SRP Integrated System Plan
Large Stakeholder Group Meeting #4
ISP Path Forward

September 28th, 2023

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Welcome

Angie Bond-Simpson
Sr. Director, Resource Management

Welcome SRP Board and Council Observers

John Hoopes
SRP Association Vice President

Chris Dobson
SRP District Vice President

Anda McAfee
SRP Board Member

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

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Safety & Sustainability Minute

Safety

Electrical safety at home

Tips for Your Home

Sustainability

6 ways you can join SRP in cutting carbon emissions

1. SRP Solar Choice to offset your energy with solar.
2. Save energy and money with these energy-saving tips.
3. Energy-saving products at SRP Marketplace.
4. SRP Solar for Nonprofits program.
5. Buy an Electric Vehicle (EV).
6. Install solar panels using an SRP preferred solar installer.

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Meeting Objectives:

- Share the results of the Phase 3 Residential Customer Research
- Inform on and discuss ISP System Strategies, Balanced System Plan and Actions
- Inform on next steps for implementing the Integrated System Plan

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Integrated System Plan (ISP)
Large Stakeholder Group Meeting Overview

2021 Summer Series: Transition from IRP to ISP

Since We Last Met
Jun 16, 2021

Near-Term Planning
Jul 22, 2021

Where We Want to Go
Aug 16, 2021

Near-Term Planning
Aug 23, 2021

Meeting #1: ISP Launch & Vision
Nov 30, 2021

Meeting #2: ISP Study Plan
April 29, 2022

Technical Working Session: ISP Study Plan
April 29, 2022

Align

Prepare

We are here

Technical Working Session: Inflation Reduction Act
Jan 17, 2023

Technical Working Session: Inverter-Based Resources
Feb 24, 2023

Technical Working Session: Markets
Mar 31, 2023

Meeting #3: ISP Key Findings
May 19, 2023

Technical Working Session: Time-of-Day Programs
Jul 2023

Meeting #4: ISP Path Forward
Sept 28, 2023

ANALYZE

SYNTHESIZE

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PLANNING TOGETHER, PLANNING BETTER

120+ community organizations invited to participate

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Agenda:

Time		Topics	Discussion Lead
9:00-9:30	**30 min**	Breakfast & Networking	
9:30-9:40	**10 min**	Welcome & Opening Remarks	**Angie Bond-Simpson (SRP)** **Joan Isaacson (Kearns & West)**
9:40-9:50	**10 min**	ISP Development Recap	**Maria Naff (SRP)**
9:50-10:15	**25 min**	Phase 3 Customer Research w/ Q&A	**April Smith (Bellomy)** **John Sessions (Bellomy)**
10:15-10:45	**30 min**	Review of Final Strategies w/ Q&A	**Angie Bond-Simpson (SRP)**
10:45-10:55	**10 min**	Review of Final Illustrative Balanced System Plan	**Angie Bond-Simpson (SRP)**
10:55-11:25	**30 min**	Review of Final ISP Actions w/ Q&A	**Adam Peterson (SRP)** **Dan Dreiling (SRP)** **Melissa Martinez (SRP)** **Grant Smedley (SRP)** **Justin Lee (SRP)**
11:25-11:30	**5 min**	Next Steps for Implementing the ISP/ Wrap Up & Thank You	**Angie Bond-Simpson (SRP)**
11:30-1:00	**90 min**	Appreciation Lunch & Networking with ISP Project Team	

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Guides for Productive Meeting

- Actively participate
- Be respectful of other perspectives
- Stay concise to allow time for everyone to participate
- Enjoy the meeting!

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ISP Development Recap

Maria Naff
Manager, Integrated Planning (SRP)

Rapid CHANGE is driving the need for an Integrated System Plan.

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Evolving customer preferences

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Climate risk and regulations

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SRP's Customer Focused Mindset

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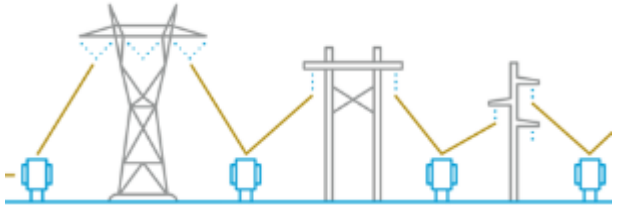
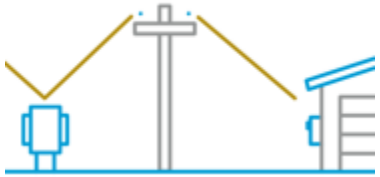
Traditional Utility Planning

Parallel Planning Processes

Resource Planning



Transmission Planning



Distribution Planning

Customer Programs Design

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SRP’s Integrated System Plan

An Integrated System Plan is the holistic **roadmap** for the **power system of the future,** which considers **evolving customer needs** for **reliability, affordability** and **sustainability** and achieves our 2035 goals.

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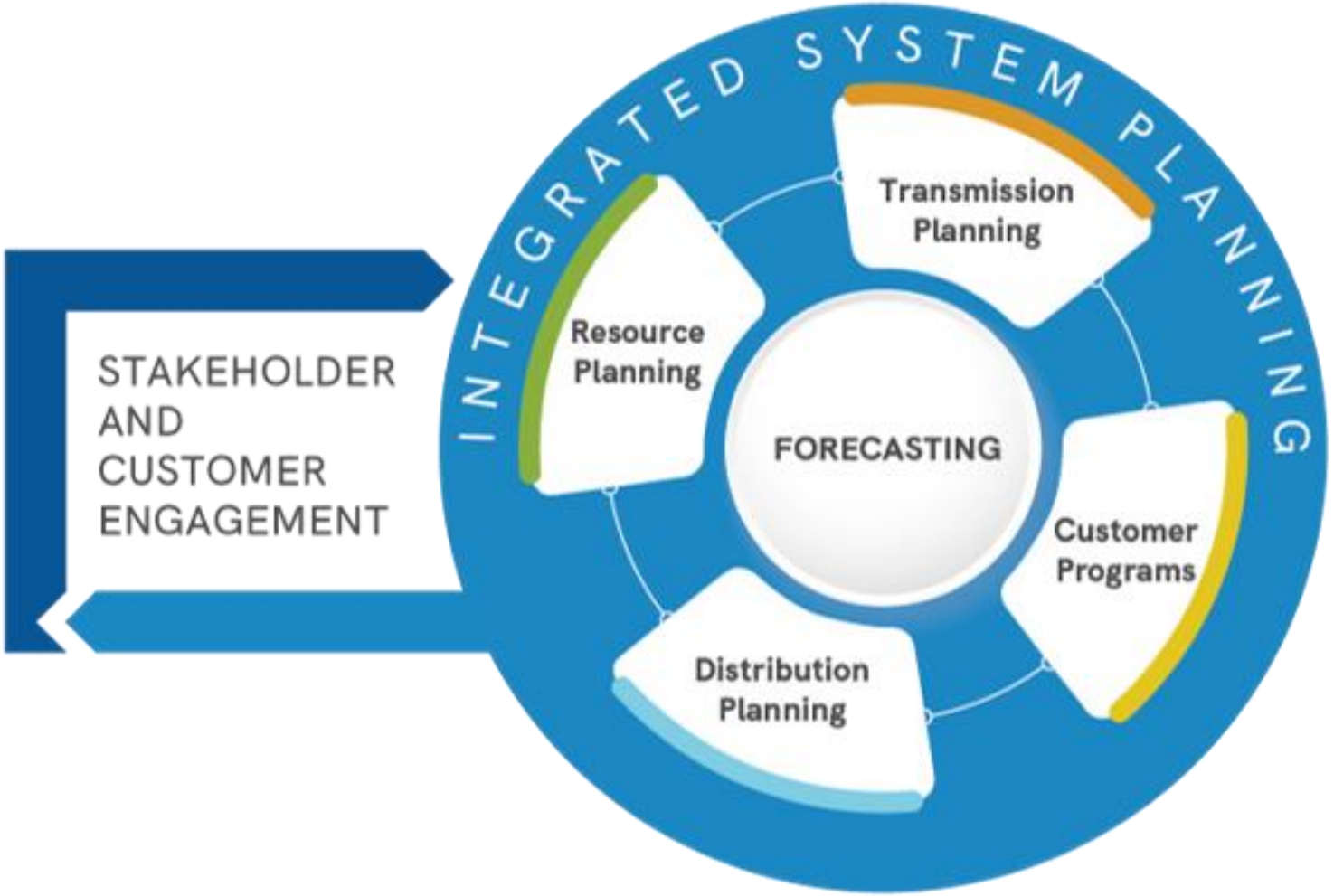
Integrated System Planning

Interactive Planning Process



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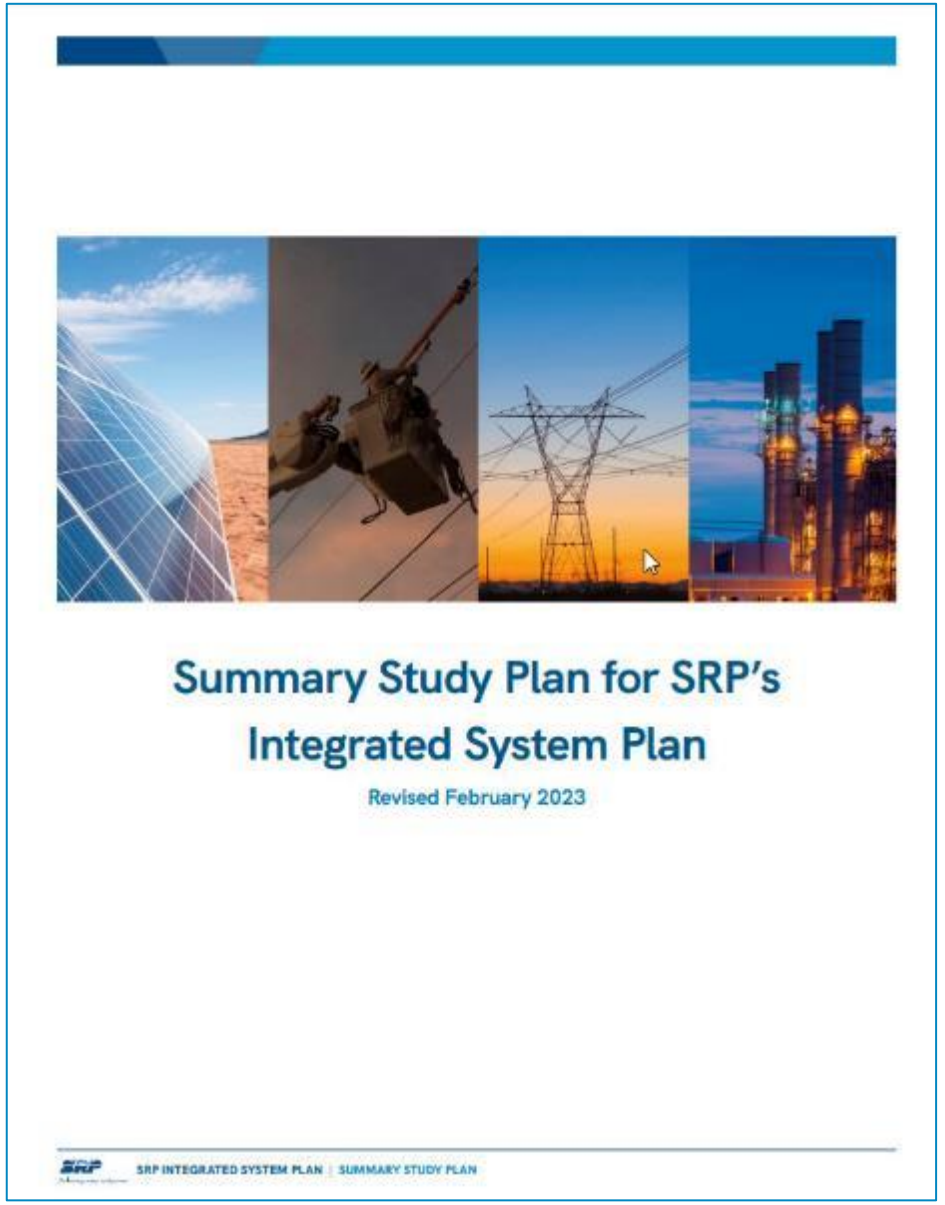
The ISP Analytical Process

- 3 strategic approaches
- 4 possible main scenarios for Arizona's future
- 12 core cases
- 10 sensitivities



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ISP PLANNING PROCESS FAST FACTS

NUMBER OF ADVISORY GROUP MEMBERS:

32 community representatives

from **23** organizations

NUMBER OF LARGE STAKEHOLDER GROUP MEMBERS:

250 community representatives from **143** organizations

615
POINTS OF FEEDBACK COLLECTED AND INTEGRATED INTO THE ISP

40
INDIVIDUAL PRESENTERS

NUMBER OF MEETINGS:

31 stakeholder meetings

totaling over **62.5** hours of content

INTERNAL ALIGNMENT MEETINGS:

Over **567** hours

1,226
SLIDES PRESENTED

48 **INTERNAL SRP DEPARTMENTS CONTRIBUTING**

42
SYSTEM PLANS CROSS-FUNCTIONALLY ANALYZED

STAKEHOLDER QUESTIONS ANSWERED:

577

102
INTERNAL SRP CONTRIBUTORS

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ISP Results: System Investments Needed at a Rapid Pace

- SRP will need to **double** if not **triple** resource capacity in the **next decade** to serve customers while achieving reliability and sustainability goals. This is an unprecedented pace.

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- New renewables **combined with** firm generation capacity are part of a least-cost portfolio, even under a wide range of gas price and technology cost sensitivities.

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- Without **new firm generation capacity**, the system cannot satisfy reliability requirements under a high load growth scenario.

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- Without **new firm generation capacity**, the system cannot satisfy reliability requirements under a high load growth scenario.
- **Hundreds of miles** of new or upgraded transmission lines and nearly double the number of 500/230 kV transformers could be needed relative to today. Location matters.

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- Without **new firm generation capacity**, the system cannot satisfy reliability requirements under a high load growth scenario.
- **Hundreds of miles** of new or upgraded transmission lines and nearly double the number of 500/230 kV transformers could be needed relative to today. Location matters.
- SRP will need to **evolve programs and price plans** to shift consumer behavior and to further educate customers on when to consume and when to conserve energy.

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ISP RESIDENTIAL CUSTOMER RESEARCH

Large Stakeholder Group Meeting | September 28, 2023

John Sessions, CEO
April Smith, Director Client Services
Bellomy Market Intelligence

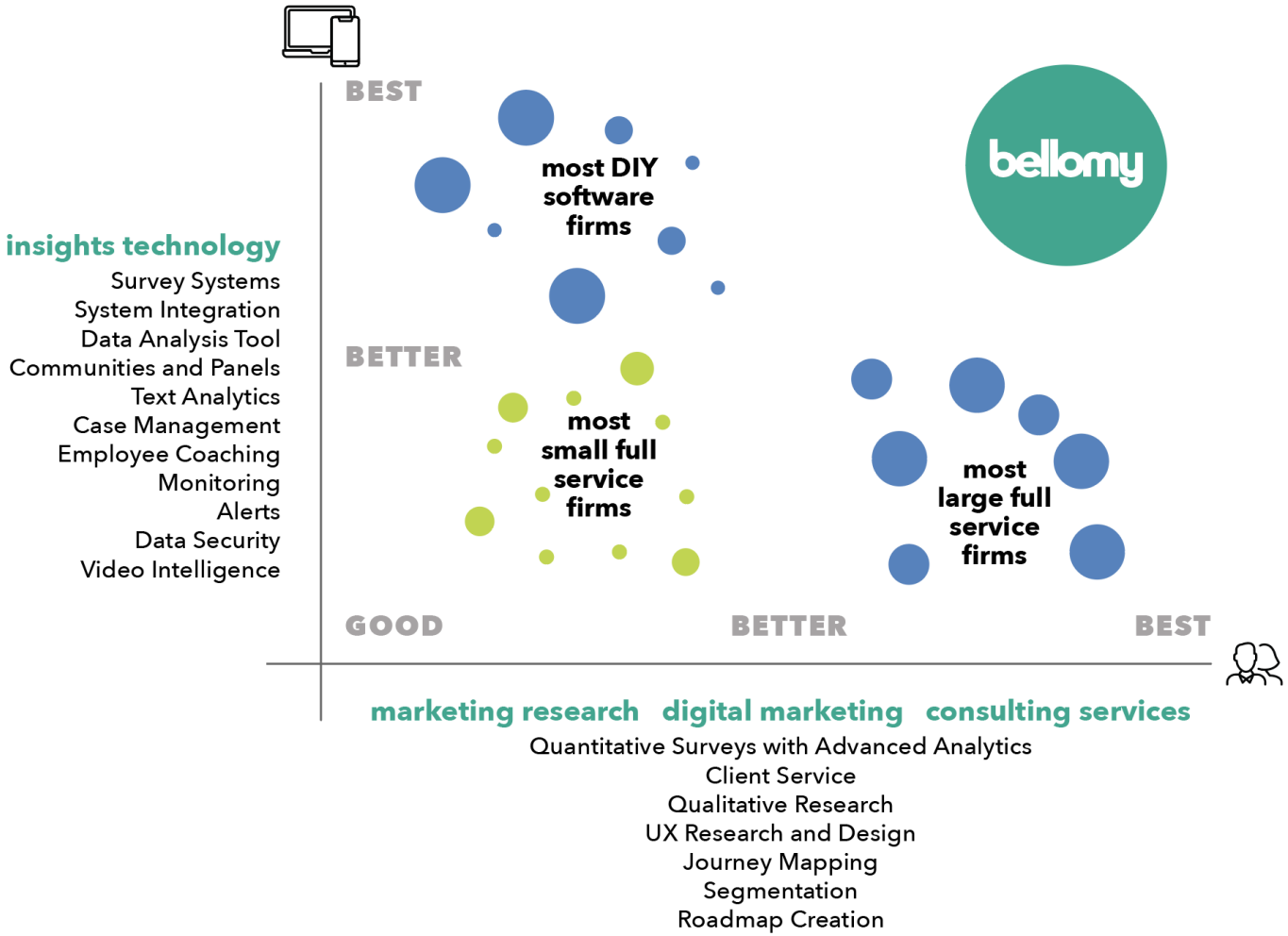
PREPARED FOR

SRP
Delivering water and power®

bellomy

About Bellomy

Insights Technology **Designed + Developed** by Insights Professionals



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About Bellomy

OUR GUARANTEE

We will be the best team you've ever worked with

COMPANY STATS

- Full-service market research firm with a digital marketing agency in-house
- Founded in 1976
- Headquartered in Winston-Salem, NC
- 100+ person company, with in-house researchers, designers, strategists, and developers across 14 states
- Ranked among the Top 50 market research firms in the US for the last 10+ years

SOME OF OUR ENERGY CLIENTS

SRP, Southern Company, WEC Energy Group, nrg, Xcel Energy, Ameren Missouri, PGW, Consumers Energy, Otter Tail Power Company, Cooperative Insights, Piedmont Natural Gas, Gulf Power, Duke Energy, LG&E KU, PPL companies, ppl, entergy, TXU energy, American Electric Power, Georgia Power, sunrun, PowerSecure, OPPD

Fueling digital acceleration through research + design

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Background + Objectives

Bring the **voice of SRP's residential customers** into the planning of the future energy system

Create a **residential customer preference metric** for consideration in the ISP's decision-making process

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Methodology: Multi-Phased Approach

A three-phased research approach was applied.

Virtual Focus Groups

4
90-minute focus groups
December 13 & 14, 2021

Confirmation Survey

400
respondents
March 7 –14, 2022

Choice Exercise Survey

1,011
respondents
May 9 – 29, 2023

All respondents were: SRP customers, aged 18 or older, energy decision makers, and did not work for a related industry.
Quotas set to ensured results were representative of SRP's residential customer base.

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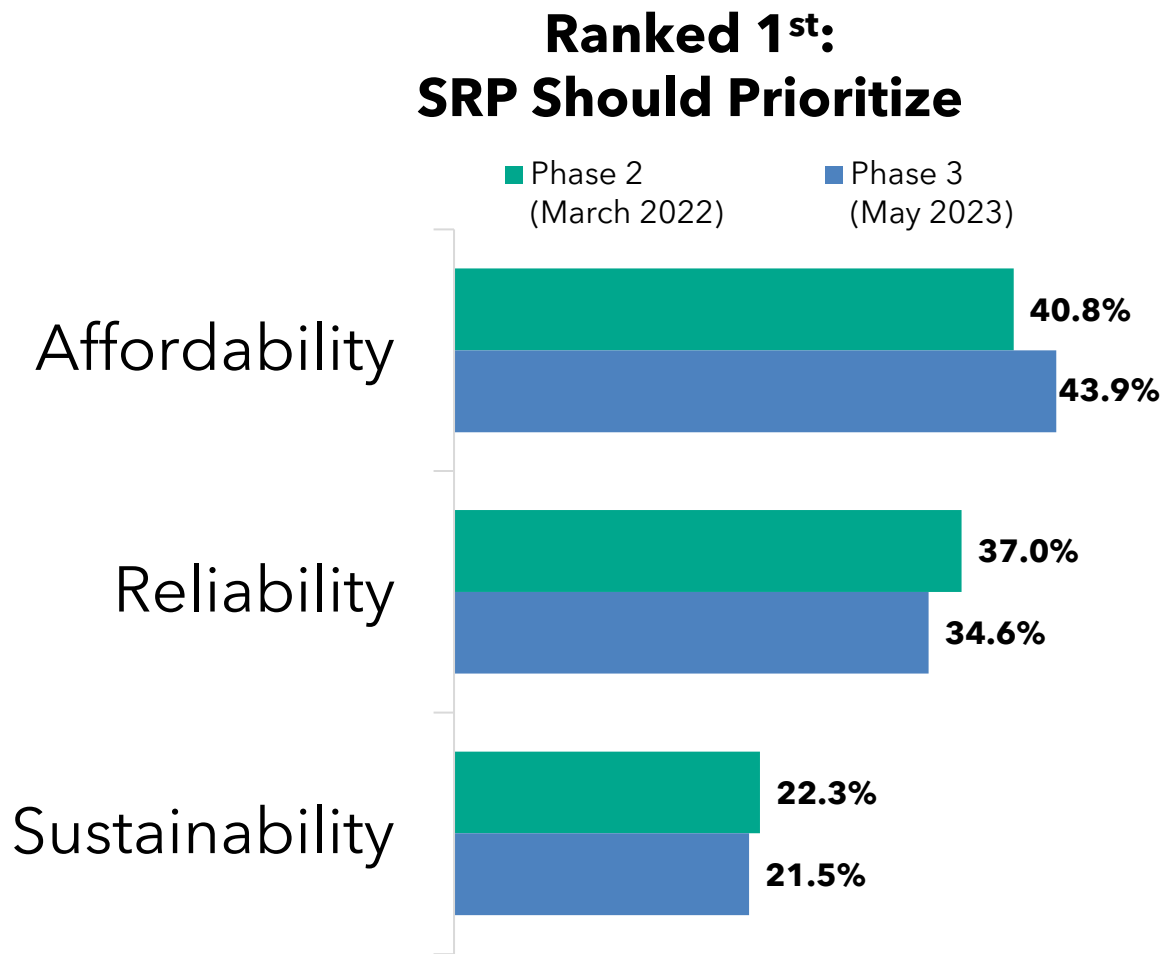
EXPERIENCE WITH SRP & PRIORITIES

Affordability and Reliability were most often ranked 1st



While a majority of customers ranked reliability first in the focus groups, they discussed a tough tradeoff between reliability and affordability.

Groups **more likely** to rank **affordability first** included:

- **Limited income** customers (200% of HHS Poverty Guidelines)
- Those enrolled in **M-Power for Pre-Pay**

Represents **about a third** of SRP's residential customer base

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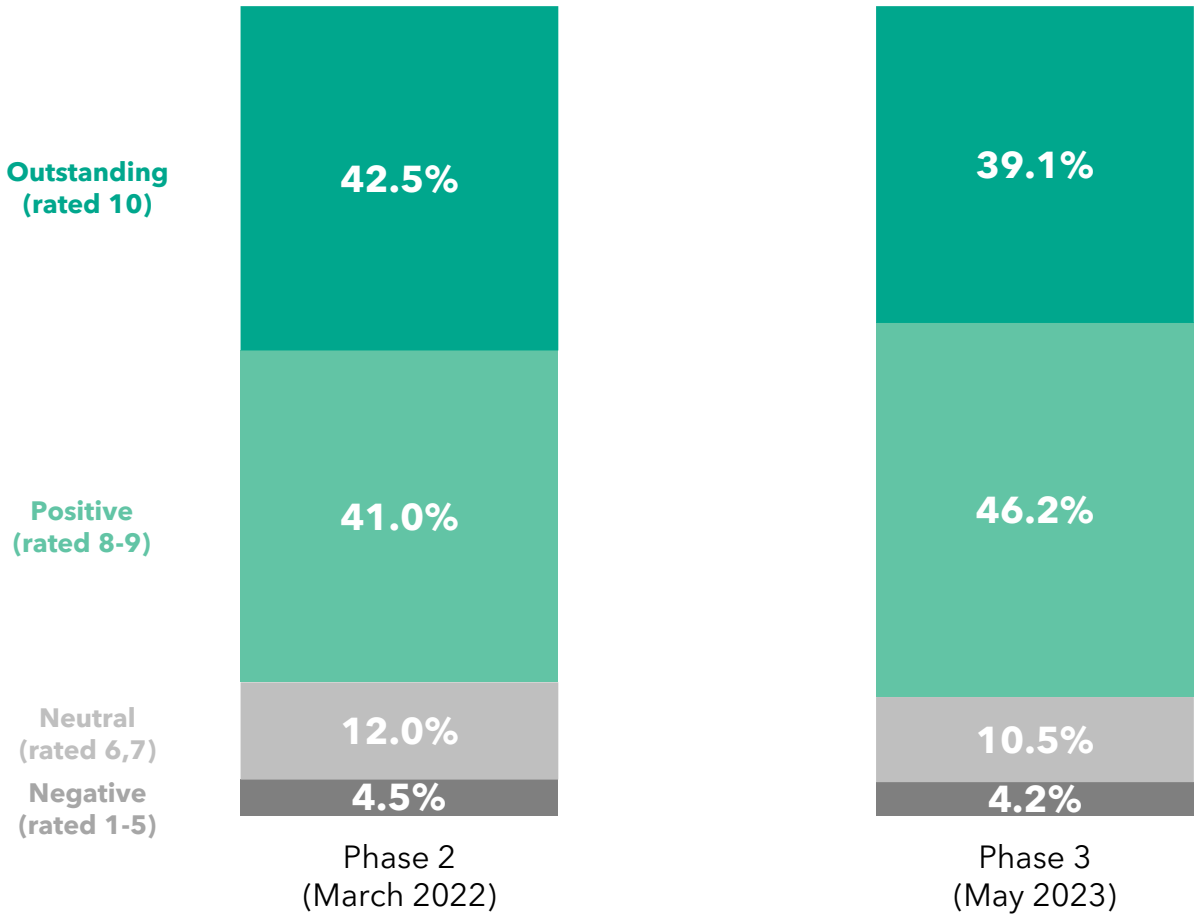
Most rated their experience with SRP positively

Overall Experience with SRP



In qualitative findings, customers noted a highly positive perception of SRP, specifying the reliability of service along with helpful customer service were key factors.

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CHOICE EXERCISE DESIGN

(BASED ON ISP ANALYSIS DRAFT RESULTS)

ISP's framework informed system inputs

- Illustrative **energy mix** (9 mixes)
- When SRP will **meet its sustainability goals** (2030/ 2035)
- % reduction in **carbon emissions*** (4 levels)
- % reduction in **water usage*** (4 levels)
- If SRP will **build new gas power plants** (Yes/ No)
- Monthly **bill impact** (4 levels)
- Number of **2-hour power outages** (4 levels)

Variation in levels resulted in evaluation of ~9,200 possible system configurations.

*Levels were conditional on the energy mixes shown

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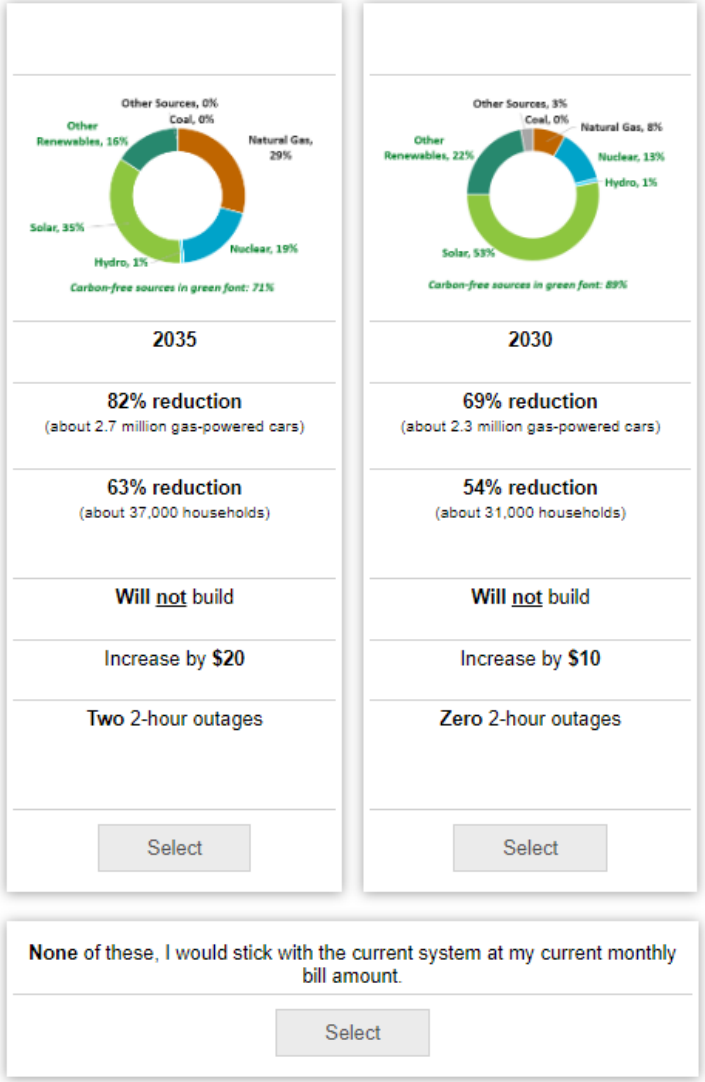
Inputs were used in a choice exercise

Conjoint methodology was used to understand customer preference

11 screens showing **2 energy plans** and a "none of these" option were shown

Customer preference ratings were produced for each potential future energy system

- Energy Mix
- Timing
- Carbon Emissions
- Water Usage
- Build Gas Plants
- Bill Impact
- 2-hour power outages



An example survey screen is shown to the right

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SYSTEM PLAN PREFERENCES

Monthly bill impact of greatest importance

Attribute	Ranked 1st Most Important
Monthly bill impact	36.8%
Reduction in carbon emissions	15.9%
Number of 2-hour power outages	14.5%
Energy mix	13.9%
Reduction in water usage	11.4%
If SRP will build new gas power plants	5.0%
When SRP will meet its sustainability goals	2.5%

Among those ranking the **energy mix first**, top ranked **priorities were evenly split**:

- Affordability – 31% ranked 1st
- Reliability – 36% ranked 1st
- Sustainability – 34% ranked 1st

Suggesting energy mix was seen as a **component related to all three priorities.**

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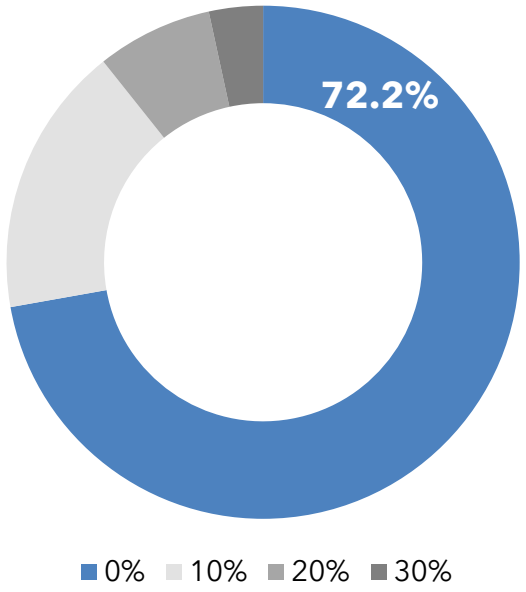
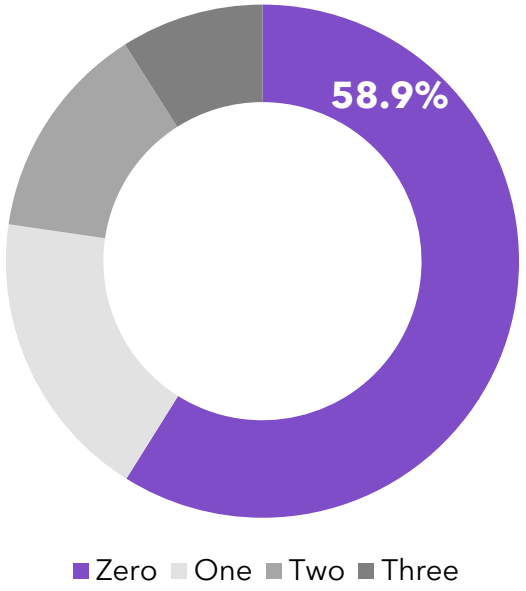
Choices indicate a desire to “have it all”

Summed Share of Preference by Attribute

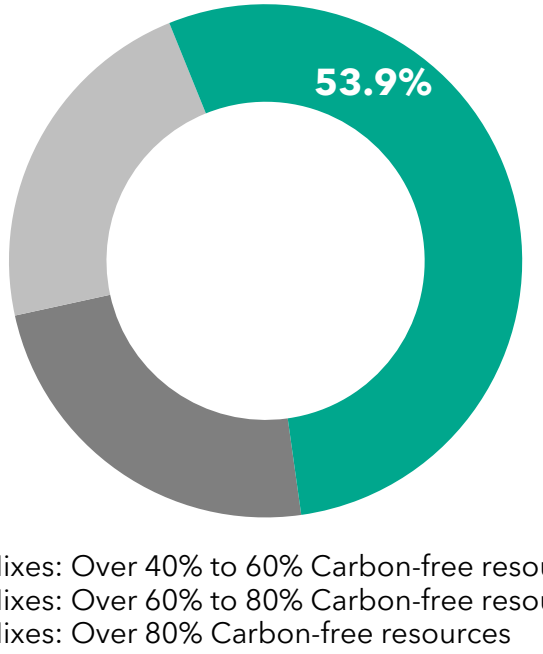
Monthly Bill Impact



Number of 2-Hour Outages



Energy Mix



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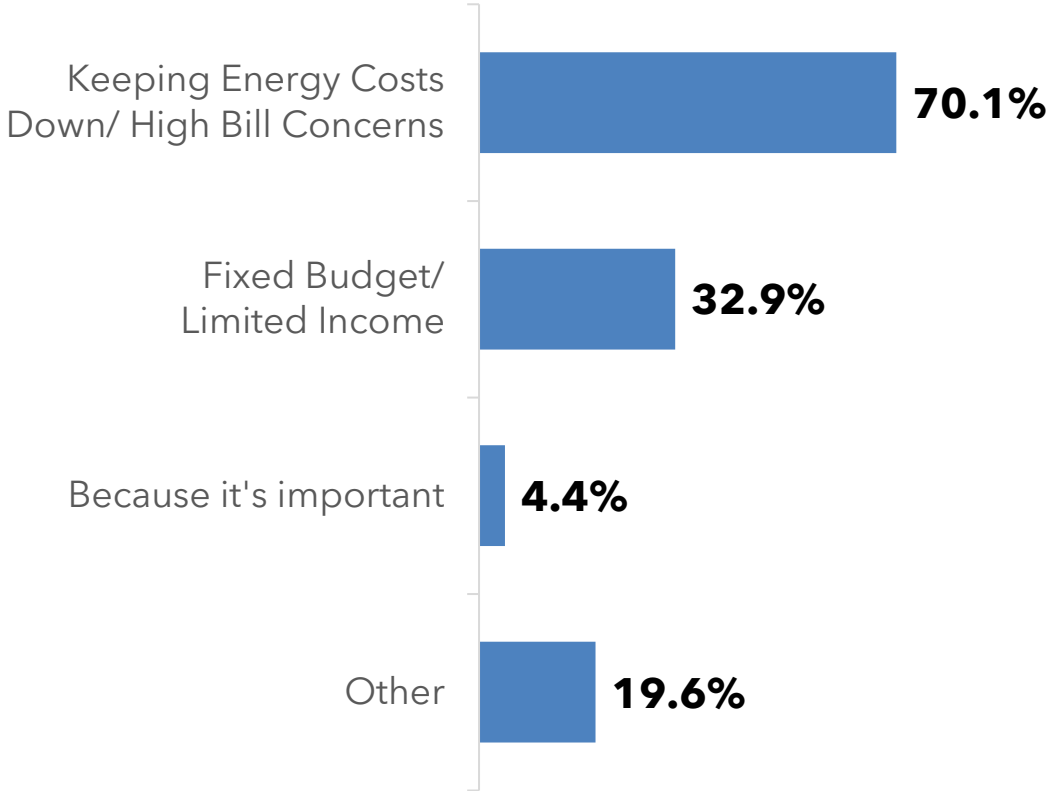
Real-world cost constraints force tradeoffs

Limitations on how much customers feel they can **invest in the "greater good"**

Fixed incomes and limited budgets constrain the degree to which they can prioritize sustainability

Price sensitivity analysis revealed a sharp decline in energy plan acceptance as levels increase **above a 10% monthly bill impact**

Reasons Why Monthly Bill Impact Most Important*



*Among those ranking monthly bill impact first (n=364); multiple responses accepted

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Customers' balanced future energy system

Findings revealed that from the residential customer's perspective the **ideal future energy system should**...

- **Manage cost, first and foremost**
- Keep monthly bill impacts **below a 10% increase** (from current bills)
- Include a diverse mix to **ensure reliability**
- Provide the cleanest, **most sustainable energy without exceeding a 10% bill increase** (from current bills)

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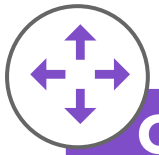
Executive Summary

It's essential for SRP to continue to focus on **residential customers' preferences and needs** in the future energy system.

Top factors: affordability & bill impacts

- In each quantitative phase of research, **affordability surpassed reliability slightly in importance**.
- Those with **limited incomes put greater emphasis on affordability**.
- When choosing a future energy system customer selections revealed **monthly bill impact as the top driver of preference**.



Customer understanding and openness to change

- Customers recognized that **challenges are interrelated** and pose **risks to sustainability, the economy, and overall quality of life**.
- In general, **lower-cost plans were more preferred**.
- Customers recognized the need for and expressed interest in SRP's investment in sustainable energy, but they **do not want to bear the cost of that investment**.

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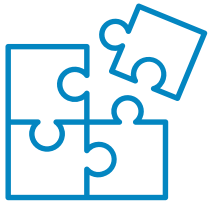
Questions?

ISP Final Products:
System Strategies

Angie Bond-Simpson
Sr. Director, Resource Management

Products of the ISP



System Strategies – Long-term strategies for planning and operating the power system to achieve SRP's 2035 goals.

Balanced System Plan – Illustrative path for SRP's system that is consistent with the ISP System Strategies.

ISP Actions – Set of near-term actions that the SRP team will complete following the publication of the ISP.

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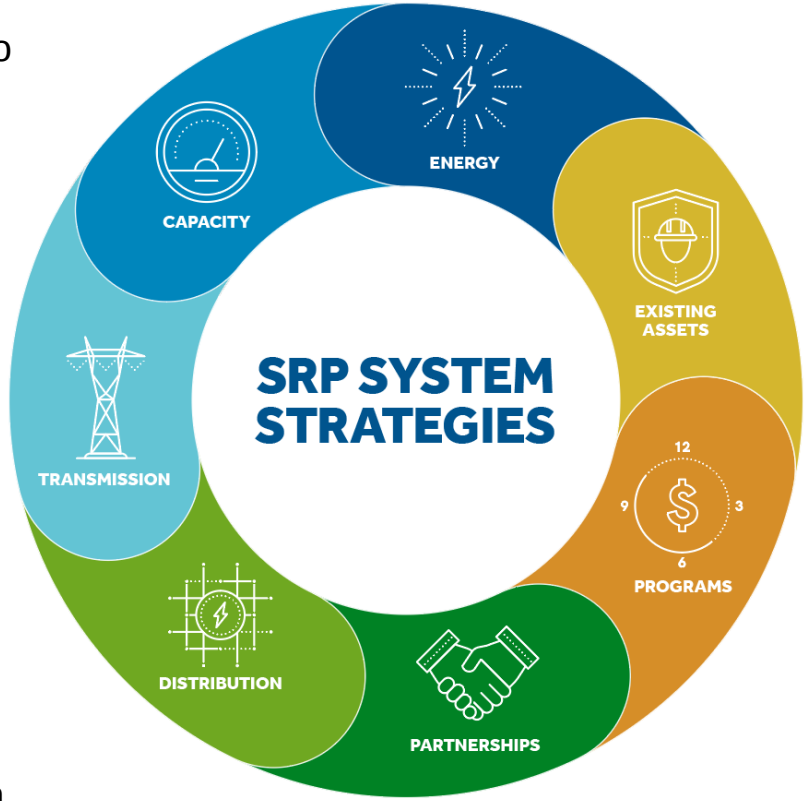
Integrated System Plan: System Strategies

Energy Investments
Invest in renewable resources and storage to manage fuel consumption and drive carbon and water reductions.

Capacity Investments
Invest in firm generation, including natural gas, to support reliability and manage affordability, while also supporting advancement of emerging firm technologies.

Proactive Transmission
Proactively plan to expand transmission infrastructure to enable generator interconnections and load growth.

Distribution Innovation
Ensure distribution grid readiness to maintain reliability and enable customer innovations to drive carbon reductions.



Strategic Investment & Reinforcement of Existing Assets
Reinforce and maximize value of existing infrastructure with strategic investments to manage affordability and ensure future performance, grid security and resilience.

Evolution of Customer Programs & Pricing
Evolve pricing and customer programs to improve economy-wide carbon reductions and pace infrastructure development, while recognizing customers' diverse needs.

Partnerships & Suppliers
Explore partnerships, supply chain and development solutions that manage cost and availability to meet the pace of transformation.

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Integrated System Plan: System Strategies

Energy Investments

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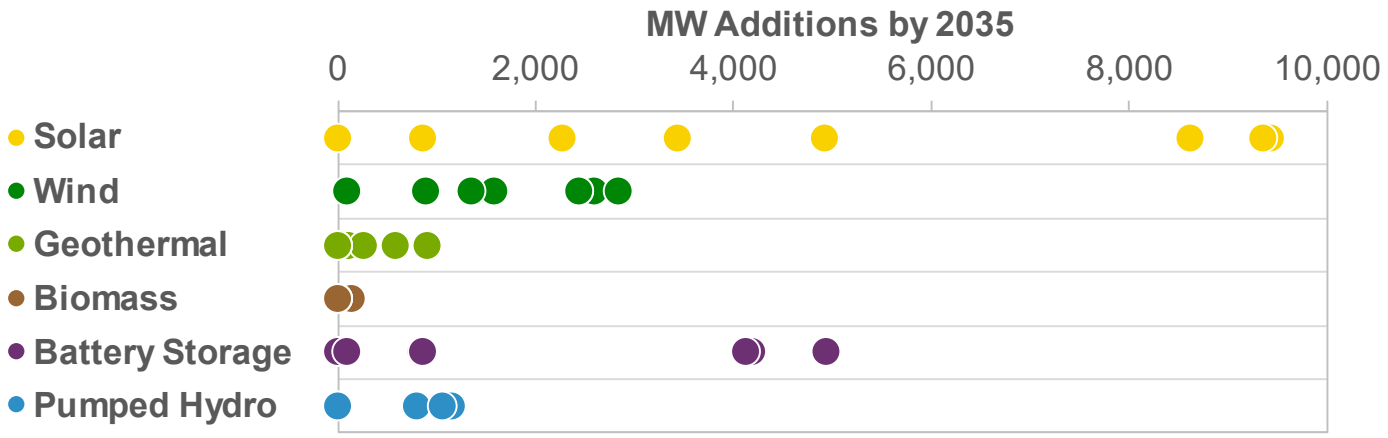
Renewable and Storage Resources Reduce Fuel Costs and Contribute to Improved Sustainability

The ISP analysis identified a range of renewable and storage additions that vary depending on future planning conditions.



Different amounts of renewable and storage additions lead to different sustainability outcomes:

Reduced Carbon Intensity

74 to 96%

vs. 2005 baseline (SRP goal of 65%)

Reduced Water Usage Intensity

31 to 71%

vs. 2005 baseline (SRP goal of 20%)

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Integrated System Plan: System Strategies

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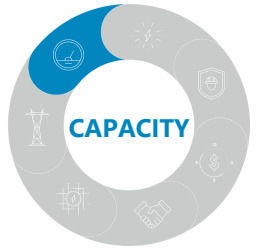
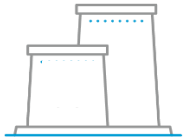
New Firm Resources Are Needed

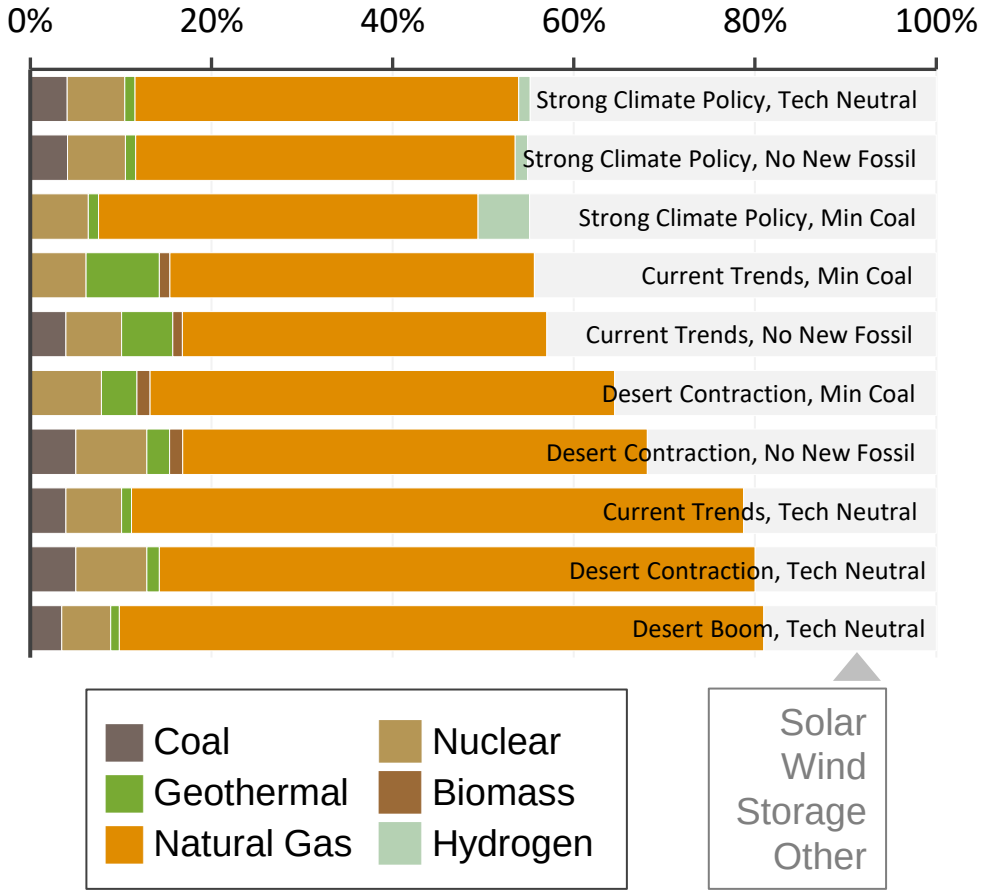




Firm resources are key to maintaining reliability.

- Across all plans, firm resources meet at least **55%** of reliability needs in 2035
- Without new firm resources, reliability is compromised by **2028** under a high load growth scenario.

Share of Adequacy Reliability Requirement Met by Firm Resources Across Cases



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Integrated System Plan: System Strategies

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Proactive Transmission
Proactively plan to expand transmission infrastructure to enable generator interconnections and load growth.

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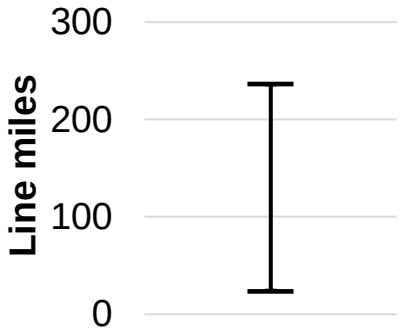
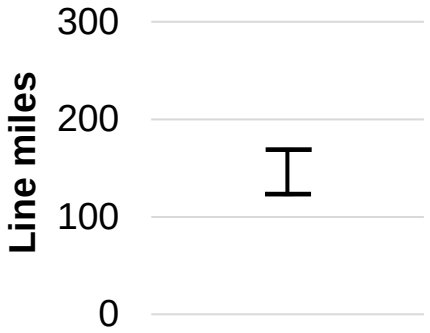
Proactive Transmission Planning Enables Load Growth and Addition of Generating Resources

A significant amount of transmission infrastructure is needed by 2035:

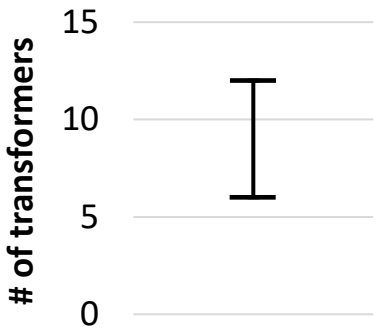
New
500 kV lines



New and upgraded
230 kV lines



New
500/230 kV transformers



Long lead times for infrastructure necessitate a proactive approach.

500 kV lines
5-9+ years

230 kV lines
3-7 years

500/230 kV transformers
3-5 years

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Integrated System Plan: System Strategies

Energy Investments
Invest in renewable resources and storage to manage fuel consumption and drive carbon and water reductions.

Capacity Investments
Invest in firm generation, including natural gas, to support reliability and manage affordability, while also supporting advancement of emerging firm technologies.

Proactive Transmission
Proactively plan to expand transmission infrastructure to enable generator interconnections and load growth.

Distribution Innovation
Ensure distribution grid readiness to maintain reliability and enable customer innovations to drive carbon reductions.

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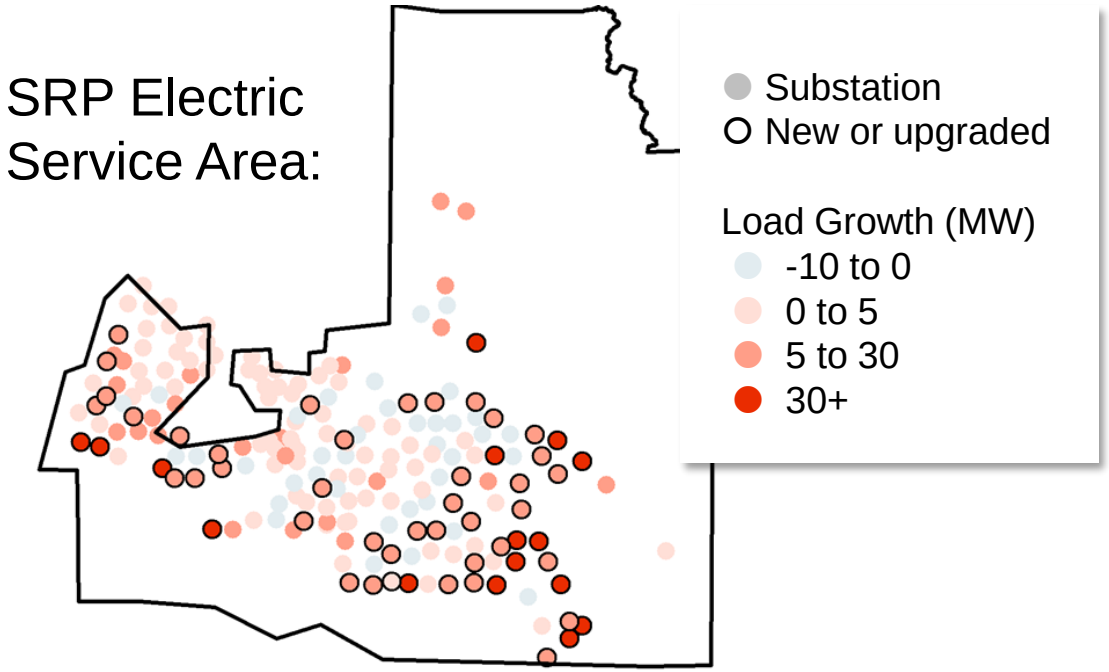
Distribution Readiness for Growth and Evolving Customer Needs

Load growth will drive additional infrastructure needs for the distribution system…



…while changes in *how* our customers use energy will require innovation and flexibility

500,000
electric vehicles

1,300 MW
distributed solar

300 MW
demand response

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Partnerships & Suppliers
Explore partnerships, supply chain and development solutions that manage cost and availability to meet the pace of transformation

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Partnership and Supplier Solutions Can Help SRP Meet the Pace of Transformation through 2035

2,200-18,000 MW
new nameplate capacity

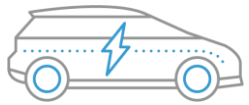
160-380 miles
new 230+ kV transmission lines

6-12
new 500/230kV transformers

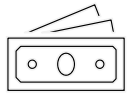
26-84
new distribution substation bays

3,800 GWh
total energy efficiency savings

300 MW
total demand response



500,000
total electric vehicles



Up to 10% IRA bonus
domestic content provisions*
**Public power must satisfy domestic content, or entire credit at risk*

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Integrated System Plan: System Strategies

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Evolve pricing and customer programs to improve economy-wide carbon reductions and pace infrastructure development, while recognizing customers' diverse needs.

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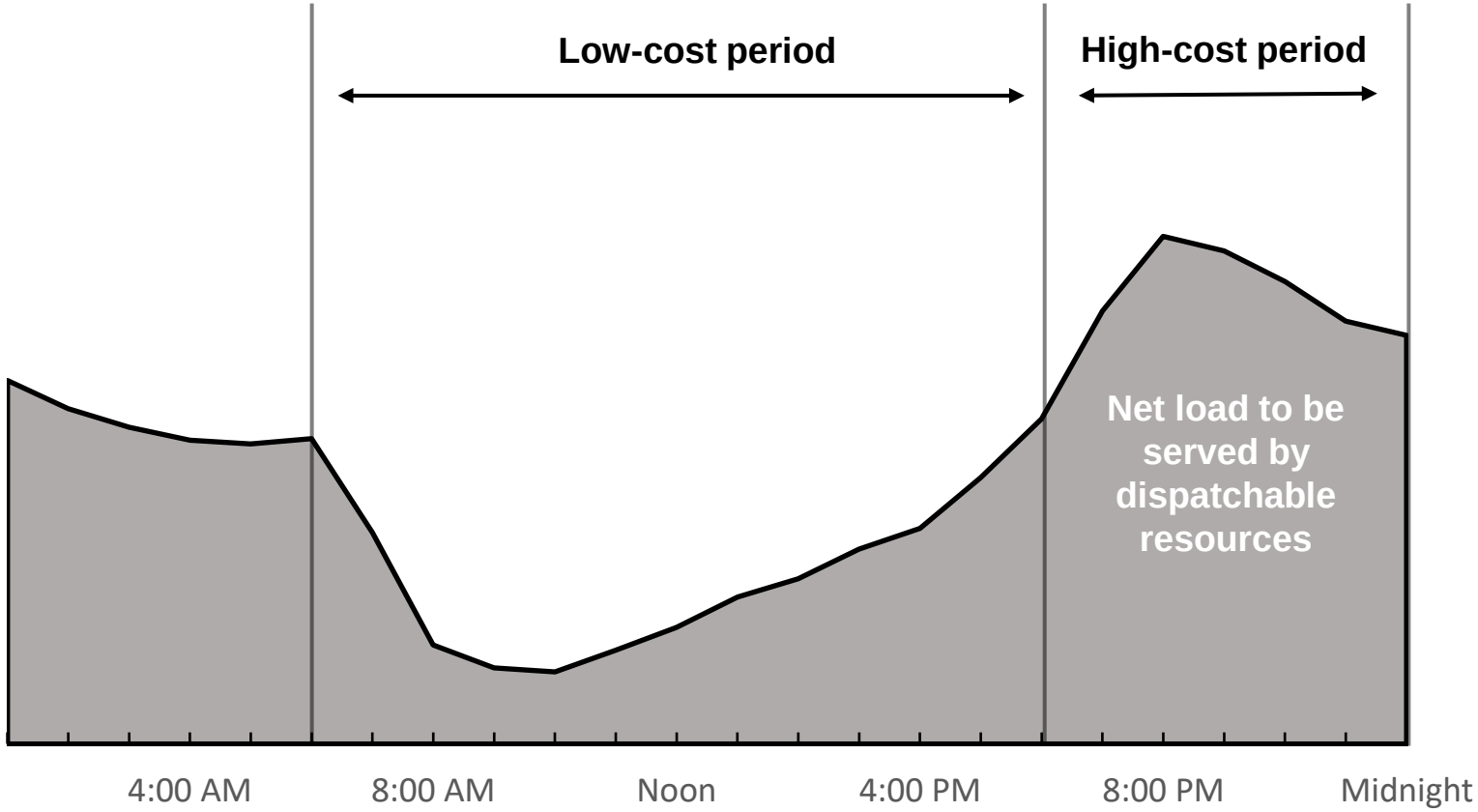
Customer Programs & Pricing Can Help SRP Meet New System Needs

As the system transforms, net load is the new target for pricing and programs.

- Late evening and overnight load reduction becomes more important
- Opportunity to shift load to mid-day, low-cost periods and build load during these periods

2035 Peak Day Projection



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Integrated System Plan: System Strategies

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Strategic Investment & Reinforcement of Existing Assets
Reinforce and maximize value of existing infrastructure with strategic investments to manage affordability and ensure future performance, grid security and resilience.

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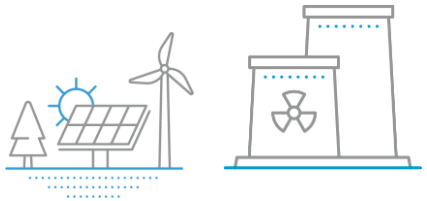
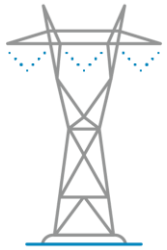
Existing Assets Are the Foundation for the Future System

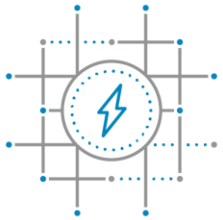
Any future planning scenario requires maintaining the existing system.



In 2035, SRP's existing and contracted generating assets make up an estimated **50%** of nameplate capacity, **70%** of reliability needs and **45%** of carbon-free energy.



In 2035, SRP's existing transmission lines make up an estimated **90%** of the total number of 230+ kV line miles.



In 2035, SRP's existing distribution substation bays make up an estimated **85%** of the total number of substation bays.

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Integrated System Plan: System Strategies

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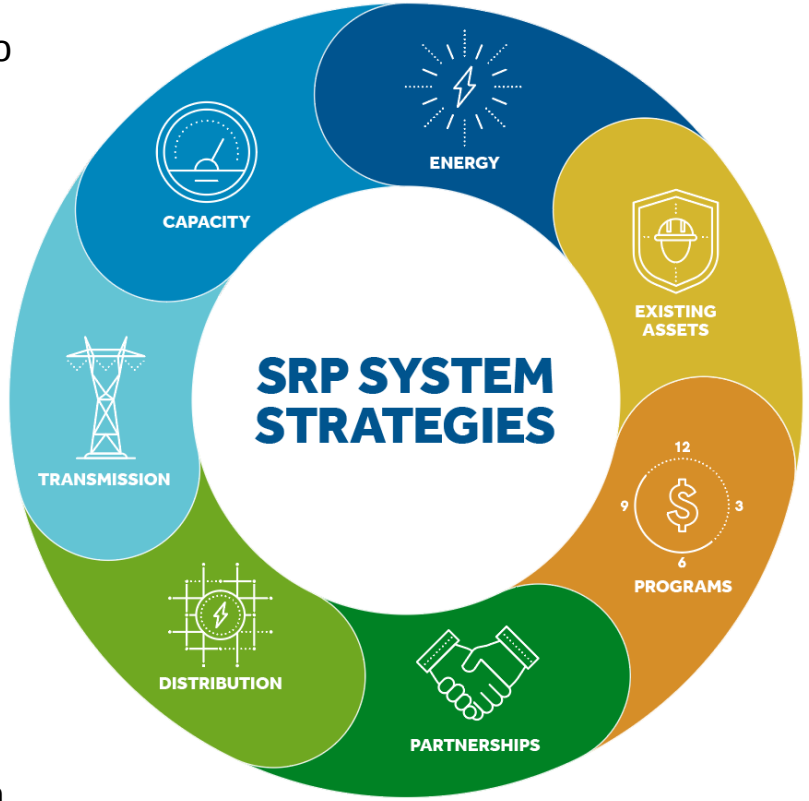

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Questions?

ISP Final Products: Balanced System Plan

Angie Bond-Simpson
Sr. Director, Resource Management

Products of the ISP

System Strategies – Long-term strategies for planning and operating the power system to achieve SRP's 2035 goals.

Balanced System Plan – Illustrative path for SRP's system that is consistent with the ISP System Strategies.

ISP Actions – Set of near-term actions that the SRP team will complete following the publication of the ISP.

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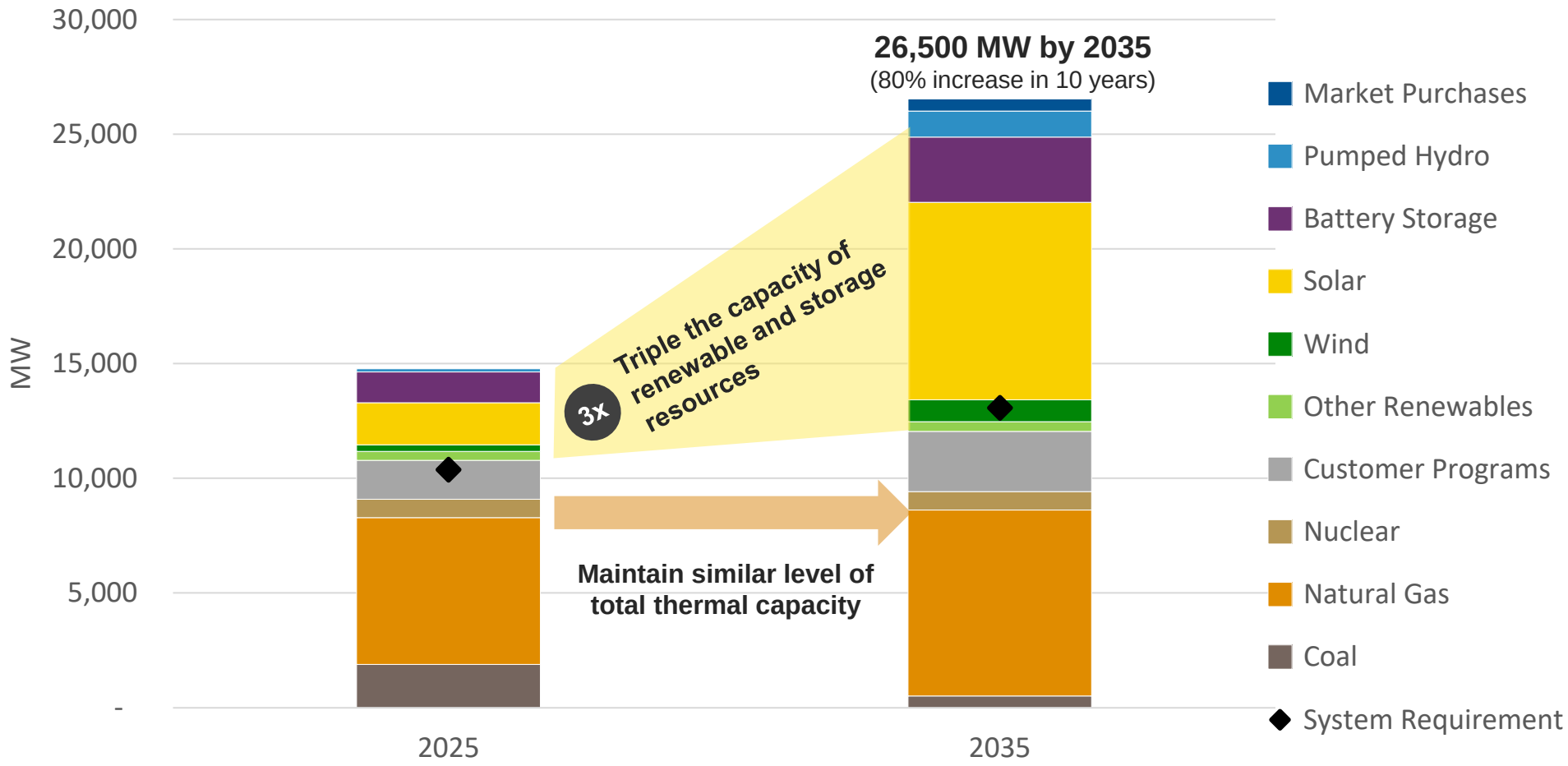
Draft Balanced System Plan: 2025 and 2035 Total Capacity



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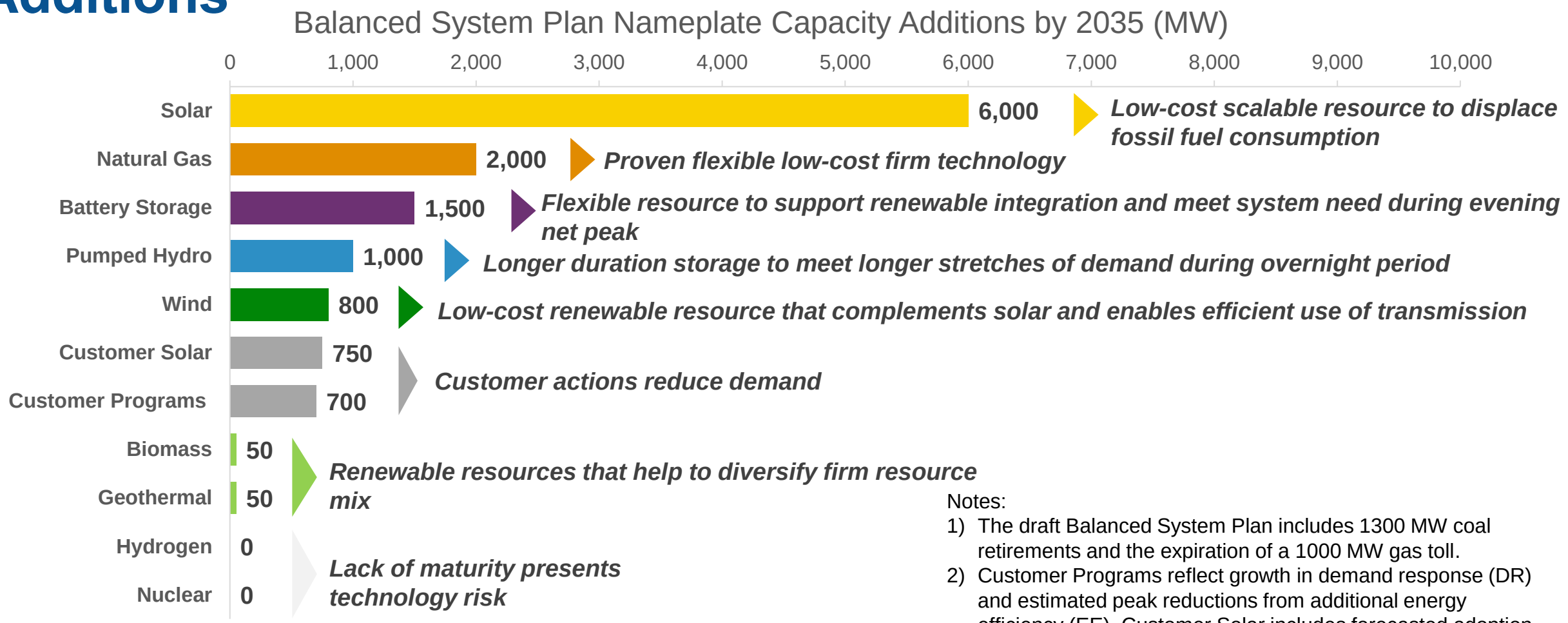
Draft Balanced System Plan: Diversified Resource Additions



Notes:

1) The draft Balanced System Plan includes 1300 MW coal retirements and the expiration of a 1000 MW gas toll.
2) Customer Programs reflect growth in demand response (DR) and estimated peak reductions from additional energy efficiency (EE). Customer Solar includes forecasted adoption of customer solar and storage.

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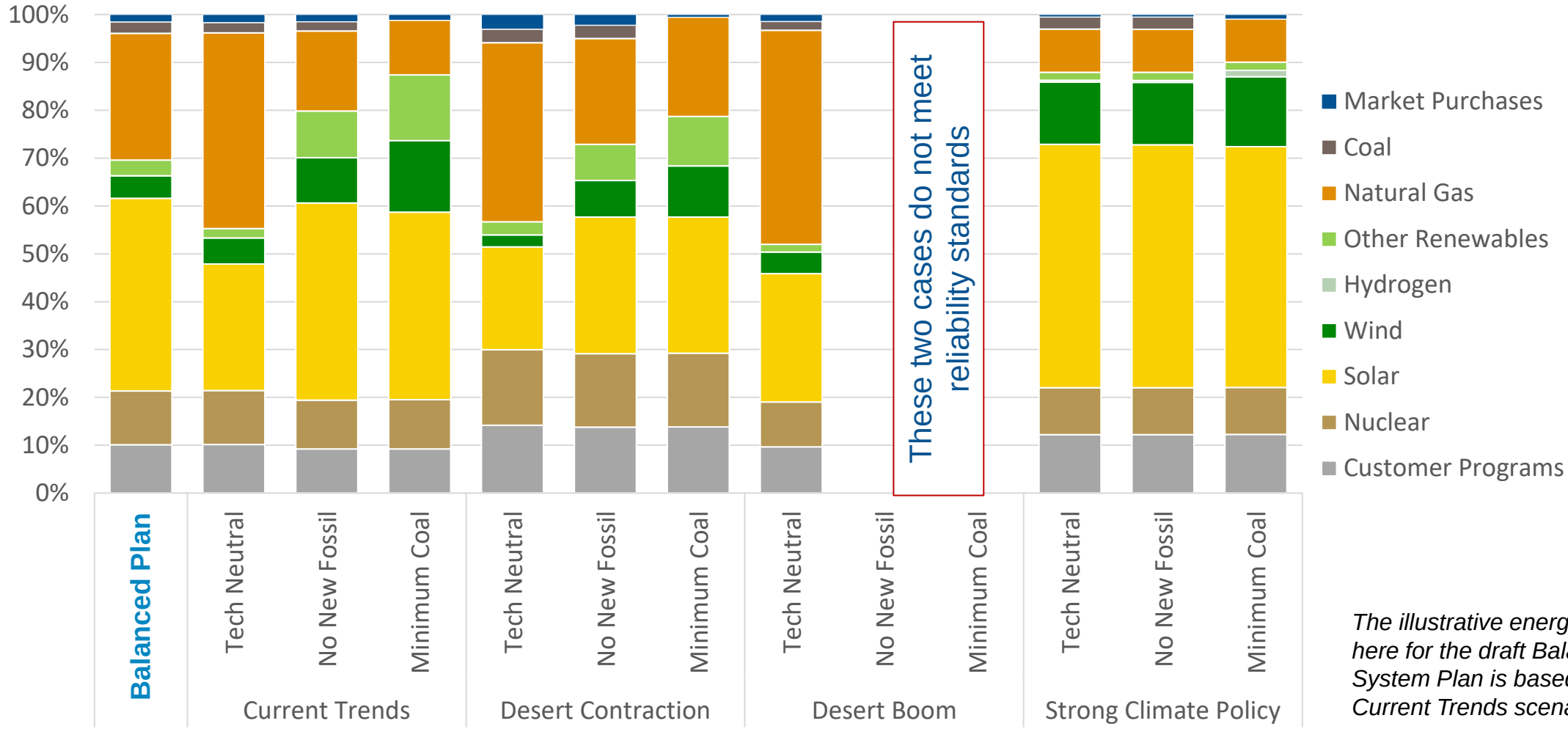
Draft Balanced System Plan: 2035 Energy Mix



The illustrative energy mix shown here for the draft Balanced System Plan is based on the Current Trends scenario.

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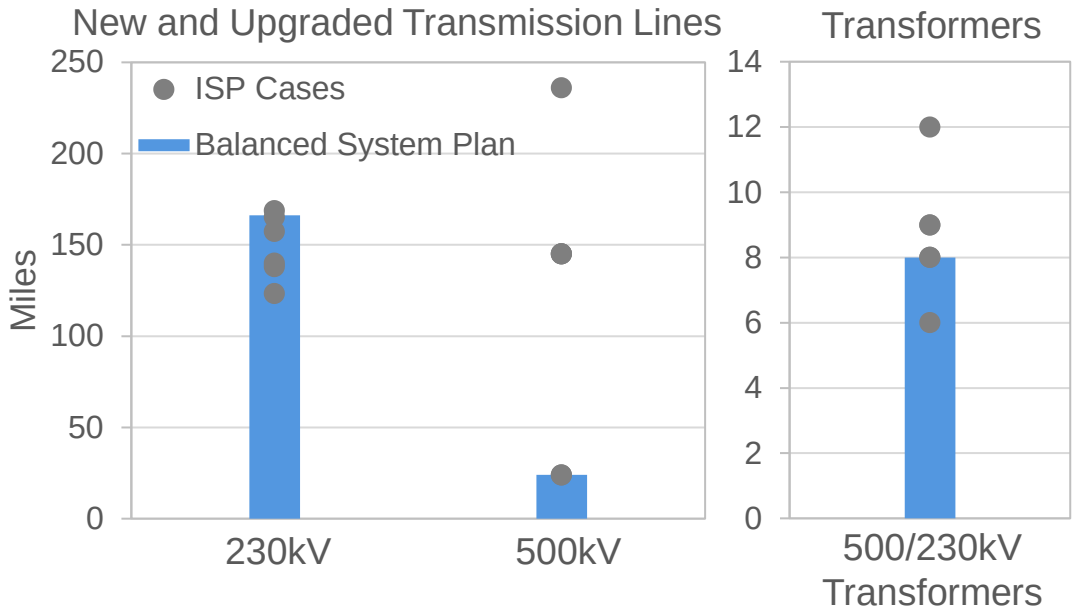
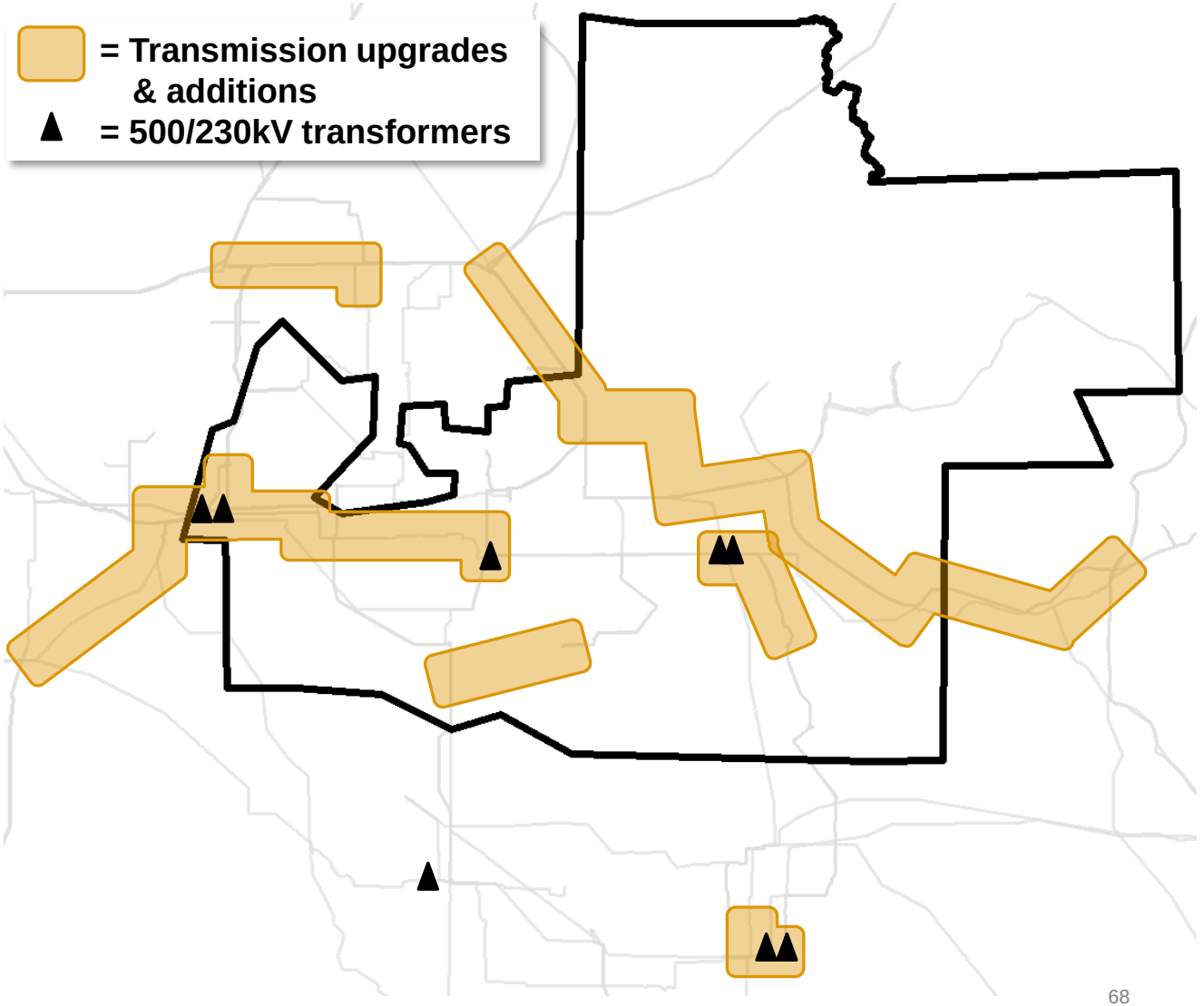
Balanced System Plan: Transmission Additions by 2035

The Balanced System Plan includes transmission infrastructure needed to meet load and generation growth, balancing a hub and pro-rata resource location strategy.





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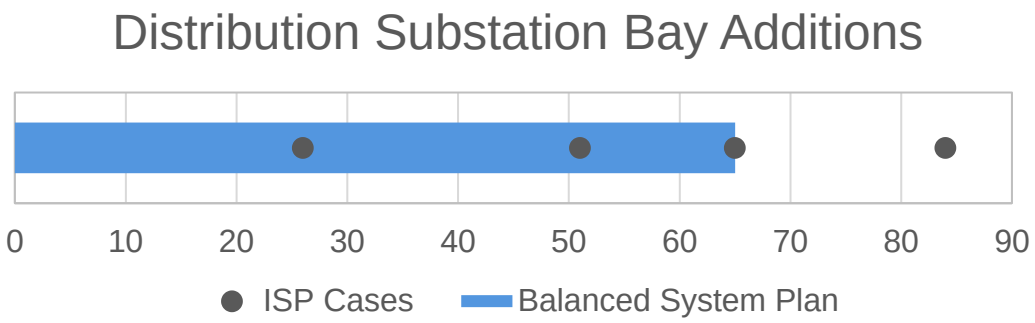
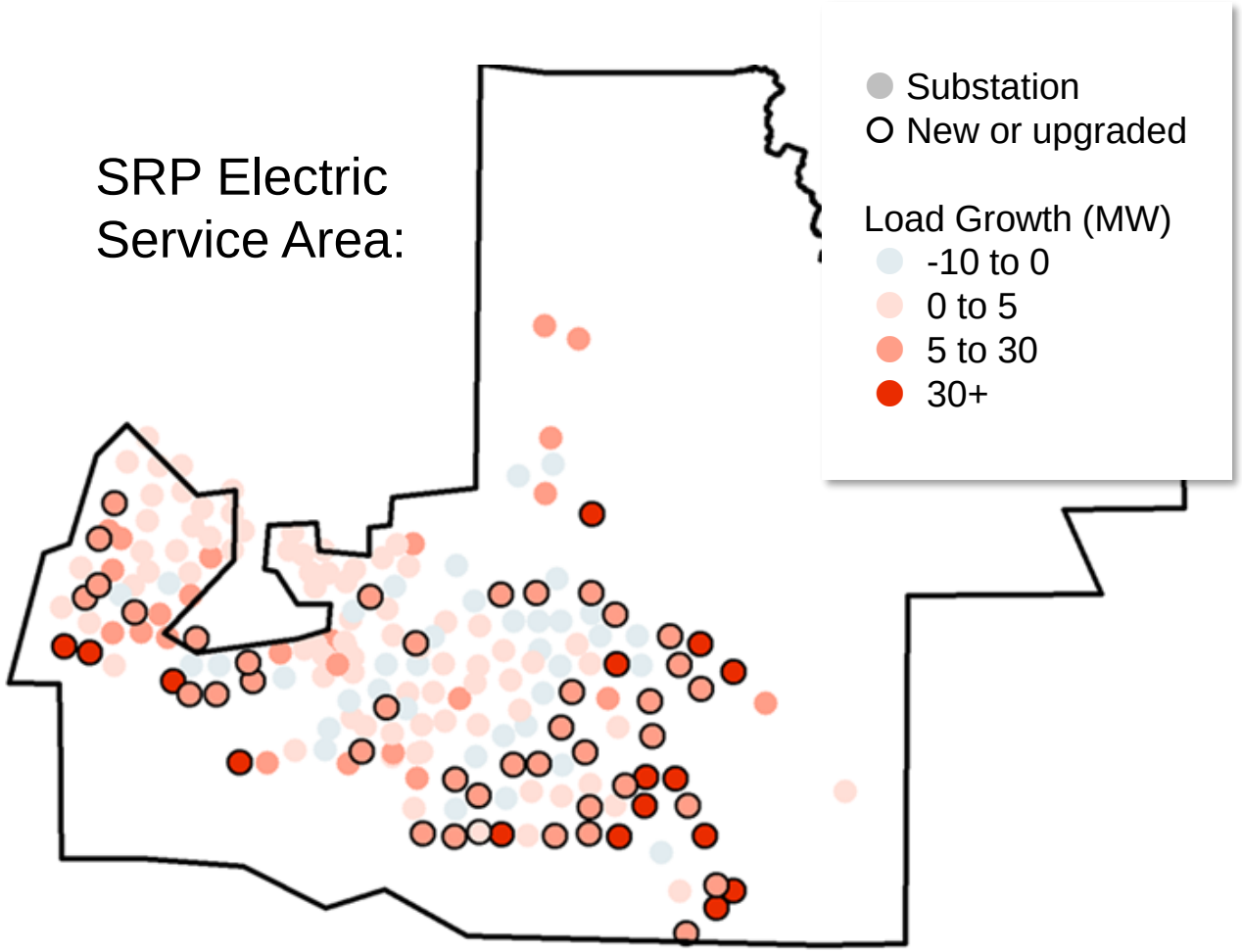
Balanced System Plan: Distribution Additions by 2035

The Balanced System Plan adds distribution infrastructure needed to meet growing load, including that from electric vehicles, while preparing the grid for future customer innovation.





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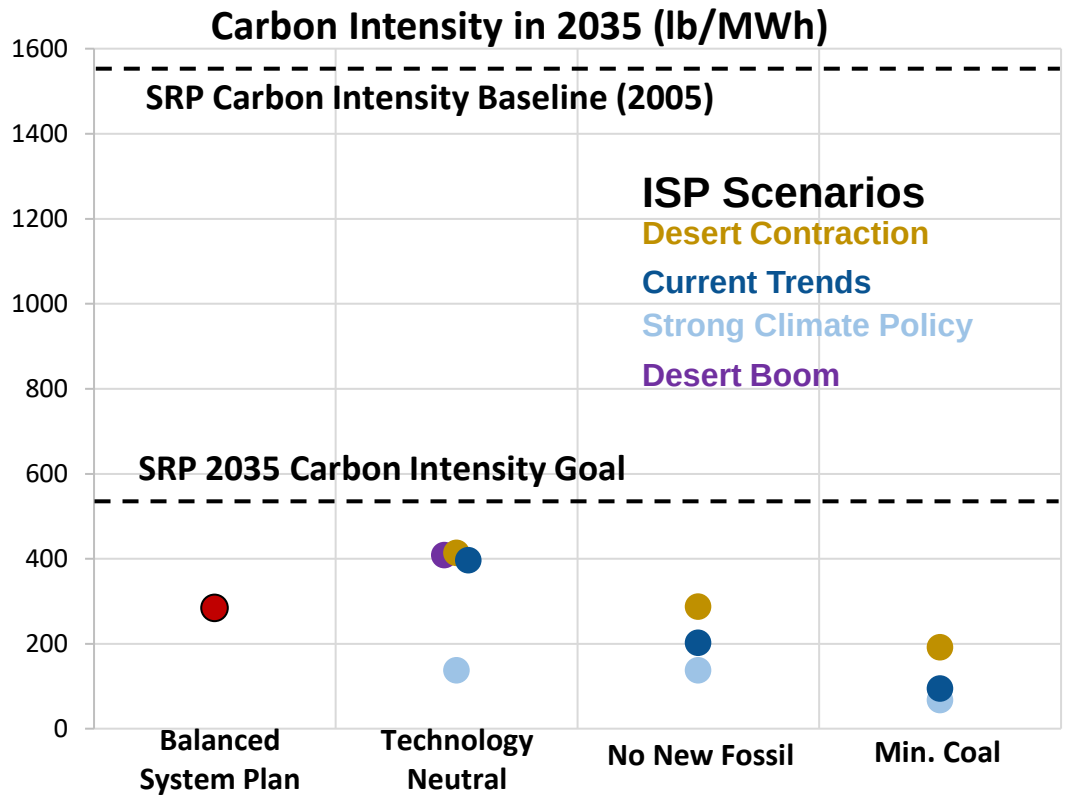
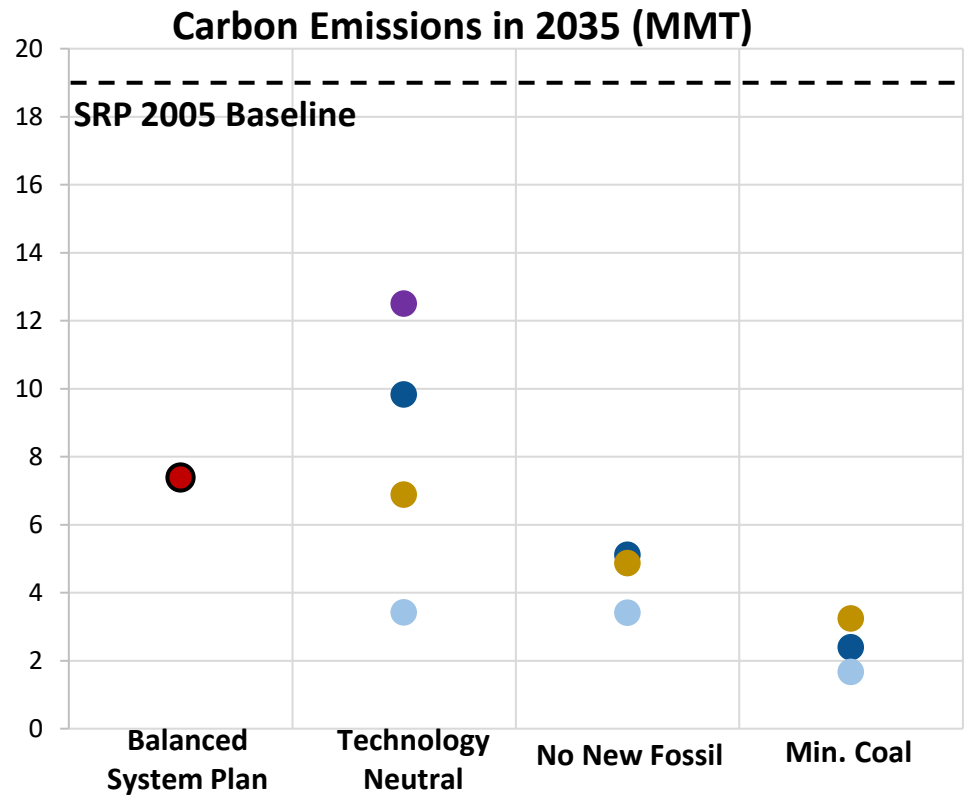
Balanced System Plan Carbon Emission Comparison



Balanced System Plan: 284 lb/MWh, 82% reduction from 2005



Balanced System Plan: 7.4MMT, 61% reduction from 2005

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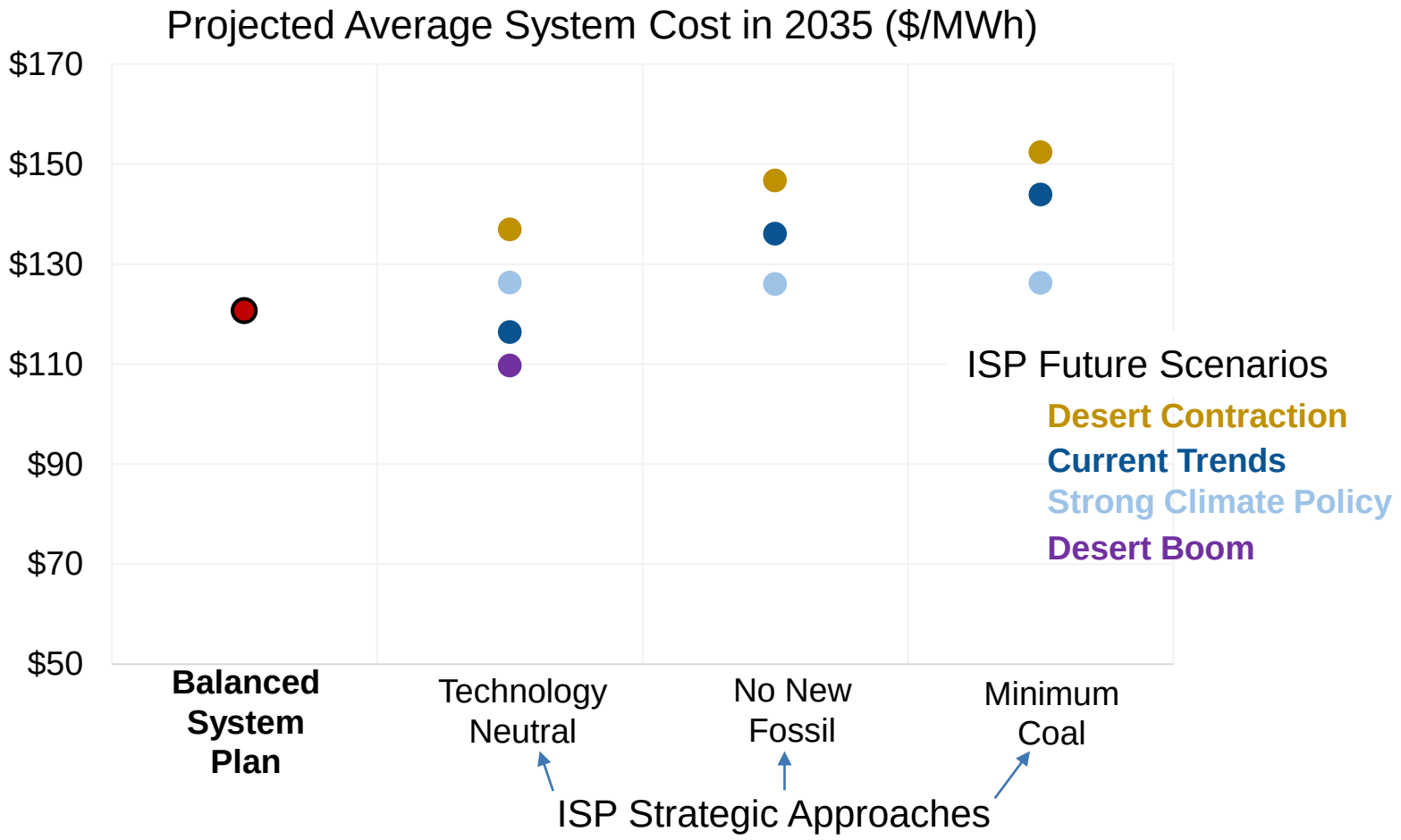
Balanced System Plan Cost Compared to ISP Strategic Approaches (2035)

- **Projected 2035 Average System Cost for the Balanced Plan ($121/MWh) is below the median outcomes for ISP strategic approaches.**



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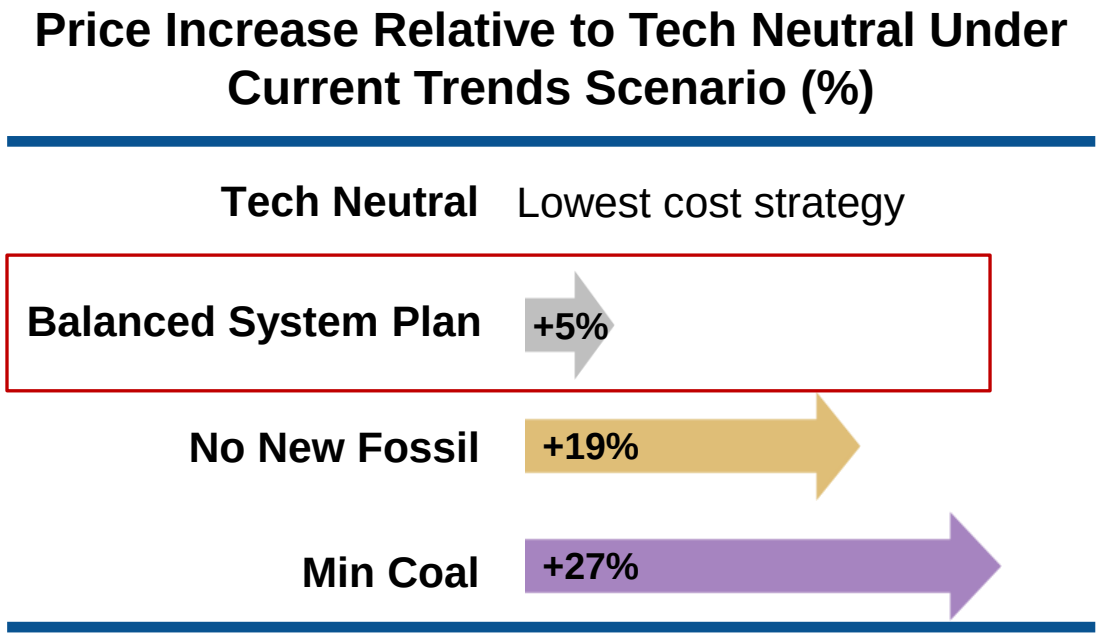
ISP Scenario Bill Impact Comparison

These are representative results based on ISP analysis modeling, not projections of SRP's future prices, and are not inclusive of factors beyond the scope of ISP analysis.

- **Tech Neutral is the lowest cost strategic approach, resulting in bill increases just below projected inflation.**
- **The Balanced System Plan bill impact is under the 10% premium threshold identified by residential customer research and well below bill impacts of No New Fossil and Minimum Coal strategic approaches**



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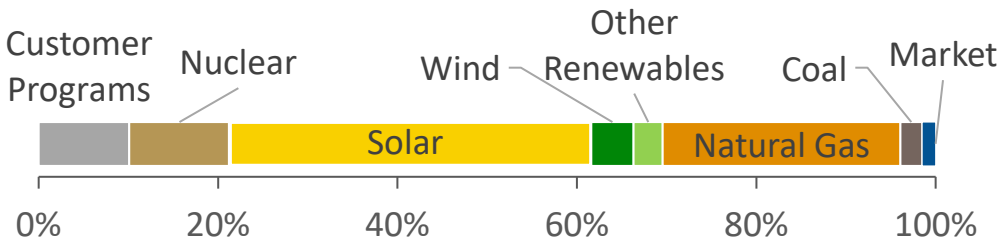
Balanced System Plan (2035)

Affordable

3% annual growth rate in total system cost

0.3% annual growth rate in average system cost ($/MWh)

Sustainable



1,300 MW
coal plants retired

7,000 MW
new wind & solar capacity

82% CO2 intensity reduction (lb./MWh)
61% CO2 emission reduction (MMT)
relative to 2005 levels

56% water use reduction (gal/MWh)
relative to 2005 levels

Reliable

16% planning reserve margin
satisfied by an increasingly diverse portfolio of resources

2,000 MW
new firm natural gas capacity to replace retired coal

1,000 MW
new long-duration energy storage capacity (pumped hydro)

190 miles of new or upgraded transmission lines

8 new transmission 500/230kV transformers

65 new distribution substation bays

Customer-Focused

3,800 GWh energy efficiency savings

300 MW total demand response

500k electric vehicles

Responsive to ISP Residential Customer Research
Manages cost, while maintaining reliability and transitioning to more sustainable energy system

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Final ISP Actions

Adam Peterson
Director, Corporate Pricing

Dan Dreiling
Director, Customer Programs

Melissa Martinez
Manager, Distribution Planning

Grant Smedley
Director, Resource Planning, Acquisition and Development

Justin Lee
Manager, Transmission Planning

Products of the ISP

System Strategies – Long-term strategies for planning and operating the power system to achieve SRP's 2035 goals.

Balanced System Plan – Illustrative path for SRP's system that is consistent with the ISP System Strategies.

ISP Actions – Set of near-term actions that the SRP team will complete following the publication of the ISP.

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ISP Action #1: Residential Time-of-Use Pilot

Execute a residential time-of-use price plan pilot and perform customer research to evaluate customers' 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.

ISP System Strategies Alignment

Evolution of Customer Programs & Pricing

Partnerships & Suppliers

Energy Investments

Potential to defer

Capacity Investments

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ISP Action #2: Time-of-Use Evolution

Engage commercial, small business, 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.

- Undertake a Pricing Process informed by the ISP as to how time-of-use plans need to evolve. Propose new time-of-use hours including a super off-peak period when the cost to serve customers' needs is lowest and on-peak hours updated for the modern grid.
- Develop communication plan for all customer types and segments to educate on any new time-of-use price plans with a focus on promoting affordability as well as potential sustainability benefits.

ISP System Strategies Alignment

Potential to defer

Partnerships & Suppliers

Evolution of Customer Programs & Pricing

Energy Investments

Capacity Investments

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ISP Action #3: 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.

- Evaluate the cost-effectiveness and emissions impacts of different customer program measures using the avoided costs and emissions impacts results from the ISP. Determine whether any changes to the customer programs portfolio are warranted based on this information, considering that these results must be weighed against other important factors such as customer access, equity, cost and satisfaction.

ISP System Strategies Alignment

Partnerships & Suppliers

Evolution of Customer Programs & Pricing

Energy Investments

Distribution Innovation

Potential to defer

Capacity Investments

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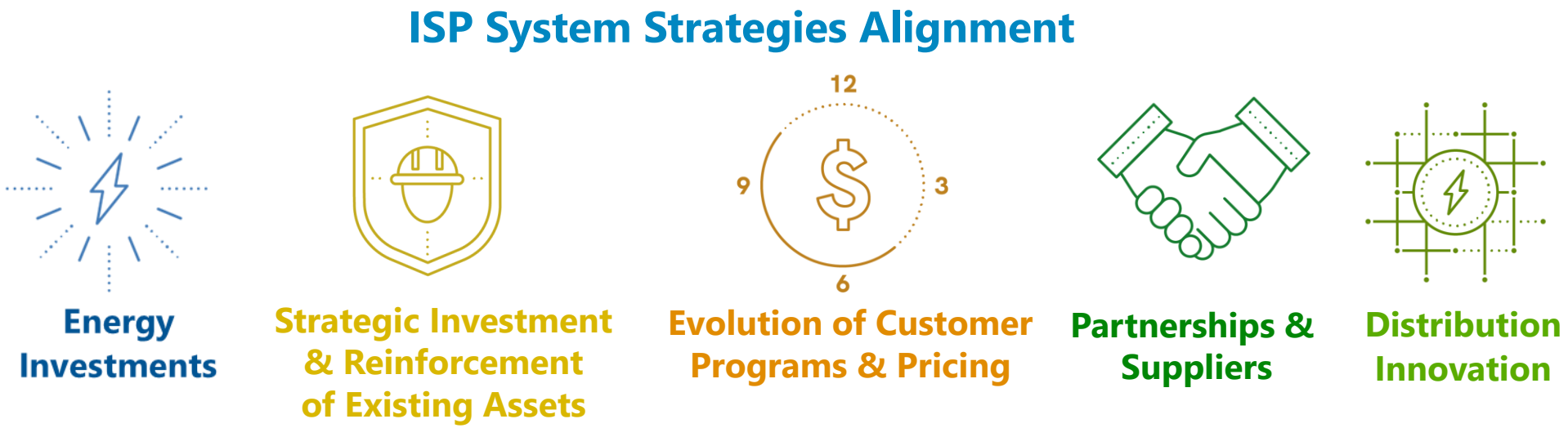
ISP Action #4: EV Management

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.



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ISP Action #5: 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.

ISP System Strategies Alignment

Energy Investments

Strategic Investment & Reinforcement of Existing Assets

Evolution of Customer Programs & Pricing

Partnerships & Suppliers

Distribution Innovation

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ISP Action #6: 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

ISP System Strategies Alignment

Distribution Innovation

Partnerships & Suppliers

Strategic Investment & Reinforcement of Existing Assets

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ISP Action #7: Resource Selection

Issue all-source requests for proposals (RFPs) or requests for information (RFIs) at least once every two years to compare with self-build options and ensure that SRP can agnostically select resource technologies that minimize total system costs while meeting SRP's reliability and 2035 Sustainability Goals.

ISP System Strategies Alignment

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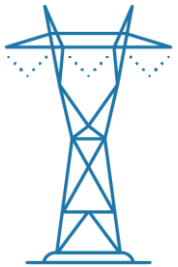
ISP Action #8: Coal Transition Action Plan

- Coordinate with co-owners to develop a path forward for the Springerville Generating Station
- Prepare plans for repurposing the Coronado Generating Station 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

ISP System Strategies Alignment

Capacity Investments

Strategic Investment & Reinforcement of Existing Assets



Proactive Transmission

Partnerships & Suppliers

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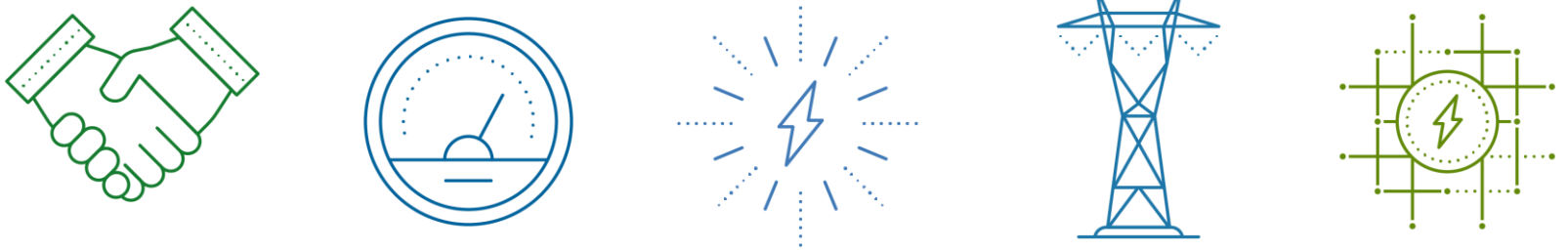
ISP Action #9: Proactive Siting

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

ISP System Strategies Alignment



Partnerships & Suppliers

Capacity Investments

Energy Investments

Proactive Transmission

Distribution Innovation

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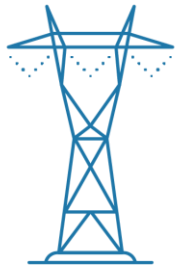
ISP Action #10: Regional Transmission

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.

ISP System Strategies Alignment

Capacity Investments

Energy Investments



Proactive Transmission

Partnerships & Suppliers

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Questions?

Next Steps for Implementing the ISP/ Wrap Up

Angie Bond-Simpson
Sr. Director, Resource Management

Next Steps

- ❑ ISP System Strategies Board Approval
- ❑ Publish ISP Report

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thank you!

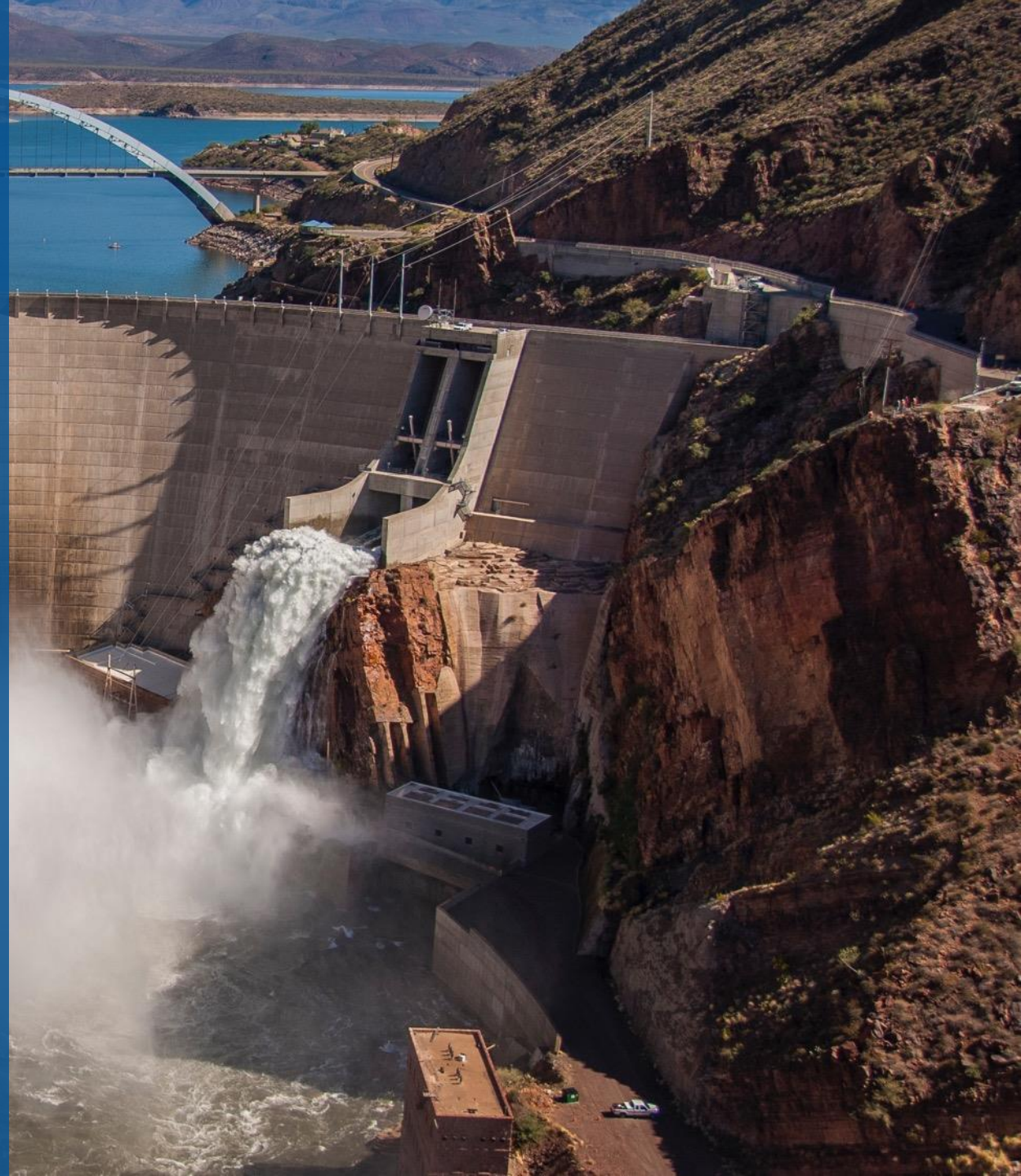
Informational Slideshow

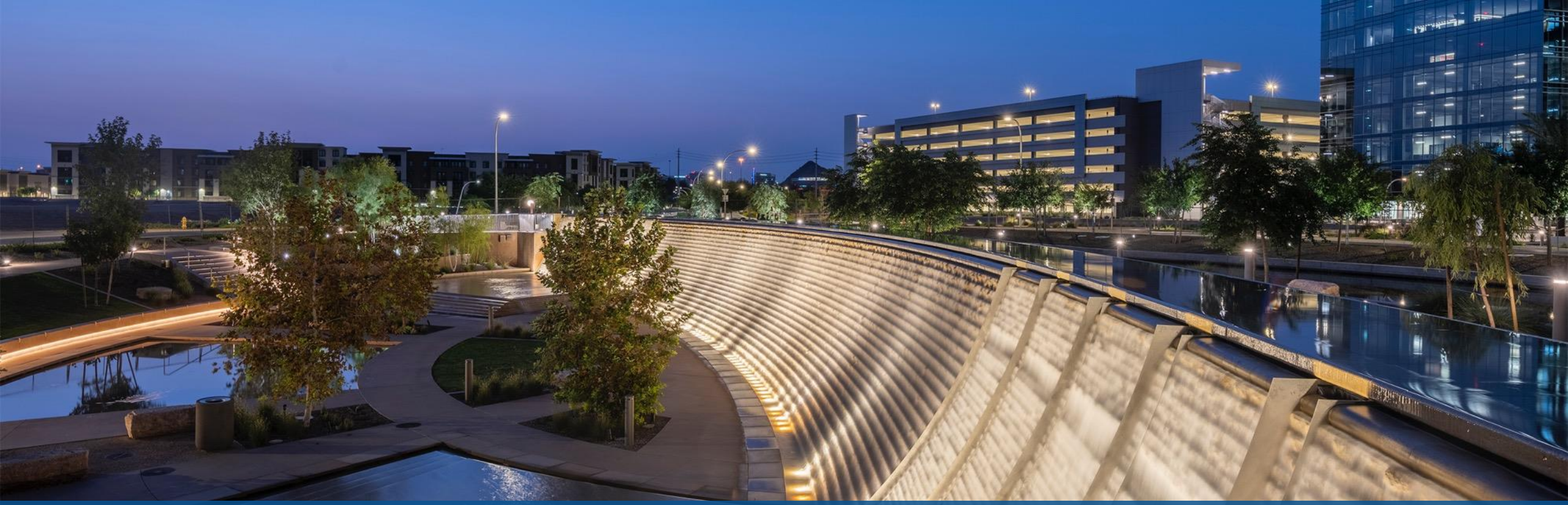
Presented before and after meeting content

©Salt River Project, 2023. All rights reserved. ISP Technical Working Session: Inverter-Based Resource Integration

What is SRP?

- One of the nation’s largest public power utilities
- Provider of reliable, affordable water and power to more than **2 Million** people
- The largest raw-water supplier in the Valley, delivering about **800,000** acre-feet of water annually
- Manager of a **13,000** square-mile watershed





Mission Statement

SRP serves our customers and communities by providing sustainable, reliable and affordable water and energy.

Customer Programs

Did you know?

SRP grew its residential demand response program to be one of the largest Bring Your Own Thermostat (BYOT) programs in the nation.

Buy energy-efficient products online with exclusive sales and instant rebates.

Energy Efficiency

Did you know?

SRP's portfolio of customer programs continues to be one of the largest and most comprehensive portfolios of Energy Efficiency (EE) programs in the region.

SRP was Awarded **2023 ENERGY STAR "Partner of the Year"**

Demand Response

Did you know ?

Last year, 76,143 smart thermostats were enrolled in the Bring Your Own Thermostat Program.

Electric Vehicles (EV)

Did you know?

To date, SRP has supported the enablement of **40,585 EVs** within its service territory.

Over the past year, SRP experienced **39% year-over-year growth in the number of EVs** within its service territory.

Pricing

Did you know?

Nearly 35% of households served by SRP participate in our voluntary Time-of-Use (TOU) price programs.

This helps reduce energy demand during peak periods and defer capital investments.

SHARE Program Funding:

Help your neighbor in need with their energy bill

In partnership with the Salvation Army through SHARE: Service to Help Arizonans with Relief on Energy

SRP makes a matching contribution — a **minimum of $500,000 per year**

The Economy Price Plan

Save $276 with the Economy Price Plan.

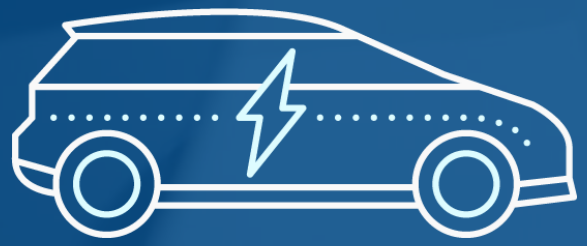
A $23 monthly bill credit available to customers with limited incomes

Time-of-Use Plans

101

Save on your electric bill by planning to use most of your energy during off-peak hours.

SRP Electric Vehicle Price Plan



The EV Price Plan offers the most opportunity for EV drivers to save.

Super off-peak times
(between 11 p.m. and 5 a.m.)

SRP Solar Choice™

When you sign up for SRP Solar Choice, you can choose to offset half or all of your energy use with clean, renewable solar energy.

Provides the opportunity for customers who rent to participate in solar energy offerings.

Community Vitality

Arizona isn’t just where we work, it’s also where we live and raise our families.

SRP has proudly been a member of the community for more than 120 years.

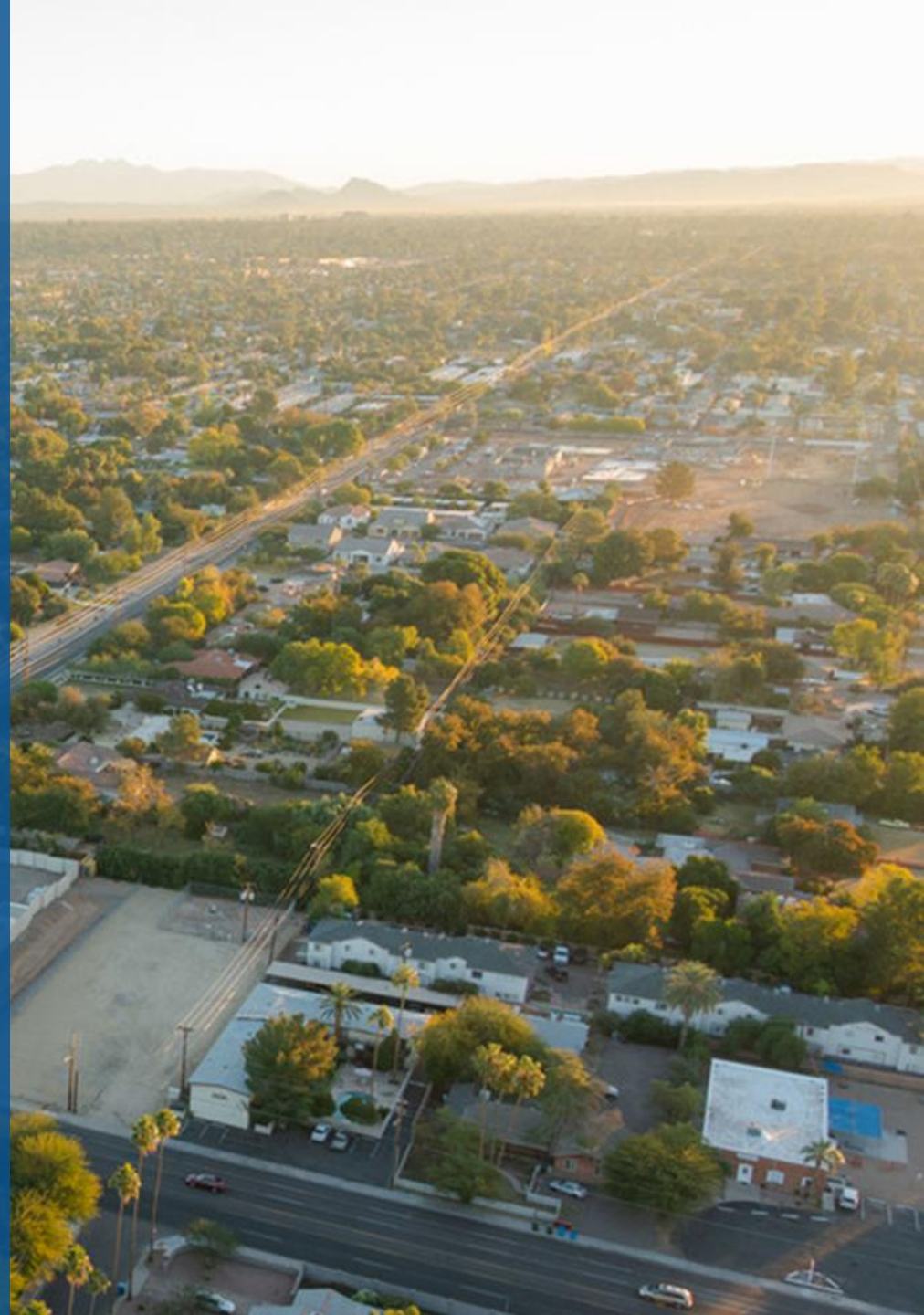
We support communities across Arizona with efforts such as:

- Healthy Forest Initiative
- Light up Navajo
- Coal Communities Transition (CCT)
- **Plus more**

Did You Know?

Maricopa is the #1 fastest growing county in the U.S.

The SRP service area is experiencing unprecedented economic development growth from tech firms and advanced manufacturing resulting in **increased energy demand by 1.7% per year during the last decade**.



Did You Know?

This summer SRP served a multi-day record peak for electricity demand.

Power demand reached over **8,000 MW on several days**, and SRP served its highest peak demand of **8,163 MW on July 18**.

The 2023 peak was 7% higher than last summer.

JD Power Award

Salt River Project Ranks Highest in West Large Region for 23 Years

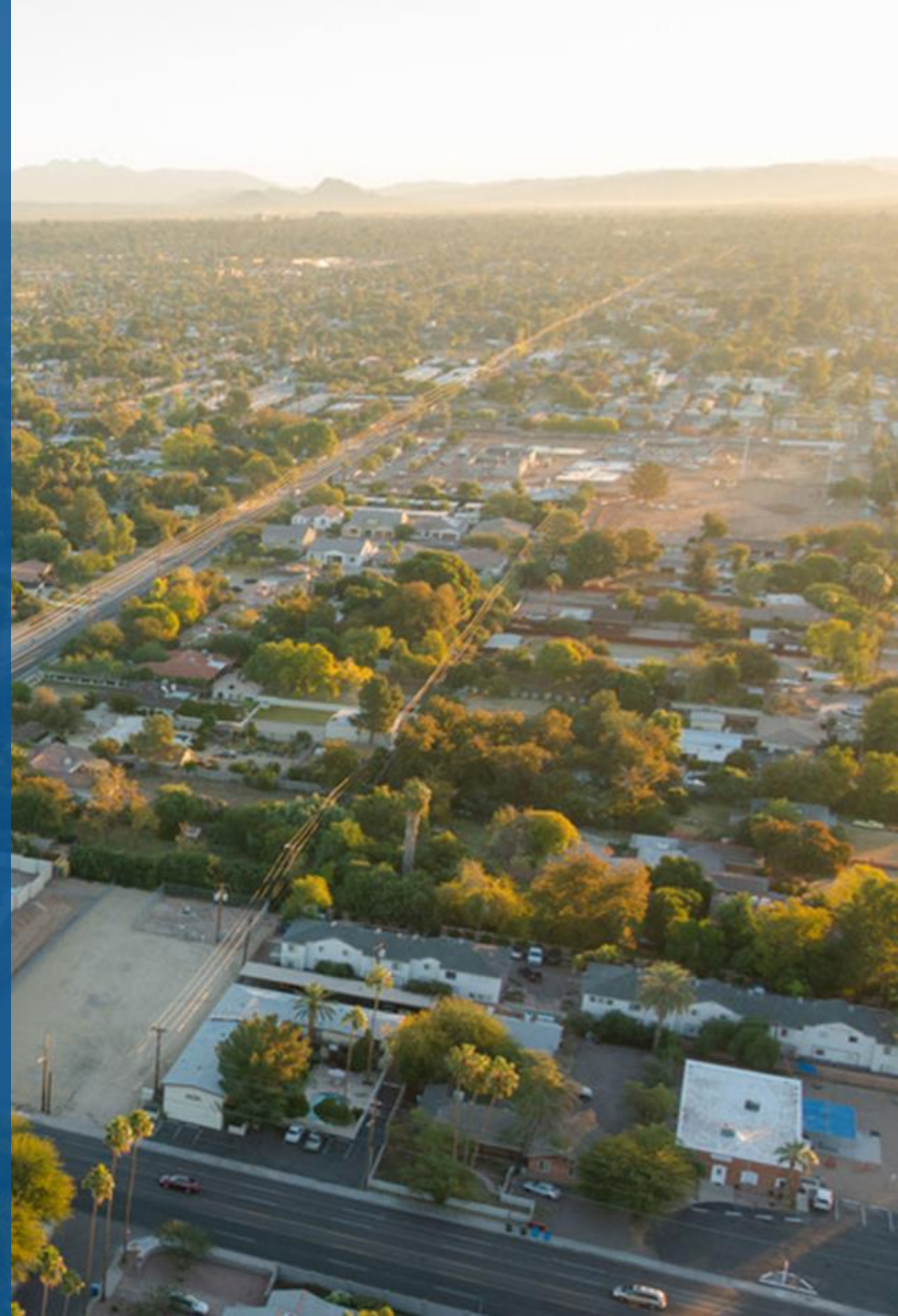
In 2022 SRP ranked first in all six factors:

1. Power Quality and Reliability
2. Price
3. Billing & Payment
4. Corporate Citizenship &
5. Communications
6. Customer Care

Did You Know?

SRP is proud to be ranked in the **top 10 in the nation** for SAIDI among all electric utilities with more than 500,000 customers **every year for at least the past 10 years.**

One industry metric commonly used to assess overall power reliability is the System Average Interruption Duration Index (SAIDI).



Did You Know?

Through **Operational Readiness efforts** SRP is taking steps to dispatch the right resources at the right time and in the most economical way possible.

This will help ensure SRP is providing reliable, affordable and sustainable power to Arizonans to meet anticipated demand in real time.

Did You Know?

SRP has restored over **68,000 acres** of forest through collaborative partnerships.

Did You Know?

SRP's groundbreaking smoke detector pilot project will help identify wildfires before they pose a threat to SRP assets and is the first of its kind in Arizona.

Wildfire mitigation efforts help safeguard SRP's reliability.

Did You Know?

SRP is retiring older utility poles that are at the end of their useful life and replacing them with newer poles that are better equipped to withstand wildfires and extreme heat.

Did You Know?

SRP safeguards its critical assets by conducting risk assessments of security systems, analyzing threat information and identifying and implementing physical security measures to reduce risk.

54%

progress towards the 2035 goal in FY22

1,020 lbs/ MWh

Sustainability: 2035 Goal

Generation Carbon Reduction

Reduce the amount of CO2 emitted by generation (per MWh) by 65% from 2005 levels by 2035

— 2050 target: 90% intensity reduction from 2005

Generation Carbon Reduction

Did you know?

SRP is implementing new, additional carbon-free resources under contract and coming online by 2025:

1,697 **MW** of solar

1,088 **MW** of storage

161 **MW** of wind

Did You Know?

SRP has among the largest utility-scale battery investments in the Western U.S. with over 1,100 MW of battery storage projects that will be online by the end of 2024.

Did You Know?

SRP will contract for a total of nearly 800 MW from Arizona's largest solar energy project, CO Bar Solar, which is located northwest of Flagstaff.

Once operational in 2025, it is expected to be one of the largest solar projects in the U.S., and the energy SRP will receive is enough to power 180,000 average size homes.

Did You Know?

SRP is also contracted to receive solar output and battery storage from the **Sonoran Energy Center**, which is the **largest solar-plus-battery project in the state**, located south of Buckeye, and is expected to be operational by the end of 2023.

Approx. 260-MW solar system with the ability to charge a 1 gigawatt-hour energy storage system.

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28%

progress towards the 2035 goal in FY22

439 gallons/ MWh

Sustainability: 2035 Goal

Generation Water Usage Reduction

Achieve 20% reduction in generation-related water use intensity across all water types