

SRP Summer Stakeholder Series – Near-Term Planning

July 22nd, 2021

Welcome

Kelly Barr

Associate General Manager Chief Strategy and Corporate Services & Sustainability Executive

safety minute

Attack Backing

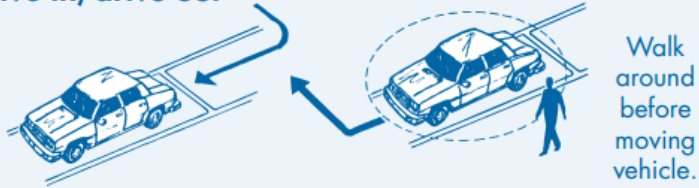
ATTACK BACKING

Attack Backing Program:

Attack Backing is a program to eliminate backing whenever possible. This approach to backing vehicles should help SRP reduce the number of preventable vehicular accidents.

When parking, eliminate backing whenever possible.

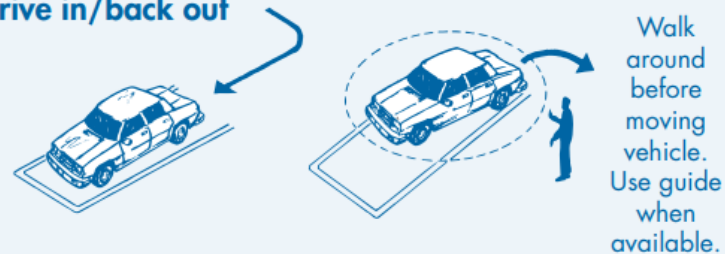
① Drive in/drive out



② Back in/drive out



③ Drive in/back out



sustainability minute

Carpooling

Carpooling reduces the number of automobiles needed by travelers.

Societal Benefits Include:

- Reductions in energy consumption and emissions
- Congestion mitigation
- Reduced parking infrastructure demand



Welcome SRP Board and Council Observers



John Hoopes
SRP Vice President



Randy Miller
SRP Board Member



Anda McAfee
SRP Board Member



Jack White
SRP Board Member



Larry Rovey
SRP Board Member



Suzanne Naylor
SRP Council Member



Rocky Shelton
SRP Council Member





June Meeting Feedback:

Overall Meeting Experience?

- **The time spent, logistics, overall understanding and pre-read material was all beneficial with insignificant disagreement.**

What would you like SRP to do more of, better or differently in future meetings?

- Make the case on **why this shift from IRP to the ISP** is timely and necessary
- Ask **stakeholders** what kind of information coming out of the **ISP would be valuable**
- **Format**
 - **More time for questions & discussion**
 - **Chat and Q&A visible by all**

Welcome SRP Team and Kearns & West



Summer Series and Meeting #2 Overview

Joan Isaacson, Facilitator
Kearns & West

ISP Summer Series Overview

Meeting #1

Since We Last Met

Update on 2017-18 IRP Strategic Resource Directions progress.

Meeting #2

Near Term Planning

Educate on forces of change affecting the industry and near-term planning
Collect perspectives and input from stakeholders.

Meeting #3

Where We Want to Go “Long-Term”

Engage stakeholders in early development of the Integrated Systems Plan (ISP).

Our Objectives for Meeting #2

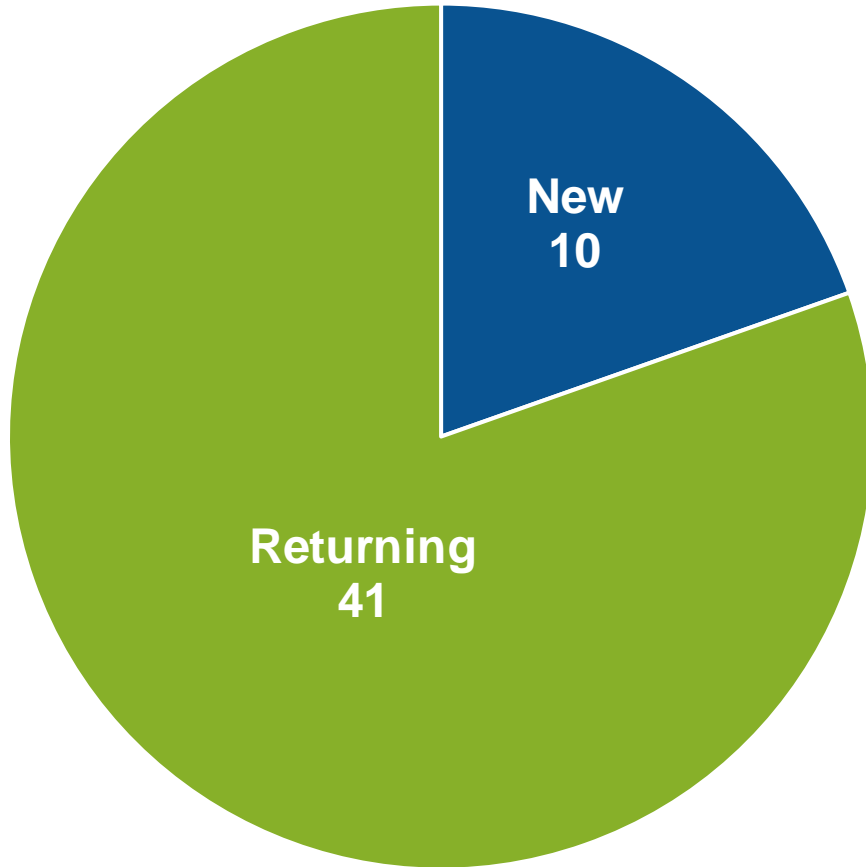
- **Provide opportunities for stakeholder to engage in Q&A related to SRP's near-term planning efforts.**
- **Collect community stakeholder perspectives on SRP's near-term planning efforts to ensure that important considerations are not missed.**
- **Increase SRP's understanding of stakeholder's topical interests to inform the stakeholder engagement program for the longer-term ISP.**

ISP Summer Series Stakeholders

1. AARP
2. AEPCO
3. AES
4. Air Products
5. Amazon
6. AMPUA
7. AMWUA
8. Apache County
9. Apache Junction
10. Apex Clean Energy
11. Apple Inc
12. APS
13. Arizona Cattle Growers Association
14. Arizona Center for Law in the Public Interest
15. Arizona Chamber of Commerce
16. Arizona Commerce Authority
17. Arizona Competitive Power Alliance
18. Arizona Cotton Growers Association
19. Arizona Energy Policy Group
20. Arizona Farm Bureau
21. Arizona Hispanic Chamber of Commerce
22. Arizona Lodging and Tourism Association
23. Arizona Power Authority
24. Arizona Residential Utility Consumer Office
25. Arizona Solar Deployment Alliance
26. Arizona Solar Energy Industries Association
27. Arizona State Land Department
28. ASU
29. Avangrid Renewables (Iberdrola)
30. AZ Thrives
31. AZ PIRG
32. AZ Strategies
33. AZ Sustainability Alliance
34. Basha's
35. Beatitudes Campus
36. Boeing
37. Bureau of Land Management
38. Casa Grande
39. Candela Renewables
40. Chandler
41. Chicanos Por La Causa
42. City of Mesa
43. City of Phoenix
44. City of Tempe
45. CMC Steel
46. Coolidge
47. Copper State Consulting Group
48. Cushman & Wakefield
49. Cyrus One
50. Digital Realty
51. DMB
52. East Valley Chamber of Commerce
53. East Valley Partnership
54. Environment America
55. Environmental Defense Fund
56. EPRI
57. First Solar
58. Florence
59. Forest Service U.S. Department of Agriculture
60. Fort McDowell Yavapai Nation
61. Freeport McMoRan Copper and Gold
62. Gamage & Burnham Attorneys at Law
63. General Electric
64. Gila Bend
65. Gilbert
66. Glendale
67. Google
68. Greater Phoenix Economic Council
69. Greater Phoenix Leadership
70. Greenlots
71. Home Builders Association of Central Arizona
72. Intel
73. Interwest Energy Alliance
74. Leeward Energy
75. Local First Arizona
76. Kyl Center for Water Policy
77. Mercy Gilbert Medical Center/Dignity Health
78. Mitsubishi Hitachi Power Systems Americas, Inc.
79. NAU
80. Navajo County
81. New Leaf/ Mesa-CAN
82. NextEra Energy Resources
83. NREL
84. Page
85. Phoenix Chamber of Commerce
86. Pinal County
87. Queen Creek
88. Roosevelt Water Conservation District
89. Salt River Pima-Maricopa Indian Community
90. Scottsdale
91. Scottsdale School District
92. Seguro Energy
93. Sierra Club
94. Southwest Energy Efficiency Project Springerville
95. SRP Customer Utility Panel (CUP)
96. St. Johns
97. Strata Solar
98. Sustainable Energy Power Alliance
99. TEP
100. The Nature Conservancy
101. U of A
102. United Dairymen of Arizona
103. Valle Del Sol Strategic Initiatives; The Real Arizona Coalition
104. Valley Partnership
105. Walmart
106. West Marc
107. Western Grid Group
108. Western Resource Advocates
109. WildFire

Community Stakeholder Participation

Meeting #1 Returning & New Stakeholder



Stakeholder Interests



Agenda

| Time | | Topics | Presenter |
|---------------|---------|---|---|
| 10:00 – 10:10 | 10 mins | Welcome and Opening Remarks | Kelly Barr |
| 10:10 – 10:15 | 5 mins | Agenda Overview and Participation Opportunities | Kearns & West |
| 10:15 – 11:15 | 60 mins | Introduction to Near-Term-Planning and Q&A | Angie Bond-Simpson and SRP Subject Matter Experts |
| 11:15 – 11:20 | 5 mins | Polling and Breakout Room Process Overview | Kearns & West |
| 11:20 – 11:40 | 20 mins | Breakout Discussions | Facilitated by Kearns & West |
| 11:40 – 11:45 | 5 mins | E3 Introduction and Announcements | Facilitated by Kearns & West |
| 11:45 – 11:55 | 10 mins | Breakout Discussion Reports | Facilitated by Kearns & West |
| 11:55 – 12:00 | 5 mins | Wrap-up/Conclusion | Angie Bond-Simpson |

Opportunities for Participating Today

- Q&A session
- Polling
- Breakout room discussions



Guides for Productive Virtual Meetings

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

Near-Term Planning Discussion

Angie Bond-Simpson, Director

Integrated System Planning & Support (SRP)

What Does Near-Term Mean?

**IRP Strategic
Directions
2018-2024**

**Near-Term Needs
2021-2024**

**Integrated System
Plan
2025-2035**

Near-term needs are those that must be planned for prior to the finalization of the ISP in 2022.

- Driven by load growth and resource adequacy needs
- Primarily resource focused
- Held constant throughout analysis in development of the ISP

Today's Purpose- Transparency

1. SRP must add resources to be online and operating by 2024.
2. Continue “And” approach to adding resources: **Solar, Storage, Customer Programs** and **Natural Gas**.
3. These resources, along with SRP's existing portfolio, must uphold SRP's commitments including 2035/2050 Sustainability Goals and core planning principles.
4. These resources will be a piece of the overall need to 2035, which is the focus of the ISP.

Strong Economic Growth Ahead

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

Phoenix leads pre-pandemic job recovery: 97% through June 2021

The Southwest is becoming America's advanced manufacturing hub.

Housing permits are at the highest since mid-2000's: Over 100 every day.

SRP Mission Considerations for Near-Term Growth

Maintaining Reliability

Technology maturity
Timely development
Available when needed



Sustainability Commitments

Carbon
Water



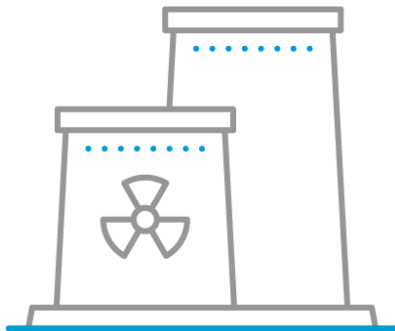
Affordability

Cost stability
Investment longevity
Lowest quartile prices regionally

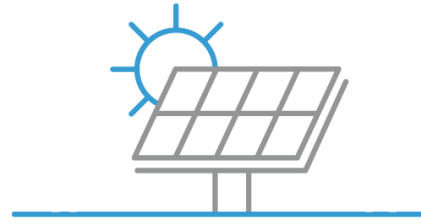
Meeting Near-Term Growth with “AND”

Serving SRP’s growing customer demand reliably will require resource additions.

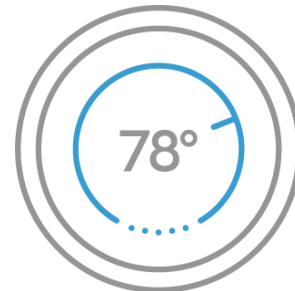
We have a good foundation:



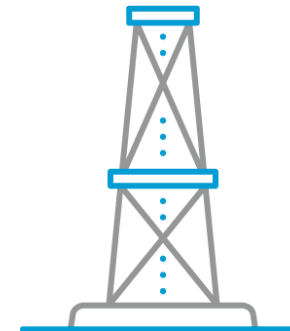
Palo Verde Nuclear
+114 MW by 2024



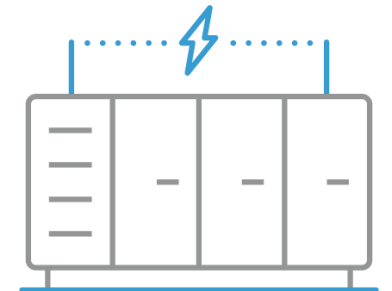
Solar Additions
+2025 MW by 2025



Demand Response
150 MW by 2022

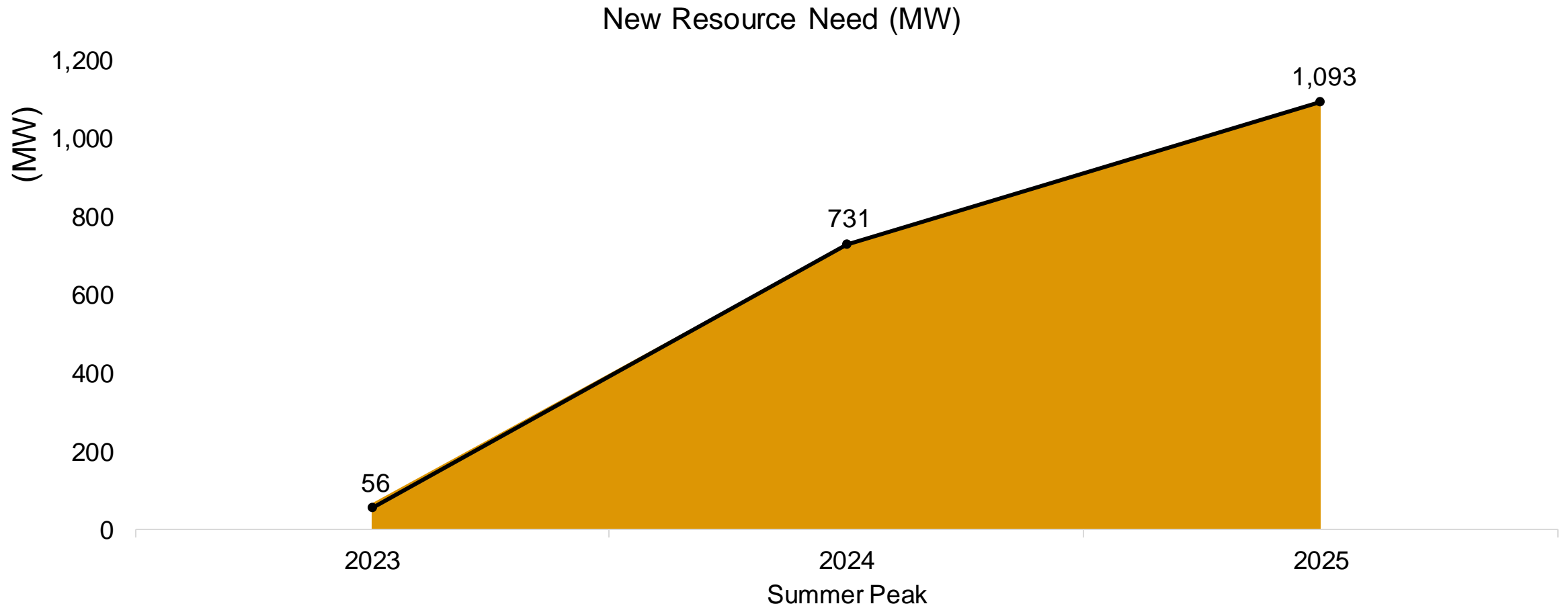


Near-term Peakers
+176 MW by 2022



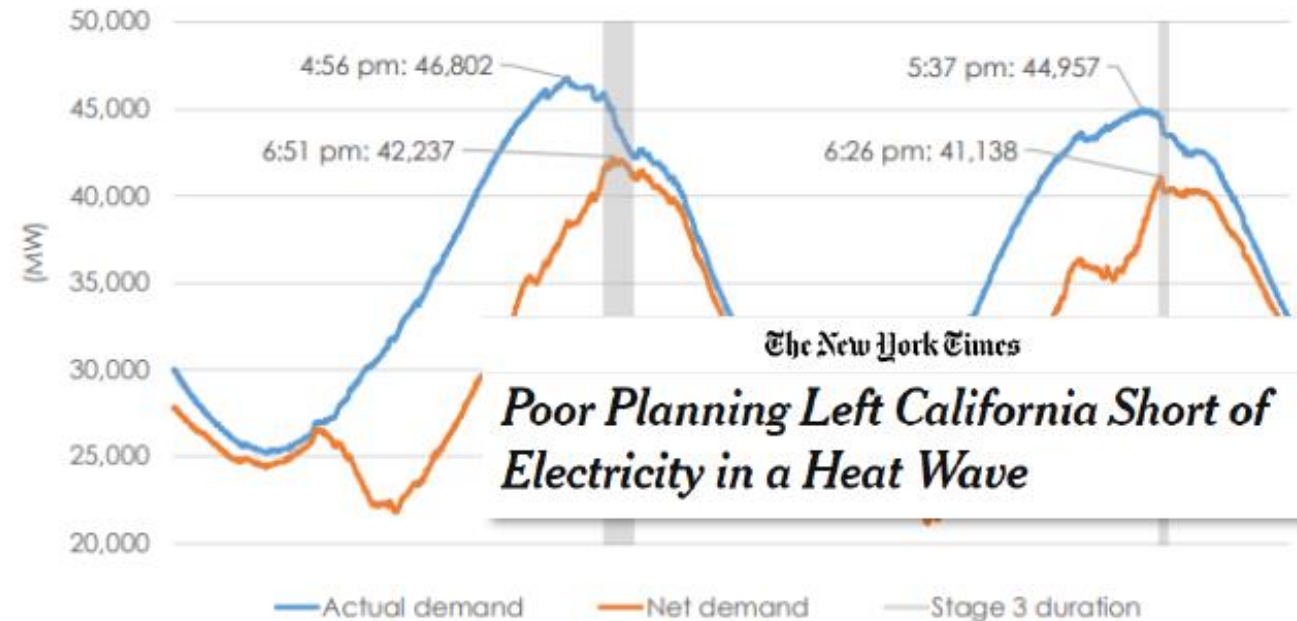
Battery Storage
+372 MW by 2023

Extraordinary Near-Term Growth



Planning for Reliability

- Ample supply available to meet demand
- All conditions – not just average
- Firm resources with sustained output have the highest reliability value.



Source: <http://www.caiso.com/Documents/Final-Root-Cause-Analysis-Mid-August-2020-Extreme-Heat-Wave.pdf>

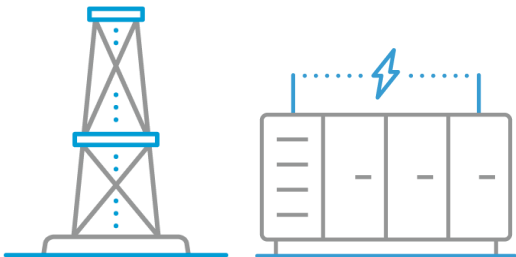
Maintaining Reliability with a Cleaner Grid



- Retirement of traditional **firm** resources



- Rapid growth of **intermittent** renewables



- Regional risk
- Climate change

Continue the “AND” Approach for Near-Term Need

Resources considered for the near-term:



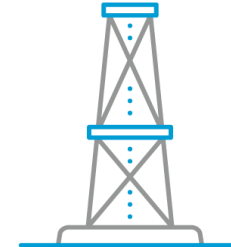
Existing Third-Party Assets
Carbon-free or low carbon



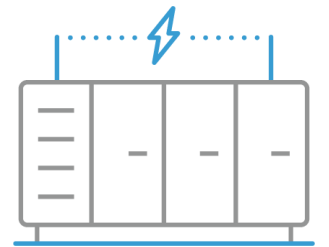
Solar



Customer Programs



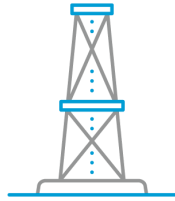
Quick Start Gas



Battery Storage

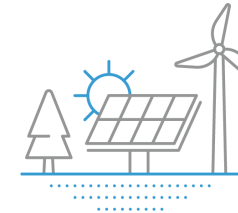
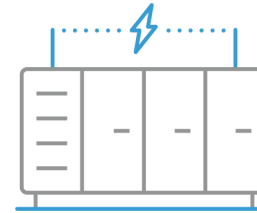
Near-Term Planning - Using the Right Tool for the Right Job

Firm



- Provides reliable capacity in all seasons and over long durations
- Flexibility to address intermittent resource ramping
- Fast response during emergency events

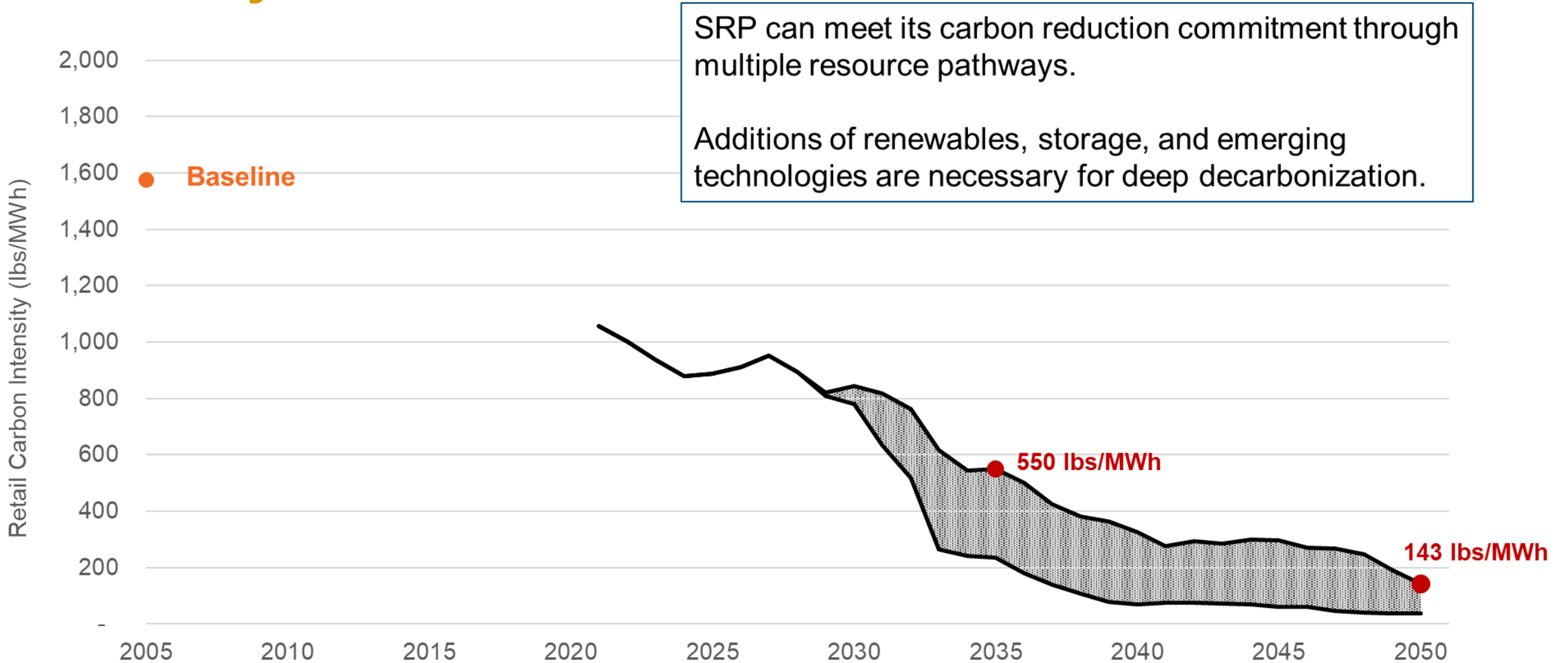
Intermittent & Limited Duration



- Carbon-free alternatives
- Developing technologies
- Decreasing costs
- Can be cheaper during daytime hours

In the near-term, **integration** of both types of resources will provide value to customers in terms of reliability, affordability, sustainability.

SRP Carbon Commitment Intensity Based



Establish Gas “Reliability Backbone” Next

Quick Start Gas Reliability Backbone:

- Meets critical demand conditions
- Backs up intermittent renewables and limited duration storage
- Capable of transitioning to hydrogen

Sustainability Commitments

- ✓ Low Carbon
- ✓ Low Water Use

Reliability Need

- ✓ Quick Start
- ✓ Firm and Flexible

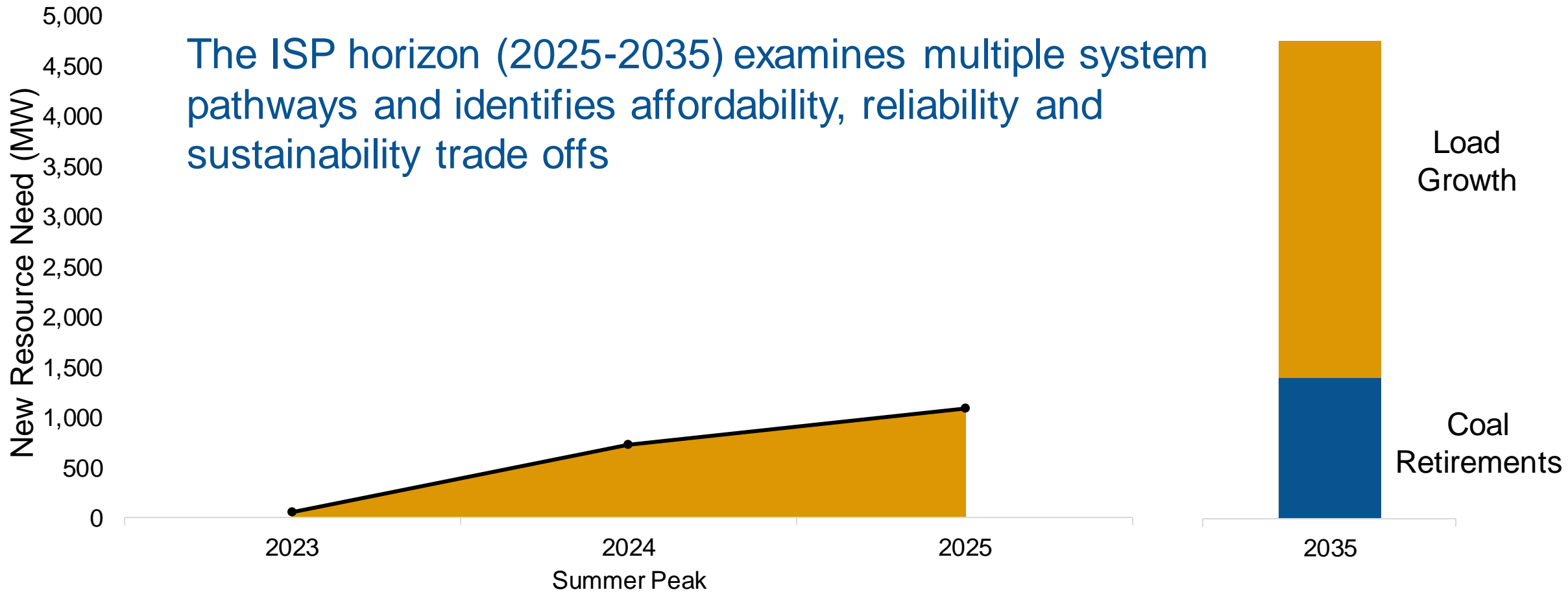
Affordability

- ✓ Mature and Versatile

Key Takeaways for Near-Term Planning

- SRP must plan for growth and be mindful of regional risks
- Near-term planning focus:
 - Substantial solar for carbon reductions – 2025 by 2025
 - Integration of industry leading battery storage commitments
 - Firm, flexible gas reliability backbone
- Other technologies will be needed

Meeting Near-Term Growth is Only a Start



Q&A

Join with Raise Hand or Chat

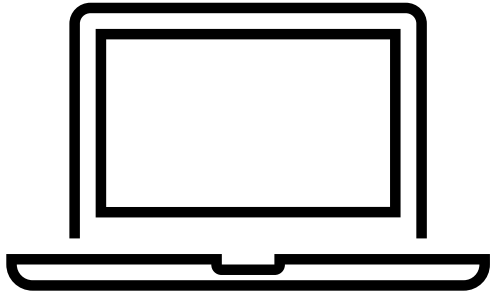
Angie Bond-Simpson, Director
Integrated System Planning & Support (SRP)
And SRP Subject Matter Experts

Polling and Breakout Discussion Process Overview

Joan Isaacson, Facilitator
Kearns & West

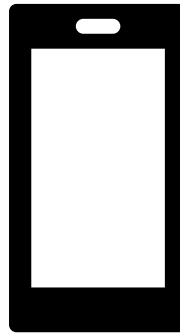
Polling Exercise

THREE WAYS TO PARTICIPATE



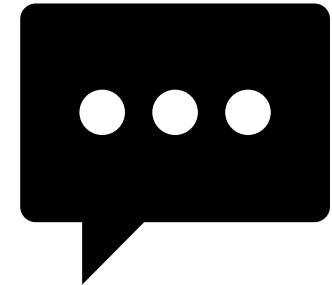
BY COMPUTER

Go to pollev.com/kwpoll1
on your internet browser.



BY SMART PHONE

Go to pollev.com/kwpoll1
on your internet browser.

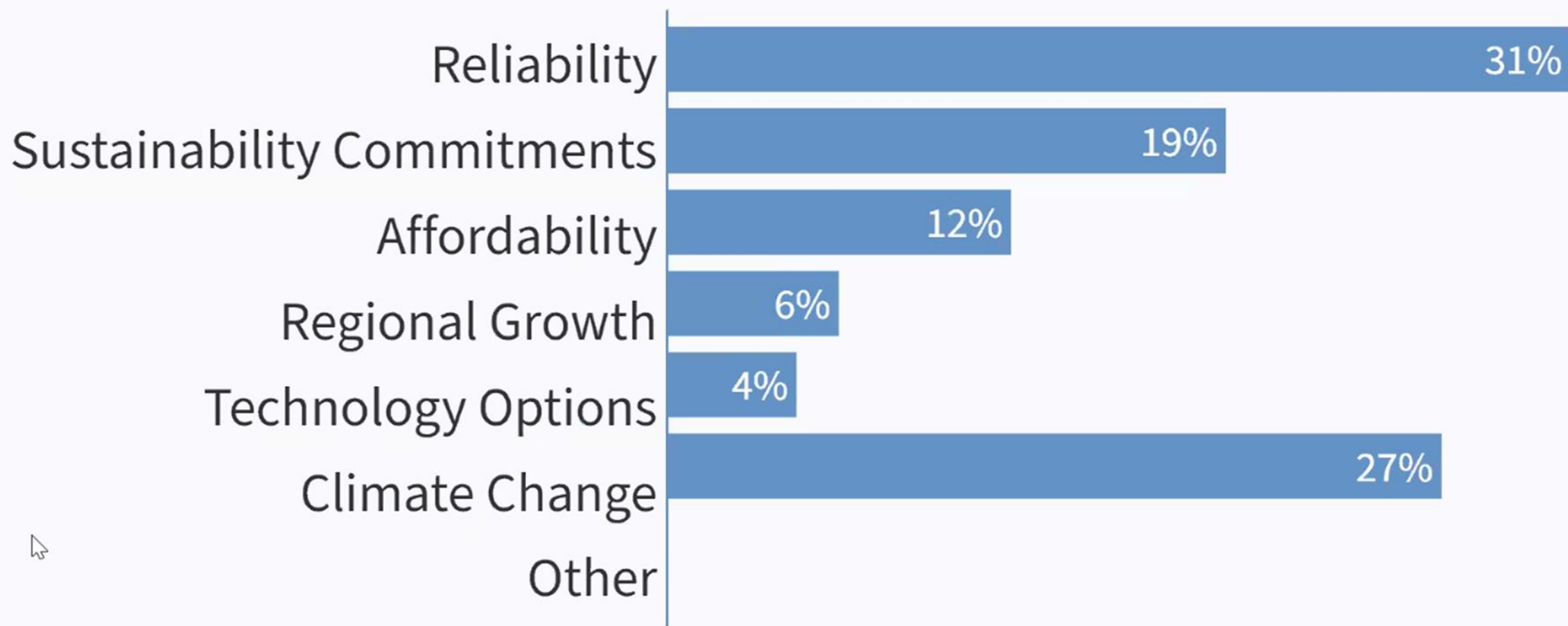


BY TEXT MESSAGE

Text [kwpoll1](https://pollev.com/kwpoll1) to 22-333 on your
mobile device.

 Poll locked. Responses not accepted.

From your perspective, what are the most important considerations for SRP's near-term planning efforts? (Please select 2 answers)



Breakout Discussions

Joan Isaacson, Facilitator
Kearns & West

Purpose: Listening Session

Collect community stakeholder perspectives on SRP's near-term planning efforts to ensure that important considerations are not missed

Increase SRP's understanding of stakeholder's interests to inform the stakeholder engagement program for the longer-term ISP

We want to hear your perspectives!
Raise Hand and unmute to join the conversation or type your perspectives in **Chat**

E3 Introduction August Meeting Overview

Angie Bond-Simpson, Director
Integrated System Planning & Support (SRP)



About E3

- + **Founded in 1989, E3 is a leading consultancy in the electric power sector – offices in San Francisco, Boston, New York, and Calgary**
- + **E3 consults extensively for utilities, developers, government agencies, and environmental groups on clean energy issues**
- + **Our experts provide critical thought leadership, publishing regularly in peer reviewed journals and leading industry publications**
- + **We have conducted deep decarbonization and clean energy analysis across the U.S. for many clients, including:**
 - **US wide:** United Nations
 - **California:** CPUC, CEC, SMUD, LADWP, The Nature Conservancy, Environmental Defense Fund
 - **Southwest:** SRP, APS, NVE, PNM, EPE
 - **Colorado:** Governor's Energy Office
 - **Hawaii:** HECO
 - **Pacific Northwest:** numerous utilities
 - **New York:** NYSERDA, NYPA
 - **New England:** Maine Governor's Energy Office, Calpine
 - **PJM:** Electric Power Supply Association
 - **Upper Midwest:** Xcel Energy



Integrated System Plan: Summer Series Informational Portal

Angie Bond Simpson, Director
Integrated System Planning & Support (SRP)

Integrated System Plan: Summer Series:

srpnet.com/about/integrated-system-plan.aspx

SRP Delivering water and power*

My Account Pay Bill Outages

MY ACCOUNT RESIDENTIAL ELECTRIC BUSINESS ELECTRIC WATER SAVINGS AND REBATES ABOUT US CONTACT US

Integrated System Plan: Summer Series

The electric power industry is undergoing a dramatic transformation fueled by changing customer expectations and desires, technological innovations and a focus on the environment.

To enable the achievement of SRP's 2035 Corporate Goals, SRP will begin transitioning from a traditional Integrated Resource Plan (IRP) to a more holistic and comprehensive Integrated System Plan (ISP).

Our new ISP will serve as a system-wide plan to keep SRP on the forefront of evolving technology and customer expectations.

This new Integrated System Plan:

- Collaboratively integrates all internal planning functions for generation, transmission, distribution and customer-sided resources
- Adapts to evolving industry demands and enhances long-term resource value for our customers and communities
- Addresses energy challenges through the lenses of sustainability, reliability and affordability
- Creates inclusive opportunities for active external stakeholder engagement

Engaging our stakeholders along the way

This summer, SRP is hosting an ISP Summer Stakeholder Series to update, educate and engage with external community stakeholders regarding the ISP transition. Working alongside communities is how SRP has helped to successfully grow the Valley. This transition is no different. Working with you through this transition is essential as we chart the course to a successful ISP.

ISP Stakeholder Engagement Opportunities

| 2021 | | | | | | 2022 | | | | | |
|---|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|
| JAN | FEB | MAR | JUL | SEP | NOV | JAN | FEB | MAR | JUL | SEP | NOV |
| ISP Summer Stakeholder Series | | | | | | | | | | | |
| Meeting #1: "Since We Last Met" @ June 16 | | | | | | | | | | | |
| Meeting #2: "Near-Term Planning" @ July 22 | | | | | | | | | | | |
| Meeting #3: "Where We Want to Go" @ August 10 | | | | | | | | | | | |
| ISP Analytical Roadmap Stakeholder Meetings | | | | | | | | | | | |
| ISP Stakeholder & Smart Engagement | | | | | | | | | | | |
| Finalize ISP Recommendation | | | | | | | | | | | |
| Final Stakeholder Meetings | | | | | | | | | | | |
| Publish ISP | | | | | | | | | | | |

ISP Summer Series Meeting 1: "Since We Last Met"

June 16, 2021, 9:30–11:30 a.m. (PST)

In this webinar, we will provide an update on actions taken in accordance with Strategic Resource Directions from the 2017-2018 Integrated Resource Plan.

Overview of Topics

- 2017-2018 Integrated Resource Plan Refresh
- 2017-2018 Integrated Resource Plan Strategic Direction Progress
- System Planning Foundations (Distribution, Transmission and Load Growth)


Webinar 1 Documents

- [Meeting 1 Pre-read material](#)
- [Meeting 1 Agenda](#)
- [Meeting 1 Presentation](#)

Report Back on Breakout Rooms

Kearns & West

What We Heard Today



**From your perspective,
what are the most
important considerations
for SRP's near-term
planning efforts?**

Wrap-up

Angie Bond-Simpson, Director

Integrated System Planning & Support (SRP)

thank you!