



Salt River Project (SRP) Integrated System Plan Modeling Subgroup Meeting #7- Summary

Prepared by Kearns & West

Modeling Subgroup – Meeting #7 Overview

Meeting Objective

- Discuss Technical Q&A for the results from Integrated System Plan (ISP) analysis

Topic: Moving Forward Together Part 1

Date: August 11, 2023

Time: 2:00 p.m. – 4:00 p.m.

Location: PERA Whitetail

Please see Appendix A for the Advisory Group member roster and attendance information. The [meeting agenda](#) and [presentation](#) are included with the meeting materials for Advisory Group Meeting #13, held earlier on August 11 and are available at the [Integrated System Plan portal](#).

Meeting Orientation

Joan Isaacson, facilitator from Kearns & West, welcomed Advisory Group members to this optional Modeling Subgroup meeting for the ISP. She explained that the session would begin with a presentation from Bellomy Market Intelligence with more detailed information about the residential customer research, including an opportunity to review the survey and pose additional questions. Next, Isaacson explained subject matter experts from SRP would respond to technical questions submitted during the earlier Advisory Group meeting. She emphasized that there would be ample time for questions from Advisory Group members.

Customer Research

April Smith, Director of Client Services from Bellomy Market Intelligence, began by walking Advisory Group members through the residential customer survey, including educational information, questions on respondents' average monthly bill and how the components of the energy plans were defined. She then showed questions where customers were asked to compare different energy plans and indicate their preference for one potential future energy system over another or to remain with the same system. She explained how this type of exercise begins to show implicit customer preferences and indicate how customers make tradeoffs for affordability, sustainability and reliability. Smith also presented questions about system impacts on opinion ratings of SRP and willingness to participate in customer programs such as demand response.

Advisory Group members asked about how questions on sustainability and the energy mix were framed, the demographic information collected, and how bill impacts were estimated and presented. Smith explained that because customers struggle to understand nuances in carbon

reduction (intensity vs. mass), components of the future energy plan were translated into more understandable terms, such as the number of gas-powered cars. On resources and energy mix, Smith described how questions were developed with the project team and configurations for system components drew from the ISP scenarios and strategic approaches.

Smith presented the questions on demographics and shared that Bellomy had conducted subgroup analysis by income, age, Hispanic vs. non-Hispanic, usage categories and rate. Smith stated that those results could be shared with those interested. She clarified that because Bellomy had data in their sample for housing types (e.g., multifamily or apartment) the survey did not include those questions. For bill impacts, Smith showed how respondents either confirmed their current average monthly SRP bill or provided that information, which was then used to populate the monthly bill impact figures for the comparison questions.

Technical Q&A

Kyle Heckel, Senior Engineer for Integrated System Planning at SRP, explained that subject matter experts from SRP would begin by responding to the written questions submitted by Advisory Group members during the earlier meeting and any follow-up questions. Advisory Group members posed questions on a variety of topics, including system resources, load, affordability, equity, and risk assessment.

System Resources

In response to Advisory Group questions about location, transmission and status of generating resources, Heckel stated that for the ISP solar, battery and gas resources are assumed to be in Arizona with options for wind and geothermal assets in other states. Grant Smedley, Director of Resource Planning, Acquisition and Forecasting at SRP, added that in the latest requests for proposals SRP is seeing resources located across Arizona. Bryce Nielsen, Director of Transmission Planning, Strategy & Development at SRP, responded to a question about generation impacts to the transmission system by explaining that attributes such as geography and weather have the largest effect during peak hours. On market reliance for generation, Pam Syrjala from Supply Trading and Fuels, said that SRP is conscientious of where it buys firm summer power and is reducing assumptions for market depth for forward firm summer power purchases.

In response to a question about how much new natural gas capacity is in the Balanced System Plan in 2035, Heckel clarified that the new capacity includes approximately 2,000 MW of gas beyond that from the Coolidge Generating Station, but this replaces nearly 2,300 MW of coal and gas capacity that is removed from SRP's portfolio over the same timeframe. Bobby Olsen, Associate General Manager & Chief Strategy, Corporate Services & Sustainability Executive at SRP, described how SRP plans for new procurement on an annual basis and is considering a cadence of every 3 years for stakeholder engagement in the process. In response to a question

about potential changes to coal retirement timelines due to load growth, Olsen said that certainty is important in the transition for coal communities and that SRP plans closure dates thoughtfully.

Load

Advisory Group members posed questions about load forecasts and how impacts from electric vehicles are considered in the ISP. With respect to load forecasts, Heckel clarified that for the draft Balanced System Plan the capacity of 15,000 MW in 2025 is the nameplate capacity, which factors in meeting the planning reserve margin as well as resources not providing 100% capacity contribution. He also noted that due to modeling assumptions for the ISP scenarios, the load forecasts begin to deviate in 2023, which results in differences between forecasts for 2025. On load growth, Jed Cohen, Manager of Forecasting and Load Research at SRP, stated that about 50-60% is driven by commercial and industrial customers.

Cohen also addressed questions about electric vehicles, noting that SRP can identify level 2 charging on its system with 80-90% accuracy. Current estimates are about 10 MW of load at 4:00 p.m. and 15 MW at 10:00 p.m. with about 41,000 electric vehicles in SRP's service territory. By 2035, he explained that SRP could see between 100 and 250 MW of load at peak hours with a potential spike of 500 MW at 11:00 p.m., given current price plans. Cohen noted that price plans might change. Vanessa Kisicki, Director of Distribution Strategy at SRP, added that SRP's distributed energy management system would go online in March 2024 and that SRP has many ongoing projects to learn about and gather information on managed charging. Cohen added that SRP is beginning to look at electrification of medium- and heavy-duty vehicles, including buses.

Affordability

Another area of interest for Advisory Group members was affordability, including time-of-use price plans and other customer programs. Adam Peterson, Director of Corporate Pricing at SRP, spoke to the impact of rooftop solar on SRP's grid and time-of-use rates and how programs are designed to send price signals. Peterson also clarified that although there is no official mechanism for monitoring price increases, SRP tracks prices based on financial plans and accounting records to ensure proper setting of rates.

Peterson also responded to questions about wider economic impacts and different classes of residential customers. He noted that although SRP does not study the impact of energy costs on regional economic growth, a team does track limited-income customers to design and implement programs that will help specific customer groups manage their energy burden. In response to an Advisory Group member comment, Olsen responded that the growing number of people who cannot afford to pay their bills shows that costs really do matter. Angie Bond-Simpson, Senior Director of Resource Management at SRP, added that the ISP project team would follow up with more specifics on customer classes (see Appendix B).

Equity

Olsen responded to Advisory Group member questions about SRP's efforts and considerations for equity, such as power outages and income. He explained that although SRP did not have a formal definition of equity in place for this ISP, there is an opportunity to address this in future planning efforts. On outages, he described SRP's program for rolling brownouts that uses random assignment (excluding hospitals and those with medical needs) as an effort to be more equitable. Olsen also noted that SRP is beginning the refresh of the 2035 Goals and that future efforts could look at data on housing condition, income and economic growth.

Risk Assessment

Advisory Group members requested further explanation of how development and operational risk were determined and how extreme heat was considered. Maria Naff, Manager of Integrated Planning at SRP, and Nevada Jack, Manager of System Integration at SRP, described how they employed expert opinion methodology to establish metrics and a scale to assess risks. They explained how they met with their teams to decide upon a baseline case, considered different factors related to risks and then aggregated the risk rating scores. Jack noted that her team is also engaging with external experts from the Technical Working Session on inverter-based resources.

Bond-Simpson and Michael Reynolds, Manager of Resource Analysis and Planning at SRP, explained how SRP's 16% planning reserve margin was used as a proxy measure designed to meet a loss of load hours (LOLH) metric of 2.4. He added that it's an effective proxy for determining reliability and that SRP is working on loss of load expectation (LOLE) metrics for future SRP planning. In response to a question about risks of extreme heat to equipment, Olsen explained that although it is outside the scope of the ISP, SRP is performing a climate risk assessment, and is participating in EPRI's Climate READi program, which will help provide guidance and practices on climate risk assessment and planning.

Wrap Up

Isaacson thanked the Advisory Group members who stayed to ask their questions and the project team members for their responses. She concluded by reminding them that the next Advisory Group meeting is scheduled for September 8, 2023.

Appendix A

Meeting Attendance

Advisory Group Member Organizations (members in attendance on 8/11 are indicated in **bold**)

Arizona Hispanic Chamber of Commerce

A New Leaf

American Association of Retired Persons (AARP)

Arizona State University (ASU)

Arizona Public Interest Research Group (PIRG)

Building Owners and Managers Association (BOMA)

Chicanos Por La Causa

City of Phoenix

Common Spirit Health

CMC Steel Arizona

CyrusOne

Environmental Defense Fund (EDF)

Intel

Kroger

Local First

Mesa Public Schools

Pinal County

Profile Precision Extrusions

SRP Customer Utility Panel (CUP)

Salt River Pima-Maricopa Indian Community (SRPMIC)

Southwest Energy Efficiency Project (SWEEP)

United Dairymen of Arizona

Western Resource Advocates (WRA)

Wildfire

Key SRP Staff

Adam Peterson, Director of Corporate Pricing

Angie Bond-Simpson, Senior Director of Resource Management

Bobby Olsen, Associate General Manager & Chief Strategy, Corporate Services & Sustainability
Executive

Bryce Nielsen, Director of Transmission Planning, Strategy & Development

Domonique Cohen, Senior Strategic Planner for Integrated Planning

Duncan Kraft, Planning Analyst for Integrated Planning

Grant Smedley, Director of Resource Planning, Acquisition and Development

Jed Cohen, Manager of Forecasting and Load Research

Kyle Heckel, Senior Engineer for Integrated System Planning

Maria Naff, Manager of Integrated Planning

Maxwell Burger, Senior Predictive Analytics Analyst for Integrated Planning

Michael Reynolds, Manager of Resource Analysis and Planning

Nevida Jack, Manager of System Innovation

Vanessa Kisicki, Director of Distribution Strategy

Key Project Team

April Smith, Bellomy Market Intelligence

John Sessions, Bellomy Market Intelligence

Arne Olson, E3

Joe Hooker, E3

Brisa Aviles, Kearns & West

Joan Isaacson, Kearns & West

Karen Lafferty, Kearns & West

SRP Board and Council Observers

Larry Rovey, SRP Board Member

Suzanne Naylor, SRP Council Member

Appendix B

Customer Class Information

Information on customer class by household income.

Household Income

(Values add to over 100 due to rounding.)

