

An aerial photograph of a large concrete dam situated in a deep, rugged canyon. The canyon walls are composed of layered, reddish-brown rock. A river flows through the canyon, curving around the base of the dam. The sky is a clear, pale blue. The overall scene is bathed in the warm, golden light of late afternoon or early morning.

Integrated System Plan Actions Update

October 18, 2024

Welcome

Angie Bond-Simpson
Senior Director, Resource Management

Welcome SRP Board and Council Observers



Chris Dobson
SRP District Vice President



Jack White
SRP Board Member



Larry Rovey
SRP Board Member



Krista O'Brien
SRP Board Member



Suzanne Naylor
SRP Council Member



Rocky Shelton
SRP Council Member



Mark Mulligan
SRP Council Member

Meeting Objectives:

Advisory Group Meeting: Integrated System Plan Actions Update

- Share updates since we last met
- Share and discuss progress made towards ISP Actions
- Share next steps and plans for ISP #2

Safety & Sustainability Minute

Halloween Safety

- Watch for children walking on roadways, medians and curbs
- Enter and exit driveways and alleys carefully

Halloween Sustainability

- Trick-or-Treat with a reusable bucket/pillowcase
- DIY your costume/decorations



Agenda:

Advisory Group Meeting: Integrated System Plan Actions Update

Time		Topics	Presenter
12:00-1:00	60 min	Lunch & Networking	
1:00-1:10	10 min	Welcome & Meeting Orientation	Angie Bond-Simpson, Joan Isaacson (Kearns & West)
1:10-1:20	10 min	SRP & ISP Updates	Mary Faulk
1:20-2:35	75 min	ISP Action Item Updates & Discussion	Resource Selection & Proactive Siting – Grant Smedley Regional Transmission – Justin Lee Coal Transition Action Plan – Grant Smedley
2:35-2:45	10 min	Break	
2:45-4:00	75 min	Continued ISP Action Item Updates & Discussion	Residential Time-of-Use Pilot & Time of Use Evolution – Angie Bond-Simpson Customer Programs & Electrification – Nathan Morey Electric Vehicle Management – Jason Smith Distribution Enablement Roadmap – Kyle Girardi
4:00-4:10	10 min	Next Steps & Closing Remarks	Duncan Kraft

Guides for Productive Meetings

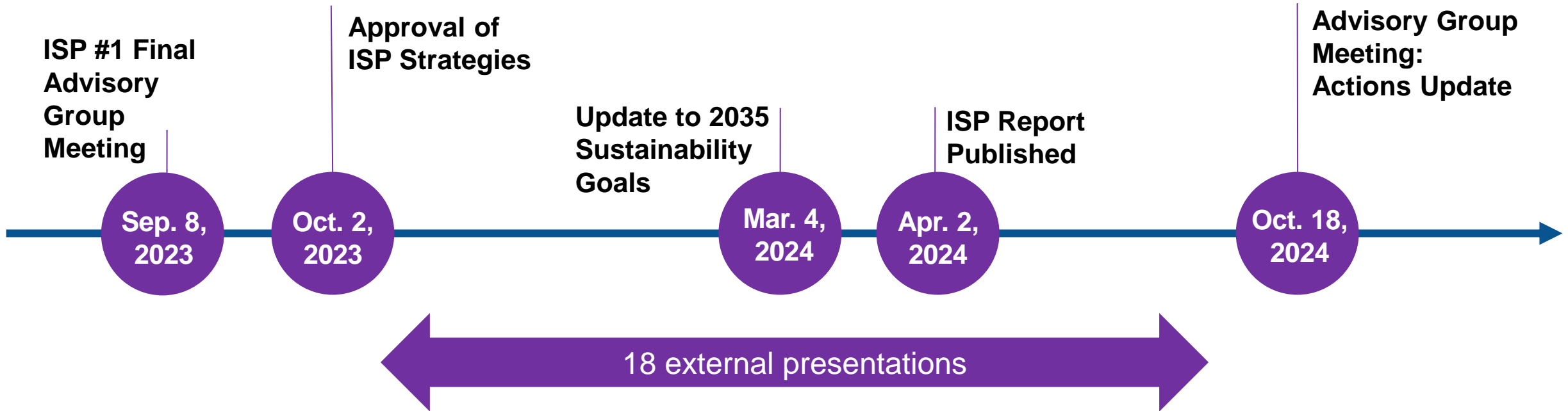
- Actively participate
- Stand up name tent to indicate wanting to provide input, ask a question, etc.
- Encourage and seek multiple perspectives, including use of multiple engagement methods
- When introducing technical subjects, begin with straightforward definitions and avoid acronyms; create comfortable environment for questions and understanding
- Stay concise so that everyone has time to participate
- Maintain one representative per Advisory Group member organization in meeting discussions
- Enjoy the meeting!

SRP Updates Since Last Advisory Group Meeting

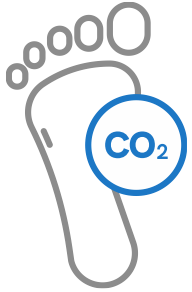
Mary Faulk

Director, Integrated System Planning & Support

ISP Events Timeline



2035 Sustainability Goals

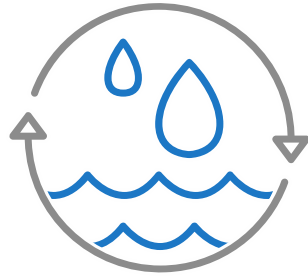


CARBON EMISSIONS REDUCTIONS

Generation Carbon

Facilities Carbon

Transportation Fleet Carbon



WATER RESILIENCY

Facilities Water

Generation Groundwater

Generation Fleet-Wide Water

Water Storage

Community Water Conservation

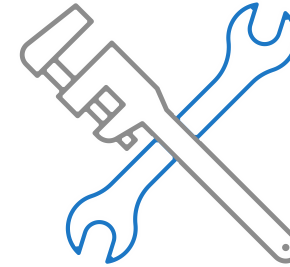


SUPPLY CHAIN & WASTE REDUCTION

Supply Chain

Municipal Waste

Industrial Waste



CUSTOMER & GRID ENABLEMENT

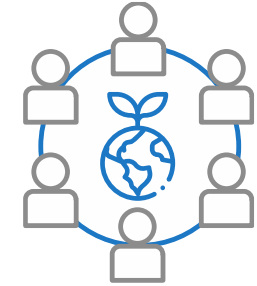
Energy Efficiency

Demand Response

Transportation Electrification

Electric Technologies

Grid Enablement

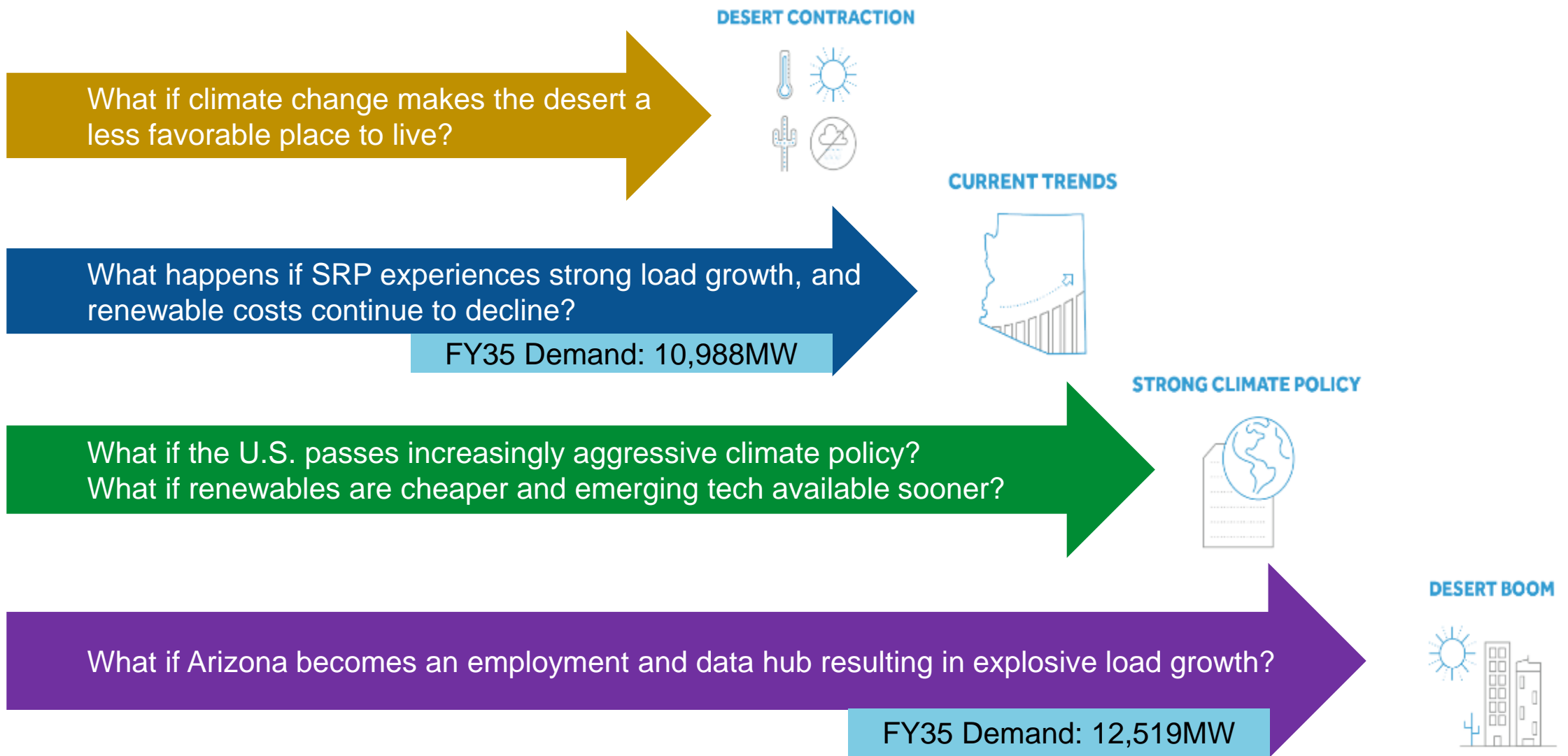


CUSTOMER & COMMUNITY ENGAGEMENT

Customer Sustainability Sentiment Rating

Forest Restoration

Considering Wide-Ranging Perspectives for the Future



System-Wide Analysis

Strategic Approaches

Scenarios

	Technology Neutral	No New Fossil	Min. Coal
Desert Contraction	●	●	●
Current Trends	●	●	●
Strong Climate Policy	●	●	●
Desert Boom	●	●	●

12 Scenario-Based System Plans



30 Sensitivity Cases

ISP Actions Update

ISP Actions

Bulk Grid Focused Actions

Resource Request for Proposals/Information

Proactive Siting

Regional Transmission

Coal Transition Plan

Customer Grid Focused Actions

Residential Time-of-Use Pilot

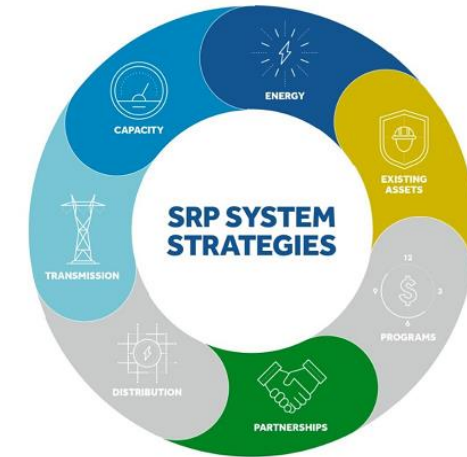
Time-of-Use Evolution

Customer Programs

Electrification

EV Managed Charging Roadmap

Distribution Enablement Roadmap



Resource Selection

Issue all-source requests for proposals (RFPs) or requests for information (RFIs) at least once every two years
Compare with self-build options and ensure that SRP can select resource technologies that meet SRP's reliability and sustainability goals while minimizing total system cost



Proactive Siting

Develop and initiate siting research that considers collaborative community engagement, land, resources, and transmission and distribution to proactively identify, prepare and preserve options for feasible sites for future system infrastructure.



Resource Selection

Recent Activities

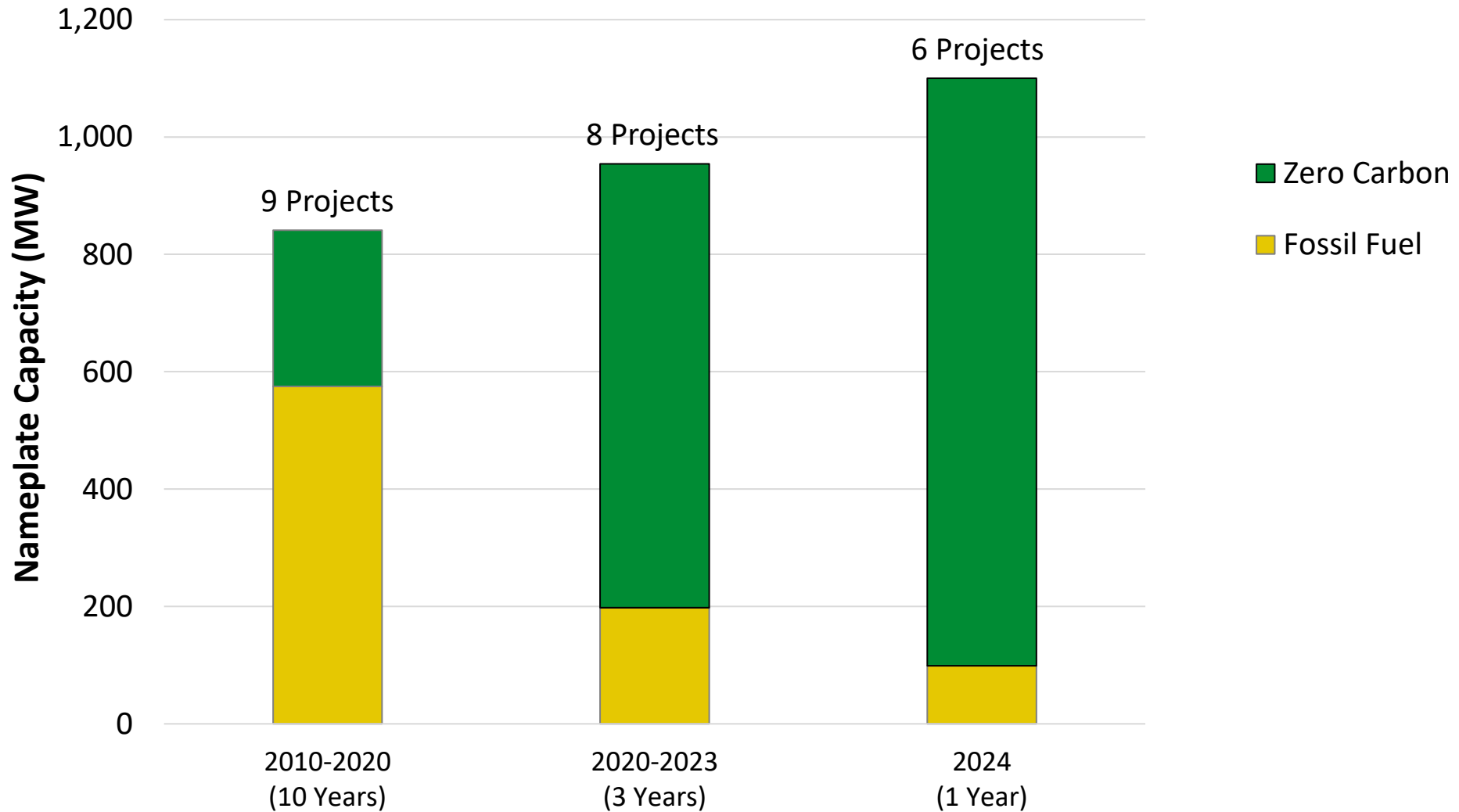
- Finalizing agreements for projects selected from 2023 All-Source RFP (1300 MW storage, 700 MW solar)
- Issued 2024 All-Source RFP seeking 1200 MW peak capacity and 2500 MW of carbon-free resources by 2029
- Evaluating proposals for a solar development partnership to add 3000 MW of solar by 2035

Next Steps

- Complete evaluation and selection of projects from 2024 All-Source RFP, project awards expected in January 2025
- Finalize solar development partnership agreement in 2025

2024 All Source RFP Proposals	
Technology	# Bids
Solar + Storage	38
Standalone Storage	26
Wind	11
Natural Gas	8
Wind + Storage	3
Solar	2
Other	4

SRP is adding new resource projects at an unprecedented pace



Resource Action Plan Summary

Under Contract and Actively Developing

Planned

Procurement Method	Resource Type	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	TOTAL
Previous RFPs	Wind	161											161
	Solar	500		400	394	705							1,999
	4hr Storage	640		455		890							1,985
2024 All-Source RFP	Solar						600	500					1,100
	4hr Storage						900	600					1,500
	8hr Storage						200	50					250
Future All-Source RFPs	Wind									200	300		500
	Solar								600	600	600	600	2,400
	4hr Storage												0
	8hr Storage								750			50	800
	Natural Gas									975			975
Strategic Partnerships	Solar						500	500	500	500	500	500	3,000
	4hr Storage												0
	8hr Storage												0
SRP Self-Build	Solar			55		200	200	200	200	200	200	200	1,455
	4hr Storage					200							200
	8hr Storage									200			200
	Natural Gas	99		288	287			225		225			1,124
	Pumped Storage										1,000		1,000
TOTAL		1,400	0	1,198	681	1,995	2,400	2,075	2,050	2,900	2,600	1,350	18,649

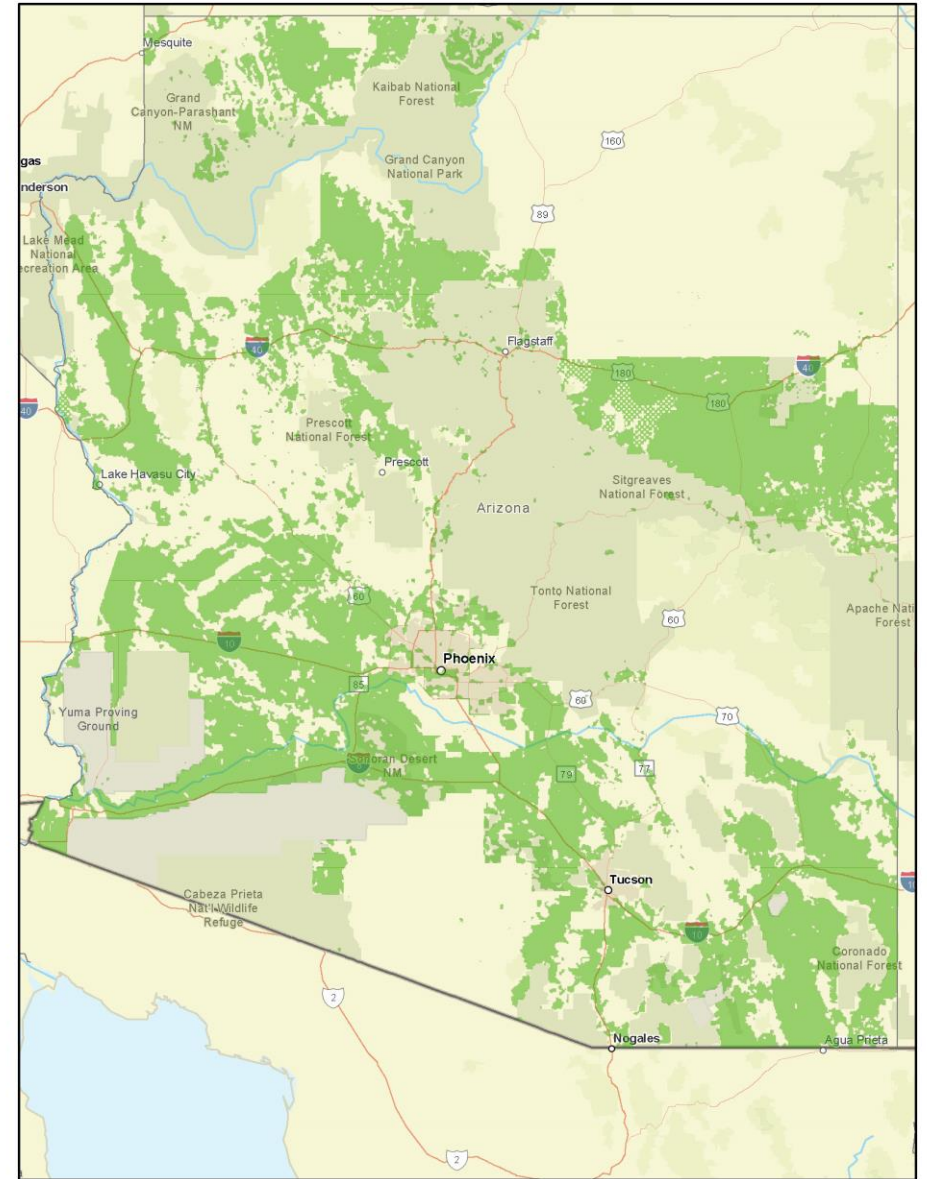
Proactive Siting

Recent Activities

- Developed GIS tool to identify potential sites
- Screened sites using key criteria
- Identified priority regions in Arizona to pursue

Next Steps

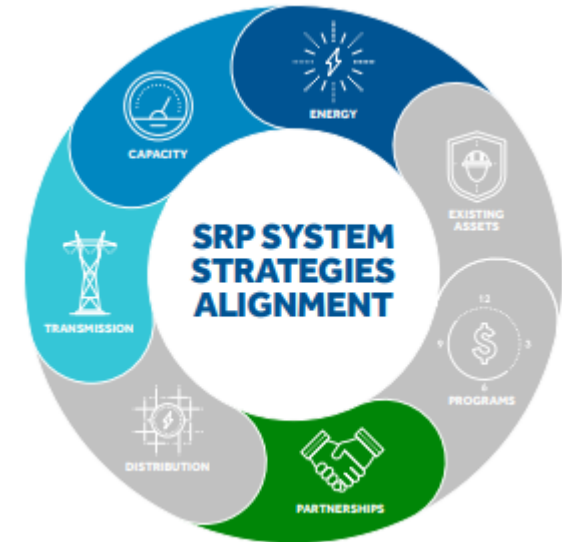
- Develop community outreach plans in prioritized regions
- Complete transmission expansion study to identify requirements and options for connecting resources



Questions?

Regional Transmission

Pursue transmission projects that would enable SRP to access diverse renewable resource options beyond solar, such as wind and geothermal, and engage with project developers, as appropriate.



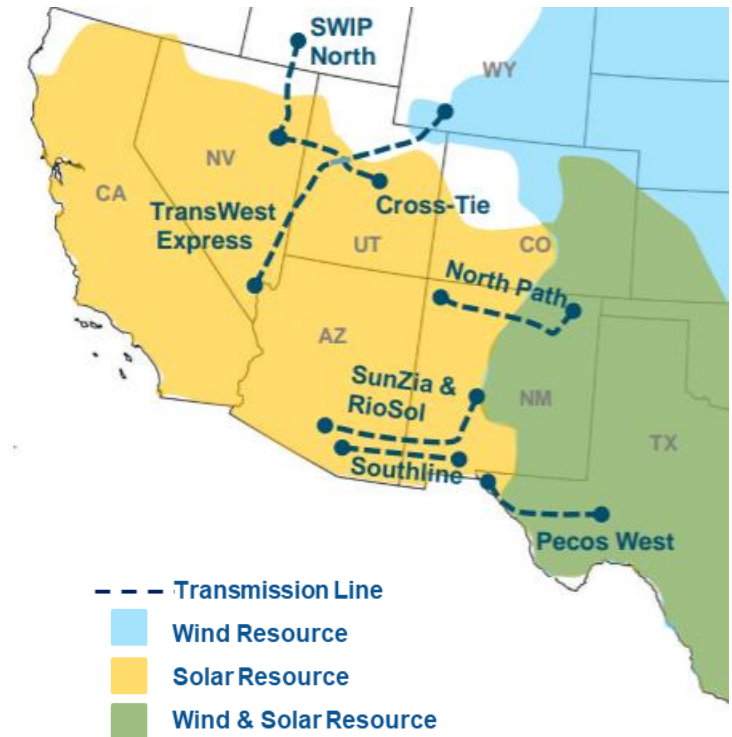
Regional Transmission

Recent Activities

- Consulted with E3 to conduct research on landscape of regional transmission projects that could deliver power into Arizona
- Held multiple meetings with transmission developers to understand options for transmission capacity
- Currently conducting transmission analysis to understand requirements for ensuring deliverability from regional transmission projects to SRP's load pocket

Next Steps

- Finalize transmission analysis
- Continue conversations with transmission developers



Questions?

Coal Transition Action Plan

- Coordinate with co-owners to develop a path forward for the Springerville Generating Station (SGS)
- Prepare plans for repurposing the Coronado Generation Station (CGS) site
- Develop solutions that preserve transmission following the retirement of coal plants
- Test strategies for minimizing coal plant emissions while leveraging their capacity to maintain reliability



Coal Transition Action Plan

Recent Activities

- Participating in Coal Community Transition effort
- Completed CGS Repurposing Study with Kiewit
- Coordinating with TEP and Tri-State on options for SGS
- Evaluating compliance options for EPA 111(d) and operational changes that can reduce emissions while preserving reliability

Next Steps

- Finalize analysis and develop recommendations for operational changes and compliance approach with EPA 111(d)
- Advance repurposing plans for CGS and SGS, and incorporate into SRP's 2025 Resource Plan

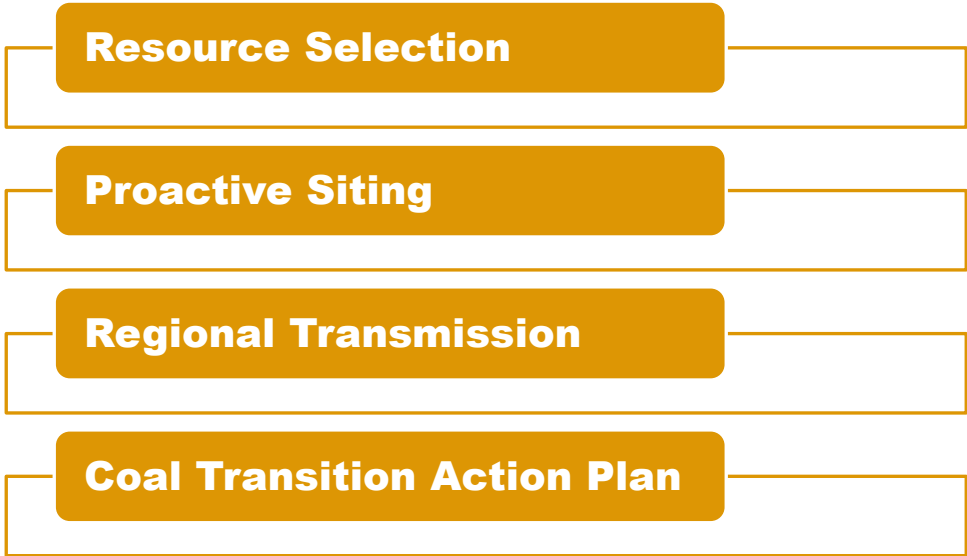
CGS Repurposing Options
Solar
Battery Storage
Wind
Natural Gas
Biomass
Long-Duration Storage
Hydrogen
Advanced Nuclear

Questions?

Discussion

- 1. What excites you about the progress that SRP has made on these Actions?
- 2. What would you like to see more of, better or different from these Action's activities?
- 3. Is there anything that we did not cover regarding these Actions that you'd like to discuss?

Provided updates on:



Break

Residential Time-of-Use Pilot

Perform customer research to evaluate customer's response to new time-of-use peak periods and a super off-peak period in the middle of the day which will inform SRP's load forecast for long-term system planning and SRP's price process.



Time-of-Use Evolution

Engage commercial, large industrial, and residential customers, and stakeholders to inform them of how the evolving grid will impact time-of-use periods and develop a roadmap for implementing new time-of-use periods.



Residential Time-of-Use Pilot & Time-of-Use Evolution

Recent Activities

- Launched Daytime Saver Pilot May 2023 with 1,000 participants.
- Testing new 6-9 PM peak, with 9 AM-3 PM super off-peak
- Preliminary findings:
 - Customers reduced peak usage by 0.8 kW, a 24% decrease
 - Customers increased super off-peak usage by 0.5 kW, an 18% rise
 - EV customer increased super off-peak usage by 1.1 kW

Next Steps

- Continue monitoring and analyzing Daytime Saver pilot performance
- Use findings from pilot to inform future price process and develop customer education materials

Questions?

Customer Programs

Continuously refresh program plans and drive participation in customer programs at levels consistent with those planned for in the ISP, representing a meaningful increase from SRP’s initial 2035 Sustainability Goal for Energy Efficiency.



Electrification

Analyze the benefits and costs of non-EV electrification within SRP’s service area, including effects on SRP operations and economy-wide emissions. Assess options for expanding E-Tech program offerings related to residential and commercial electrification.



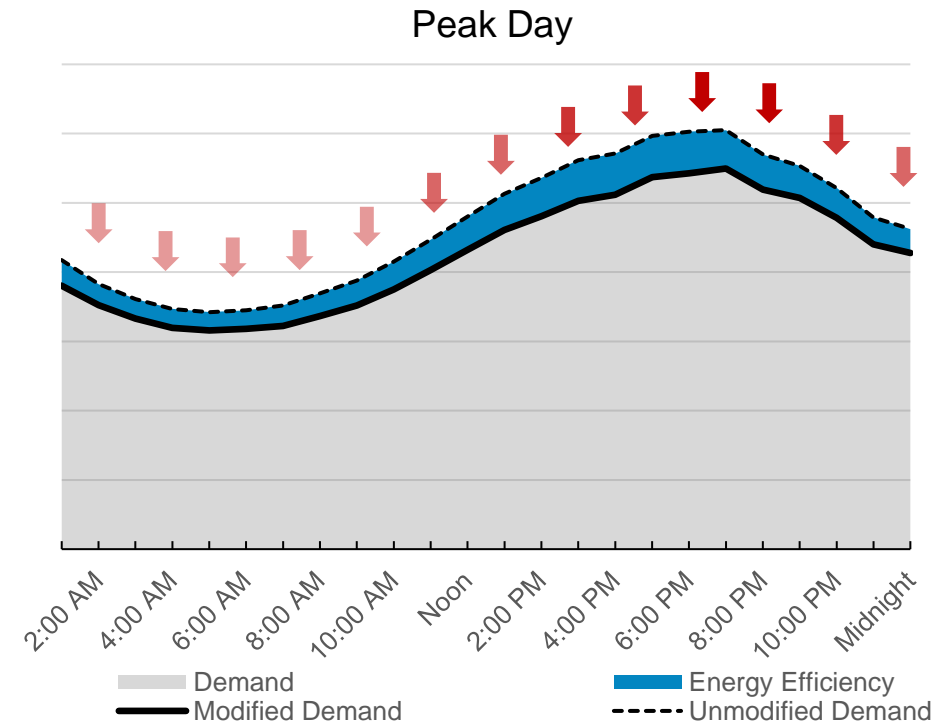
Customer Programs – Energy Efficiency

Recent Activities

- Delivered 626,000 MWh of incremental EE savings in FY24
- Portfolio refinements drive cooling-based savings and deliver personalized recommendations
 - New Cool Roof & Window Replacement residential rebates
 - New Home Energy Report program to 200,000+ customers
 - New HVAC Tune-up program for businesses & multifamily
 - New Virtual Commissioning program for businesses
- Updated 2035 Sustainability Goal:
 - Increased to 4 million MWh of annual aggregate energy savings

Next Steps

- Target 636,000 MWh of annual incremental EE savings in FY25
- Launch ENERGY STAR Multifamily New Construction program
- Coordinate with Governor's Office of Resiliency to support and align with IRA-funded HOMES program



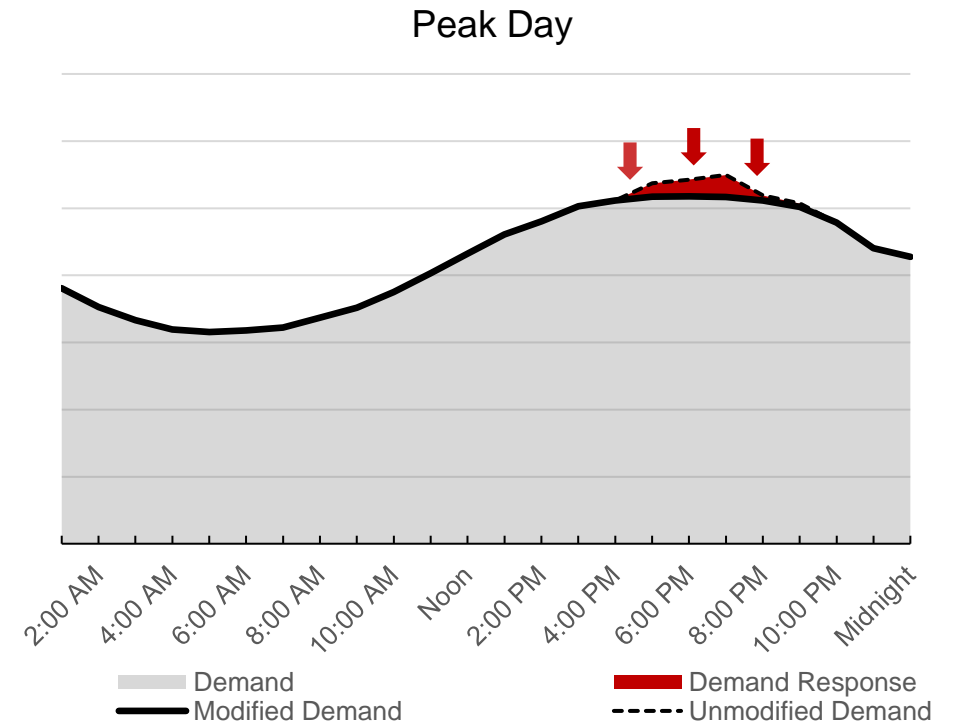
Customer Programs – Demand Response

Recent Activities

- Enrolled 165 MW of dispatchable capacity in FY24
- Secured custom 25 MW DR agreement with CMC Steel
- Recruited new participants to grow capacity of Bring Your Own Thermostat and Business Demand Response programs
 - 96,000+ enrolled residential smart thermostats
 - 740+ enrolled business customer facilities

Next Steps

- Continue to grow residential BYOT program
- Develop DR solution for large industrial customers to attract others like CMC Steel
- Refine retention practices to mitigate natural program attrition



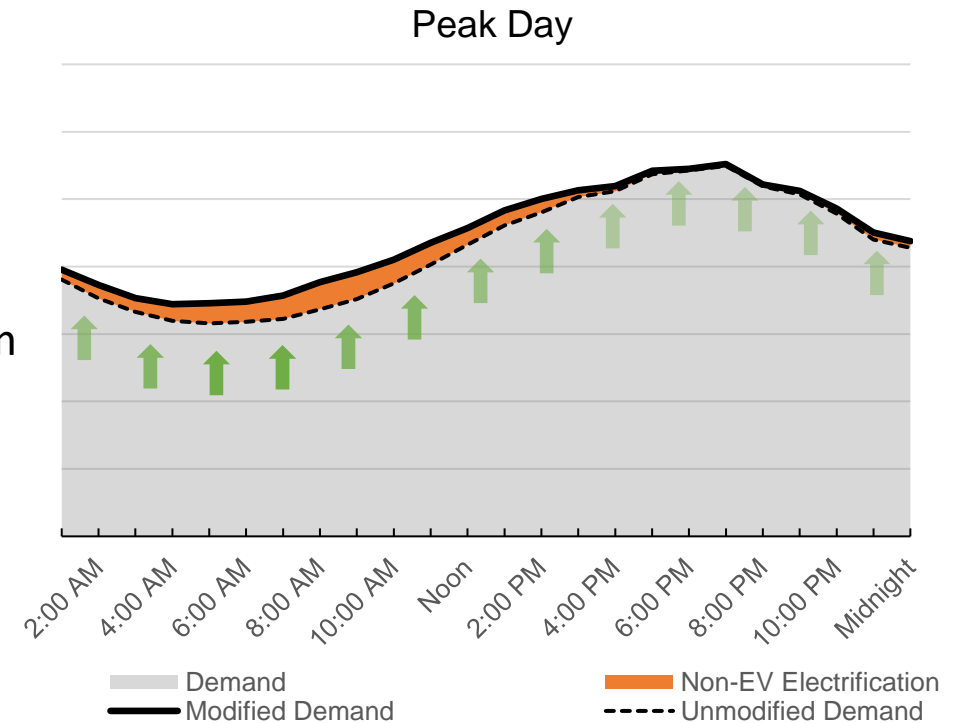
Customer Programs – Electrification

Recent Activities

- Delivered 19,000 MWh of incremental energy impact in FY24
- Launched residential Heat Pump Water Heater rebate
- Working with ASU-led EPIX team (Electrified Processes for Industry without Carbon) to identify industrial electrification projects
- Enhancing outreach and engineering capabilities of the program team
- Refining energy and carbon impact analyses
- Updated 2035 Sustainability Goal:
 - Increased to 320,000 MWh of annual aggregate energy impact

Next Steps

- Deliver 18,000 MWh of incremental energy impact in FY25
- Build a strong pipeline of custom industrial electrification projects
- Coordinate with Governor's Office of Resiliency to support and align with IRA-funded HEAR program



Questions?

EV Management

Develop a roadmap by evaluating customer needs and system impacts and assessing viable pathways for managing electric vehicle (EV) charging through price plans, customer programs and educational efforts to align with time periods that are lower-cost and minimize additional infrastructure needs.



EV Management

Recent Activities

- Collaborated with Guidehouse to develop an EV Managed Charging Roadmap, which identifies strategies for shaping EV load and a plan for implementing various managed charging techniques
 - Key Outputs:
 - Updated 2035 Sustainability Goal: support adoption of 1 million EVs in SRP's service territory and manage 90% of EV charging
 - Near-, medium-, and long-term recommendations
 - Alignment of corporate programs and initiatives to the roadmap

Next Steps

- Expand existing managed charging pilots consistent with roadmap
- Support evolution of TOU rates that prioritize daytime charging
- Enhance customer educational and outreach efforts around managed charging to facilitate customer experience and improve participation
- Continue to monitor EV industry growth/developments and adapt accordingly

Questions?

Distribution Enablement Roadmap

Continue implementing SRP's Distribution Enablement (DE) Roadmap, which includes:

- Deploying Advanced Distribution Management System (ADMS) and Distributed Energy Resources Management System (DERMS)
- Continue implementing advanced planning tools
- Advancing the distribution interconnection process
- Executing the DE Research & Development (R&D) plan



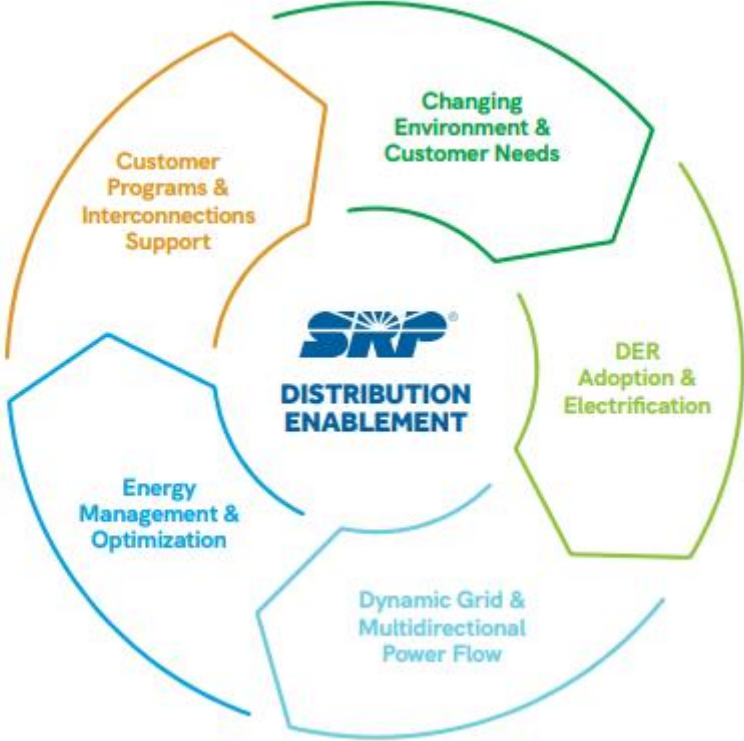
Distribution Enablement Roadmap

Recent Activities

- Conducted a **Value of Customer-Sited Solar and Storage Study** to update assumptions on DER value
- Built **R&D Distribution Enablement Lab** designed to simulated grid to test advanced capabilities (*microgrid, DER control, VPP, etc.*)
- Upgraded 100% **Distribution Line Capacitor Controllers** (*over 3,000*) to enhance power quality control
- Implemented new automated **Interconnection Application Screening Process** to ensure grid integrity and streamline customer process
- Issued **Distribution Connected Solar and Storage Request for Information** to determine 12kV DER opportunities

Next Steps

- **ADMS and DERMS** go live December 2024



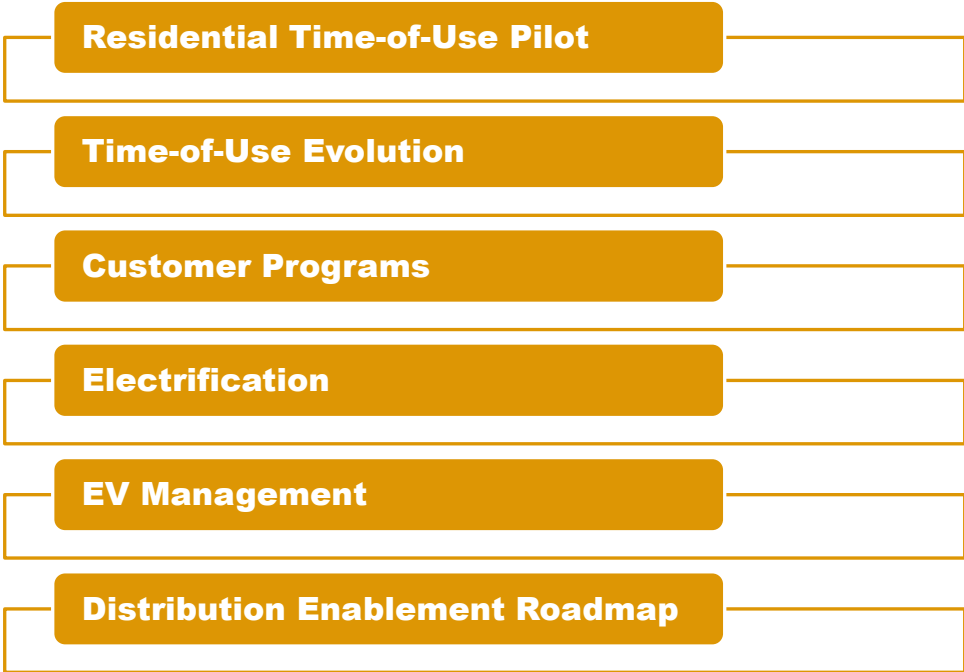
Customer DER Adoption	
Customers with DER	59,782
Customers with Batteries	4,506

Questions?

Discussion

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- 2. What would you like to see more of, better or different from these Action's activities?
- 3. Is there anything that we did not cover regarding these Actions that you'd like to discuss?

Provided updates on:



Wrap Up and Next Steps

Duncan Kraft

Planning Analyst, Integrated Planning

thank you!