



CALIFORNIA PUBLIC UTILITIES COMMISSION

Public Briefing by Pacific Gas & Electric Company (PG&E) on Readiness for 2020 Public Safety Power Shutoff Events 10:00 a.m. August 13, 2020 Virtual

Pursuant to Executive Order N-29-20, paragraph 3, issued on March 17, 2020,
Commissioners may participate remotely from teleconferencing locations.

Link to Executive Order N-29-20:

<https://www.gov.ca.gov/wp-content/uploads/2020/03/3.17.20-N-29-20-EO.pdf>

Watch and/or give public comment:

To watch: www.adminmonitor.com/ca/cpuc

Listen and/or give public comment: (800) 857-1917; passcode: 989 9501

***Updated* AGENDA**

- 10:00 AM:** Opening Remarks from CPUC Commissioners and Leaders from California Department of Forestry and Fire Protection (CAL FIRE) and California Governor's Office of Emergency Services (Cal OES)
- 10:20 AM:** Presentation by Michael Lewis, President, PG&E
- 10:40 AM:** Discussion, Q & A with Commissioners, CAL FIRE, Cal OES, and PG&E
- 11:20 AM:** Public Comment
- 12:00 PM:** Event close

Time for presentation and discussion is estimated.

Presentation slides will be posted at <https://www.cpuc.ca.gov/psps/> when available.

Public comment may exceed 40 minutes depending on the number of callers in queue, and each speaker will have between 1-3 minutes to speak depending on the number of callers.

Community Wildfire Safety Program

2020 PUBLIC SAFETY POWER SHUTOFF READINESS UPDATE

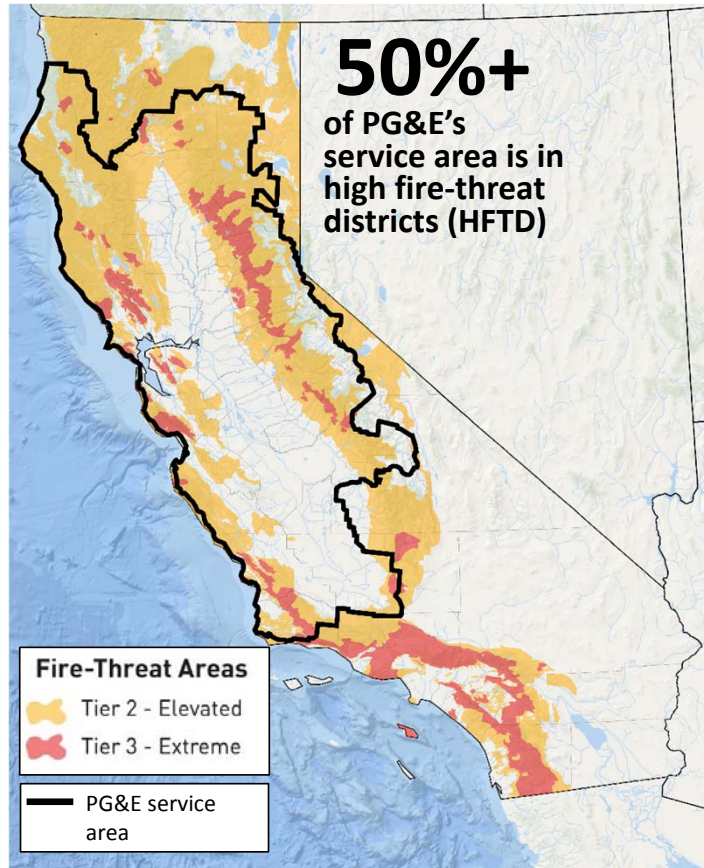
CALIFORNIA PUBLIC UTILITIES COMMISSION

August 13, 2020





Wildfire Risks Across PG&E's Service Area



Source: California Public Utilities Commission

| | |
|-------------------------------------------------|----------------|
| Total electric customers served | 5.1M |
| Electric metered customers in HFTD | 505,600 |
| Counties served (electric) | 47 |
| Counties with high fire-threat districts | 42 |
| Overhead distribution line miles (total) | 81,000 |
| Overhead distribution line miles in HFTD | 25,500 |
| Overhead transmission miles (total) | 18,200 |
| Overhead transmission miles in HFTD | 5,500 |

Numbers are approximate

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



Public Safety Power Shutoff 2020 Goals

SMALLER

33% FEWER
IMPACTED CUSTOMERS

- Secured over 450 megawatts of temporary generation to support substations and critical customers
- Adding ~600 sectionalizing devices and line switches to limit the size of outages
- Increased weather model resolution for more precise events

SHORTER

50% FASTER
RESTORATION TIMES

- Secured 30 additional aircraft, for faster and around-the-clock patrols
- Using infrared equipment to enable night inspections
- Expanded mutual assistance program

SMARTER

BETTER COMMUNICATIONS, RESOURCES AND ASSISTANCE BEFORE, DURING AND AFTER A PSPS EVENT

- Improved coordination with local agencies and critical service providers
- Improved and strengthened PSPS event website
- Enhanced customer notifications with more detailed information
- Coordinated county-specific and COVID-19 CRC plans
- Increased support for customers with Access and Functional Needs
- Using AI to improve data collection and analysis for better event management and situation reports
- Trained leadership and EOC staff in Standard Emergency Management System



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2020 PSPS Readiness: System Improvements

SMALLER IN SIZE

YEAR-TO-DATE 2020 PROGRESS RELATIVE TO 2020 GOALS (AS OF 8/5)

| | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| <p>TEMPORARY GENERATION Securing backup generation for microgrids, Community Resource Centers and critical facilities</p> | <p>458 MEGAWATTS (MW) 300 TOTAL MW BY 9/1/20</p> | <p>153% complete</p> |
| <p>SUBSTATION GENERATION READINESS Requiring substations for backup power and positioning temporary generation to keep customers energized</p> | <p>51 OPERATIONALLY READY 62 TOTAL LOCATIONS BY 9/1/20</p> | <p>82% ready</p> |
| <p>SECTIONALIZING DEVICES Separating the distribution grid into smaller sections for more targeted PSPS events</p> | <p>507 DEVICES 592 TOTAL DEVICES BY 9/1/20</p> | <p>86% commissioned</p> |
| <p>TRANSMISSION LINE SWITCHES Installing switches to redirect high-voltage power and keep communities energized</p> | <p>36 SWITCHES 23 TOTAL SWITCHES BY 6/1/20</p> | <p>157% complete</p> |
| <p>IMPROVED WEATHER MODELING Improved ability to pinpoint severe weather and shrink outage areas</p> | <p>New Outage Producing Winds (OPW) Model 2.0: COMPLETE New Fire Potential Index (FPI) Resolution (9km² → 4km² granularity): 9/1/20</p> | |
| <p>WEATHER STATIONS Adding additional stations to enhance weather forecasting and tracking; 808 total stations installed to date</p> | <p>182 STATIONS 235 TOTAL STATIONS BY 9/1/20</p> | <p>77% installed</p> |
| <p>HIGH-DEFINITION CAMERAS Improving real-time monitoring of high-risk areas and conditions; 224 total cameras installed to date</p> | <p>82 CAMERAS 100 TOTAL CAMERAS BY 9/1/20</p> | <p>82% installed</p> |





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2020 PSPS Readiness: Restoration Resources

 SHORTER IN LENGTH

We will take the following steps to restore power to customers faster:

-  Nearly doubling our exclusive-use helicopter fleet from 35 to 65
-  Using two airplanes with infrared cameras capable of inspecting transmission lines at night
-  Deploying more PG&E crews and contractors
-  Expanding mutual assistance support from other utility companies





2020 PSPS Readiness: Enhanced Customer Support

SMARTER FOR CUSTOMERS

Improved CRC Plans

- › Locally coordinated locations
- › Expanded resources and multiple delivery models
- › COVID-19 precautions



Upgraded PSPS Website

- › Increased capacity
- › ADA accessible
- › Improved maps
- › Available in 13 languages



Expanded Customer Outreach

- › **16** Customer Webinars (~3,800 attendees)
- › **12** Postcards/Mailers/Brochures
- › **24** Customer Emails
- › **308M** average monthly advertising impressions (July/Aug.)



Critical Customer Support

- › **Ongoing critical customer list updates** in coordination with counties
- › **Support for COVID-19 essential hospitals** in high fire-risk areas
- › **Ongoing engagement with telecommunications providers** (including multiple notification tests)
- › **Listening sessions and webinars** with large customers and critical service providers
- › Resiliency plans for **vote tabulation centers**



Enhanced Customer Notifications

Detailed info up to 2 days in advance (including restoration times and links to customer resources)

- **2 DAYS BEFORE** power is turned off
- **1 DAY BEFORE** power is turned off
- **JUST BEFORE** power is turned off
- **DURING** the PSPS event (weather all clear and ETOR)
- **ONCE** power is restored



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2020 PSPS Readiness: AFN Support

 SMARTER FOR CUSTOMERS

Community-Based Organizations (CBOs)

- › Set up partnerships with ~250 Community-Based Organizations to expand communications reach
- › Established councils to engage and solicit feedback from community leaders
- › Expanded resource partnerships



Medical Baseline Customers

- › Expanded Medical Baseline Program to provide additional communications benefits
- › Responding to COVID-19, eased process for enrolling and recertification
- › Conducted extensive outreach to encourage potentially eligible to enroll



California Foundation for Independent Living (CFILC)

- › Working with the CFILC to fund resources to help prepare for disasters and extended power outages
- › Resources include:
 - Portable backup power
 - Emergency preparedness assistance
 - Accessible transportation
 - Hotel vouchers and food stipends
 - Medical Baseline application assistance





2020 PSPS Readiness: Working with County, Tribal, City Governments



| | | | | |
|--------------------------------|--------------------------------|-----------------------|--------------------------------|-----------------------------------------|
| PSPS Listening Sessions | Regional Working Groups | PSPS Exercises | PSPS Advisory Committee | Wildfire Safety Working Sessions |
| Status: Complete | Status: Complete | Status: Complete | Status: Ongoing | Status: In Progress |

OUTREACH

✓ COMPLETE

Stakeholder Meetings (ongoing)

Meetings with agency stakeholders to share information.

200+

PSPS Listening Sessions

Meetings with local and tribal governments to gather feedback on the 2019 PSPS events and identify opportunities for improvement.

36

Regional Working Groups

Sessions with public safety partners to solicit input and recommendations on PSPS-related items.

5

PSPS Exercises

Regionally-based PSPS exercises with PG&E staff and external stakeholders to test PSPS processes and procedures.

3

Standard Emergency Management System (SEMS) Training

All EOC staff trained in the system that State and local governments use for managing emergencies.

550

PSPS Advisory Committee

Ad hoc meetings with local and tribal governments to obtain input on updates to PSPS processes and procedures.

5

Wildfire Safety Working Sessions

Localized discussions with counties, tribes and other key stakeholders to review wildfire safety work in the county.

34

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

DATA AS OF 8/12 8



2020 PSPS Readiness: COVID-19 Mitigations

 SMARTER FOR CUSTOMERS

As COVID-19 continues, we are focused on actions that reduce the impact of Public Safety Power Shutoff events on customers and communities.

In response to COVID-19, we are taking the following actions:



Coordinating with the California Hospital Association, the Hospital Council of Northern and Southern California and directly with hospitals to ensure that ALL COVID-19 critical hospitals in high fire-threat areas can continue operating effectively during a PSPS event.



Working with county governments and local Offices of Emergency Services (OES) to ensure that current and potential future auxiliary medical facilities and temporary pandemic-care facilities will be protected from disruptive de-energization.



Updating Medical Baseline enrollment and renewal so customers can self-certify without a physician's note. Medical Baseline enrollments have increased by roughly 25,000 customers (13%) over the last three months.



Offering micro Community Resource Centers (smaller, open air tents) and mobile CRCs (vans) to supplement indoor CRCs if shelter-at-home and physical distancing requirements are in place during PSPS events.



Using temporary generation and grid-based solutions to support some communities and societally important facilities to limit the number of areas that we must de-energize in PSPS events.



Updating work processes and procedures to ensure the safety of customers and employees during essential wildfire safety work.

Thank You

For more information, please:

- Call us at **1-866-743-6589**
- Email us at **wildfiresafety@pge.com**
- Visit **pge.com/wildfiresafety**



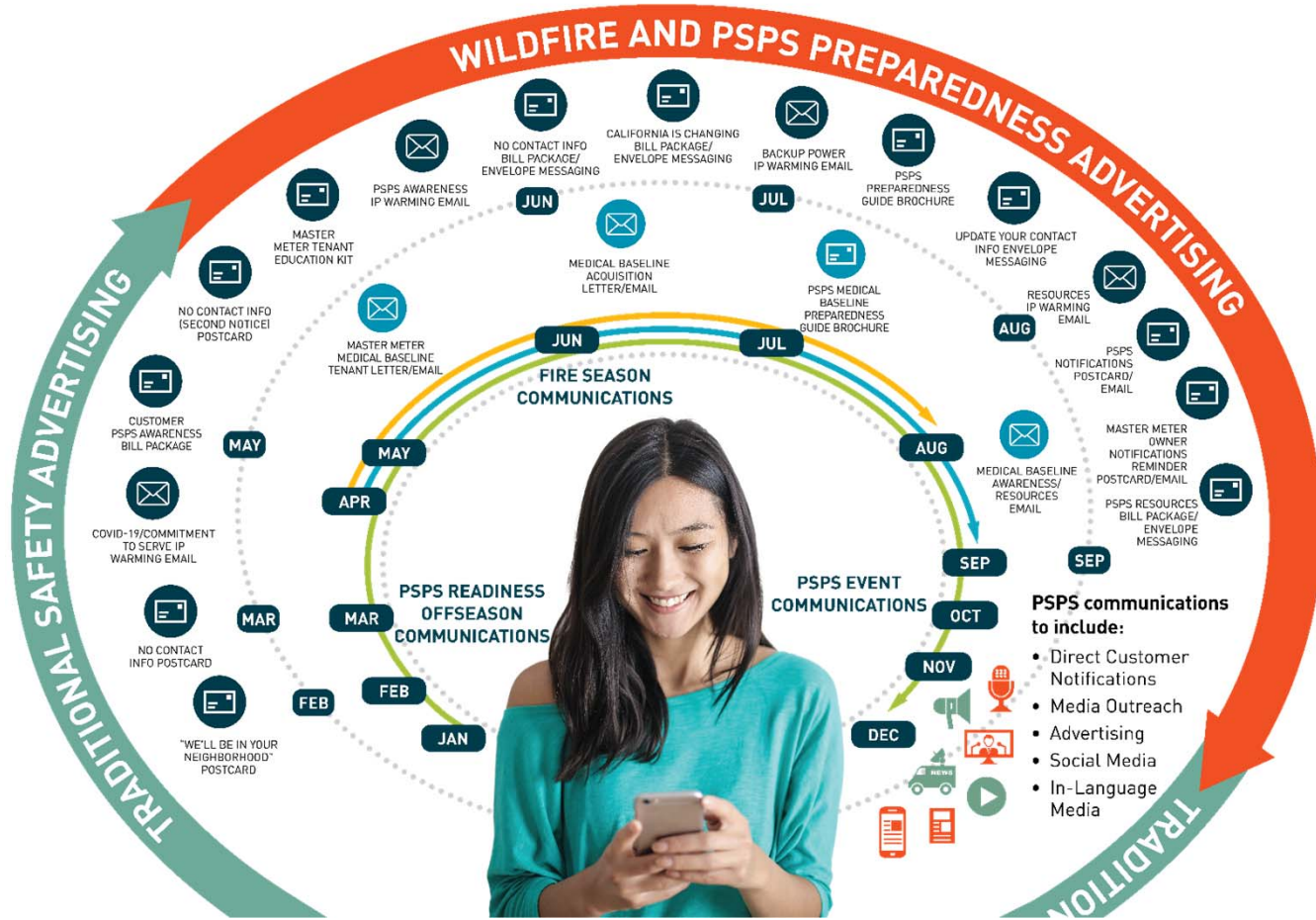


2020 PSPS Readiness: Enhanced Customer Outreach & Communications

In order to be prepared for wildfire season and the potential for PSPS, **PG&E customers will receive communications through a variety of channels.**

Ongoing Communications:

- Webinars
- Medical Baseline Outreach
- Project Milestone Announcements



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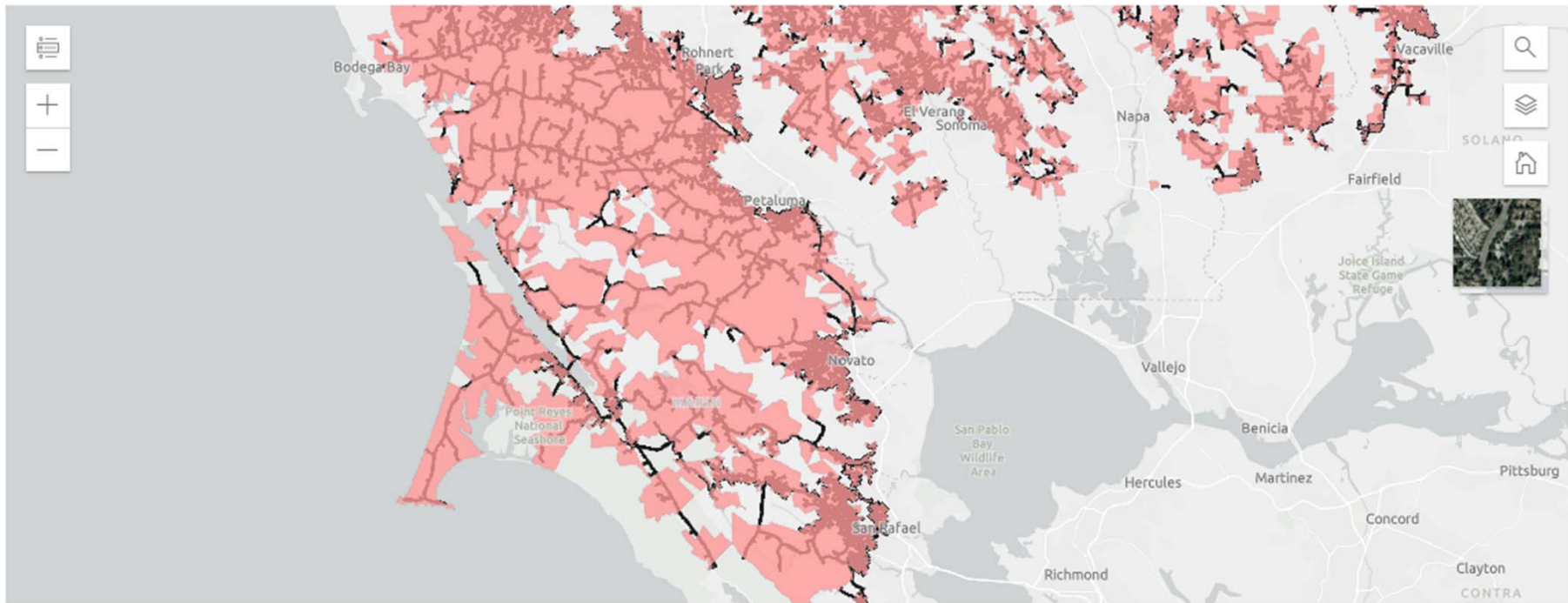


Sample PSPS Event Map Refinement

SAMPLE PUBLIC SAFETY PARTNER MAP FOR REFERENCE

 Public Safety Power Shutoff Portal

Overview PSPS planning PSPS events



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



Sample Customer Outage Map

SAMPLE CUSTOMER MAP FOR REFERENCE

PPSP In Progress - Get the latest Information

← VISIT PGE.COM 877-660-6789

HOME PPSP EVENTS SAFETY PG&E PARTNERS OUTAGES ENGLISH

Service Address
506 RICHARDSON ST GRASS VALLEY CA 95945 GRAS

Current Outages Future Forecasted Outages

Yuba City YUBA SUTTER PLACER NEWADA

New Bullards Bar Reservoir
Englebright Lake
Camp Lake West Reservoir

PPSP Outage Forecast
PPSP Coverage Area

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Sample Situation Report

The Situation Report is created during a PSPS event to provide a high-level overview of the event.

- This includes potential shutoff and restoration times, counties currently in scope and the potential customer impacts by County.
- This report is posted on the PSPS Portal at 0730 and 1430 each day.

PLAN SELECTION

| | | | |
|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| PLAN C-02 Tx Playbook: Created: Mon, Nov 18 19:00 Approved: Mon, Nov 18 20:00 TPs: 9 | PLAN C-03 Tx Playbook: Created: Tue, Nov 19 06:54 Approved: Tue, Nov 19 09:00 TPs: 10 | PLAN D-01 Tx Playbook: PSPS 11-2... Created: Tue, Nov 19 17:32 Approved: Tue, Nov 19 19:15 TPs: 6 | PLAN D-05 DESCOPE Tx Playbook: PSPS 11-2... Created: Wed, Nov 20 16:30 Approved: Wed, Nov 20 17:00 TPs: 5 |
|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|

Master Meter Tenant Excluded Included

PLAN SUMMARY | PLAN D-05 DESCOPE

| TOTAL SCOPE | ASSETS | CUSTOMERS | NOTIFICATIONS | TEMPORARY GENERATION |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Time Places: 5 Divisions: 6 Counties: 11 Tribes: 0 | Tx Circuits: 15 Tx Circuit Classes: 60: 10 / 115: 4 / 230: 1 Dx Circuits: 53 | Affected Customers: 49,771 Affected Tribal Customers: 0 Medical: 2,466 Critical Facilities: 378 | Add'l Customers to Notify: 0 Add'l MBL to Notify: 0 MBL Pending Notification: 11 MBL No Response: 54 | Temporary Microgrids: [TBD] Substations: [TBD] Number of Mitigated Customers: [TBD] |

OVERALL EVENT SUMMARY

A strong north or northeast wind event is expected to develop on Wednesday 11/20/2019 @1000 and into Thursday, generally affecting the northern half of the PG&E territory. There is still considerable uncertainty regarding the strength, timing and humidity levels with this system. Strong wind gusts in excess of 50 mph are possible across the Sacramento Valley and adjacent elevated terrain including the northern Sierra foothills in addition to the SF North Bay. Most of northern and central California has not received any significant precipitation this fall and fire potential is well above normal as live fuel moisture remains below critical values for mid-November and dead fuel moisture is at historically low levels in many areas. This potential event is forecasted to impact the following 18 Counties:
Amador, Butte, Colusa, El Dorado, Glenn, Lake, Mendocino, Napa, Nevada, Placer, Plumas, Shasta, Sierra, Solano, Sonoma, Tehama, Yolo, and Yuba.

EVENT TIME PLACES

note: map displays a sample of outage parcels

| | |
|-------------------------|---------------------------|
| TP3.1 - West Sac Valley | 11/20 09:00 - 11/20 16:00 |
| TP5 - Northern Sierra | 11/20 16:00 - 11/21 02:00 |
| TP1 - North Bay rescope | 11/20 07:00 - 11/21 02:00 |
| TP10 - Shingletown | 11/20 08:00 - 11/21 02:00 |
| TP3 - North Valley | 11/20 08:00 - 11/20 17:00 |

Nov-20th: 09:00 Nov-20th: 15:00 Nov-20th: 21:00

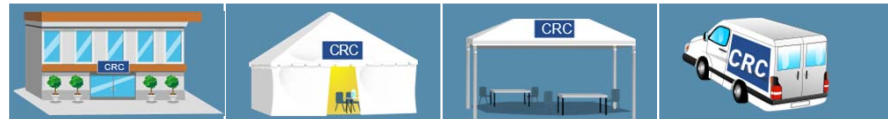
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CRC Resources and COVID-19 Considerations

Given the current COVID-19 environment, in addition to continuing to establish indoor CRCs, we are implementing outdoor contingencies including Micro and Mobile CRCs.

- Indoor and outdoor CRC locations developed in consultation with local and tribal governments.
- In PSPS events, actual deployment locations and preferred CRC type will be coordinated with local and tribal governments.
- During a PSPS event, CRC locations will be shared on pge.com/pspsupdates and via social media.
- Operating hours will be from 8:00 a.m. to 10:00 p.m.
- CRCs will be professionally staffed rather than employee volunteers.



| Details/Resources | Indoor | Tent | Micro | Mobile |
|--------------------------------------------------|-----------------------------------------|-----------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|
| CRC Overview | Indoor site (i.e. Community Center) | Soft-sided tent at outdoor site | Open air tents at outdoor site | Sprinter van and tents at outdoor site |
| If Physical Distancing Required | Metering inside and physical distancing | N/A; due to size limits of tent, will not use | Grab-and-go bags*; metering and physical distancing | Grab-and-go bags*; metering and physical distancing |
| COVID-19 Health and Safety Measures | ✓ | ✓ | ✓ | ✓ |
| ADA-Accessible Restroom and Hand-Washing Station | ✓ | ✓ | ✓ | ✓ |
| Heating and Cooling | ✓ | ✓ | | |
| Device Charging | ✓ | ✓ | ✓ ** | ✓ ** |
| Wi-Fi Service | ✓ | ✓ | ✓ | ✓ |
| Bottled Water | ✓ | ✓ | ✓ | ✓ |
| Non-Perishable Snacks | ✓ | ✓ | ✓ | ✓ |
| Tables and Chairs | ✓ | ✓ | ✓ *** | ✓ *** |
| Bagged Ice | ✓ | ✓ | | |
| Blankets (quantities limited) | ✓ | ✓ | ✓ | ✓ |
| Security Personnel | ✓ | ✓ | ✓ | ✓ |
| Wind/Weather-Resistant | ✓ | Limited | | |

*Bag contains device charger, water, snacks and info card. **On-site charging for medical devices only.
***Tables and chairs for customers charging medical devices.

SCE's 2020 Planning for Public Safety Power Shutoffs

California Public Utilities Commission Briefing

Aug. 11, 2020

- SCE does not take the decision to de-energize lightly. We recognize the hardships a de-energization event can create; this is why SCE is committed to informing and supporting the communities we serve
 - PSPS remains a vital tool in protecting public safety and mitigating wildfire risk
- SCE has refined its approach to PSPS based on lessons learned from 2019, Commission guidance, and feedback from customers, communities and stakeholders
- With the grid improvements SCE has made since last year, under the same weather conditions as 2019, we expect to see a **30 percent reduction** in the number of customers affected by future PSPS events
 - Approximately half of these customers are not expected to experience PSPS at all in 2020
- SCE continues to make modifications ahead of the 2020 fire season focusing on:
 - SCE’s preparedness and decision-making tools during PSPS
 - Community information, engagement and outreach
 - Stakeholder collaboration for emergency preparedness and response
 - Customer care during PSPS
- SCE is implementing changes to its PSPS approach during the COVID-19 pandemic
 - Recognizing greater impact of de-energizations for customers working, learning and caring for loved ones at home
 - Balancing assistance to customers while following CDC guidance and state and local orders

2019 PSPS Events

- SCE conducted 16 events (9 led to de-energizations) with approx. 122,000 unique customers de-energized in 2019 with an average duration of 27 hours
- Largest de-energization event was Oct. 27-Nov. 3, 2019 and affected approx. 101,000 unique customers
- During post-patrols found multiple instances of equipment damage and tree branches contacting power lines that could have ignited a fire

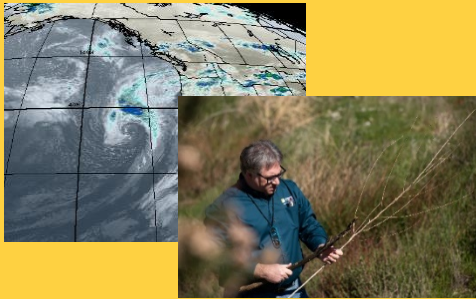
Major PSPS Lessons Learned

1. System hardening, especially circuit sectionalization, continues to be useful in reducing the scope and frequency of PSPS de-energizations
2. The key role played by a dedicated PSPS Incident Management Team and improved analytics in supporting PSPS decision-making and operations
3. Find opportunities to improve communication, engagement, and response to customers during PSPS events
4. It's important to maintain and add customer care programs
5. Modifying protocols to reduce the scope, frequency and impacts of PSPS to customers is important, especially during COVID-19 pandemic
6. Provide additional information about decision-making in post-event reporting



PSPS Decision Points

Decision points include, but are not limited to:



- **Watches and Warnings issued** by the National Weather Service
- SCE meteorologists' forecast of **strong wind** conditions in the service area
- SCE fire scientists' assessment of **fire potential** using weather data, fuel conditions, and vegetation moisture content



- **Circuit health** as determined by inspection findings, recent upgrades, and any observed damage
- Real-time field observations from qualified electrical workers monitoring for **hazardous conditions**



- Guidance from **emergency management officials** and first responder agencies (e.g., Cal OES, CAL FIRE, county/city emergency management entities, tribal governments)
- Impact to **critical infrastructure** as determined by community characteristics and information

SCE expects to reduce the scope, duration, and impact of PSPS; however, PSPS will continue to remain a viable solution for extreme conditions

Multipronged approach to reduce scope, duration, and impacts of PSPS

Switching Playbooks

Targeted Grid Hardening

Engineering & System Evaluation

Microgrids & Resiliency Zones

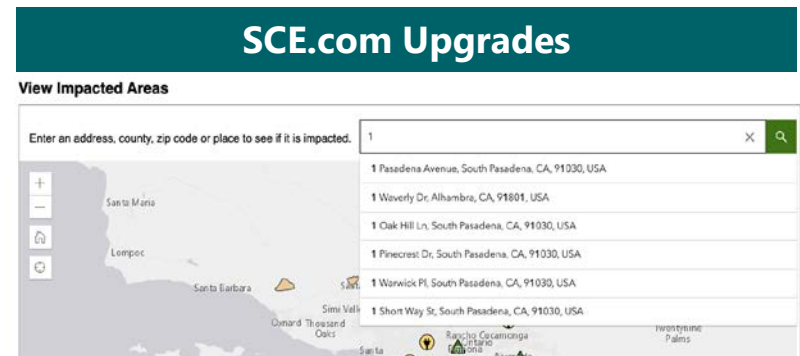
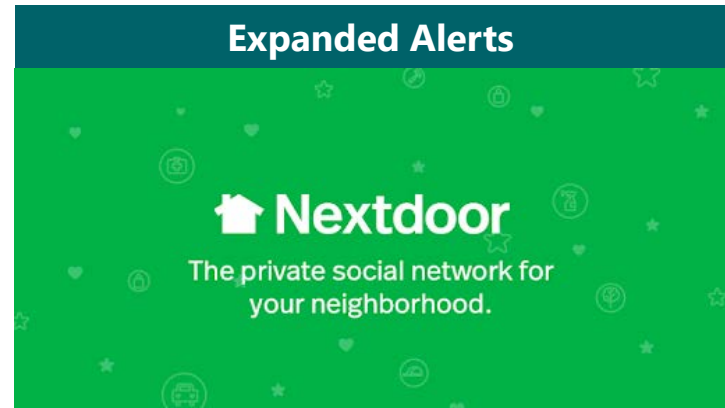
Customer Care

Rapidly developing circuit-specific plans to reduce the impacts observed in 2019 by:

- ❖ Leveraging existing isolation equipment
- ❖ Targeting remediations
- ❖ Identifying small upgrades to reduce the number of customers impacted by PSPS
- ❖ Deploying more weather stations
- ❖ Pursuing microgrid opportunities when technologically and economically feasible with safety operations in mind
- ❖ Establishing Community Resource Centers
- ❖ Deploying Community Crew Vehicles
- ❖ Providing potable water
- ❖ Addressing food spoilage claims
- ❖ Conducting community outreach

SCE has expanded communications to make it easier for customers to receive updates in their preferred language

- **Expanded alerts** based on zip code to include non-SCE account holders via the “Nextdoor” communications platform
- **SCE.com** has been upgraded to provide customer-friendly outage information, including enhanced interactive mapping that enables street-level zoom capabilities
- **SCE.com performance** has also been upgraded to handle more traffic (5M views over an hour now vs 200k in 2019)
- Customers can sign up to receive notifications in their **preferred language** (English, Spanish, Mandarin, Cantonese, Korean, and Tagalog)



SCE is offering a variety of new programs and services to our customers, especially for most vulnerable populations

- **Back-up generation** will be offered to customers that have a range of varying needs
 - Our most vulnerable income-qualified, critical care customers can receive a fully subsidized back up battery with solar for up to 24 hours of resiliency
 - Customers reliant on well water pumping can receive a rebate of up to \$500
 - Customers that need a portable power battery can receive a \$50 rebate
- **Goods and services** are provided via SCE's Community Resource Centers and Community Crew Vehicles to customers in impacted communities including device charging, restrooms, ice, water, PPEs, and ability to enroll in outage alerts.
- **Resiliency zones** are in development to augment certain vulnerable rural communities in which back-up power will be provided to essential services within those areas
- **Circuit-level customer care plans** provide a summary overview of all programs and services available for each circuit area (137 completed to-date with a goal of 1,100)
- **Deploy temporary backup generation** on underground portions of selected de-energized circuits that have experienced PSPS events
- **Preparedness and resiliency planning** support for critical infrastructure providers

Community Engagement & Expanded Partnership

SCE is committed to keeping its customers and key stakeholders informed of WMP activities, PSPS protocols, and general emergency preparedness

- Held nine virtual community meetings and 15 resiliency workshops beginning in May to share information about PSPS, emergency preparedness, and SCE's wildfire mitigation plan
- Increased partnerships, including giving grants, with organizations supporting Access & Functional Needs customers
- Expanded pool of Community Resource Centers and adjusted protocols for social distancing due to COVID-19











Community Meetings & Livestreams



Community Crew Vehicle

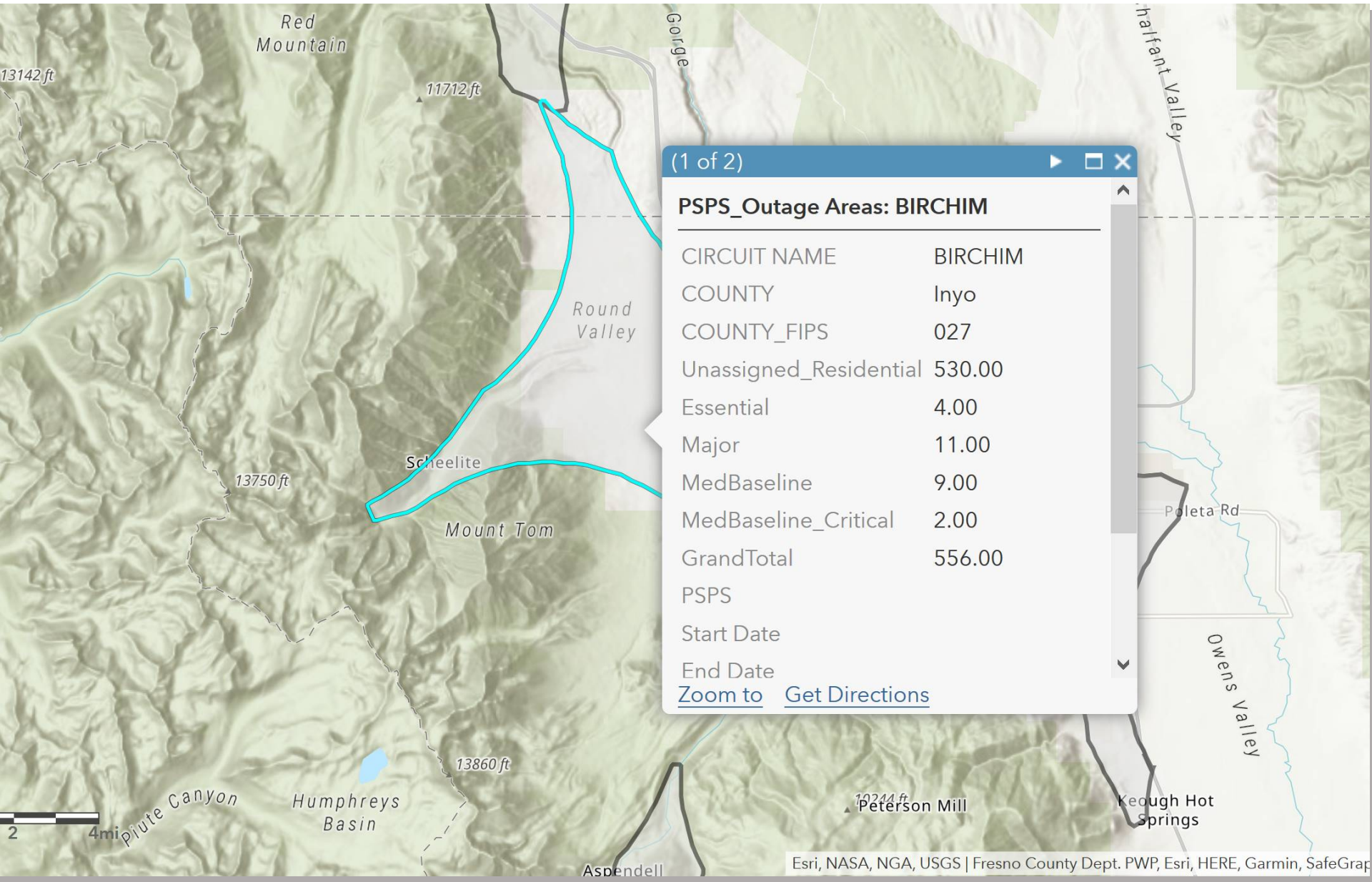


In closing, SCE has made significant progress in 2020 (through Q2) to reduce wildfire risks and mitigate PSPS

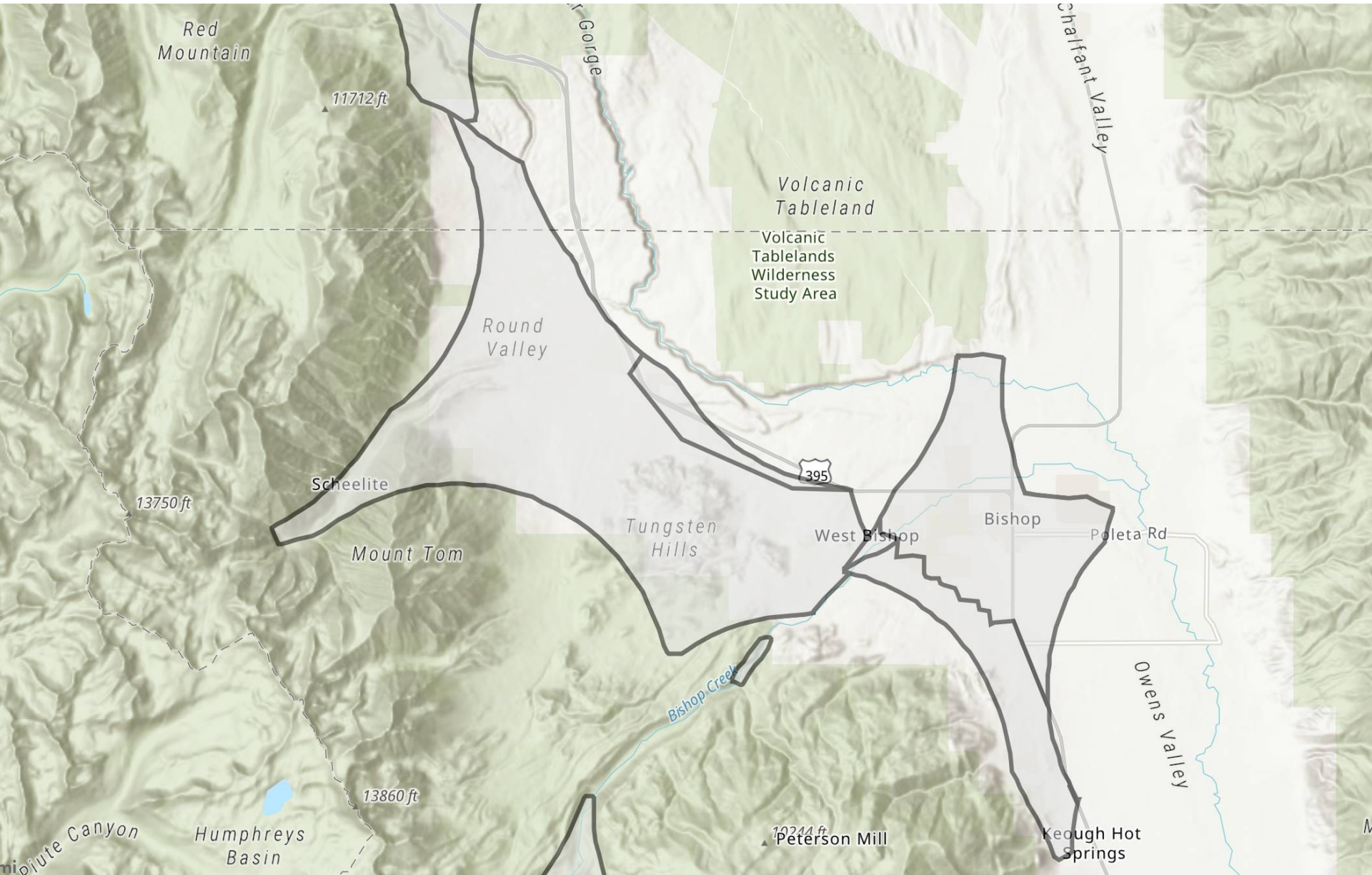
| | | | | |
|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
|  <p>Community Meetings</p> |  <p>Covered Conductor</p> |  <p>Composite Poles</p> |  <p>Enhanced Veg Mgmt</p> |  <p>Customer Resiliency</p> |
| Conducted 9 community meetings | Installed ~330 miles of covered conductor Total of over 850 circuit miles installed since 2018 | Installed ~1,870 Fire-Resistant Poles Total of over 3,000 Fire-Resistant Poles installed since 2018 | ~10,000 Hazard Trees mitigated Total of over 15,900 Hazard Trees mitigated since 2018 | Launched Critical Care Backup Battery Program |
|  <p>Install Sectionalizing Devices</p> |  <p>Branch Line Protection</p> |  <p>High Fire Risk Inspections</p> |  <p>Weather Stations</p> |  <p>Pole Brushing</p> |
| Installed and commissioned 29 additional sectionalizing devices Total of over 80 additional devices installed since 2018 | ~1,440 Current Limiting Fuse locations installed Total of over 11,400 fuse locations installed since 2018 | 100% of high-risk structures ground inspected for Distribution & Transmission in high fire risk area | Installed ~390 weather stations Total of over 850 weather stations installed since 2018 | Inspected and cleared brush around ~98,500 poles |

Appendix

Sample Map in REST



Sample Map in REST



View Impacted Areas

Enter an address, county, zip code or place to see if it is impacted.

Esri, HERE, NPS Powered by Esri

PSPS Areas **High Risk Fire Areas**

- Power Shutoff
- Under PSPS consideration
- Community Crew Vehicles
- Community Resource Centers

[Report an Outage](#)

Monitoring for PSPS from:
3/4/2020 4:00 PM
to: 3/5/2020 4:00 PM.

End date is estimated based on weather forecast

[Zoom to](#)

Power has been shut off in this area

Estimated restoration time:
3/6/2020 4:00 PM

Estimates will be updated as weather conditions improve

[Zoom to](#)

View Impacted Areas

Enter an address, county, zip code or place to see if it is impacted.

1 Pasadena Avenue, South Pasadena, CA, 91030, USA
1 Waverly Dr, Alhambra, CA, 91801, USA
1 Oak Hill Ln, South Pasadena, CA, 91030, USA
1 Pinecrest Dr, South Pasadena, CA, 91030, USA
1 Warwick Pl, South Pasadena, CA, 91030, USA
1 Short Way St, South Pasadena, CA, 91030, USA

View Impacted Areas

Enter an address, county, zip code or place to see if it is impacted.

Your address is not impacted

Location: Kmart / Sears ✕

Address: 9283 Westchester Blvd
Tomland, CA 92555

Hours: 4/13-4/17 8:00AM to 5:00PM

[Zoom to](#)

SCE Community Crew Vehicle ✕

Address: Rio Hondo Ave & Guess St, CA 92888

Hours: M-F 2:00pm to 5:00pm

[Zoom to](#)

Customer Resources During a PSPS

Community Crew Vehicles

When a Public Safety Power Shutoff is called, Community Crew Vehicle(s) will be available for customers in the affected areas. These vehicles are equipped with backup power so customers can charge their personal mobile devices and continue to receive updates about the outage. Agents are also on-site to help customers update their account information and get assistance with questions. Snacks and water are also provided. See below for location(s) and times:

View Impacted Areas

Enter an address, county, zip code or place to see if it is impacted.

Your address is not impacted

| Los Angeles County | Los Angeles County | San Bernardino County | Ventura County |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| 3458 West Chester Rd Roman, CA 92888 | Rio Hondo Ave & Guess Blvd Tomland, CA 92888 | 9765 Central St Sweetland Highland, CA 92888 | 897 Ruden St Highview, CA 92888 |
| <ul style="list-style-type: none"> ▪ 4/15-4/20 9:00AM - 3:00PM | <ul style="list-style-type: none"> ▪ 4/15 - 4/20 9:00AM to 5:00PM | <ul style="list-style-type: none"> ▪ 4/15-4/20 9:00AM to 5:00PM | <ul style="list-style-type: none"> ▪ 4/14-4/20 9:00AM to 3:00PM |

Community Resource Centers

Community Resource Center(s) will be available for customers in affected areas when a Public Safety Power Shutoff is called. These centers will allow customers to power up their personal mobile devices and, where available, to have access to Wi-Fi. Customers will also have access to water and light snacks, a sitting area, restrooms, and updated information on the proactive power shutoff. See below for location(s) and times:

| Los Angeles County | Mono County | San Bernardino County | Santa Barbara County |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Kmart / Sears 9283 Westchester Blvd Tomland, CA 92888 | Kmart / Sears 873 Candy Rd Sweetwater, CA 92888 | Kmart / Sears 79 Green Av Blue Ridge, CA 92888 | Kmart / Sears 345 Main St Santa Barbara, CA 92888 |
| <ul style="list-style-type: none"> ▪ 4/13-4/17 8:00AM to 5:00PM | <ul style="list-style-type: none"> ▪ 4/13-4/17 8:00AM to 5:00PM | <ul style="list-style-type: none"> ▪ 4/13-4/17 8:00AM to 5:00PM | <ul style="list-style-type: none"> ▪ 4/13-4/17 8:00AM to 5:00PM |



**& WILDFIRE
SAFETY**

2020 Public Safety Power Shutoff Readiness

August 10, 2020



Public Safety Power Shutoff Readiness



2019 Public Safety Power Shutoff (PSPS) Overview

2020 Fire Season Outlook

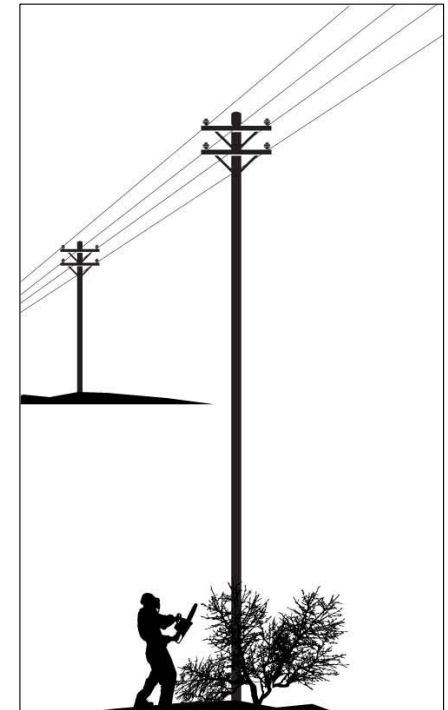
PSPS Mitigations – Potential Impact Reductions

Communications and Outreach

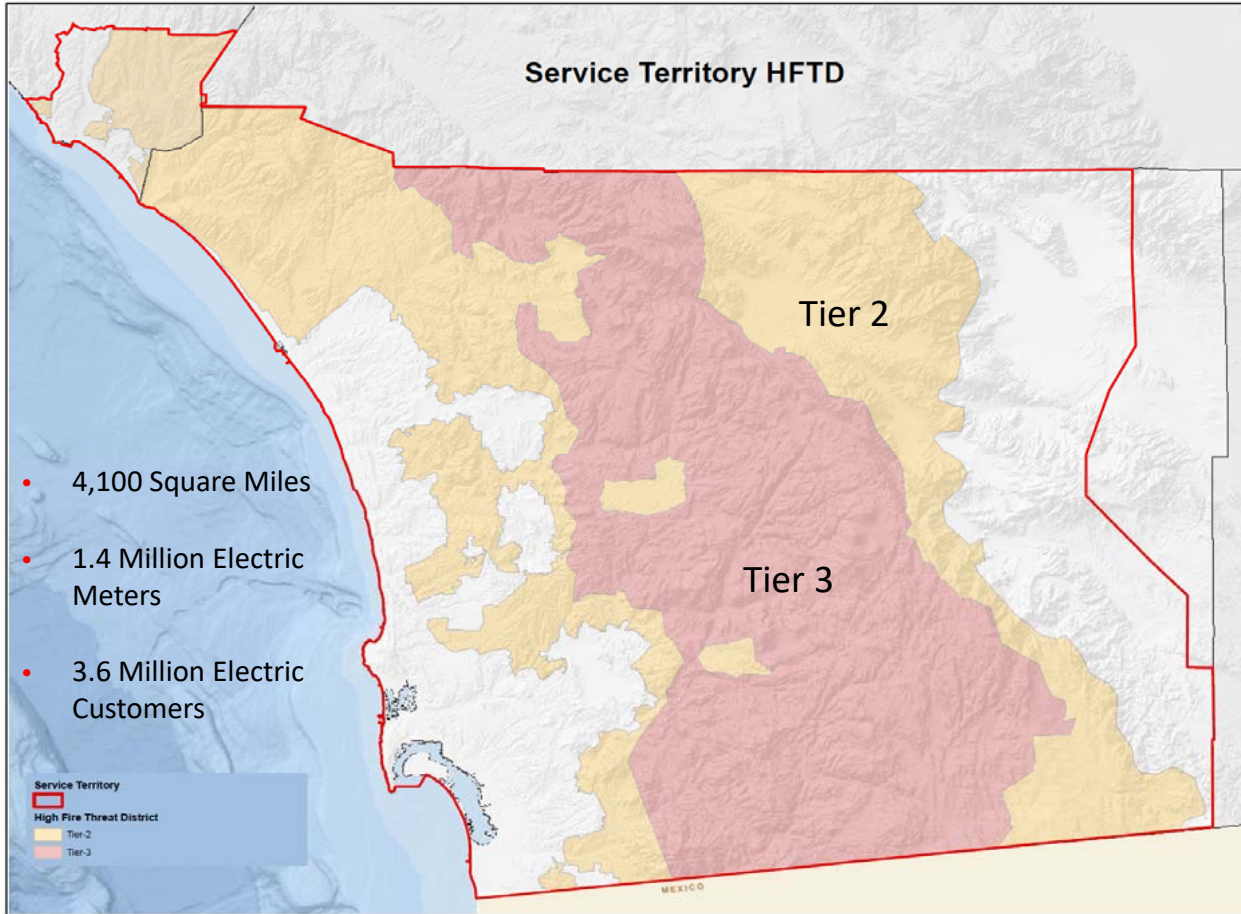
Coordination

Situational Awareness, Inspection, and Patrol Enhancements

Pandemic PSPS Preparations



Wildfire Risk in SDG&E Service Area



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- 64%** Service territory area in HFTD*
- 3,500** Overhead miles in HFTD
- 206K** Customer accounts in HFTD
- 220** Weather stations planned to support PSPS in 2020
- 61%** Service territory underground
- 53%** Inventory trees in HFTD

* HFTD – High Fire Threat District

2019 Public Safety Power Shutoff Overview



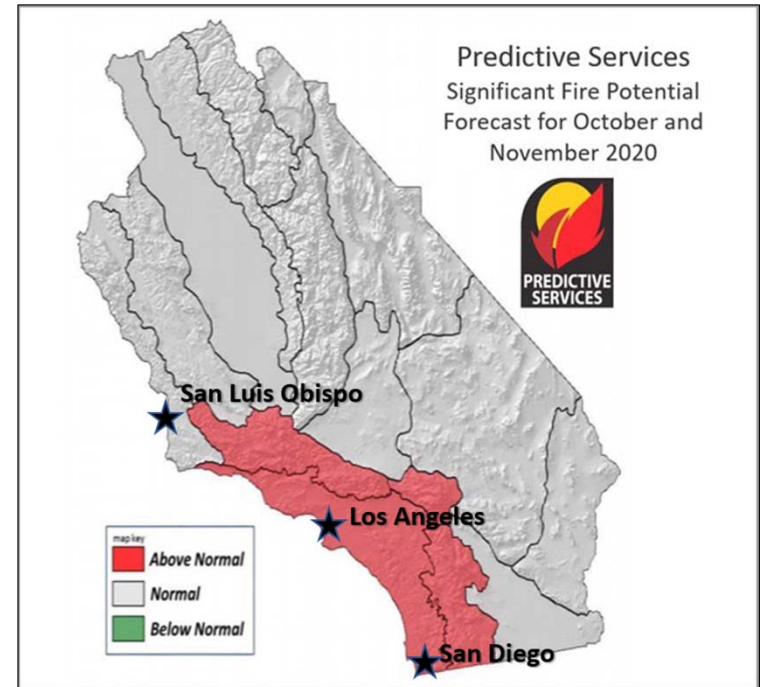
| EVENT DETAILS | OCT 10-11 | OCT 24-25 | OCT 30-31 |
|-------------------------------------------------------------------------------|-----------|-----------------|-----------------|
| METERS IMPACTED | 395 | 19,000 | 27,700 |
| CIRCUIT SEGMENTS | 4 | 62 | 84 |
| AVGERAGE METERS PER SEGMENT | 99 | 333 | 304 |
| AVERAGE OUTAGE DURATION | 20 HRS | 24 HRS | 24 HRS |
| LONGEST OUTAGE DURATION | 23 HRS | 57 HRS | 33 HRS |
| PEAK WINDS MPH | 47 | 78 | 68 |
| COMMUNITY RESOURCE CENTERS (CRCs) & COMMUNITY INFORMATION CENTERS (CICs) OPEN | 2 CRCs | 7 CRCs & 2 CICs | 7 CRCs & 2 CICs |
| DAMAGE/ HAZARDS | 0 | 5 | 10 |

2020 Fire Season Outlook



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- Southern California is not currently under drought conditions, though Northern California is experiencing significant drought.
- Elevated fire potential will continue through the summer months.
- Periods of extreme fire potential likely during Santa Ana Wind conditions late September through November.
- Official fire agency forecasts predict normal "Significant Fire Potential" through September.
- Latest forecast indicate above normal "Significant Fire Potential" events October and November.

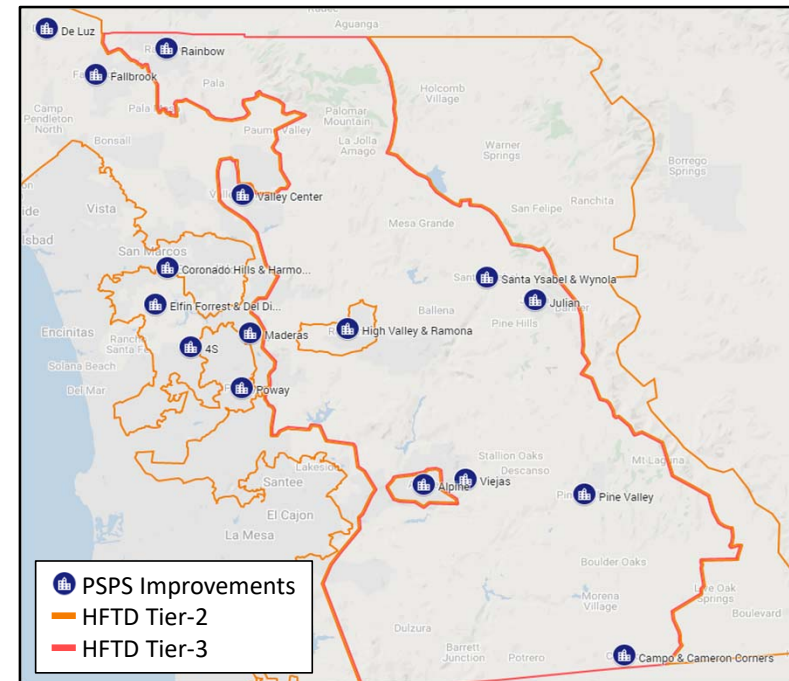
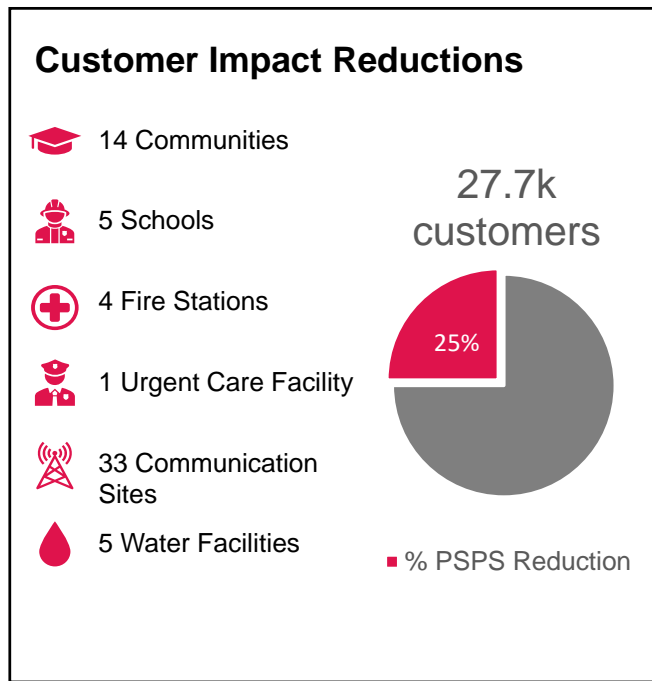


Wildfire Risk Mitigation | PSPS Enhancements



~25-30% reduction in customers impacted by PSPS as a result of additional enhancements*

| Solutions |
|-----------------------------------------------------------|
| Sectionalizing devices |
| Weather stations |
| Undergrounding |
| Grid reconfiguration |
| Microgrids |
| Local generation |
| 7,000/ 12,425** PSPS customer impacts mitigated |





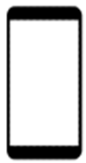







* Compared to 2019 PSPS events

** Some mitigations have PSPS reductions that are weather dependent

Public Communication and Outreach



Multi-channel engagement strategy to educate and inform customers and general public

| | | | | |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
|  Regional Partners |  Outbound Dialer |  PSPS Mobile App |  SDG&E Website |  Community Events |
|  Social Media |  Broadcast Media |  Digital Signage |  Notifications |  Med. Baseline Outreach |

Supporting the Access & Functional Needs Population



Support the needs of AFN customers by building strong relationships with strategic community partners, sharing situational awareness information and facilitating connections

Approach

- 1 Facilitate discussions & feedback solicitation from AFN expert Advisory Councils and Working Groups
- 2 Expand partnerships with 2-1-1 San Diego and Orange County to assist in service delivery needed by AFN populations
- 3 Broaden network of ~200 Community Based Organizations to identify the needs of AFN customers

Examples of Partner Services



Readiness Support



Amplified Notifications



Assisted Transportation



Food Security



Resiliency Items



Welfare Checks

PSPS Mobile App and Website



Digital channel enhancements, including a new mobile app and upgraded website

PSPS Mobile App

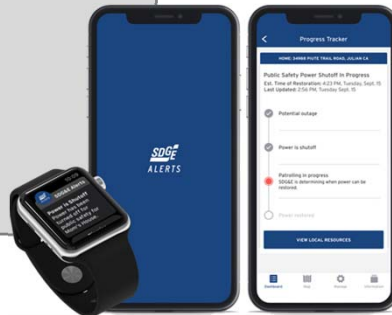
Real-time status updates via push notifications for saved locations.

Location-based status tracker, which communicates PSPS status and estimated restoration times.

At-risk area map views – visibility of available Community Resource Centers.

View address status without having to sign up for push notifications.

Accessible to all, including non-account holders.



PSPS Website

New dashboard layout – user friendly information.

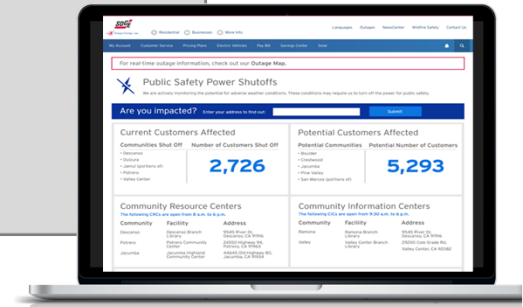
Responsive design and coding for page optimization and built with low-bandwidth customers in mind.

Address look-up tool.

Dynamic list of communities impacted and potential shutoffs, including real-time customer counts.

Interactive GIS-based map.

Community Resource Center information.



PSPS Maps for Public and Public Safety Partners



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Public Maps

| Current Customers Affected | | Potential Customers Affected | |
|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Communities Shut Off | Number of Customers Shut Off | Potential Communities | Potential Number of Customers |
| <ul style="list-style-type: none"> Descanso Dutbury Jacinto (portions of) Potrero Valley Center | 2,726 | <ul style="list-style-type: none"> Boulder Crestwood Jacumba Pine Valley San Marcos (portions of) | 5,293 |

| Community Resource Centers | | | Community Information Centers | | |
|----------------------------|--------------------------|-------------------------------------|-------------------------------|------------------------------|----------------------------------------------|
| Community | Facility | Address | Community | Facility | Address |
| Descanso | Descanso Branch Library | 9545 River Dr, Descanso, CA 91916 | Ramona | Ramona Branch Library | 9545 River Dr, Descanso, CA 91916 |
| Potrero | Potrero Community Center | 24550 Highway 94, Potrero, CA 91963 | Valley | Valley Center Branch Library | 29000 Cole Grade Rd, Valley Center, CA 92082 |
| Jacum | | | | | |

Customers access maps on SDGE.com and the mobile app

Public Safety Partner Maps

Public safety partners access maps through a password-protected website

Address look-up tool allows customers to see if they are impacted by PSPS

Google-based map, responsive to any device

Hosted on Cloud to ensure stability and accessibility

Programmed to ensure faster page load for low-bandwidth customers

Website and mobile app use same map and data technology to ensure consistency

Uses maps and technology from ArcGIS Online (AGOL)

Public safety partners can go to map and select different layers, including:

- Potential at-risk communities, 48-72 hours in advance
- Planned at-risk communities (also 48-72 hours in advance)
- Current PSPS outages

Hosted on Cloud to ensure stability and accessibility

Wildfire Resilience Webinars and Safety Fairs



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- Hosted four Wildfire Resilience Webinars
- SDG&E subject matter experts from Vegetation Management, Meteorology, Emergency Management and Wildfire Resilience & Operations
- Drive through Wildfire Safety Fairs transitioned to fully contactless delivery approach
- External partners included
 - CALFIRE
 - American Red Cross
 - 211 San Diego
 - County Animal Services



Enhanced Public Safety Partner Outreach



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Local Governments and First Responders

- Initial meetings with San Diego and Orange Counties' Emergency Manager groups (*January 2020*)
- Briefings held with all Fire Agencies (*Monthly*)
- Law enforcement outreach (*June 2020*)
- Additional meetings to discuss a combined PSPS/pandemic response (*June 2020*)

Critical Infrastructure

- Direct communication with newly identified COVID-19 medical facilities (*Ongoing*)
- Meetings with Association of California Water Agencies (pre-COVID-19) PSPS best practices discussion (*Quarterly*)
- Outreach to critical business customers to confirm contact information and back-up generation (*Ongoing*)

Public Officials and Tribal Partners

- Tribal emergency manager meeting (*June 2020*)
- Targeting PSPS outreach and briefings to local including governments, including tribal (*June 2020*)

Planning Exercises

- Workshops with public safety partners (*July/ August 2020*)
- Training Exercise, including CalOES/CPUC/County OES/CAL FIRE (*September 2020*)

Customer Resiliency Enhancement – Generators



| Generator Grant Program (GPP) | Mobile Home Park Project (MHP) | Generator Assistance Program (GAP) | Whole House Generator Project (WHP) |
|---------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------|
| Medical Baseline Customers 1,250 Grants | Four MHPs located in HFTD | HFTD Tier 3 and Low Income Rebate Program: 1,000 Rebates | Risk Spend Efficiency Model 300 Grants |
| Delivered 566 Portable Battery Units (as of July 24, 2020) | Finalizing contract with third party administrator | 238 (27 CARE) rebates downloaded of 9,000 customers contacted | Finalizing contract with third party administrator |
| Completion by September 2020 | Two completed by October 2020 Two completed by year-end | Rebate Coupons expire December 31, 2020 | Initiate construction by September 2020 |
| Goal Zero Yeti 3000 + multiple re- charging sources | Generac PWRcell | Duromax 5500 + handful of other widely available units | Generac 7173 |



Customer Resiliency Enhancement – Microgrids in Progress



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| Ramona Air Attack Base | Cameron Corners | Butterfield/Agua Caliente | Shelter Valley |
|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| CAL FIRE Air Support U.S. Forest Service Air Support Fire-retardant mixing stations | CAL FIRE Station, a school, and telecom switching center (east San Diego County) | Desert community (far east San Diego County) | Desert community San Diego Fire Station Community Center (far east San Diego County) |
| Portable generator in place | Portable fossil fuel generator will serve customers this fire season | Portable fossil fuel generator will serve customers this fire season | Portable fossil fuel generator will serve customers this fire season |
| Renewable source completion year-end 2020 | Renewable source completion by July 2021 | Renewable source completion by December 2021 | Renewable source completion by December 2021 |
| Energy Storage | Solar + Energy Storage | Solar + Energy Storage | Solar + Energy Storage |



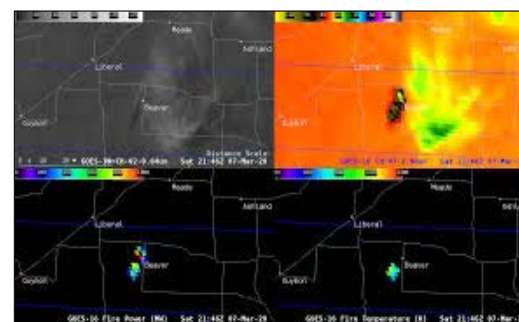
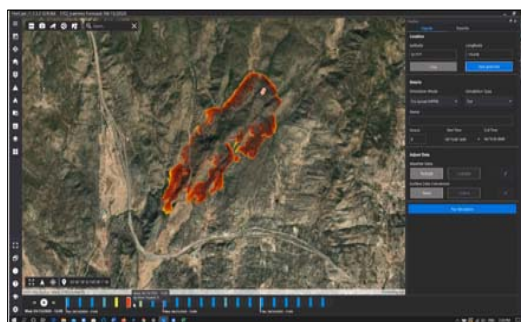
Broader Situational Awareness – Fire Safe 3.0



30 Additional Weather Stations –
enabling 30-second data reporting

Improved Wildfire Modeling – new fuels,
vegetation and fire growth algorithms

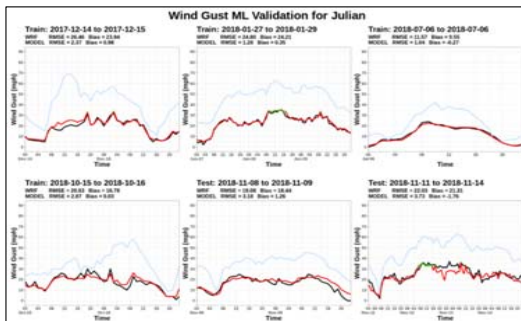
Satellite Wildfire Detection – fire alert
notifications in 20-30 seconds



AI-Based Forecasting System –
improving alerting capability

New Academic Partnerships – moving
fire science forward

Additional Cameras – increasing
real-time situational awareness



Aerial Inspection, Patrol and Firefighting Enhancements



- Using drones for detailed inspections and aerial patrols
- Supporting PSPS
 - H145 Airbus dual engine helicopter
 - H135 Airbus dual engine helicopter (new in 2020)
 - Call-When-Needed (CWN) helicopter available within 24 hours
 - Additional CWN through Helistream- sole patrol flight providers due to experience on SDG&E system
- Firefighting Helicopters
 - Erickson Air Crane
 - UH-60 Blackhawk



PSPS Readiness: COVID-19 Enhanced Measures



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- Additional pandemic PSPS planning and preparedness
 - Internal continuity assessment for safe response execution
 - Response processes include pandemic conditions
- COVID-19 specific exercises stress test a remote PSPS response
 - Emergency Operations Center (EOC) virtual response
 - Multiple event scenarios - active wildfire with PSPS and pandemic
 - Include local public safety partners
- Augmented operational response ensures employee and community safety
 - Drive-thru Community Resource Centers
 - Additional resources provided
 - Solar powered phone chargers
 - 12v power inverters



Questions

