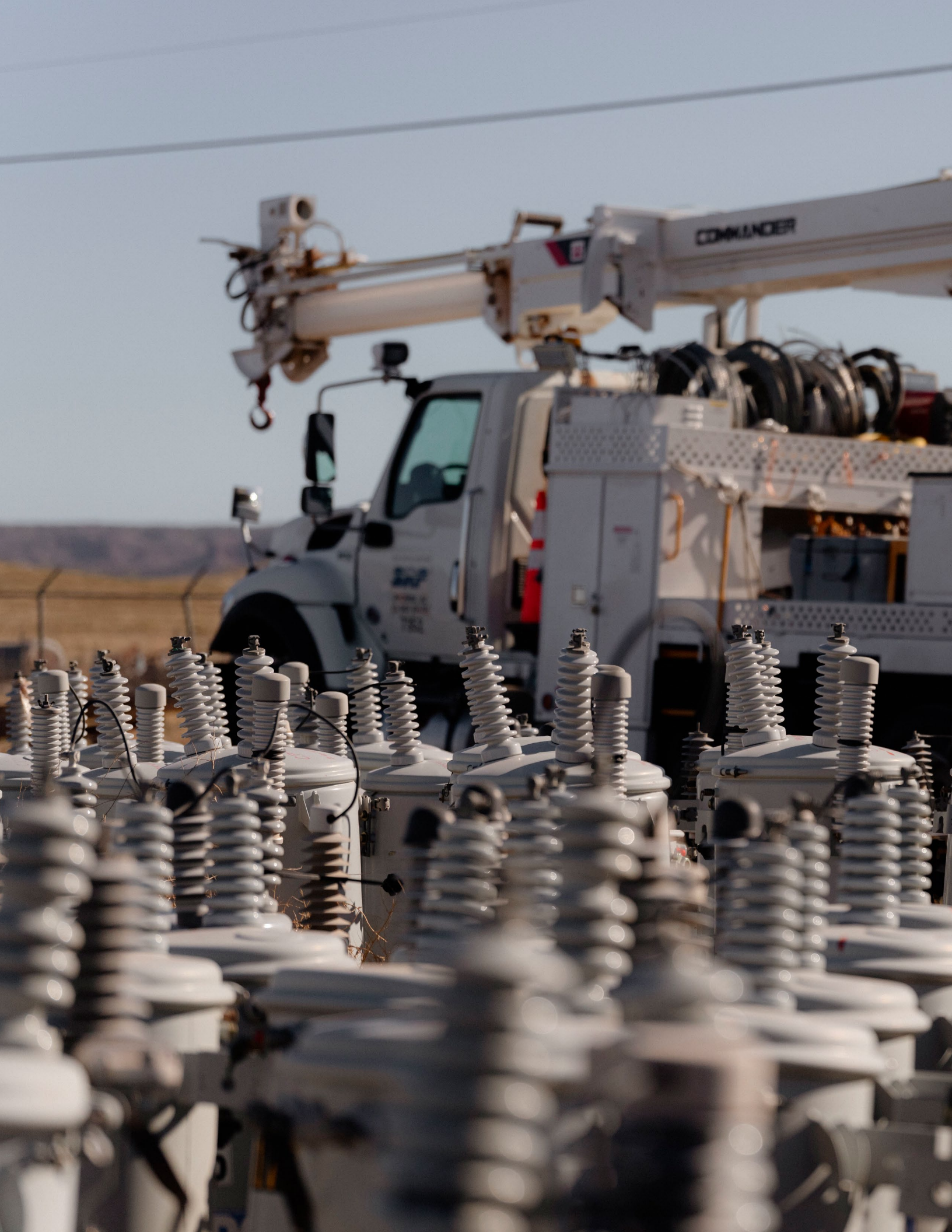




2025  
**GRID**  
PERFORMANCE  
REPORT



Delivering water and power®





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SRP's fiscal year runs from May 1 through April 30.

## MESSAGE FROM LEADERSHIP

SRP's Grid Performance Report is our report card for the power delivery system for fiscal year 2025 (FY25). It provides the key metrics that show how the system performed during the past year and highlights specific achievements and projects.

**Despite the challenges posed by rapid growth as well as another record hot summer in Arizona, SRP achieved exceptional reliability and remained in the top 10 nationally for the power industry. In fact, we achieved all our performance targets except one. This is due to the outstanding work of team members across the company and strong strategic initiatives that support reliability and resiliency.**

Throughout FY25, SRP continued to implement robust improvements and changes to ensure the system can continue to meet customers' needs today and in the future.

### **Grid Resiliency**

SRP's Grid Resiliency Program is designed to reduce the magnitude and duration of extreme disruptive events through prevention, response and recovery initiatives. In FY25, we advanced two key initiatives designed to strengthen and assess the resiliency of our system.

- The Wildfire Mitigation Plan (WMP) was enhanced using a risk-based approach that identifies opportunities for SRP, both water and power, to reduce the causes and impacts from wildfires to people, property, infrastructure and the watershed. This will help direct work in the areas of vegetation management and system hardening. SRP also worked with stakeholders across the company to develop a six-year road map for continued improvement of the WMP.
- Since there is no industry standard for measuring system resiliency, SRP developed its own: the Electric System Resilience Index (ESRI). This metric is designed to identify potential resilience events that SRP may experience and evaluate our ability to prevent, respond to and recover from those events. ESRI focuses on areas that have the greatest impact on SRP's resiliency, which include cybersecurity, high fire risk circuits, battery fire readiness, asset spare programs and more.

## Grid Transformation

SRP established the Distribution Enablement Program to help ensure customers can adopt behind-the-meter resources while also maintaining the integrity of the distribution grid. As part of that effort, the Advanced Distribution Management System (ADMS) went online in January 2025, allowing SRP to operate a more flexible and reliable distribution grid. The ADMS helps to ensure more accurate outage information for customers, better awareness, forecasting and modeling of distributed energy resources (DERs), control of DERs to support advanced customer programs, advanced sensing and fault location, centralized automatic power restoration and more. All of which supports the massive transformation of the grid to enable more customer choices and meet decarbonization goals.

These are just a few examples of how SRP moved forward in FY25 to meet the challenges of growth and grid transformation to better serve our customers and to support continued economic prosperity in the Valley. This report provides much more detail about the performance of our power delivery system and the amazing work being done every day by dedicated SRP team members. I am proud of what we achieved in FY25 and excited about what we have planned for the coming year.



A handwritten signature in black ink, appearing to read 'John Coggins', written in a cursive style.

**John Coggins**  
Associate General Manager  
& Chief Power System Executive

## ABOUT THE POWER DELIVERY SYSTEM

SRP provides power to more than 1.1 million customers in a 2,900-square-mile service area, with 1,258,000 advanced meters serving SRP customers. Of these, approximately 996,000 second-generation meters with enhanced capabilities have been deployed. In addition, there are nearly 200,000 prepay meters that also have advanced features but without the enhanced capabilities of SRP’s second-generation advanced meters.

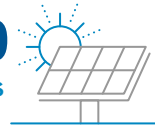
**1.1 MILLION+ CUSTOMERS**



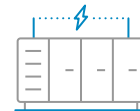
2,900-SQUARE-MILE SERVICE AREA

For more than a decade, SRP has been steadily investing in utility-scale solar energy to meet the clean energy demands of our customers. SRP purchases solar energy from 14 utility-scale solar plants, including four with on-site storage, for a total capacity of 1,440 megawatts (MW), which is enough to power about 324,000 homes. In addition, SRP utilizes 748 MW of solar-charged storage and 485 MW of grid-charged storage to allow energy to be used during times of highest demand.

**1,440 MEGAWATTS CAPACITY**



In total, 61,825 customer-owned Distributed Energy Resources (DERs) are interconnected with the SRP grid, including stand-alone solar generation, solar paired with battery storage and stand-alone battery storage. Of those DERs, 60,865 are residential and 960 are commercial. These DERs provide a total generation capacity of 563 MW and battery storage capacity of 41 MW.



**41 MW DER BATTERY STORAGE CAPACITY**

Last year, SRP’s Energy Efficiency (EE) programs saved SRP customers 643,926 megawatt-hours (MWh) of energy. The Residential and Commercial Demand Response (DR) portfolios have subscribed a combined 176 MW of cumulative dispatchable capacity. This includes 102,001 smart thermostats enrolled in the residential SRP Bring Your Own Thermostat Program™ (BYOT) and nearly 724 commercial customer sites participating in the SRP Business Demand Response Program™ at fiscal year-end.



**643,926 MWH OF ENERGY SAVED FOR CUSTOMERS**

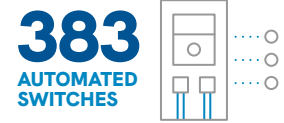
The Electric Technology (E-Tech) program provides rebates to commercial and industrial customers who replace fossil fuel-powered equipment — such as forklifts — with cleaner, cheaper-to-operate and quieter electric equipment. The E-Tech program delivered 20,881 MWh of energy impact this past year. The Transportation Electrification program currently stands at 68,011 light-duty electric vehicles (EVs) in operation within SRP’s service territory. SRP offers a comprehensive portfolio of EV-related programs to help educate and offset the cost of chargers for residential and business customers, as well as homebuilders, helping to reduce barriers and accelerate market transformation.

**20,881**

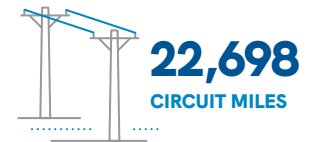
MWH OF ENERGY IMPACT THIS PAST YEAR



Distribution switches are used to facilitate switching customer load from one circuit to another and to interrupt flow in the event of an outage, construction or maintenance. There are 45,456 distribution switches on the distribution system, including 383 automated switches.



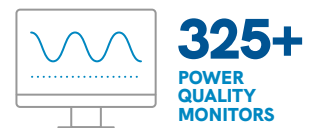
Most of SRP's distribution system is looped, meaning there is more than one path that electricity can travel to serve a customer, but only through one path at a time. SRP operates and maintains 22,698 circuit miles of lines that make up the SRP distribution system, which entails 1,450 distribution circuits.



Service transformers step down the voltage from 12.47 kilovolts (kV) or 21.6 kV to levels suitable for customer use. There are 186,996 service transformer units in the SRP distribution system.



SRP has more than 325 power quality monitors installed throughout its electric system to help ensure the delivery of reliable and consistent power to its customers.



SRP operates and maintains 295 substations, including 192 distribution substations that transform power to the 12 kV voltage level to serve neighborhoods and other customers.



SRP operates and maintains 2,460 circuit miles of three-phase power lines at voltages of 69 kV to 500 kV. These transmission lines, along with supporting equipment such as circuit breakers and transformers, form the backbone of the SRP transmission system.



Generating stations and substations contain power transformers that increase or decrease voltage. SRP maintains 613 active power transformers.



# GRID PERFORMANCE



# Grid Performance Scorecard

SRP consistently upholds industry-leading reliability, driven by a strong commitment to operational excellence and data-informed decision-making. Central to this achievement is SRP’s disciplined monitoring of key performance indicators —especially those related to reliability and power quality. By comparing actual performance against established goals, SRP can assess whether the system is meeting expectations. When goals are not met, SRP conducts thorough investigations to pinpoint root causes and implement targeted solutions.

The Grid Performance Scorecard in Figure 1 demonstrates that SRP has successfully met five of six FY25 reliability and power quality goals.

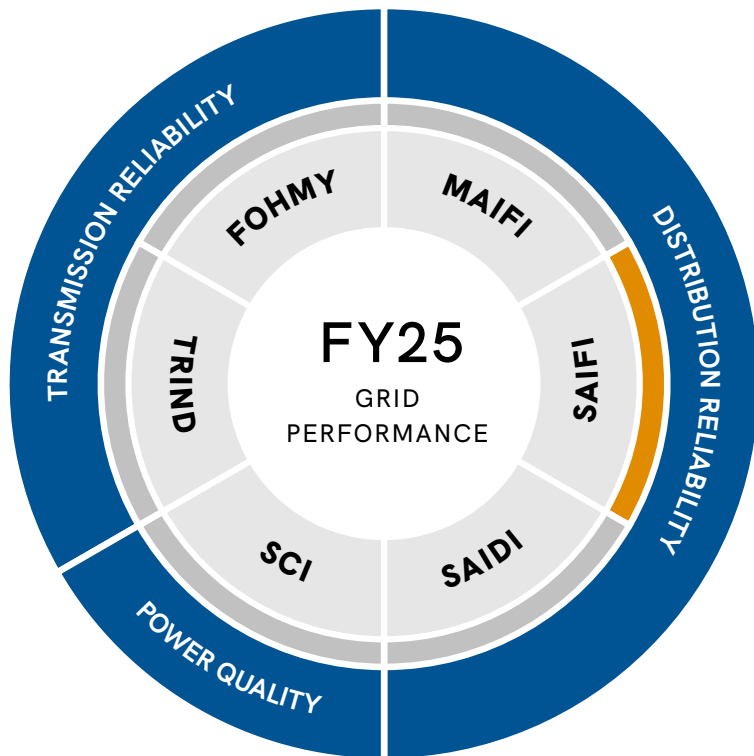
## Key Indices

The FY25 Grid Performance Scorecard shows SRP’s performance against the following reliability and power quality key indices:

- System Average Interruption Duration Index (SAIDI):** This metric tracks the number of minutes customers are without power for a duration of more than five minutes, averaged over all SRP retail customers. This includes any loss of customer load, planned or unplanned.
- System Average Interruption Frequency Index (SAIFI):** This metric tracks the number of times customers are without power for a duration of more than five minutes, averaged over all SRP retail customers. This includes any loss of customer load, planned or unplanned.
- Momentary Average Interruption Frequency Index (MAIFI):** This metric tracks the number of times customers are without power for a duration of five minutes or less, averaged over all SRP retail customers. This includes any loss of customer load, planned or unplanned.
- Sag Count Index (SCI):** This metric tracks how often a voltage sag event is recorded.
- Forced Outage Rate per Hundred Miles of Transmission per Year (FOHMY):** This metric tracks the number of unplanned outages per 100 miles of transmission line.
- Transmission Index (TRIND):** This metric measures each outage based on the voltage level, the type of element lost, the duration of the outage and the cause of the outage.

**FIGURE 1** | Grid Performance Scorecard

■ Goal Met   ■ Goal Not Met



## DISTRIBUTION RELIABILITY

SRP sets ambitious reliability goals, emphasizing system performance and resilience. These targets are based on a 10-year historical average, supplemented by one standard deviation. If the calculated value drops more than 5% below the previous goal, adjustments are made downward. This methodology reflects SRP's steadfast dedication to operational excellence, even when facing adverse weather conditions. SRP's distribution reliability metrics account for all types of service interruptions and remain unadjusted for major events, weather fluctuations or planned maintenance.

### Customer Minutes of Interruption (SAIDI)

System Average Interruption Duration Index (SAIDI) is an industrywide metric that measures the number of minutes of customer interruption averaged over all customers. For FY25, SAIDI was 58.8 minutes, achieving the goal of 73.1 minutes or less. This means there were 58.8 minutes of customer interruption for the entire year when averaged over all customers.

During the first and second quarters of FY25, considerable storm activity was observed. Each month that exceeded its SAIDI target experienced one Major Event Day (MED), a designation applied when reliability metrics surpass predefined thresholds, signaling system operational or design limitations. The most substantial impact occurred on July 24, when a storm event resulted in 2.3 customer minutes of interruption, marking the highest single-day MED of the year. In total, FY25 recorded two MEDs, an improvement from the three recorded in FY24.

Figure 2 illustrates the five-year SAIDI trend alongside FY25's monthly performance. Notably, FY25 achieved the lowest SAIDI value in four years, successfully meeting its annual target. Excluding the MEDs in the July and August months, SRP consistently met all monthly SAIDI goals throughout the year.



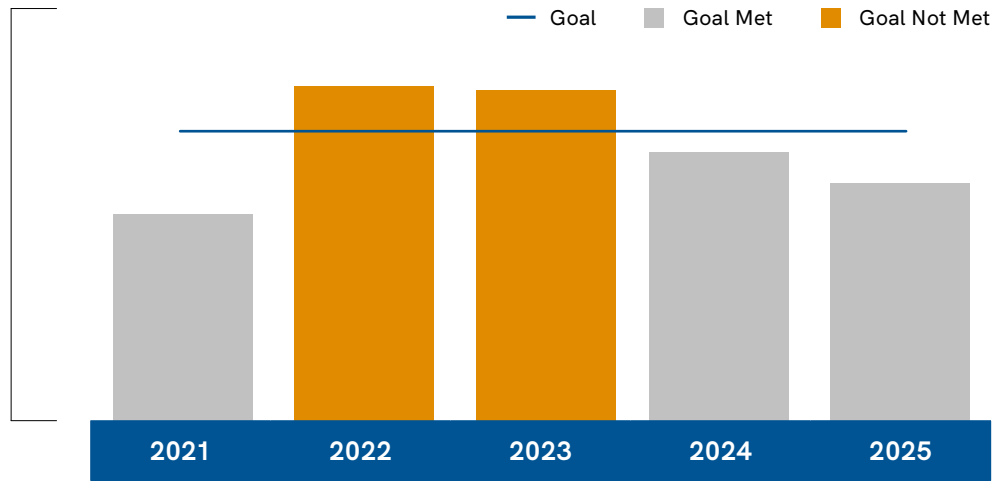
**FIGURE 2**

**SAIDI**

Duration: The Average Number of Minutes Customers Experienced a Sustained Interruption

**YEAR**

Results — 5-Year Trend (Minutes)

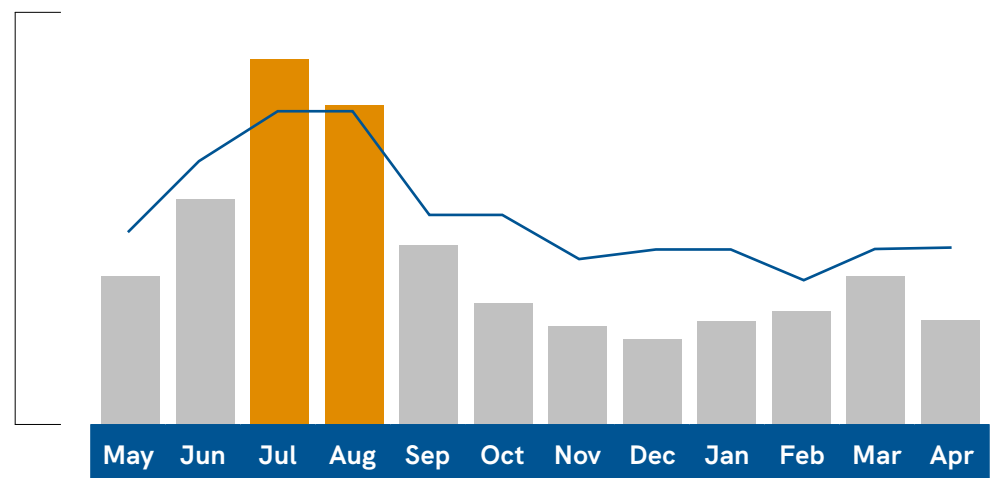


|               |
|---------------|
| Actual Result |
| Goal          |
| Variance      |

|       |      |      |      |       |
|-------|------|------|------|-------|
| 2021  | 2022 | 2023 | 2024 | 2025  |
| 52.0  | 84.3 | 83.3 | 67.1 | 58.8  |
| 73.1  | 73.1 | 73.1 | 73.1 | 73.1  |
| -21.1 | 11.2 | 10.2 | -6.0 | -14.3 |

**MONTH**

Results — FY25 (Minutes)



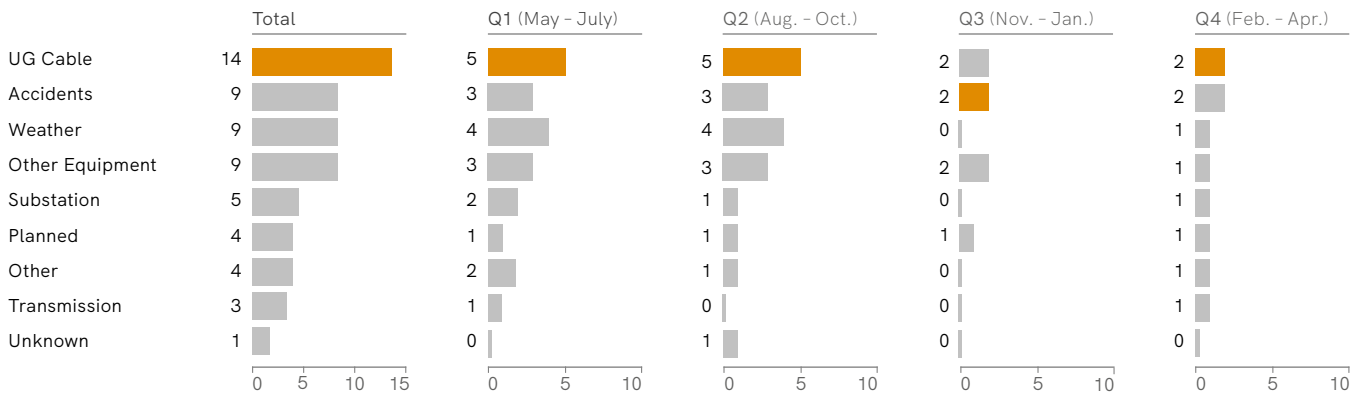
|               |
|---------------|
| Actual Result |
| Goal          |
| Variance      |

|      |      |      |     |      |      |      |      |      |      |      |      |
|------|------|------|-----|------|------|------|------|------|------|------|------|
| May  | Jun  | Jul  | Aug | Sep  | Oct  | Nov  | Dec  | Jan  | Feb  | Mar  | Apr  |
| 4.4  | 6.5  | 10.6 | 9.3 | 5.3  | 3.6  | 2.9  | 2.5  | 3.0  | 3.4  | 4.4  | 3.1  |
| 5.6  | 7.6  | 9.1  | 9.1 | 6.1  | 6.1  | 4.8  | 5.1  | 5.1  | 4.2  | 5.1  | 5.2  |
| -1.2 | -1.1 | 1.5  | 0.2 | -0.8 | -2.5 | -1.9 | -2.6 | -2.1 | -0.8 | -0.7 | -2.1 |

Figure 3 presents the key contributors to customer outage minutes, identifying the leading driver for each fiscal quarter and for the full fiscal year. In FY25, underground (UG) cable failures emerged as the largest contributor to SAIDI, responsible for 13.9 minutes, or 24% of total outage duration. Accidents followed, accounting for 9.3 minutes (16%) of FY25 SAIDI. UG cable failure was the leading contributor in Q1, Q2 and Q4 and only slightly trailed accidents in Q3.

**FIGURE 3** | SAIDI | Cause Code Contribution to SAIDI — FY25

Number of Minutes per Customer



Cause Codes

Distribution electric service reliability directly influences customer experience. SRP investigates outages to determine what caused them and categorizes these causes as follows:

- **UG Cable:** Underground distribution line failures.
- **Other Equipment:** Distribution equipment failures excluding UG Cable, Substation or Transmission.
- **Weather:** Primarily storm activity such as high winds, rain and lightning.
- **Accidents:** Damaged equipment due to automobile accidents.
- **Substation:** Equipment failures inside a substation such as a transformer failure.
- **Planned:** System maintenance activities such as cable replacement projects.
- **Other:** Combination of all other less impactful causes.
- **Transmission:** Transmission line failures.
- **Unknown:** No known cause found. The condition was temporary and can no longer be observed.

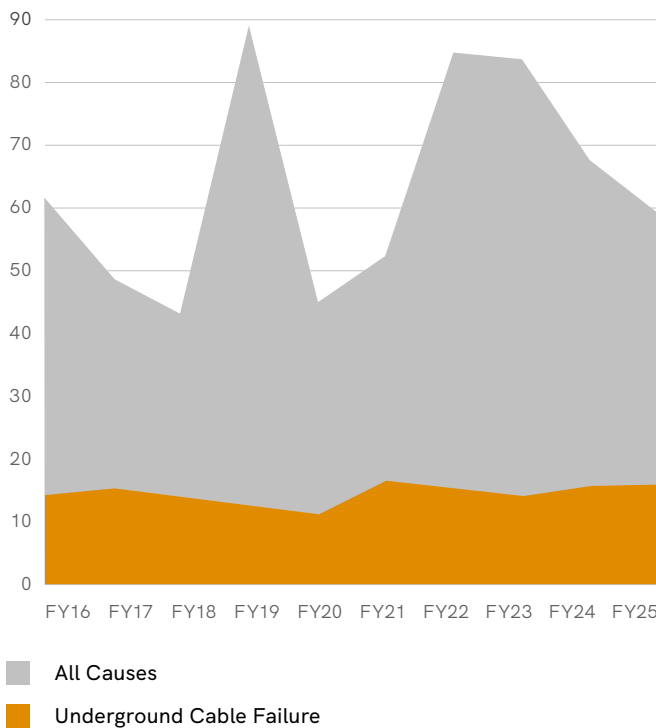
Figure 4 highlights the impact of underground (UG) cable failures — represented in orange — on annual SAIDI values over the past decade. During this period, UG cable failures accounted for between 12% and 28% of the total SAIDI. In FY25, these failures contributed 13.9 minutes, or 24% of SAIDI, marking a slight increase from FY24’s contribution of 13.5 minutes (20%).

Figure 5 illustrates the influence of weather-related events — represented in blue — on SAIDI performance over the same timeframe. These outages are largely driven by storm conditions, including high winds, rainfall and lightning. A notable decline is observed in FY25, with weather-related SAIDI dropping to 9.2 minutes (16%) from 17.9 minutes (27%) in FY24.

**FIGURE 4**

## Underground Cable Failure Contribution to SAIDI

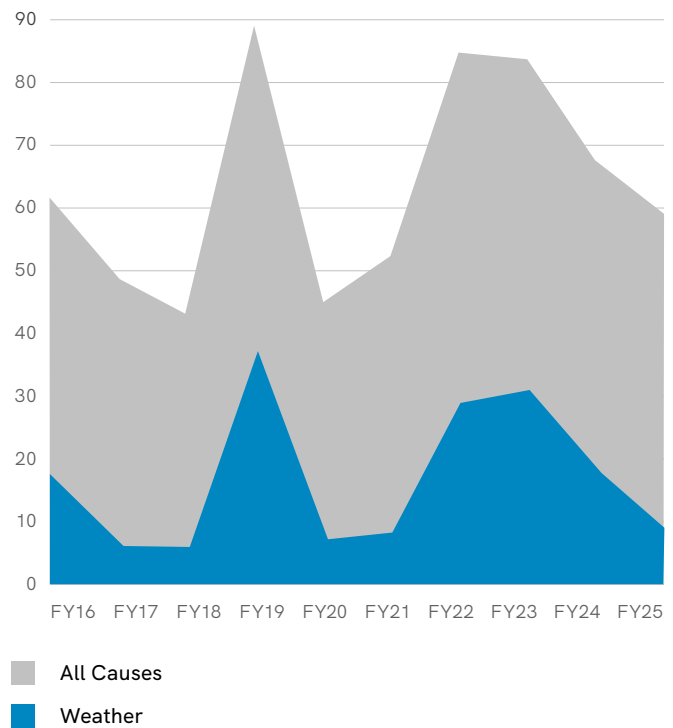
Minutes of Outage per Customer



**FIGURE 5**

## Weather Contribution to SAIDI

Minutes of Outage per Customer





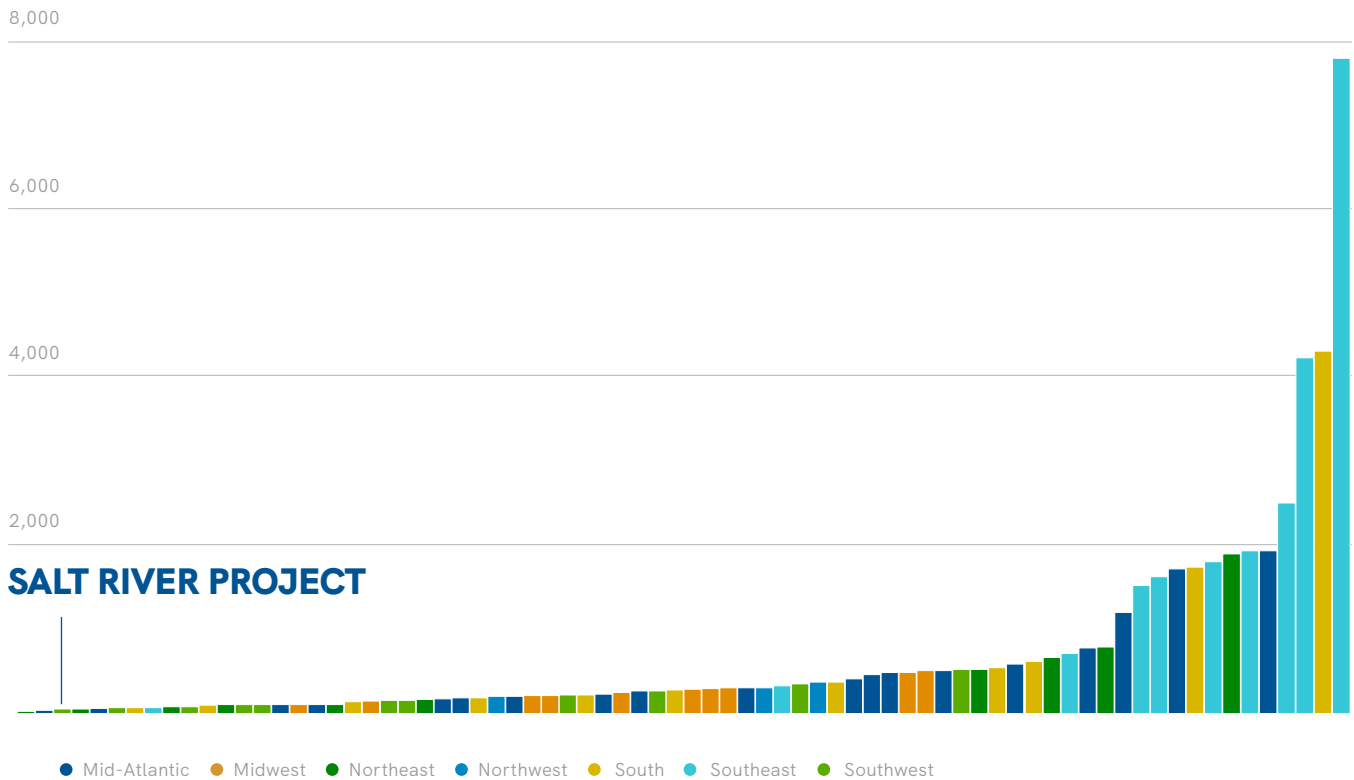
## Distribution Reliability Performance Relative to Peers

The U.S. Energy Information Administration (EIA), a governmental entity under the U.S. Department of Energy, gathers data from utilities across the country, which are required to file EIA 861 or 861S forms. SRP is using the available EIA distribution reliability data to measure its performance against that of its peers.

For the SRP corporate metric SAIDI, SRP ranked third in 2024 among all electric utilities with over 500,000 customers. Figure 6 depicts SRP’s ranking for SAIDI performance against all other utilities. Each utility’s region is coded by color, with 11, including SRP, located in the Southwest Region. SRP had the lowest SAIDI score for the Southwest Region.

Figure 7 provides additional information on how SRP’s SAIDI performance stacked up against other utilities. The SAIDI scores in the Southwest Region ranged from a low of 58 minutes to a high of 509 minutes. The SAIDI scores for all electric utilities with over 500,000 customers ranged from a low of 28 minutes to a high of 7,804 minutes. SRP’s SAIDI score for the 2024 calendar year was 58 minutes, significantly below the median of 291 minutes.

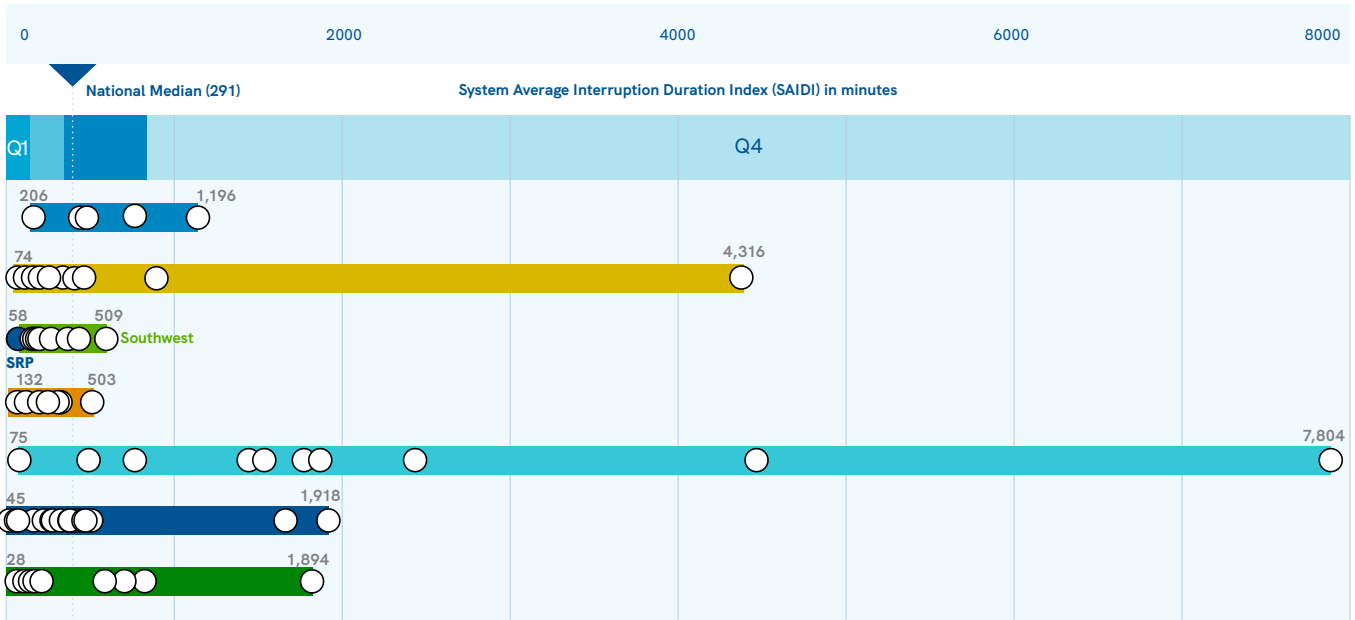
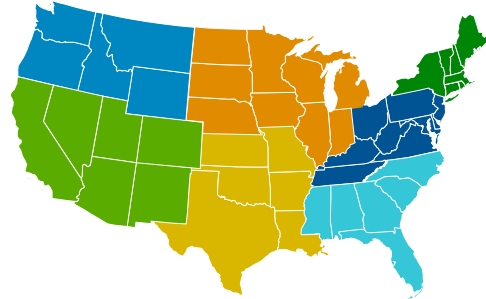
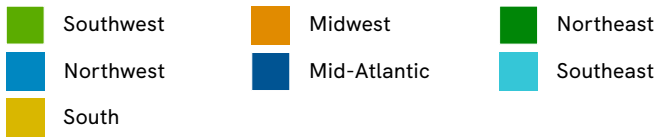
**FIGURE 6** | 2024 EIA SAIDI Benchmarking Results (released in 2025)



## FIGURE 7 | 2024 EIA SAIDI Benchmarking Results (released in 2025)

### Distribution reliability performance relative to peers

Based on data from calendar year 2024 for 74 large utilities that filed EIA 861 forms. Each bar represents the range of SAIDI scores for the region, and each circle represents the scores of individual utilities in the region.



#### MEDIAN PERFORMERS

The median SAIDI for all large utilities was 291 minutes.

#### SRP 2025 RESULTS

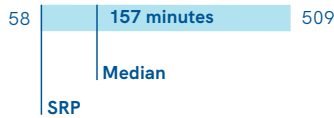
- 58 minutes
- #3 ranking overall
- #1 ranking in southwest

Calendar Year 2024 Data

#### BEST PERFORMERS

All large utilities in Quartile 1 (top 25% of scores) had SAIDI of 148 minutes or less.

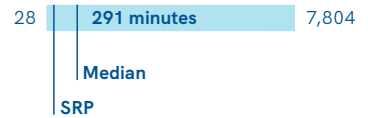
#### SOUTHWEST REGION



#### WORST PERFORMERS

All large utilities in Quartile 4 (bottom 25% of scores) had SAIDI of 582 minutes or more.

#### LARGE UTILITIES



SRP is categorized as a large-sized utility (over 500K customers)



## Customer Sustained Interruptions (SAIFI)

System Average Interruption Frequency Index (SAIFI), another industry standard metric, quantifies the frequency of sustained interruptions experienced by customers. Specifically, SAIFI is the frequency at which customers experience a sustained interruption averaged over all customers.

A sustained interruption is an outage lasting more than five minutes. Transient faults caused by events like lightning strikes and arcing are not factored into the SAIFI calculation, as they will generally resolve in less than a second. These faults and others that do not surpass a five-minute outage duration are a part of the momentary interruptions (MAIFI) calculation.

For FY25, the SAIFI result was 0.96 outages, exceeding the goal of 0.82 outages or less. This means that, on average, there was just under one outage per customer during the year.

Figure 8 illustrates the five-year trend for SAIFI, highlighting that after increasing for three years in a row, SAIFI has now decreased in the last two. Monthly performance data reveals the goal was met only in October, December, January and February; however, apart from July, the variances were minimal. The primary contributors to SAIFI in FY25 were underground cable failures, weather, accidents and other equipment. The 'Other Equipment' category includes all overhead and underground assets — such as transformers, switches and capacitors — excluding underground cable.



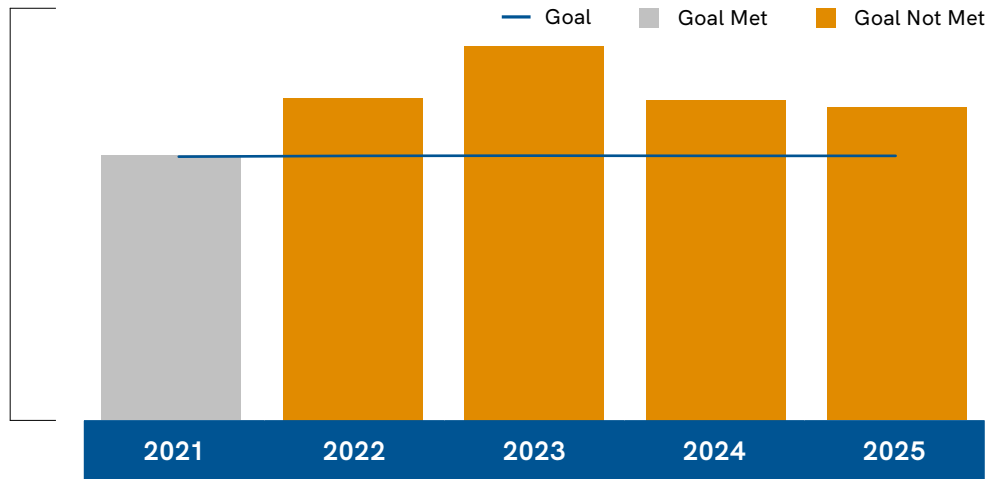
**FIGURE 8**

**SAIFI**

Frequency: The Average Number of Times Customers Experienced Sustained Interruption

**YEAR**

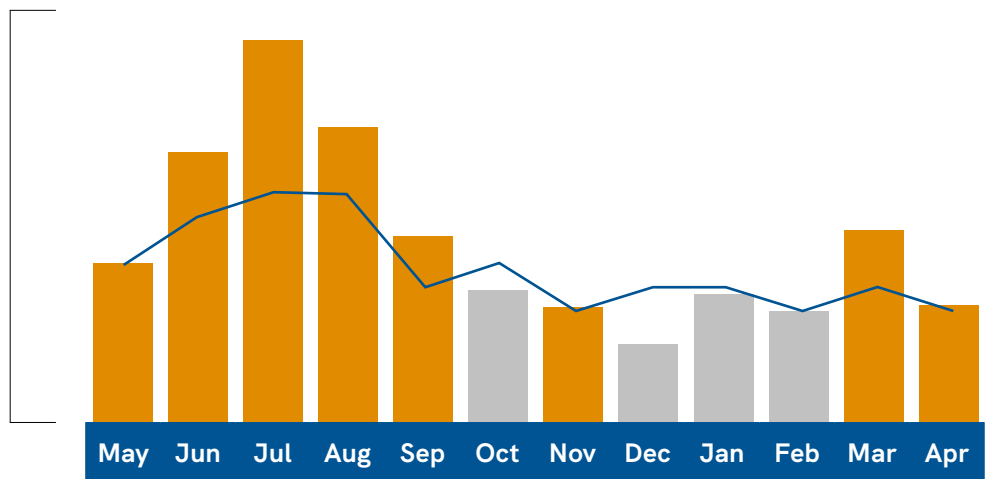
Results — 5-Year Trend (Outages)



|               |      |      |      |      |      |
|---------------|------|------|------|------|------|
| Actual Result | 0.82 | 0.99 | 1.14 | 0.99 | 0.96 |
| Goal          | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Variance      | 0.00 | 0.17 | 0.32 | 0.17 | 0.14 |

**MONTH**

Results — FY25 (Outages)



|               |      |      |      |      |      |       |      |       |      |      |      |      |
|---------------|------|------|------|------|------|-------|------|-------|------|------|------|------|
| Actual Result | 0.07 | 0.12 | 0.17 | 0.13 | 0.08 | 0.06  | 0.05 | 0.04  | 0.06 | 0.05 | 0.08 | 0.06 |
| Goal          | 0.07 | 0.09 | 0.10 | 0.10 | 0.06 | 0.07  | 0.05 | 0.05  | 0.06 | 0.05 | 0.06 | 0.05 |
| Variance      | 0.00 | 0.03 | 0.07 | 0.03 | 0.02 | -0.01 | 0.00 | -0.02 | 0.00 | 0.00 | 0.02 | 0.01 |

## Customer Momentary Interruptions (MAIFI)

Momentary Average Interruption Frequency Index (MAIFI) measures the frequency of brief service interruptions averaged across all customers. These interruptions include both transient outages and short-duration events caused by factors such as animals or vegetation momentarily bridging conductors.

To mitigate the impact of such faults, SRP employs auto-reclosers — devices that automatically restore service by reclosing circuit breakers after a fault. This functionality ensures that customers experience only brief outages. By tracking MAIFI separately from SAIFI, SRP distinguishes momentary events from sustained interruptions, enabling more targeted reliability analysis.

In FY25, SRP achieved a MAIFI of 1.18, well below the goal of 1.88 or fewer momentary interruptions. This means customers experienced slightly more than one such event over the year when averaged over all customers.

Figure 9 illustrates a five-year downward trend in MAIFI, with FY25 marking the best performance to date. Monthly data shows that MAIFI targets were met every month except March.



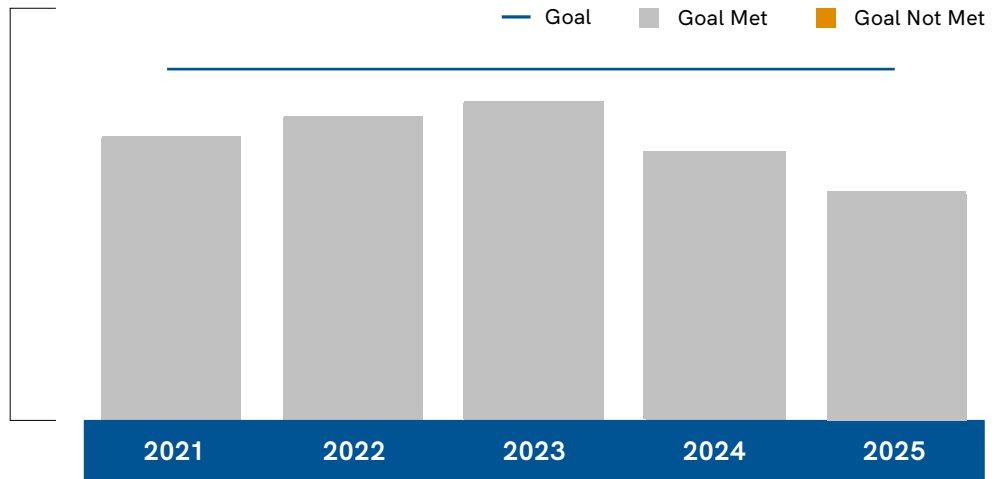
**FIGURE 9**

**MAIFI**

Frequency: The Average Number of Times Customers Experienced a Momentary Interruption

**YEAR**

Results — 5-Year Trend (Outages)

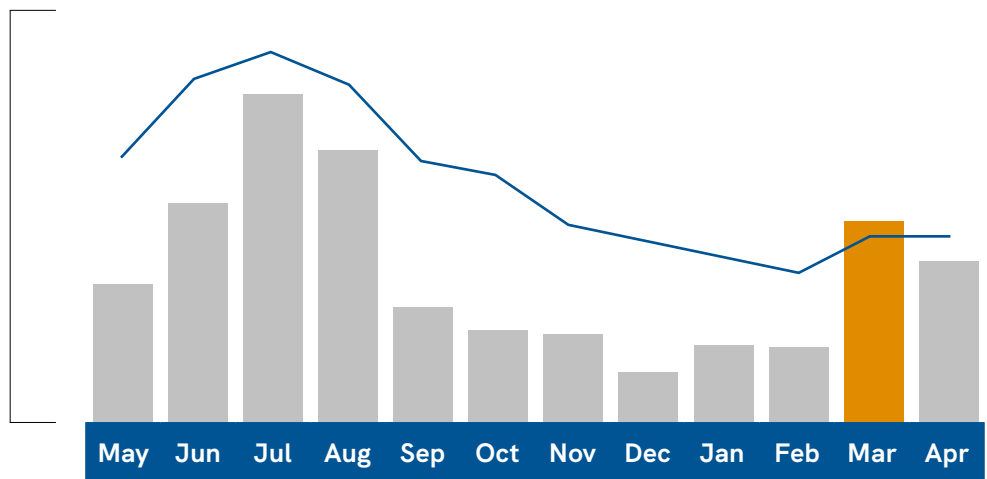


|               |       |       |       |       |       |
|---------------|-------|-------|-------|-------|-------|
| Actual Result | 1.52  | 1.55  | 1.59  | 1.38  | 1.18  |
| Goal          | 1.88  | 1.88  | 1.88  | 1.88  | 1.88  |
| Variance      | -0.36 | -0.33 | -0.29 | -0.50 | -0.70 |

| Year          | 2021  | 2022  | 2023  | 2024  | 2025  |
|---------------|-------|-------|-------|-------|-------|
| Actual Result | 1.52  | 1.55  | 1.59  | 1.38  | 1.18  |
| Goal          | 1.88  | 1.88  | 1.88  | 1.88  | 1.88  |
| Variance      | -0.36 | -0.33 | -0.29 | -0.50 | -0.70 |

**MONTH**

Results — FY25 (Outages)



|               |       |       |       |       |       |       |       |       |       |       |      |       |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| Actual Result | 0.09  | 0.14  | 0.21  | 0.15  | 0.08  | 0.06  | 0.06  | 0.04  | 0.05  | 0.05  | 0.13 | 0.11  |
| Goal          | 0.17  | 0.22  | 0.24  | 0.22  | 0.17  | 0.16  | 0.13  | 0.12  | 0.11  | 0.10  | 0.12 | 0.12  |
| Variance      | -0.08 | -0.08 | -0.03 | -0.07 | -0.09 | -0.10 | -0.07 | -0.08 | -0.06 | -0.05 | 0.01 | -0.01 |

| Month         | May   | Jun   | Jul   | Aug   | Sep   | Oct   | Nov   | Dec   | Jan   | Feb   | Mar  | Apr   |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| Actual Result | 0.09  | 0.14  | 0.21  | 0.15  | 0.08  | 0.06  | 0.06  | 0.04  | 0.05  | 0.05  | 0.13 | 0.11  |
| Goal          | 0.17  | 0.22  | 0.24  | 0.22  | 0.17  | 0.16  | 0.13  | 0.12  | 0.11  | 0.10  | 0.12 | 0.12  |
| Variance      | -0.08 | -0.08 | -0.03 | -0.07 | -0.09 | -0.10 | -0.07 | -0.08 | -0.06 | -0.05 | 0.01 | -0.01 |

## TRANSMISSION RELIABILITY

Tracking and measuring transmission system performance is an essential part of maintaining a reliable power grid. When events do occur on the system, SRP investigates to determine the cause. SRP uses an incident management platform that is built to capture, track, investigate, analyze and report on incidents and near misses. The platform includes additional trackable fields that, when coupled with refined reporting and dashboarding, can lead to improved tracking and system reliability.

SRP uses two measurements of transmission reliability:

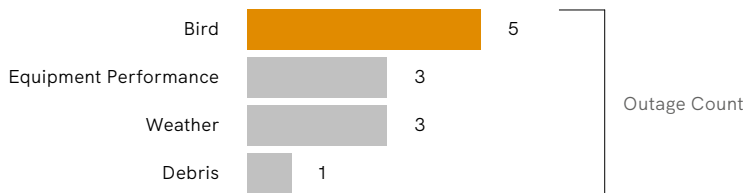
- **FOHMY (Forced Outage rate per Hundred Miles of transmission per Year), which is established across the industry, and**
- **TRIND (Transmission Index), which was developed by the North American Transmission Forum (NATF) as a more comprehensive metric.**

Unlike distribution metrics, FOHMY and TRIND do not consider planned outages, such as maintenance outages.

Using metrics to compare with other utilities furthers understanding of system performance. SRP participates in the North American Transmission Forum (NATF), which collects transmission outage data from participants and allows for collaboration and comparison with other entities.

Figure 10 depicts the number of transmission line outages broken down by cause code. The top cause of transmission outages in FY25 was bird-related events, particularly bird streamers, a conductive excrement discharged by birds. These streamers can bridge across insulators or the air gap between different phases of transmission lines, causing a fault on the transmission circuit that triggers the forced outage of that circuit.

**FIGURE 10** | Transmission Line Outages — FY25\*



\*Includes outages on 115 kV, 230 kV and 500 kV lines.



## FOHMY

SRP uses FOHMY to track transmission system performance and benchmark against other utilities. This metric tracks the number of unplanned outages per 100 miles of transmission line, enabling performance comparisons between short- and long-distance transmission line owners. Lower FOHMY scores indicate a smaller number of outages and a more reliable transmission system. Currently, SRP is only providing and comparing FOHMY for the Bulk Electric System (BES), which is transmission operated at or greater than 100 kV.

As shown in Figure 11, SRP had 0.82 BES transmission outages per hundred miles, which is better than SRP's FOHMY reliability goal of having fewer than 2.10 outages per hundred miles. This is a decrease of 0.50 outages per hundred miles from the FY24 result. Bird-related events, particularly the bird streamers, were the largest contributor to FOHMY in FY25.

SRP's FOHMY performance ranked eighth among 17 Western Electricity Coordinating Council (WECC) utilities, according to 2024 outage data gathered by the NATF. The NATF promotes best practices to maintain and improve transmission system reliability, and its rankings help SRP understand how to improve performance for its more than 1.1 million power customers.



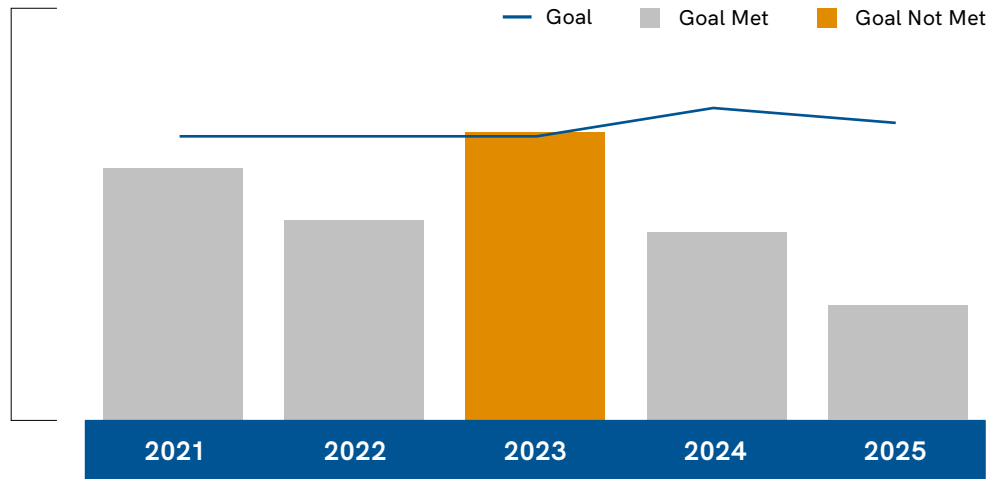
**FIGURE 11**

**FOHMY**

Forced Outage Rate per Hundred Miles of Transmission per Year

**YEAR**

Results — 5-Year Trend (Outages)

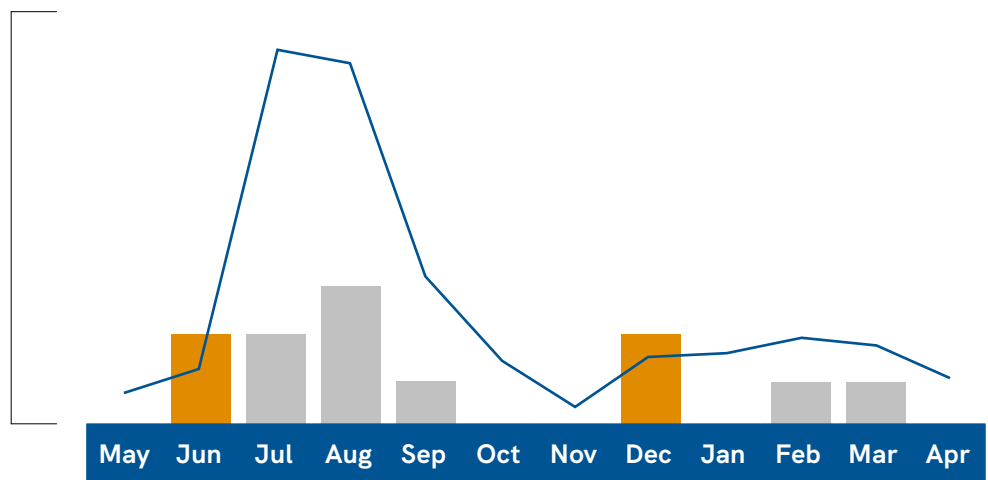


|               |       |       |      |       |       |
|---------------|-------|-------|------|-------|-------|
| Actual Result | 1.77  | 1.40  | 2.03 | 1.32  | 0.82  |
| Goal          | 2.00  | 2.00  | 2.00 | 2.20  | 2.10  |
| Variance      | -0.23 | -0.60 | 0.03 | -0.88 | -1.28 |

| Year          | 2021  | 2022  | 2023 | 2024  | 2025  |
|---------------|-------|-------|------|-------|-------|
| Actual Result | 1.77  | 1.40  | 2.03 | 1.32  | 0.82  |
| Goal          | 2.00  | 2.00  | 2.00 | 2.20  | 2.10  |
| Variance      | -0.23 | -0.60 | 0.03 | -0.88 | -1.28 |

**MONTH**

Results — FY25 (Outages)



|               |       |      |       |       |       |       |       |      |       |       |       |       |
|---------------|-------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| Actual Result | 0.00  | 0.14 | 0.14  | 0.21  | 0.07  | 0.00  | 0.00  | 0.14 | 0.00  | 0.06  | 0.06  | 0.00  |
| Goal          | 0.05  | 0.09 | 0.55  | 0.53  | 0.22  | 0.10  | 0.03  | 0.10 | 0.11  | 0.13  | 0.12  | 0.07  |
| Variance      | -0.05 | 0.05 | -0.41 | -0.32 | -0.15 | -0.10 | -0.03 | 0.04 | -0.11 | -0.07 | -0.06 | -0.07 |

| Month         | May   | Jun  | Jul   | Aug   | Sep   | Oct   | Nov   | Dec  | Jan   | Feb   | Mar   | Apr   |
|---------------|-------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| Actual Result | 0.00  | 0.14 | 0.14  | 0.21  | 0.07  | 0.00  | 0.00  | 0.14 | 0.00  | 0.06  | 0.06  | 0.00  |
| Goal          | 0.05  | 0.09 | 0.55  | 0.53  | 0.22  | 0.10  | 0.03  | 0.10 | 0.11  | 0.13  | 0.12  | 0.07  |
| Variance      | -0.05 | 0.05 | -0.41 | -0.32 | -0.15 | -0.10 | -0.03 | 0.04 | -0.11 | -0.07 | -0.06 | -0.07 |

## Transmission Index

While FOHMY tracks the number of transmission outages, Transmission Index (TRIND) measures the severity of transmission outages. TRIND measures each outage based on the voltage level and type of element lost, as well as the duration and cause of the outage. The more severe an outage, the more points that outage is assigned. For example, a 500 kV line outage will have more points than a 69 kV outage of the same duration. This allows a high-level comparison of the severity between outages that FOHMY doesn't provide.

The sum of the outage points is then normalized with another score based on system size and average NATF member performance. This allows for better comparison between utilities despite different system sizes. A TRIND score of 50 implies an average reliability performance.

As depicted in Figure 12, FY25 TRIND was 12.2, which is better than the SRP goal of being at or below a TRIND score of 25. TRIND exceeded the monthly targets in May, June and March. Each of these months had a large number of 69 kV outages due to debris making contact with the transmission lines. Examples of the debris include tarps, patio umbrellas, sheet metal roofing and wet, broken tree branches blown into the lines by strong winds. The most common type of debris is conductive helium-filled balloons. Debris has been a major cause of 69 kV outages across the industry, though the duration of these outages is typically short.

Another contributor to TRIND in these months, and the top contributor to the annual value, are transmission equipment failures. While these failures don't occur as often as debris, weather or bird-related events, they do tend to lead to longer outage durations. The TRIND scoring process also gives more weight to outages caused by equipment failures. This helps these events stand out to encourage utilities like SRP to further evaluate the reasoning and improve inspection and maintenance processes to reduce events in the future. Examples of failed transmission equipment include surge arrestors, bushings, relays and breakers.



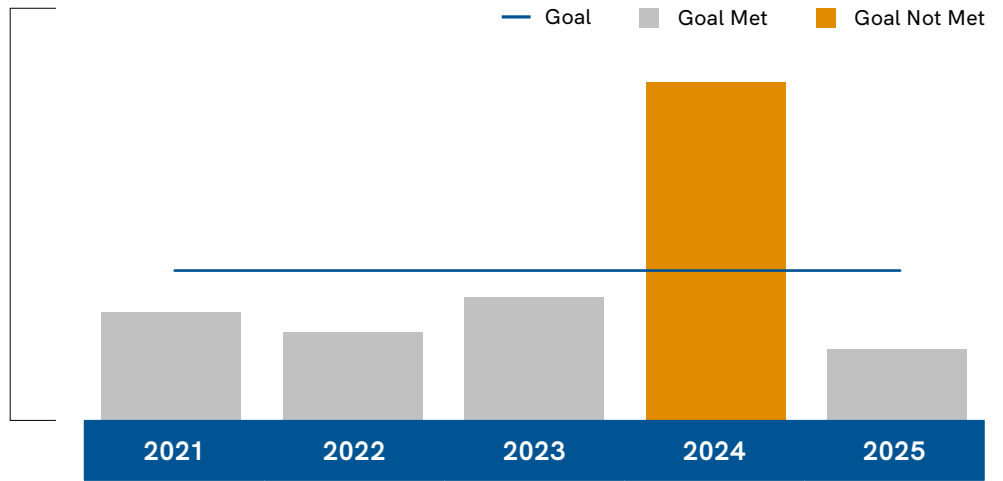
FIGURE 12

TRIND

Transmission Index

YEAR

Results — 5-Year Trend (Score)

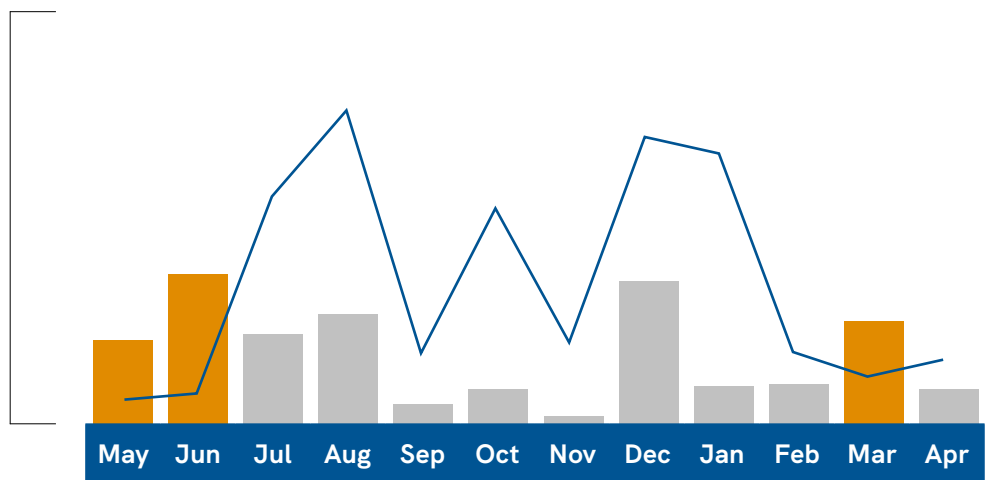


|               |
|---------------|
| Actual Result |
| Goal          |
| Variance      |

|               | 2021 | 2022 | 2023 | 2024 | 2025  |
|---------------|------|------|------|------|-------|
| Actual Result | 18.5 | 15.3 | 21.0 | 57.2 | 12.2  |
| Goal          | 25.0 | 25.0 | 25.0 | 25.0 | 25.0  |
| Variance      | -6.5 | -9.7 | -4.0 | 32.2 | -12.8 |

MONTH

Results — FY25 (Score)



|               |
|---------------|
| Actual Result |
| Goal          |
| Variance      |

|               | May  | Jun  | Jul   | Aug   | Sep   | Oct   | Nov   | Dec   | Jan   | Feb   | Mar  | Apr   |
|---------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| Actual Result | 1.21 | 2.20 | 1.33  | 1.61  | 0.20  | 0.34  | 0.10  | 2.11  | 0.54  | 0.57  | 1.51 | 0.49  |
| Goal          | 0.33 | 0.42 | 3.36  | 4.64  | 1.01  | 3.19  | 1.16  | 4.25  | 4.01  | 1.05  | 0.68 | 0.92  |
| Variance      | 0.88 | 1.78 | -2.03 | -3.03 | -0.81 | -2.85 | -1.06 | -2.14 | -3.47 | -0.48 | 0.83 | -0.43 |

## POWER QUALITY

Power quality refers to the effectiveness of supplied electric energy in supporting customer loads without adversely affecting sensitive equipment. As technology advances, SRP's energy supply faces increasing expectations for power quality.

Voltage sags, which are brief drops in voltage lasting fractions of a second, are the most common power quality event. These sags can disrupt sensitive electronic equipment and control systems. While residential customers are typically less affected by voltage sags, this may change with advances in home technology. The impact of a voltage sag depends on its magnitude, duration and the sensitivity of the equipment.

Large loads and unexpected load swings, such as those from customer motors and data centers, can cause voltage sags when they turn on or change power demands. SRP faces the challenge of maintaining adequate systemwide power quality levels, which includes assisting customers with power quality issues caused by their own equipment.

Faults at higher voltages (e.g., 230 kV, 500 kV) affect larger areas but are less likely to disrupt processes due to milder sag effects. Lower voltage faults (e.g., 12 kV) affect fewer customers but can be more severe and disrupt processes.

To monitor voltage sag events, SRP uses more than 325 power quality monitors. This enables SRP to track and plot the location of these events on the system. With the implementation of new technology, the deployment strategy for power quality monitors aims to achieve comprehensive monitoring of the electrical infrastructure. Initially, the focus will be on all 69 kV loops, with plans to transition to cover most dedicated substation transformers. SRP's long-term goal is to reach 100% coverage of all 4-500 kV substation buses.

**The Sag Count Index (SCI) tracks how often a voltage sag event is detected. A voltage sag event occurs any time the voltage level drops below 90% of the normal voltage level.**

Figure 13 illustrates the monthly trend, five-year trend and variance-to-goal for each of the past five years for Sag Count Index (SCI). In FY25, the SCI was 1.0 events per SRP power quality monitor, per month, indicating an average of only one voltage sag event detected. This year's performance was the lowest of the past five years and well below the goal of less than 1.7 events per monitor, per month.

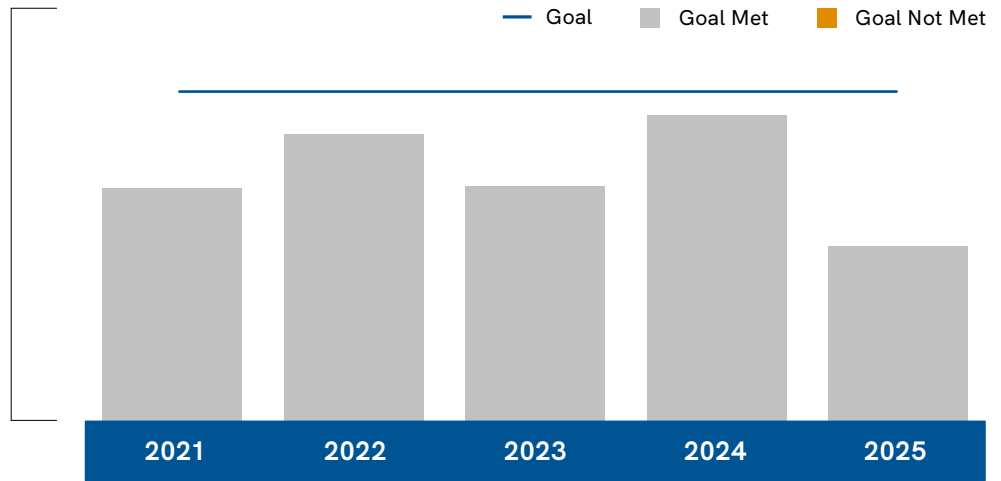
FIGURE 13



How Often a Voltage Sag Event is Detected per Month

YEAR

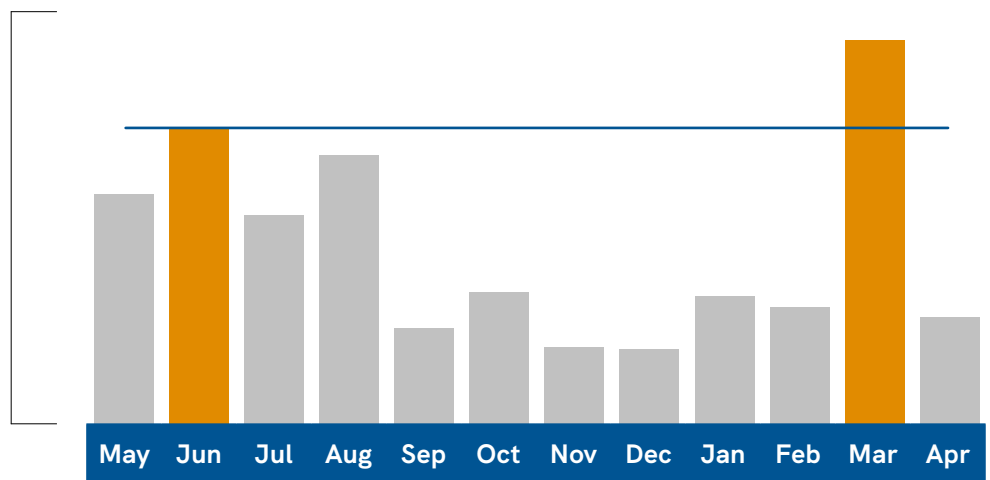
Results — 5-Year Trend (Events)



|               |      |      |      |      |      |
|---------------|------|------|------|------|------|
| Actual Result | 1.4  | 1.5  | 1.4  | 1.6  | 1.0  |
| Goal          | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  |
| Variance      | -0.3 | -0.2 | -0.3 | -0.1 | -0.7 |

MONTH

Results — FY25 (Events)



|               |      |     |      |      |      |      |      |      |      |      |     |      |
|---------------|------|-----|------|------|------|------|------|------|------|------|-----|------|
| Actual Result | 1.4  | 1.7 | 1.2  | 1.6  | 0.6  | 0.8  | 0.5  | 0.4  | 0.8  | 0.7  | 2.2 | 0.7  |
| Goal          | 1.7  | 1.7 | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7  | 1.7 | 1.7  |
| Variance      | -0.3 | 0.0 | -0.5 | -0.1 | -1.1 | -1.0 | -1.3 | -1.3 | -0.9 | -1.0 | 0.5 | -1.1 |

A photograph of a male worker with a beard, wearing a white hard hat with a headlamp, safety glasses, and a blue long-sleeved shirt. He is kneeling on the ground at night, focused on working on a piece of electrical equipment. The equipment consists of several white ceramic insulators mounted on a metal frame. The worker is holding a green and orange tool, possibly a wrench or a specialized key, connected to a yellow cable. The background is dark, with some blurred lights and the side of a white truck or trailer, suggesting an outdoor industrial or utility site.

# OPERATIONAL EXCELLENCE

In this section of the Grid Performance Report, you will see several examples of initiatives that demonstrate SRP's commitment to operational excellence and continuous improvement. Through this work, SRP is ensuring that our power delivery system is optimally maintained and operating at the highest standards.

## Stories

- 30 | SRP'S HUMAN EXTERNAL CARGO (HEC) HELICOPTER PROGRAM TAKES FLIGHT
- 32 | MITIGATING RISK THROUGH THE OSCILLATION MONITORING, ANALYSIS AND NOTIFICATION PROGRAM
- 34 | LEADING THE CHARGE: POWERING WALMART'S EV FAST-CHARGING NETWORK

## Works in Progress

In addition to the stories highlighted on the following pages, SRP implemented these key operational excellence projects in FY25 that help increase our ability to deliver reliable, affordable and sustainable water and energy:

- **Optimizing our grid** — Advanced Distribution Management System (ADMS): SRP deployed ADMS to replace legacy operation applications with a unified software platform. This system supports a comprehensive suite of grid management optimization tools.
- **Evaluating our impact** — Distribution Enablement (DE) Lab / Innovation Technology Lab: The new lab was commissioned to test emerging technologies in a scalable and flexible environment. This enables SRP to evaluate its impact on the power grid and determine optimal integration strategies in a controlled setting.
- **Enhancing our process** — New Interconnection Process: This new process introduced automated technical screening for distributed energy resources (DERs) interconnecting to the distribution system. This screening process quickly assesses hosting capacity, fault current, short circuit, transformer loading, transient stability and inverter voltage, based on the DER system size.

## SRP'S HUMAN EXTERNAL CARGO (HEC) HELICOPTER PROGRAM TAKES FLIGHT

SRP delivers power to the Valley over 2,460 circuit miles of transmission power lines. The integrity of the transmission system is, quite literally, in the hands of its lineworkers. They perform maintenance, improvements and upgrades from hundreds of feet in the air, and their work often requires long drives, exhausting hikes and steep climbs up towers.

With the introduction of the Human External Cargo (HEC) program, the job is now just a helicopter flight away.

Using HEC, SRP lineworkers are suspended below the company's helicopter — a Bell 429 GlobalRanger — on a special short-haul line, or a very strong rope. This method enables transmission maintenance workers to be quickly transported to and from jobs in historically hard-to-reach places.

HEC increases efficiency, saving the team hours and even weeks by reducing travel time and decreasing worker fatigue. Not to mention, it's just plain cool.

HEC was first introduced in 2024 at SRP — making it the first utility provider in Arizona to employ this method. The transmission team went through extensive safety training to prepare.

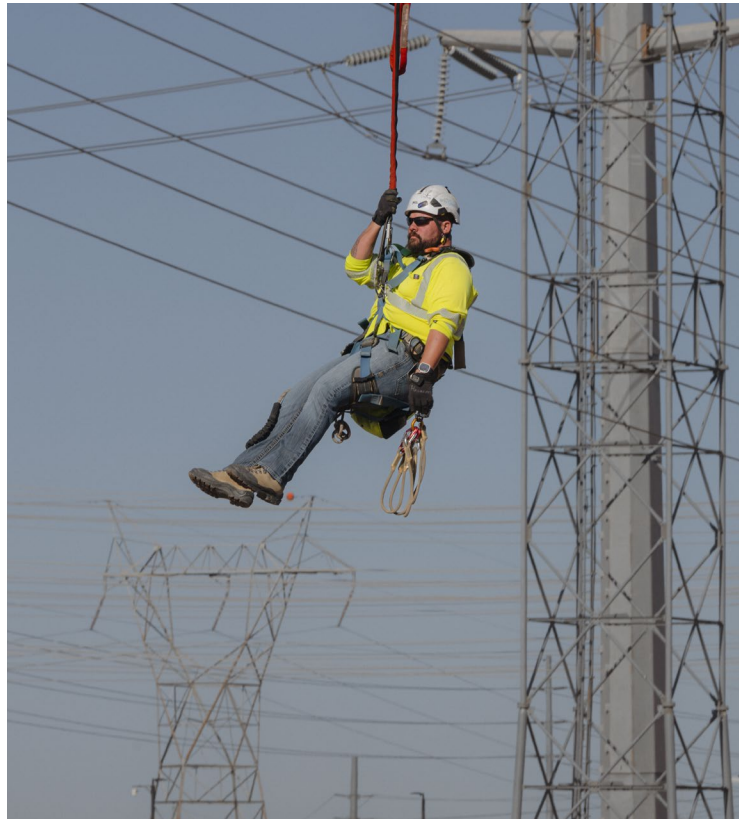
Transmission team leadership sought instruction from outside consultants, including Air Rescue Systems — a team of subject matter experts with backgrounds in the U.S. Navy, U.S. Army, Special Operations, high-altitude mountain rescue and other elite units. Everyone in the Transmission Line Maintenance department is now certified to do HEC.

**SRP took its first official HEC flight in June 2024. Since then, the method has been used in a variety of jobs, especially those with remote access. The team is able to do three to four times as much with HEC than they were able to with previous methods.**

At a recent job that required lineworkers to replace old static insulators on transmission lines from the Palo Verde Generating Station to the Westwing Receiving Substation, the team was able to complete 260 in just two weeks using HEC. Without it, they might have been able to replace 60 to 80 of these insulators in that same amount of time.

Currently, HEC is performed only on de-energized transmission lines. This year, the team will be trained and certified to work from the helicopter on energized lines, allowing for maintenance without de-energizing or needing outages on transmission circuits, for specific maintenance tasks.

With HEC, SRP can more quickly and easily perform transmission maintenance. When it comes to delivering safe and reliable energy across the Valley, the sky's the limit.



## MITIGATING RISK THROUGH THE OSCILLATION MONITORING, ANALYSIS AND NOTIFICATION PROGRAM

To build a reliable, affordable and sustainable future for Arizona, SRP is adding more renewable energy resources to its power mix. While these energy sources move us closer to a cleaner, greener future, they come with their own unique challenges and risks.

In 2024, a small team at SRP was formed to monitor and mitigate one specific risk associated with the power flow from renewable sources to the grid — oscillation events.

The Oscillation Monitoring, Analysis and Notification (OMAN) team, a part of SRP's Grid Operations Support department, monitors the power flow from SRP-owned thermal power plants and newer Inverter-Based Resources (IBRs) to the grid.

Their goal is to increase quality of power and to decrease reliability risks through early detection of oscillatory disturbances and coordinated action.

Using two types of software, the OMAN team monitors and analyzes oscillation events in real-time and offline to understand their impact at a variety of locations, including SRP's Agua Fria Generating Station (pictured).

Oscillations, or fluctuations in voltage, current, power and frequency, can impact a power system's stability and reliability. On a small scale, oscillations can trip and damage electric equipment. On a large scale, they can destabilize a grid and cause blackouts.

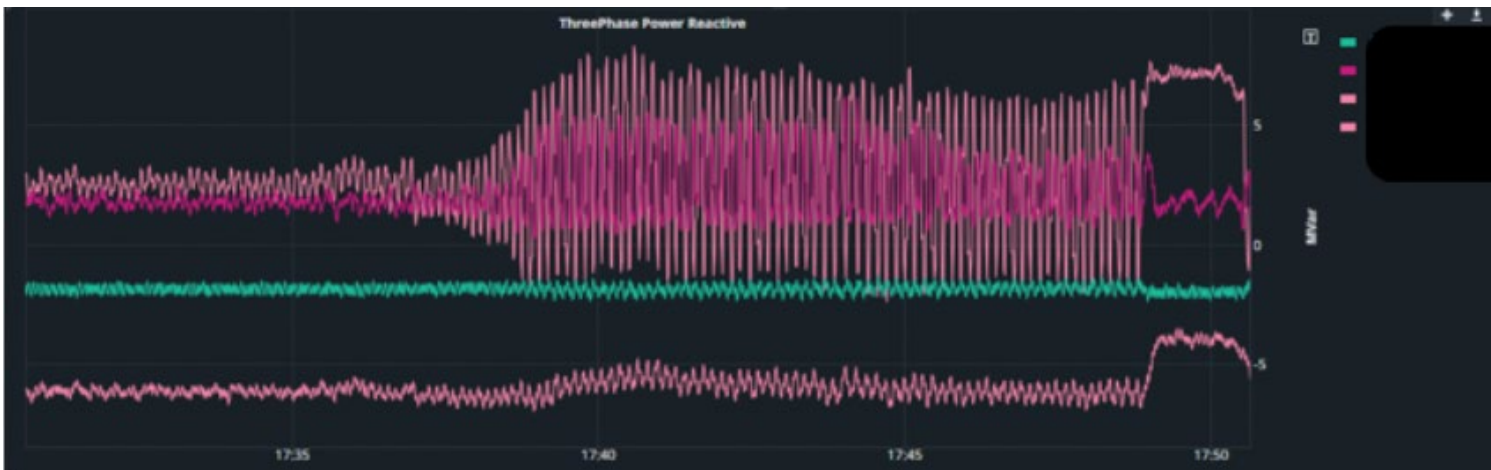
Renewable power sources like IBRs — solar, wind and battery power integrated into the grid through inverters — have a higher tendency to create oscillations because of the distributed nature of multiple small units contributing to the IBR output rather than one big machine. Issues can range from problems with individual devices to more complex interactions between device-level and plant-level controllers.

**With OMAN, SRP now has the technology and a team in place to detect, monitor and report oscillation disturbances, and can relay that information to operators in the control room and at third-party-operated sites.**

From that point, necessary interventions can be made, including actions from SRP operators and third-party IBR operators to stop large oscillations and investigations and repairs to resolve small oscillations.

With the growth of IBRs and the retirement of some traditional generators, SRP can expect more of these oscillatory impacts to its system. Programs like OMAN will help maintain reliability of the system and prevent oscillatory issues.

Thanks to OMAN's system of monitoring and communication, SRP can continue to deliver reliable power while building a cleaner energy future.



## **LEADING THE CHARGE: POWERING WALMART'S EV FAST-CHARGING NETWORK**

SRP has a powerful reputation for reliability with businesses across the Valley.

When Walmart was seeking the right location and partner to begin building its nationwide network of direct current fast chargers (DCFC) for electric vehicles (EV), the company chose Arizona and SRP as its starting point.

The massive DCFC project is part of Walmart's efforts to make EV ownership more accessible. By 2030, the megaretailer plans to install thousands of fast chargers at Walmart and Sam's Club locations across the U.S.

The retailer first introduced the idea of a new fast-charging network in 2023, sending a technical questionnaire to utilities across the country. Walmart needed a partner who could design and construct the right power system for its planned network of 400-kilowatt (kW) chargers. The company was also seeking the right mix of EV rebates and incentives.

Members of SRP's design, construction and product development teams provided prompt, innovative responses that impressed the retailer and helped win the business.

Walmart chose four stores in SRP service territory in the East Valley and Phoenix to begin its project.

SRP's design and construction team began its well-defined process and made a cost-saving discovery along the way.

The team performed a load study to determine if additional capacity would be needed to meet the new charging system's required load. They found that nearly all Walmart locations generate solar power. Compared to neighboring businesses, the retailer's actual load was very low, and it already had the power needed for the majority of the projects on site.

SRP's discovery reduced the amount of trench, conduit and easement access needed, amounting to cost and time savings.

The SRP team designed a system using primary redundant feeds that already existed on site, offering maximum reliability and room for future innovation. The team also reviewed terms and conditions to allow Walmart to participate in SRP's EV program and discussed money-saving price plans and ways to encourage off-peak charging.


**Walmart was so impressed with SRP's work that it expanded the scope of the project in Arizona. The retailer added an additional 23 sites to its initial 14, for a total of 37 planned fast-charging sites across the Valley.**

The DC fast-charging stations in SRP territory are on track to be completed and energized by early 2026.

Once complete, 148 new fast-charging stations will be available to EV drivers in Mesa, Queen Creek, Phoenix, Chandler, Tempe, Apache Junction and San Tan Valley. And SRP's future-focused design allows for additional chargers to be installed at each site.

The DCFC project has helped strengthen SRP's relationship as a reliable provider of partnership and power to Walmart, setting a successful stage as it expands charging sites across the country.



An aerial photograph of a reservoir with a rocky shoreline. A large metal transmission tower stands on a grassy hillside, with several high-voltage power lines stretching across the water and land. The water is calm, reflecting the sky and the tower. The surrounding landscape is arid with sparse green and brown vegetation.

**2025**  
**GRID**  
**PERFORMANCE**  
**REPORT**

## ACKNOWLEDGMENTS

The Grid Performance Report is produced by a cross-functional team with many other contributors. The formal work team by department includes:

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