2025 Annual Electric Reliability Results

Nov. 9, 2026

Welcome

We are committed to an accessible and inclusive meeting experience. Live captions are available through Microsoft Teams. Please let us know if you need any support participating today.

Questions are welcome!

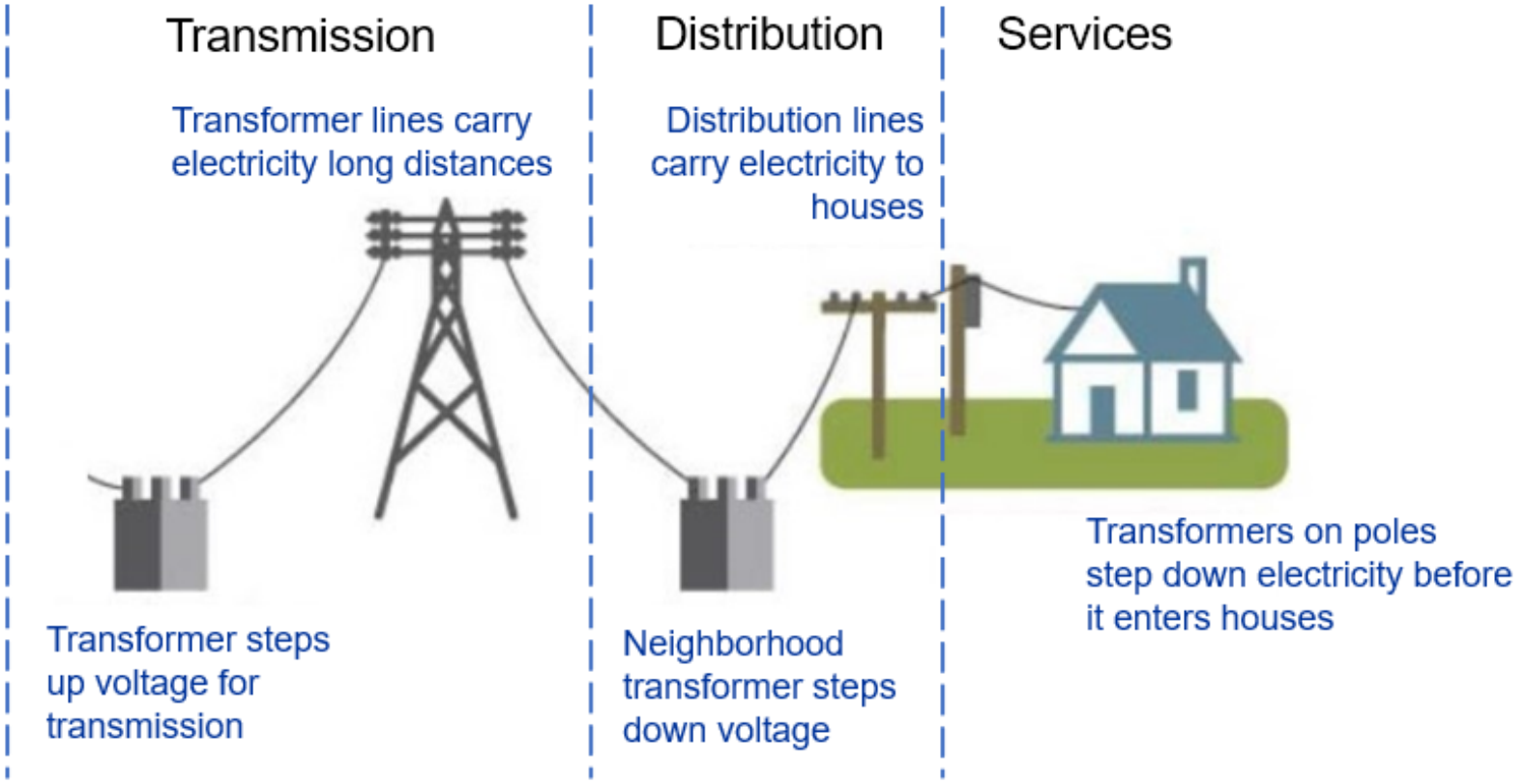
- To help us stay on track, please hold your questions until the end of the presentation. We'll leave time for Q&A.
- When speaking, please state your name and avoid speaking over others. If you're online, please use the Raise Hand feature or chat to ask questions.

Agenda

- Background
  - Asset classification
  - Reliability metrics
  - Major Event Day
  - Reliability goals
- Industry leading achievements
- Reliability metric comparison vs. other utilities
- 2025 SDG&E Annual Report review
- Updated outage map

Asset Classification





Source: Adapted from National Energy Education Development Project (public domain)

Reliability statistics are broken down by Transmission, Substation and Distribution

Reliability Metrics

Four most common metrics in the electric utility industry as defined by IEEE 1366

SAIDI	**Total minutes every customer was without power due to sustained outages**	**Total number of customers**
SAIFI	**Number of sustained customer outages experienced by all customers**	**Total number of customers**
CAIDI	**System Average Interruption Duration Index (SAIDI)**	**System Average Interruption Frequency Index (SAIFI)**
MAIFI	**Number of customers who experience momentary outages**	**Total number of customers**

**SDG&E served just over 1.54M customers in 2026*

Major Event Day

As defined in IEEE 1366

- A Major Event Day (MED) is a day in which the daily SAIDI exceeds a pre-determined threshold
- Days exceeding the MED threshold are days on which the energy delivery system experiences stresses beyond what is normally expected (such as severe weather)
- MEDs are separately analyzed



Reliability Goals

Learn from outage results, then develop system and operational enhancements

Goal 1: Review outages

- Review all unplanned outages and their causes
- Evaluate planned outage impacts on the customer experience
- Validate trends

Reviews drive change



Goal 2: Mitigation Plans

Modernize our infrastructure

Strategic equipment upgrades, reducing:

- Frequency of outages
- Scope of outages

Enhance our operational practices

Where appropriate, change how we operate to shorten restoration times

Awards and Recognition

PA Consulting ReliabilityOne® Awards

Industry recognition of SDG&E's reliability performance

OUTSTANDING RELIABILITY

21 **consecutive years**

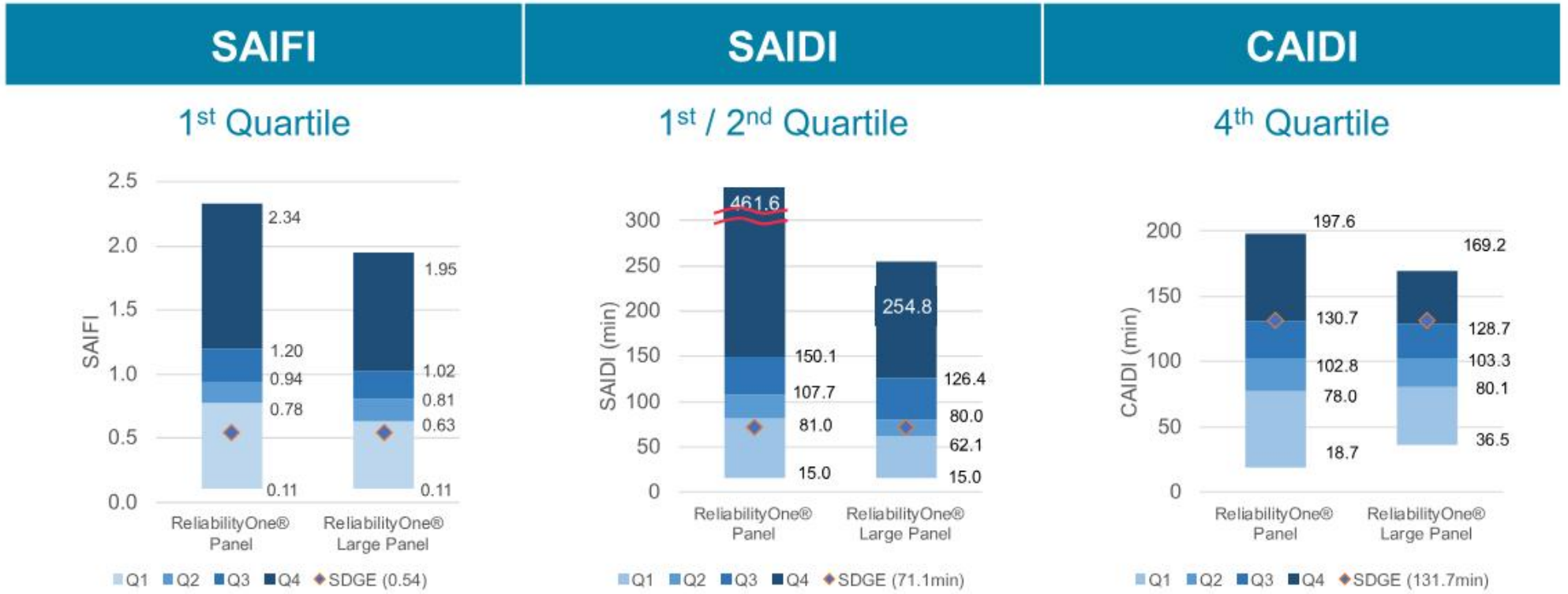
"Best in the Pacific"

OUTSTANDING GRID SUSTAINABILITY

2020 **2022** **2023**

How does SDG&E compare nationwide and with the other large California utilities?

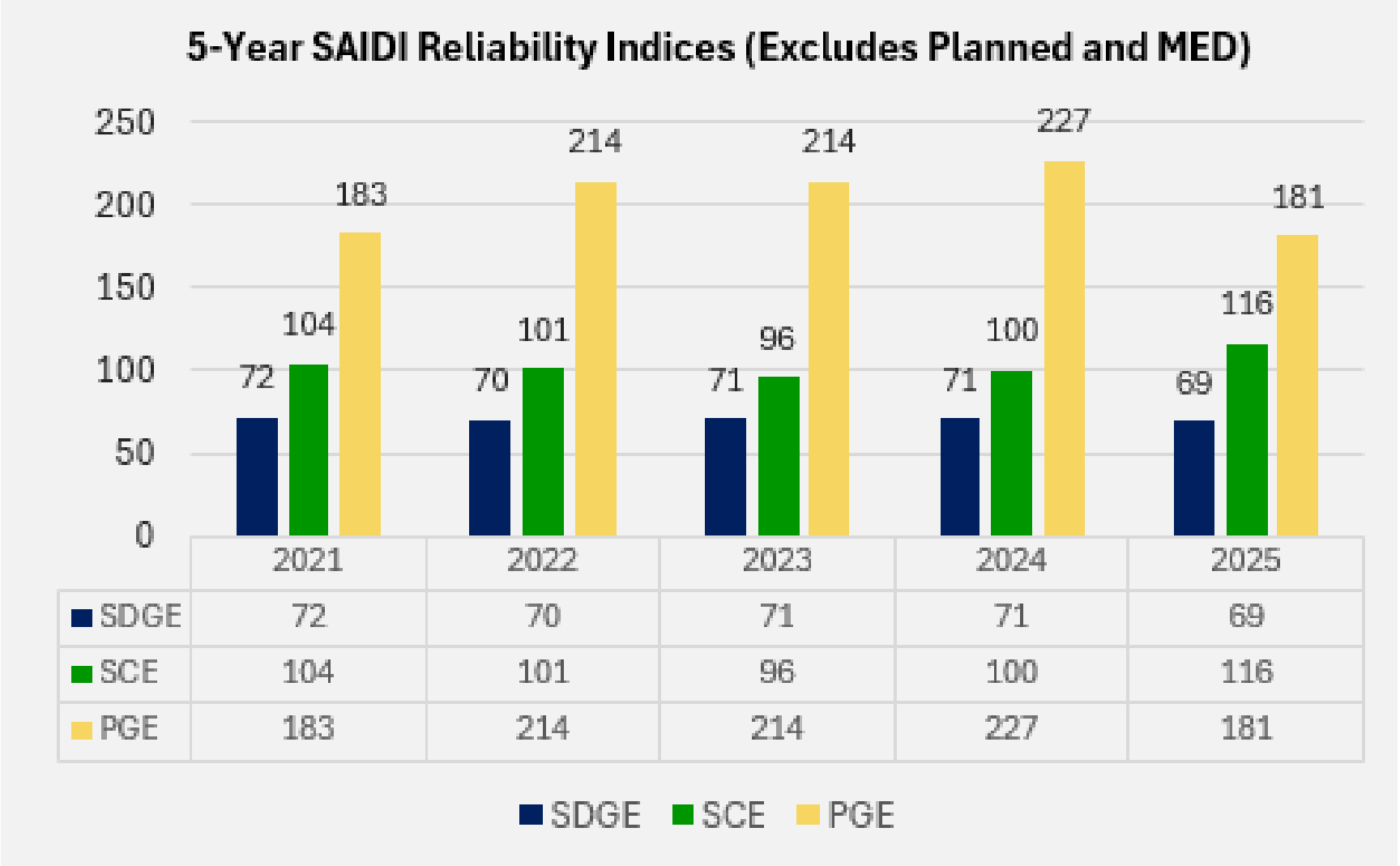
Reliability Comparison - Nationwide



Benchmarking data collected by PA from a variety of publicly available data sources, including Energy Information Agency (EIA) annual reliability data.

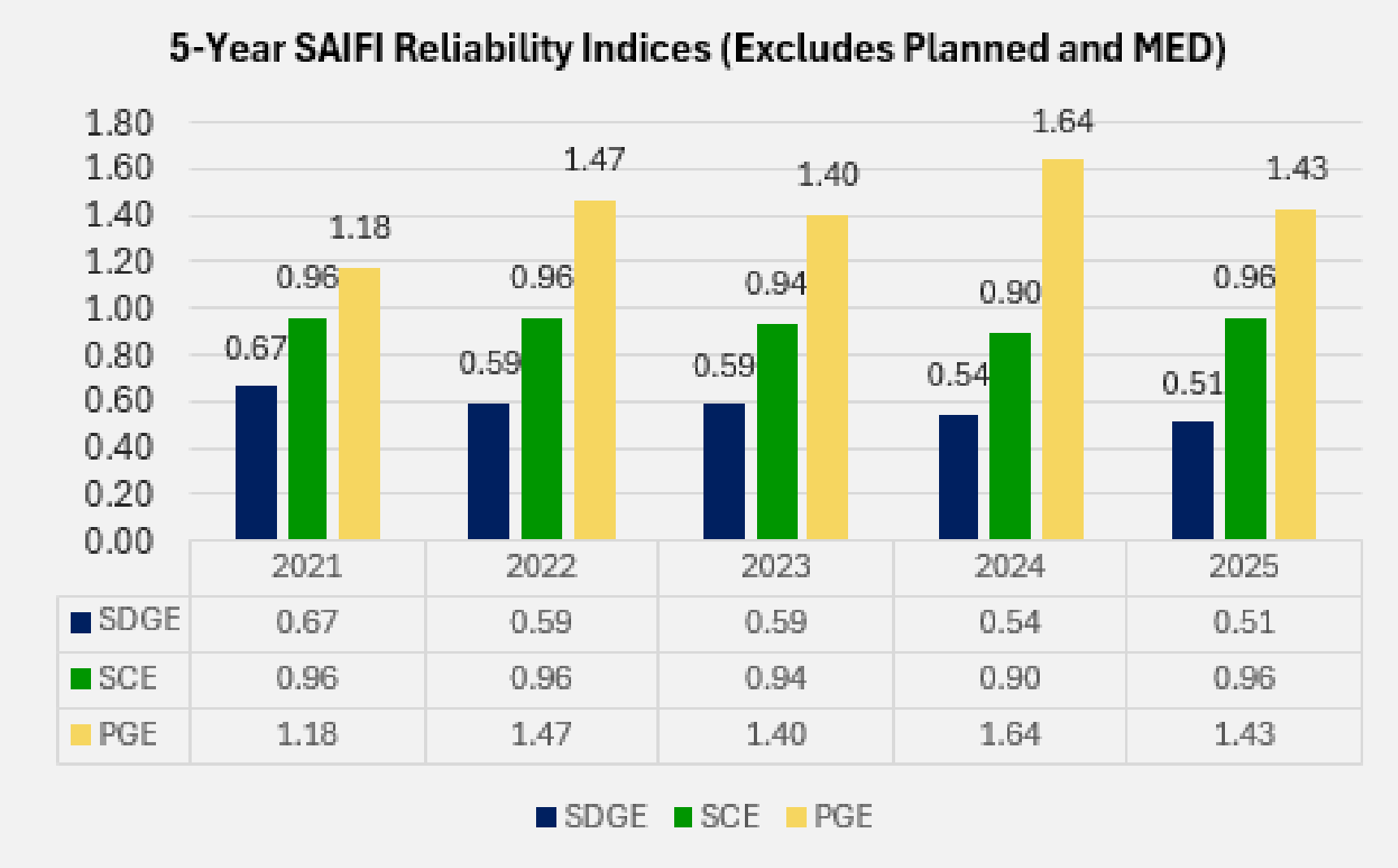
IOU Panel: > 300,000 Customers. Large IOU Panel: > 750,0000 Customers

SAIDI Comparison to California IOUs



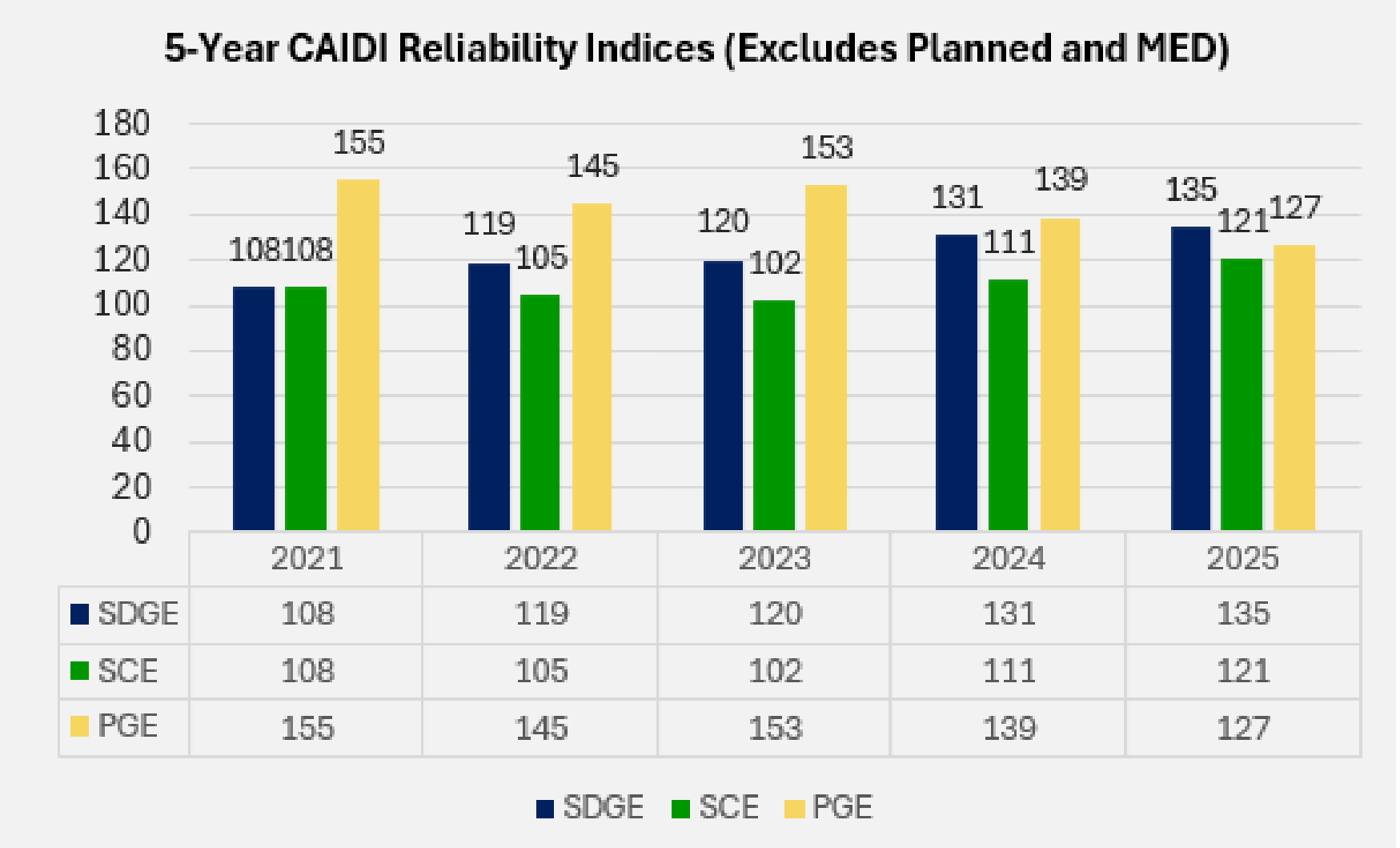
	2021	2022	2023	2024	2025
SDGE	72	70	71	71	69
SCE	104	101	96	100	116
PGE	183	214	214	227	181

SAIFI Comparison to California IOUs



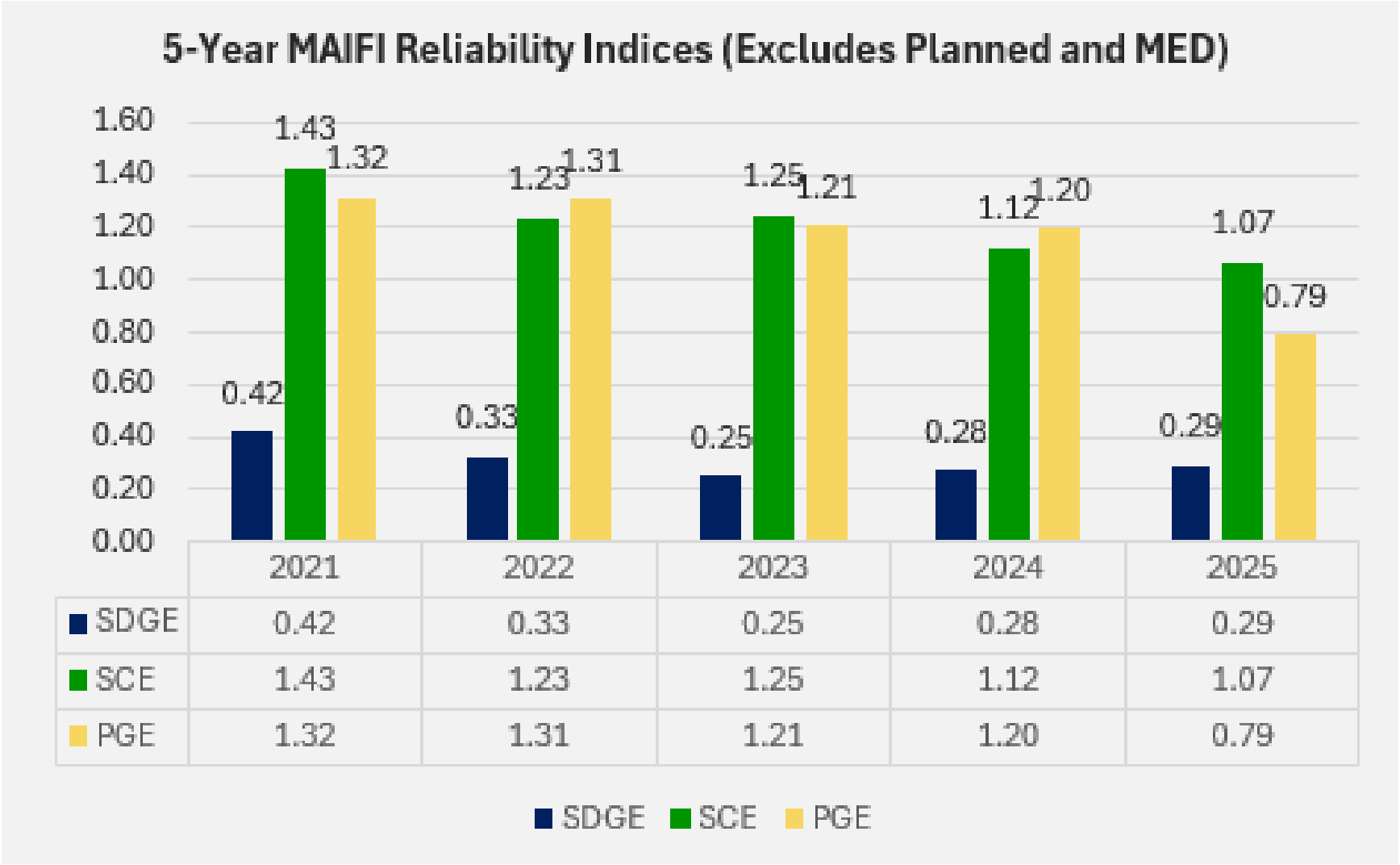
	2021	2022	2023	2024	2025
SDGE	0.67	0.59	0.59	0.54	0.51
SCE	0.96	0.96	0.94	0.90	0.96
PGE	1.18	1.47	1.40	1.64	1.43

CAIDI Comparison to California IOUs



	2021	2022	2023	2024	2025
SDGE	108	119	120	131	135
SCE	108	105	102	111	121
PGE	155	145	153	139	127

MAIFI Comparison to California IOUs



	2021	2022	2023	2024	2025
SDGE	0.42	0.33	0.25	0.28	0.29
SCE	1.43	1.23	1.25	1.12	1.07
PGE	1.32	1.31	1.21	1.20	0.79

Annual Report Contents and Key Takeaways

SDG&E's Annual Electric Reliability Report

- **Section 1** – System indices for the last 10 years
- **Section 2** – District reliability indices for the past 10 years including and excluding MED
- **Section 3** – System and District indices based on IEEE 1366 for the past 10 years including planned outages and including / excluding MED
- **Section 4** – Service territory map including divisions of districts
- **Section 5** – Top 1% of Worst Performing Circuits (WPC) excluding MED
- **Section 6** – Top 10 major unplanned power outage events within a reporting year
- **Section 7** – Summary List of MED per IEEE 1366
- **Section 8** – Historical 10 largest unplanned outage events for the past 10 years
- **Section 9** – Number of customer inquiries on reliability data and the number of days per response

Section 1 – System Indices for the Past 10 Years (Unplanned)

A look inside the report chapter on unplanned outages over the past 10 years

What's in Section 1

- Tables and graphs for all 4 major reliability indices (SAIDI, SAIFI, CAIDI and MAIFI)
- System-wide results for the past 10 years, 2016–2025
- Unplanned outages only, shown with and without major event days (MED)

What it means for the system

- SAIDI has remained stable at around 70.5 minutes per customer
- SAIFI has stayed around 0.6 interruptions per customer, never exceeding 0.67
- CAIDI has shown a slight increase
- MAIFI is down 18% since 2016, though it varies year to year

Key takeaways for customers

- Day-to-day reliability has held steady over the past 10 years
- Outage frequency is steady, and brief momentary interruptions are down 18%
- A slight rise in CAIDI means the average unplanned outage is taking longer to restore

Section 2 – District Indices for the Past 10 Years (Unplanned)

A look inside the report chapter on unplanned outages by district

What's in Section 2

- Tables and graphs for all 4 major indices (SAIDI, SAIFI, CAIDI and MAIFI)
- Results by district for the past 10 years, 2016–2025
- Unplanned outages only, with and without major event days (MED)

What it means for the Eastern District

- Eastern serves about 14% of SDG&E's customers (~221K)
- Per customer, outage duration and frequency are slightly above the system average
- Both SAIDI and SAIFI (MED Excluded) have improved over the last 10 years
  - 12% fewer outage minutes
  - 8% fewer sustained interruptions

Key takeaways for customers

- Eastern District reliability is modestly improving over the long term
- Outages remain slightly longer and more frequent than the system average
- The upward trend in momentary interruptions (MAIFI) is under review

Section 3 – System and District Indices – Planned and Unplanned

A look inside the report chapter that includes planned outages

What's in Section 3

- Tables and graphs for all 4 major indices (SAIDI, SAIFI, CAIDI and MAIFI), by district
- Additional transparency into customer interruptions by adding planned outages
- Planned work includes replacing aging equipment, adding capacity and wildfire mitigation

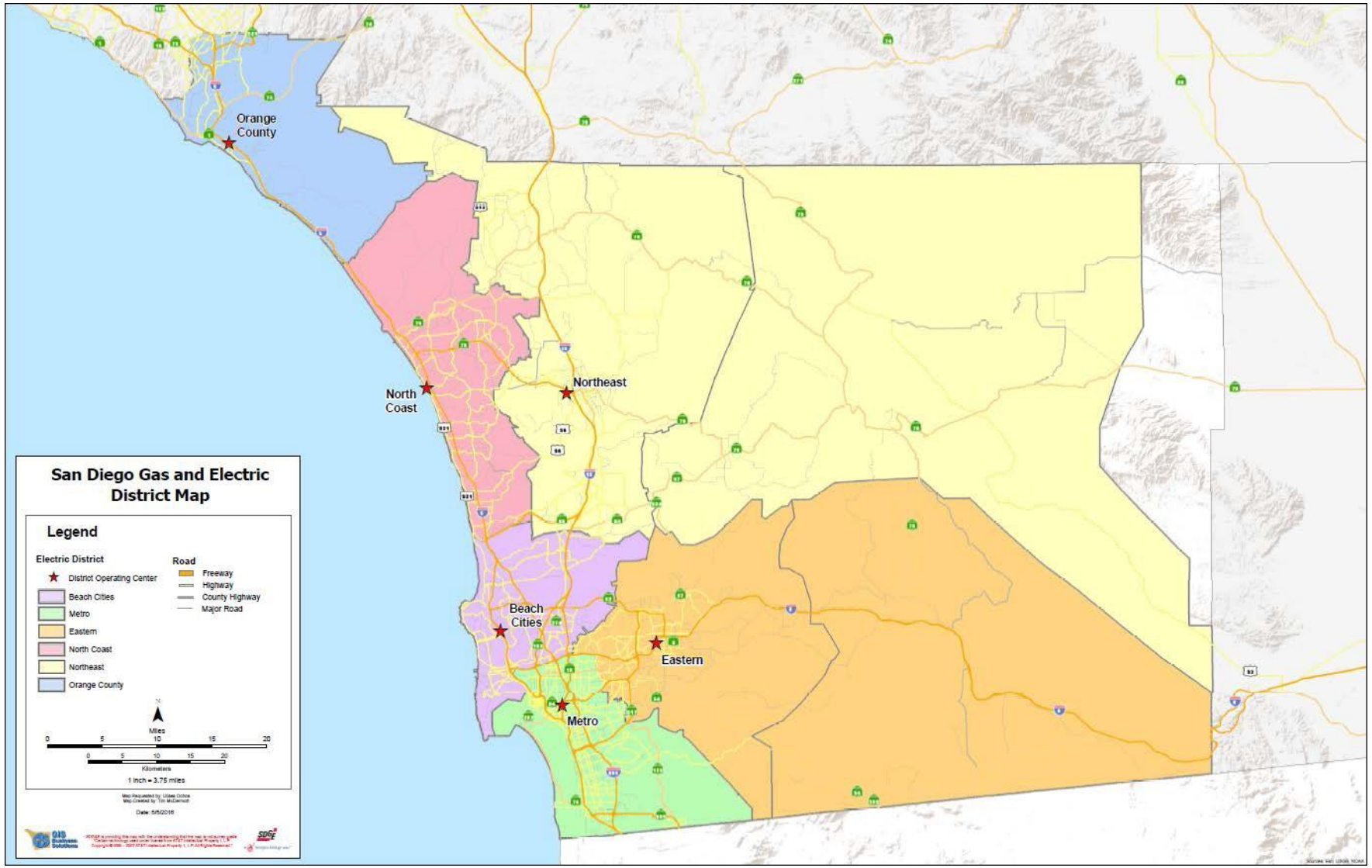
What it means for the Eastern District

- Planned-outage SAIDI peaked from 2020 through 2023
- Main driver was pole replacements both to replace aging equipment and as part of our wildfire mitigation efforts
- Additional planned outages were due to system reliability enhancements, intended to mitigate likelihood and consequence of future failures

Key takeaways for customers

- SDG&E's focus is to provide advance notice, minimize the number of customers affected and the duration of each interruption, and coordinate work whenever practical.
- Much of this work replaces aging equipment whose failure may have resulted in a longer, unplanned outage

Section 4 – Service Area Map



Section 5 – Top 1% Worst Performing Circuits

Ranked by Circuit SAIDI and Circuit SAIFI

What's in Section 5

- List of the Top 1% Worst Performing Circuits
- Ranked using Circuit SAIDI and Circuit SAIFI
- Two-year view of unplanned outages, 2024–2025

What it means for Eastern District

- Circuit 441 was the worst performing circuit when ranked by Circuit SAIDI
- Excluding PSPS and Fire, there were 7 unplanned outages on Circuit 441 in 2024 and 2025 combined
- Of these 7 outages, 5 were due to Bird Contacts

Key takeaways for the system

- No circuit has appeared on the worst performing circuits list for 3 consecutive years

*** Circuit SAIDI represents the two-year average (2024-2025) of all outages: Mainline, Feeder, Backbone, and Branch*

Section 6 – Top 10 Major Unplanned Outages in 2025

Ranked by the number of customers affected

What's in Section 6

- List of the top 10 major unplanned outages in 2025
- Ranked by number of customers affected, rather than system SAIDI

What it means for the EA

- Top event by customer impact was due to severe weather on December 24
- Four of the top 10 outages were due to PSPS, which affected the EA
- The only non-PSPS, non-weather outage in the list that affected the EA was a tee connector failure on July 7, 2025 (10,400 Customers and System SAIDI of 0.70)

What it means for the system

- To address PSPS outages, SDG&E invests in wildfire hardening
- SDG&E proactively replaces tee connectors (Planned replacements can result in shorter outage durations and smaller customer impacts)

Section 7 – 2025 Major Event Days

Four Major Event Days in 2025

Date	Description	Location (District)	Number of Customers Out of Service
January 7	PSPS Event – Extreme Winds	EA, NC, NE	7,043
January 14	PSPS Event – Extreme Winds	BC, EA, NE, OC	7,609
January 20	PSPS Event – Extreme Winds	CM, EA, NE	16,885
January 23	PSPS Event – Extreme Winds	EA, NC, NE, OC	12,967

Key Takeaway – All Major Event Days were due to Public Safety Power Shutoffs

Section 8 – Historical 10 Largest Unplanned Outage Events

Ranked by System SAIDI, 2016–2025

What's in Section 8

- List of the top 10 unplanned outage events, ranked by System SAIDI
- Covers the years 2016 through 2025
- From 2016 – 2025, only 1 event from 2025 made the Top 10 → PSPS on January 20

What it means for the system

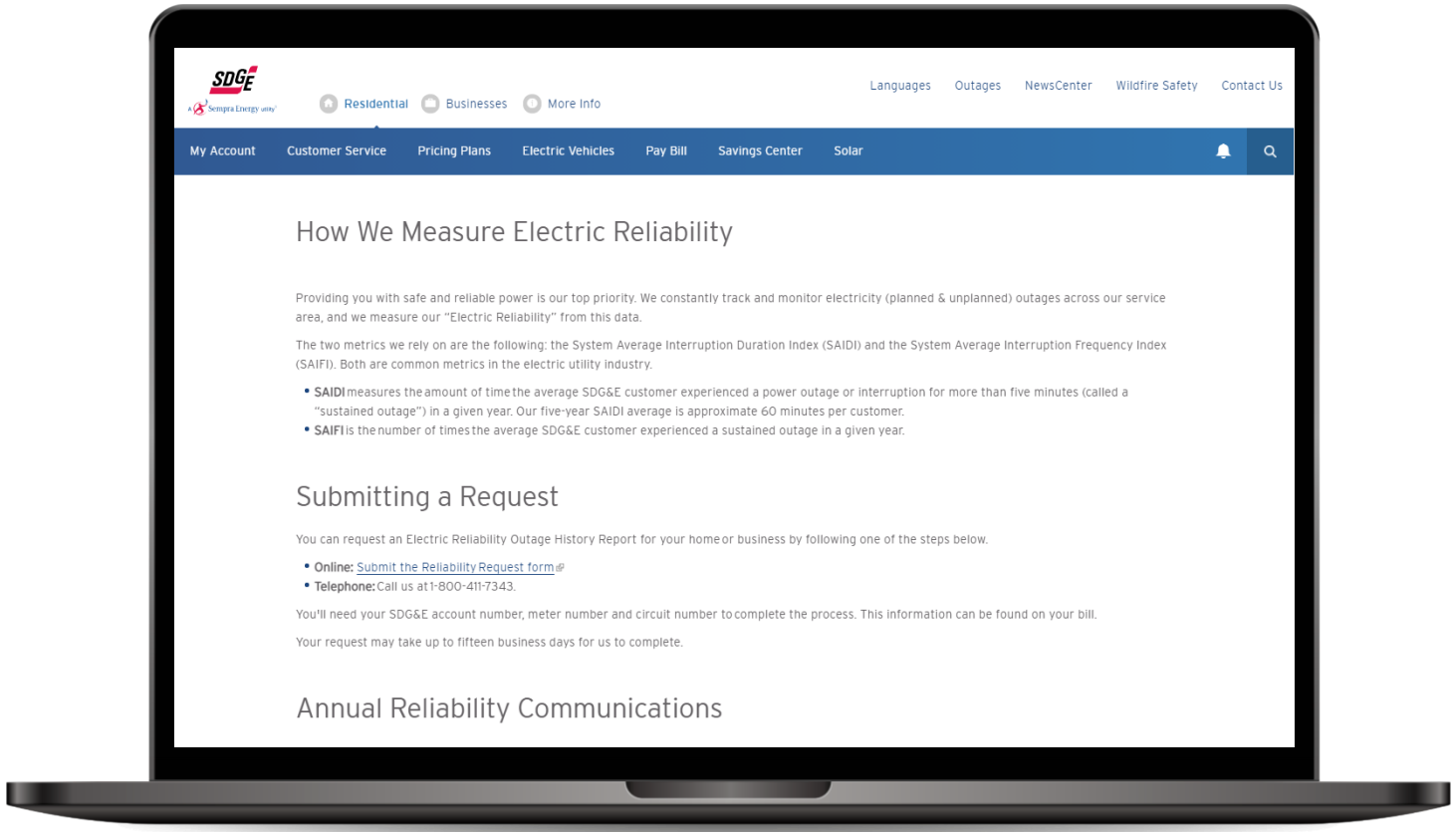
- The top 8 events are all public safety power shutoffs (PSPS)
- The other two events were an El Niño storm in late January 2016 and the Valley Fire in 2020

Section 9 – Website – Outage Inquiries

Find information or submit a request:

sdge.com/system-reliability

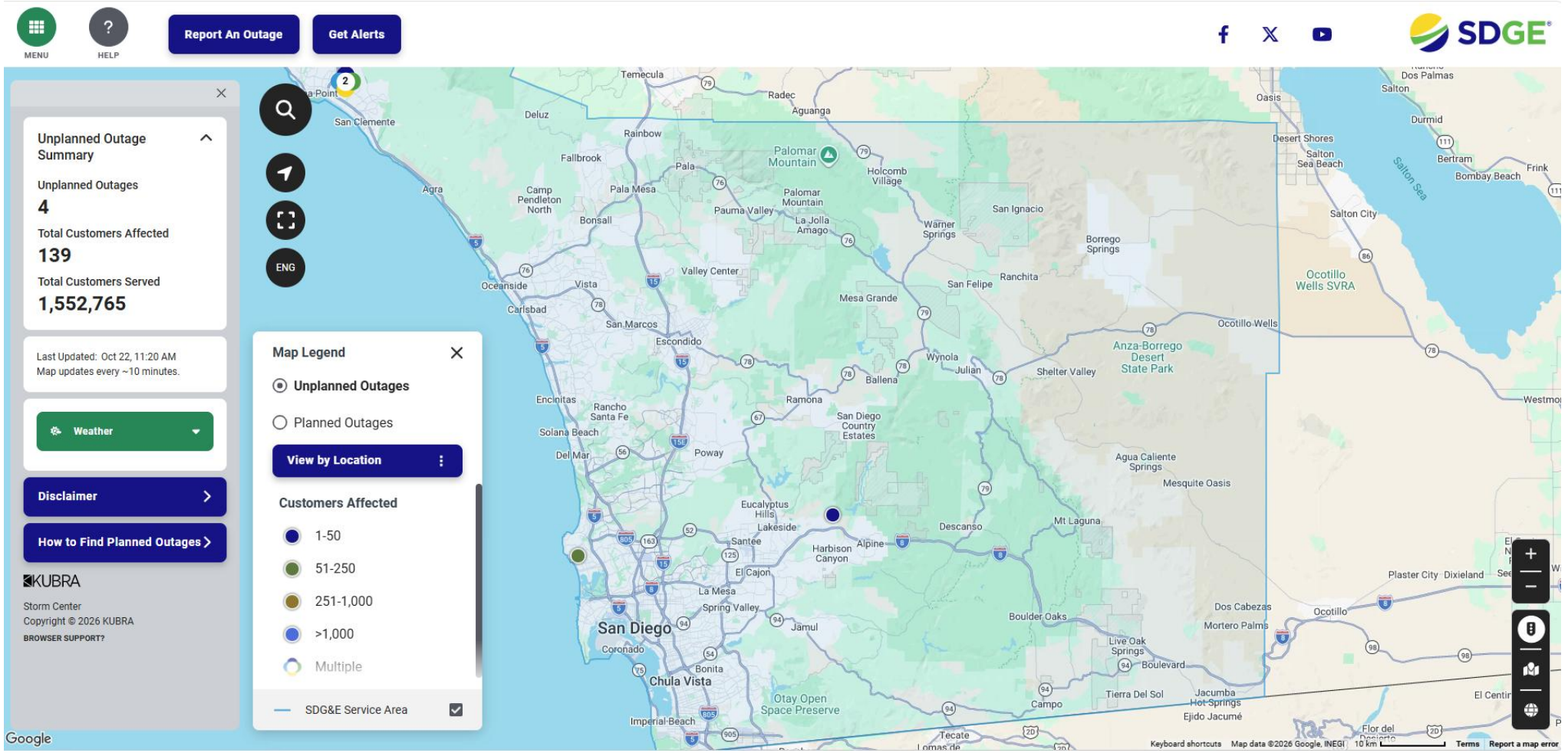
In 2025, the average response time was approximately one business day.



Outage Maps

Outage Map Provides Real Time Updates on Outages

https://outage.sdge.com



Modern Outage Experience That Performs When It Matters

The new outage map delivered a faster, clearer customer experience and scaled seamlessly during high-demand events, providing uninterrupted access to outage information when customers needed it most.

Go Live: March 16th

- Address-level lookup eliminates guesswork
- Easier-to-find outage details
- Multiple ways to view outages
- Integrated, real-time weather context
- Flexible map layers tailored to customer needs

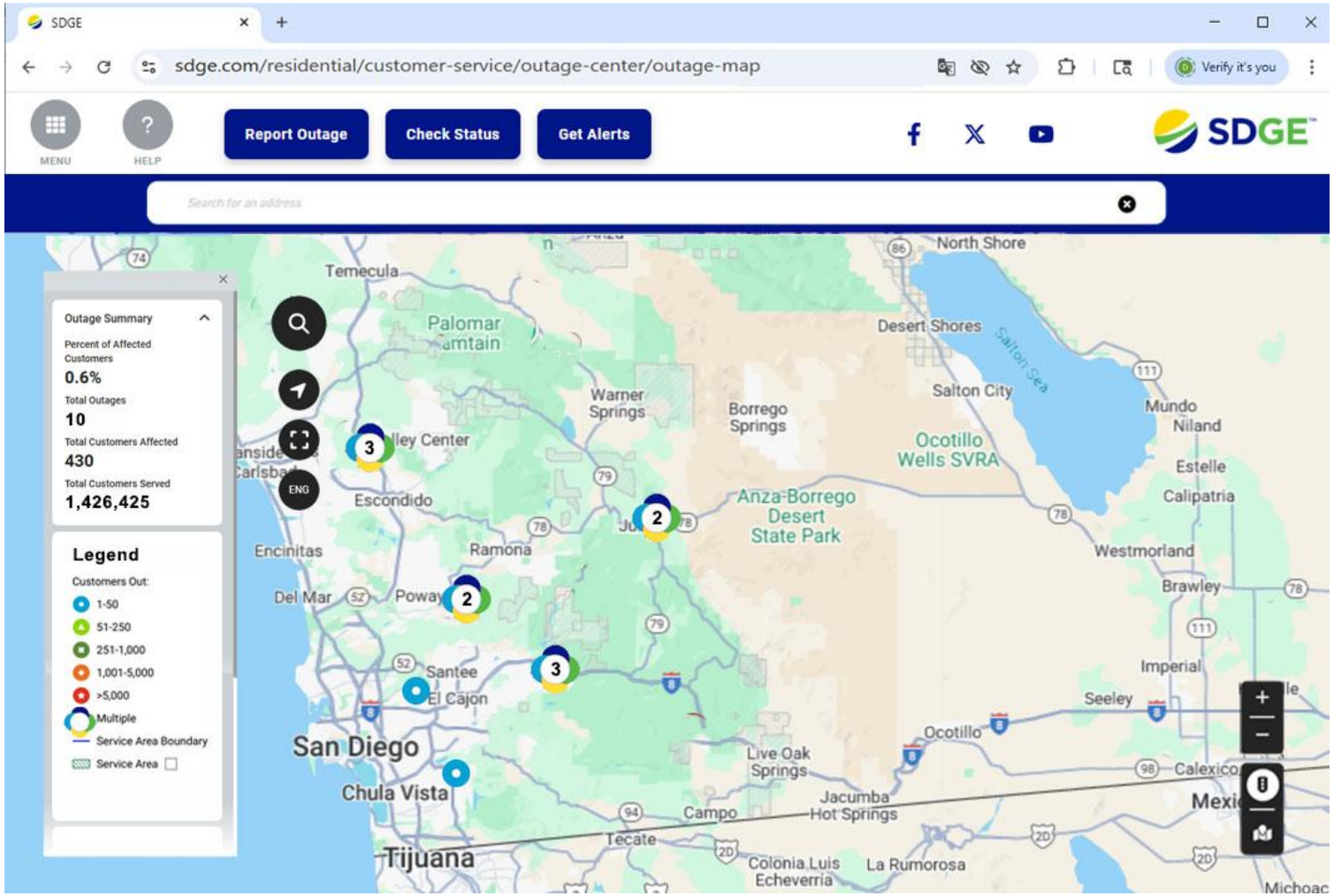
Proven at Scale: March 26

Tested during a major outage event, the map scaled seamlessly under extreme demand

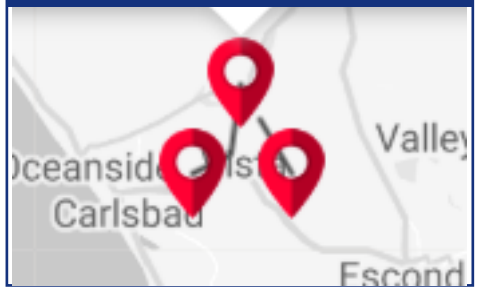
- ***233K customer views***
- **Day prior baseline** (March 25): 7K views (+3,140% surge)
- **PSPS benchmark** (Jan 2025): 40K views
- **Previous map failure threshold** (Sept 8, 2024): 83K views

Reliability is more than restoring power.
Customers also need timely, accurate information they can trust during outage events.

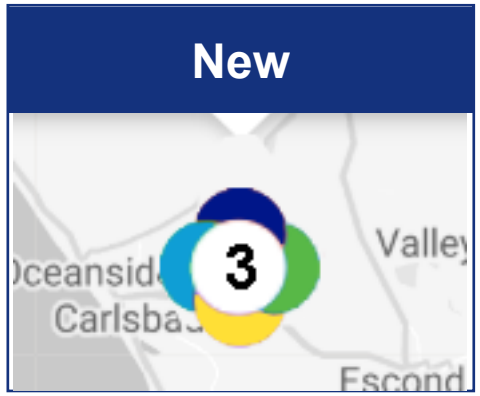
Improved Outage Visibility



Previously



New

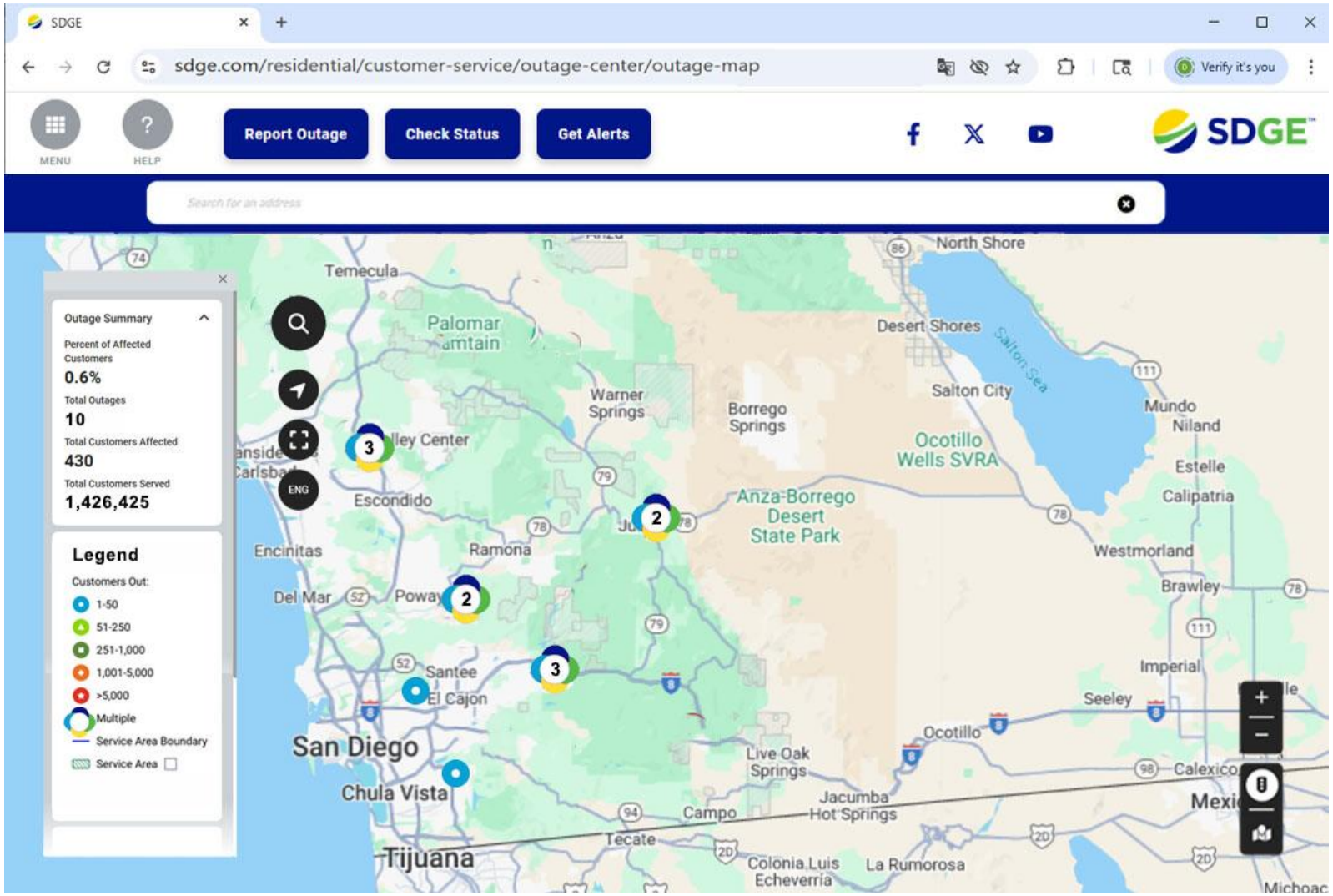


Faster Access to Outage Information

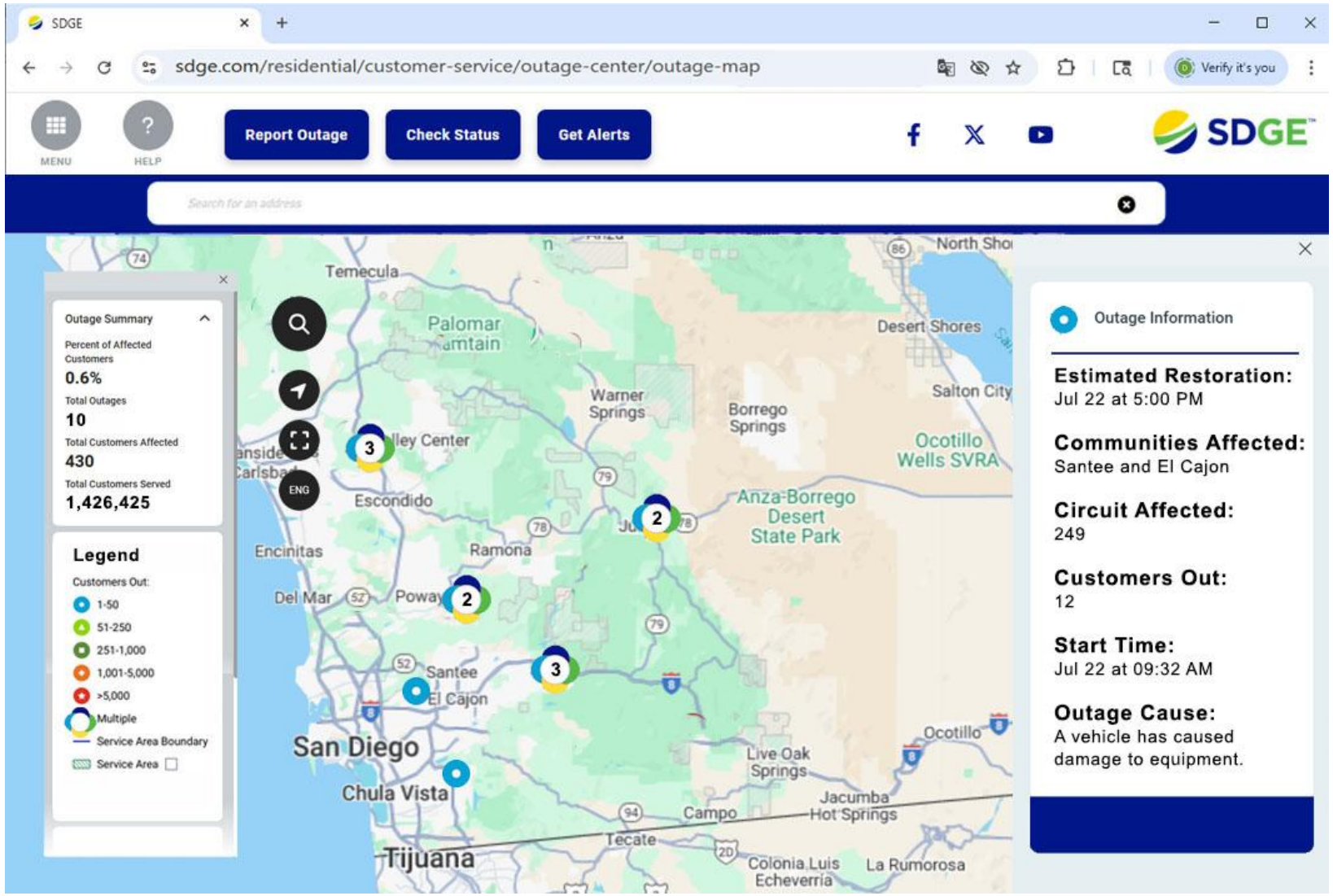
1

2

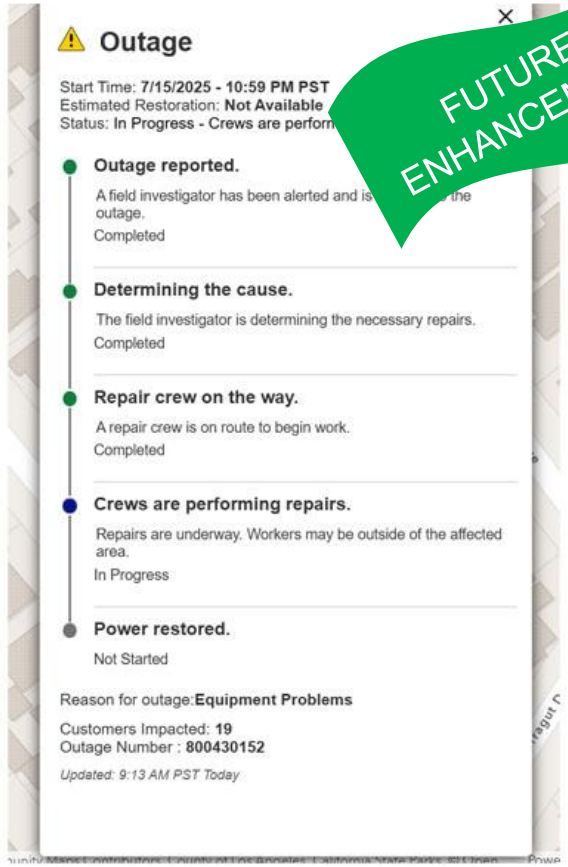
3



Greater Transparency for Customers

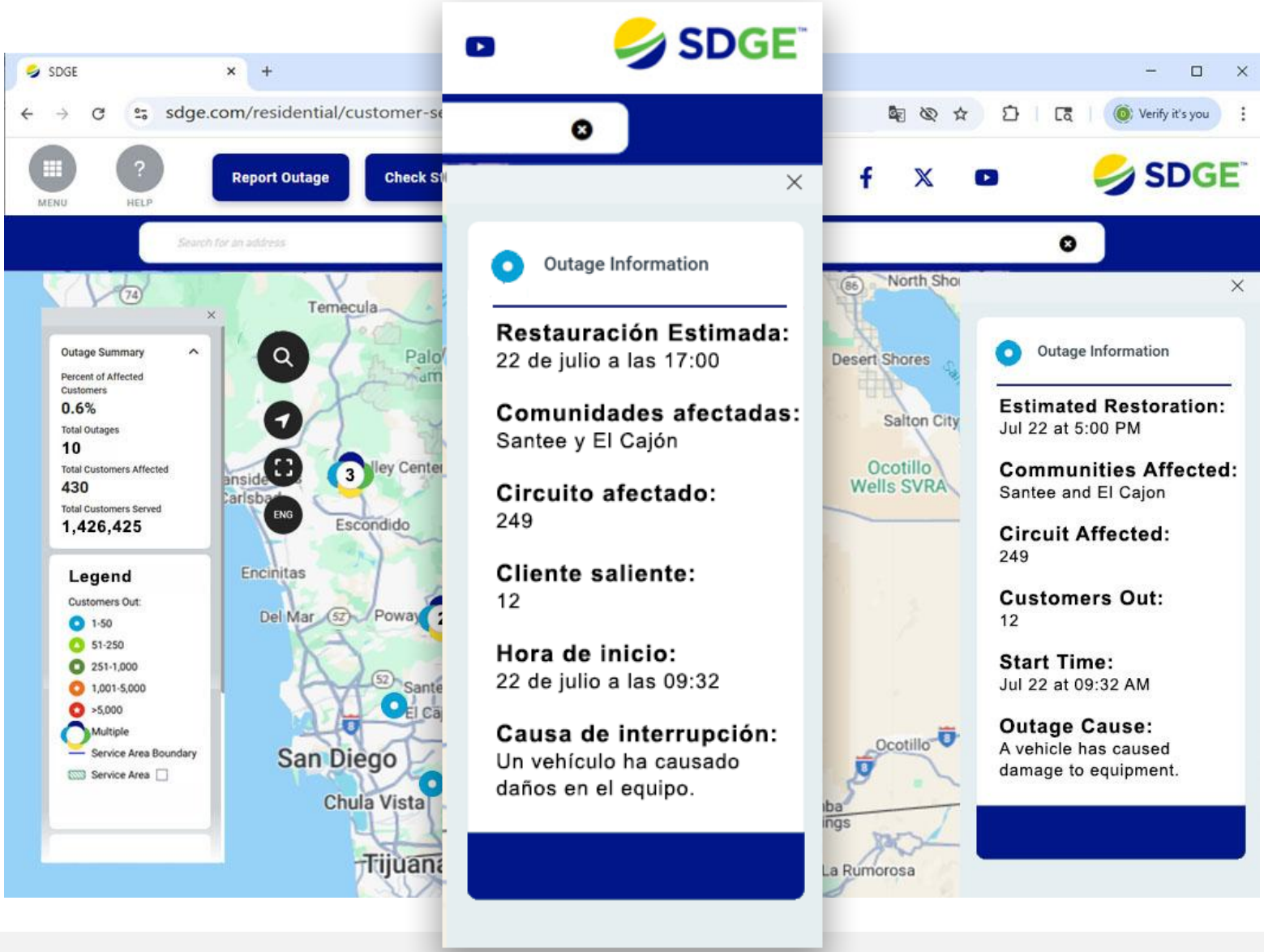


Outage Tracker

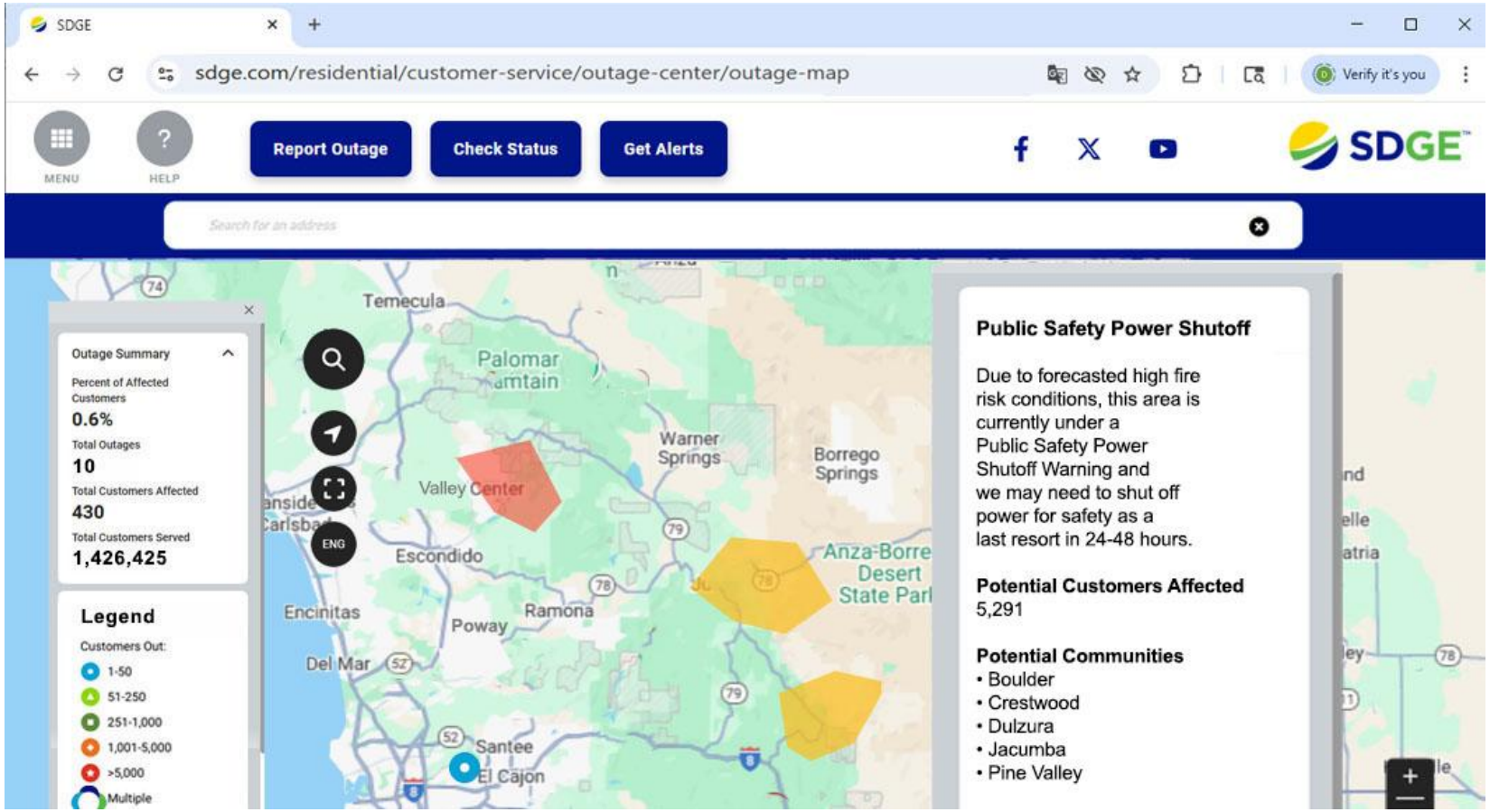


FUTURE ENHANCEMENT

Expanded Accessibility



Public Safety Power Shutoffs

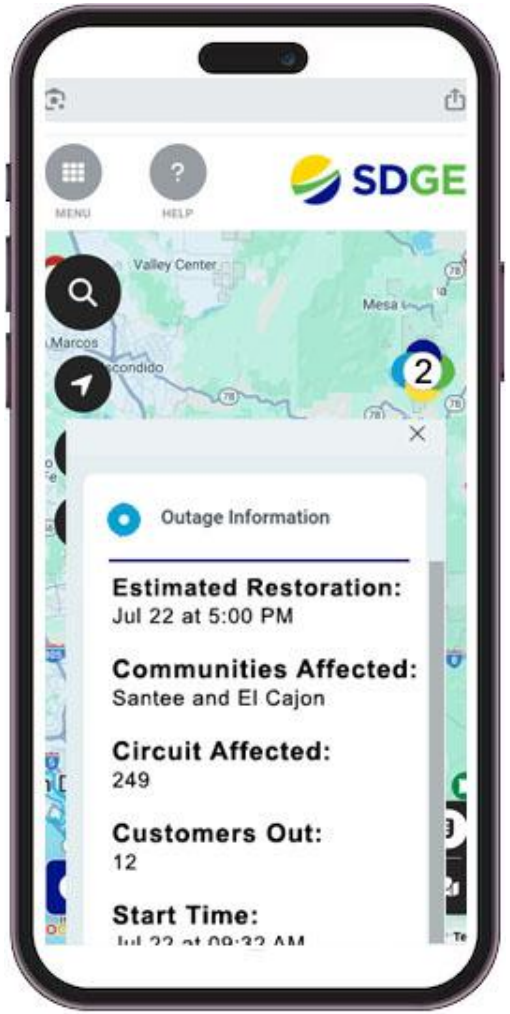


Relevant Data Layering

- Community Resource Centers
- Wind speed
- Nearby hotels
- EV charging
- Gas stations

Information Where You Need It



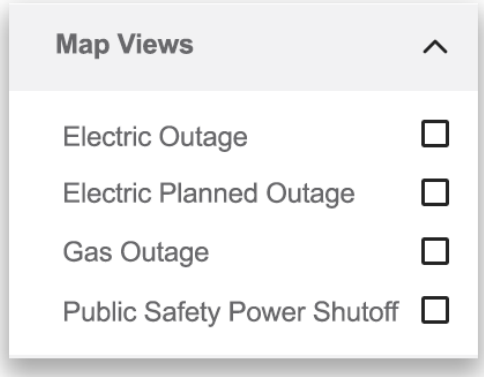


Enhanced Mobile Experience

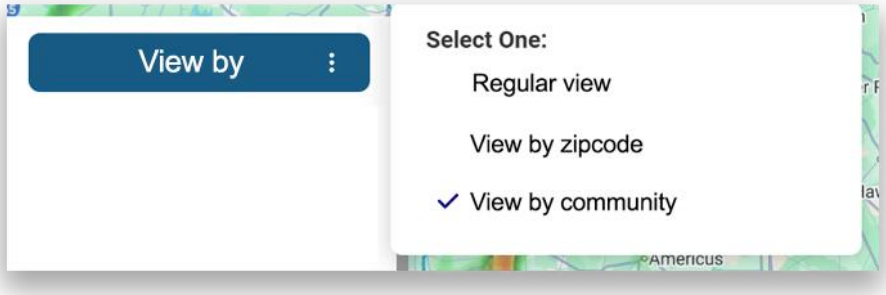
- App-like experience
- Streamlined navigation
- Touch controls
- Location-based services
- Faster load times

Additional Information Available

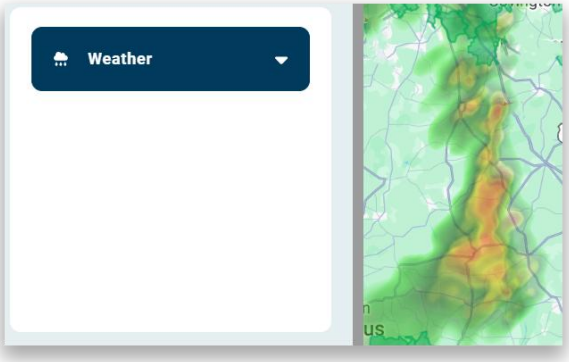
Custom Map Views



View Categories



Data Layers



Map Displays



Summary

- Reliability metric definitions
- Reliability vs. peers
  - 21 consecutive years of ReliabilityOne outstanding reliability
  - Top performer among CA IOUs on SAIDI, SAIFI and MAIFI
- Annual report
  - Over past 10 years, SAIDI and SAIFI held steady, MAIFI down 18% since 2016
  - No repeat circuit on the worst-performing list
- PSPS Impacts on System Performance
  - In 2025, there were 4 Major Event Days, all PSPS
  - 8 of the 10 largest outages since 2016 were PSPS
- Customer Access
  - Outage inquiries answered in about 1 business day
  - New Outage Map
- SDG&E's 2025 Annual Report available at sdge.com/system-reliability





Thank You

Social Media

Connect with us on our social media channels

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***LinkedIn**.com/company/sdge*