

2021 San Diego Gas & Electric Company Public Safety Power Shutoffs (PSPS) Preparedness Staff Briefing #1

June 11, 2021



California Public
Utilities Commission

Agenda

1:00 – 1:10 p.m. Introduction

Shelby Chase, California Public Utilities Commission

1:10 – 2:50 p.m. San Diego Gas & Electric Company (SDG&E) Presentation

Jonathan Woldemariam, Director – Wildfire Mitigation and Vegetation Management

Brian D'Agostino, Director – Fire Science & Climate Adaptation

Augie Ghio, Director – Emergency Management

Alex Kim, Director – Customer Programs

2:50 – 3:00 p.m. Closing Remarks

Housekeeping

- Attendees are muted.
- Briefing is being recorded.
- 1st briefing – presentations only.
- 2nd briefing – follow up questions and topics.
- Survey form – please return after briefing.

Objectives



Actions to prepare for the 2021 fire/PSPS season



Lessons learned from 2020



Areas of concern



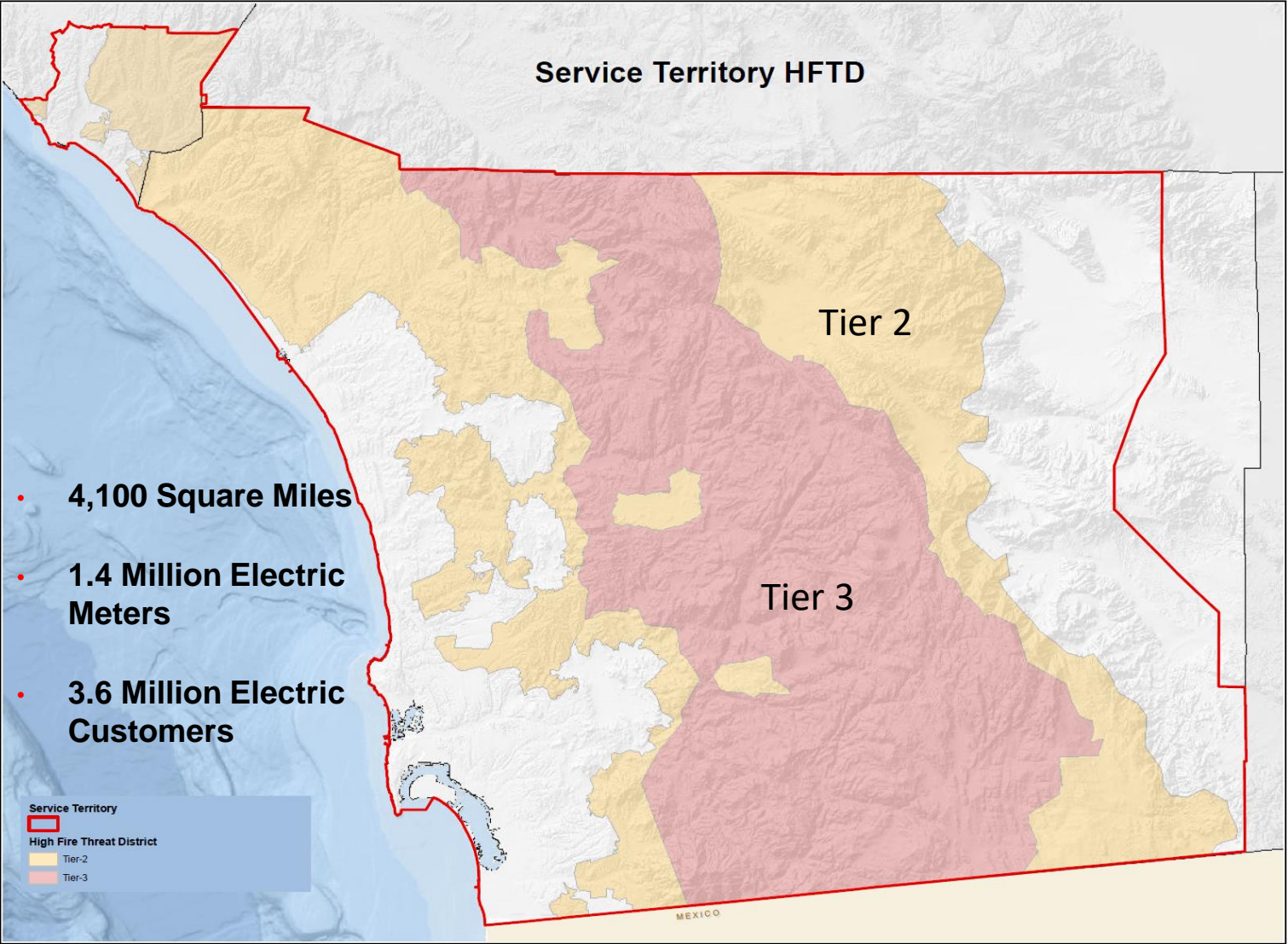
**& WILDFIRE
SAFETY**

2021 Wildfire and PSPS Preparations

CPUC Briefing #1

June 11, 2021

Wildfire Risk in SDG&E Service Area

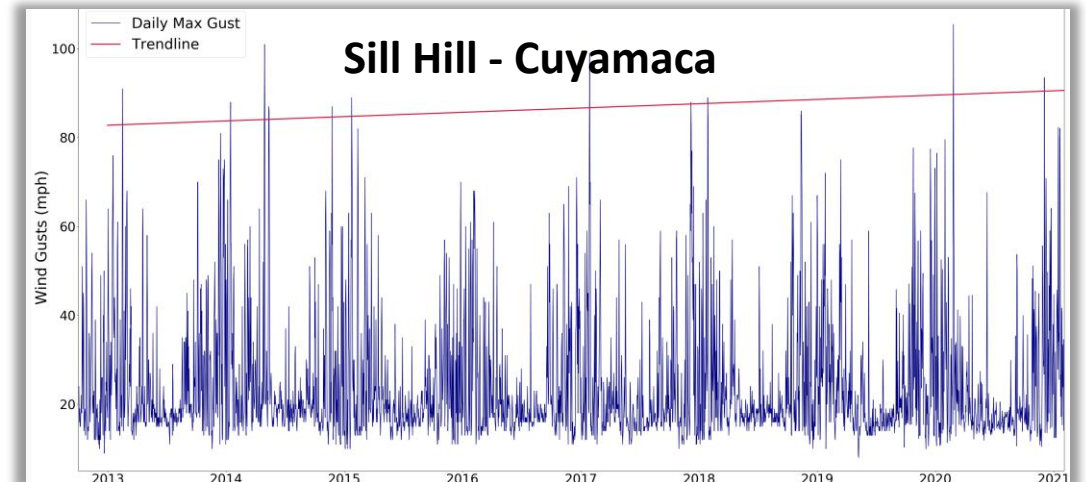
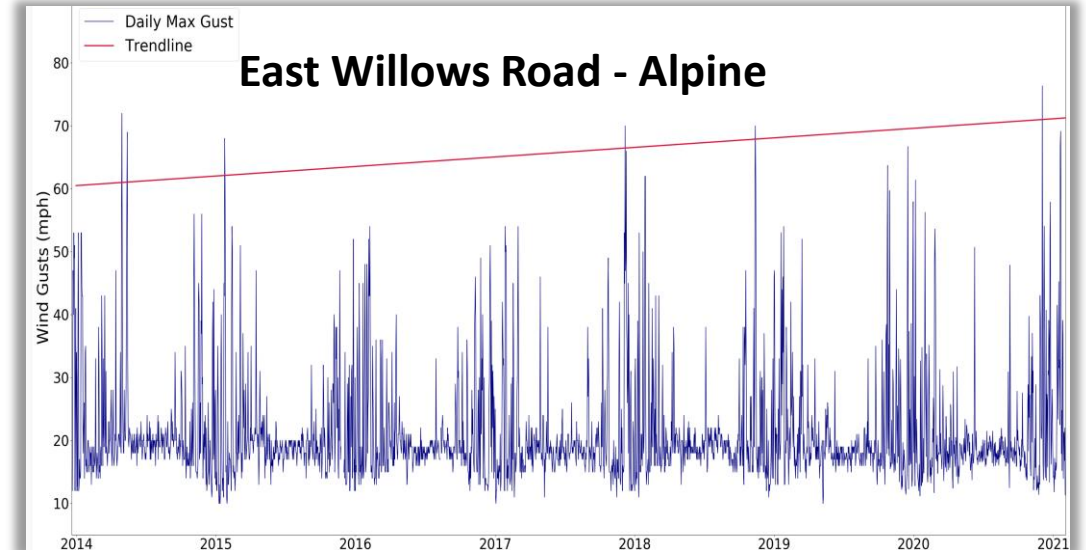
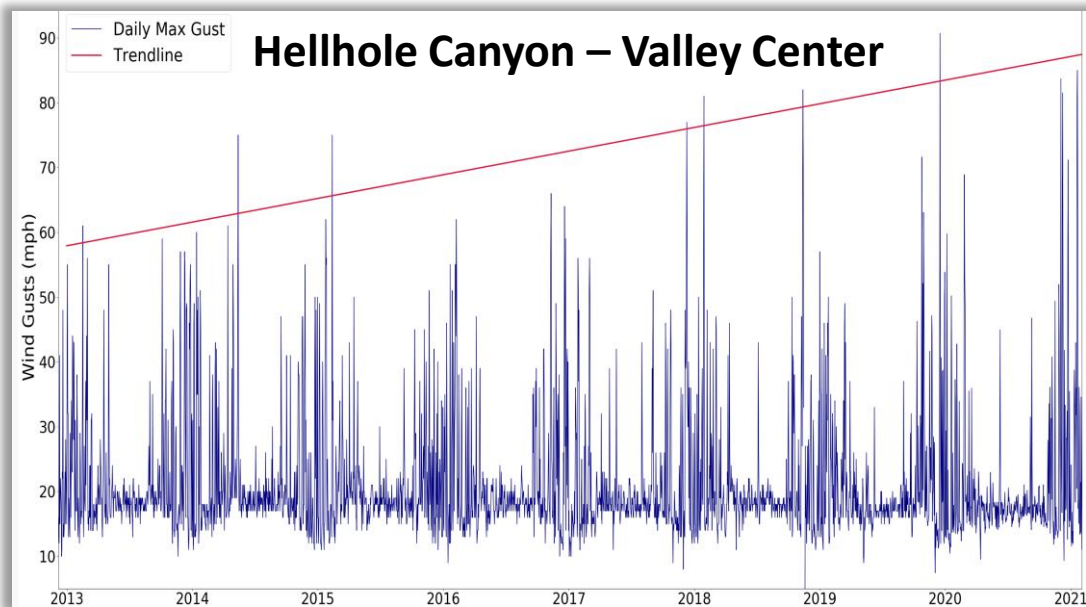


64%	Service territory area in HFTD*
3,500	Overhead miles in HFTD
206K	Customer accounts in HFTD
220	Weather stations planned to support PSPS
61%	Service territory underground
53%	Inventory trees in HFTD

* HFTD – High Fire Threat District

Wind Data Over Time

2013–2021 weather data collected from the SDG&E weather network indicates an **increase in occurrences** of high wind events over the last several years.



Late Season RFWs & PSPS

In 2020, there were four late-season RFW/PSPS events; and a total of 11 RFW/PSPS events for the season

Date	Thu 11/26	Fri 11/27	Sat 11/28	Sun 11/29	Mon 11/30	Tue 12/1	Wed 12/2	Thu 12/3	Fri 12/4	Sat 12/5	Sun 12/6	Mon 12/7	Tue 12/8	Wed 12/9	No RFWs 12/10 through 12/22	Wed 12/23	Thu 12/24
RFW																	
FPI																	

Red Flag Warning 11/26–11/28

- Top 20 Average Gusts: 48 mph
- Wind Speed Records: 0
- Peak Gust: **56 mph**
- Stations Reaching 95%: 75
- Station Reaching 99%: 8
- PSPS Customers Notified: 2,739
- PSPS Customers affected: **0**
- CRCs Opened: 0

Red Flag Warning High Wind Warning 12/2–12/4

- Top 20 Average Gusts: 71 mph
- Wind Speed Records: 43
- Peak Gust: **94 mph**
- Stations Reaching 95%: 170
- **Station Reaching 99%: 126**
- PSPS Customers Notified: 95,000
- PSPS Customers affected: **73,000**
- CRCs Opened: 10 (2,667 cars)

Red Flag Warning High Wind Warning 12/7–12/8

- Top 20 Average Gusts: 59 mph
- Wind Speed Records: 2
- Peak Gust: **82 mph**
- Stations Reaching 95%: 145
- Station Reaching 99%: 67
- PSPS Customers Notified: 50,483
- PSPS Customers affected: **15,300**
- CRCs Opened: 6 (415 cars)

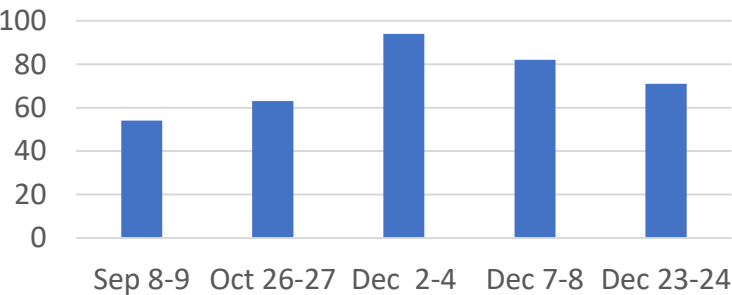
Red Flag Warning 12/23–12/24

- Top 20 Average Gusts: 57 mph
- Wind Speed Records: 2
- Peak Gust: **71 mph**
- Stations Reaching 95%: 152
- Station Reaching 99%: 66
- PSPS Customers Notified: 30,394
- PSPS Customers affected: **6,797**
- CRCs Opened: 4 (59 cars)

2020 PSPS Event Summary

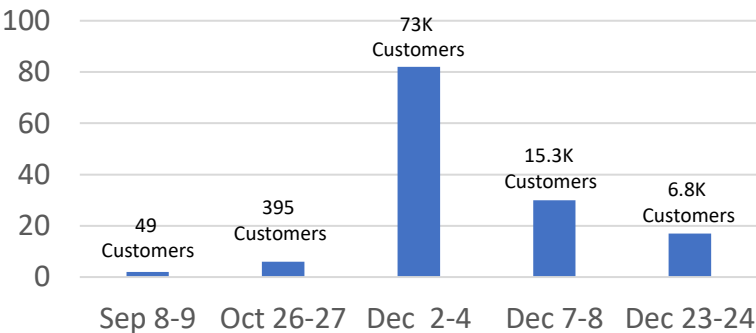


Peak Winds



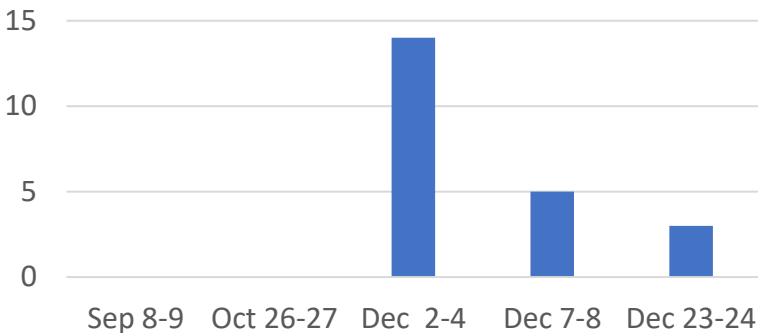
■ Peak Winds (MPH)

Circuit Segments De-Energized



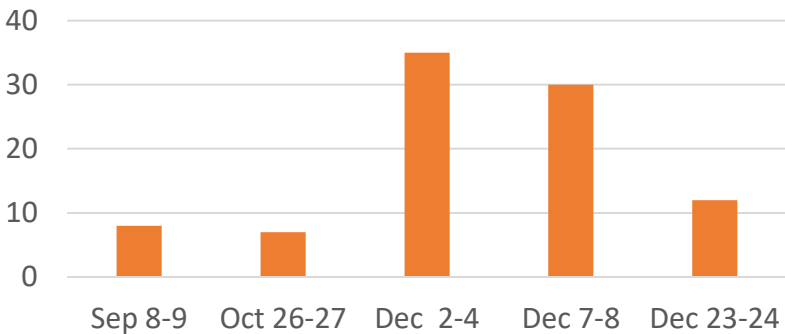
■ Number of Circuit Segments De-Energized

Damage/Hazard Found



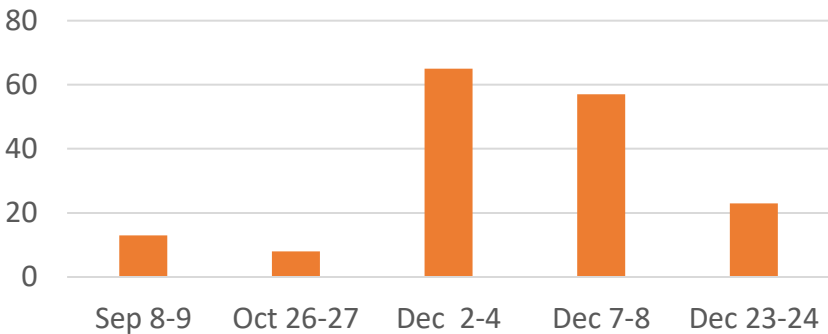
■ Damage/Hazard Found

Average Outage Duration



■ Hours

Longest Outage Duration



■ Hours

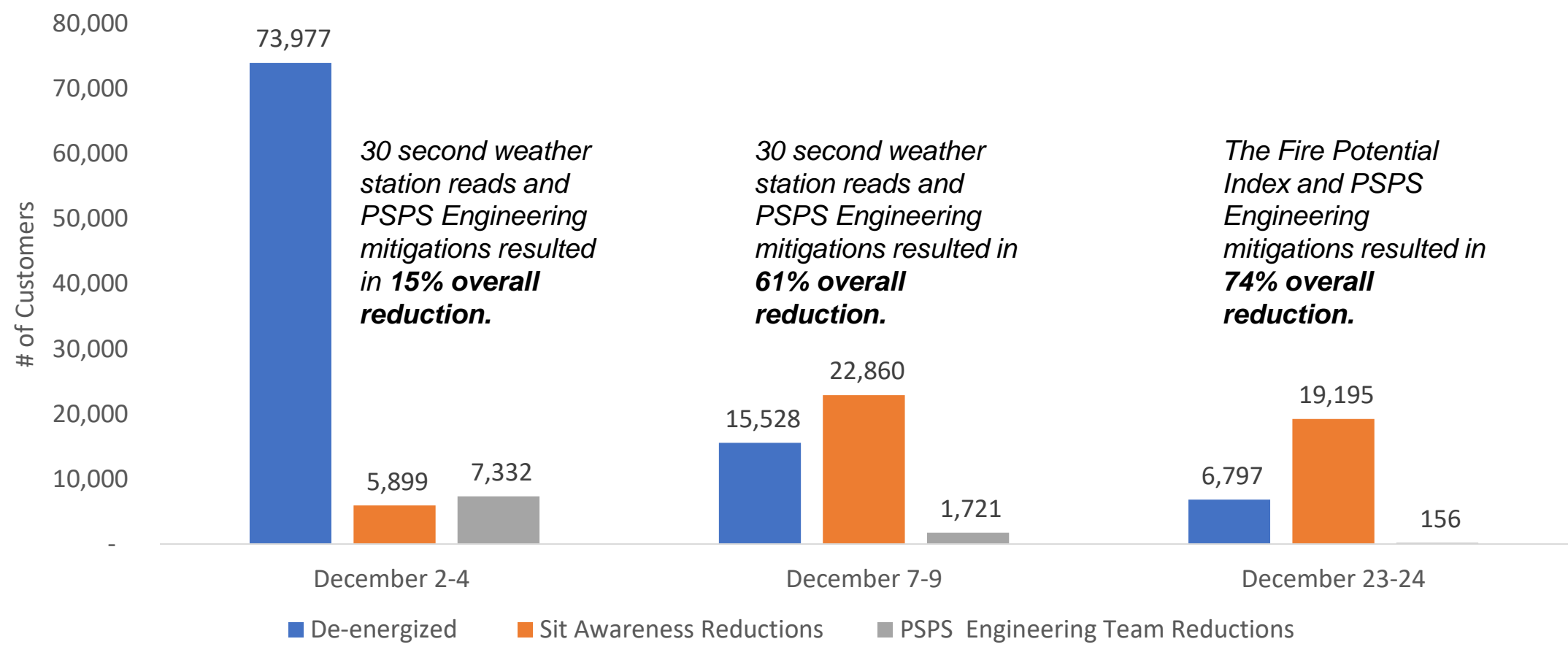
2020 PSPS Customer Impact Reduction: Weather Technology & Load Transfer/Switching

- **New weather technology**
 - 30 new weather stations
 - 30-second weather data available at more than 210 weather stations
 - New PSPS dashboard and geospatial tool to monitor weather conditions
- **Fire Potential Index (FPI)**
 - Inform operational decisions by areas in our service territory
 - Reduce PSPS impacts
- **New load transfer/localized switching plans**
 - Seven circuits
 - Four communities



2020 PSPS Customer Impact Reduction

Estimated PSPS Reductions in 2020 Events

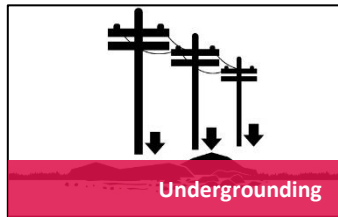


Wildfire Risk Reduction & PSPS Impact Mitigation



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Total

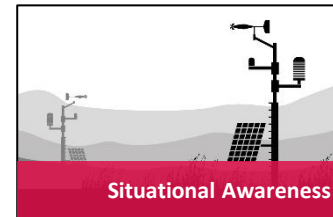
100+ cameras
220 weather stations



2021
Completed/Target
10.28/25
miles installed

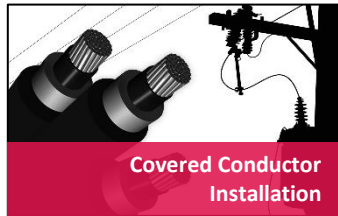
41%
complete

Completed
since 2019
37.8
miles installed



2021
Completed/Target
0 / 17
cameras installed

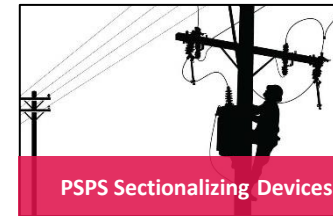
2021
Completed/Target
7/25
Weather stations
upgraded



2021
Completed/Target
0/20
miles installed

On Track

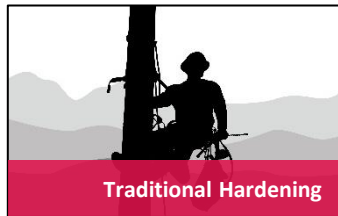
Completed
since 2020
1.9
miles installed



2021 Completed
5 / 10
devices installed

50 %
complete

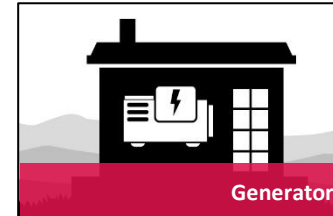
Completed
since 2019
28
sectionalizing devices
installed



2021
Completed/Target
29.2 / 117
miles installed

25%
complete

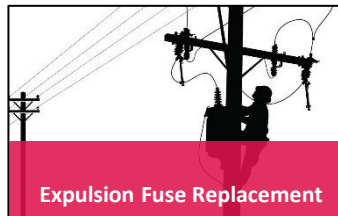
Completed
since 2019
390+
miles installed



2021
Completed/Target
187 / 3,663
Generators provided
to eligible customers

On Track

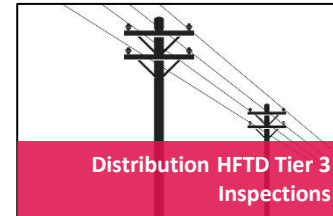
Completed
since 2020
2,683
Generators provided
to eligible customers



2021
Completed/Target
406 / 3970
Cal Fire approved
fuses installed

10%
complete

Completed
since 2019
6,075
Cal Fire approved
fuses installed



2021
Completed/Target
10,841 / 10,815
inspections

100 %
complete

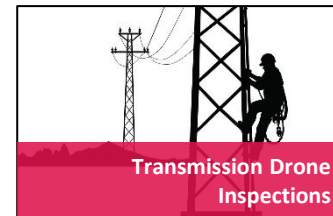
Completed
since 2020
22,315
inspections



2021
Completed/Target
4865 / 17,000
Trees trimmed to
enhanced clearances

29%
complete

Completed
since 2019
28,107
Trees trimmed to
enhanced clearances






2021
Completed/Target
223 / 2,715
inspections

8%
complete

Completed
since 2020
1,677
inspections

PSPS Reduction Over Time

Risk-informed grid hardening measures support long-term vision of reducing PSPS impacts

Mitigation	How it Reduces PSPS	Outcomes	
Covered Conductor	Allows utility to raise threshold ¹ for de-energization		Scope of PSPS
Undergrounding	Reduces necessity of shut-off		
PSPS Sectionalizing	Enables more targeted de-energization		
Microgrids	Keeps communities energized during shut-off		Frequency of PSPS
Fixed Backup Power	Keeps customers energized during shut-off		
Resiliency Grant Programs	Provides backup solutions to keep critical appliances/equipment energized during shut-off		Duration of PSPS
Resiliency Assistance Programs	Provides instant rebates to customers to purchase backup generators to reduce their PSPS impacts		

1) Adjustments to de-energization thresholds based on new mitigations such as covered conductor are still under development

2020 PSPS Customer Impact Reduction




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Generator Programs

- Generator Grant Program – 1,334 units
- Generator Assistance Program – 2,284 customer rebates
- Whole Facility Generators – 80 customers



Microgrid – 5 Sites

- Ramona Air Attack Base, Butterfield Ranch, Shelter Valley, Cameron Corners, Julian Town Center – 348 customers
- Renewable options beginning in 2021



Weather Station

- 30 new weather stations
- 30-second reads at 210 weather stations
- New geospatial tools and PSPS dashboard



Sectionalizing Device

- 23 new devices – 5,773 customers
- Helped divide circuits into smaller segments
- Reduces customers impacts from PSPS



Load Transfer - 7 Circuits

- Four communities – 156 customers
- Rincon Reservation, Viejas Reservation, Del Mar, San Clemente

2021 PSPS Mitigation Measures and Impact Reduction

WMP Program	2021 Number of Locations	2021 Customer PSPS Impact Reduction
PSPS Sectionalizing	10	5,000
Fixed Backup Power	413	413
Resiliency Grant Programs	~	2,000
Resiliency Assistance Programs	~	1,250
Microgrids	6	578
Undergrounding	9	1,127
Total		11,000*

** Weather events will dictate the actual number of customer impact reductions*

Microgrids

Implementing resiliency projects to keep customers and critical facilities energized

Ramona Air Attack Base	Cameron Corners	Butterfield/Agua Caliente	Shelter Valley	South Campo	Sherilton Valley
CAL FIRE Air Support U.S. Forest Service Air Support Fire-retardant mixing stations	CAL FIRE Station, and 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)	Feeding America distribution center, San Diego County Sheriff, Community Center, USPS (east San Diego County)	Vulnerable Community located in HFTD Tier 3 (east San Diego County)
Energy Storage	Solar + Energy Storage	Solar + Energy Storage	Solar + Energy Storage	Design in Progress	Design in Progress
July 2021	July 2021	December 2021	December 2021	Q1 2023	Q1 2023



Generators

The generator programs are a valued resource with customers

Generator Grant Program (GGP) + AFN	Mobile Home Park Project (MHP)	Generator Assistance Program (GAP)	Fixed Backup Power (FBP)
Medical Baseline Customers + AFN Customers 2,000 Grants	MHPs located in HFTD (Stoneridge at Warner Springs & Pine Valley Trailer Park + 2 TBD sites)	HFTD 2/3, low income Rebate program: 1,250 Rebates	Grid hardening alternative targeting most PSPS prone customers 413 Grants
No direct cost to customers	No direct cost to customers	\$300 Standard rebate \$450 CARE eligible rebate	No initial direct cost to customers
Completion between Sept - Oct	Complete before end of 2021	Rebate Coupons Expire 12/31/2021	Construction complete by Q4 2021
Goal Zero Yeti 3000 + multiple re-charging sources	Generac PWRcell	Portable generators & batteries (available online and in store)	Generac 7173



PSPS Decision-Making Criteria and Modeling



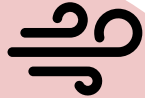
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Safety



Fire Conditions

- Red Flag Warning (RFW)
- Fire Potential Index (FPI)
- Santa Ana Wildfire Threat Index (SAWTI)



Weather Conditions

- Temperature
- Humidity
- Wind gusts



Field Observations

- Flying debris
- Tree damage
- Impacts to powerlines

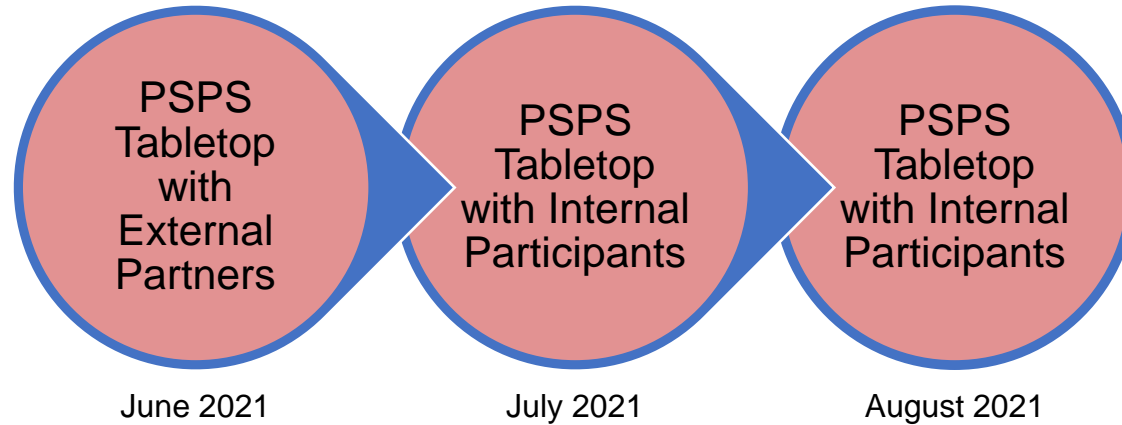


External Considerations

- Wildfire activity in the region
- Availability of firefighting resources
- Reports from emergency responders

SDGE PSPS Dashboard														
DeEnergized Areas														
Critical Facility Details														
30 Second Read														
PSPS Guide														
EOC Web Resources														
Admin														
Anemometer	Select	Device	Gust	Alert Speed	Gust - Alert Speed	95/99 Per	VRI	Forecast	FPI	District	Sub	Projected Meters	Projected MBL	Community
Sill Hill	<input checked="" type="checkbox"/>	79-799R*	50	42	-8	36/44	H	45	15	ME	WR	638	15	Descanso
Sill Hill	<input checked="" type="checkbox"/>	626	50	42	-8	36/44		45	15	ME	WR			Descanso
Buckman Springs	<input checked="" type="checkbox"/>	441-25R	45	42	-3	36/44	H	45	15	ME	GC	120	6	Campo
Buckman Springs	<input checked="" type="checkbox"/>	629	43	42	-1	36/44		45	15	ME	GC			Campo
Harrison Park	<input type="checkbox"/>	227-7R*	40	42	+2	37/44	M	45	15	RA	ST	471	2	Julian
Round Potrero	<input type="checkbox"/>	157-75R	36	40	+4	34/42	M	41	14	ME	BAR	319	5	Portrero
Crestwood	<input checked="" type="checkbox"/>	445-23R*	33	40	+7	34/42	L	41	15	ME	BUE	1365	68	Boulevard
Crestwood	<input type="checkbox"/>	1215-12R	31	40	+9	34/42	L	41	15	ME	BUE	219	7	Boulevard

2021 PSPS Exercises



Exercise Objectives	Core Capability
Improve coordination between SDG&E and local and state public safety partner agencies.	Operational Coordination
Increase understanding on communication and customer support expectations between SDG&E and public safety partners.	Intelligence and information sharing
Determine instances where SDG&E and local public safety partners can collaborate.	Communications / Notifications
	Operational Coordination

In addition to the formal tabletop exercises, SDG&E will test specific systems between June 1 and September 1 to include:

- Customer Notification
- Public Safety Partner Notification
- Public Safety Partner Secure Portal Training/Exercise
- Patrolling/Inspection

Following each exercise, a comprehensive After-Action Review process is completed, and an improvement plan is developed

Preparedness Coordination: Critical Facilities and Infrastructure

Annual outreach campaign to critical facilities to assess resiliency plans



Regular touchpoints with account executive



Multiple Points of Contact



PSPS Events

Two-way communication with Account Executive during events



Annual webinars



Method of Notification

Email, Call, Text



EOC

Business Services
EOC Representative



Annual outreach campaign



Assessing Resiliency Plans



Post PSPS Feedback

Preparedness Coordination: Local, Tribal, and County Emergency Response



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Tabletop Exercises

6/28: tabletop exercise with external partners
July & August: internal tabletop exercises



Virtual EOC Tours

Scheduled for June and July for all external stakeholders



Joint Planning

Working with County OES, Cal OES, and CAL FIRE.
Meetings with Emergency Managers



Government Briefings

Ongoing on WMP, PSPS and pandemic preparation



Portal

Secure web portal for Public Safety Partners and jurisdictions for convenient communication



PSPS Webinars and Community Fairs

Webinars completed in May and June with Public Safety and Community Partners, and in-person community fairs scheduled for August



2021 Outlook

Public Safety Partner Portal – Critical Resources



One Source

Streamlined,
consistent data
and messages



Resources

Social media kit,
community flyer,
talking points



Secure

GIS information
requires double
authentication



24/7 contacts

Direct links to call
Liaison and Emergency
Management



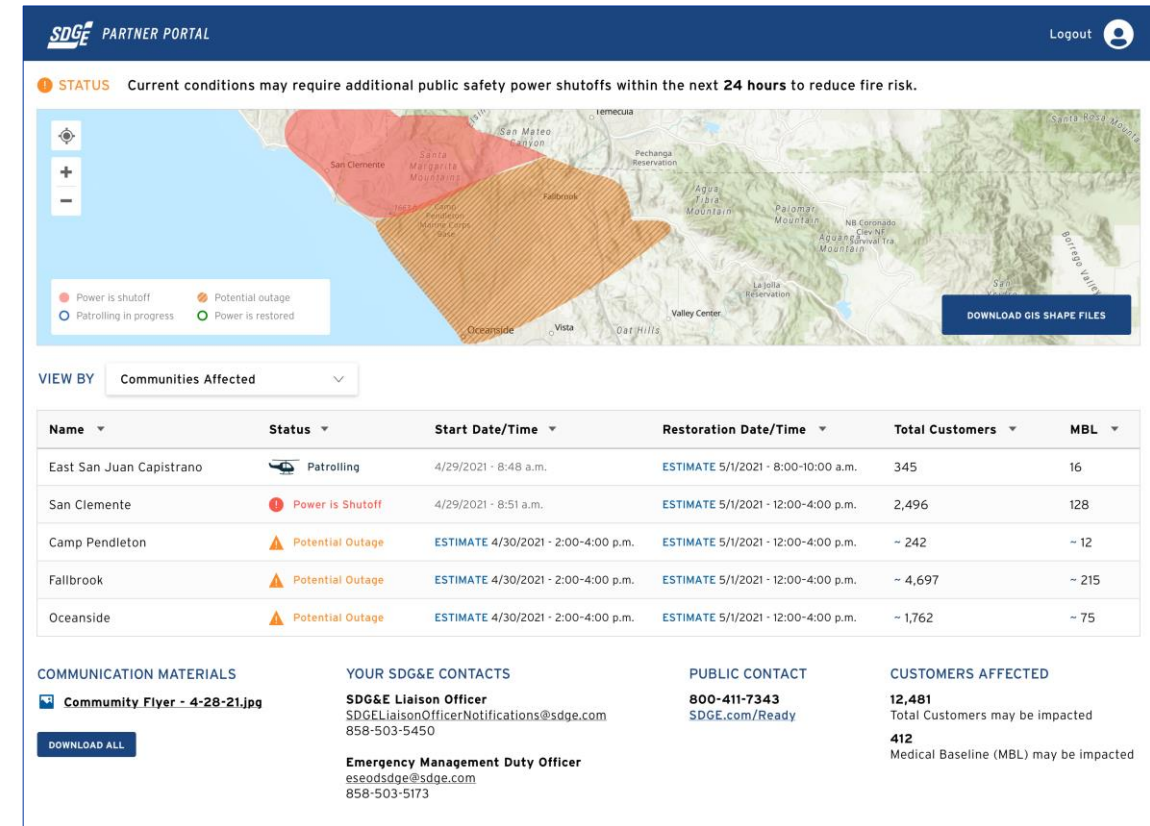
Reporting

Reporting and
audit trail made
easy



Partner Input

Informed by Public
Safety Partner
feedback



SDGE PARTNER PORTAL Logout

STATUS Current conditions may require additional public safety power shutoffs within the next 24 hours to reduce fire risk.

Legend: Power is shutoff (Red dot), Potential outage (Orange triangle), Patrolling in progress (Blue circle), Power is restored (Green circle).

VIEW BY: Communities Affected

Name	Status	Start Date/Time	Restoration Date/Time	Total Customers	MBL
East San Juan Capistrano	Patrolling	4/29/2021 - 8:48 a.m.	ESTIMATE 5/1/2021 - 8:00-10:00 a.m.	345	16
San Clemente	Power is Shutoff	4/29/2021 - 8:51 a.m.	ESTIMATE 5/1/2021 - 12:00-4:00 p.m.	2,496	128
Camp Pendleton	Potential Outage	ESTIMATE 4/30/2021 - 2:00-4:00 p.m.	ESTIMATE 5/1/2021 - 12:00-4:00 p.m.	~ 242	~ 12
Fallbrook	Potential Outage	ESTIMATE 4/30/2021 - 2:00-4:00 p.m.	ESTIMATE 5/1/2021 - 12:00-4:00 p.m.	~ 4,697	~ 215
Oceanside	Potential Outage	ESTIMATE 4/30/2021 - 2:00-4:00 p.m.	ESTIMATE 5/1/2021 - 12:00-4:00 p.m.	~ 1,762	~ 75

COMMUNICATION MATERIALS
Community Flyer - 4-28-21.jpg
DOWNLOAD ALL

YOUR SDGE CONTACTS
SDGE Liaison Officer
SDGELiaisonOfficerNotifications@sdge.com
858-503-5450
Emergency Management Duty Officer
eseods@sdge.com
858-503-5173

PUBLIC CONTACT
800-411-7343
SDGE.com/Ready

CUSTOMERS AFFECTED
12,481
Total Customers may be impacted
412
Medical Baseline (MBL) may be impacted

Confidential Information Sharing

Secure Portal

- Critical Infrastructure
 - List to be posted on the secure portal
- GIS polygon info
 - Link on the secure portal to the ArcGIS rest service with near real-time data

Data Sharing

- Medical Baseline Customer List
 - Upon request from County OES at the beginning of the season via an NDA
 - Upon request from local jurisdictions during activation
- Affected Zip Code list
 - Upon request from County OES for emergency food programs

Community Resource Centers (CRC)

- 11 Locations in total across the HFTD + 3 mobile resources
- In-person brick-and-mortar facilities
- Hours of Operation: 8am – 10pm (until power is restored)
- Resources provided include*:
 - Bottled water
 - Light snacks
 - Cell phone charging
 - Seating
 - Restrooms
 - Ice
 - Water trucks (for large animals)
 - Up-to-date outage event information

* Other resources may be provided while supplies last, including vehicle power inverters, portable cell-phone charging batteries, blankets, hand warmers, and radios.



PSPS Website and Online Tools

PSPS Website

- **Mobile-first design**
 - Upgraded tables and layout
 - Optimized map
 - Communities and customers affected
 - Fast load times, programed for low-bandwidth connection
- **Tools**
 - Address look-up
 - CRC information
 - Multiple languages
 - Additional Resources

PSPS Mobile App

- **Stay connected**
 - Real-time status updates with push notifications for saved locations.
 - Interactive map shows impacted areas and resources like CRCs.
- **Up-to-date information**
 - Customers can track the PSPS journey:
 - Advanced notifications
 - De-energization
 - Patrolling
 - Re-energized
 - CRC information
 - Additional Resources

Capacity

- **Website and mobile app built on Amazon Web Services (AWS)**
 - Both utilize AWS' Elastic Web-Computing, adding more servers to handle load.
 - Constant load testing and refinement.
- **Website specific:**
 - Best in class, CloudFlare CDN offsets strain on web servers.
 - Load balancing and proxy caching.
 - Multi-tier stack, that separates the web servers from the file/database servers.

2020 Event Communications

- **In-Event Customer Communications**

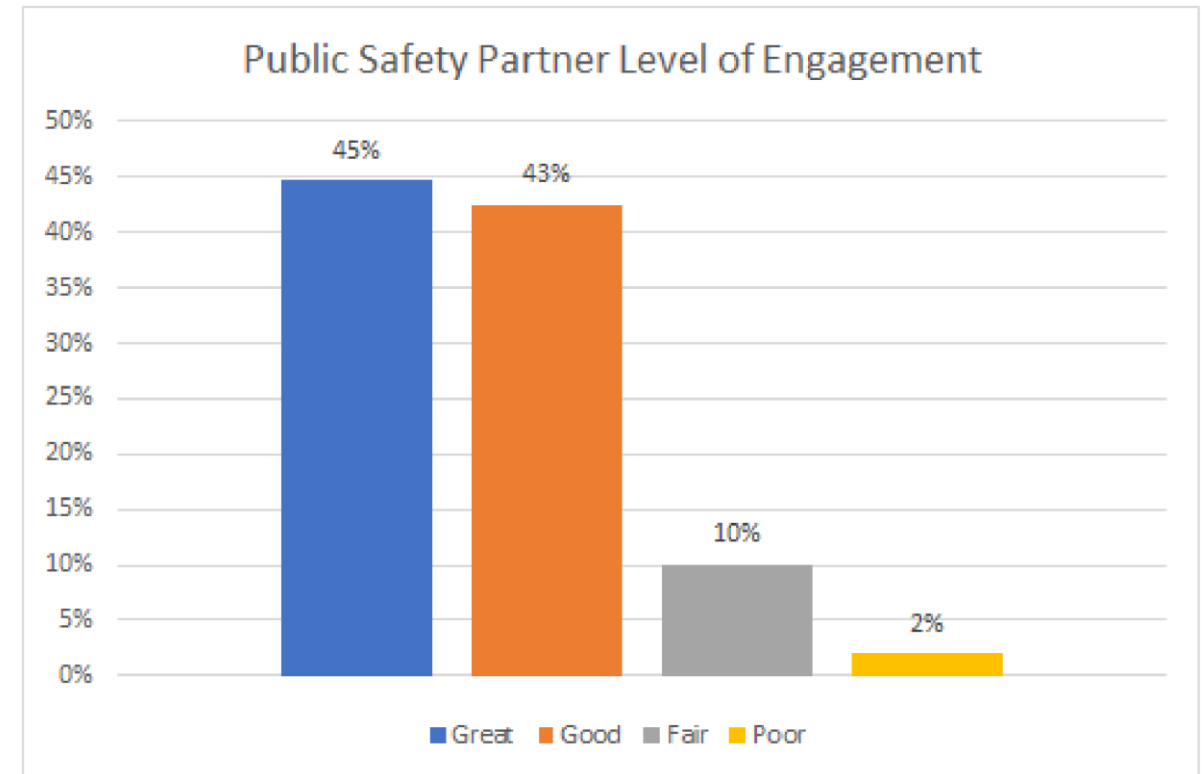
- More than 10,000 PSPS App downloads
- 31 roadside electronic message signs deployed

- **Vulnerable Customer Communications**

- 700+ community orgs reached through County OES/Partner Relay
- 200 Community-Based Partner orgs amplified messaging

- **Public Safety Partner Notification**

- 2,000+ touchpoints with public safety partners per event
- 88% surveyed public safety partners satisfied with SDG&E communication



2021 PSPS Customer Notifications

Enhancements

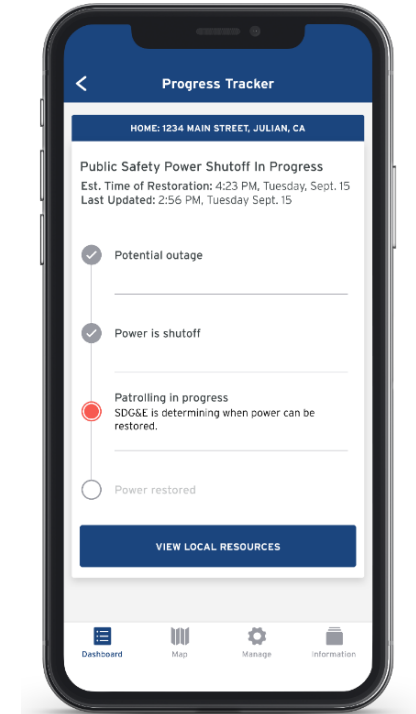
- Available in 21 prevalent languages and American Sign Language
- Escalating notifications aligned with NWS use of 'Watch' and 'Warning'
- In-message resources provided
- Increased Spanish communications complimenting notifications

Messaging

- Multiple delivery channels
- Directly associates PSPS to wildfire mitigation
- Refined annually – customer, public safety and community partner feedback
 - Majority of respondents satisfied with notification content
 - Increased communications requested

Uniform Communication Across Diverse Platforms

- Social Media, SDG&E website and NewsCenter
- Broadcast media outreach (real-time updates and general awareness messaging)
- In-Community mobile road signs and community marquees
- Message amplification by 2-1-1 and other CBOs



**SDG&E PSPS
Mobile App**



Medical Baseline (MBL) Program



2021 Customer Communications

- Campaign will run 7/1/21–11/28/21
- Includes Digital Banners, Paid Search, Paid Social and Email
 - Sign-up new customers to the MBL program.
- Direct Mail to current MBL customers in High Fire Threat Districts
 - Asking customers to update their contact information on sdge.com/myaccount and/or sign up for outage notifications.
- Partnering with CBOs to promote Medical Baseline to new eligible customers.
 - Robust promotion through 211 and other key community agencies
- New customer online application launched in April through SDG&E's new CIS.
 - Allows for easier enrollment to program and offers an option to sign up for outage notifications.

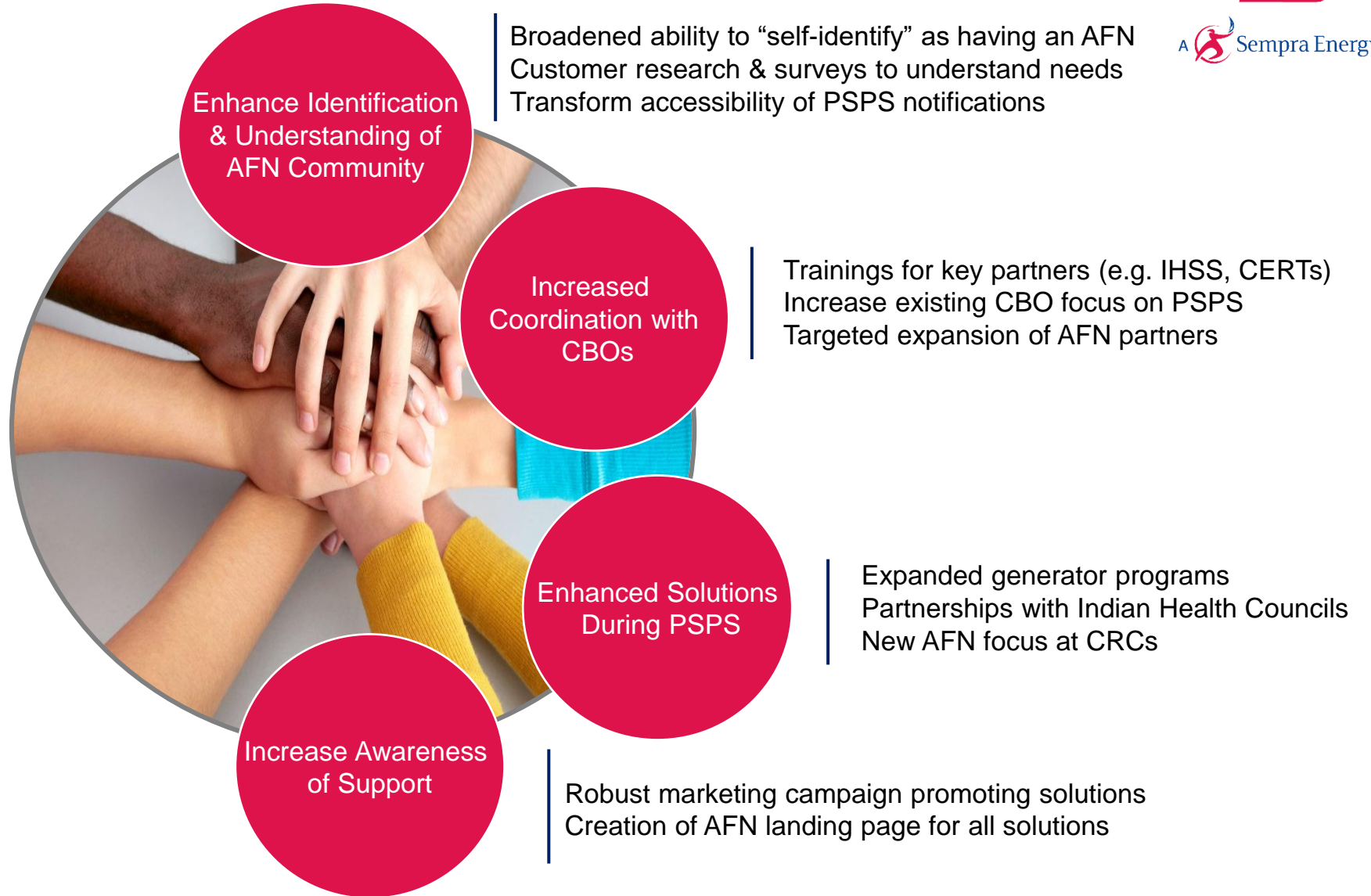
Customers with Access & Functional Needs



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Key AFN Needs

- Accessible & easy to understand communications
- Support during PSPS events
 - Back-up generation
 - Hotel stays
 - Transportation
- Financial assistance programs



Mobile Home Park Customers

Identification

HFTD	Premises	Spaces
Total	363	33,587
Tier II	63	3,998
Tier III	46	2,428

2021 Expanded Outreach & Education Efforts



Communications Providers: Notification and Coordination



Regular touchpoints with account executive



Multiple Points of Contact



Assessing Resiliency Plans



Annual webinars



Method of Notification

Email, Call, Text



PSPS Events

Two-way communication with AE during events

Risk Areas for PSPS Preparedness

Staff Resources

Staff turnover

On-going training requirements

Regulatory Environment

One-size fits all approach

Potential requirements to track specific AFN disabilities

Notifications

External agencies not always consistent

Some notification requirements may delay restoration

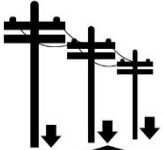
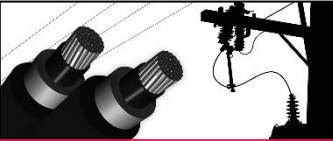



Appendix A


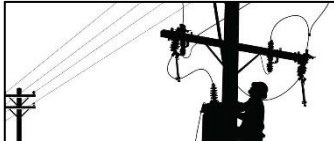

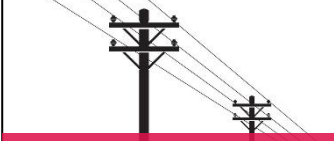
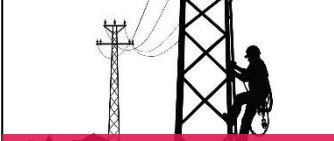


SDG&E's Wildfire Mitigation Plan Seeks to Reduce the Risk of Wildfires Caused by Utility Infrastructure and Customer Impacts Due to Public Safety Power Shutoffs



A Sempra Energy utility®

	2021 Completed/Target 17,754/22,269 inspections completed	80% complete
Distribution – Detailed Inspections		
	2021 Completed/Target 55,809/86,000 inspections completed	65% complete
Distribution - Annual Patrol Inspections		
	2021 Completed/Target 2,554/18,000 inspections completed	14% complete
Distribution – Infrared Inspections		
	2021 Completed/Target 0/22,000 inspections completed	0% Complete <small>*work to begin late June</small>
Distribution – Drone Inspections		
	2021 Completed/Target 10,841/10,815 inspections completed	100% complete
Distribution – HFTD Tier 3 Inspections		

	2021 Completed/Target 6,453/9,796 inspections completed	66% complete
Distribution – Intrusive Wood Pole Inspections		
	2021 Completed 917/1,943 devices installed	47% complete
Transmission – Detailed Inspections		
	2021 Completed/Target 223/ 2,715 inspections completed	8% complete
Transmission – Drone Inspections		
	2021 Completed/Target 0/6,166 inspections completed	0% Complete <small>*work to begin in August</small>
Transmission – Infrared Inspections		
	2021 Completed/Target 6,097/6,324 inspections completed	96% complete
Transmission – Helicopter Patrols		

Closing Remarks

Survey – Please return to Drucilla.dunton@cpuc.ca.gov

Schedule of Remaining Staff Briefings

-  PG&E Staff Briefing #2 – June 28th 10:00 a.m. – 12:00 p.m.
-  SMJU Staff Briefing #2 – June 30th 2:30 p.m. – 4:30 p.m.
-  **SDG&E Staff Briefing #2 – July 1st 1:00 p.m. – 3:00 p.m.**



California Public Utilities Commission

Questions?

Contact Shelby Chase at Shelby.chase@cpuc.ca.gov
and Dru Dunton at Drucilla.dunton@cpuc.ca.gov