

SALT RIVER PROJECT AGRICULTURAL IMPROVEMENT AND POWER DISTRICT BOARD MEETING NOTICE AND AGENDA – AMENDED

SPECIAL BOARD OF DIRECTORS

Tuesday, February 11, 2025, 9:30 AM

Zoom Webinar Link (view only, no participation):

<https://srpnet.zoom.us/j/87186987407?pwd=iYR85KaTrmHKenHUqZZP2pQXUwK5yb.1>

**SRP Administration Building
1500 N. Mill Avenue, Tempe, AZ 85288**

Call to Order
Invocation
Pledge of Allegiance
Roll Call

1. Proposed Adjustments to the SRP Standard Electric Price Plans and Proposed Adjustments to the Fuel and Purchased Power Adjustment Mechanism (FPPAM)
 - A. Opening Remarks and Process Overview
..... PRESIDENT DAVID ROUSSEAU
 - B. Public Comments from Organizations Requesting Formal Presentations to the Board VARIOUS
 - C. Additional Public Comments (up to 2 minutes per commentor) VARIOUS
 - D. Board Consultant Response to Public Comments BRUCE CHAPMAN, CHRISTENSEN ASSOCIATES
 - E. Management Consultant Response to Public Comments
.....MICHAEL KAGAN, CONCENTRIC ENERGY ADVISORS
 - F. Management Responses to Public Comments MICHAEL O’CONNOR, JOHN COGGINS, JOHN TUCKER, and BRIAN KOCH
 - G. General Board Discussion Including Board Comments About Potential Amendments to be Considered..... VARIOUS
2. Adjourn..... PRESIDENT DAVID ROUSSEAU

Members of the public shall refrain from making any inappropriate comments while attending the meeting or addressing the Board. Disruptive activity from the audience, being loud, clapping, stomping of feet, or any similar demonstrations including any signage are also prohibited. Violations of this rule may result in removal from the meeting.

The Board may vote during the meeting to go into Executive Session, pursuant to A.R.S. §38-431.03 (A)(3), for the purpose of discussion or consultation for legal advice with legal counsel to the Board on any of the matters listed on the agenda.

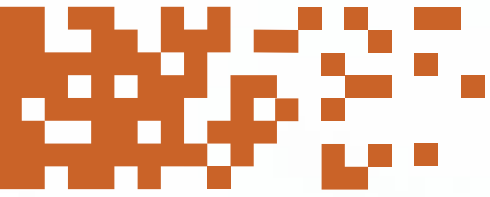
The Board may go into Closed Session, pursuant to A.R.S. §30-805(B), for discussion of records and proceedings relating to competitive activity, including trade secrets or privileged or confidential commercial or financial information.

Visitors: The public has the option to attend in-person or observe via Zoom and may receive teleconference information by contacting the Corporate Secretary’s Office at (602) 236-4398. If attending in-person, all property in your possession, including purses, briefcases, packages, or containers, will be subject to inspection.





AES DEFINED



2025 SRP Proposed Adjustment to Rates

Insights by AES Defined



INTRODUCTION

- Travis Sarver, PE
- Arizona Native & SRP Customer
- Founder of AES Defined in 2017
- We are in the business of helping customers save money on utility bills!
- Actively working with several school districts throughout SRP and APS territory specifically to manage their utility consumption and save money on their bills.
- Consultant for AASBO / ASBA [“Schools Group”] in the 2019 & 2022 APS Rate Cases.



PARTNERSHIP WITH SCHOOLS

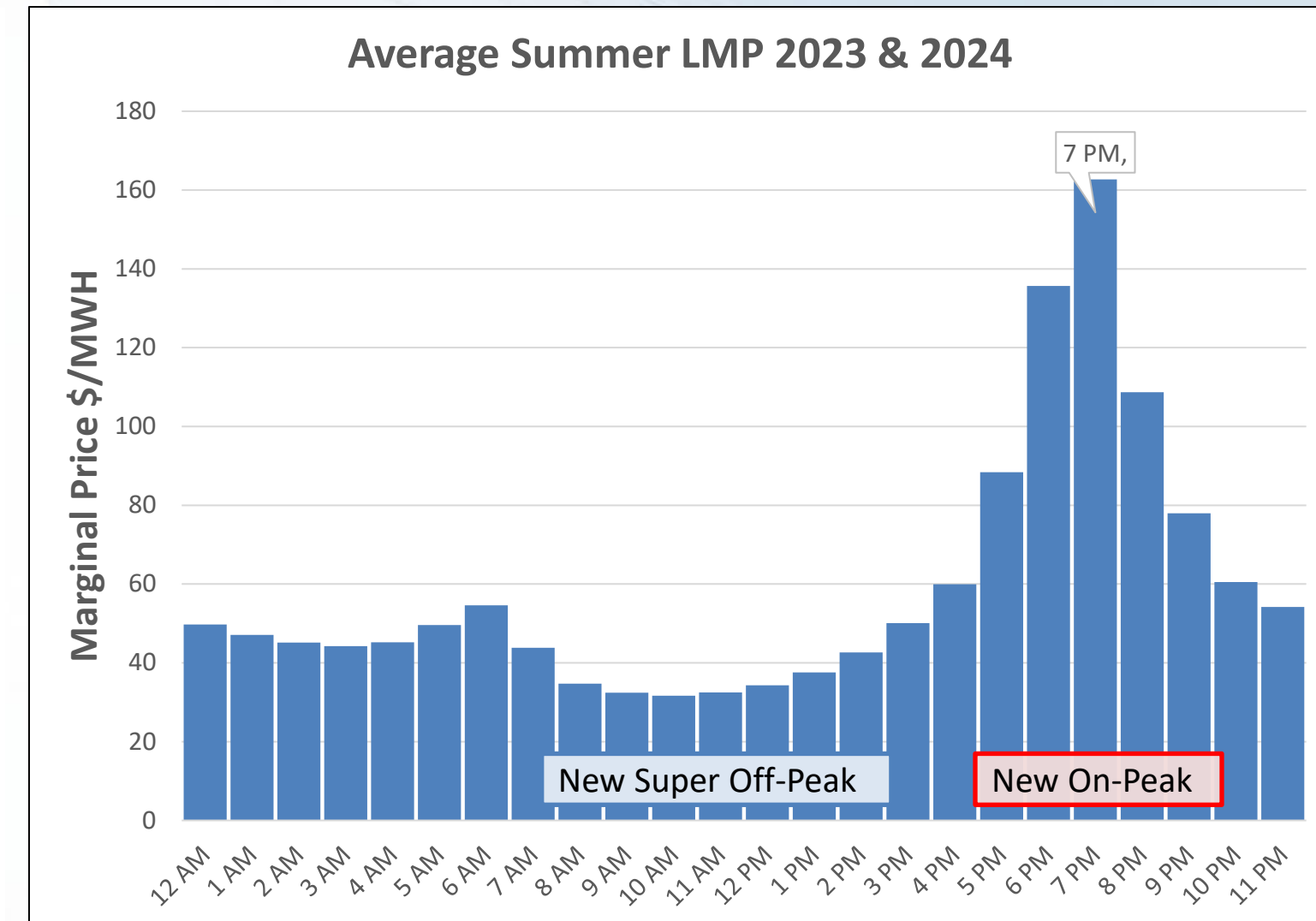
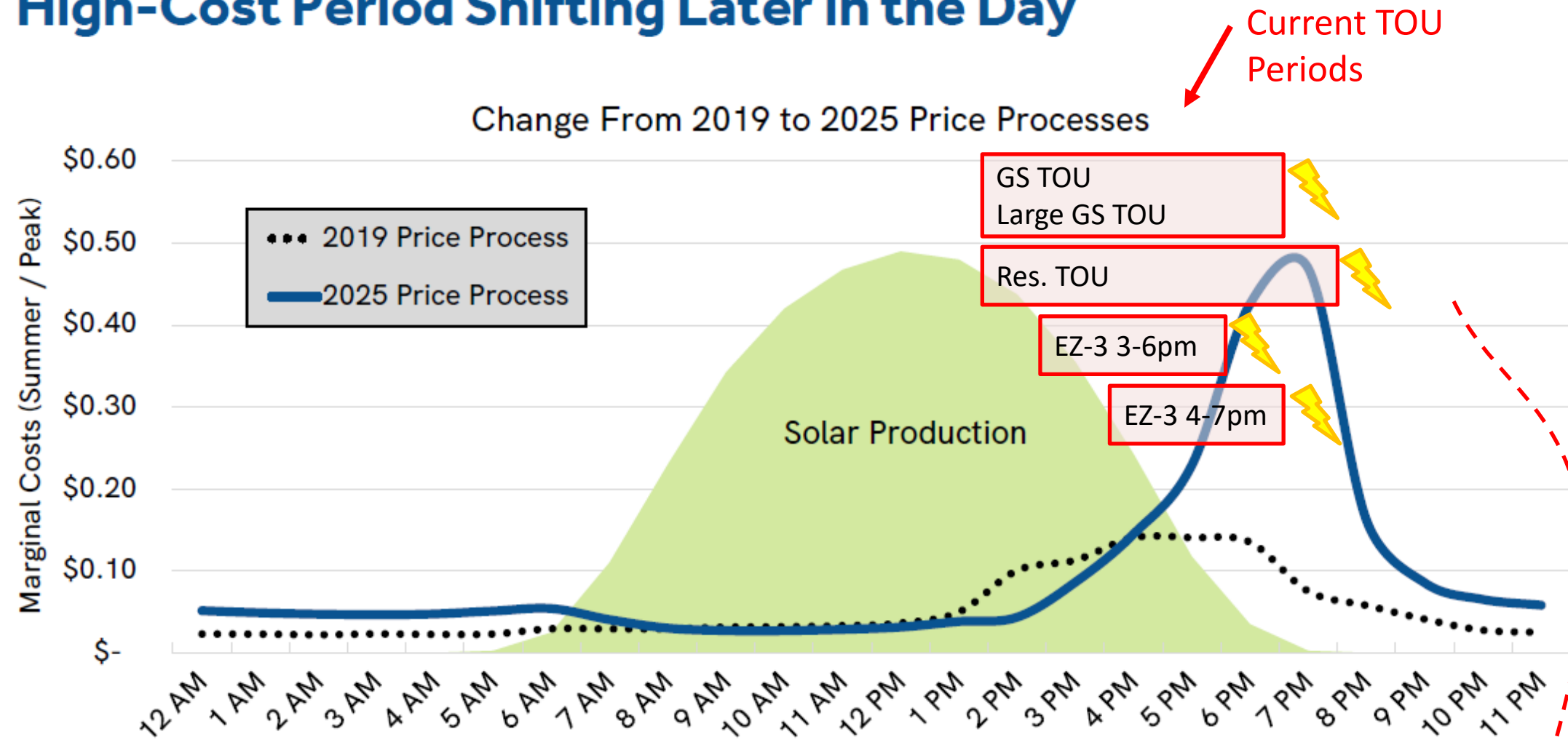


AES DEFINED



Importance of Price Signals

High-Cost Period Shifting Later in the Day

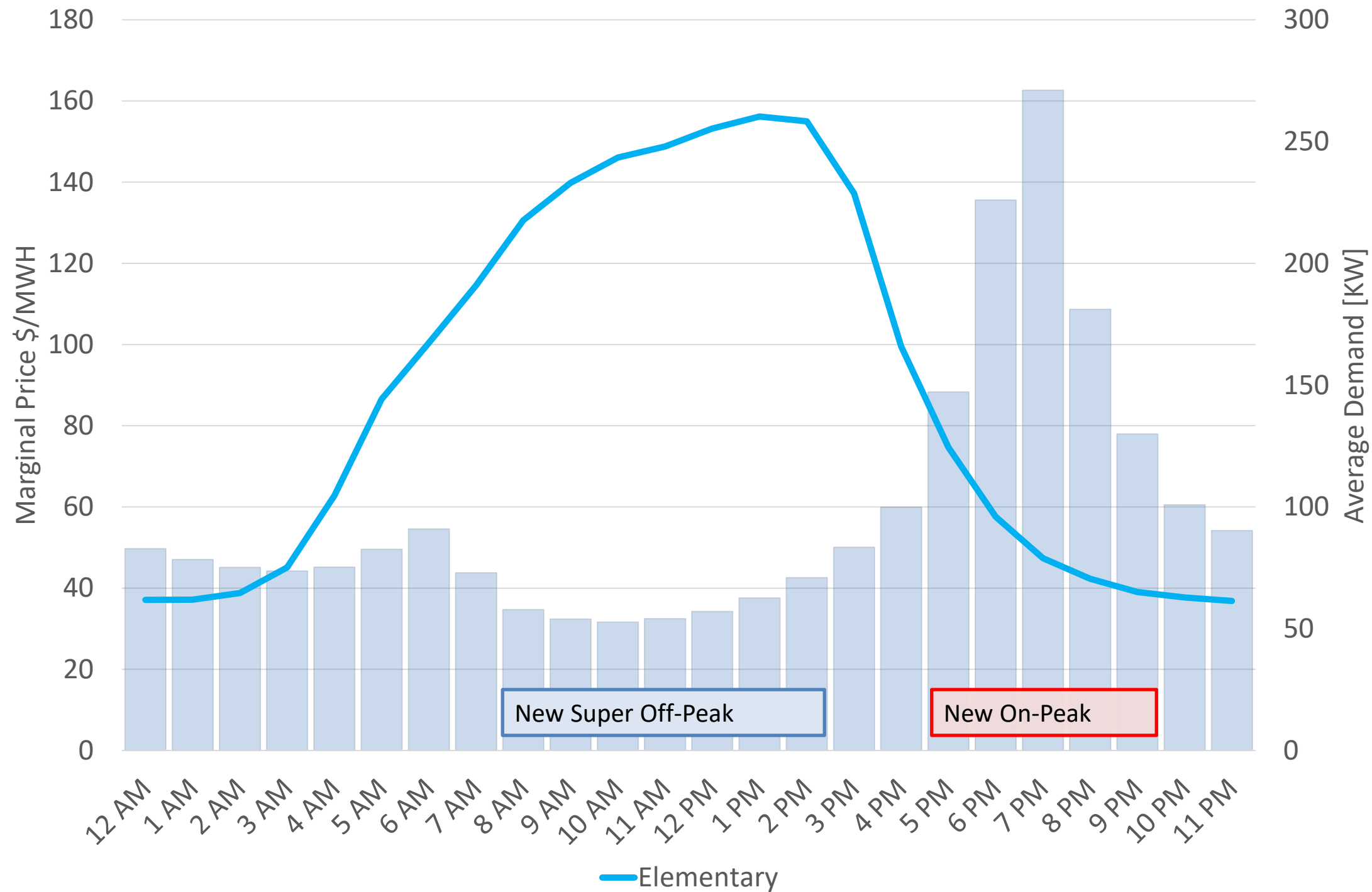


Incorrect price signaling can have a Negative effect on grid and capacity management. Many SRP TOU plans end during the most constrained time period on the grid, around 6-7pm.

Demand Spikes Immediately After On-Peak Periods

Impact on Schools

Typical Elementary Summer Load Profile



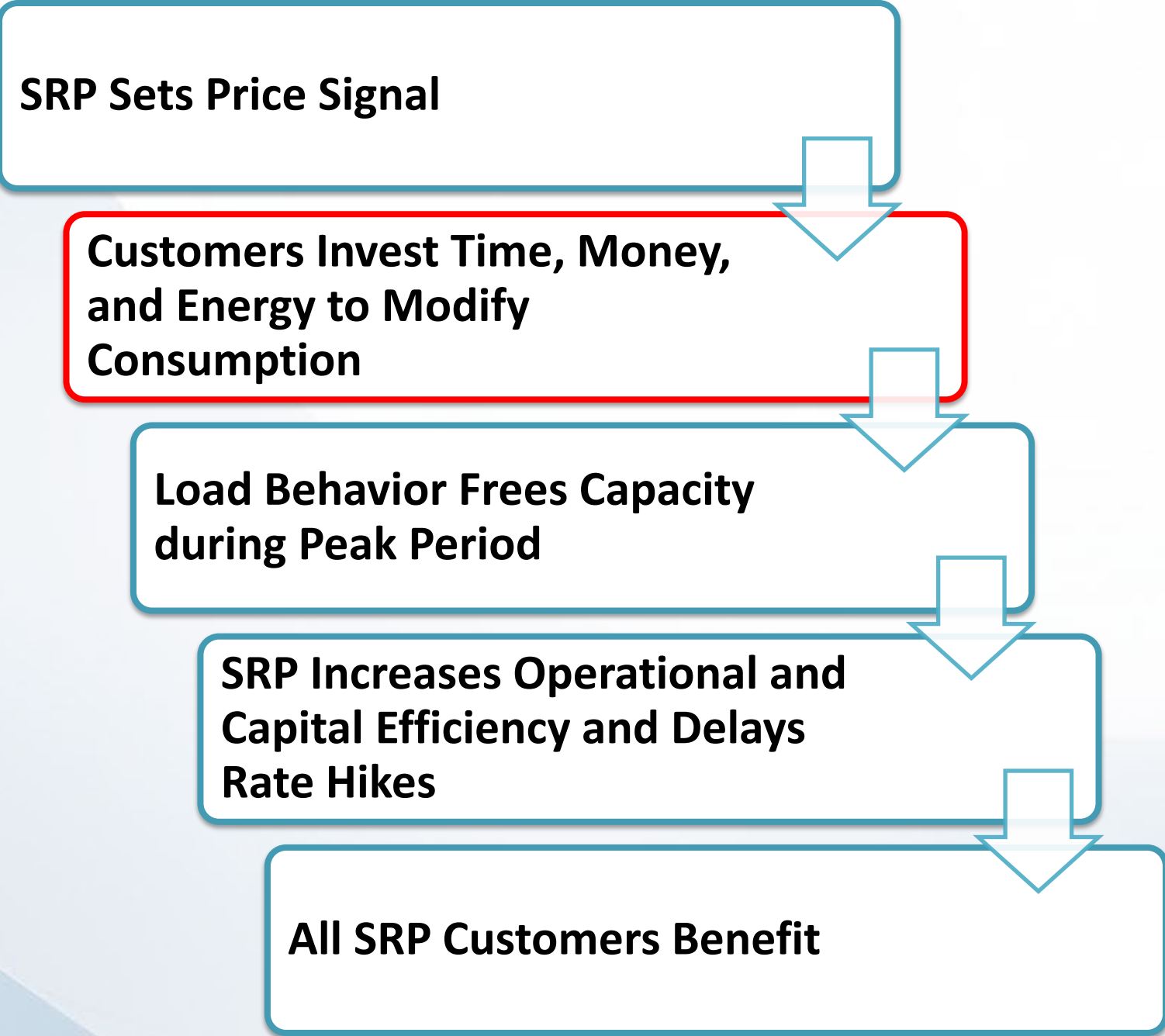
Estimated Impact on Schools by Rate Plan

E-32	E-36	E-61
4-10% ▼ <i>decrease</i>	1% ▲ <i>increase</i>	3-5% ▼ <i>decrease</i>

- Schools consume the majority of energy during the 8am-3pm Super Off-Peak period.
- Eliminates the 5am-9am Winter On-Peak Period.
- “Inverse Duck Curve”
 - Usage coincides with Solar Generation
- Low Cost to Serve

Increase Investment in TOU Plans

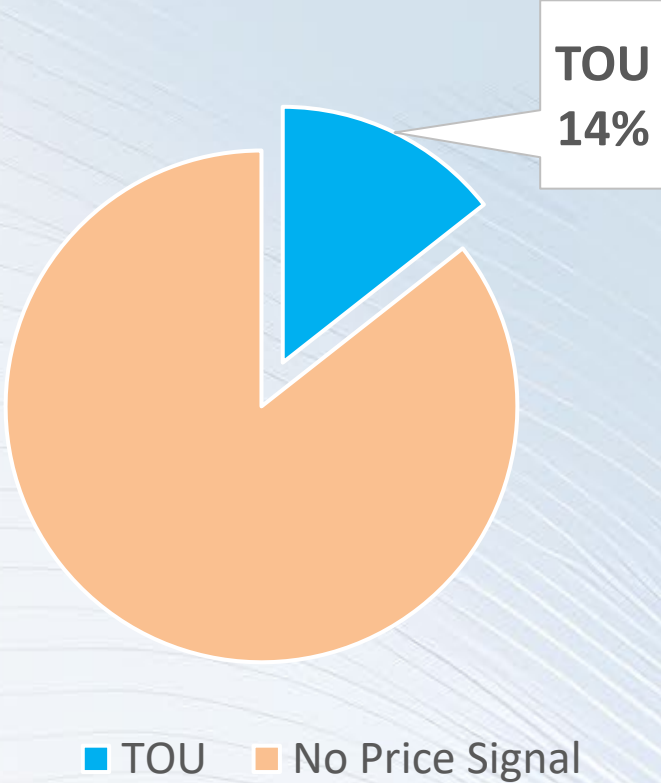
"An investment in TOU is an investment in grid management; otherwise, it's grid mismanagement."



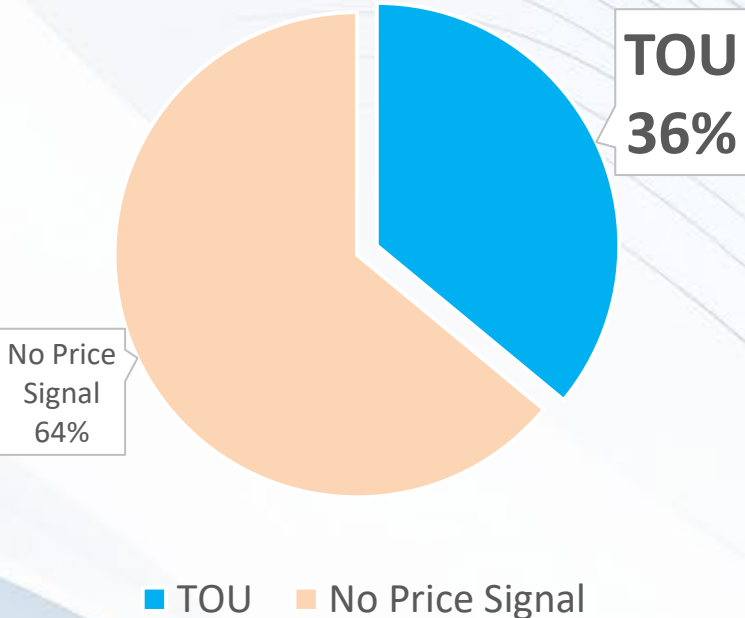
We Need a BIGGER Carrot.



Standard GS



Residential



Recommendations for SRP

#1 Reduce Revenue Increase on GS-TOU classes

Rate	Description	Customer Accounts	% of Class	Original		Modified	
				\$ Proposed Annual Impact	% Proposed Annual Impact	\$ Proposed Annual Impact	% Proposed Annual Impact
E-32*	Time-of-Use	15,140	14.4%	\$3,745,434	1.3%	\$2,996,347	1.0%
E-36	Standard	90,041	85.6%	\$9,080,713	1.3%	\$9,829,800	1.4%

➔ Use the Reduction in E-32 TOU Revenue to reduce the Super Off-Peak rates

GS TOU E-32	CURRENT \$/KWH			PROPOSED \$/KWH		
	Peak	Shoulder	Off-Peak	Peak	Shoulder	Off-Peak
Summer	0.1558	0.1166	0.073	0.1319	0.1058	0.0803
Peak Summer	0.1771	0.1246	0.0741	0.1924	0.1267	0.1093
Winter	0.1274	0.1209	0.0752	0.0982	0.0857	0.0609

Lower the Off-Peak rates with the reduced Revenue Requirement

➔ Use the Increase in E-36 GS Revenue to increase demand charges

➤ Either kW charges or kWh/kW energy tiers

Recommendations for SRP

#2 Add Tiers to KW Charges for E-16

To Be Frozen and Sunset		Moved to Price Plan	
E-15	Average Demand Price Plan	E-16	Manage Demand 5-10 p.m. and Save
E-27	Customer Generation Price Plan		
E-27P	Residential Demand Price Plan Pilot		

Current E-27 Demand Plan KW Structure

Per kW Charges (On-Peak)

Summer	First 3 kW	Next 7 kW	All Add'l kW
Distribution Facilities	\$0.00	\$0.00	\$0.00
Distribution Delivery	\$2.88	\$5.07	\$10.29
Transmission	\$0.98	\$1.78	\$3.40
Transmission Cost Adjustment	\$0.00	\$0.00	\$0.00
Ancillary Services 1-2	\$0.00	\$0.00	\$0.00
Ancillary Services 3 - 6	\$0.00	\$0.00	\$0.00
Generation	\$4.03	\$7.52	\$13.59
Total	\$7.89	\$14.37	\$27.28

Proposed E-16 Demand Plan KW Structure [Tiers]

	First 1 kW	Next 3 kW	All Add'l kW
Per kW Charge	\$0.00	[\$14-19]	[\$20-30]

- Gives incentive for customers to control demand as low as possible.
- Provides pathway to encourage energy storage solutions.
- Provides relief for smaller customers (i.e. multi-family).
- This "First kW Free" approach is used in GS plans E-32 and E-36 (First 5 kW is free).

Recommendations for SRP

#3 Introduce a Super Saver TOU Plan

- Similar to the E-27[P] rate plan but with the new TOU hours.
- Demand based on monthly max On-Peak kW demand (30-minute interval)
- Aggressively ratcheting kW charges tiers

– Match the Proposed E-16 tiers

	First 1 kW	Next 3 kW	All Add'l kW
Per kW Charge	\$0.00	[\$14-25]	[\$30-50]

- Low Energy Rates
 - Closely matching marginal cost of energy
- Intended for more advanced customers who can effectively manage energy and demand (solar + storage, storage only, demand management, etc.)

SUMMARY / FINAL RECOMMENDATIONS

1. We support the new TOU hours and believe they align with current and future cost of service.
 - ✓ Schools will particularly benefit from this new structure.
2. We believe the SRP needs to 'lean in' to the TOU rate plans to dramatically increase adoption.
 - ✓ Lower off-peak / super off-peak energy rates as much as possible
 - ✓ Both GS and Residential TOU classes should have lower revenue requirements to accommodate lower rates
 - ✓ Add E-16 tiered demand charge structure
 - ✓ Add residential Super Saver option (aggressive demand charge / low energy charge)
 - ✓ These improvements can be accommodated by slightly higher revenue increases to non-TOU price plans and lower returns on TOU plans



2/11/2025



Notes on Public Presentations of February 5, 2025

Bruce Chapman
February 11, 2025
Salt River Project Special Board Meeting

Topics

- Loss of Load Probability
- Fixed Charges
- Distributed Energy Resource Rate Design
- Time-of-Use Pricing
- Virtual Power Plants
- Rate E-67

Loss of Load Probability (LOLP)

- New allocator for generation and FPPAM demand-related costs, replacing 4 CP
- Reviewed appropriateness of the LOLP allocator in our report and approved
 - Reviewed spreadsheet applying LOLP to hours of the year.
- Question: is LOLP itself appropriately calculated.
- Answer: reviewed spreadsheet and interviewed staff. Concluded that calculations were appropriate.

Fixed Charges

- Cost Allocation Study (CAS) classifies costs as customer-, demand-, and energy-related.
 - Customer-related costs divided by customer count for each class yields customer-related unit cost
- Utilities traditionally under-recover customer-related costs in monthly customer charges. Volumetric charge includes recovery of remaining fixed costs.
 - SRP does this too.
- Utilities are increasing residential monthly customer charges at a faster pace than other charges to recover more via fixed charges and less by volumetric charges (the energy charge)
 - Key factor is rise of Distributed Energy Resources (DERs). Reduced usage leads to under-recovery of fixed costs.

Fixed Charges (2)

- Criticism: lowering volumetric charges is anti-conservation and shifts costs to small customers, who are disproportionately low-income
- DER customers, who have above-average incomes, enjoy cross-subsidy by other customers.
- Utility responses: DER rate redesign and increase in monthly customer charge level.

DER Rate Design and Pricing

- Problem: residential delivery services costs are partly collected in the energy charge
- SRP CAS study revealed the residential solar customers have the lowest revenue/cost ratio of all classes.
 - Regulatory theory encourages narrowing rate of R/C ratios with each rate case.
- Questions:
 - Are the CAS allocations accurate? We concluded that management's cost allocation was acceptable.
 - Do proposed rates reflect cost? We concluded that management's calculation of R/C ratios was reasonable, and that residential solar rates were below cost.
 - Also, management's gradual closing of the gap appears reasonable.

DER Rate Design and Pricing (2)

- Question: what are existing DER customers entitled to regarding rate changes? They invested in solar panels based on then-current prices and solar installers' calculated payoff periods.
- Industry debate: is the relationship between the customer and the utility a "contract" or a "rate"?
 - Formally, the relationship is a rate, in my view. Utilities retain the right to change prices in rates, and to change rate structures.
 - The industry is moving away from net metering and net billing toward designs that improve cost recovery.
- SRP changes lengthen payoff period but offer 4 years until mandatory rate change.

DER Rate Design and Pricing (3)

- Question: what should the “export” price be? (This is the price paid to customers when site generation exceeds consumption.)
- Problem: large differences of opinion about this value:
 - DER advocates favor long-run avoided costs, captured in “Value of Solar” concept
 - Utilities favor short-run avoided costs, reflecting changes in costs that appear on their books when a customer reduces usage.
 - Regulators have not reached conclusions re this.
- SRP management’s price method is compatible with the utility position elsewhere.
 - Higher rate elsewhere are a dubious guide, since price components differ across jurisdictions.

DER Rate Design and Pricing (4)

- Long-term challenge of utilities:
 - Inform customers of the cost of delivery service via unbundled charges for delivery.
 - Pay for customer-generated power at market-based prices.
 - Facilitate customer investment decisions via full-cost recovery tariffs than will not require disproportionate upward revision in prices in later years.
- Full-recovery *efficient* pricing helps the utility to avoid “uneconomic bypass” – departure of load from the system due to customer misunderstanding of cost to serve.
 - Efficient pricing sets costs close to marginal/avoided cost.

TOU Pricing

- Questions:
 - How many time periods, seasons?
 - What hours of the day to cover with each period?
 - What price ratios across time periods?
- Utility practice:
 - Very diverse re time periods
 - Hours of the day have been changing in response to the spread of solar energy in daylight hours.
 - Customer preference balanced against wholesale market pattern
 - Price ratios vary from reflection of wholesale market ratios to strategic choice of 3:1 or more to induce load shifting

TOU Pricing (2)

- Participation favored by off-peak customers due to bill reduction
 - High price ratio can deter participation due to high peak prices, but encourage it for those able to respond.
- TOU improves the match across customers between bill and cost to serve: peak-coincident customers pay more.
- Customer choice:
 - Based on competitive retail market portfolios, utilities should feel free to offer a residential portfolio of flat, seasonal, TOU of several types
- Management's portfolio appears reasonable, including simplification since it clarifies alternatives but attempts to meet diverse customer needs (EV charging, DER, standard service, etc.)

Virtual Power Plants

- Useful in deregulated service territories to connect retail customers willing to curtail consumption with the wholesale market
 - Third parties aggregate customer load for sale to wholesale market.
- Vertically integrated utilities can replicate this service by offering curtailable service and direct load control and altering their generation and purchased power levels in anticipation of demand response.
- Charges:
 - Payment to customer for availability (often via lump sum or demand charge bill discount)
 - Payment for load reduction from contract level, or charge at high energy prices for consumption

Very Large Customers (Rate E-67)

- Customer presentation noted that Rate E-67 customers are above rate parity (revenue/cost ratio is above 1.0)
- Difference of opinion with SRP re relative rate increase.
- Customer position can be seen as concern that SRP is failing to move toward parity at adequate speed.
- Industry practice is that rates should move toward parity, but the rate of movement is subject to other rate design considerations, such as need for gradualism.
- In our view, costs appear properly allocated and are moving toward rate parity.





District Water Support Obligation

February 11, 2025

Special District Board – Price Process

Presented by Michael J. O'Connor
AGM and Chief Legal Executive



Delivering water and power™

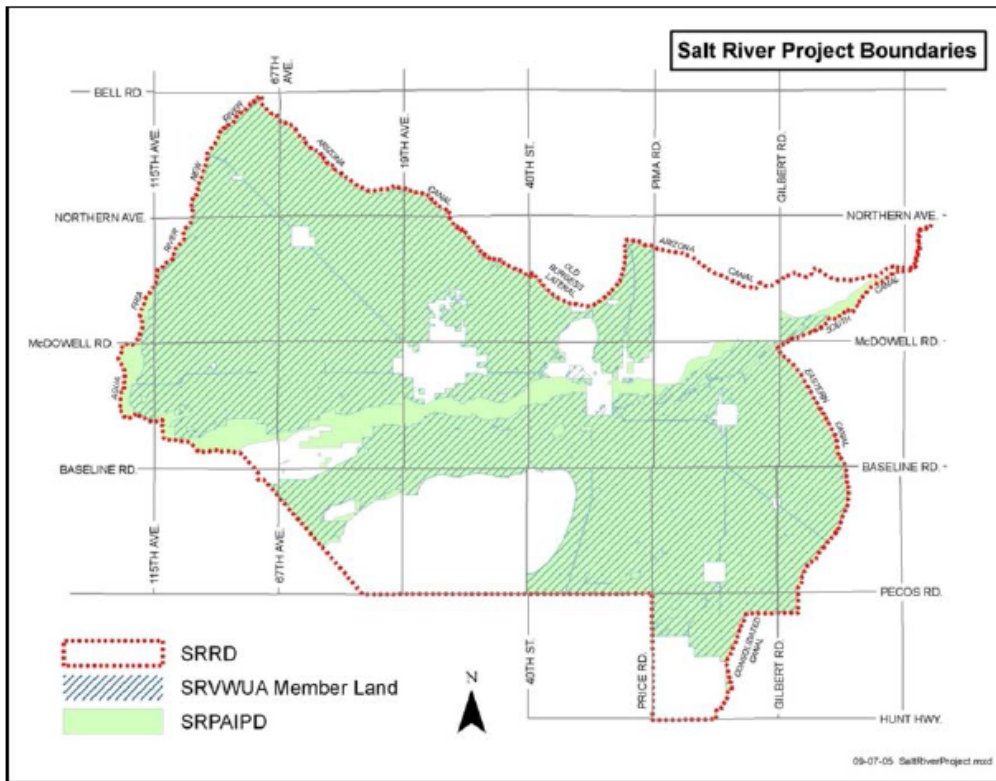
District Water Support Obligation

The Salt River Project Agricultural Improvement and Power District (“District”), since its formation in 1937, and consistent with:

1. Reclamation law and principles;
2. The purposes of the Salt River Valley Water Users’ Association (“Association”) and the District; and
3. The requirements of the 1937 Contract between the District and Association as amended in 1949 (“1949 Contract”)

Has an obligation to and has appropriately used electric revenues to financially support its water storage and delivery operations.

District Development, 1937



- District Statutory Authority - Ch. 23 Amendments (S.B. No. 7)
 - One acre/one vote
 - Political subdivision
 - Finance and refinance debt
 - Use of power revenues to support the water function (e.g. reduce the cost of water storage and delivery, secure water supplies, and finance water infrastructure)

1937/1949 District/Association Contracts

1. In 1937, the District was formed as a political subdivision of the State of Arizona, and entered into its first contract with the Association.
2. The Association transferred all its assets to the District as part of the contract.
3. The District, in consideration for the transfer of all Association assets, undertook the Association's obligations to shareholders.
4. In 1949, the Association and District amended the 1937 Contract, which is still effective today.
5. The 1949 Contract references the financial obligation of the District for water support.

2002 Memorandum of Understanding Between District and Association

1. General terms of the 2002 Agreement
2. Recitals of the 2002 Agreement reference the District obligation to the Association under the 1949 Contract
3. Identifies the process in the event of a dispute between District and Association over the extent of the District's financial obligation
4. Sets the District's financial obligation to the Association regarding water support during the pendency of a dispute

Scope of Water Support

Under the 1949 Contract, the scope of the District water support to the Association refers to working capital necessary for the Association to operate and maintain the Irrigation & Drainage system (below Granite Reef Dam)

- Does not include capital replacements & additions to the SRP Irrigation & Drainage system (to be the responsibility of the District)
- There is no specific reference to water related work such as:
 - Reservoir operations, weather forecasting, watershed monitoring, forest restoration, etc.
 - Water strategy & policy work
 - Water rights & contracts work
 - Recharge projects, CAP/SRP Interconnection Facility (CSIF), and similar projects

2035 Water Support Goal

- There are two financial support targets in this goal:
 - A percentage target of the O&M of the Irrigation & Drainage system; and
 - A percentage target of total electric revenues
- The 2035 water support goal would be as follows:
 - By 2035, 60% of the Irrigation & Drainage O&M expenses will be met from electric revenues, and
 - The total amount of financial support to water system O&M will not exceed 2.5% of total electric revenues

QUESTIONS?

Summary of Value of Solar Study Presented to SRP Board and Council on 6/6/24

John Coggins

AGM and Chief Power System Executive

2/11/25




Value of Solar Study

Timeline

- May 15, 2024 – report published
- June 6, 2024 – SRP Board and Council Work Study Session
- August 12, 2024 – meeting with preferred solar installers
- August 14, 2024 – meeting with AriSEIA
- November 4, 2024 – SRP Board meeting discussion

Sound Grid Partners

- Sound Grid Partners (SGP) is an engineering and analysis firm based in Seattle, WA
- Founded in 2018 with extensive experience working with utilities to plan, deploy, and utilize distributed energy resources
- Works with utilities and developers of solar and energy storage resources
- Ability to provide independent perspective and utilize advanced analysis tools customized for SRP's system

	Tess Williams, PhD <i>Principal</i>
	Dan Sowder, P.E. <i>Principal</i>
	Marley Cross <i>Senior Power System Engineer</i>

Study objective: carefully compare the benefits and costs of different approaches to building solar and storage to help guide the most effective path to decarbonization

- Quantitative and objective: capture all realizable benefits and costs, across different scales of assets, and from multiple perspectives
- Leverage third-party to apply state-of-the-art modeling with industry standard approach
- SRP-specific, reflecting current grid and market dynamics while building on past studies, models and pilots
- Point in time study (study year 2026) to provide depth, minimize assumptions and decrease variability

Key technical insights from analysis



1	Residential solar is over three times more expensive to build and delivers only ~70% of the system benefits as bulk-scale solar
2	Solar host customers are subsidized by all other customers under current price plans
3	The cost to all SRP customers of compensation to residential solar host customers is higher than the all-in cost of bulk-scale solar
4	Adding storage to small-scale solar increases system benefits , but by less than the increase in costs
5	Large C&I solar + storage with single-axis tracking solar, actively cooled storage with four-hour duration, and utility control is cost-benefit positive for all parties

Residential solar is **over 3 times more expensive** and **delivers only ~70% of the system benefits** as bulk-scale solar

	Cost to solar host customer	Cost to all SRP customers	System benefits: capacity, energy, T&D		
Bulk-scale solar	-	\$72/kW-year (all-in cost)	\$94/kW-year		
Residential solar	\$240/kW-year (all-in cost)		\$66/kW-year		

Comparing options for adding solar to the SRP system



Each dollar of investment by all SRP customers goes over twice as far if invested in bulk-scale solar instead of residential solar



	Cost to solar host customer	Cost to all SRP customers	System benefits: capacity, energy, T&D	Value of \$1.00 of investment by all SRP customers	Solar energy generated by \$1.00 of investment by all SRP customers
Bulk-scale solar	-	\$72/kW-year (all-in cost)	\$94/kW-year	\$1.31	40 kWh/year
Residential solar	\$240/kW-year (all-in cost)	\$107/kW-year (compensation to solar host customer)	\$66/kW-year	\$0.62	16 kWh/year

The **cost to all SRP customers** of compensation to **residential solar** host customers is **higher than the all-in cost of bulk-scale solar**

	Cost to solar host customer	Cost to all SRP customers	System benefits: capacity, energy, T&D		
Bulk-scale solar	-	\$72/kW-year (all-in cost)	\$94/kW-year		
Residential solar	\$240/kW-year (all-in cost)	\$107/kW-year (compensation to solar host customer)	\$66/kW-year		

Most promising customer deployments



Adding storage to small-scale solar **increases system benefits**, but by less than the **increase in costs**

	All-in asset cost	System benefits: capacity, energy, T&D
Residential solar	\$240/kW-year	\$66/kW-year
Residential solar + storage	\$446/kW-year	\$117/kW-year

thank you!

**Proposed Adjustments to
SRP's Standard Electric Price Plans
Effective with the
November 2025 Billing Cycle**

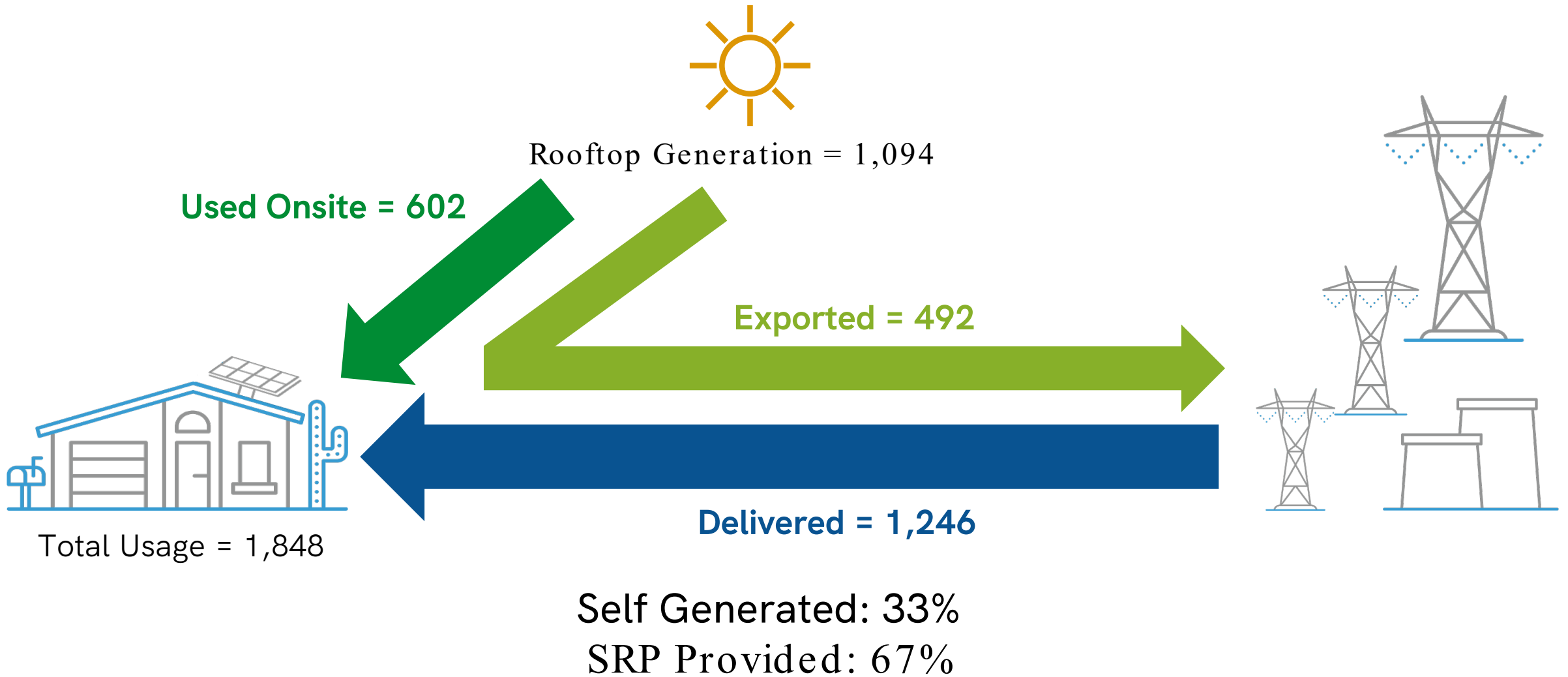
February 11, 2025

Rooftop Solar

Rooftop Solar Proposal – Key Points

- Cost Allocation Study accurately reflects direct SRP cost reductions in system usage attributable to distributed generation (DG) customers
- After sunseting: no separate solar price plans
- Solar customers and customers without solar have same charges on E-28 and E-16
 - Same MSC (lower than current MSC under solar price plans)
 - Same TOU hours including 3-hour on-peak option on E-28
 - No grid access fees or interconnection fees
 - Same per-kWh delivered charges
 - Market-based export credit, updated annually (transparent and publicly available)

Typical DG Customer Monthly Energy Flow (kWh)



Solar Reduction of Cost Allocation – Simplified View

Cost Allocation Reduced by Distributed Solar

- Distribution

- Transmission

- Ancillary Services

- Generation

- Fuel and Purchased Power

Both on-site and exported solar generation reduce allocated costs

Not Reduced

- Monthly Service Charge

Solar Reduction of Cost Allocation – Detailed View

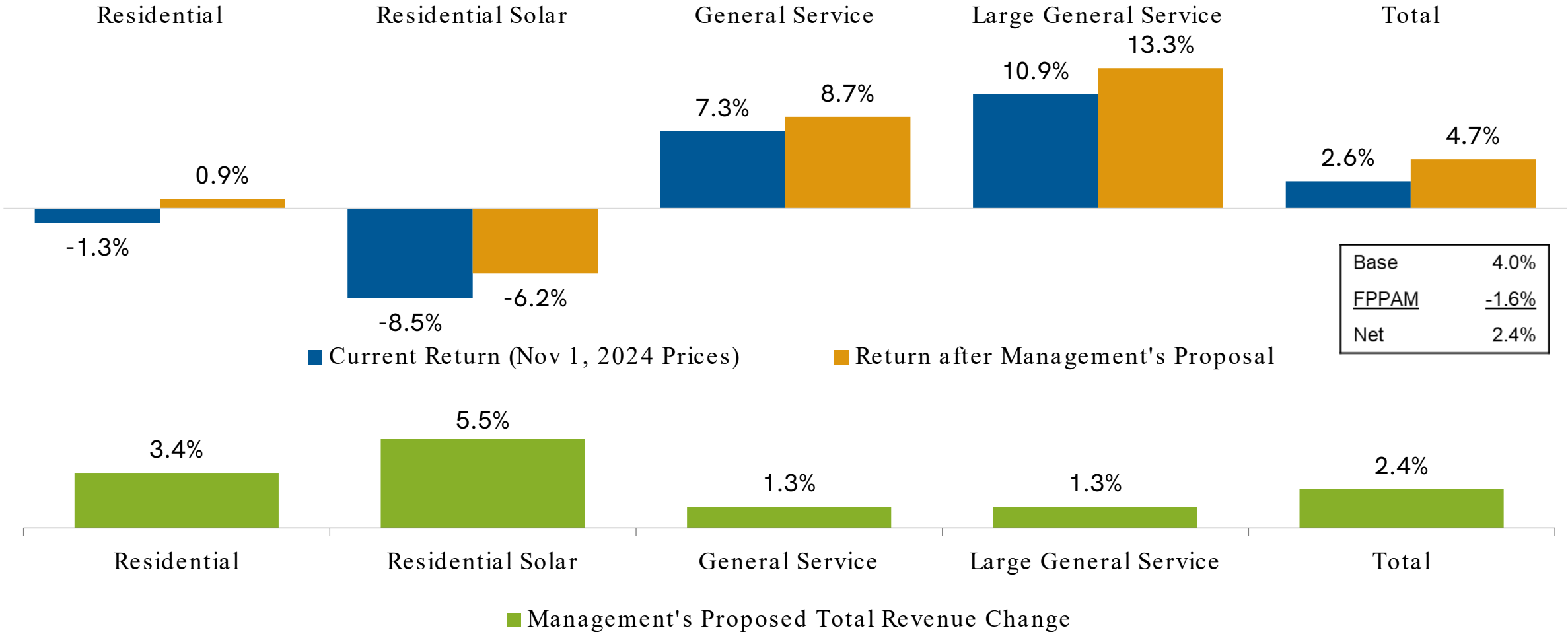
Solar energy consumed on-site reduces SRP's costs by more than excess energy exported to grid

Function	Allocator*	On-Site	Excess	Explanation
Billing, Customer Service, and Metering	Per Customer			Fixed costs that do not vary with energy consumption.
Distribution Facilities	Per Customer (by "Tier")			Fixed costs, often installed before the home is built, does not change with usage
Distribution Delivery	Delivered kW	✓		Solar energy used on-site avoids the distribution system; excess energy does not.
Transmission	Net kW	✓	✓	On-site and excess solar energy at transmission peak lower transmission infrastructure requirements
Ancillary Services 1-2	Net kW	✓	✓	On-site and excess solar energy can reduce costs for regulation and reactive supply & voltage control
Ancillary Services 3-6	Delivered kWh	✓		On-site solar can reduce grid demand; SRP provides reserves for excess solar energy
Generation "Peak"	Net kW	✓	✓	Both on-site and excess solar energy reduce the need for additional generation capacity during peak hours, as they lower net kW coinciding with the generation peak
Generation "Average"	Delivered kWh	✓		On-Site solar directly reduces reliance on SRP's generating resources; excess solar energy in one hour does not reduce the need for the resources in a different hour
FPPAM	Net kWh	✓	✓	Both on-site and excess solar energy reduce the need for SRP fuel or purchased power in corresponding hour

*kW allocators based on different coincident peak measurements depending on function (e.g., G, T, and D peak at different hours)

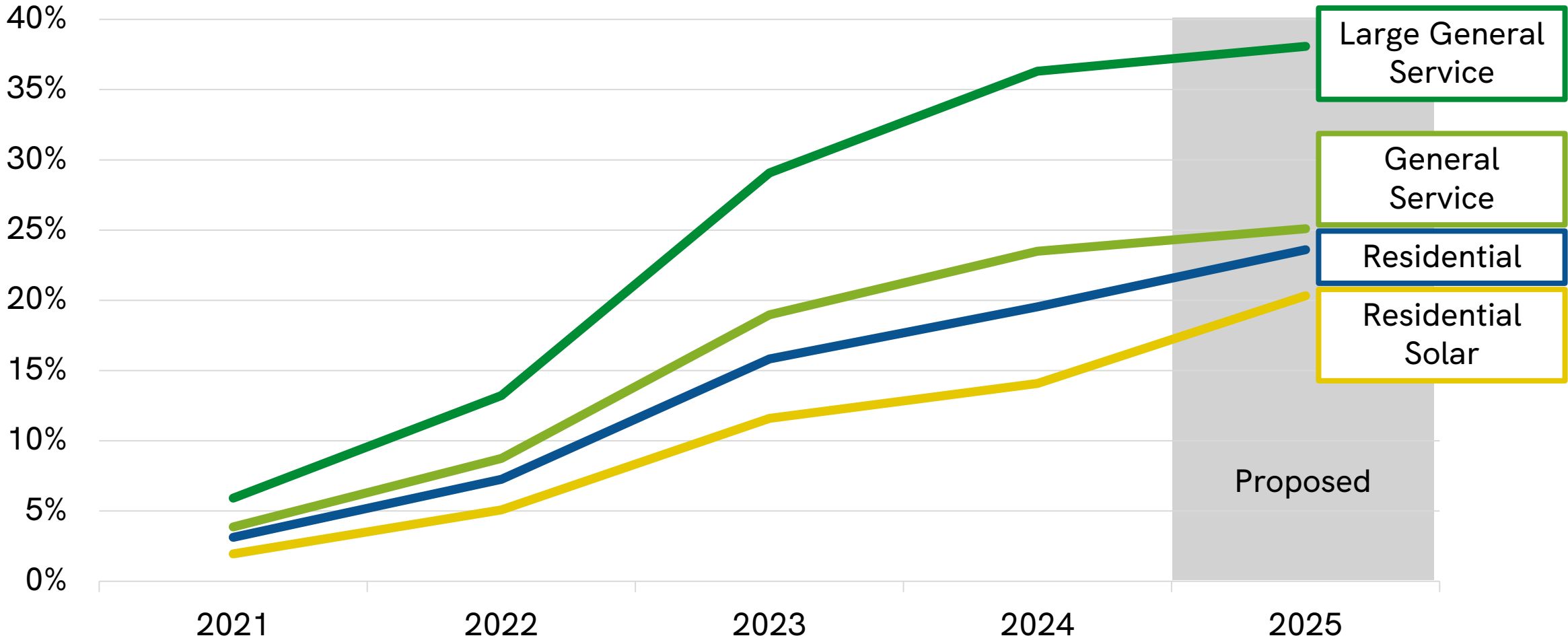
Proposed Average Adjustment Varies by Class

Being mindful of Board Pricing Principles of Gradualism, Cost Relation, Choice, Equity, and Sufficiency

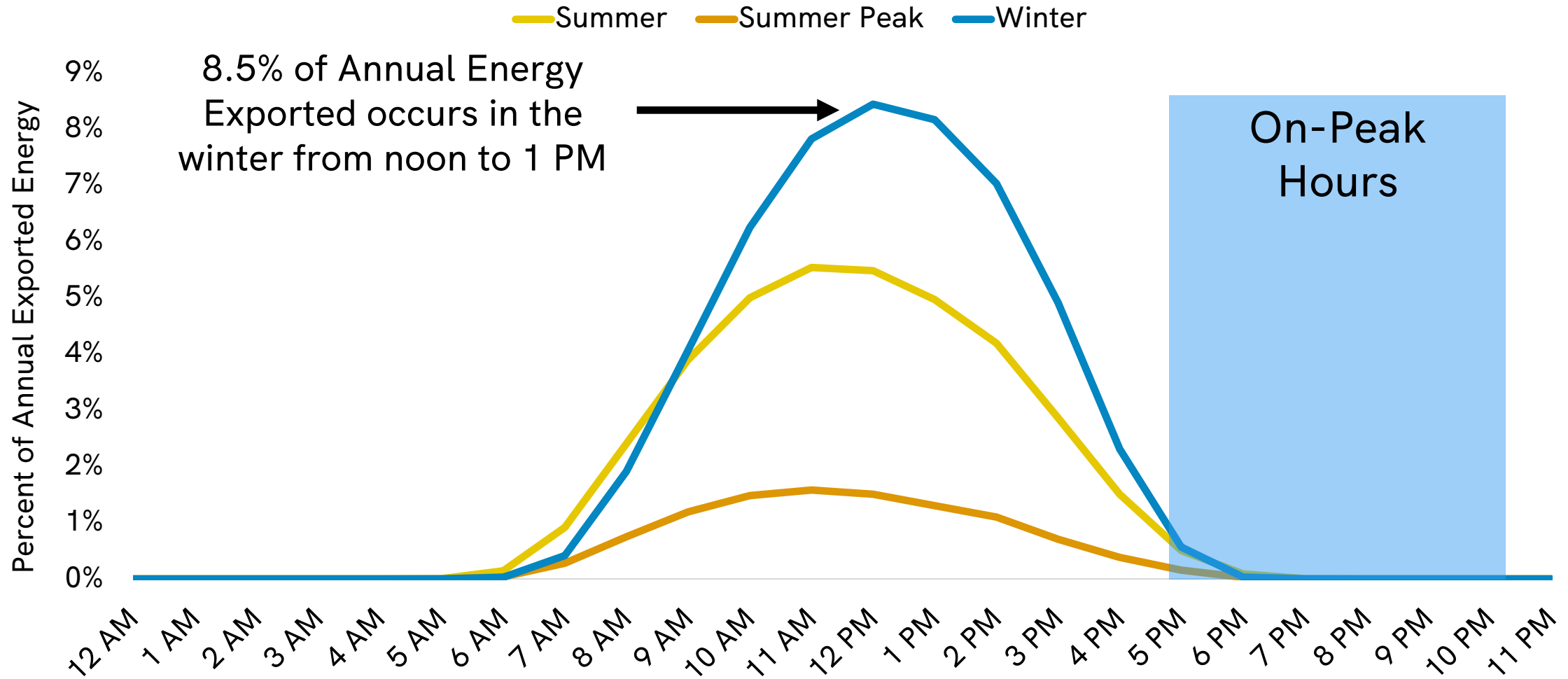


Recent Price Changes

Cumulative Price Changes



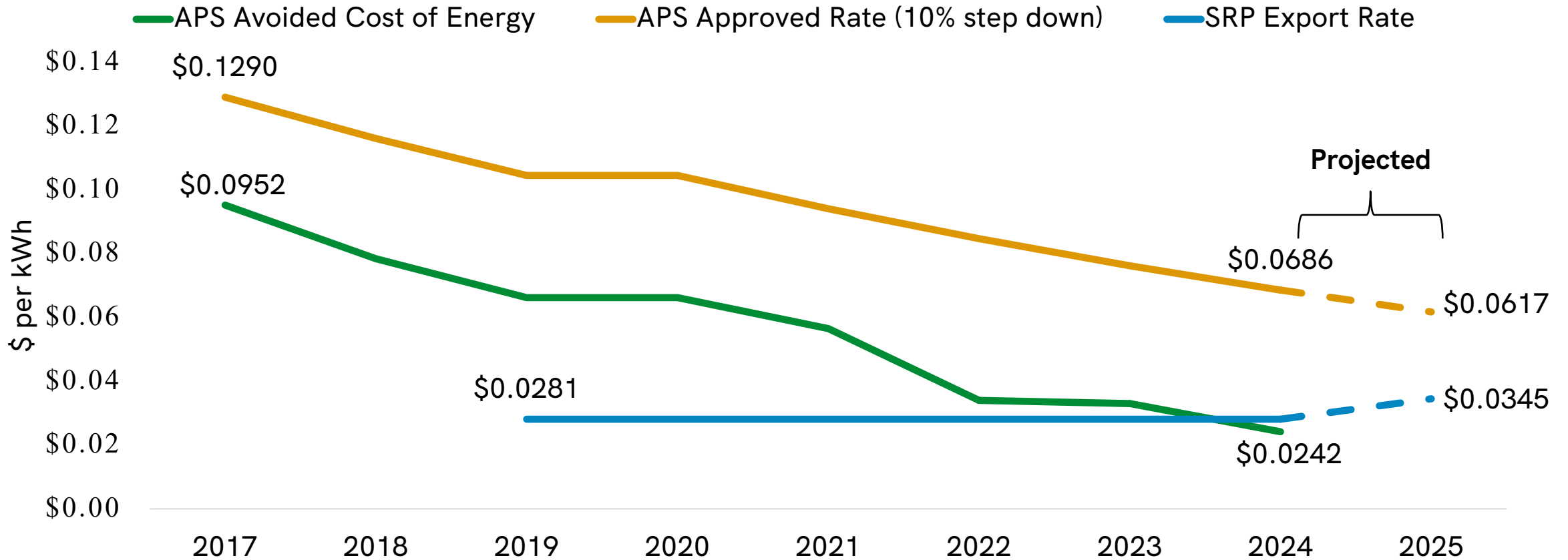
Percent of Annual Customer Generation Exported by Season



Export Credit Solar Price Plan Rate Design

Export Rate (E-16 & E-28)

Arizona Solar Export Rates



Solar Proposal Summary



The direct SRP cost reductions of DG are incorporated into the cost allocation study, as confirmed by Board and management consultants



Additional support for certain customers or technologies is best addressed through targeted programs (e.g. REC program), rather than cost allocation or price plans. Such support should be addressed at a future board meeting.



All residential customers are subject to the same monthly service charges, same TOU hours, and same per-kWh delivered charges

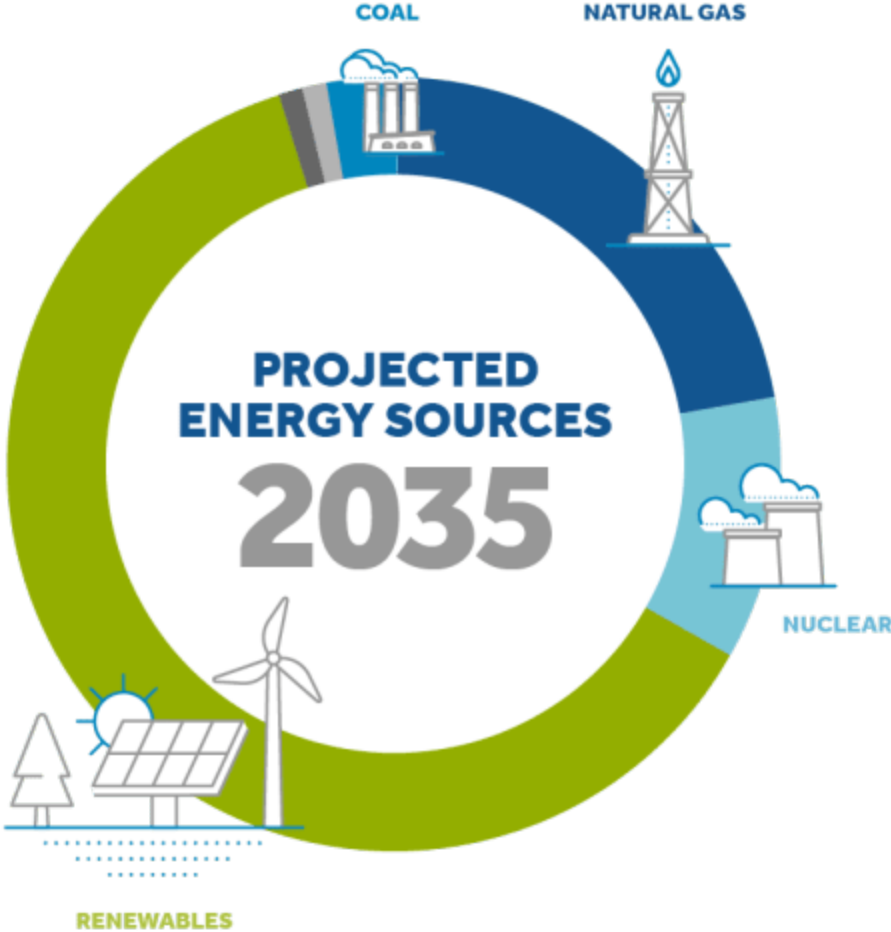
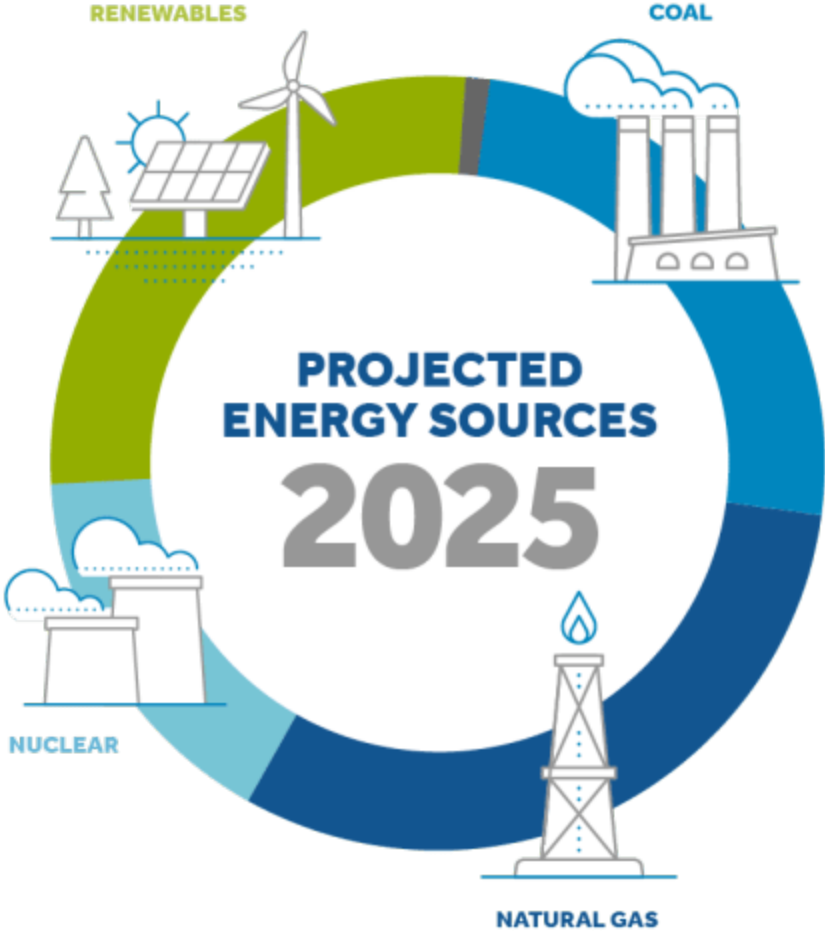
Why Move Hours Now...Why Not Wait?

- Transition to new TOU hours this Price Process is necessary to impact resource decisions for 2028-2030
- Proposal provides time for customers to learn and understand new plans
- Provides time to support gradual migration of 360,000+ customers

LOLP Hour Importance Ranking 2028	
12 PM - 1 PM	7
1 PM - 2 PM	7
2 PM - 3 PM	7
3 PM - 4 PM	7
4 PM - 5 PM	6
5 PM - 6 PM	4
6 PM - 7 PM	1
7 PM - 8 PM	2
8 PM - 9 PM	3
9 PM - 10 PM	5

Carbon Goals

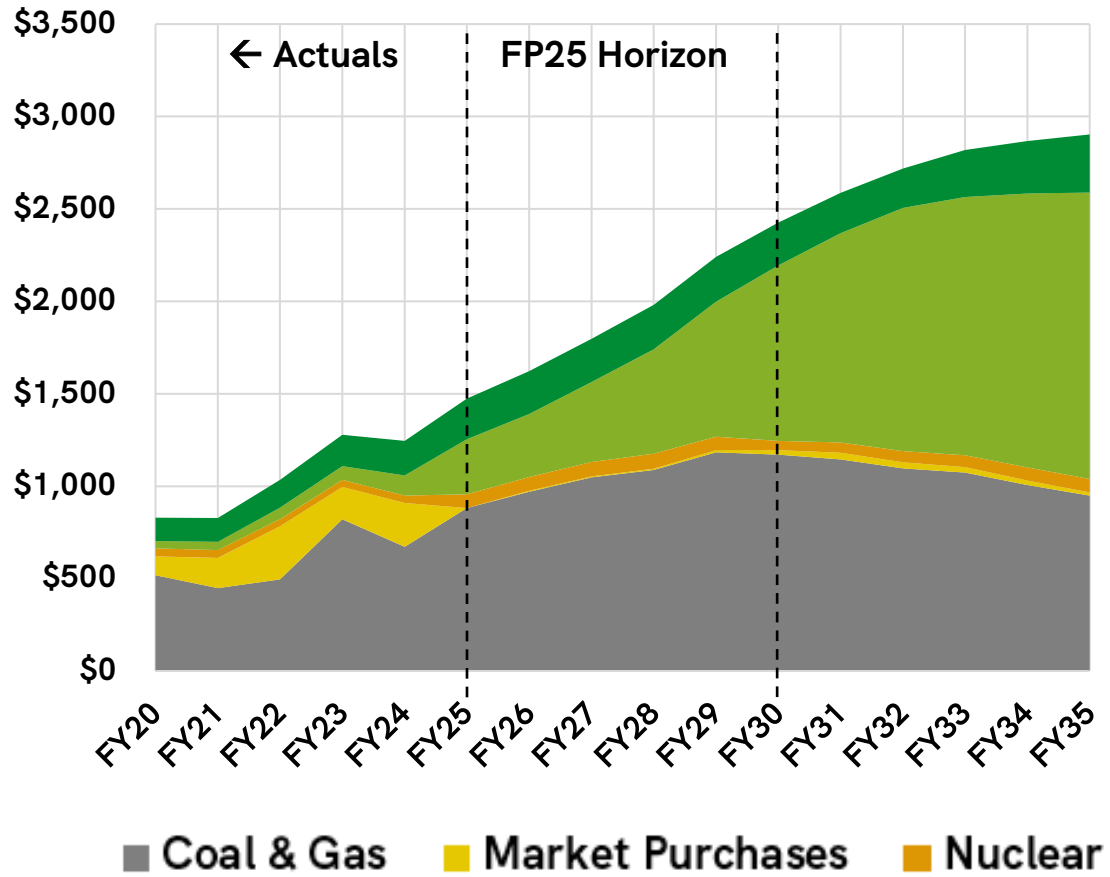
Energy Transition Goals



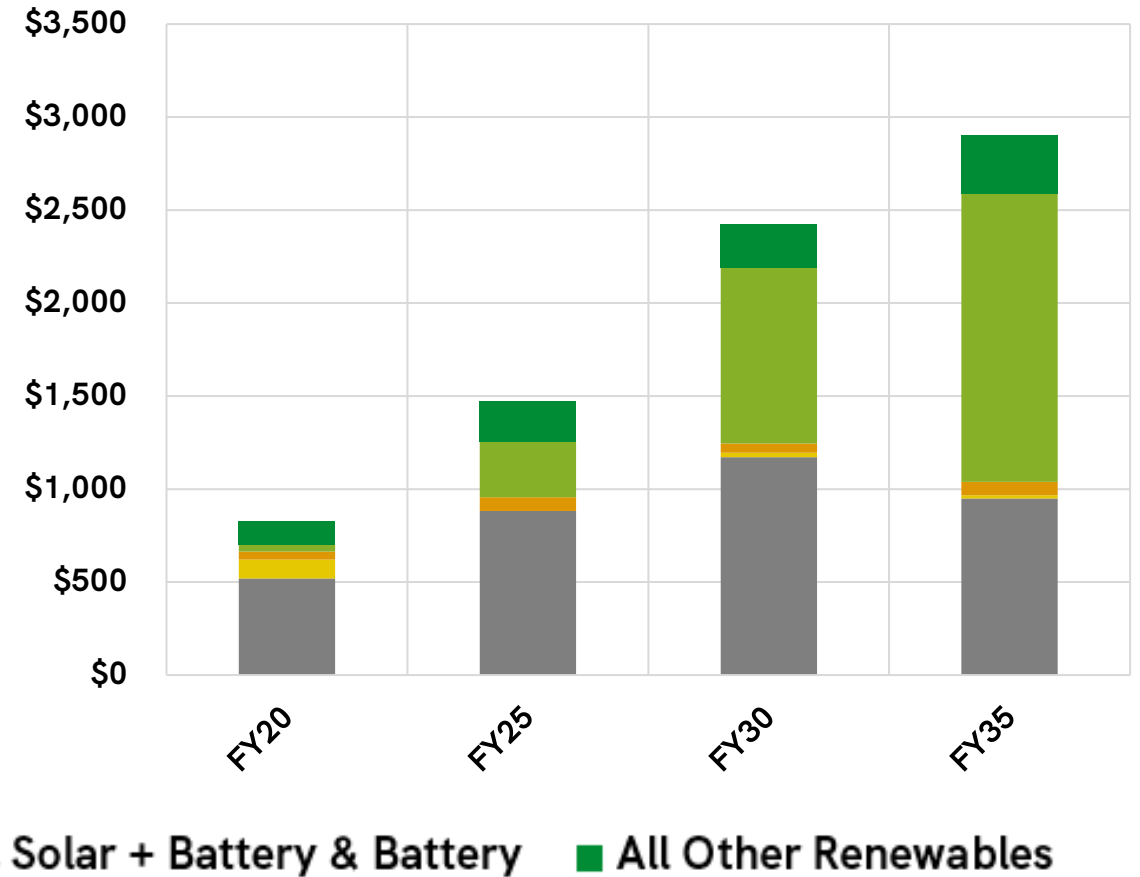
Retail Fuel & Purchased Power Generation

Long-term load growth met from renewable & hydro production; thermal generation forecasted to decline

Actuals & Long-Term Outlook (\$M)



Actuals & Long-Term Outlook (\$M)



2025 Price Process Objectives

Limited revenue increase

Simplified Residential price plan portfolio

Increase assistance to limited-income customers

Align TOU hours with evolving costs

Address common solar customer concerns

Protections for existing customers from new large load investments

