource diversity.
- Proposals are compared against similar technologies to arrive at shortlisted bids.
- All technologies compete to maintain reliability at least cost for customers.
- All relative costs, inclusive of fuel, are included in the portfolio analysis.

Large Customer Subscription Program Update

Patrick Bogle, APS

Our top customers sites are dramatically changing in terms of type, size, and scale.

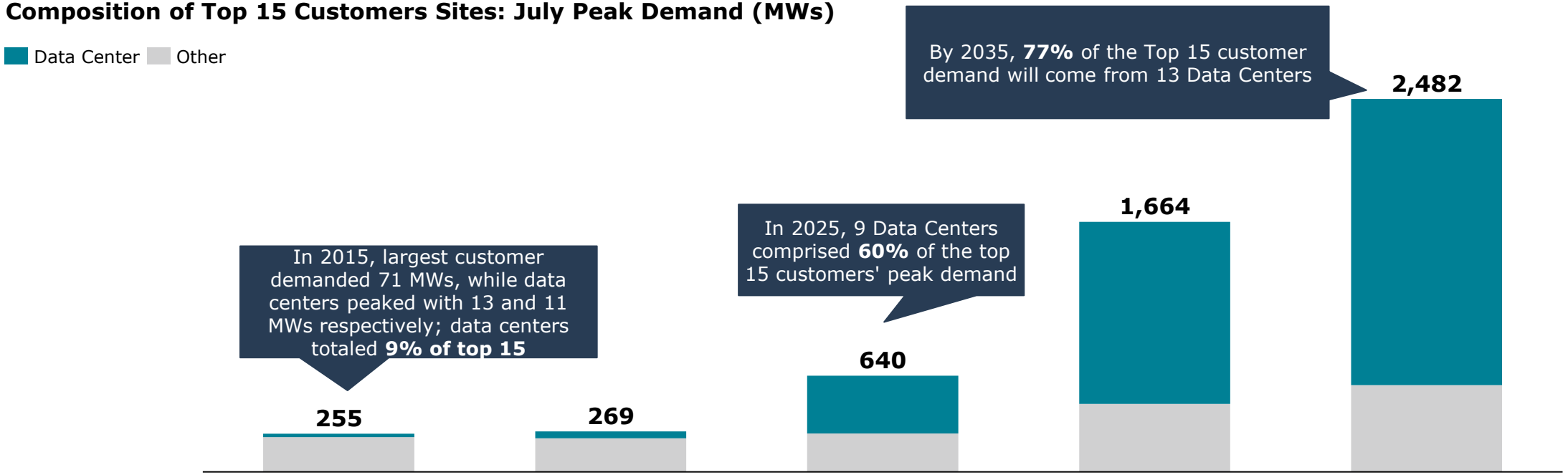
Composition of Top 15 Customers Sites: July Peak Demand (MWs)



	2015	2020	2025
# of DCs in top 15	2	2	9

We have hit the tipping point in which data centers will challenge every aspect of our business.

Composition of Top 15 Customers Sites: July Peak Demand (MWs)

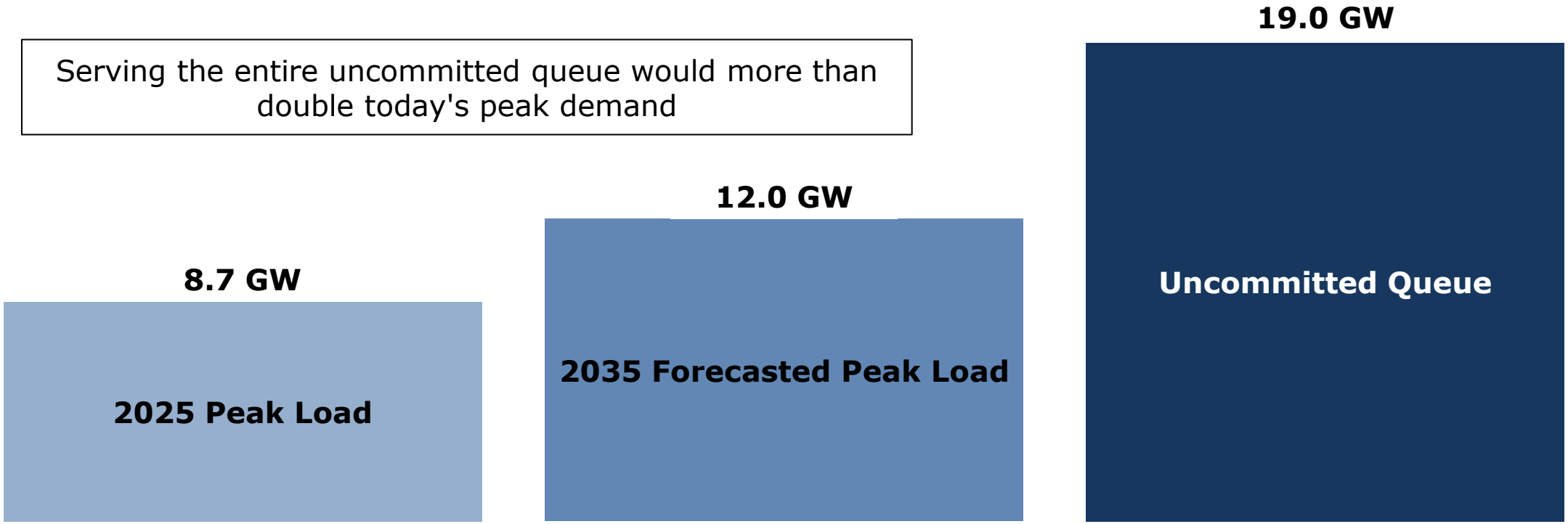


	2015	2020	2025	2030	2035
# of DCs in top 15	2	2	9	13	13
Top 15's % system peak	**4%**	**4%**	**7%**	**17%**	**22%**

We have a large opportunity with Nearly 19GW of requests in the uncommitted queue.

APS Peak Demand (GW)

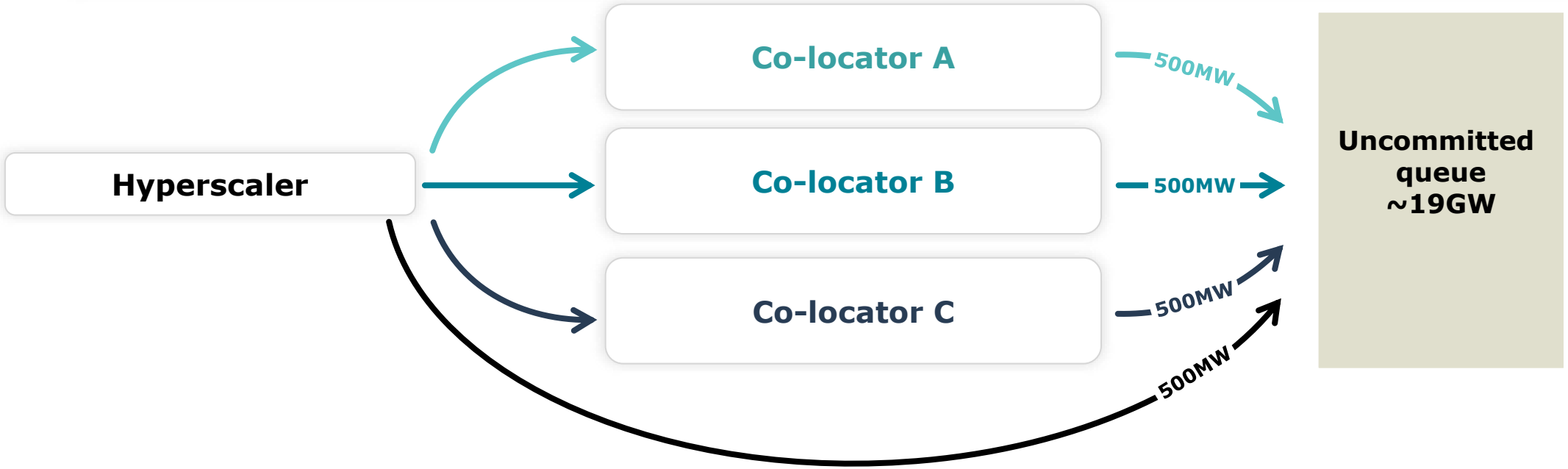
Serving the entire uncommitted queue would more than double today's peak demand



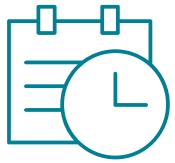
We know that not all of the Queue will materialize, and that there are duplicative requests

EXAMPLE CASE STUDY:
MICROSOFT

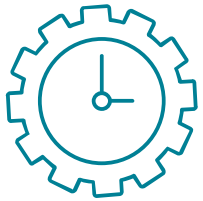
Microsoft wants 500MW | **Microsoft brings that bid to market through co-locators and also comes to APS directly** | **In our queue, that load could show up multiple times**



Data center customers have significant differences from other types of customers we serve.



Forecasting and commitment challenges



Operate 24/7/365

Require significant infrastructure

Long lead times and cost intensive

We have established guiding principles in serving data center load.

Ensure reliability for existing customer base

Protect affordability for existing customers

We have two pathways to serve data center customers

1

Extra High Load Factor [XHLF] Tariff with Load Commitment Agreement

Fully **assigns all incremental costs** required to serve the customer classes causing growth, protecting against cost shifts

2

Subscription Model

Delivers **service to large scale customers more efficiently** through bilateral agreements; customers share risks in exchange for speed to market

Our service offerings for large load customers will continue to evolve.

	Standard offer...	Innovative new offering...
	Extra High Load Factor (XHLF) Tariff	**Subscription Model**
How we procure	• Forecast load, procure resources, and allocate capacity based on system excess	• Create a portfolio of incremental resources to serve requirements of large loads
How we recover & finance	• Traditional ratemaking, exposed to rate case cycles and regulatory lag • APS finances 100% of development	• Contract set outside of the rate case • Accelerated customer payments finance new development
How we select customers	• Prioritize customers based on queue position and location	• Select customer who provides the best risk protections for APS and existing customers

Based on customer feedback, we have developed an innovative product offering to meet their needs.

Speed to Service

Accelerated timeline to provide up to 1.2 GW of service, with a target ramp beginning in 2028

Leverages Customer Financing

Limits impact to APS balance sheet and puts development risk on customer

Scalable and Repeatable

This first offering is expected to be the first of many

We have launched our first offering; it will be the first of many.

Key Contract Terms

1. Customers will commit to a 20-year term of service with service tied to asset development
2. Customer provides accelerated capital to ensure APS financial metrics remain healthy
3. Capacity style payment structure ensures cost recovery of investments regardless of usage
4. High standards for creditworthiness and contract minimums ensure protections for APS

Our first offering serves up to 1.2GW of load with service targeted to begin in 2028 from a diverse portfolio

- **Gas**
- **Wind**
- **Solar**
- **Battery Storage**

The process around the Subscription Model is just beginning to take shape.

September-November 2025	Early 2026	August 2026	2028+
Initial Subscription Offering	**Contract finalized**	**ACC approval**	**Service ramps**
We have announced our first offering to accelerate service through our new model. Customers are solicited for service requests	Contract executed with customer(s) to deliver 1.2 GW of service	Commission approval of the Subscription Model to unlock customer commitments	Energization targeted to start in 2028, with full service in early 2030s


aps
Break

Time for a Break

Break Duration 5 min.

Meeting will resume at hh:mm:ss

2026 IRP Resource Pricing

Mike Eugenis, APS

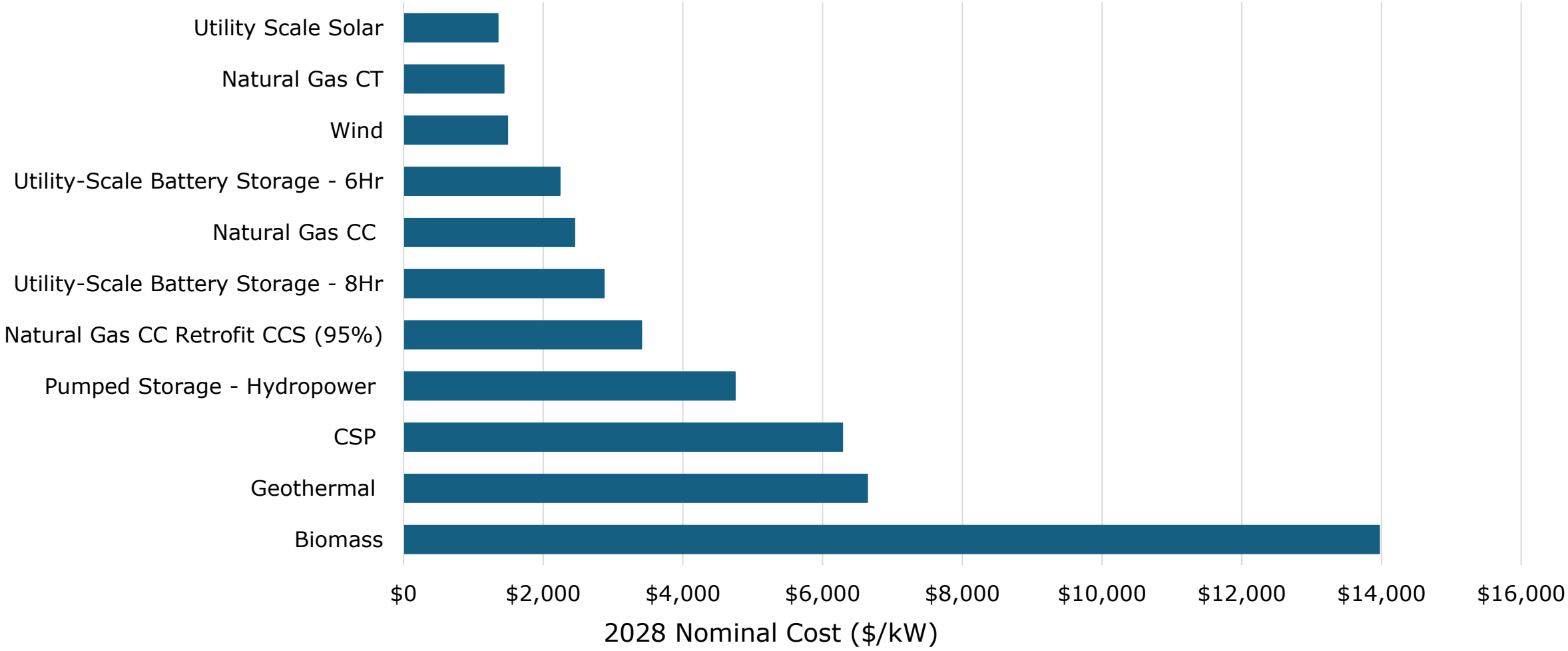
Future resource cost assumptions are primarily determined from publicly available sources

National Renewable Energy Laboratory (NREL)
Nuclear - Large
Nuclear - Small
Natural Gas CC Retrofit CCS (95%)
Concentrated Solar Power
Utility Scale Solar Power
Wind
Geothermal
6hr Utility Scale Battery Storage
8hr Utility Scale Battery Storage
Pumped Storage – Hydropower

Hybrid of Industry Materials
Natural Gas CC
Natural Gas CT

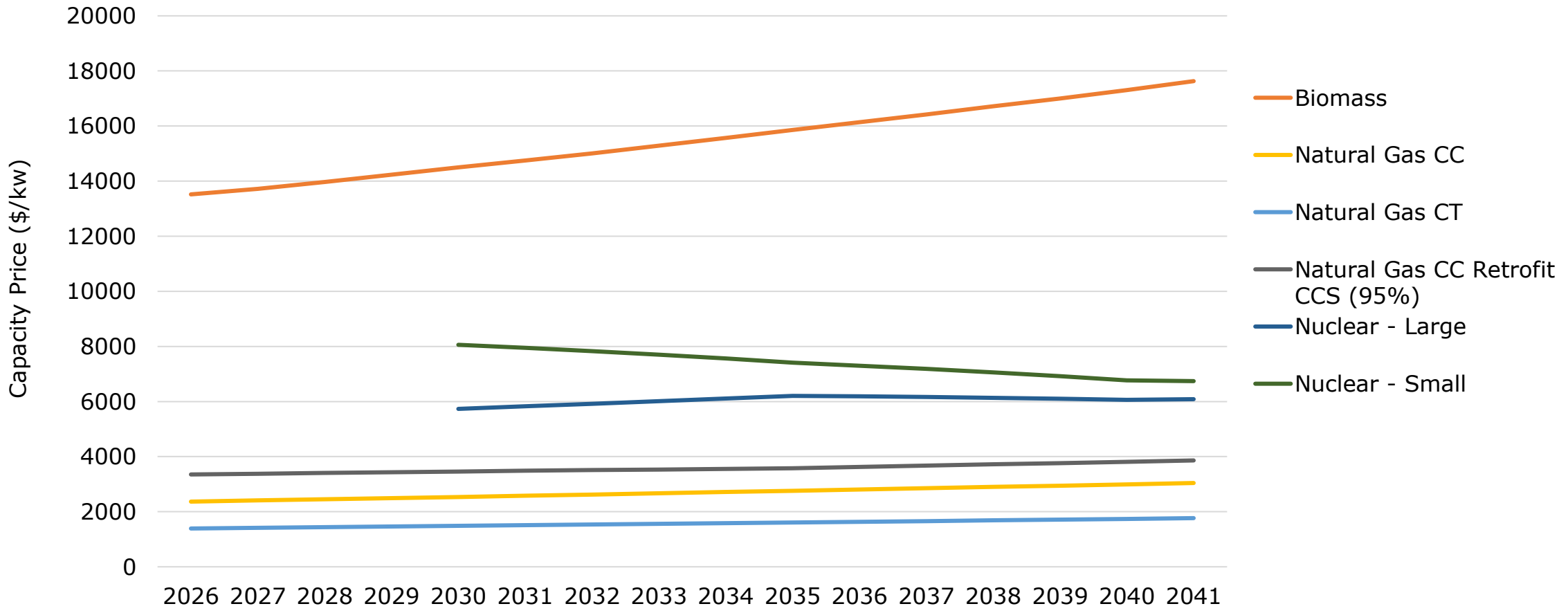
Energy Information Administration (EIA)
Biomass

2028 New Resource Capital Costs

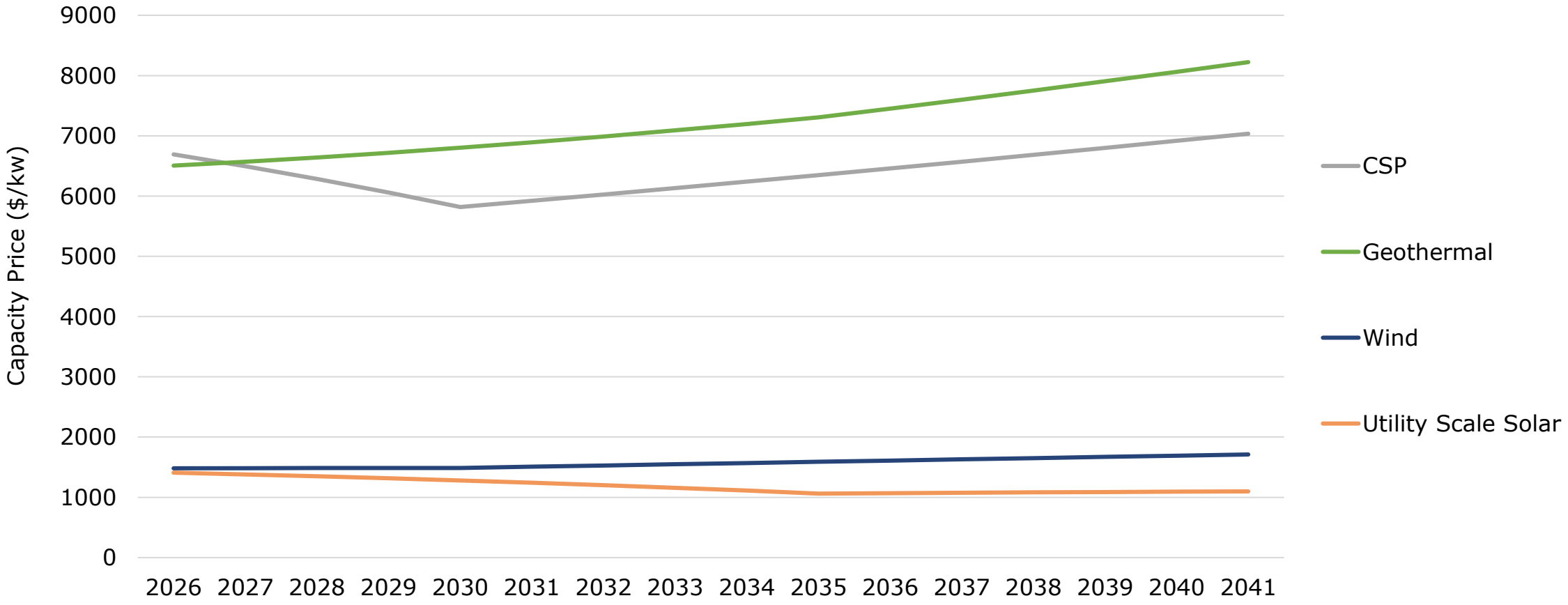


*Cost data is preliminary in nature

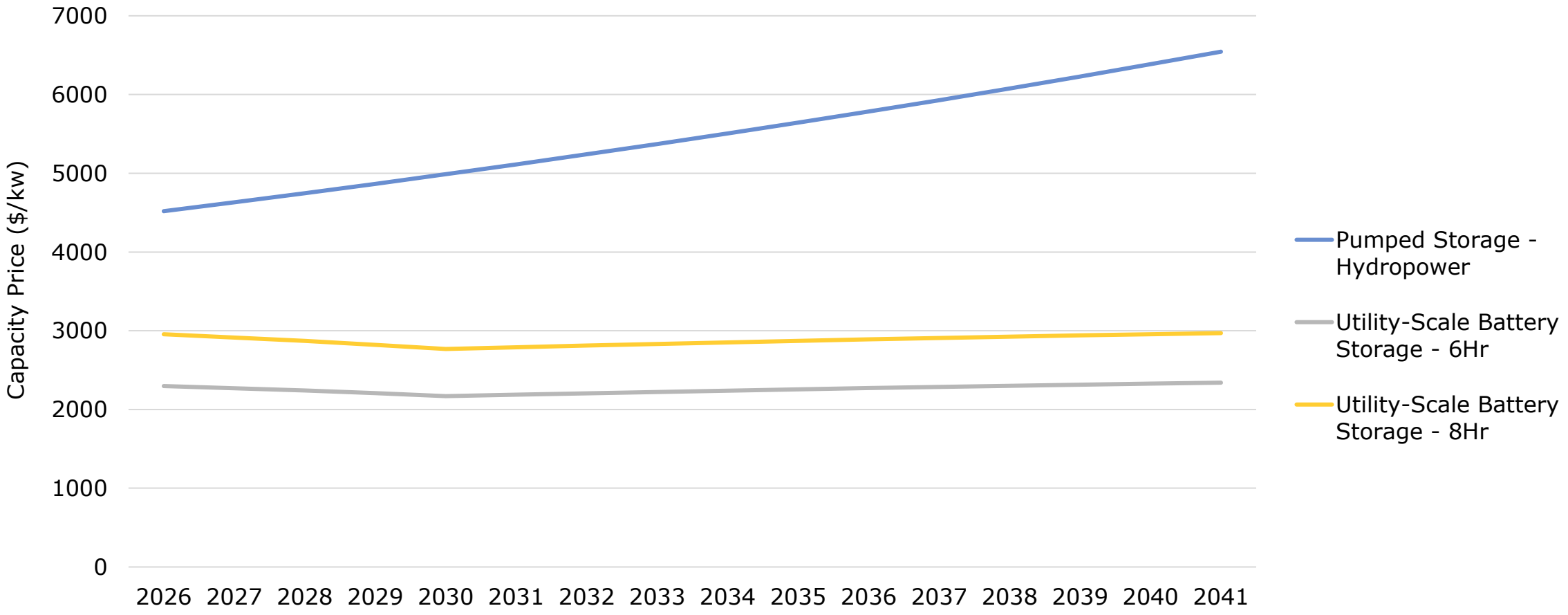
New Resource Capital Costs by Year - Thermal



New Resource Capital Costs by Year – Renewable



New Resource Capital Costs by Year – Energy Storage



Resource Pricing Information

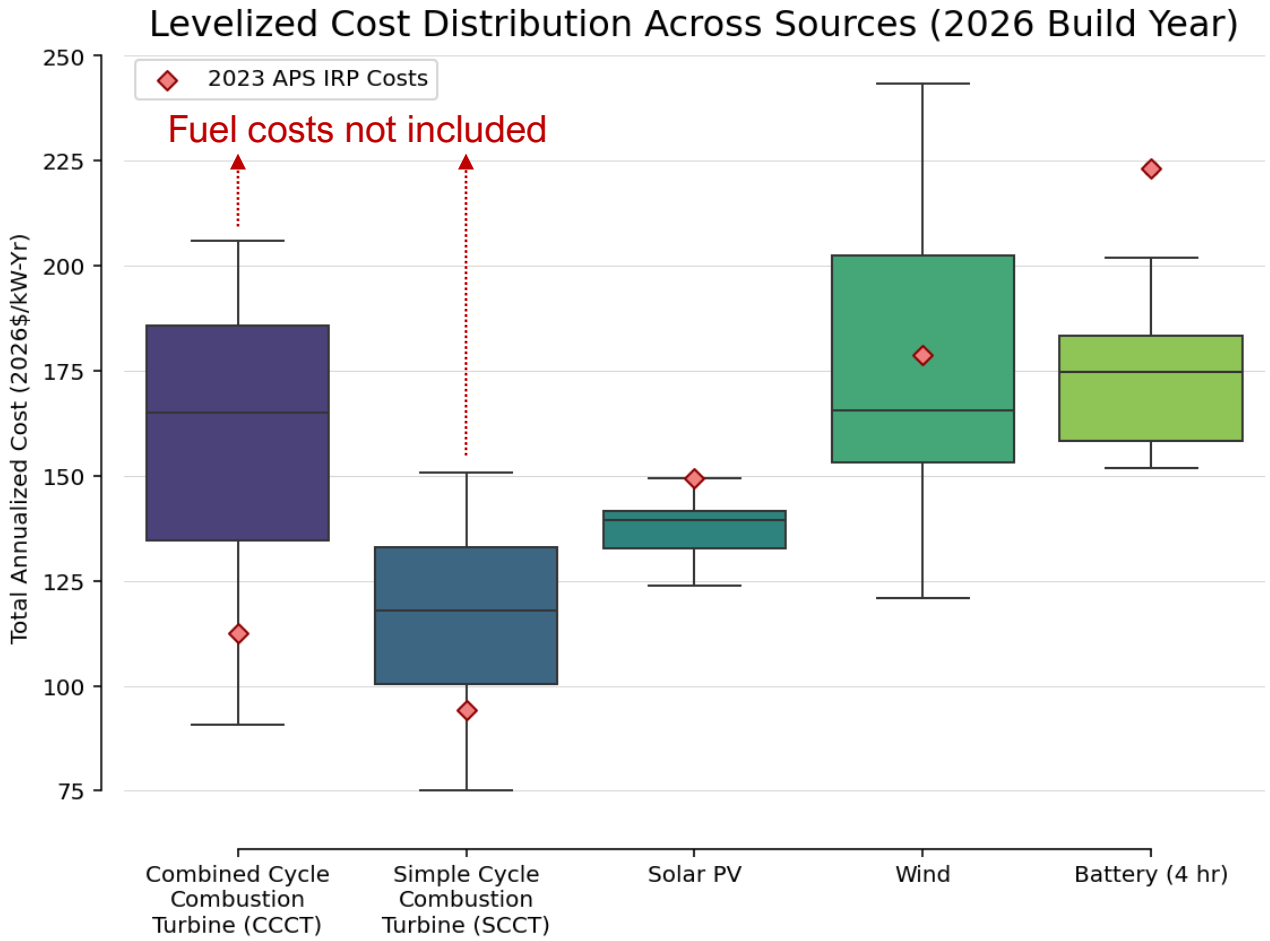
Prepared for the Nov 2025 APS PAC

November 2025

Comparing Resource Costs

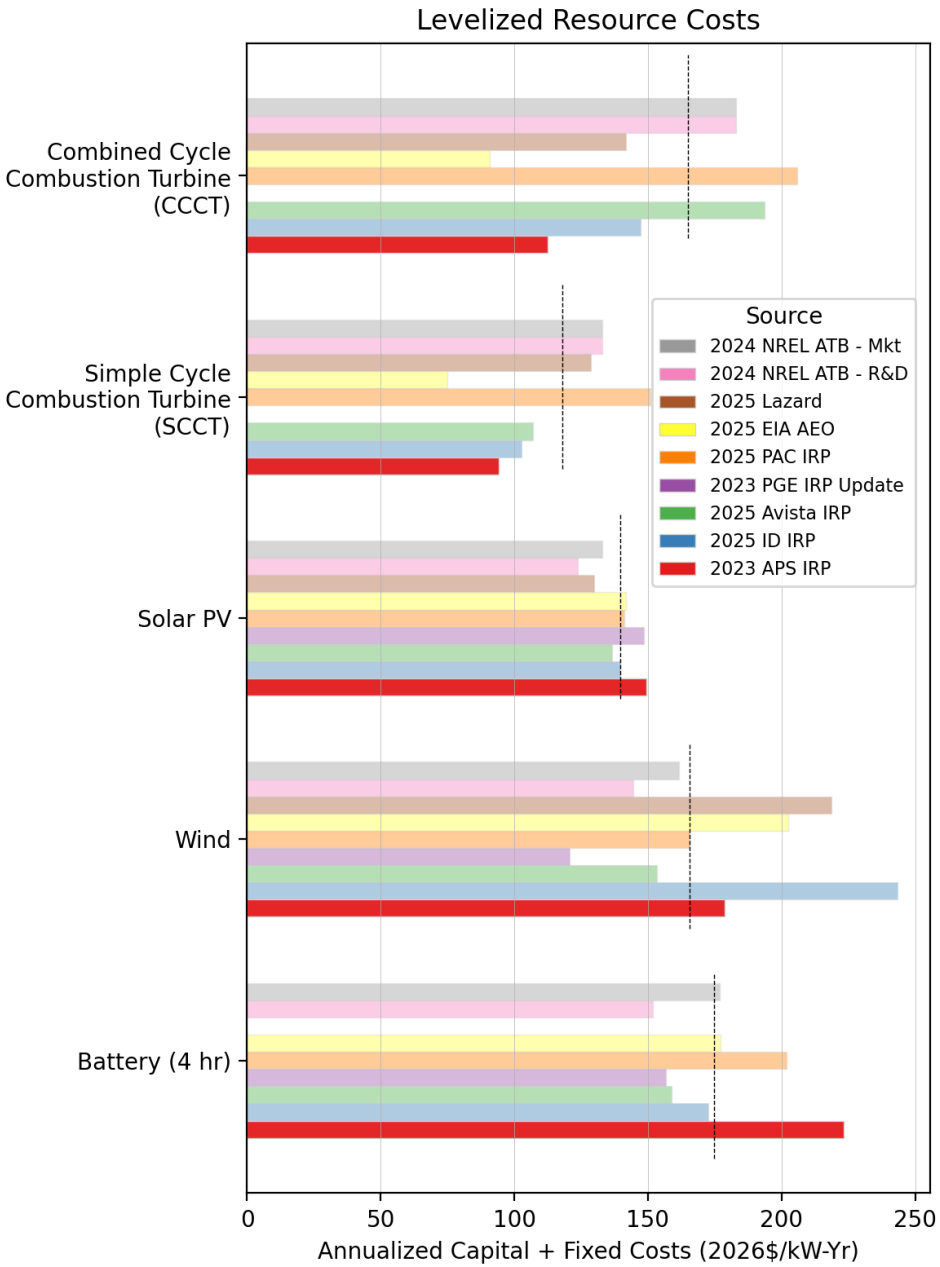
- **Capital and fixed O&M costs are key inputs to the long-term capacity expansion models that inform resource planning**
  - Recent shifts in policy, tax incentives, supply chains, and technology maturity have complicated resource cost estimates
- **We reviewed 9 costs sources including utility IRPs in the west and benchmarking reports like the NREL ATB and Lazard's**
  - Sources cited suggest ***CT costs have increased by 20-30%*** *since estimates in the 2023 APR IRP*
  - Alternatively, source cited suggest **solar, wind, and storage costs have fallen by 10-50%**

Sources Cited	
2024 NREL ATB – Market	2025 Pacificorp IRP
2024 NREL ATB – R&D	2023 PGE IRP Update
2025 Lazard's LCOE+	2025 Avista IRP
2025 EIA AEO	2025 Idaho Power IRP
2023 APS IRP	



Annualized Cost by Source

- **Using publicly available data, we calculated the annualized cost of each new resource**
  - Capital costs amortized at the source's capital recovery factor
  - Fixed costs assumed from source documentation
  - All costs inflated to a common 2026$ year
  - Note: This analysis does not capture variable costs
- **This levelized resource cost offers an approximate apples-to-apples look at building these new resources**
  - The APS 2023 IRP values are shown in **red** relative to the 8 other sources reviewed
  - The vertical dashed line in each cluster represents the median cost of the population
  - Note: Missing bars reflect resources that were not considered by the constituent source (e.g. the 2023 PGE IRP Update did not consider CT resources)
    - Missing bars are not included in calculation of the median cost



2026 IRP Resource Pricing Stakeholder Discussion

Load Forecast Update

Ross Mohr, APS

Residential Customers and Data Centers Drove the Return to Strong Load Growth

	2015	2020	2025	CAGR 2015-2020	CAGR 2020-2025
Retail Customers (000s)	1,177	1,289	1,432**	1.8%	2.1%
Retail Sales* (GWh)	27,959	28,401	34,001**	0.3%	3.7%
Peak Demand (MW)	7,031	7,660	8,631	1.7%	2.4%

* Weather normalized

** 2025 values based on midpoint of Q3 earnings guidance ranges for 2025 growth: 2.0-2.5% for customers and 4.0-6.0% for sales

2026 IRP Load Forecast Summary

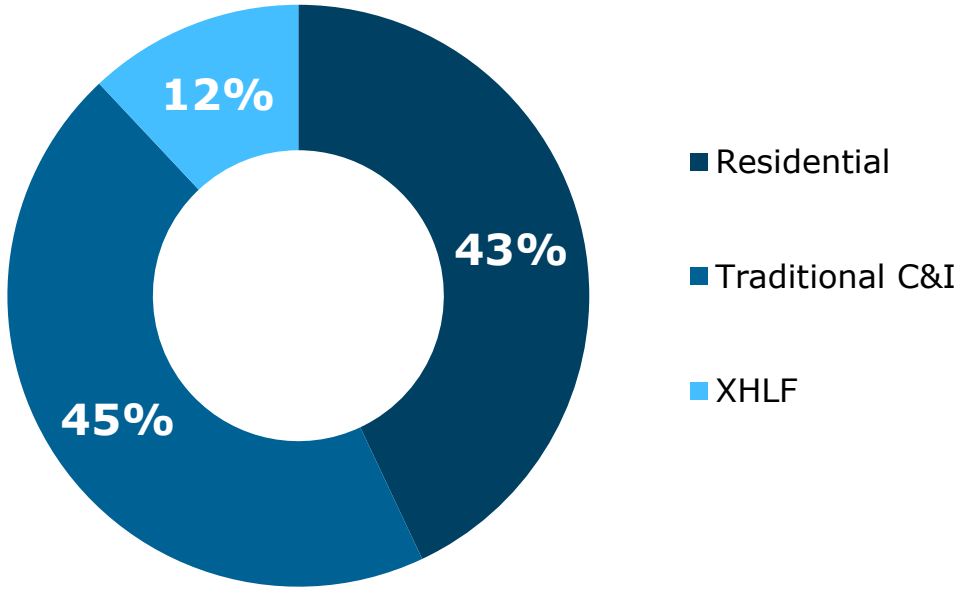
- Energy Sales (GWh) projected to grow to 59,800 GWh in 2041
  - Growth of 24,100 GWh during 2026 IRP period (67% total growth)
  - Data centers and large new industrial (XHLF) accounts for 76% of growth
    - XHLF: "Extra High Load Factor" customers operate near peak demand 24/7
  - Electric vehicle charging accounts for 13% of growth
  - The remaining 11% of sales growth is driven by strong customer growth, partially offset by declining use per customer
- Peak Demand (MW) projected to grow to 11,700 MW in 2041
  - APS set a new all-time peak demand of 8,631 MW on August 7th

Average Annual Growth Rates For the 15-Year Planning Period	Customers	Retail Sales (MWh)	Peak Demand (MW)
2023 IRP (2023-2038)	1.5%	4.0%	2.4%
2026 IRP (2026-2041)	**1.6%**	**3.5%**	**2.0%**

The Load Forecast Roadmap

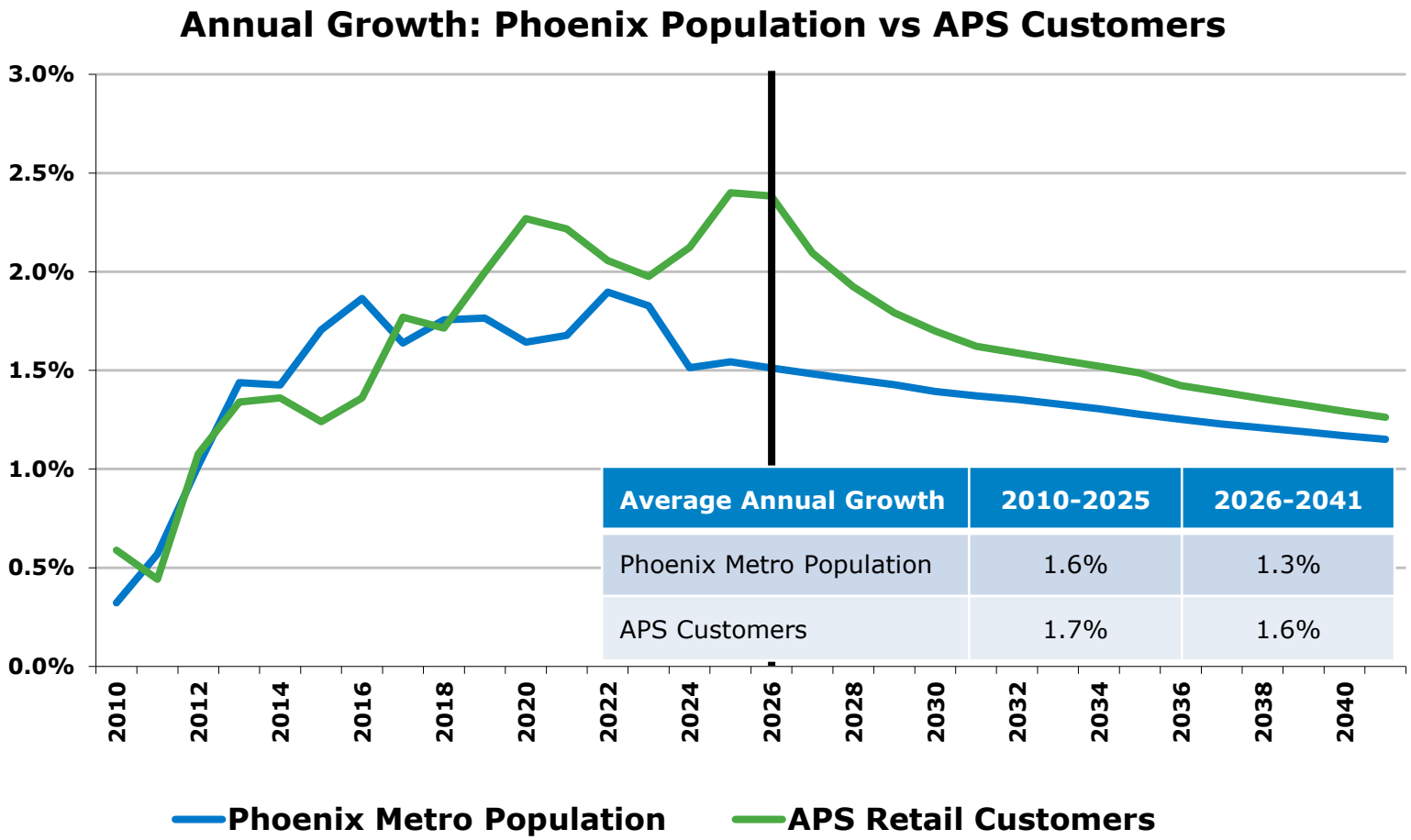
- Economics
- Customer Counts
- Weather: rolling 10-year average
- Customer Class Loads: Residential, C&I, XHLF, EV charging
- Load Reductions:
  - Rooftop solar (DG – Distributed Generation)
  - Energy Efficiency programs (EE)
- Peak Demand and 8760 Forecast

2025 Sales by Customer Class



Customer Growth Supported By Population Growth

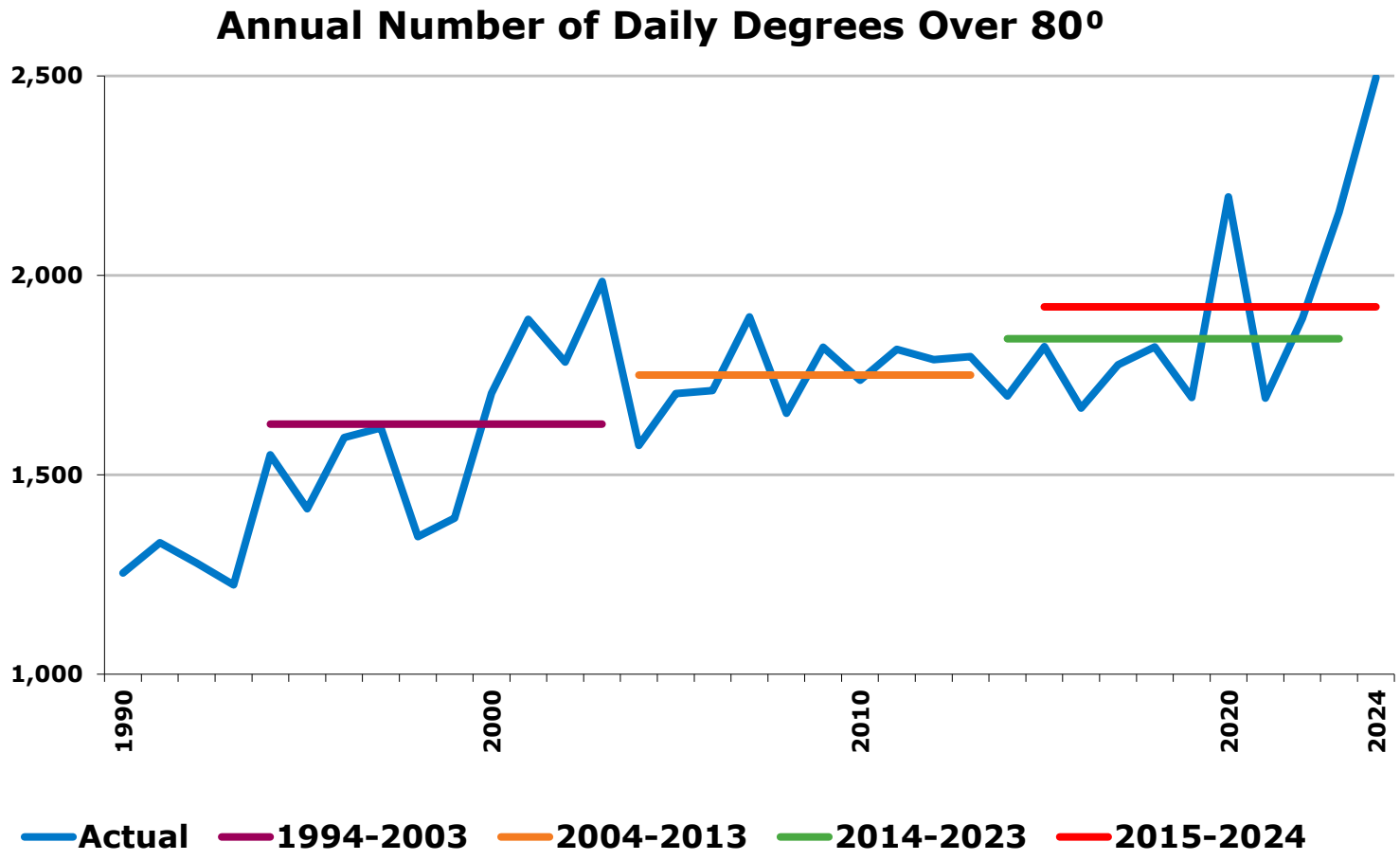
- Customer growth highly correlated with population growth
- Customer (household) growth faster than population growth
  - Primarily a function of long-term demographic trends
    - Declining persons per household over time
  - Increasing share of Metro Population growth in APS territory vs SRP



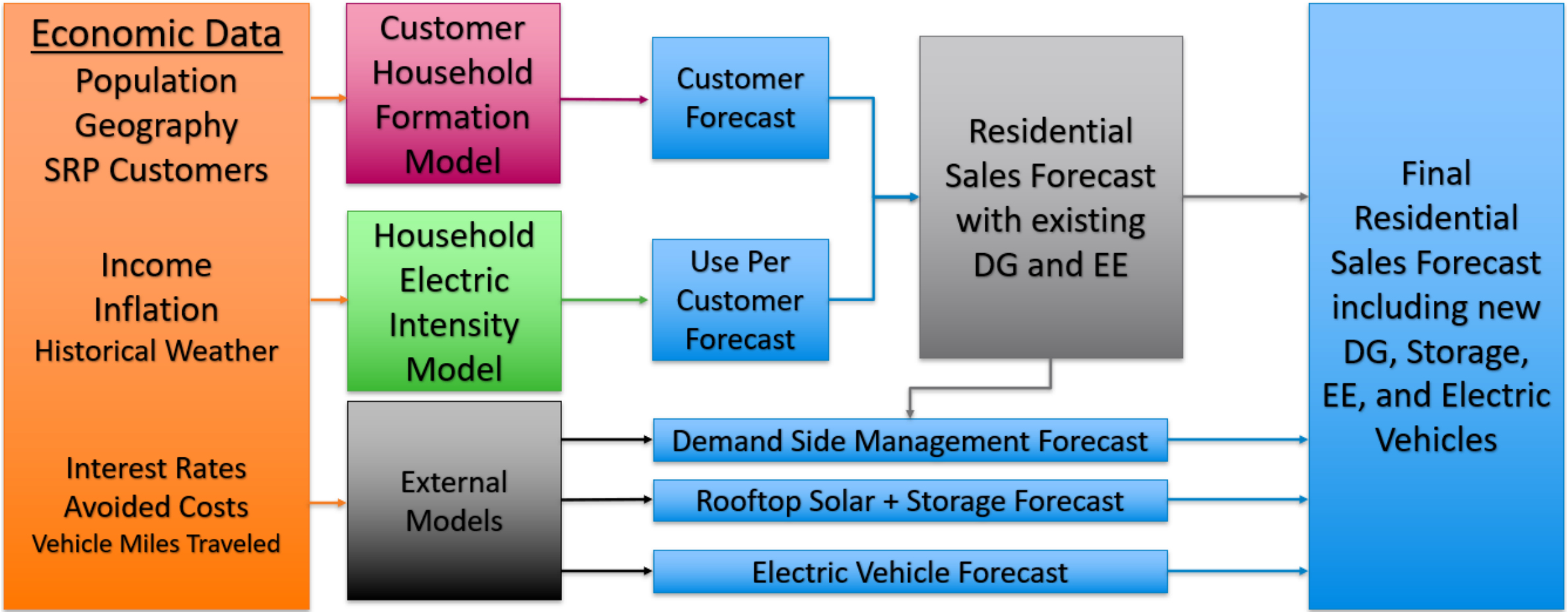
Average Annual Growth	2010-2025	2026-2041
Phoenix Metro Population	1.6%	1.3%
APS Customers	1.7%	1.6%

Hotter Weather Increases Load Forecasts and Presents New Challenges for Planning

- Sales forecast level partly determined by rolling 10-year average weather
- Summer 2024: most days over 110, most consecutive days over 100
- Including 2024 in the 10-year average added roughly 200 GWh to the sales forecast

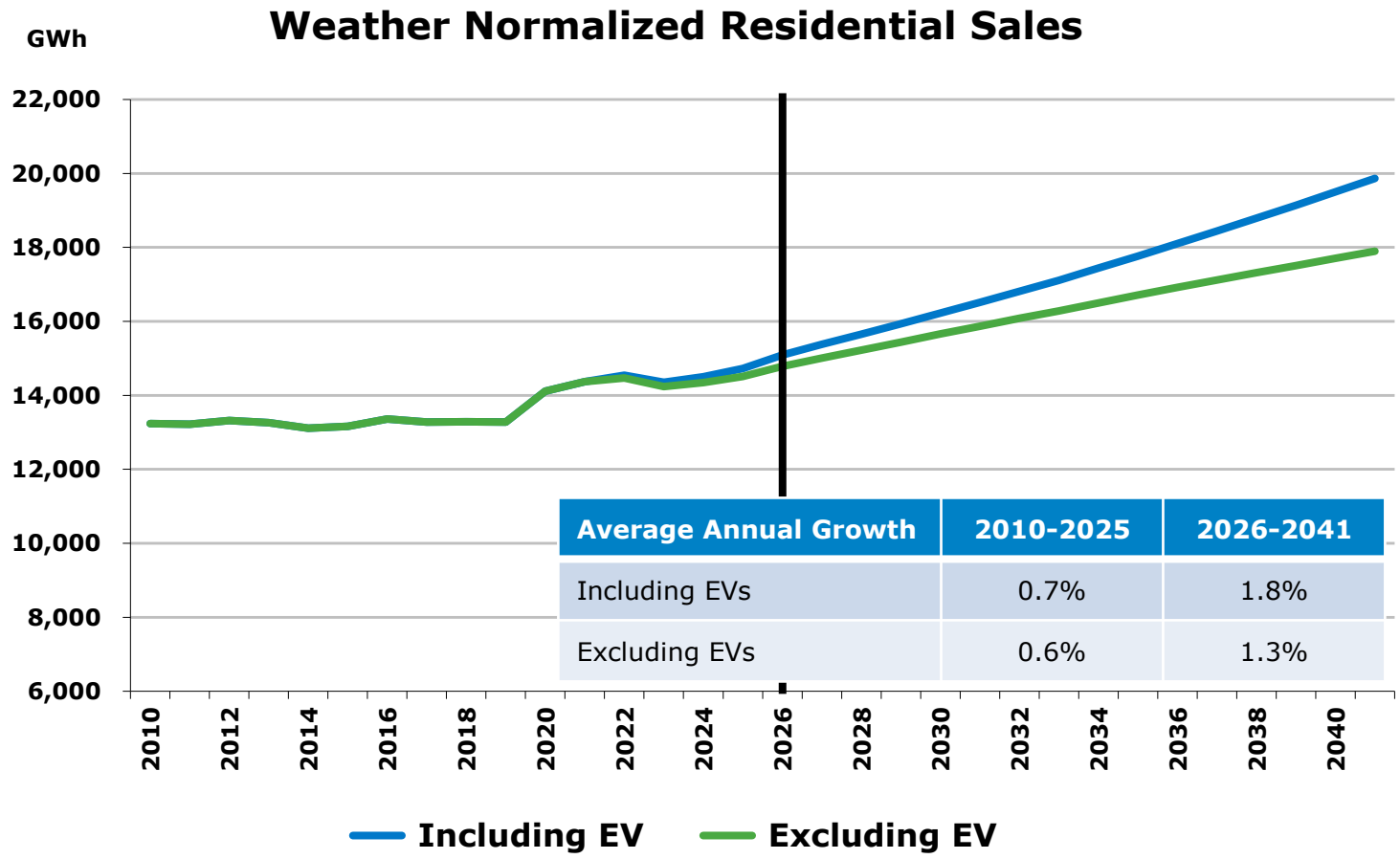


Residential Load Forecasting Approach



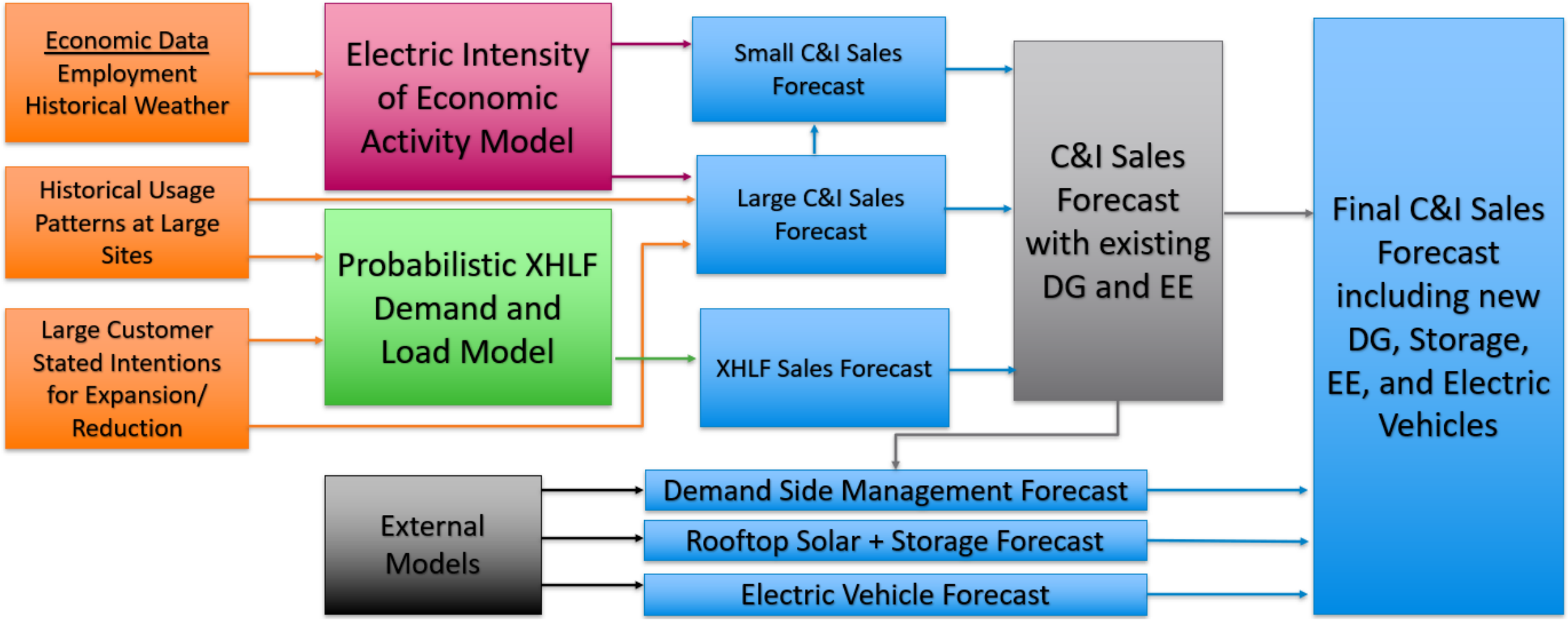
Residential Sales Growth Projected to Continue

- Sales growth ≈ customer growth + usage growth
- Sales have increased due to remote work starting in 2020
- Impacts of customer and base usage growth outweigh the savings due to DG and DSM
- EV adoption increase growth an additional 0.5% points



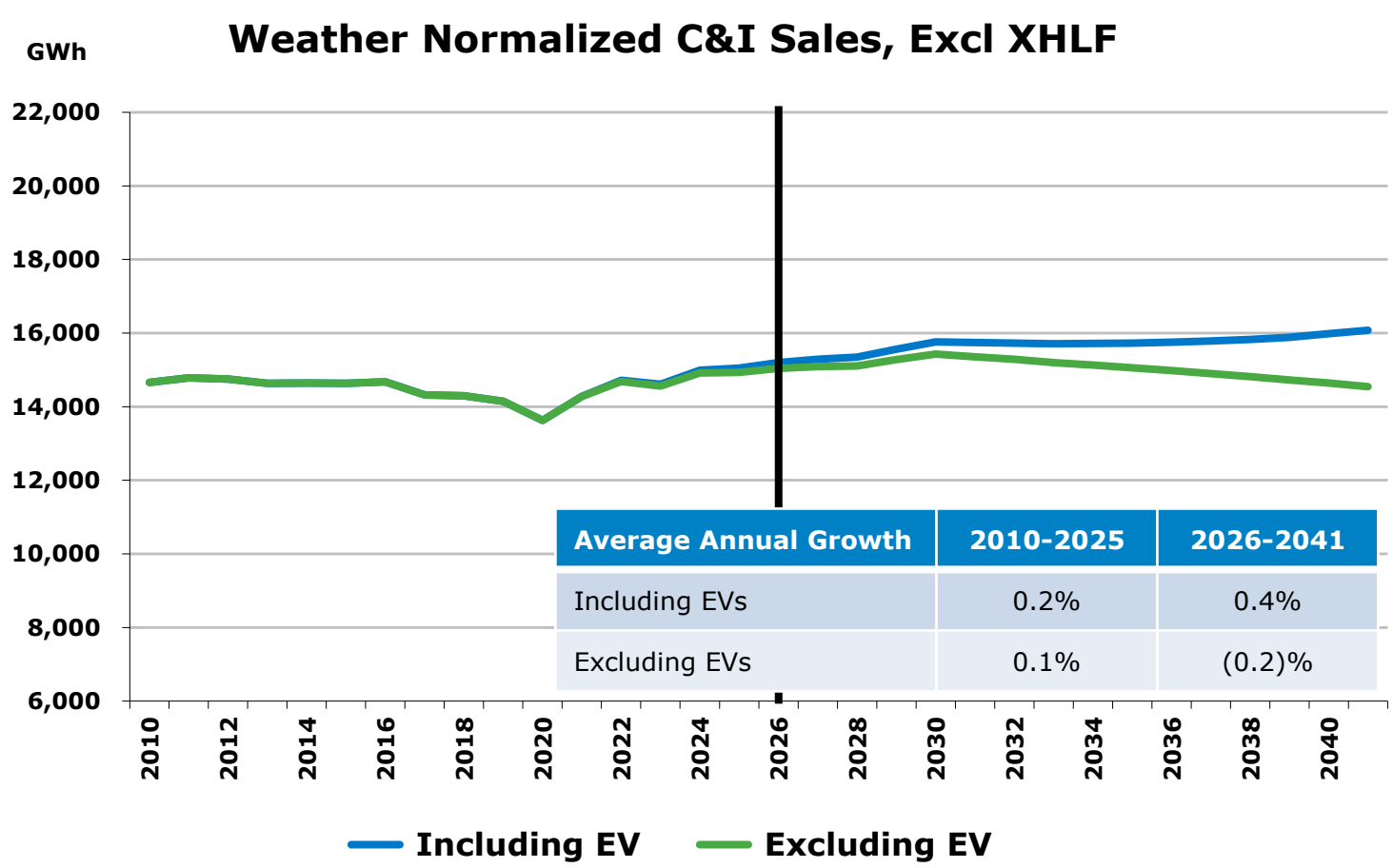
Average Annual Growth	2010-2025	2026-2041
Including EVs	0.7%	1.8%
Excluding EVs	0.6%	1.3%

C&I Load Forecasting Approach



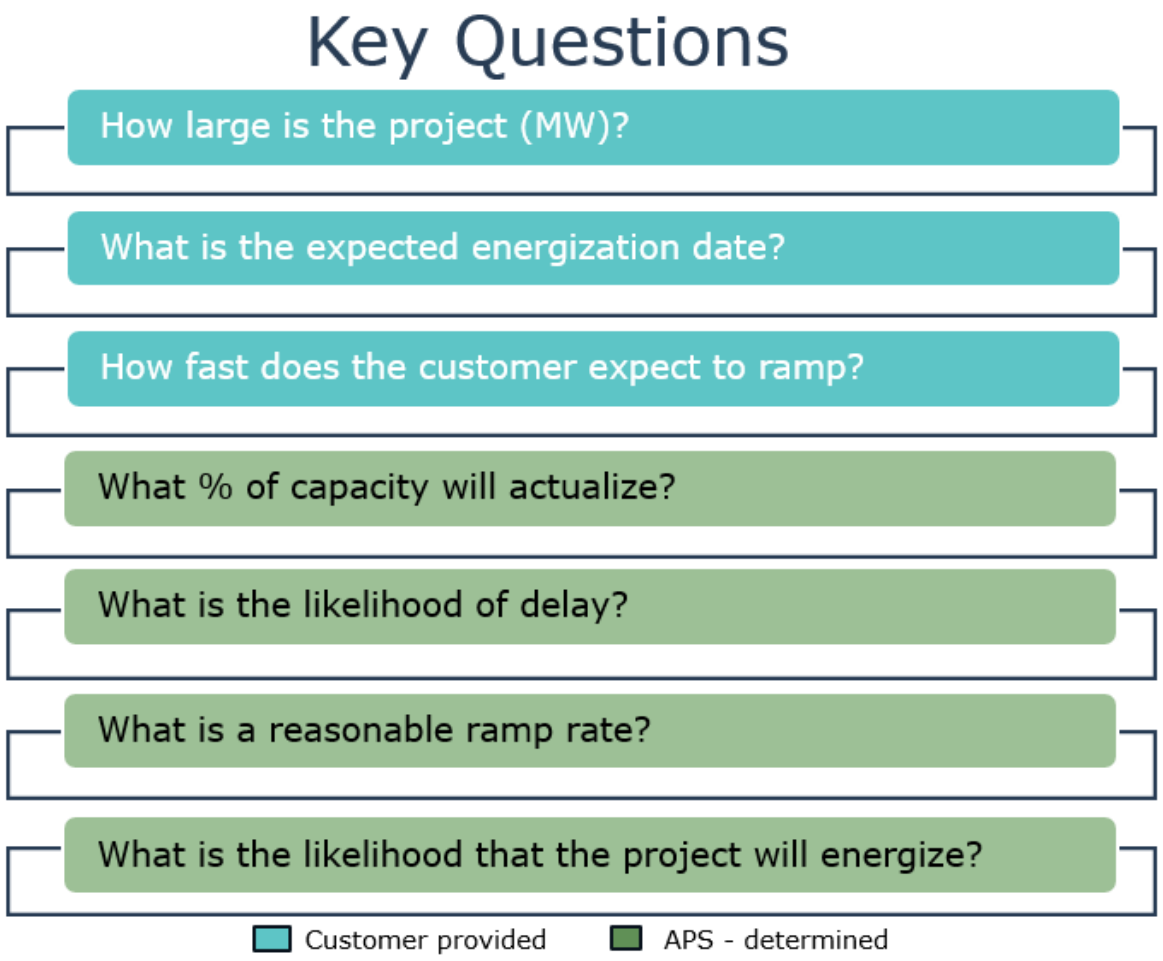
C&I Sales Growth Driven By EV Charging

- Population and employment growth lead to C&I growth
- Impacts of customer and employment growth outweighed by savings due to DG and DSM
- EV charging drives positive projected sales growth
- Large C&I customer success stories contribute to growth



Average Annual Growth	2010-2025	2026-2041
Including EVs	0.2%	0.4%
Excluding EVs	0.1%	(0.2)%

XHLF: A New Forecasting Challenge



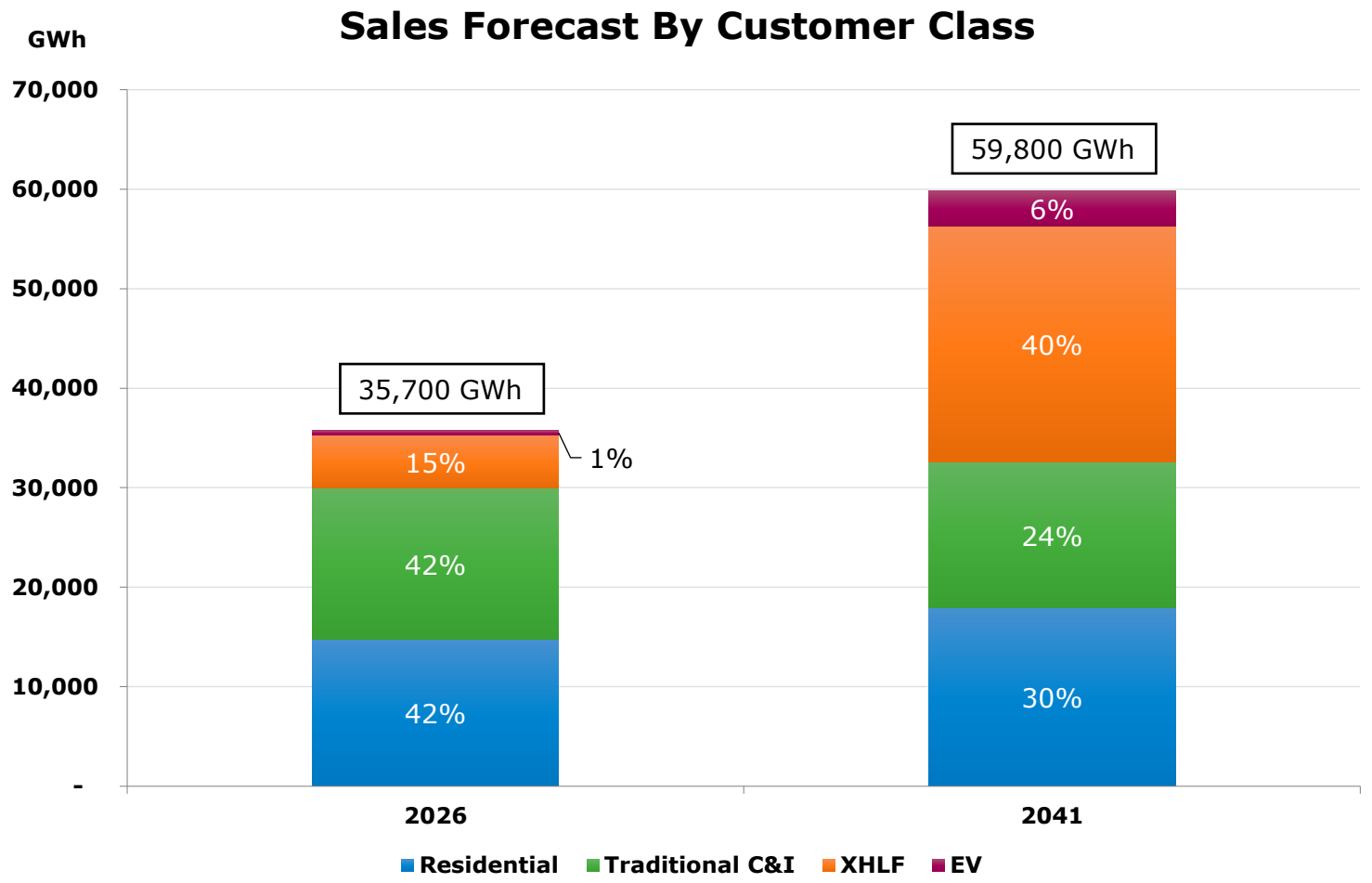
Main Forecasting Challenge

Ensuring resource adequacy, while minimizing financial risk

- Planning for XHLF projects is especially difficult
  - Frequent changes to build-out plans
  - Project start-dates are delayed
  - Ramping of load slower than planned

XHLF Drives Projected Sales Growth

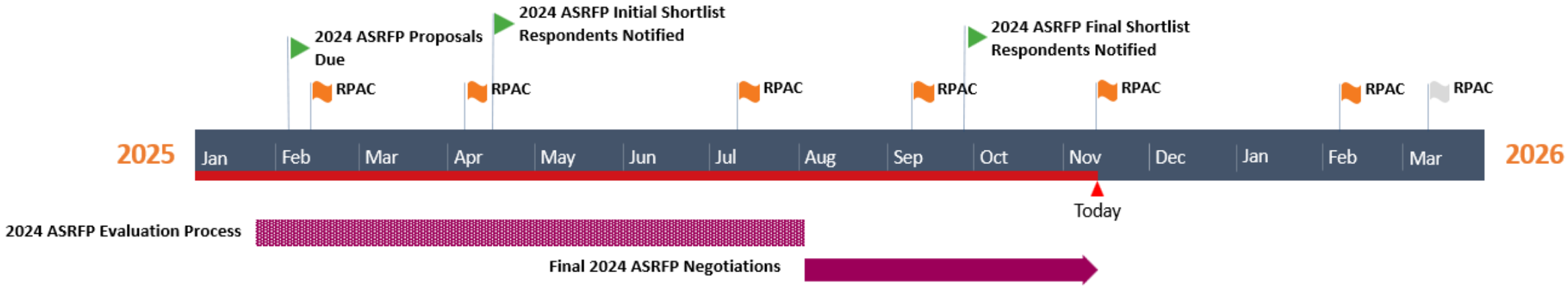
- XHLF sales expected to grow from 15% of sales in 2026 to 40% in 2043
- EV charging projected to comprise 6% of sales
- Core customer sales projected to slightly increase, but their share of sales declines from 84% in 2026 to 54% in 2041



Next Steps & Closing Remarks

Adam Constable, APS

Forward Plans and Meetings



Key Milestones

February RPAC Meeting: TBD

Time: 10:00 am

(The November RPAC Meeting is the final RPAC Meeting of 2025 - Please reach out to us before the February RPAC Meeting if you have any questions or topics to discuss.)

Notice of Intent for IRP Modeling Licenses: March 6, 2026

Upcoming ASRFP Release: TBD