

SALT RIVER PROJECT AGRICULTURAL IMPROVEMENT AND POWER DISTRICT MEETING NOTICE AND AGENDA

POWER COMMITTEE
Thursday, October 24, 2024, 9:30 AM

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

Committee Members: Jack White Jr., Chair; and Leslie C. Williams, Vice Chair; and Casey Clowes, Randy Miller, Kathy Mohr-Almeida, Mark Pace, and Paul Rovey

Call to Order

Roll Call

1. **CONSENT AGENDA:** The following agenda item(s) will be considered as a group by the Committee and will be enacted with one motion. There will be no separate discussion of these item(s) unless a Committee Member requests, in which event the agenda item(s) will be removed from the Consent Agenda and considered as a separate item CHAIR JACK WHITE JR.

- Request for approval of the minutes for the meeting of September 26, 2024.

2. Southwest Power Pool's (SPP) Markets+ Development JOSH ROBERTSON

Request for approval of SRP's participation in Phase 2 of SPP's Markets+ development.

3. 2024 All-Source Request for Proposals (RFP) Update WILL FIELDER

Informational presentation regarding an update on the 2024 All-Source RFP, which was issued for resources to meet peak capacity and carbon-free energy needs in the late 2020's.

4. Distribution-Connected Solar and Storage Request for Information (RFI) Update MARY FAULK

Informational presentation regarding an overview of the RFI that SRP issued to explore solar and/or storage projects that will connect directly to SRP's 12 kilovolt distribution system.

5. Report on Current Events by the General Manager and Chief Executive Officer and Designees JIM PRATT

6. Future Agenda Topics CHAIR JACK WHITE JR.

The Committee 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 Committee on any of the matters listed on the agenda.

The Committee may go into Closed Session, pursuant to A.R.S. §30-805(B), for 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.



MINUTES
POWER COMMITTEE MEETING

DRAFT

September 26, 2024

A meeting of the Power Committee of the Salt River Project Agricultural Improvement and Power District (the District) convened at 9:30 a.m. on Thursday, September 26, 2024, from the Hoopes Board Conference Room at the SRP Administration Building, 1500 North Mill Avenue, Tempe, Arizona. This meeting was conducted in-person and via teleconference in compliance with open meeting law guidelines. The District and Salt River Valley Water Users' Association (the Association) are collectively known as SRP.

Committee Members present at roll call were J.M. White Jr., Chair; and C. Clowes, R.J. Miller, K.L. Mohr-Almeida, M.V. Pace, and P.E. Rovey.

Committee Member absent at roll call was L.C. Williams, Vice Chair.

Also present were Vice President C.J. Dobson; Board Members R.C. Arnett, K.J. Johnson, L.D. Rovey, and S.H. Williams; Council Chair J.R. Shelton; Council Liaison G.E. Geiger; Council Members M.L. Farmer, E.C. Gorsegner, J.W. Lines, W.P. Schrader III, and N.J. Vanderwey; L. Arthanari, I.R. Avalos, M.J. Burger, A.P. Chabrier, J.D. Coggins, A.Y. Gilbert, C.M. Hallows, Z.J. Heim, R.O. Hernandez, L.F. Hobaica, S.A. Horgen, V.P. Kisicki, M.M. Klein, K.J. Lee, M.L. Martin, M.R. Maser, G.A. Mingura, K.R. Nielsen, R.C. Norlin, J. Oh, B.A. Olsen, D.D. Patterson, I.C. Perez, S.A. Perkinson, J.M. Pratt, K.S. Ramaley, J.C. Robertson, C.M. Sifuentes, M.D. Weber of SRP; John Deese of Origis Energy; Matt Derstine of Snell & Wilmer, L.L.P.; Ian Calkins of Copper State Consulting Group; Ben Fitch-Fleischmann and Sam Johnston of Interwest Energy Alliance; Roger Halbakken of Arevia Power; Ashley Johnson of NextEra Energy; Autumn Johnson of Tierra Strategy; Nicholas Navarro of Plus Power; Samantha Salton and Bridget Sidwell of Strata Clean Energy; Zach Nelson of RWE; and Laura Trolese of The Energy Authority (TEA).

In compliance with A.R.S. §38-431.02, Andrew Davis of the Corporate Secretary's Office had posted a notice and agenda of the Power Committee meeting at the SRP Administration Building, 1500 North Mill Avenue, Tempe, Arizona, at 9:00 a.m. on Tuesday, September 24, 2024.

Chair J.M. White Jr. called the meeting to order.

Consent Agenda

Chair J.M. White Jr. requested a motion for Committee approval of the Consent Agenda, in its entirety.

On a motion duly made by Board Member R.J. Miller and seconded by Board Member M.V. Pace, the Committee unanimously approved and adopted the following item on the Consent Agenda:

- Minutes of the Power Committee meeting on August 22, 2024, as presented.

Corporate Secretary J.M. Felty polled the Committee Members on Board Member R.J. Miller's motion to approve the Consent Agenda, in its entirety. The vote was recorded as follows:

YES:	Board Members J.M. White Jr., Chair; and C. Clowes, R.J. Miller, K.L. Mohr-Almeida, M.V. Pace, and P.E. Rovey	(6)
NO:	None	(0)
ABSTAINED:	None	(0)
ABSENT:	Board Member L.C. Williams, Vice Chair	(1)

Evaluation of Day-Ahead Market Alternatives using SRP's Energy Market Principles

Using a PowerPoint presentation Josh C. Robertson, SRP Director of Energy Market Strategy, stated that the purpose of the presentation was to provide information regarding a comparison of two competing day-ahead market options against SRP's Energy Market Principles. They introduced Laura Trolese of TEA.

L. Trolese provided a background of TEA and explained that it was formed when three of its original members saw the benefit of creating a new entity to trade in their region that proved more economical doing it together, rather than going it alone. Using a map, they highlighted TEA's regional experience and made referenced to their public power clients. They provided an overview of the Western markets landscape as follows: 1) the West has been working on organized markets for nearly two decades, but this time is different; 2) the changing resource mix drives need for greater sharing of resources across a broader footprint; 3) entities are not quite ready for full Regional Transmission Organization (RTO) and pursuing incremental RTO services; 4) California Independent System Operator (CAISO) and the Southwest Power Pool (SPP) are competing for day-ahead market footprints – CAISO Extended Day-Ahead Market (EDAM) is moving forward, while SPP Markets+ depends on gaining critical mass; and 5) the presence of day-ahead markets in the West will impact all trade in the West.

L. Trolese informed the Committee that SRP retained TEA to provide an independent assessment of SRP's evaluation of day-ahead market options. They noted that TEA found no inaccuracies in SRP's assessment of market design differences between EDAM and Markets+ and that TEA agrees with SRP that Markets+ appears to best align with SRP's principles for joining a day-head market.

L. Trolese said that the cornerstone public principles include local control, affordability, and reliability. They detailed the benefits of the day-ahead market as follows:

- 1) operational savings through more efficient dispatch; 2) sharing of transmission to

ensure most efficient use; 3) proactive congestion management; and 4) increased visibility and situational awareness.

L. Trolese explained that the realization of benefits depends upon the governance, market design, and footprint of the day-ahead market SRP joins. They highlighted the benefits relating to the cornerstone public principles as follows: local control – benefits from an impartial market operator; affordability – benefits from capacity savings and footprint; and reliability – benefits from common resource adequacy.

L. Trolese concluded with the following takeaways: 1) TEA supports SRP's conclusion that the governance, SPP's impartial role in the market, and best practice market design policies of Markets+ appears to best align with SRP's principles; and 2) TEA concludes that Markets+ also best aligns with the cornerstone principles of the broader public power community.

J.C. Robertson of SRP; and L. Trolese of TEA responded to questions from the Committee.

Copies of the handouts distributed and the PowerPoint slides used in this presentation are on file in the Corporate Secretary's Office and, by reference, made a part of these minutes.

President D. Rousseau; Board Members S.D. Kennedy, K.H. O'Brien, and L.C. Williams; M.J. O'Connor and R.R. Taylor of SRP; Natasha Anderson of Mission Clean Energy; Leo Bird of Bright Night Power; Lisa Hickey of Interwest Energy Alliance; and Andy McCoy of the Arizona Attorney General's Office entered the meeting during the presentation.

Western Electricity Coordinating Council (WECC) Audit Update

Using a PowerPoint presentation, Matt D. Weber, SRP Director of Regulatory Audit and Compliance, stated that the purpose of the presentation was to provide information regarding the WECC audit scheduled for December 2, 2024 through December 13, 2024, including the audit purpose, the audit scope, and SRP's preparation activities.

M.D. Weber reminded the Committee that the North American Electric Reliability Corporation (NERC) and its associated regional councils, such as the WECC, have been selected by the Federal Energy Regulatory Commission (FERC) to manage the Electric Reliability in the United States. They explained that the SRP Electric Reliability Compliance Program maintains a corporate culture that promotes reliability, security, and compliance with NERC Reliability Standards. M.D. Weber introduced Israel C. Perez, SRP Principal Regulatory Compliance Engineer.

Continuing, I.C. Perez said that the audit is conducted every three calendar years to ensure compliance and evaluate risk and that SRP received a notice of audit packet on August 2, 2024. They explained that WECC will evaluate SRP's compliance as it

relates to its Critical Infrastructure Protection (CIP) and Operations and Planning (O&P) standards.

I.C. Perez reported that the following risk areas are the target of WECC's audit: physical security, remote connectivity, asset management and maintenance, entity coordination, and power system planning studies. They stated that WECC will conduct virtual interviews, request electronic data, and visit onsite control centers and two or more substations. I.C. Perez reviewed the timeline for the 2024 WECC audit. They concluded with a discussion of key takeaways.

I.C. Perez and M.D. Weber responded to questions from the Committee.

Copies of the PowerPoint slides used in this presentation are on file in the Corporate Secretary's Office and, by reference, made a part of these minutes.

M.L. Martin and J.C. Robertson of SRP; Andy McCoy from the Arizona Attorney General's Office; and Laura Trolese from TEA left the meeting during the presentation. G.M. Smedley of SRP entered the meeting during the presentation.

Salt River Pumped Storage Project Transmission Update

Chair J.M. White Jr. tabled the agenda item regarding the Salt River Pumped Storage Project transmission update to a future Power Committee meeting.

South Mountain Transmission Project

Using a PowerPoint presentation, John D. Coggins, SRP Associate General Manager and Chief Power System Executive, stated that the purpose of the presentation was to provide information regarding efforts to site and develop the South Mountain Transmission Project. They introduced Rick O. Hernandez, SRP Power Delivery Program Manager.

Continuing, R.O. Hernandez provided a map of the proposed South Mountain Transmission Project and indicated that the planned area will serve various uses. He explained that due to the City of Phoenix's projected high growth in the Laveen area, the current transmission and sub-transmission systems do not have the capacity to serve the projected load growth in Laveen.

R.O. Hernandez broke down the scope of the project as follows: 1) a 500 kilovolt (kV)/230kV/69kV receiving station; 2) two single-circuit 500kV line ties at substation; 3) two double-circuit 230kV pole lines; and 4) an option for a double-circuit 69kV underbuilt. They noted that the 230kV transmission lines will require a Certificate of Environmental Compatibility (CEC).

R.O. Hernandez reviewed the project financials for the Financial Plan 2025 (FP25) Budget. They provided an overview of the following developments: the public process

timeline; SRP's external facing website for the South Mountain Transmission Project; public outreach notifications; open house events; and examples of stakeholder engagements.

R.O. Hernandez, with the use of a map, outlined the routing opportunities and explained the line routes based on the project's purpose, need, and stakeholder feedback. They concluded with a discussion of next steps.

J.D. Coggins and R.O. Hernandez responded to questions from the Committee.

Copies of the PowerPoint slides used in this presentation are on file in the Corporate Secretary's Office and, by reference, made a part of these minutes.

S.A. Horgen, M.M. Klein, I.C. Perez, and M.D. Weber of SRP left the meeting during the presentation.

2023 All-Source Request for Proposals (RFP)

Using a PowerPoint presentation, Grant M. Smedley, SRP Director of Resource Planning, Acquisition, and Development, stated that the purpose of the presentation was to provide information regarding projects selected from the 2023 All-Source RFP.

G.M. Smedley summarized the 2023 All-Source RFP process as follows: 1) it was a comprehensive process conducted over 1.5 years; 2) the selection criteria was based on reliability, sustainability, affordability, and executability; 3) the projects selected will help meet SRP's capacity and carbon-free energy needs through the summer of 2028; and 4) the power purchase agreements will incorporate terms reflecting lessons learned including the following: commercial operation dates ahead of summer, rigorous testing/commissioning requirements, and robust performance requirements. They said that 58 unique project bids from 42 developers were received, 11 projects were shortlisted, 9 projects were selected, and 7 projects were or will be brought forth for Board approval consisting of approximately 1,300 megawatts (MW) of storage and 700 MW of solar capacity.

G.M. Smedley reviewed a timeline of presentations to the Power Committee regarding the 2023 All-Source RFP process from November 2022 to-date. They also reviewed the procurement targets established to meet peak capacity needs and to make continued progress towards SRP's 2035 Sustainability Goals.

G.M. Smedley broke down the evaluation and selection criteria for peak capacity and carbon-free energy project, which consisted of several categories including executability, operating characteristics, affordability, and sustainability. They provided a summary of current resources in construction, development, or active contract negotiations from FY25 to FY34, which was previously presented by B. Olsen at the August 2024 Board meeting.

G.M. Smedley provided an overview of the following recommended projects selected from the 2023 All-Source RFP with expected commercial operation by April 2028:

1) Valley Farms – a 400 MW grid-charged battery project developed by NextEra; 2) Selma – a 150 MW solar and battery project developed by NextEra; 3) Rainbow Valley – a 130 MW solar and battery project developed by EDF; and 4) SunDog – a 200 MW solar and battery project developed by Invenergy. They presented a project map reflecting the proposed locations of Valley Farms, Selma, Rainbow Valley, and SunDog.

G.M. Smedley responded to questions from the Committee.

Copies of the PowerPoint slides used in this presentation are on file in the Corporate Secretary's Office and, by reference, made a part of these minutes.

Vice President C.J. Dobson; A.P. Chabrier, A.Y. Gilbert, Z.J. Heim, R.O. Hernandez, K.R. Nielsen, R.C. Norlin, and J. Oh of SRP left the meeting during the presentation; W.C. Fielder and B.L. Petrey of SRP entered the meeting during the presentation.

Closed Session: Power Purchase or Energy Storage Agreements Selected from the 2023 RFP

Chair J.M. White Jr. called for a closed session for the Power Committee at 11:45 a.m., pursuant to A.R.S. §30-805(B), for the Committee to consider matters relating to competitive activity, including trade secrets or privileged or confidential commercial or financial information, with respect to a request for approval to enter into power purchase agreements or energy storage agreements for the following projects selected from the 2023 All-Source RFP: 1) a 400 megawatt (MW) grid-charged battery project; 2) a 150 MW solar and battery project; 3) a 130 MW solar and battery project; and 4) a 200 MW solar and battery project.

Natasha Anderson of Mission Clean Energy; Leo Bird of Bright Night Power; Ian Calkins of Copper State Consulting Group; John Deese of Origis Energy; Matt Derstine of Snell & Wilmer L.L.P.; Ben Fitch-Fleischmann, Lisa Hickey and Sam Johnston of Interwest Energy Alliance; Roger Halbakken of Arevia Power; Ashley Johnson of NextEra Energy; Autumn Johnson of Tierra Strategy; Nicholas Navarro of Plus Power; Zach Nelson of RWE; and Samantha Salton and Bridget Sidwell of Strata Clean Energy left the meeting.

The Committee reconvened into open session at 11:53 a.m. with the following members and others present: President D. Rousseau; Board Members R.C. Arnett, C. Clowes, K.J. Johnson, S.D. Kennedy, R.J. Miller, K.L. Mohr-Almeida, K.H. O'Brien, M.V. Pace, L.D. Rovey, P.E. Rovey, J.M. White Jr., L.C. Williams, and S.H. Williams; Council Chair J.R. Shelton; Council Liaison G.E. Geiger; Council Members M.L. Farmer, E.C. Gorseigner, J.W. Lines, W.P. Schrader III, and N.J. Vanderwey; and L. Arthanari, I.R. Avalos, M.J. Burger, J.D. Coggins, W.C. Fielder, C.M. Hallows, L.F. Hobaica, V.P. Kisicki, K.J. Lee, M.R. Maser, G.A. Mingura, M.J. O'Connor, B.A. Olsen,

D.D. Patterson, S.A. Perkinson, B.L. Petrey, J.M. Pratt, K.S. Ramaley, C.M. Sifuentes, G.M. Smedley, and R.R. Taylor of SRP.

Natasha Anderson of Mission Clean Energy; Ian Calkins of Copper State Consulting Group; Autumn Johnson of Tierra Strategy; and Samantha Salton and Bridget Sidwell of Strata Clean Energy entered the meeting.

Report on Current Events by the General Manager and Chief Executive Officer or Designees

There was no report on current events by Jim M. Pratt, SRP General Manager and Chief Executive Officer.

Future Agenda Topics

Chair J.M. White Jr. asked the Committee if there were any future agenda topics. None were requested.

There being no further business to come before the Power Committee, the meeting adjourned at 11:54 a.m.

John M. Felty
Corporate Secretary

Request for Approval for SRP to Participate in SPP Markets+

Power Committee Meeting

Josh Robertson | October 24, 2024

Meeting Objectives

- Provide an overview of the financial benefits of day-ahead market participation.
- Summarize the impact of day-ahead market participation on SRP's sustainability goals.
- Request approval for SRP to participate in SPP's Markets+, including the SPP Phase 2 Funding Agreement.

SRP's Energy Market Principles

Customer Benefits

- Net benefits
- Load and resource diversity
- Maintain or enhance reliability
- Path to RTO

Governance

- Independence / transparency
- Public Power representation
- Local resource decision making
- Utility input on grid operations

Transmission Cost Allocation

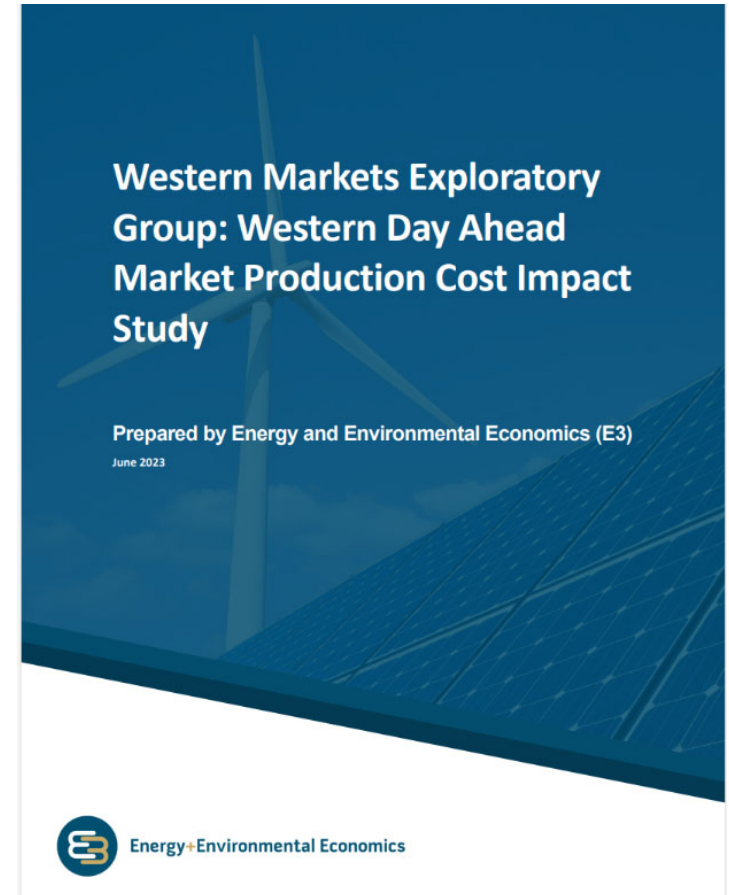
- New project cost allocated based on needs and measurable benefits
- Transmission costs recovered via "license plate" charge

Generation Resource Sufficiency

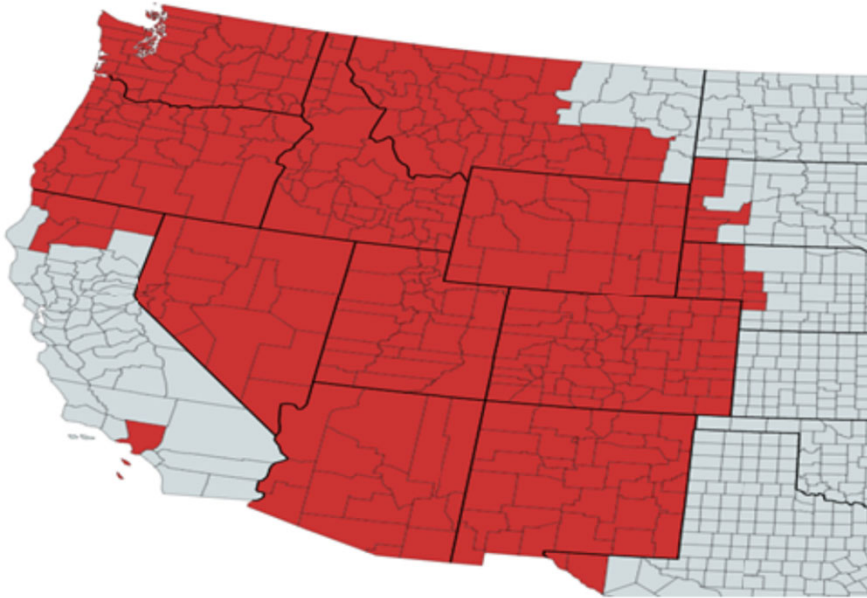
- Maintain vertically integrated utility structure
- Self scheduling of generation
- Resource adequacy construct

Western Market Exploratory Group (WMEG) Cost-Benefit Study (CBS)

- Goal was to provide information on benefits of joining either Markets+ or EDAM
- Simulates scenarios with different market footprints
- Focuses on variable production costs and energy market prices
- Based on expected future resource plans provided by utilities

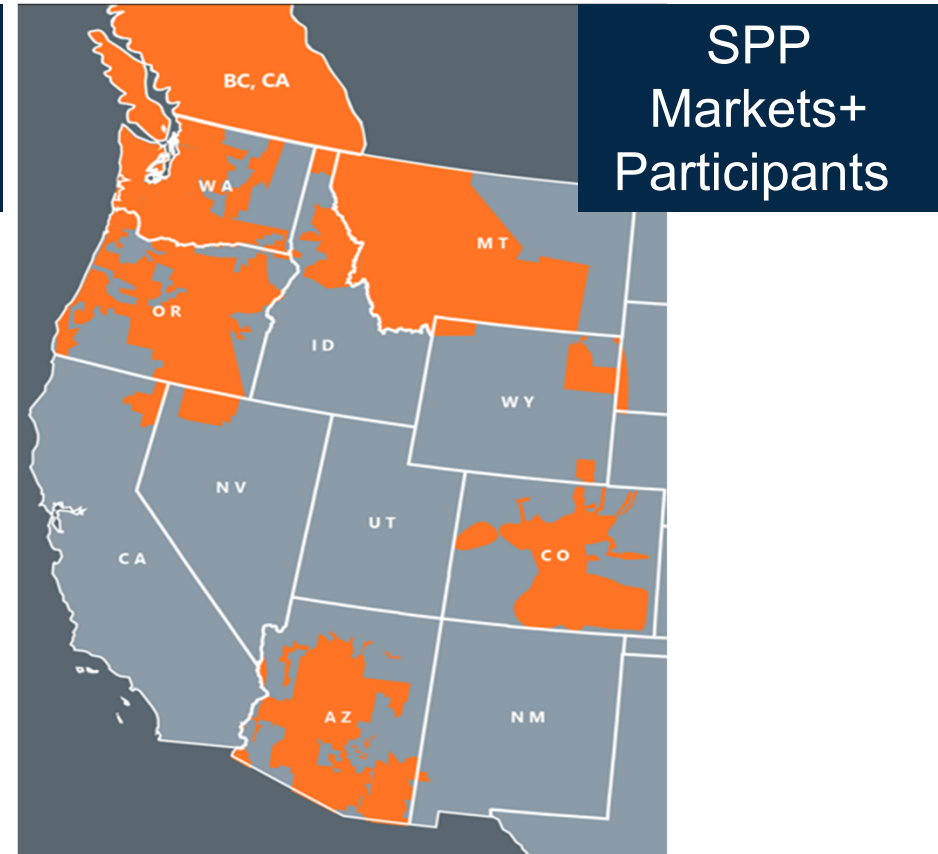


WMEG Participation

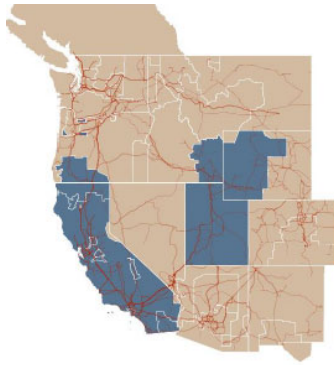


1. SRP
2. APS
3. TEP
4. AEPCO
5. PNM
6. Black Hills
7. LADWP
8. Portland
9. Seattle City Light
10. Platte River
11. NV Energy
12. PacifiCorp
13. Idaho
14. Puget Sound
15. Xcel
16. Avista
17. BANC
18. BPA
19. Chelan
20. El Paso
21. Grant
22. Northwestern
23. Tacoma
24. Tri-State
25. WAPA

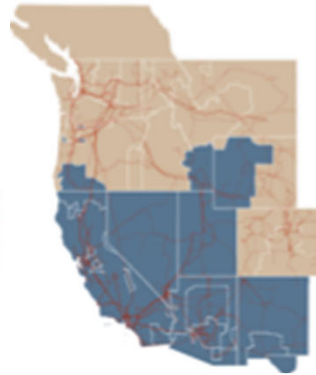
Potential Day-Ahead Market Footprints



Market Footprints WMEG Cost-Benefit Study



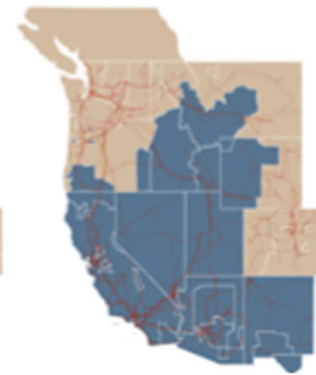
Main Split



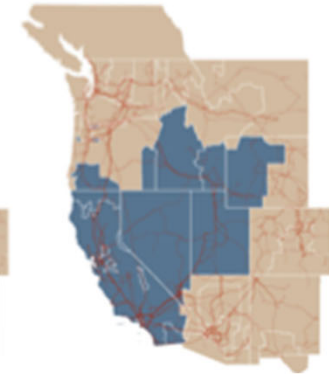
Alternative Split 1



Alternative Split 2



Alternative Split 3



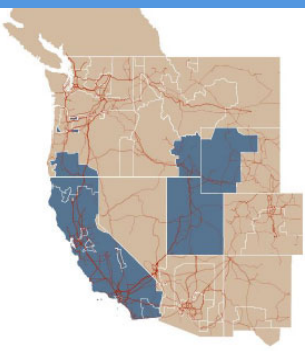
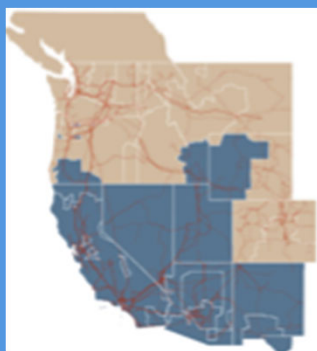
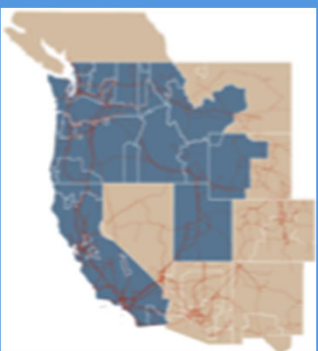
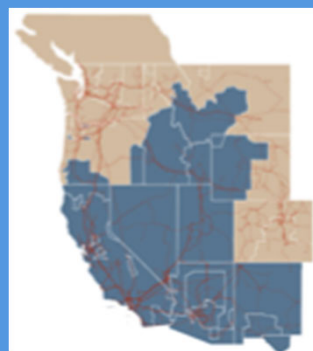
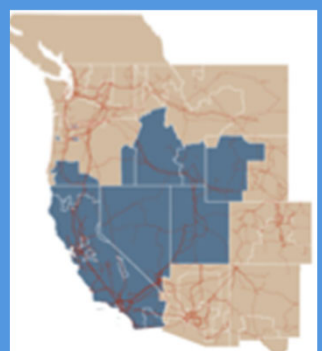
Alternative Split 4
"Current Expectations"

Map Legend

 EDAM Footprint

 Markets+ Footprint

SRP WMEG Cost-Benefit Study 2026 Results

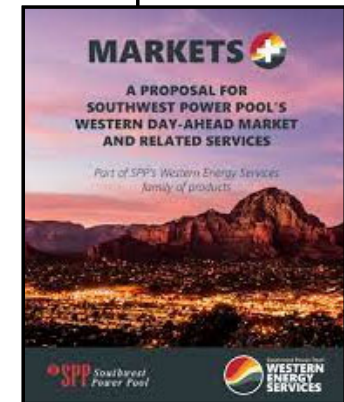
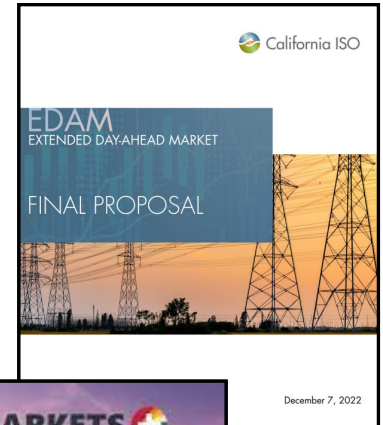
Footprint Map					
Scenario Name	Main Split	Alternative Split 1	Alternative Split 2	Alternative Split 3	Alternative Split 4 “Current Expectations”
SRP Day-Ahead Market	Markets+	EDAM	Markets+	EDAM	Markets+
Benefits Direction	↑	↑	↑	↑	↑
SRP Cost Savings \$	\$35M	\$32M	\$26M	\$30M	\$48M
SRP cost Savings %	4.7%	4.4%	3.6%	4.1%	6.5%

Arizona Entities Alignment Impacts Benefits

- AZ entities see benefits in day-ahead market participation
 - Important for AZ entities to be aligned.
 - There is a risk in not joining a day-ahead market if others do.
- NW – SW diversity is an essential factor in footprint selection
 - Greater benefit for AZ entities when in the same market as NW entities.
 - Greater benefit for AZ entities when in the same market as NW entities and in a separate market from CA.
- SRP, APS, TEP expressed support for Markets+

WMEG Cost-Benefit Study Conclusions

- All Day-Ahead cases result in additional cost savings over current market participation.
- Overall production cost differences between footprints are modest.
- Individual entity and regional results vary widely.
- Impacts of not joining a day-ahead market if others do are likely reduced liquidity and higher costs.



Requested Follow-up

WMEG Resource Dispatch Trends – SRP 2026

- **Solar Curtailments**
 - SRP in EDAM increases curtailments compared to business as usual (BAU)
 - SRP in Markets+ decreases curtailments compared to BAU
- **Coal and Gas**
 - All cases decrease coal and gas output from BAU
 - Coal and gas output is lower when SRP is in Markets+ than when in EDAM, except for single EDAM footprint

Clean Energy and GHG Accounting in Markets +

- SRP able to claim clean resources paid-for by customers
- Resource shuffling mitigated
 - Participation in the GHG pricing zone is voluntary
 - Protected via contractual arrangements and market participants provided surplus amounts
- Tracking and reporting will improve emissions visibility
 - Inclusive of owned, contracted, and market-based resources used to serve load
 - Hourly granularity

Request for Approval

SPP Markets+ Implementation & Participation Costs

- Market+ Phase 2 = Market Implementation
- Total SPP Costs
 - Phase 2: \$150M; each participant pays based on load
 - Annual operating fee of ~\$68M
- SRP costs
 - Phase 2 ~\$2.1M* paid annually for 10 years
 - Annual operating fee ~\$9.4M*
 - Internal implementation ~\$19.9M

** Subject to final number of participants*

SRP's Energy Market Principles

Customer Benefits

- Net benefits
- Load and resource diversity
- Maintain or enhance reliability
- Path to RTO

Governance

- Independence / transparency
- Public Power representation
- Local resource decision making
- Utility input on grid operations

Transmission Cost Allocation

- New project cost allocated based on needs and measurable benefits
- Transmission costs recovered via "license plate" charge

Generation Resource Sufficiency

- Maintain vertically integrated utility structure
- Self scheduling of generation
- Resource adequacy construct

Request for Approval

Management requests that the Power Committee recommend that the Board authorize the General Manager and Chief Executive Officer or Associate General Manager and Chief Planning, Strategy, and Sustainability Executive to execute:

- i. All agreements necessary for SRP to participate in SPP's Markets+, including the SPP Phase 2 Funding Agreement; and
- ii. Any subsequent amendments to such agreements that do not materially modify the terms of the agreements.

thank you!





Day-Ahead Markets Q&A

October 2024

The purpose of this document is to provide Board members and other stakeholders with the responses to questions related to SRP's participation in a day-ahead market.

Day-Ahead Market Participation Questions & Answers

- **Approval Item supported by prior presentations:** **1)** 12/05/2022 Western Markets Update – Informational Session **2)** 12/13/2022 WPP Western Resource Adequacy Program (WRAP) – Approval **3)** 01/24/2023 Phase 1 of Southwest Power Pool's Markets+ – Approval **4)** 08/22/2023 Western Markets Update – Informational Session **5)** 10/31/2023 Western Markets – Board/Council Study Session **6)** 04/25/2024 WRAP Update and Approval to Delay First Binding Season – Approval **7)** 06/20/2024 Update on Western Markets Initiatives - Informational Session **8)** 08/27/2024 Organized Day Ahead Market Participation and Overview of Impacts of SRP's Business Processes - Board/Council Study Session **9)** 09/26/2024 Evaluation of Day-Ahead Market Alternative Using SRP's Energy Market Principles - Informational Session
- **E3 WMEG Western Day Ahead Market Production Cost Impact Study – June 2023**
Prior presentations and Cost Impact Study are available via the Board & Council Portal. Please contact the Corporate Secretary's Office should you need access.

1. What are the day-ahead electricity market options available today and what are their timelines?

SRP is considering two day-ahead electricity market options: Markets+, proposed to be operated by the Southwest Power Pool (SPP) with an independent board of directors, and the Extended Day-Ahead Market (EDAM), proposed by the California Independent System Operator (CAISO) under the shared authority of an independent Governing Body and the CAISO Board of Governors. EDAM will go live in 2026, with its first two participants, PacificCorp and Portland General Electric, along with the CAISO Balancing Authority. Markets+ is scheduled to go live in 2027.

2. How will SRP's customers benefit from the company's participation in a day-ahead market?

SRP's participation in a day-ahead market aligns with SRP's mission to provide reliable, affordable, and sustainable energy to its customers. This participation is expected to result in cost savings for SRP customers, with studies indicating annual savings between \$23.9 million to \$47.5 million compared to current market participation. The day-ahead market will optimize resource utilization across a potentially diverse market footprint, which might include large hydrogeneration, solar, and wind resources. The diverse footprint, with different peak times will efficiently supply excess capacity during high-demand periods. Participation in a market with diverse resources and load profiles offers better matching of supply with demand, reducing overall costs and enhancing efficiency. Additionally, participation in a day-ahead market might serve as an incremental step towards potential future participation in a Regional Transmission Organization (RTO), which has the potential to unlock further economic benefits and improve transmission planning and operation. The market design will also support the integration of renewable energy sources, aligning with SRP's sustainability goals, including greenhouse gas tracking and reporting for enhanced emissions transparency. The design will allow resources like solar, wind, and hydropower to participate in electricity trading. This is coupled with other market resources, such as batteries, to manage the intermittency of these renewable sources reliably and cost-effectively. Overall, SRP's participation in a day-ahead market is

expected to provide net benefits for customers by reducing costs, optimizing resources, and supporting SRP's long-term sustainability goals.

3. Which of the day-ahead markets does SRP management expect will provide the greatest benefits to SRP's customers?

SRP's market strategy is to continue its incremental approach to organized market participation, ensure net benefits for SRP customers, enhance, or maintain system reliability, and have a future viable pathway for full RTO participation. Using SRP's Energy Market Principles as a guide, SRP management believes that the Markets+ day-ahead market will provide the greatest benefits to SRP's customers. Participation in Markets+ is generally projected to result in greater cost savings for SRP customers compared to EDAM. Additionally, Markets+ offers a robust governance structure that promotes independence, transparency, inclusivity, and stakeholder-driven decision-making, ensuring that public power utilities, like SRP, have a significant voice in market decisions. All participants in Markets+ will adhere to a shared resource adequacy program, ensuring sufficient resources are available to reliably serve load across the entire market footprint, preventing any participants from leaning on others and promoting equitable investment in resources. Furthermore, Markets+ supports SRP's strategy for future market engagement, offering a clear path towards full RTO participation. Overall, SRP management believes that SPP Markets+ aligns better with SRP's principles for market participation and will provide net benefits for SRP's customers.

4. How will joining a day-ahead market affect customer rates?

Participating in a day-ahead market is projected to bring substantial cost savings for SRP customers, with studies estimating annual savings ranging from \$23.9 million to \$47.5 million compared to current Business as Usual market participation. Any savings from day-ahead market participation will benefit SRP's customers.

5. What role did the WMEG study play in SRP's decision making? What other resources (i.e., third-party studies, internal studies) and sources of data are being leveraged to inform SRP's day-ahead market decision?

The Western Markets Exploratory Group (WMEG) was a group of 25 investor-owned utilities and public power entities across the Western Interconnection interested in exploring pathways to Western organized markets. In total, the group represented over 95 GW of peak load and over 16.5 million customers in the Western Interconnection. The WMEG engaged Energy & Environmental Economics, Inc. (E3) to perform a Cost Benefit Study (CBS) examining the economic impact that joining either the EDAM or the Markets+ option would have for each WMEG entity and for the Western Interconnection overall. The starting database for the study was a data set created by the Western Electric Coordinating Council (WECC) with subsequent modifications for both WMEG member areas and non-WMEG areas. The CBS benefited significantly from contributions by staff from each WMEG member in providing input data – including load growth projections, updated generator additions and retirement information, as well as generator operational parameters, costs, and percentage shares that are owned and or contracted to different WMEG entities, which was necessary for calculating the adjusted production cost impact of different market participation plans for each entity. SRP believes that having 25 utilities providing detailed data and input into the CBS enhanced the WMEG study's reliability by ensuring a diverse and comprehensive dataset, reducing biases, and increasing the

robustness of the findings. Currently, SRP is working with E3 to develop additional scenarios and analysis.

In addition to WMEG studies, SRP retained Utilicast to perform a Gap Assessment comparing today's operations where SRP is in the CAISO's Western Energy Imbalance Market (WEIM) using CAISO's Reliability Coordinator (RC) services to two different mutually exclusive scenarios: 1) SRP participates in EDAM and WEIM and continues using CAISO as its Reliability Coordinator and 2) SRP participates in Markets+, withdraws from CAISO's WEIM and switches its Reliability Coordinator to SPP's Western RC. In addition to its day-ahead market gap analysis findings, Utilicast highlighted staffing and systems changes for SRP to consider in its long-term strategy. According to Utilicast's assessment of the two different day-ahead market designs and potential impact on SRP's strategy, if SRP wants to maintain its path to RTO options, the Markets+ path appears to have a more direct route than EDAM.

In addition to the external consultant studies and analysis, SRP performed a thorough review of both market options against SRP's Energy Market Principles. The Energy Authority, as a consultant to SRP, assessed SRP's review of the market options and provided support for the findings.

6. Why does SRP need to make its day-ahead market decision in 2024?

Over the past few years, SRP staff have been actively involved in the development processes for EDAM and Markets+. The first presentation on day-ahead markets to the SRP Board was in December 2022. This was followed by several updates to the Board on Western Markets and a [public session](#) in 2023, which was part of SRP's Integrated System Plan technical workshops. SRP management presented that SPP Markets+ aligns better with SRP's principles for market participation and will provide net benefits for SRP's customers.

The timing of SRP's decision to join Markets+ is crucial, as it could affect the future viability of this choice. Markets+ relies on sufficient participants' commitment to succeed. Without this, the market may not form, and SRP could miss the chance to join the market it views as the better option. Although EDAM is a voluntary market, entities need an alternative to maintain their trading practices in the West. If Markets+ does not move forward and the West consolidates into a single market with CAISO, SRP may not have any choice but to participate because it can be anticipated that the bilateral market would diminish.

7. Which day-ahead market option will provide the greatest reduction of greenhouse gas emissions?

SRP's management expects that actual greenhouse gas (GHG) emission reductions will depend on individual utilities and whether they are subject to state compliance obligations or their own commitments. SRP is evaluating day-ahead market participation with consideration for SRP's sustainability goals. It is important for SRP to participate in a day-ahead market that will facilitate tracking emissions from purchases and sales. Both day-ahead market options provide that framework. SRP and other entities continue to be concerned that the current EDAM design allows California to deem a disproportionate share of carbon free resources as delivered to California, resulting in a disadvantage to other entities for meeting state or corporate goals.

8. Does SRP believe that EDAM's governance issues would be sufficiently addressed should California adopt Steps 1 and 2 of the governance changes proposed in the West-Wide Governance Pathways Initiative?

The CAISO Board of Governors has approved the Pathways Initiative Step 1 proposal, which does not require approval from the California state legislature. Step 1 does not sufficiently alter the existing governance structure, as market governance remains under California's ultimate authority. The Pathways Step 2 concept will require California state legislation; however, previous legislative efforts have failed and the outcome of this effort is unknown. The Pathways Initiative is unlikely to result in a governance framework comparable to SPP's Markets+ because CAISO's EDAM and WEIM are market designs and tariffs developed under CAISO's existing governance framework, lacking a transparent, stakeholder-driven design that ensures equitable outcomes. Most importantly, the Pathways Initiative does not address the fundamental issue of CAISO being both a market operator and market participant, which leads to blurred lines during dispute resolution discussions. In addition, The CAISO is a California state agency with a Board of Governors appointed by the California Governor and confirmed by the state senate. The Board appoints the CEO of the CAISO and CAISO is mandated to serve the needs of California consumers. The Pathways Initiative is still in development, with an evolving scope and uncertain outcome.

9. Why is SRP considering exiting WEIM so soon after investing in systems to support participation? What investment will be lost? What benefits will be lost?

SRP's 2035 Corporate Goal is to shape and participate in regional Western electric markets that provide value for the company and its customers. To achieve this, SRP is carefully evaluating market developments and adopting a gradual approach to entering these markets. The initial step was joining the CAISO WEIM market in 2020, following an implementation process that began in 2017. The next phase in this incremental approach is participating in a day-ahead market, with the potential to eventually evolve into a fully operational RTO.

Participating in WEIM provided SRP with several benefits, including staff training, situational awareness, and cultural transformation, enabling SRP to learn how to participate in an organized market. Additionally, SRP achieved greater operational efficiencies. As SRP transitions to Markets+, these positive changes will be retained. Most of the investments in hardware and software (such as meters) made for WEIM will also be utilized in the new day-ahead market.

In its decision-making process, SRP considered the benefits and costs of continuing participation in the WEIM, as well as any advantages of switching markets. SRP's decision timing for joining Markets+ is 7 years since its WEIM implementation began. This period has provided SRP ample time to prepare for the next step in market participation.

Requested Follow-up

Power Committee Meeting Handout

October 24, 2024

1

Question asked during "Day-Ahead Markets Evaluation" presented by The Energy Authority (TEA) to Power Committee

Question: Can you [TEA] provide financial benefits from public power entities that have joined an RTO?

Answer: TEA's response provided in the following slides.

2




3

Study Background & Objectives

- Client was previously in a purely bilateral market, then an imbalance market, then a full Regional Transmission Organization (RTO).
- Client observed their share of RTO transmission projects & RTO administrative fees increasing over time.
- Locally high transmission congestion raised questions whether transmission projects were beneficial.
- Client and their Board in an existing RTO wanted to understand if the RTO:
 - Benefited their customers
 - Lowered their wholesale power supply costs

10/24/2024 Power Committee Meeting - Handouts

4 

4

Study Approach & Assumptions

Approach:

- TEA modeled a historical back cast & a five-year future projection that compared:
 - RTO Case:
 - Assumed client resided within RTO and included market costs (transmission, admin.)
 - Bilateral Case:
 - Assumed client resided outside the RTO but bought/sold from the RTO
- The back cast allowed us to calibrate models against actual observed results in the RTO.

Assumptions:

- Remained mostly the same (generating units, load, fuel pricing, and PPA contracts)
- Major differences in assumptions:
 - RTO Case:
 - Included client share of RTO transmission projects, RTO admin fees
 - Bilateral Case:
 - No cost sharing in RTO transmission projects, no RTO admin fees
 - Addition of an hourly \$/MWh hurdle rate to buy/sell with the RTO
 - Higher operating reserves volume
 - Costs to maintain the Balancing Authority (BA) function

5

Study Results

Study results for different utilities would yield different results.

For client, RTO market was beneficial in all but one back cast year, and all projected years

- Client is generally net long energy and significant benefit from selling excess energy to the RTO when units were available.
- Client experienced a year with numerous outages, which resulted in the RTO being slightly more expensive than a stand-alone case.
- Client has considerable dispatchable range on resources, allowing for ramping down during low-priced hours and purchasing under the cost of self generation.
- RTO case resulted in significantly lower emissions. Client able to benefit from purchasing high renewables in RTO footprint.
- Client units ran significantly more in the bilateral case, which may increase maintenance costs.

6



7

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 center of the canyon, and a bridge is visible on the left side. The sky is clear and blue.

2024 All-Source Request for Proposals Update

Power Committee

Will Fielder | October 24, 2024

Agenda

- Procurement Update
- Response Summary
- Evaluation Criteria
- Timeline & Next Steps

Procurement Update

- Resources that provide capacity during summer months
 - At least 700 MW by December 2028
 - At least an additional 500 MW for a total of 1,200 MW by December 2029
- Planned carbon-free resource additions
 - Up to 2,500 MW of carbon-free energy by December 2029
- Long-development projects with commercial operation dates after 2030
- SRP retained Wood Mackenzie to administer RFP and support evaluation



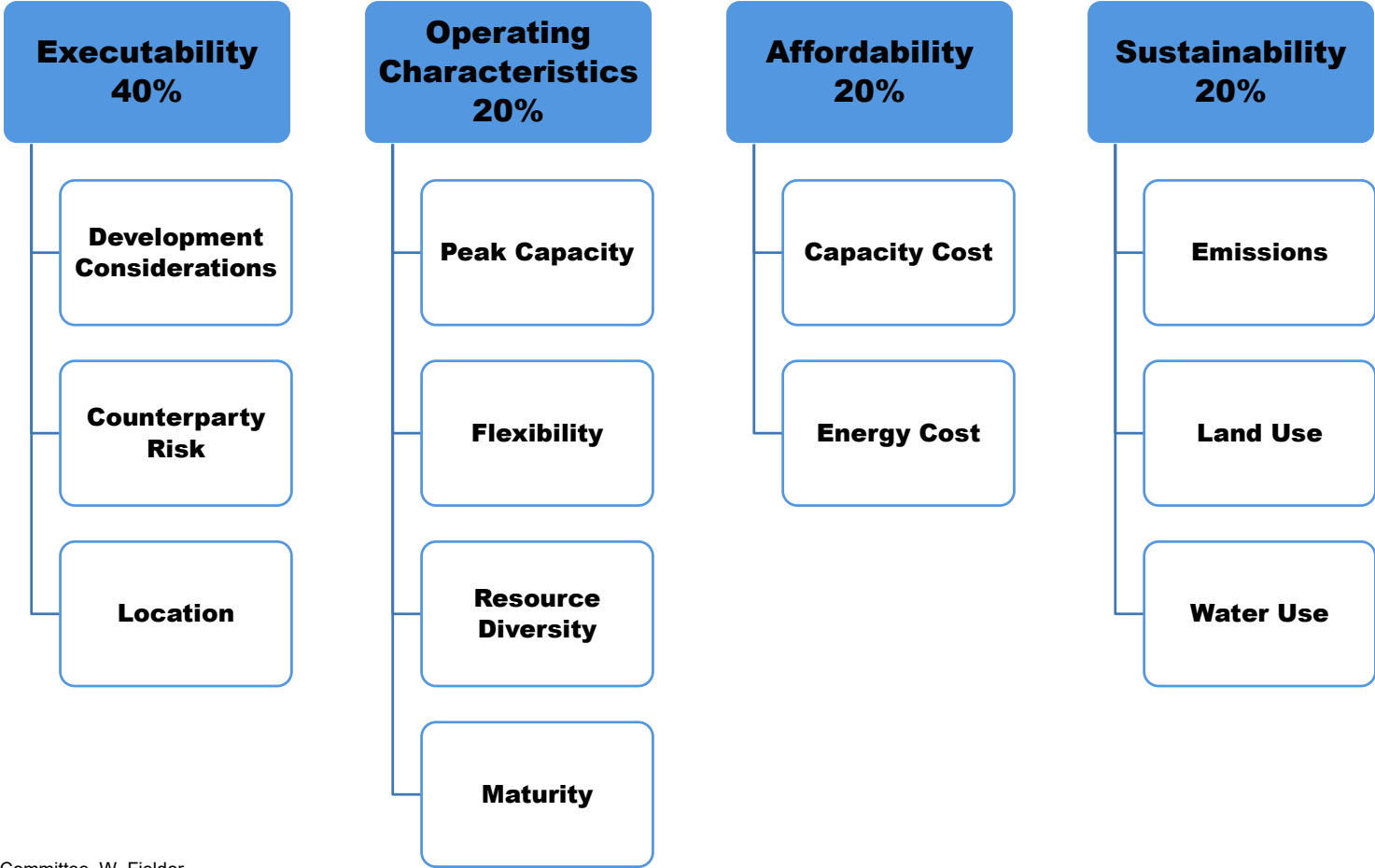
Response Summary

- Proposals were due May 3, 2024
- 58 interested parties proposed projects
- Received 92 main proposals
 - More than 300 project configurations
 - 8 of the main proposals were long-development projects or had long-development configurations
- Varying online dates, technologies, capacities, and pricing (configurations)

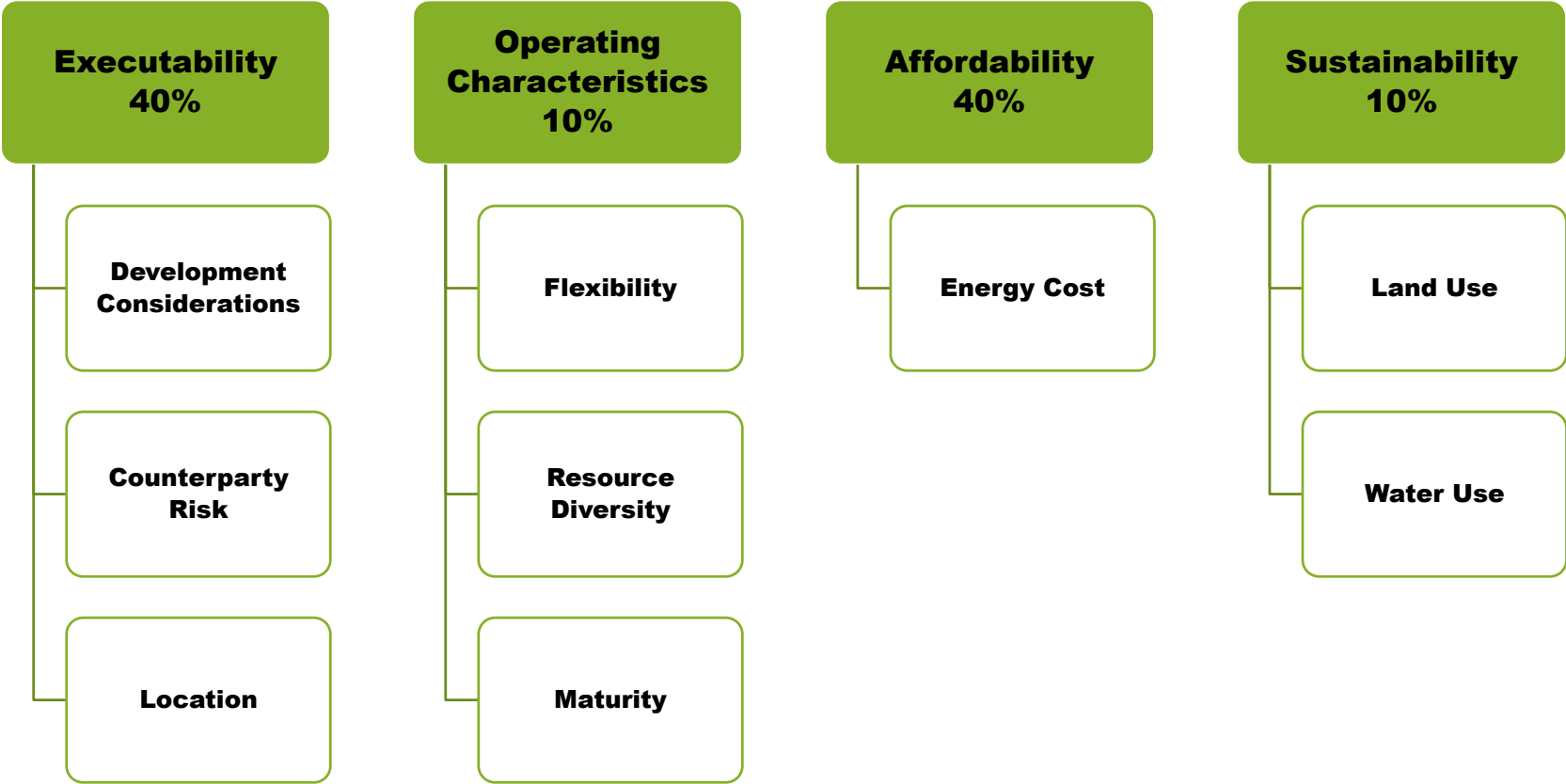
Technology	# of Main Proposals
Solar + Storage*	38
Standalone Storage*	26
Wind	11
Gas (CTs and CCs)	8
Wind + Storage*	3
Solar	2
Other*	4

*Included 4, 8, and 10-hr storage configurations

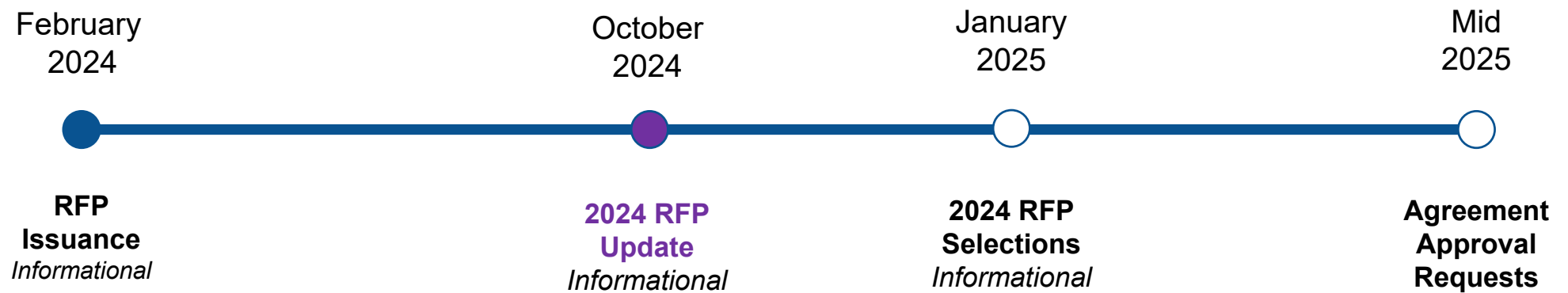
Evaluation Criteria: Summer Capacity



Evaluation Criteria: Carbon Free



Timeline and Next Steps



- Previous Power Committee meeting
- Current Power Committee meeting
- Future Power Committee meeting

thank you!



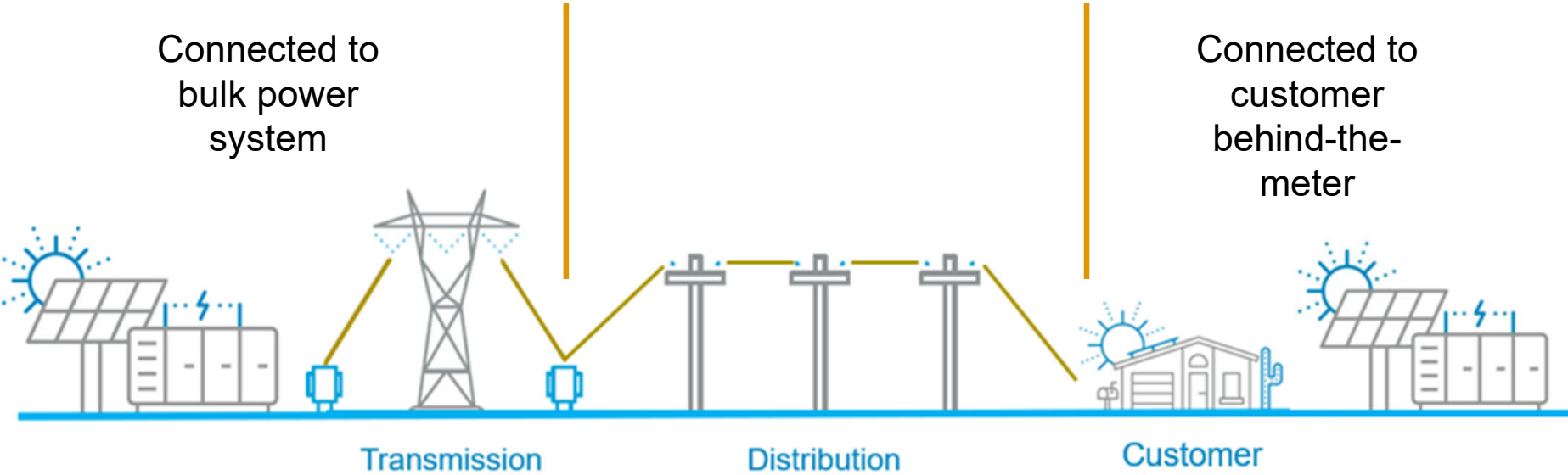


Distribution Connected Solar & Storage Request for Information

Power Committee

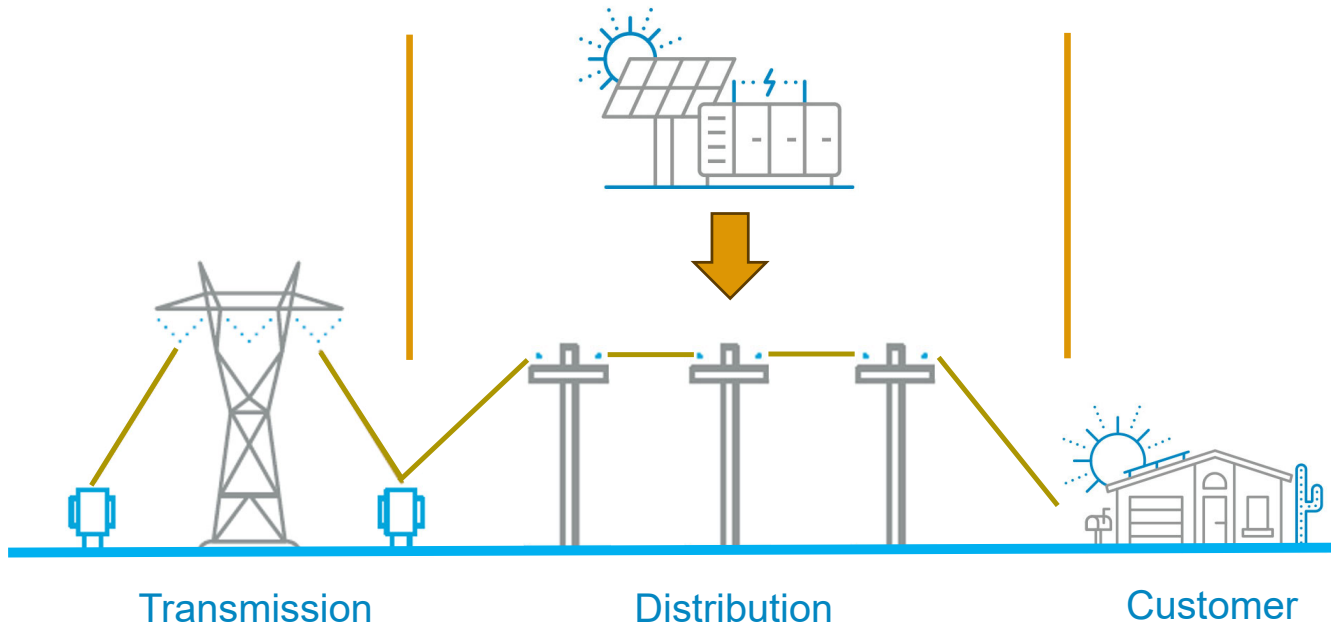
Mary Faulk | October 24, 2024

Current Solar and Storage Experience



Information on Distribution Connections

RFI objective: Explore solar and storage resources connected at the distribution level



Overview of the RFI

- Issued to over 200 vendors alongside press release and public posting
- Posted from May 31st to August 5th
- Project parameters:
 - Connect directly to SRP's 12kV distribution system (in front of customer meter)
 - 1 MW to 10 MW projects
 - Integrate with SRP's Advanced Distribution Management System (ADMS)

SRP Issues Request for Information for Distribution Connected Solar and Energy Storage Systems

May 31, 2024

Salt River Project (SRP) is requesting information from solar and/or storage installers, financing entities and any other interested parties regarding the installation of distributed solar and/or energy storage systems interconnected directly to SRP's distribution system.

SRP serves Maricopa County, one of the fastest-growing counties in the nation. Over the next decade, SRP plans to add thousands of megawatts (MWs) of solar and over a thousand MWs of battery storage. SRP has experience with large, utility scale solar and storage systems connected to the transmission system, as well as customer-sited rooftop and/or battery installations that are primarily focused on offsetting behind-the-meter customer load.

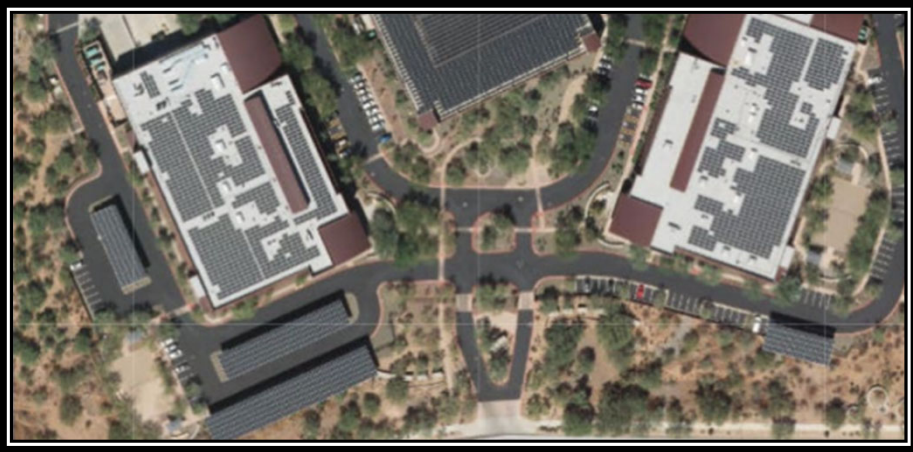
SRP is interested in exploring projects connected directly to its 12kV distribution system that SRP can use to potentially improve flexibility, reliability and resilience. The purpose of this RFI is to determine what viable installation, aggregation, communication and financing models exist for distribution-connected solar and/or storage systems that could help SRP meet its [2035 sustainability goals](#) while minimizing cost impacts to its customers.

Based on information gathered through this RFI, SRP may issue a Request for Proposals (RFP) at a later date.

SRP is requesting responses to the RFI by August 5, 2024. Additional information on the RFI can be found [here](#).

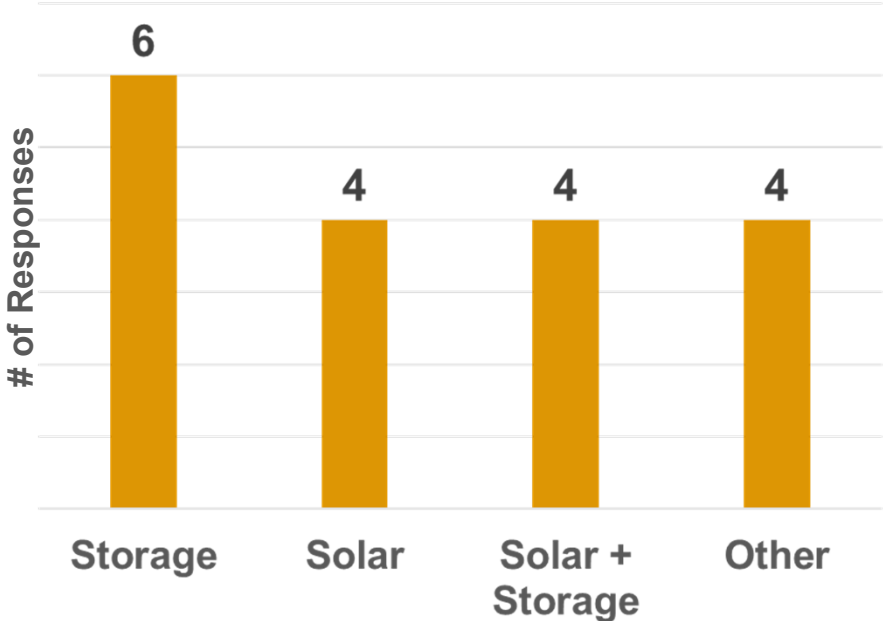
Diverse Range of Responses

- 18 different configurations
- 37 projects recommended, ranging from generic solar program development to specific projects with locations identified



10/24/2024 Power Committee, M. Faulk

Responses by Technology



Other includes supercapacitor storage, compressed air storage, and solar + storage microgrid

Information Categories

Size

Timeline

Costs

Space

Recruitment

Compensation

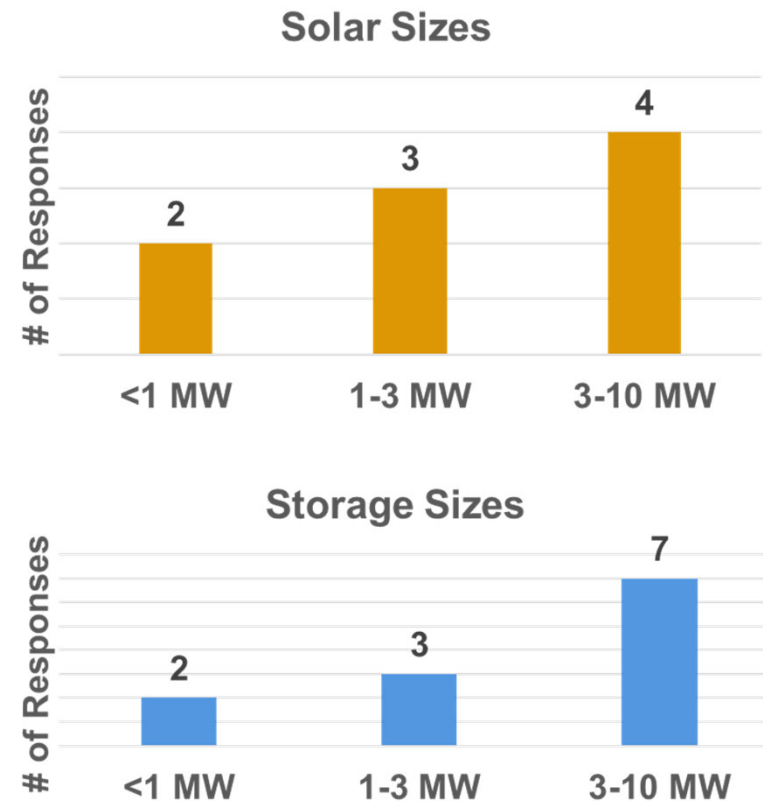
Aggregation

Communication

Majority of Responses Larger Scale Projects

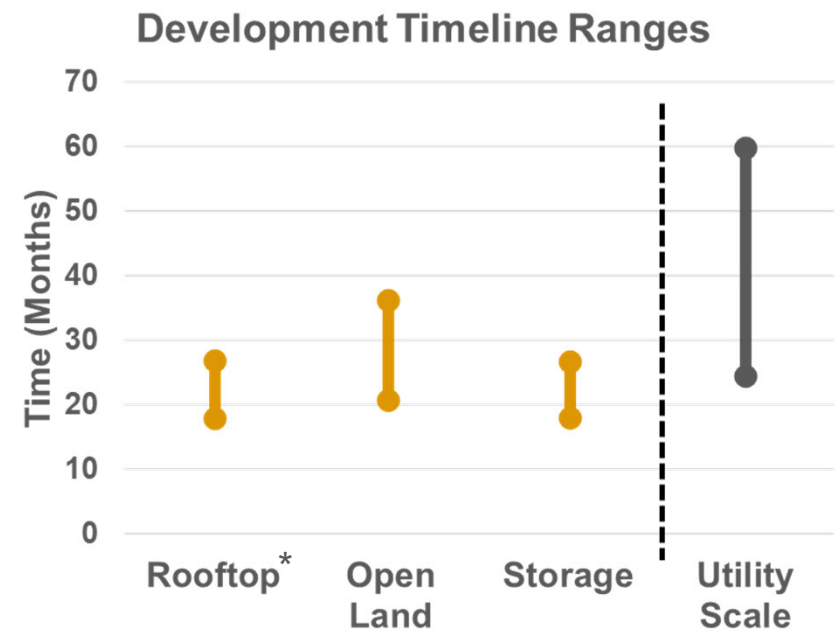
- Most projects > 1MW reflecting solar installs at commercial scale or open land
- Multiple vendors suggested preference towards large, individual installations rather than aggregating multiple smaller projects

Reference: Average project size from 2024 ASRFP 360 MW



Wide-range of Timelines Proposed

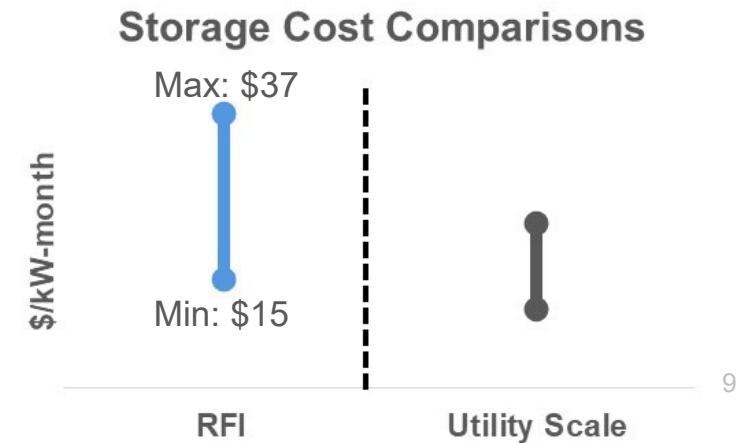
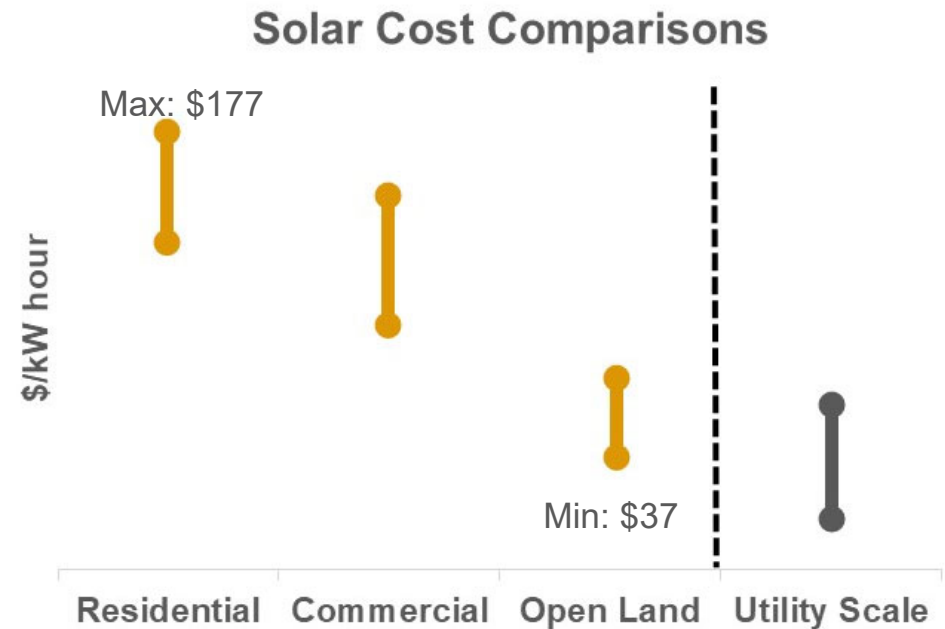
- Project timelines from contract execution to commissioning ranged from 14 months to 3 years
- Rooftop solar and standalone batteries have slightly shorter development timelines, likely due to scale and siting
- Site identification, permitting, and interconnection biggest uncertainties



*Only received timelines for commercial projects

Indicative Costs Vary

- Economies of scale for larger installations
- Fixed tilt rooftop installations considerably more expensive than single-axis-tracking on \$/MWh basis
- Opportunity for distribution connected storage



Key Takeaways and Next Steps

Compared to Utility Scale Bulk System Solar and Storage:

- Opportunities may exist for adding resources faster to the distribution system, yet size and increased costs should also be considered
- Greenfield single-axis-tracking and larger storage projects are most cost comparable
- Installations that provide shade, such as parking structures, may increase project value

Next Steps

- Explore co-benefiting solutions
- Develop pilot proof of concept into FP26 budget cycle

