



Wildfire Mitigation Advisory Committee Meeting

March 19, 2024

CAL FIRE –
Office of the State Fire Marshal



Roll Call

Welcome!

- ▶ If you have technical difficulties during this meeting, please contact Carrie Lewis at:
 - (916) 980-9352 or carrie.lewis@fire.ca.gov



Roll Call / Quorum Established



Daniel Berlant



Anale Burlew



Keali'i Bright



Caroline Thomas Jacobs



J Lopez



Robert Troy



Deborah Halberstadt



Michael Maguire



Jacy Hyde



Roy Wright



Dave Winnacker



Chris Ochoa



Lenya Quinn-Davidson



Yana Valachovic



Clay Kerchof



Staci Heaton



Sophia Lemmo



Sean McGlynn



Catherine Freeman



Don Hankins



Lisa Lien-Hagar

Approval of Past Meeting Minutes (February)

- ▶ Scan the QR Code Below to Access the Complete Meeting Minutes Document!



WILDFIRE MITIGATION ADVISORY COMMITTEE MEETING *Meeting Minutes – Tuesday, February 19, 2024* *Posted: March 6, 2024*



Committee Members Present In-Person

Anale Burlaw, Department of Forestry and Fire Protection
Brian Newman-Lindsay, Department of Conservation
Daniel Bertant, CAL FIRE – Office of the State Fire Marshal
Caroline Thomas Jacobs, Office of Energy Infrastructure Safety (Virtual)
J. Lopez, State Board of Forestry and Fire Protection
Deborah Halberstadt, California Department of Insurance (Virtual)
Michael Maguire, Office of Planning and Research
Nick Cammarota, Representative from the Building Industry
Staci Heaton, Rural County Representatives of California
Sean McGlynn, League of California Cities
Steve Hawks, Retired Annuitant
Jacy Hyde, California Fire Safe Council

Committee Members Present Via Zoom

Todd Lando, Local Fire Service Representative
Sophia Lemmo, California Association of Resource Conservation Districts
Roy Wright, Insurance Institute for Business & Home Safety
Clay Kerchof, Department of Housing and Community Development
Roy Wright, Insurance Industry
Lenya N. Quinn-Davidson, University of California Cooperative Extension
Don Hankins, Professor, CSU Chico

Members Absent

Catherine Freeman, California State Association of Counties
Nancy Ward, Office of Emergency Services
Yana Valachovic, California Fire Science Consortium
Samuel Assefa, State Planning and Research

CAL FIRE Staff in Attendance

Wendy Collins, Assistant State Fire Marshal
Frank Bigelow, Deputy Director
Andrew Henning, Assistant Deputy Director
Jim McDougald, Staff Chief
Matt Damon, Staff Chief
Crystal Sujeski, Staff Chief
Heather McCulley, Assistant Chief (Virtual)
John Morgan, Staff Chief
Dennis O'Neil, Assistant Chief (Virtual)
Gene Potkey, Assistant Chief (Virtual)
Shane Galvez, Battalion Chief (Virtual)
Camel Barnhart, Deputy Chief (Virtual)
Scott Witt, Deputy Chief (Virtual)
Justine Grafton, Staff Services Analyst (Virtual)




Approval of Meeting Agenda

- ▶ Scan the QR Code Below to Access the Complete Meeting Agenda Document!



WILDFIRE MITIGATION ADVISORY COMMITTEE MEETING
Meeting Agenda – Tuesday, March 19, 2024, 1:00 PM – 3:00 PM
Posted: 3/8/24



Location:
CNRA Building, 715 P Street, 2nd Floor Conference Room 2-302 (A/B)
Sacramento, CA 95814

Zoom Meeting Information –
Please click the link below to join the webinar:
<https://us06web.zoom.us/j/85192423489?pwd=dnZYaUhXVFllUTFmT21nMzJYYVlxQT09>
Passcode: 462073

- 1. CALL TO ORDER**
 - A. Welcome
 - B. Roll Call/Quorum Established
 - C. Approval of Past Meeting Minutes – February 20, 2024
 - D. Approval of Agenda – March 19, 2024
- 2. UPDATES**
 - A. Division Report
 - B. California Wildfire Mitigation Program (CWMP) Report
 - C. Board of Forestry and Fire Protection Update
- 3. PRESENTATIONS**
 - 2023 PG&E Powerline Ignition Trends, Pacific Gas & Electric
 - Ignition Trends and Wildfire Mitigation Efforts Update, San Diego Gas & Electric
 - Ignition Trends and Wildfire Mitigation Efforts Update, Southern California Edison
- 4. ROUNDTABLE**
- 5. PUBLIC COMMENT**
- 6. UPCOMING MEETING DATES FOR 2024**
 - A. Third Tuesday of each month from 1:00-3:00 PM
 - B. April 16, 2024
 - i. CNRA Building, 715 P Street, 2nd Floor Conference Room 2-221, Sacramento, CA 95814
- 7. MEETING ADJOURNMENT**

Page 1 of 1





Community Wildfire Preparedness and Mitigation Division Report



Wildfire Preparedness

Home Hardening

- ▶ Collaboration with CalOES is ongoing for the California Wildfire Mitigation Program including the preparation for work to begin on the first structure to be retrofitted by North Coast Opportunities in Lake County.
- ▶ Conducted the classroom portion of our CWMP DSI/HIZ training for the Shasta and North Coast Opportunities personnel. Field days are scheduled for 3/20 in Shasta and 3/21 in Lake County.



Wildfire Preparedness

Defensible Space

- ▶ 6 Local government agencies have requested Model Defensible Space Program (Government Code 51189(d)(1)).
- ▶ Qualified Entity training concluded with El Dorado County Fire Safe Council's pilot program.
- ▶ Statewide SRA Total for Fiscal Year-To-Date 2023-2024:
 - 185,077 inspections completed, 74% of the 250,000 Goal



Wildfire Preparedness

Utility Wildfire Mitigation Program

- ▶ Continuing to review and update the Powerline Field Guide
- ▶ PRC 4292/4293 Statistical data sampling review is continuing
- ▶ Collaboration with Power Pro's to assist with the training curriculum on powerline identification, safety and PRC 4292/4293



Wildfire Preparedness

Burn Permits

- ▶ Statewide SRA Fiscal Year-To-Date 2023-2024:
 - 49,382 requested – 44,931 issued
 - 96,033 issued since the January 3, 2023 launch



Wildfire Planning and Statistics

Fire Prevention Efforts FY 23/24

- ▶ Fuel Reduction Projects:
 - 570 projects, 114% of the goal
- ▶ Combined Fuel Reduction:
 - 54,946.9 acres treated, 54.9% of the goal
 - Unit Projects – 29,983.2 acres
 - Northern Region: 19,102.5 acres
 - Southern Region: 10,880.7 acres
 - Grant Projects: 20,672.3 acres
 - CFIP Projects: 4,291.4 acres
- ▶ Prescribed Fire (also counted in fuel reduction):
 - 22,054.8 acres treated, 44.1% of the goal



Wildfire Planning and Statistics

Wildland Fuels Reduction Reporting

- ▶ Completed annual request for prescribed fire perimeters for FRAP.
- ▶ Continued development of CalMAPPER V4.
- ▶ Quarterly QA/QC starting this week to be completed April 8th
 - Update fiscal year reports.



Wildfire Planning and Statistics

Fire Hazard Severity Zones

- ▶ State Responsibility Area Map to take effect April 1, 2024
- ▶ Map and GIS data at [Fire Hazard Severity Zones | OSFM \(ca.gov\)](https://www.fire.ca.gov/land-use/fire-hazard-severity-zones)



Wildfire Planning and Statistics

Pre-Fire Planning

- ▶ Completed Review of the Western States Forest Manager (WSFM) WUI Grant and federal Community Wildfire Defense Grants (CWDG).
- ▶ California has submitted two WSFM grants from Placer County, and 70 CWDG across the state, totaling a request of \$170m+.
- ▶ Beginning the State Responsibility Area 5-year review to be completed July 1, 2025.



Wildfire Planning and Statistics

CalStats

- ▶ Provided feedback on NERIS (National Emergency Response Information System) Framework and Data Schemas.
- ▶ Finalizing incident data and wildland fire perimeter data to begin development of the 2023 Wildfire Activities Statistics Report (Red Book).



Community Wildfire Mitigation Assistance

Land Use Planning

- ▶ Ongoing work with local jurisdictions on Safety Elements and Subdivision review (SDR) program
 - At this month's Resource Protection Committee (RPC) meeting, El Dorado County Safety Element and Marin County SDR surveys were presented to the Board.
 - Currently submitted for Board review: City of Monterey, City of Chula Vista, and the City of Irvine.



Community Wildfire Mitigation Assistance

National Fire Protection Association Firewise USA

- ▶ Staff continue to provide communities assistance throughout the state with the application process.
- ❏ Currently 790 communities in good standing.
- ▶ Staff currently working on over 50 NEW applications.
- ▶ 800th Community to be determined soon.



Community Wildfire Mitigation Assistance

Subdivision Review

- ▶ Staff continue doing Fire Safety Surveys throughout the state as jurisdictions assist us with local identification.
- ▶ **Current Fire Safety Survey areas:** San Bernadino, Ventura, Inyo, Mono ,Plumas, Sierra, Shasta, Siskiyou, and Modoc Counties.
- ▶ Once completed, these surveys will be presented at the closest month RPC meeting.



Community Wildfire Mitigation Assistance

Local Planner Training

- ▶ Introduction to Land Use Planning for Wildfires in California course:
 - Registration now open for at least 4 more training dates in 2024
 - Register at www.communitywildfire.org/trainings
 - Trainings held recently on 3/12 in Santa Rosa and on 3/14 in Morgan Hill
 - Next class will be Tahoe City on 4/25 and Redding on 4/30



Community Wildfire Mitigation Assistance

Wildfire Prevention Grants Program

- ▶ FY 2023-24 Wildfire Prevention Grants Solicitation closed on January 10, 2024.
- ▶ We received 224 applications requesting \$254.2 million in funding .
- ▶ Announcements are expected to be announced in Summer 2024.

Use the QR code below to visit the Grants Website!

www.fire.ca.gov/what-we-do/grants/wildfire-prevention-grants





California Wildfire Mitigation Program (CWMP) Report

J Lopez

California Wildfire Mitigation Program Report

- ▶ North Coast Opportunities (NCO) in Lake County:
 - FEMA Award: 3/17/2023, Revised Award: 8/15/2023
 - First property received 7 bids; 4 D space only; 3 are comprehensive – Home hardening and D Space
 - The winning bid is \$34,000
 - Comprehensive bids ranged from \$31- \$100K
 - NCO is bringing on three new property assessors
 - Assessor Training Class scheduled for March 14-21
- ▶ Shasta County Fire Safe Council (FSC):
 - First property (CWMPA-000033) has received three quotes ranging from \$46-58k
 - Three current assessor(s) on staff. Three more to be trained in upcoming Assessor Training scheduled for March 15-20



California Wildfire Mitigation Program Report

- ▶ San Diego County Fire Department
 - FEMA Award: 8/29/23
 - Out of 8 SOW, 4 SOW went to EHP Phase II review assessor training
 - One current Assessor on staff. Additional staff trained in February
 - 7 County Prevention Specialists (will be assisting with assessments)
 - 5 County Building Inspectors for permitting purposes
 - 3 San Diego Fire Department Personnel (observers)



California Wildfire Mitigation Program Report

▶ Tuolumne County

- FEMA Award: 6/22/23
- Phase I work with FEMA for the previous projects (Shasta, Lake, and San Diego) streamlines the FEMA approval process. The new process and lessons learned are expected to expedite the completion of Phase I for Tuolumne County
- Phase I EHP vendor has been working on EHP Phase I deliverables since mid-December
 - SMEs met with FEMA on February 7
 - EHP Phase I is proceeding as expected
 - EHP Phase I is expected to take 6-9 months from the beginning of SME work
- Community update will be provided by county staff, CWMP, and CAL FIRE in April



California Wildfire Mitigation Program Report

▶ El Dorado County

- FEMA Award: 6/29/23
- Phase I work with FEMA for the previous projects (Shasta, Lake, and San Diego) streamlines the FEMA approval process. The new process and lessons learned are expected to expedite the completion of Phase I for El Dorado County
- The county is reviewing bids and will choose a winning vendor this month

▶ Shasta Valley Resource Conservation District (SVRCD) in Siskiyou County

- Award: 5/1/23
- 29 applications received to date
- 10 contractors on pre-qualified list
- Scope of work procedures in development
- Bid form in development
- 3 assessors currently on staff. More to be trained in upcoming Assessor Training Class in mid-Spring





**Board of Forestry and
Fire Protection Report**
J Lopez

Board of Forestry and Fire Protection Report

- ▶ Presentation
 - CAL FIRE Strategic Plan Update
- ▶ Management Committee Meeting
 - Utility Right of Way Exemption Amendments
 - <https://bof.fire.ca.gov/business/>
- ▶ Forest Practice Committee Meeting
 - Discussion on Vegetation and Fuels Treatment in the Watercourse and Lake Protection Zones (WLPZs)
 - Dead, Dying, and Diseased Exemption Acreage Amendments under 1038(d)
 - Forest Fire Prevention Exemption Amendments under 1038.3
- ▶ Resource Protection Committee Meeting
 - Land Use Planning Program Update
 - Subdivision Review Program Update
 - Marin County
 - Safety Element Reviews
 - El Dorado County



2023 PG&E Powerline Ignition Trends PG&E



Pacific Gas and Electric Company

Wildfire Mitigation Advisory Committee Monthly Meeting

March 19, 2024



1 Evolving Wildfire Risk and Mitigation Strategies

2 Ignition Analysis Program

3 Measuring Progress and 2023 Ignition Record



Nick Babb

Senior Manager, Wildfire Risk
Management

Evolving Wildfire Risk and Mitigation Strategies





Why we are here: Catastrophic Wildfire History

2015

No catastrophic wildfire 2016

2017

2018

2019

2020

2021

2022

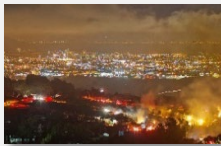
No catastrophic wildfire 2023

As a result of the Butte Fire, we improved our **employee and contractor vegetation management training**.



Butte Fire
📍 70,868
🏠 965

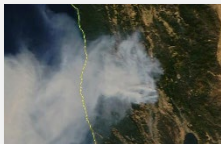
In response to a series of catastrophic wildfires in 2017, we **deployed several mitigation programs**, including the development and implementation of the **Public Safety Power Shutoff (PSPS) Program** and the **Enhanced Vegetation Management Program (EVM)**.



Tubbs Fire
📍 38,000



Atlas Fire
📍 51,624
🏠 903



La Porte Fire
📍 6,151
🏠 76

Cascade Fire
📍 9,989
🏠 274

Cherokee Fire
📍 8,500
🏠 7

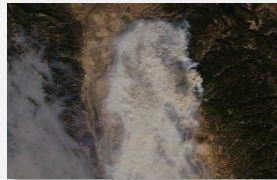
Nuns Complex
📍 245,000
🏠 1,527

Pocket Fire
📍 17,357
🏠 8

Railroad Fire
📍 12,407

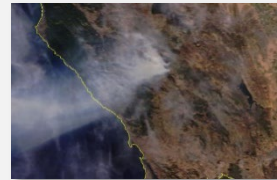
Redwood Valley Fire
📍 36,523
🏠 584

In response to the Camp Fire, we enhanced our **asset inspection processes and improved risk modeling** to evaluate equipment failures.



Camp Fire
📍 153,336
🏠 19,558

After the Kincade Fire, we began removing **idle facilities and open jumpers**, in addition to enhancing risk modeling and asset inspections.



Kincade Fire
📍 77,758
🏠 434

Following the Zogg fire, we **continued the removal of idle facilities, open jumpers and enhancement of risk modeling and asset inspection fire**.



Zogg Fire
📍 56,338
🏠 231

Immediately after the Dixie Fire, we **established the Enhanced Powerline Safety Settings (EPSS) Program**.



Dixie Fire
📍 963,309
🏠 1,405

In 2022, we experienced the Mosquito Fire.

This ignition is under investigation and has not been attributed to PG&E's equipment at this time. PG&E filed an Electric Incident Report (EIR) for the event at the abundance of caution.



Mosquito Fire
📍 76,788
🏠 78



Who and Where We Serve

By The Numbers

16M

PEOPLE SERVED

5.5M electric accounts

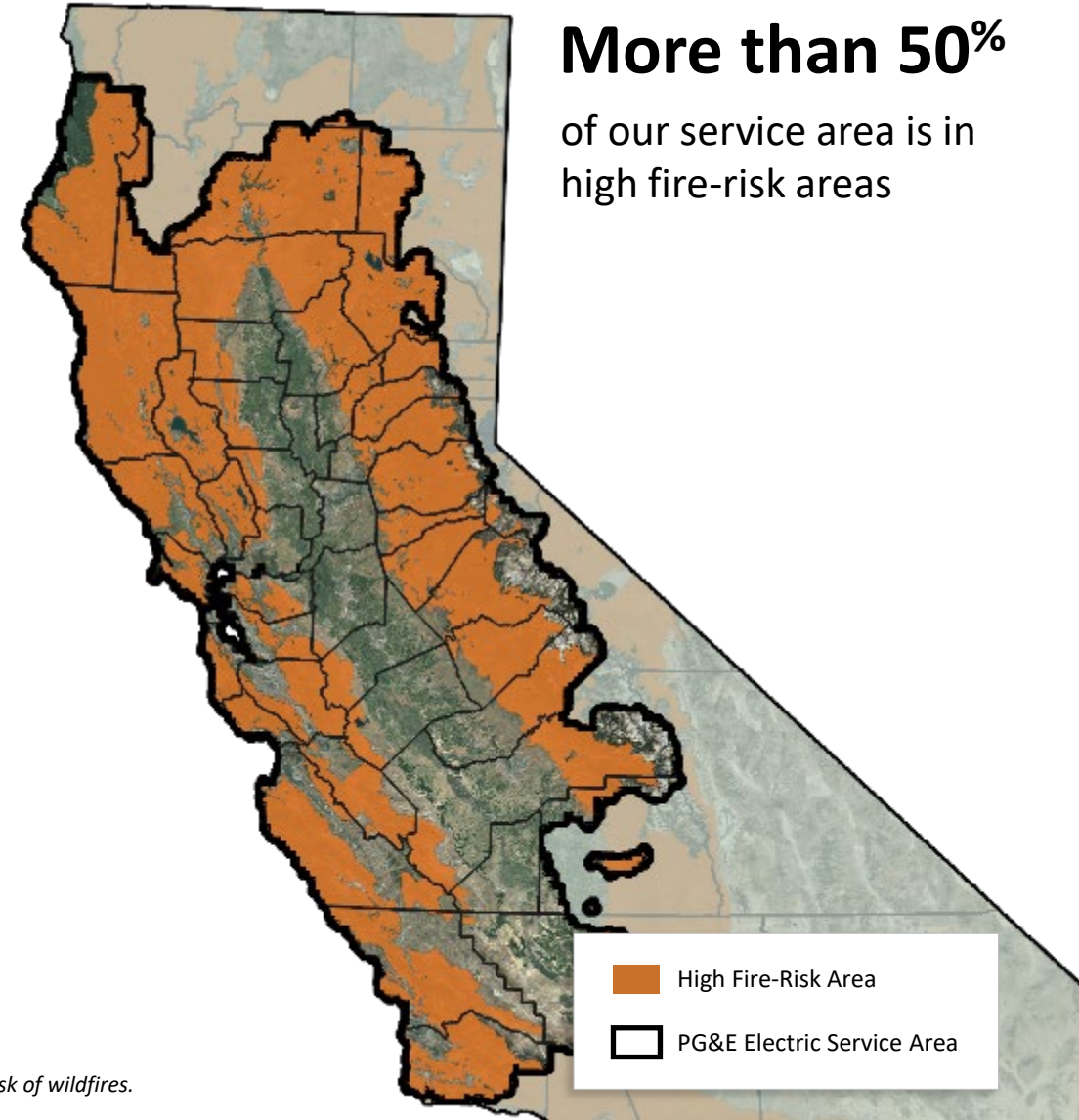
4.5M gas accounts

70,000

SQUARE MILE
SERVICE AREA

106,700 circuit miles of electric
distribution lines

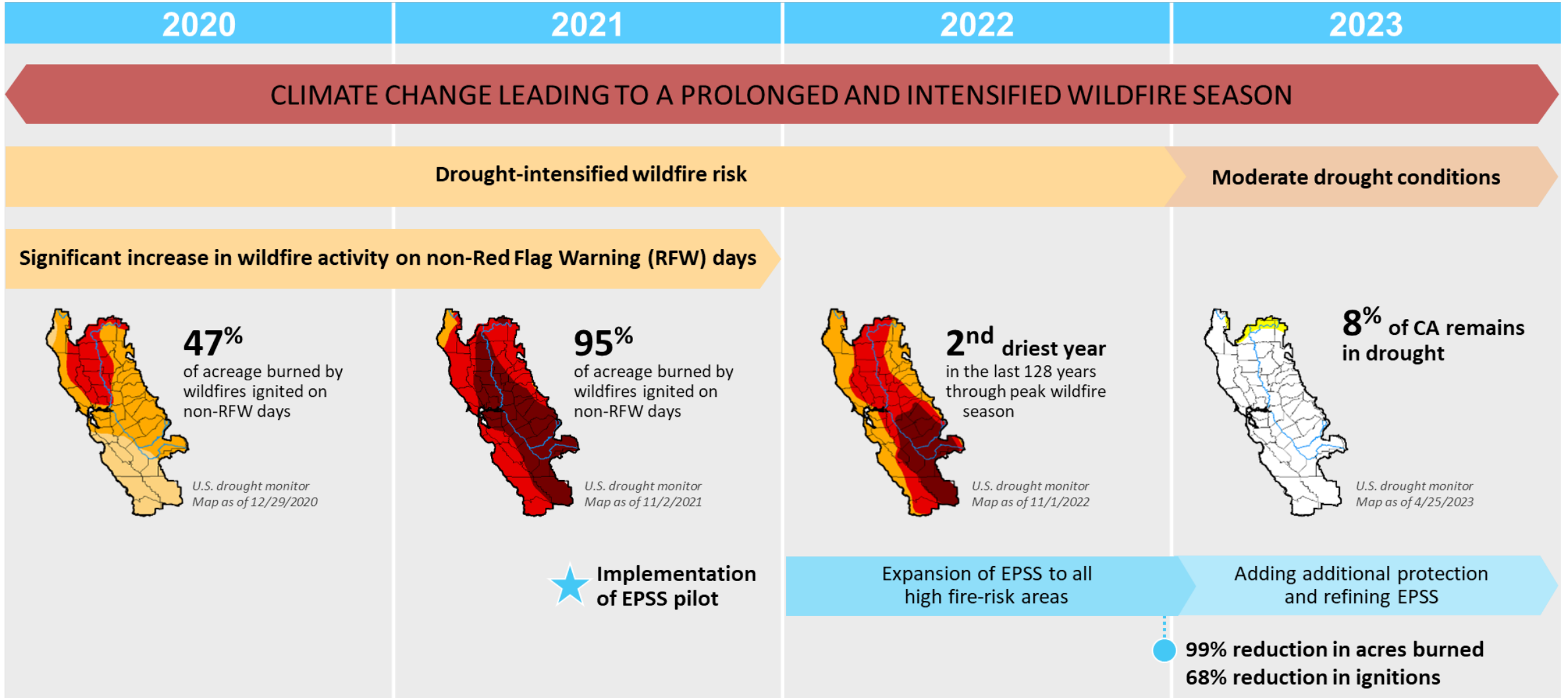
42,100 miles of natural gas
distribution pipeline



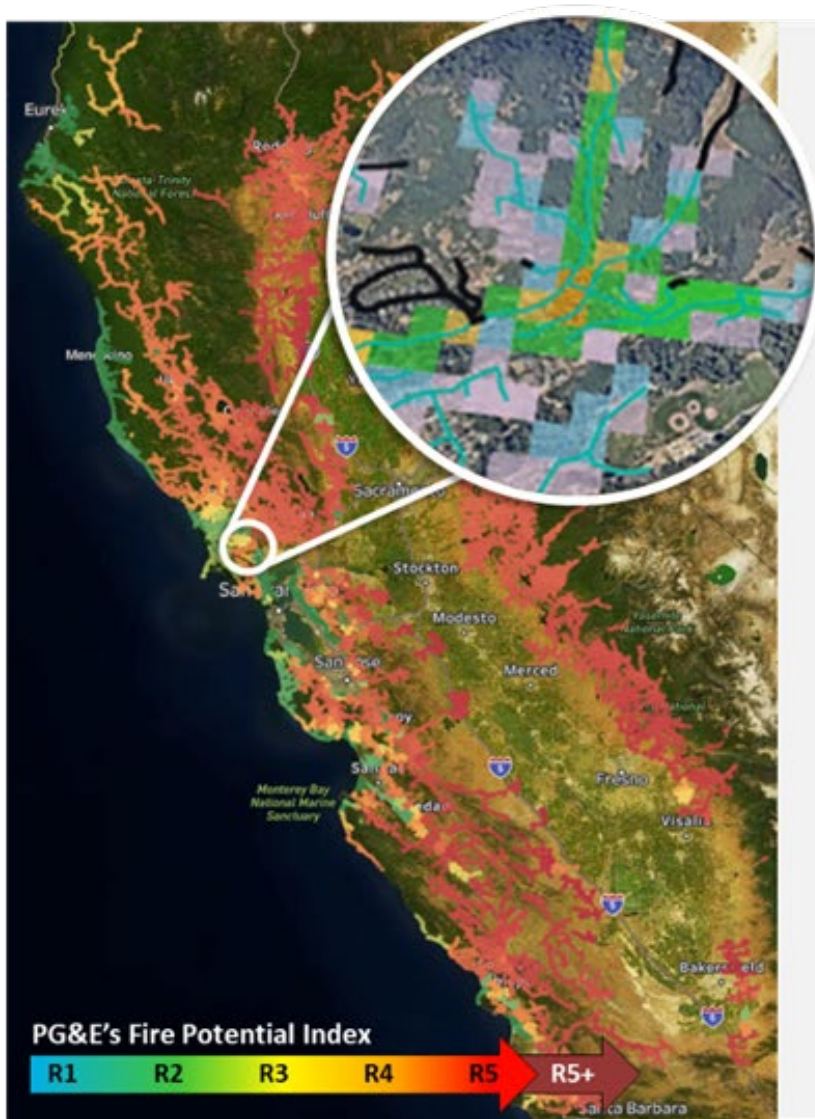
Data is approximate

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Responding to Evolving Wildfire Risk



Focusing on Where and When The Risk is Present



PG&E's Fire Potential Index (FPI)

helps us identify wildfire risk by measuring:

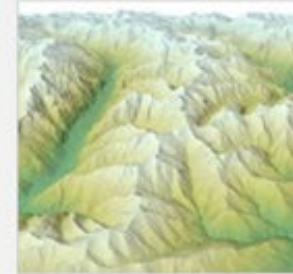
Weather



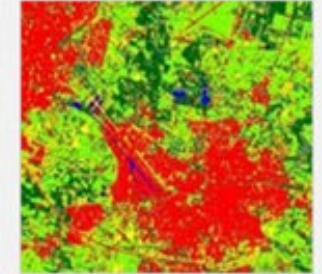
Fuel Moisture



Topography



Fuel Model Type



FPI is calculated each day using:



Over 8 billion data points leveraging advanced artificial intelligence and machine learning models

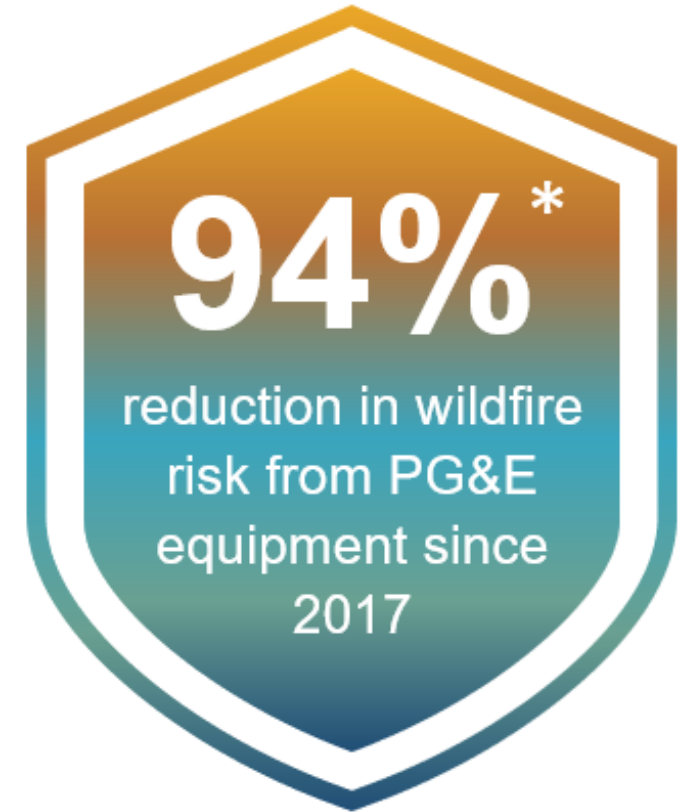


2x2 km grid cells across the entirety of our high-fire risk areas



129-hour look-ahead, rolling forecast

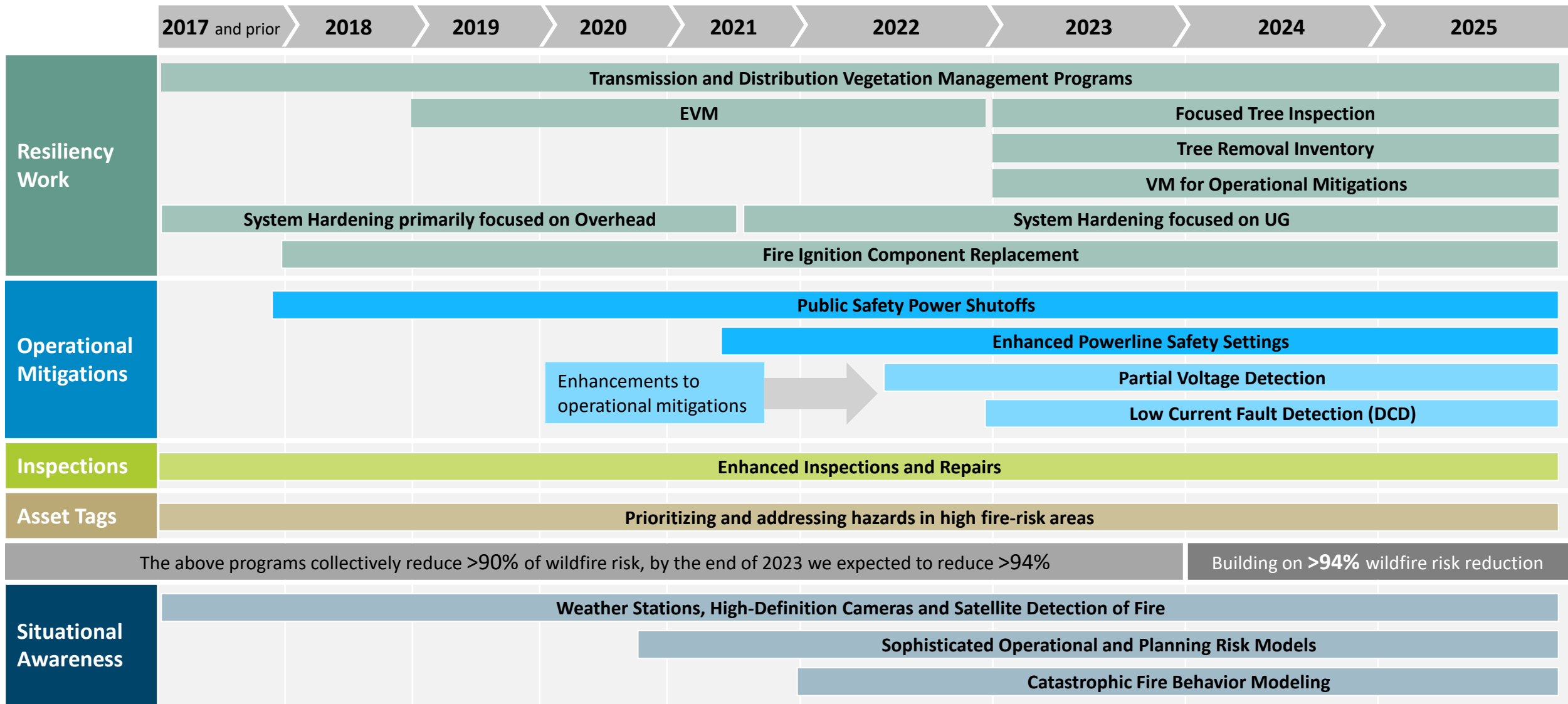
Implementing Layers of Protection



**This number was calculated based on the methodology established by the California Public Utilities Commission (CPUC) in the Safety Model Assessment Proceeding and implemented by PG&E, accordingly.*



Building on Layers of Wildfire Protection



Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

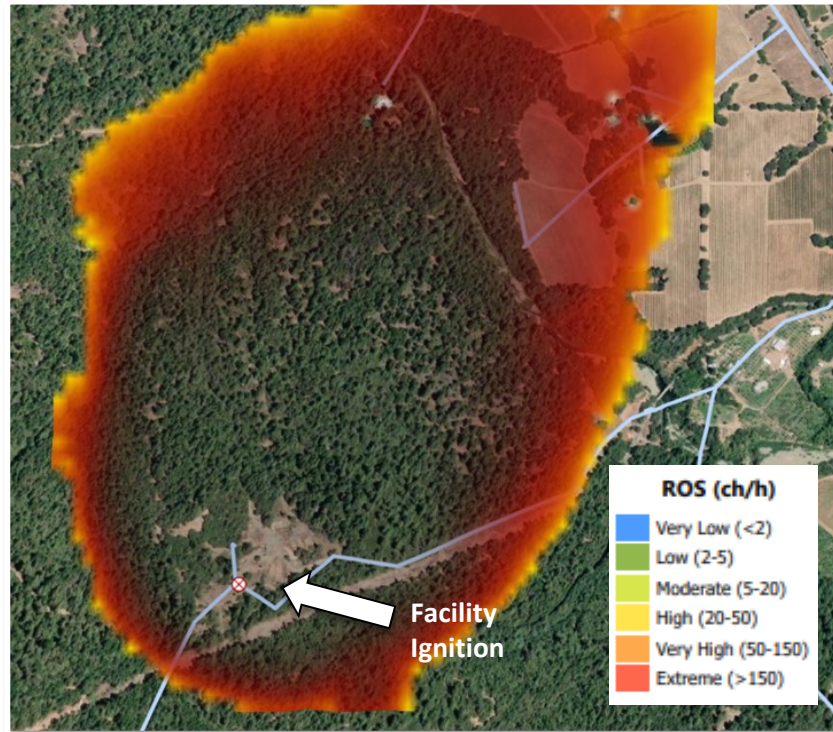


Artificial Intelligence Cameras

PG&E has a network of 600+ cameras that give us the ability to monitor and respond to wildfires across our service area.

To further our situational awareness capabilities, we installed AI on all these cameras. This capability allows integration with our Hazard Awareness and Warning Center (HAWC) and the CAL FIRE dispatch center, **allowing suppression resources to be mobilized within one minute of an ignition.**

Simulation of 9/25/2023 Ignition

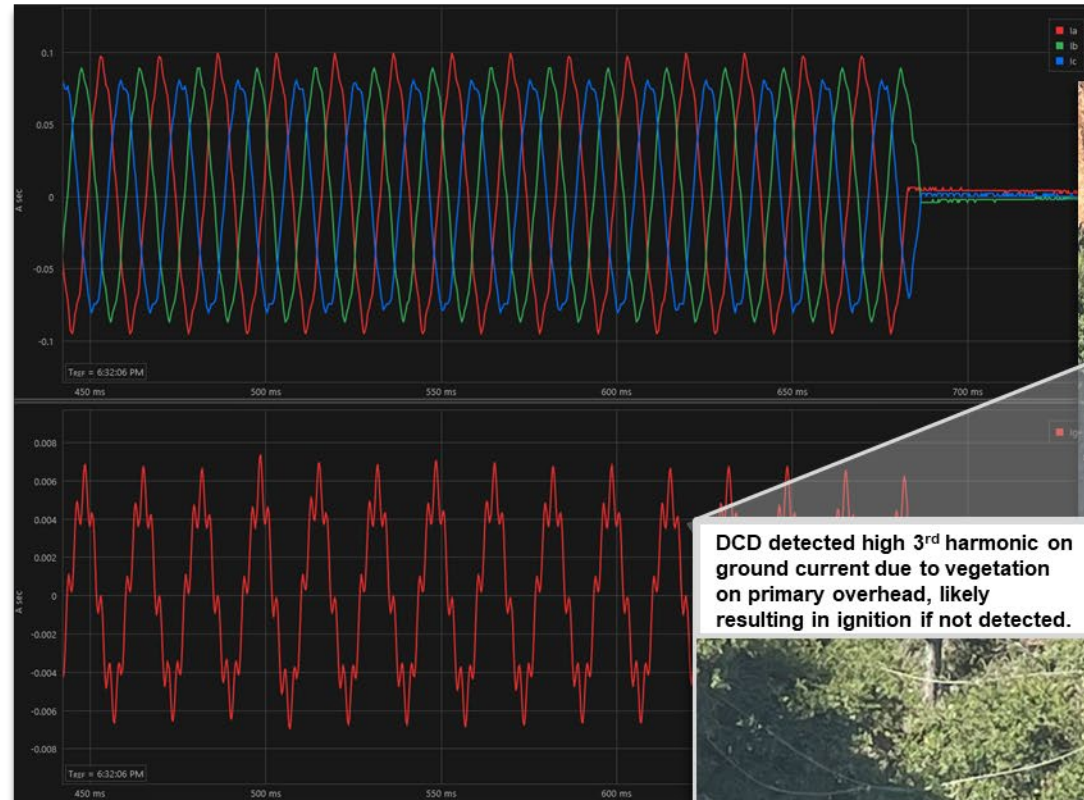


On September 25th 2023, a camera identified a PG&E facility ignition. Had the wildfire cameras not been in place, the ignition could have spread and damaged nearby areas.

Hours without Suppression	Acres	Buildings Impacted
1	8	0
4	10	0
8	462	9

Each day, our Protection Engineering team reviews EPSS outages on DCD enabled devices and assesses device performance for potential DCD-related tripping.

- Decision making due to **detailed real-time and post event analysis** of DCD outages.
- Oscillography events are reviewed for **potential triggers** indicating a high impedance ground fault.
- **Refine strategies and response measures** based on learning from DCD outage events.



PG&E's most important responsibility is the safety of our customers and the communities we serve.

Transmission Pole Clearing

What is it?

PG&E performs removal of vegetation around select transmission and distribution poles and towers in accordance with PRC Section 4292, to maintain a firebreak of at least 10 feet in radius (out from the pole) and 8 feet up from the ground.

Where is this work performed?

These requirements apply in the state responsibility area during designated fire season.

2023 WMP Target

Inspect, clear, and maintain, where clearing is necessary, 77,503 poles

This important safety work includes:

- ✓ Removing all flammable material and vegetation in a **10-foot radius around the base of the pole or tower**
- ✓ Removing brush, limbs and foliage **up to eight feet above the ground**
- ✓ Removing all dead, dying, diseased or dried vegetation **from eight feet above the ground to the top of the power lines**



EXAMPLE OF POLE CLEARING AND VEGETATION CONTROL WORK



PG&E's most important responsibility is the safety of our customers and the communities we serve.

Transmission Splice Shunts

What is it?

Shunt splice installation serves as a short-term mitigation by installing a splice shunt on top of an existing splice that have been identified as having a higher risk of failure. This installation eliminates the splice as a single point of failure, as a failure of the original splice would not result in down conductor.

Where is this work performed?

On identified transmission lines in high fire risk areas with existing high-risk splices and no near-term transmission line rebuild project

2023 WMP Target

Install shunt splices on 20 transmission lines

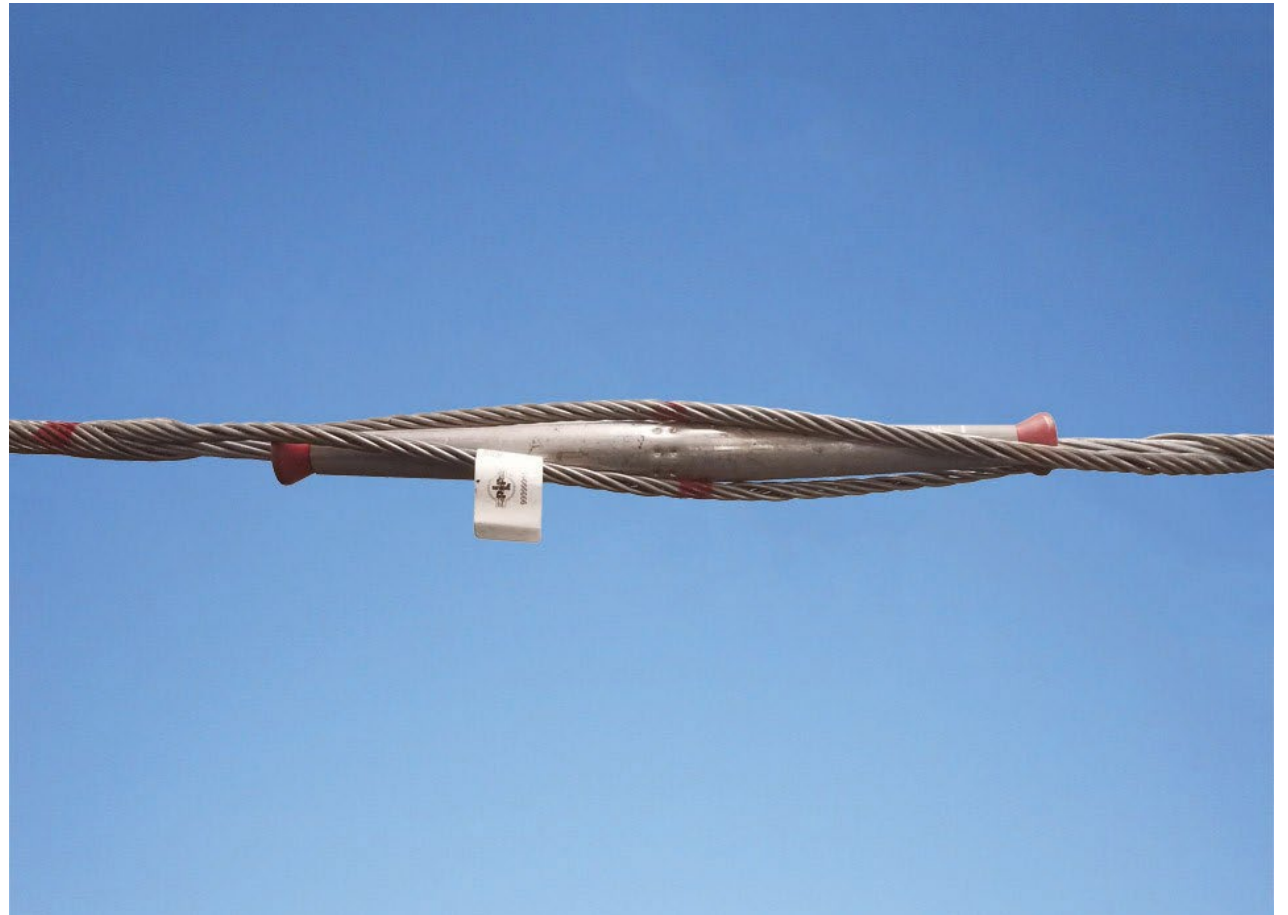


Photo c/o Preformed Line Products

Measuring Progress

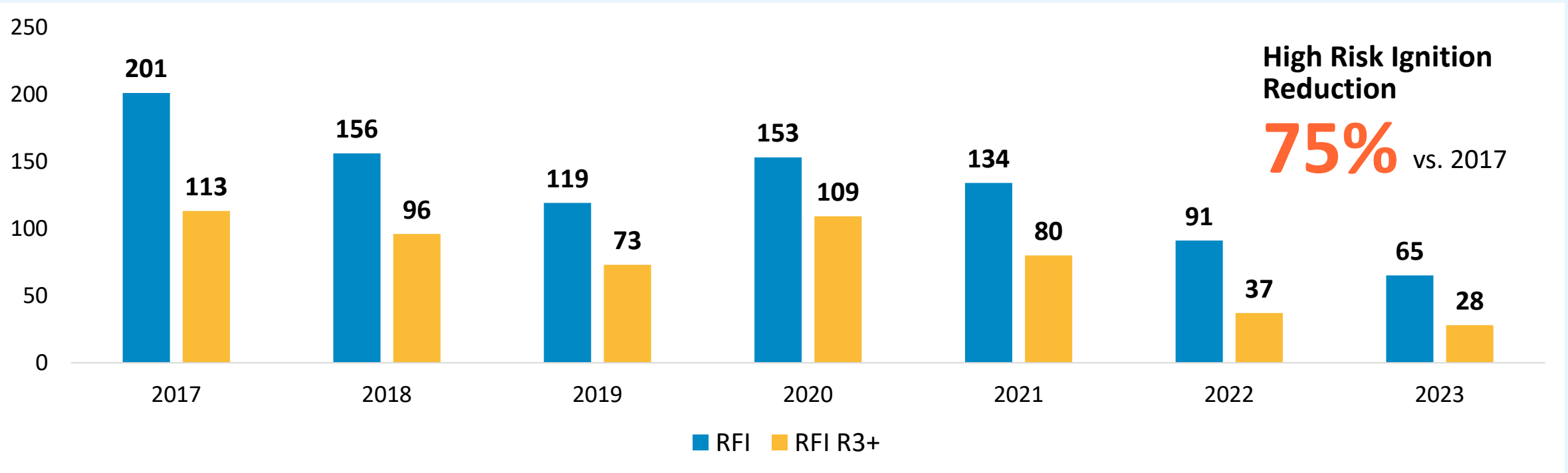




Reducing Ignitions Where and When they Matter

We track and analyze California Public Utilities Commission (CPUC) reportable fire ignitions (RFI) in R3+ conditions to assess whether our mitigation efforts are working and where we can improve.

Cumulative CPUC-Reportable Ignitions in High Fire Threat Districts and High Fire Risk Areas



1. Based on a comparison in the Utility's GRC testimony of the wildfire risk score for a baseline risk level to a risk level reflecting the Utility's mitigation work. Risk scores are calculated using the scoring methodology established by the CPUC in the Safety Model Assessment Proceeding, which reflects the frequency with which various risks are expected to occur and the potential safety, reliability, and financial impacts of varying degrees of wildfire severity.
2. A reportable fire incident per Decision 14-02-015 is a fire event that meets the following criteria: ignition is associated with the Utility's power lines (either transmission or distribution), something other than the Utility's facilities burned, and the resulting fire travelled more than one meter from the ignition point.

New Weather-Normalized Metric

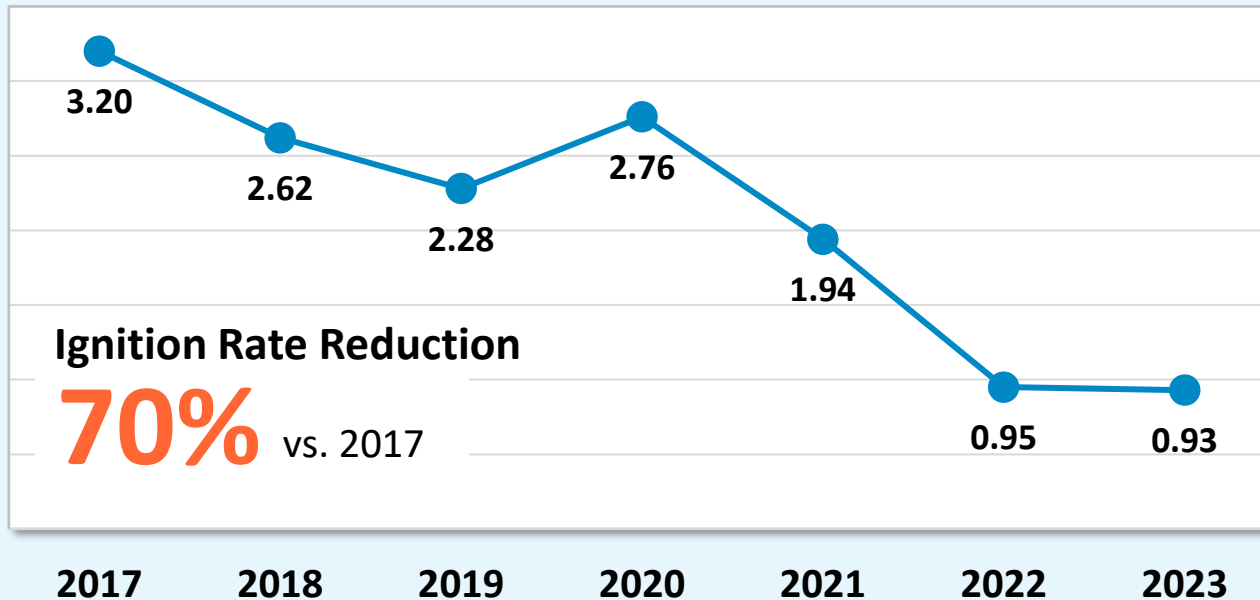
To better measure of success for wildfire reduction work, we are transitioning to a new weather normalized ignition metric that addresses the gaps between the CPUC’s RFI and Wildfire Risk Reduction.

High Fire Threat Districts and High Fire Risk Areas Weather-Normalized Ignition Rates R3+ per 100k Circuit Mile Days



The metric measures the rate of ignition incidents occurring in high-risk weather conditions in High Fire Threat Districts/High Fire Risk Areas normalized by 100,000 circuit miles.

- Reported as a rolling metric over 365 days.
- Accounts for the year-over-year weather variability as reflected in FPI.
- Aligned with the wildfire risk reduction mitigations.



1. Based on a comparison in the Utility's GRC testimony of the wildfire risk score for a baseline risk level to a risk level reflecting the Utility's mitigation work. Risk scores are calculated using the scoring methodology established by the CPUC in the Safety Model Assessment Proceeding, which reflects the frequency with which various risks are expected to occur and the potential safety, reliability, and financial impacts of varying degrees of wildfire severity.
2. A reportable fire incident per Decision 14-02-015 is a fire event that meets the following criteria: ignition is associated with the Utility's power lines (either transmission or distribution), something other than the Utility's facilities burned, and the resulting fire travelled more than one meter from the ignition point.

Thank You





Ignition Trends & Wildfire Mitigation Efforts San Diego Gas & Electric





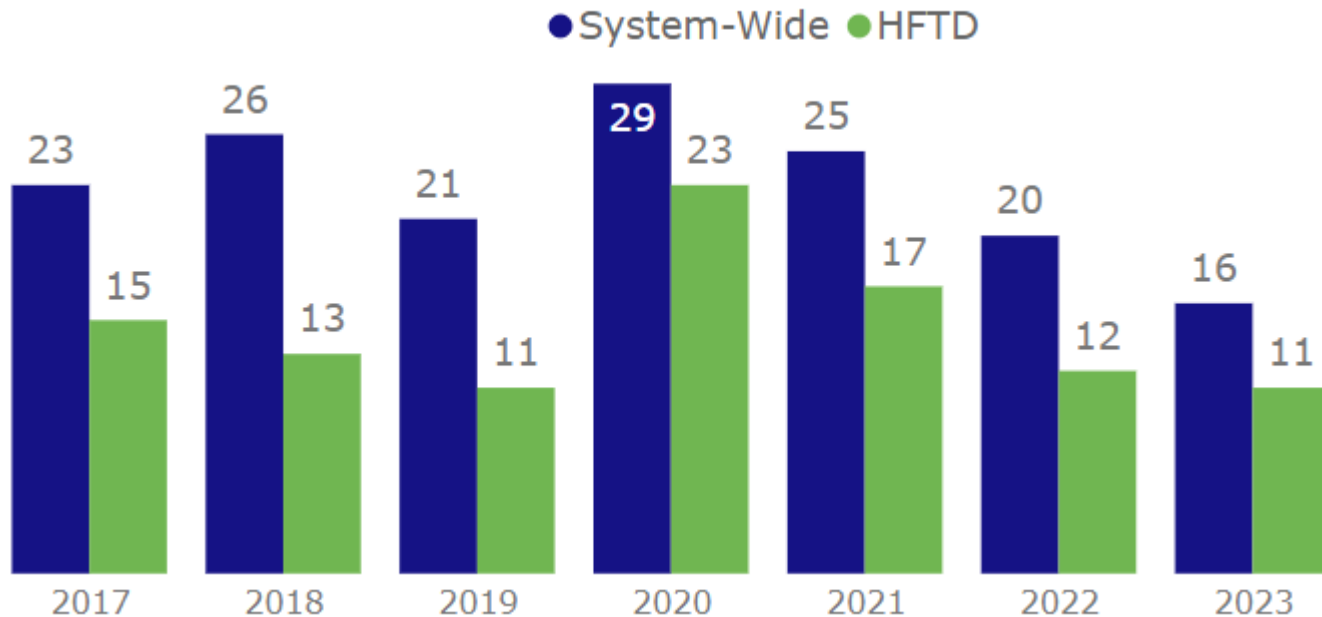
Ignition Trends and Wildfire Mitigation Update

Shaun Gahagan, WMP Program Manager



Ignition Trends

Total Reportable Ignitions



2023 IGNITIONS

- **16** CPUC reportable ignitions – a record low
- **20.75** acres burned – an average of 1.3 acres per ignitions



WILDFIRE DETECTION AND SUPPRESSION

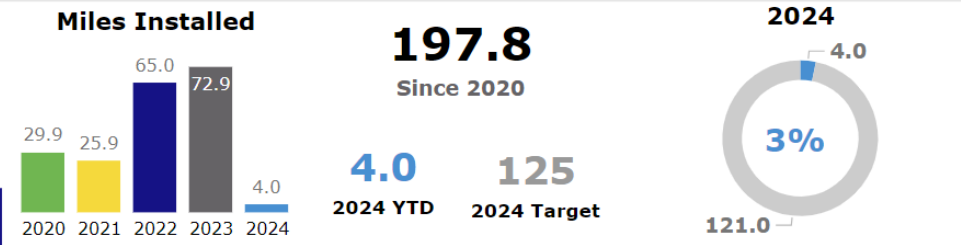
- **>95%** of all wildfire ignitions are held to below 10 acres due to detection & aggressive air response



Ignition Management Program

- **29** Notifications made to Energy Safety in 2023
- Follow-up fact finding performed on all SDG&E related ignitions
- **859** evidence of heat reports since 2019

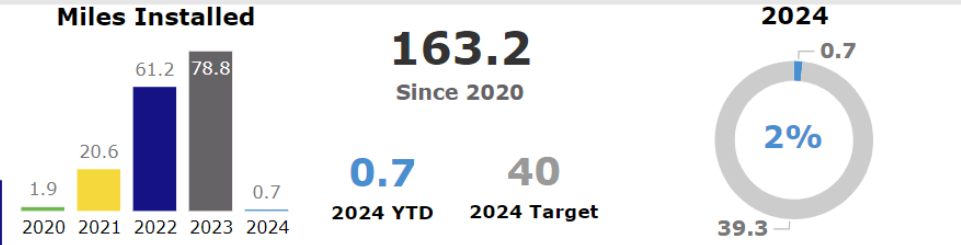
Undergrounding



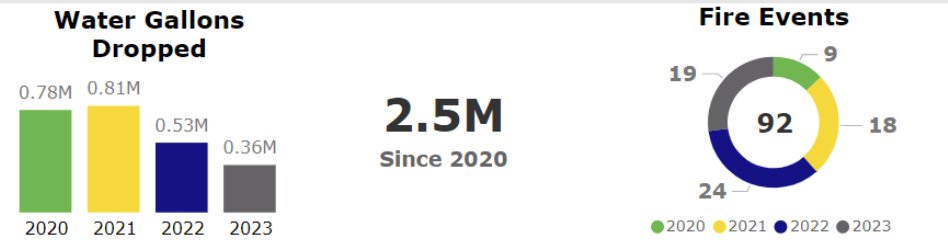
Distribution Inspections



Covered Conductor Installation



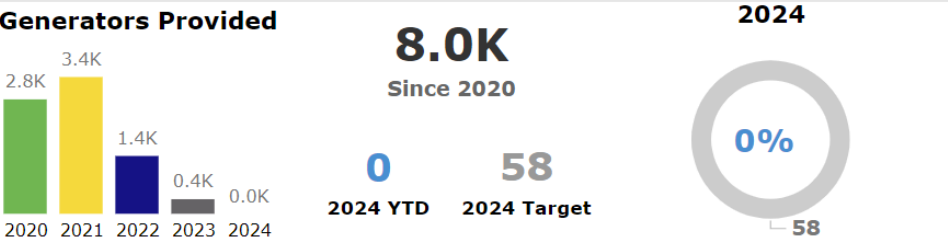
Aerial Fire Suppression



Drone Inspections



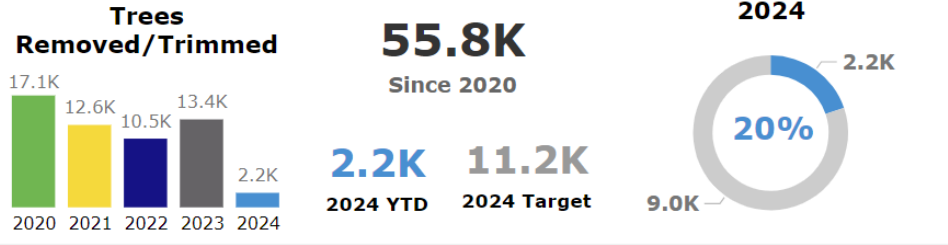
Generator



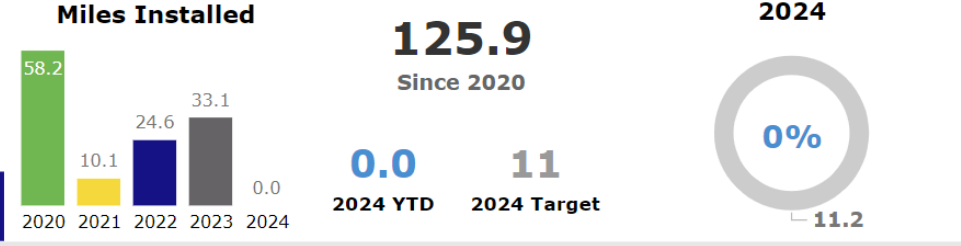
Various Equipment Replaced



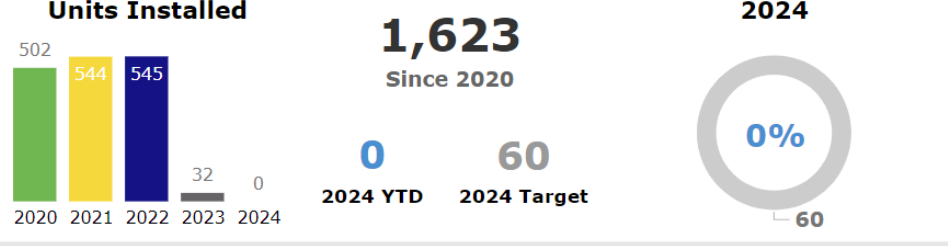
Enhanced Vegetation Management



Transmission Hardening



Elec Sys Hardening - EFD & WFI



Global Leader in Wildfire Mitigation

 **15 YEARS**

without a large utility-related wildfire

 **100% RISK INFORMED**

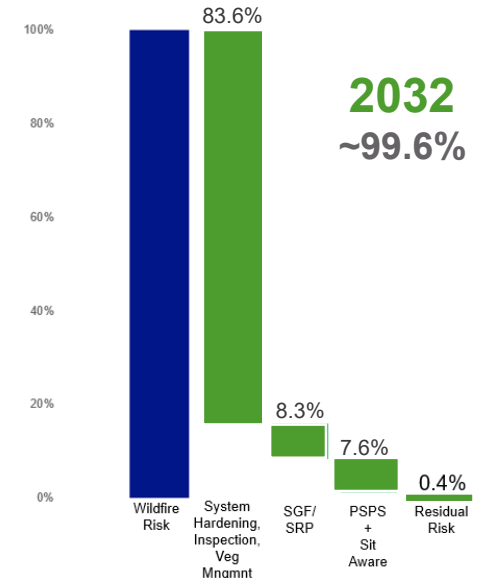
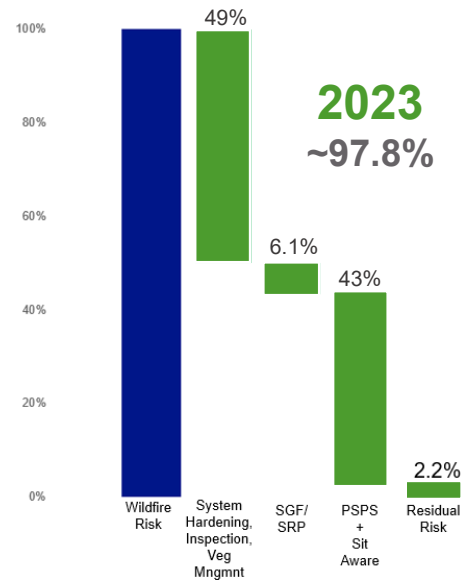
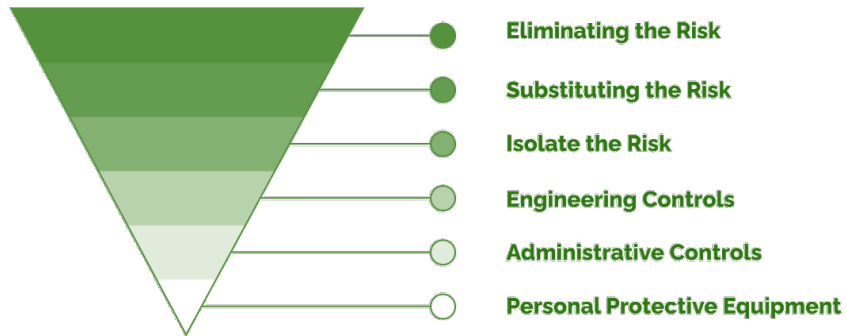
Industry-leading risk models informing grid hardening investments

 **INDUSTRY LEADER**

Began wildfire mitigation work in 2008 on transmission lines & 2013 on distribution lines

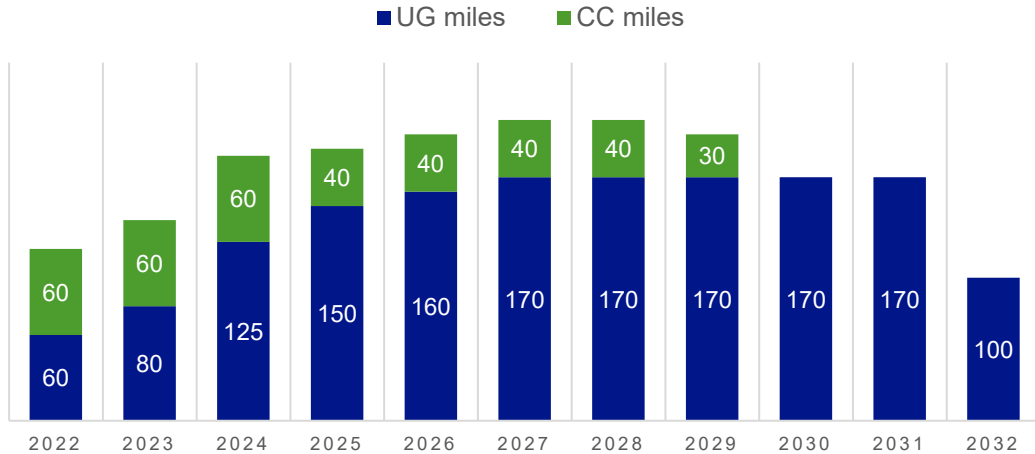
SDG&E has seen major risk reductions since 2007 through infrastructure modernization & operational enhancements with additional mitigation plans to continue through 2032

Hierarchy of Control



Where We Are Going – Grid Hardening

WILDFIRE MITIGATION SCOPE



TOTAL

370 miles of Covered Conductor
1500 miles UG

HFTD Hardening	YTD 2022	2032
Undergrounding	2,735 miles (44%)	4,235 miles (65%)
Covered Conductor	47 miles (<1%)	392 miles (6%)
Trad Hardening	900 miles (15%)	570 miles (9%)
Unhardened	2,490 miles (40%)	1,275 miles (20%)

Industry-Leading

- Helps reduce wildfire risk at a greater rate
- Supports reduction of PSPS impacts & risks to customers
- 80 miles of distribution lines were undergrounded in the High Fire Threat District between 2020 & 2022
- All 1040 miles of transmission lines within HFTD will be hardened by 2026

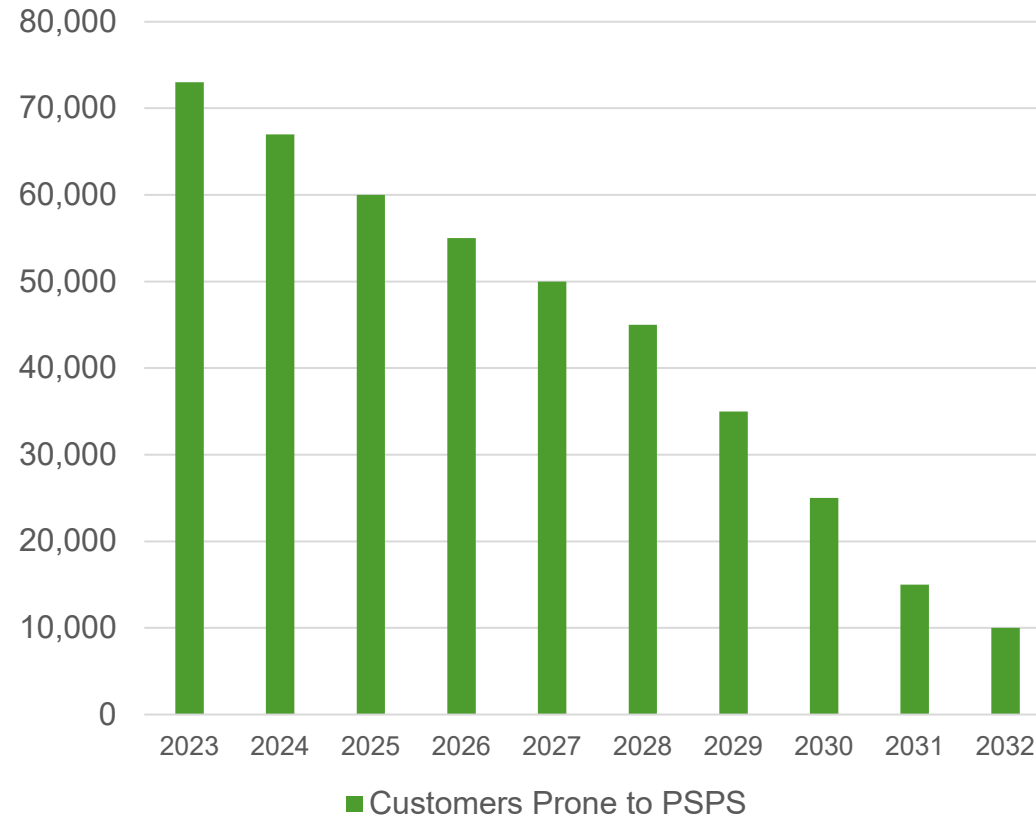
Added Benefits

- Increased resilience to all climate-induced hazards, including extreme rainfall & tropical cyclones
- Decreased maintenance and operational costs through less vegetation management & fewer inspections.

Targeted Risk Reduction

Latest undergrounding scope enhancements are optimized to expedite both reductions in the highest wildfire & the need for frequent PSPS amidst worsening climate conditions.

Customers Prone to PSPS



Focused Grid Hardening
Highest risk circuits (top 30%) are directly targeted by increased undergrounding strategy



90+%

RISK REDUCTION FOR HIGHEST RISK CIRCUITS COMPLETE BY

2027

Focused PSPS reduction
Most frequently impacted PSPS circuits* are directly targeted by increased undergrounding strategy



93%

REDUCTION IN PSPS FOR FREQUENTLY IMPACTED CIRCUITS COMPLETE BY

2032

*customers who have experienced 5+ PSPS



Thank You.



Wildfire Innovation + Technology

Technology and Innovation are foundational to SDGE's wildfire mitigation program.



Situational Awareness

- Expanding AI applications across weather networks, cameras, and satellite
- Data scientists are enhancing industry-leading wildfire risk modeling, informing hardening strategy (Climate Change, Social Vulnerability)
- Drone inspections completed for high-risk areas, including Rancho Santa Fe



Engineering & Operations

- Re-engineering system undergrounding to reduce costs
- Optimizing inspections and vegetation management through a risk-informed approach
- Driving edge-computing capabilities with falling conductor protection, high-speed relays & private LTE
- Enhanced fuel management to mitigate fire growth, including fuel breaks, goat grazing and fire retardants along egress routes
- More aerial firefighting resources available in San Diego County than any other county in California



Stakeholder Education and Outreach

- Operation Megaphone: enables communicating with all customers in one hour
- Redefining community engagement in our Wildfire and Climate Resilience Center
- Launched an award-winning application to keep community stakeholders informed during emergencies



Wildfire Innovation By The Numbers



SUPERCOMPUTING
440 million

computing hours per year to support resilience to extreme weather



WILDFIRE SUPPRESSION

>95% Of all wildfire ignitions are held to below 10 acres due to aggressive air response



COMMUNITY + CUSTOMER SOLUTIONS

40K Access and functional needs customers supported through award-winning applications and generator programs

WEATHER FORECASTING

>1 billion



Historical weather observations training AI-based wind forecasting models

SYSTEM HARDENING

100%



Of transmission system hardening in Tier 3 of the High Fire Threat District

CUSTOMER NOTIFICATIONS

1.4 million



Customers can be contacted per hour



WILDFIRE RISK MODELING

>10 million

Wildfire simulations conducted daily to inform operational wildfire risk models



DRONE-BASED INSPECTIONS

>3.8 million

Images taken for all poles and structures training AI-based inspection models

GENERATOR PROGRAMS

7,800

Generators given to customers in need to increase resilience

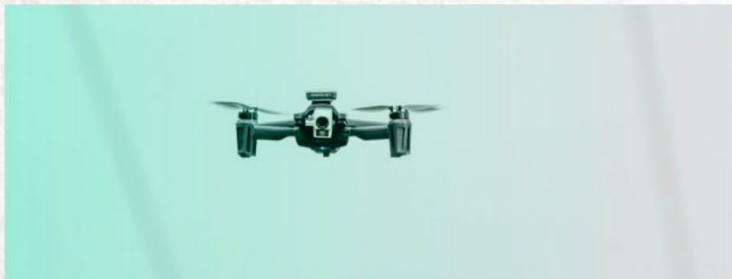
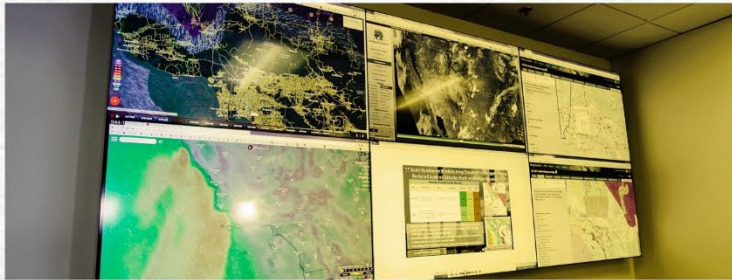




Ignition Trends & Wildfire Mitigation Efforts Southern California Edison



IGNITION TRENDS AND WILDFIRE MITIGATION EFFORTS UPDATE



SCE SERVICE AREA & HIGH FIRE RISK AREAS



50,000 SQ. MI.
of SCE service area
across southern,
central and coastal
California

14,000 SQ. MI.
of high fire risk
areas



51,000 MI.
of SCE overhead
distribution and
transmission lines

14,000 MI.
in high fire risk areas

Counties with high fire risk area served by SCE

Fresno
Inyo
Kern
Los Angeles
Mono
Orange
Riverside
San Bernardino
Santa Barbara
Tulare
Ventura



5M
customer accounts
or 15M residents in
SCE's service area

1.3M
customer accounts
or 3.9M residents
served by circuits in
high fire risk areas

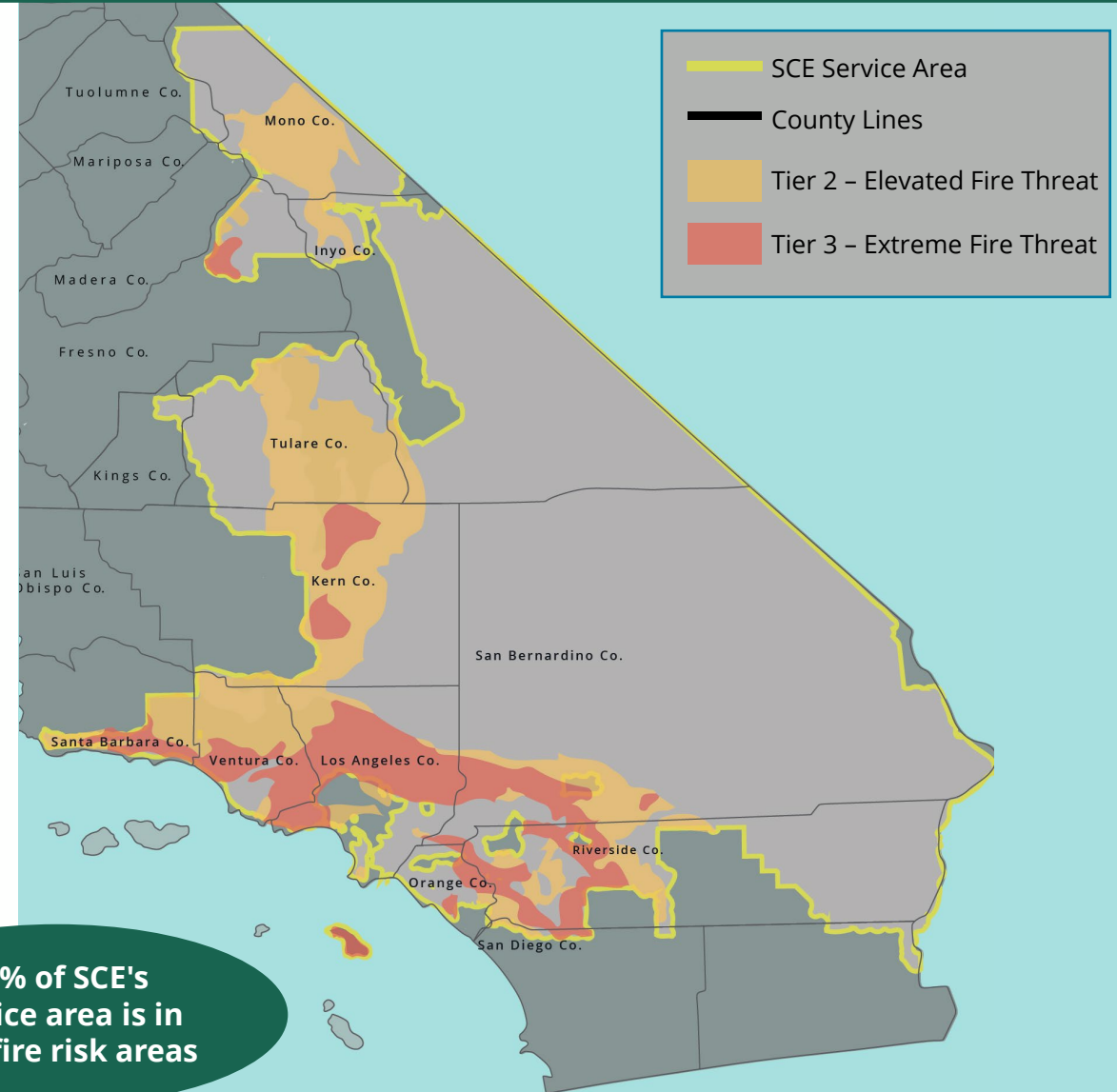


1.4M
power poles and towers

311,000
in high fire risk areas

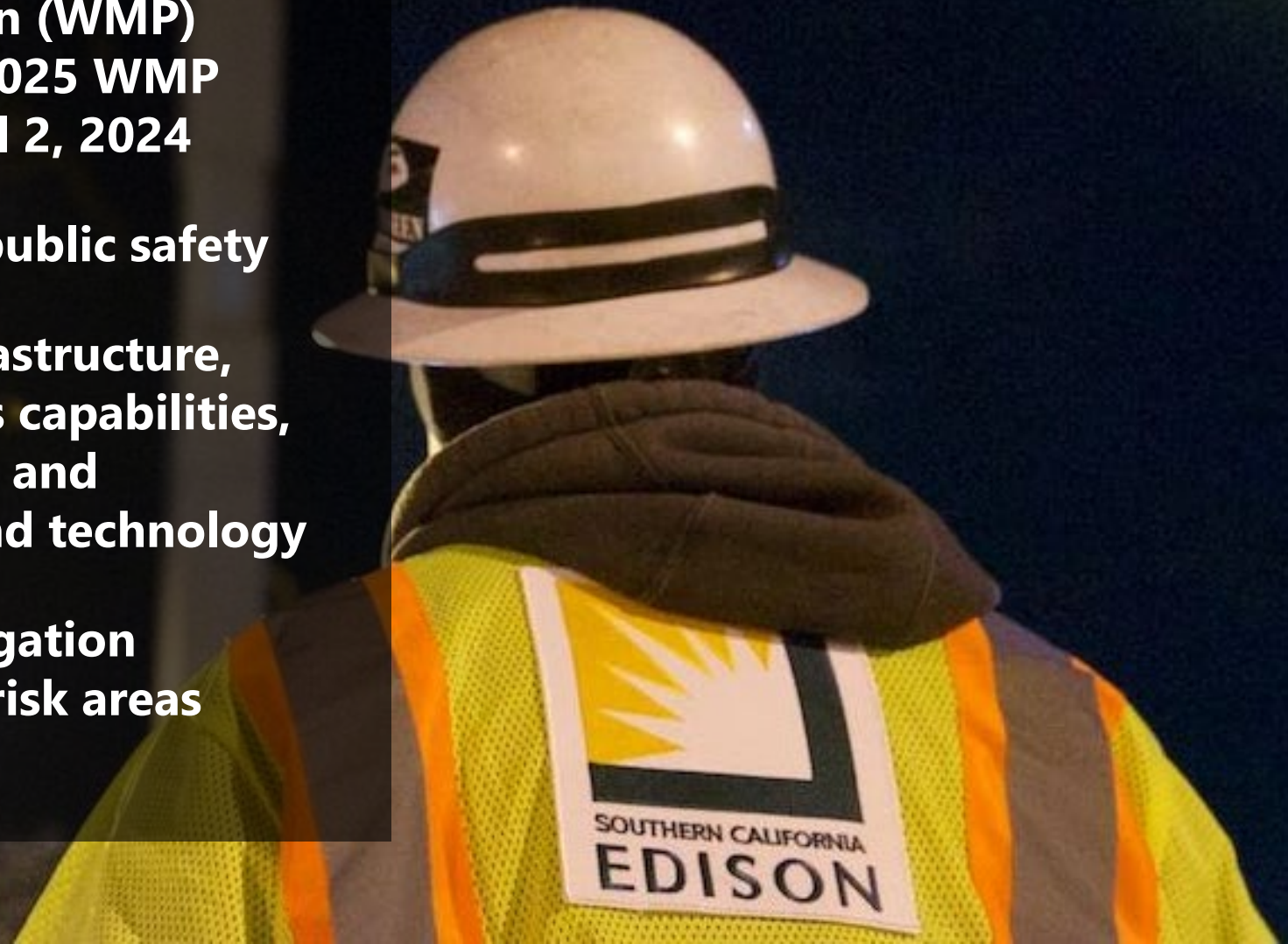
Counties with no or limited high fire risk areas served by SCE

Imperial
Kings
Madera
Tuolumne

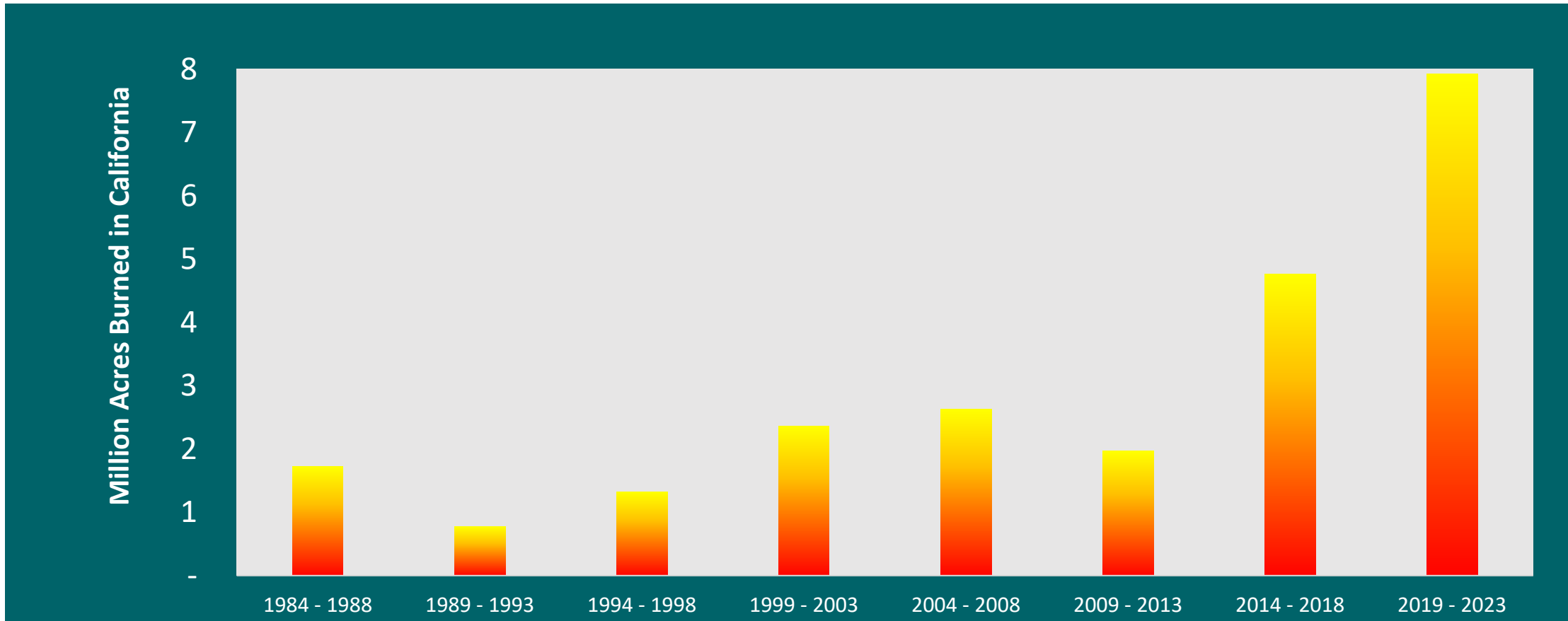


OUR WILDFIRE MITIGATION PLAN

- **2023-25 Wildfire Mitigation Plan (WMP) submitted on March 27, 2023. 2025 WMP Update to be submitted on April 2, 2024**
- **Primary objective is to protect public safety**
- **SCE is further hardening its infrastructure, bolstering situational awareness capabilities, enhancing operational practices and harnessing the power of data and technology**
- **SCE incorporates advanced mitigation measures deployed in high fire risk areas around the world**

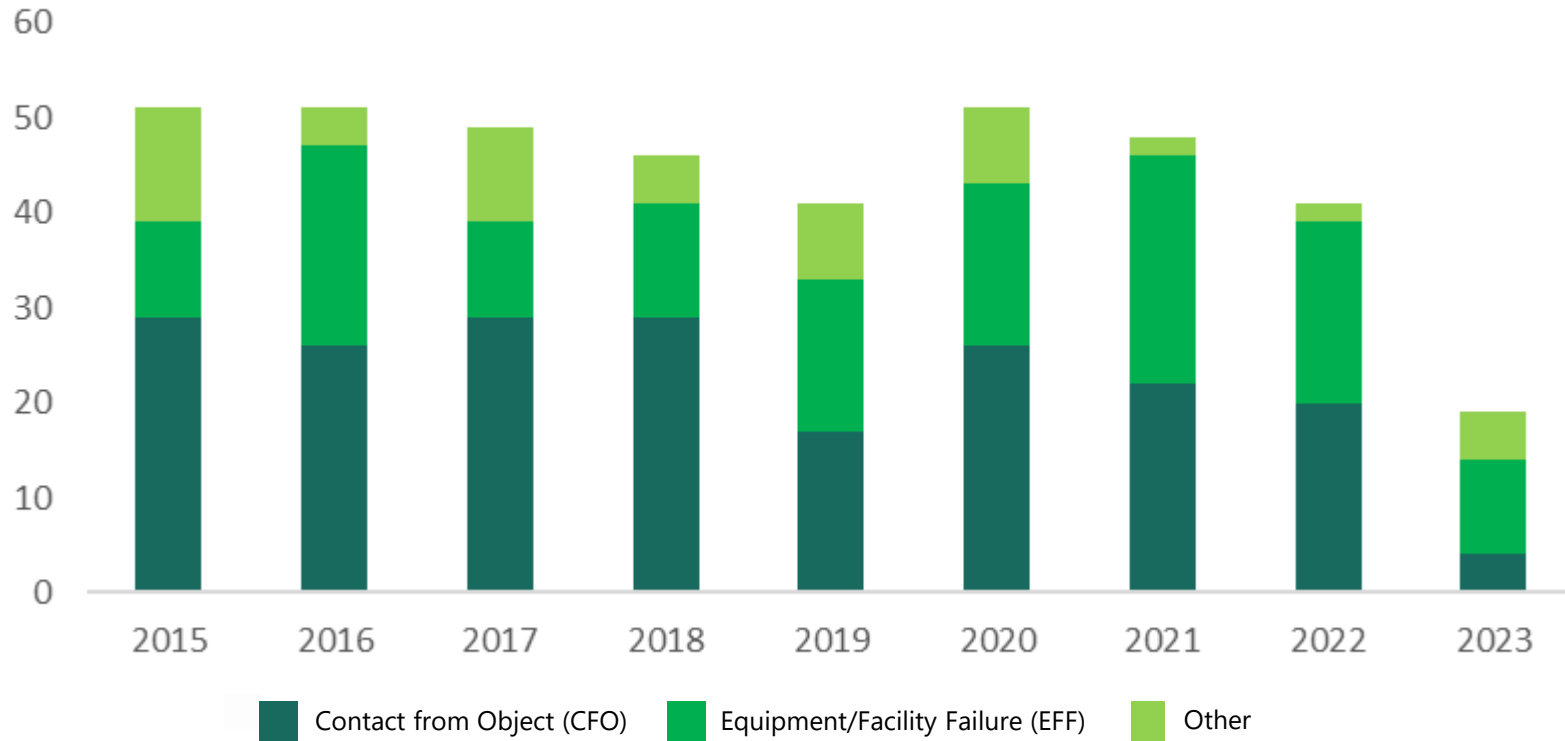


ACRES BURNED HAS STEADILY INCREASED THROUGHOUT THE PAST 40 YEARS IN CALIFORNIA



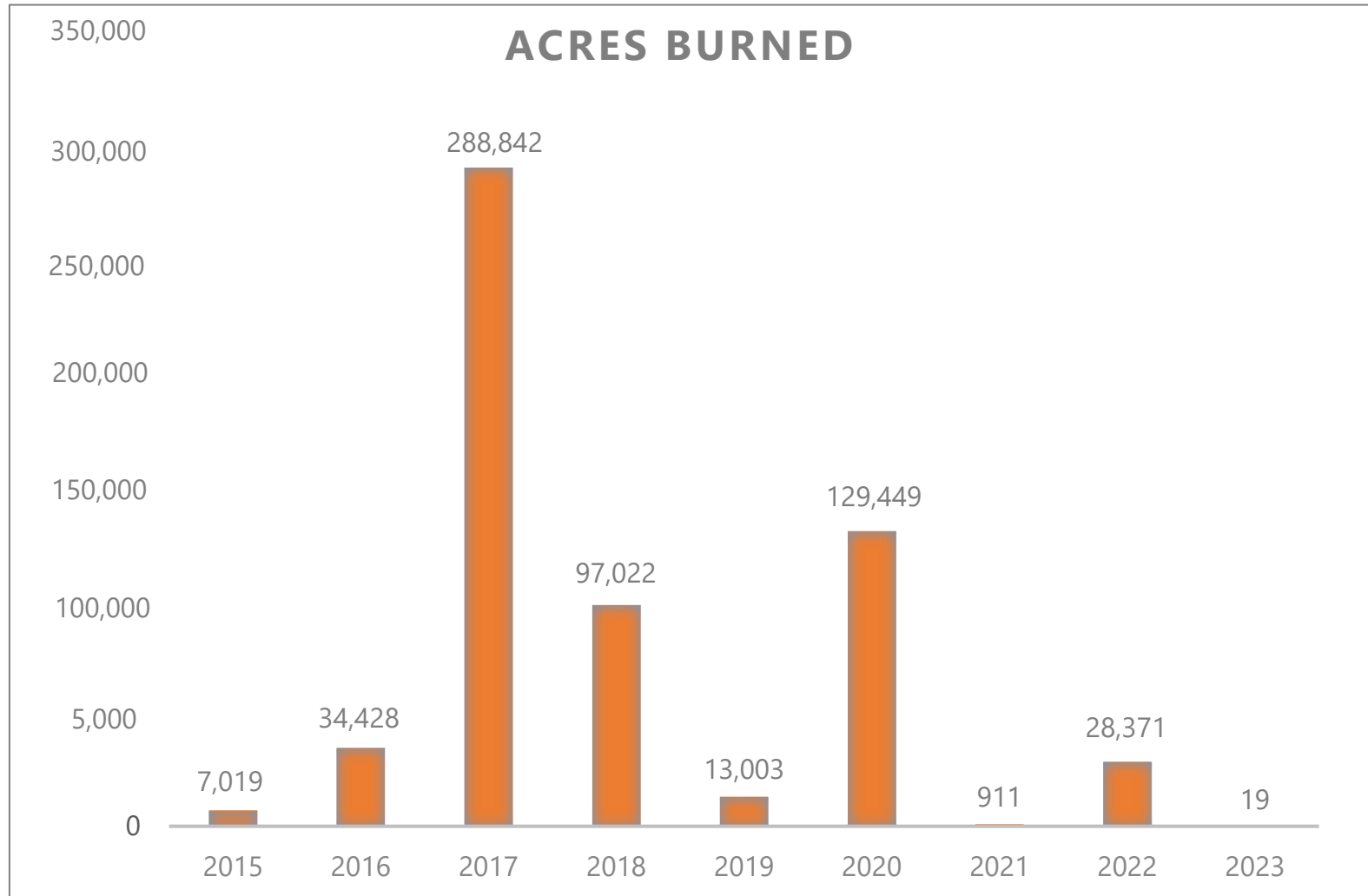
SCE HAS SEEN A STEADY DECREASE IN CPUC REPORTABLE FIRES IN HIGH FIRE RISK AREAS

CPUC Reportable Ignitions in High Fire Territory



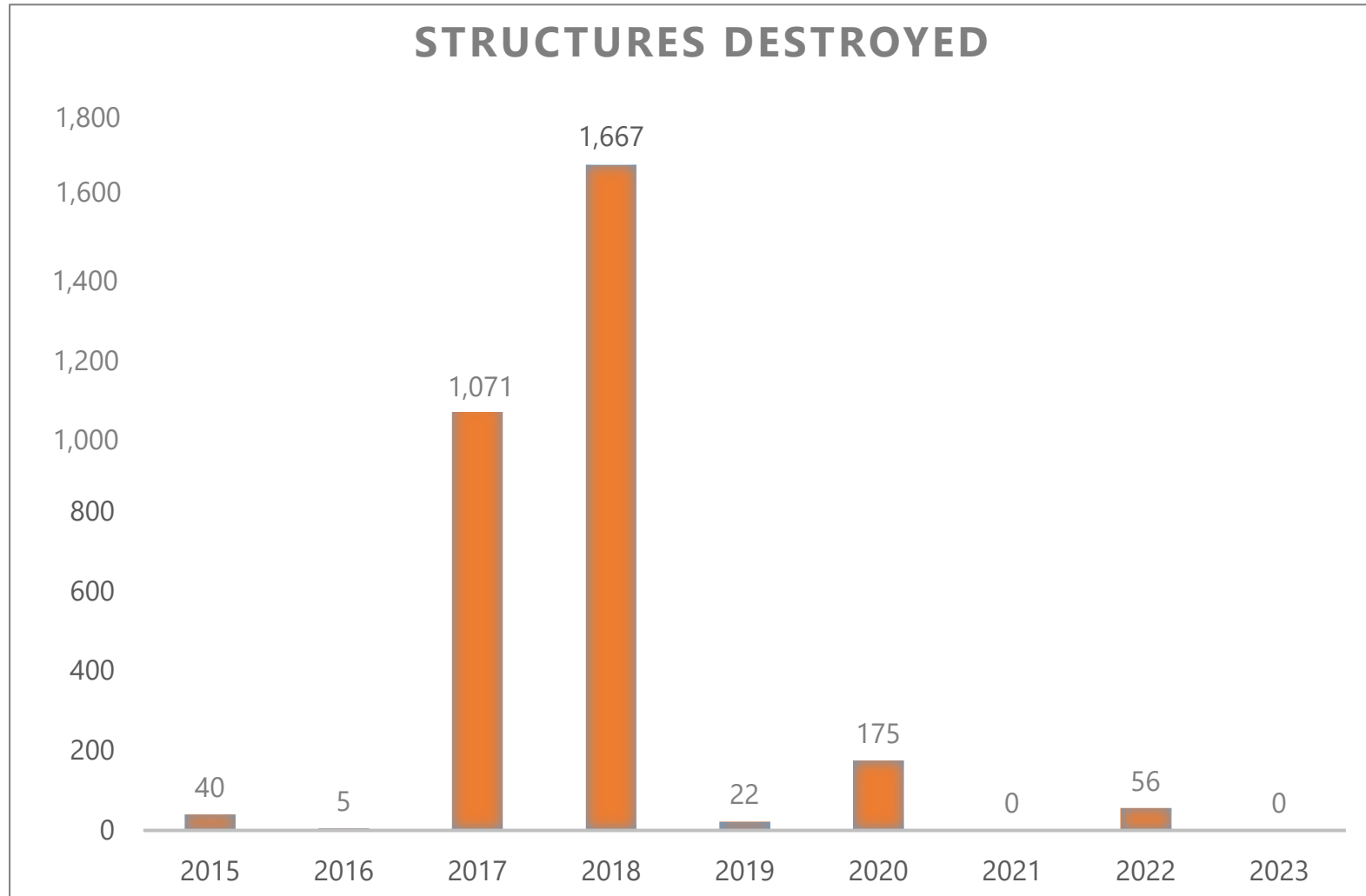
CPUC reportable ignitions have been steadily decreasing since SCE started implementing its wildfire mitigation programs.

ACRES BURNED HAS BEEN DESCREASING IN SCE SERVICE AREA



93% fewer acres burned in 2022-23 compared to 2017-18

BUILDINGS DAMAGED/DESTROYED HAS BEEN DECREASING IN SCE SERVICE AREA



98% fewer structures destroyed in 2022-23 compared to 2017-18

SCE HAS REDUCED THE PROBABILITY OF CATASTROPHIC WILDFIRES ASSOCIATED WITH ITS EQUIPMENT BY ABOUT 85-88% SINCE 2018

5,580+ MILES
OF COVERED CONDUCTOR



2 MILLION+
TRIMS AND REMOVALS



1 MILLION+
HFRA INSPECTIONS



1,730+ WEATHER STATIONS
190+ HD CAMERAS



Completed in high fire risk areas since 2018

31% fewer
tree-caused
faults²

48% lower
defect find
rate³

~90% visual
coverage of
HFRA

70% fewer
faults on fully
covered circuits¹

No ignitions
due to failure of
covered
conductor

90% less PSPS outage
time in 2023
compared to 2020⁴

1. Measured by faults covered conductor is expected to mitigate per 100 circuit miles on fully covered circuits as compared to bare circuits from 2018–2023 in HFRA

2. Measured by average monthly tree caused circuit interruptions in HFRA in 2021–2023 compared to the average from 2017–2019. In 2023, Southern California experienced significant impacts from seasonal rain and snowfall (e.g., Hurricane Hilary), which led to an increase of storm-related tree-caused circuit interruptions in 2023

3. Measured as Total Defect Find Rate of Top Ignition Drivers (% of inspections) in 2023 as compared to 2019 (inception of program) for structures inspected every year. Southern California experienced significant impacts from seasonal rain and snowfall (e.g., Hurricane Hilary), which led to an increase of defect find rates in 2023

4. ~22 million customer minutes of interruption in 2023 compared to ~268 million in 2020, not normalized for weather

SCE MAINTAINS FOUNDATIONAL STRATEGY WHILE ADVANCING KEY INCREMENTAL FOCUS AREAS EACH YEAR

2019

FOUNDATIONAL STRATEGY

Hardening the electric grid

Enhancing operational practices

Bolstering situational awareness capabilities

2020 - 2022

GRANULAR WILDFIRE RISK, PSPS MITIGATION

Refined risk analysis models

Enhanced inspection strategy

Reduced PSPS impacts

Funded aerial fire suppression

Piloted new technologies

2023-2025

INTEGRATED WILDFIRE MITIGATION STRATEGY

Continue risk-informed grid hardening and mitigations

Advance transmission hardening

Continue reducing PSPS impacts

Further advance new technologies



Learn More:
sce.com/wildfire

Energized by Edison Stories & Videos:
edison.com/wildfire-safety

Roundtable / Public Comment

- ▶ Roundtable
- ▶ Public Comment



Next Meeting Information

April 16, 2024

CNRA Building, 715 P Street
2nd Floor Conference Room 2-221
Sacramento, CA 95814

- RCD Post Fire Handbook - California Association of Resource Conservation Districts (CARCD)
- Conflagration Data and Lahaina Report on surviving homes – Institute for Business & Home Safety
- Wildfire and Forest Resilience Task Force Group 2, Fire Adapted Communities Roadmap and Dashboard: Baseline Assessment document – Institute for Business and Home Safety, Ascent, The Watershed Center



Meeting Adjournment

- ▶ Copies of the written materials have been posted on the Office of the State Fire Marshal web site at <https://osfm.fire.ca.gov/>
- ▶ For information concerning the Advisory Committee Meeting, please contact Carrie Lewis at (916) 980-9352 or carrie.lewis@fire.ca.gov.
- ▶ NOTE: Items designated for information are appropriate for committee action if the committee chooses to act. The agenda order is tentative and subject to change. Agenda items may be taken out of order to facilitate the effective transaction of business. The Committee may not discuss or act on any matter raised during the public forum period, except to decide whether to place the matter on the notice and agenda of a future committee meeting.

