



& WILDFIRE SAFETY

PUBLIC SAFETY
POWER
SHUTOFF

2022



Program Overview

PSPS Program Activation Criteria

- Officer-in-Charge makes decision based on:
- Fire Conditions
 - National Weather Service (NWS) declares event
 - Santa Ana Wildfire Threat Index (SAWTI) rating
 - Elevated or Extreme FPI
 - High WRRM-Ops Fire Size Potential
- Weather Conditions
 - High wind gusts, high temperatures, and low relative humidity (RH)
- Wildfire activity in the region
- Availability of firefighting resources

	Mon 11/12	Tue 11/13	Wed 11/14	Thu 11/15	Fri 11/16	Sat 11/17	Sun 11/18
ME	Extreme 16	Extreme 16	Extreme 15	Elevated 14	Elevated 14	Elevated 13	Elevated 13
RA	Extreme 16	Extreme 16	Extreme 15	Elevated 14	Elevated 14	Elevated 13	Elevated 13
EA	Extreme 16	Extreme 16	Extreme 15	Elevated 14	Elevated 13	Elevated 13	Elevated 13
NE	Extreme 16	Extreme 16	Extreme 15	Elevated 14	Elevated 13	Elevated 13	Elevated 13
OC	Extreme 15	Extreme 15	Elevated 14	Elevated 14	Elevated 13	Elevated 12	Elevated 12
NC	Extreme 15	Extreme 15	Elevated 14	Elevated 13	Elevated 13	Elevated 12	Elevated 12
BC	Extreme 15	Extreme 15	Elevated 14	Elevated 13	Elevated 13	Elevated 12	Elevated 12
CM	Elevated 14	Elevated 14	Elevated 14	Elevated 13	Elevated 13	Elevated 12	Elevated 12

NO RATING
MARGINAL
MODERATE
HIGH
EXTREME

Winds are either not expected, will not contribute to significant fire activity.

Upon ignition, fires may grow rapidly.

Upon ignition, fires will grow rapidly and will be difficult to control.

Upon ignition, fires will grow very rapidly, will burn intensely, and will be very difficult to control.

Upon ignition, fires will have extreme growth, will burn very intensely, and will be uncontrollable.

Public Safety Shutoff Criteria / Safety Factors



- **Fire Conditions**

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

- **Weather Conditions**

- Temperature
- Humidity
- Wind Gusts

- **Observations From the Field**

- Flying Debris
- Tree Damage
- Impacts to Powerlines

- **Wildfire Activity in the Region**

- **Availability of Firefighting Resources**

- **Reports from Emergency Responders**



PSPS Process



If high fire risk weather conditions are present, we may shut off power as a final recourse to keep you and your community safe.



TRACKING THE FORECAST

Well in advance of any event, we begin tracking weather forecasts and system conditions to understand the potential risk to the region. This information is then combined with our Fire Potential Index and Santa Ana Wildfire Threat Index to better understand and quantify the potential risk of the expected weather event.



OPERATIONAL ADJUSTMENTS

As we refine our weather forecast we also evaluate our electric system, make operational modifications to ensure the safe operation of the system, or cancel at-risk field work, deploying field observers to critical locations and activating our Emergency Operations Center.



MONITORING CONDITIONS

We monitor real-time data from our weather system, cameras and personnel in the field to determine environmental conditions. We also collaborate with the National Weather Service, the U.S. Forest Service, CAL FIRE and the San Diego County Office of Emergency Services to share pertinent information.



SITUATIONAL ASSESSMENT

As the situation evolves, highly experienced subject matter experts are on staff to take appropriate and timely actions to protect public safety and mitigate against any threats.



DE-ENERGIZE

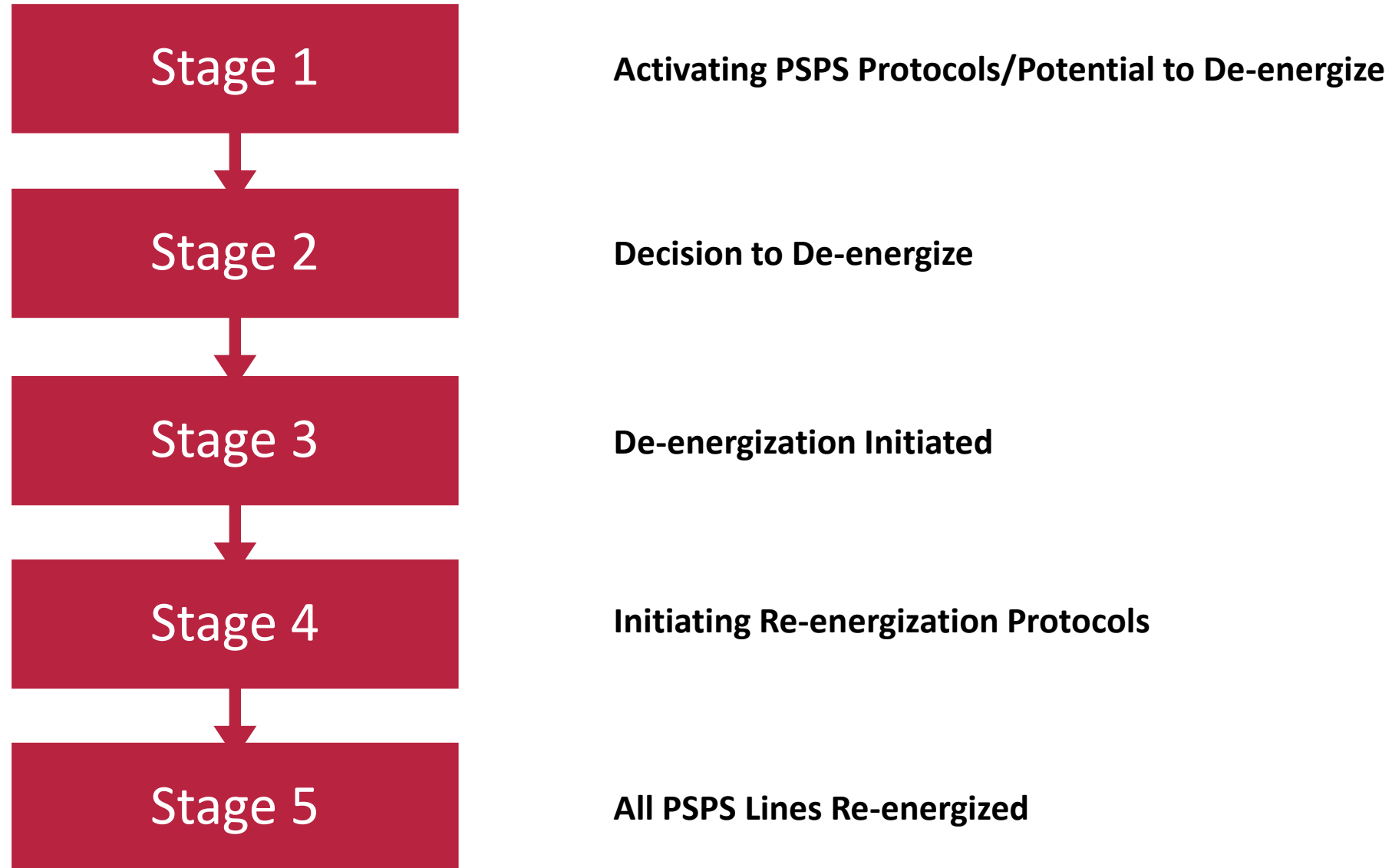
We may turn off power for safety as a last resort, and it would remain off until conditions are safe. It is challenging to predict how long an outage might last given a variety of factors. These include, among others, the duration and location of strong winds, potential damage incurred on the system while de-energized and whether aerial patrols are possible at the time.



PATROLS & RESTORATION

The restoration process requires reduced wind speeds for a sustained period and sufficient daylight to allow our crews to patrol a line and deem it safe. Once equipment and conditions are confirmed safe, we'll begin systematically restoring power.

PSPS Stages



PSPS Notifications

2021 Accomplishments:

- **Increased accessibility** of all notifications, including American Sign Language (ASL) video
- **Launched Public Safety Partner Portal**. 87% surveyed public safety partners satisfied with SDG&E communications
- **In-Community marquees** & electronic roadside message signs deployed in affected communities

2022 Planning:

- **Increased capacity** of outbound auto dialer system
- **Enhance Public Safety Partner Portal** to include mobile app push notification capability
- **Refine & expand** notification process & technology
- **Continued coordination** with regional public safety partners & CBOs to amplify messages



Customer Communications

Augmented and diverse communications tools used to inform customers before, during and after events



Before Event

Year-long public education campaigns • Multiple educational initiatives • Extensive media and journalist education effort • Power outage & preparedness videos • Messaging amplification by up to 200 CBOs • Multiple customer & CBO surveys & research • Public education In-language & accessible communications • In Community Outreach

During Event

Leverage 20+ diverse communications platforms • Hyper-local targeting via Nextdoor • Media & journalist outreach • PSPS mobile app & radio PSAs • In-community & roadside signage & flyer distribution • Simplified PSPS & Wildfire Safety webpages • Message amplification by CBOs & partners • Customer notification refinement to accommodate in-language & AFN customers • Dedicated Spanish media team



After Event

Follow-up customer communications via diverse platforms • Expanded customer research & solicitation of stakeholder feedback to inform future campaigns



Customer Notifications



Enhancements

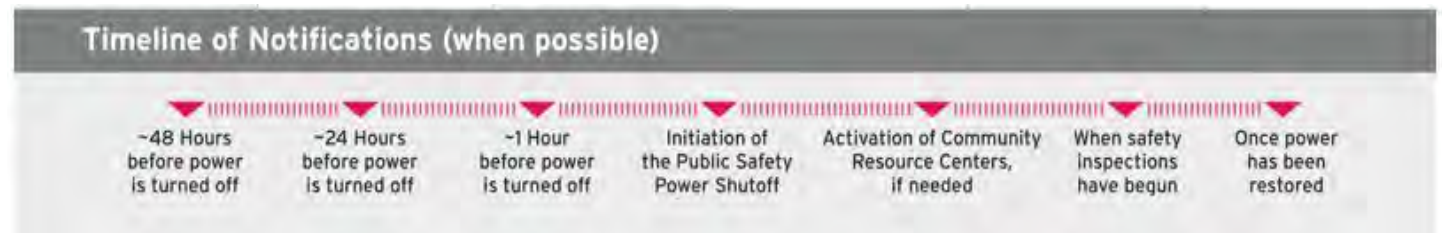
- Available in **21 prevalent languages** and **American Sign Language**
- Escalating conditions language **aligned with National Weather Service**
- In-message link to resources provided
- Increased Spanish communications complimenting notifications

Messaging

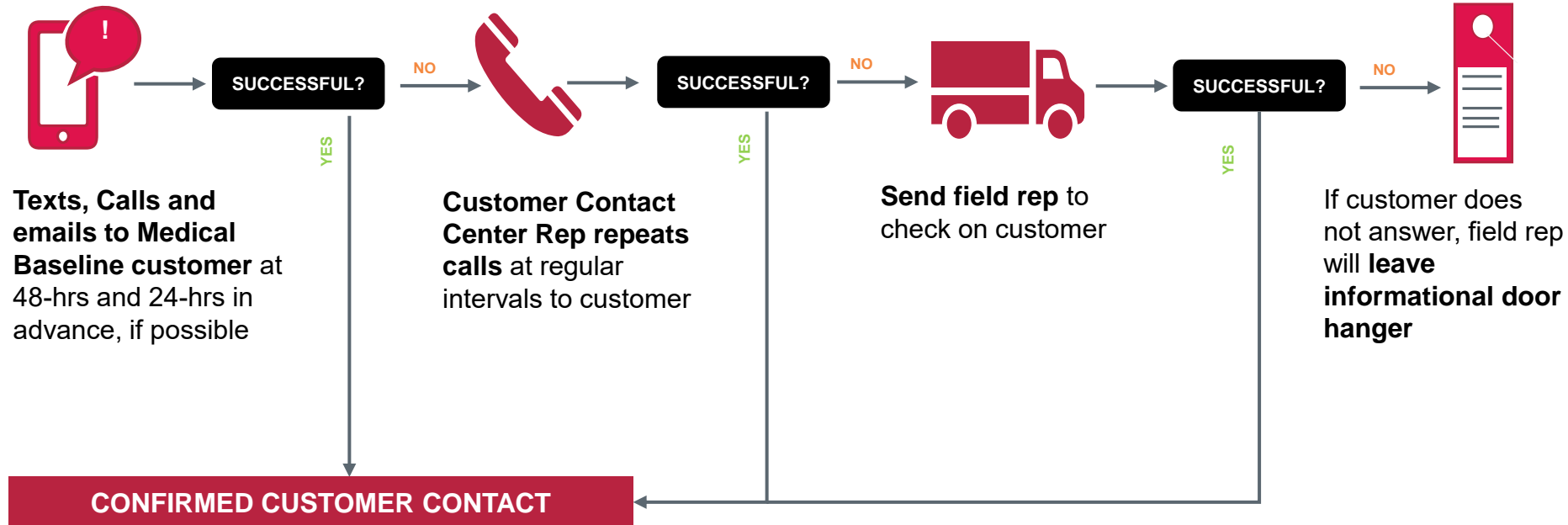
- Multiple delivery channels
- Directly **associate PSPS to wildfire prevention**
- **Refined annually** – customer, public safety and community partner feedback

Uniform Communication Across Diverse Platforms

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



Notifications: Medical Baseline & Life Support

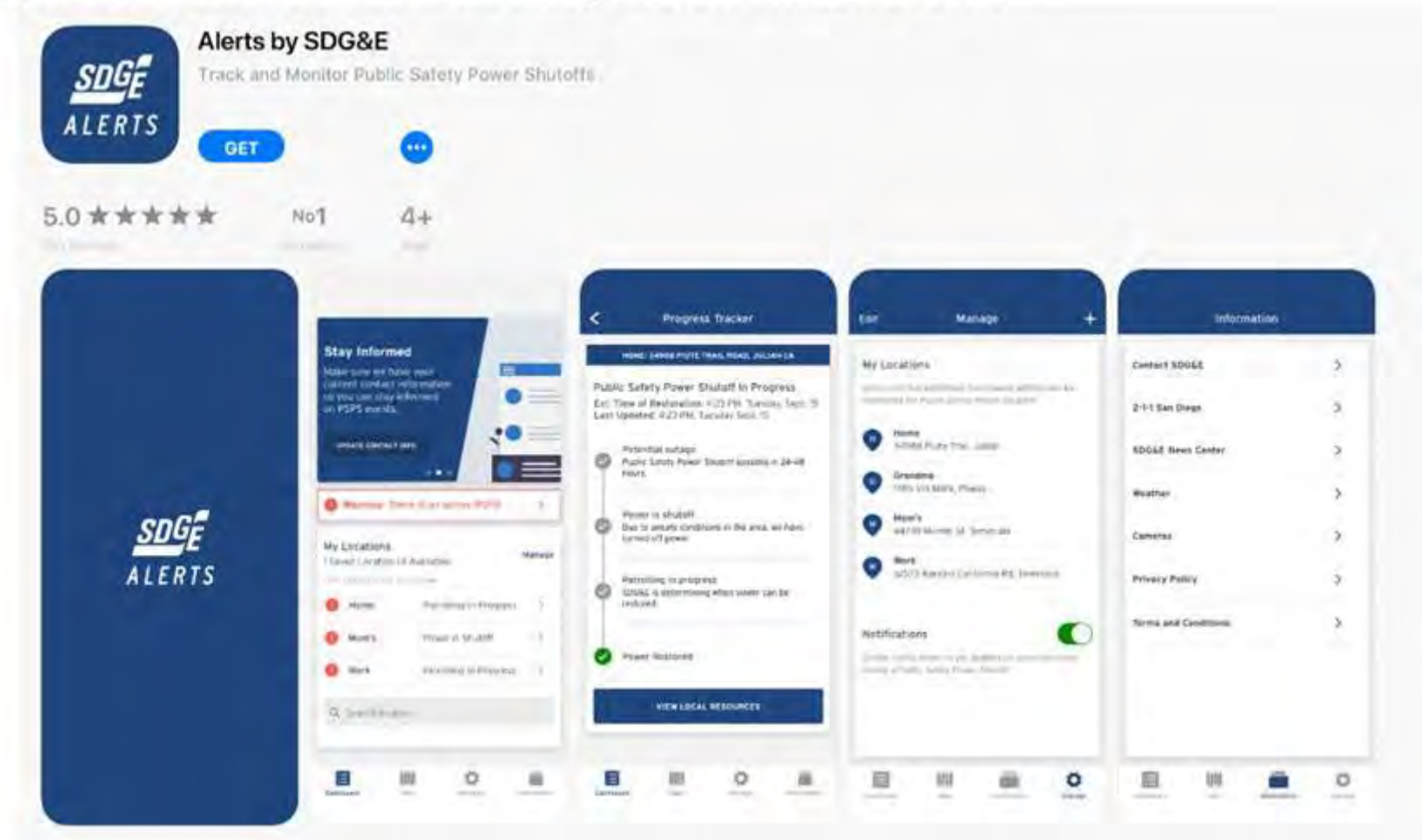
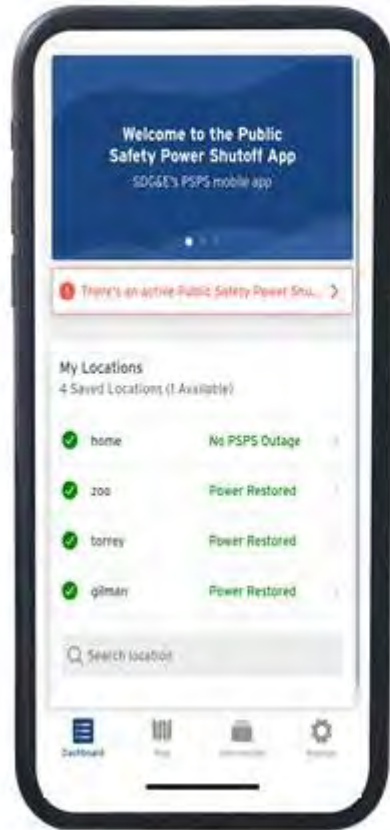


For Medical Baseline notifications, the notification is considered successful if the customer has answered a phone call, responded to a text message, opened an email or clicked on a link included in an email.

Field reps will notify customer of Public Safety Power Shutoff and encourage them to spend time with a friend or family member, if needed. If customer is experiencing a medical emergency, rep will offer to dial 911 and wait with the customer until emergency services arrive.

Alerts by SDG&E

2020 launch of a Mobile App to communicate Public Safety Power Shutoff events



Reenergization Forecasted wind gusts have peaked and winds are trending downward

- Aerial assets can fly for patrols and response
- Circuits cannot be patrolled until the following conditions are met:
 - Foot and drone patrols can be completed safely
 - Full visual patrol of entire circuit is completed
 - No damage is found, or damage has been repaired
 - Electric Troubleshooter, observer, or line crew on scene
 - Contract firefighting crew on scene
- SDG&E prioritizes restoration efforts for critical needs such as hospitals, water pumping stations, and law enforcement and fire infrastructure





Outreach & Mitigation Strategies

Wildfire Preparedness Outreach & Education

Collaboration with stakeholders in the wildfire safety community to enhance community preparedness & wildfire resilience

2021 Accomplishments:

- 5 customer Wildfire Safety Webinars
- 6 drive-thru Wildfire Safety Fairs; **96% favorability rate**
- First joint SDG&E/tribal partner Wildfire Safety Fair
- Customer **favorability of 88%** for public education as relevant & meaningful

2022 Planning:





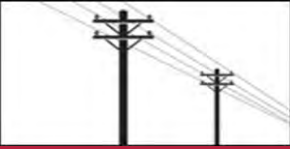

- Wildfire Safety Fairs, webinars & potentially integrate in-person Town Halls
- Expanded customized outreach to tribal communities & AFN customers
- Expand multi-channel engagement strategy
- Listening sessions/working groups – local governments, tribes, public safety partners, critical facilities & monthly 'Customer Listen' Surveys



PSPS Mitigations – Projections & Results

*Reduced Number of
Customers Impacted*

3-Year Projected Total	2022 Projected Total	2021 Total	2020 Total
39,533	11,695	13,359	14,479

	2022 Projections	2021 Results	2020 Results		2022 Projections	2021 Results	2020 Results
 <p>PSPS Sectionalizing</p>	10 Locations 4,607 Customers	11 Locations 9,719 Customers	23 Locations 12,870 Customers	 <p>Standby Power Programs</p>	300 Customers	353 Customers	32 Customers
 <p>Strategic Undergrounding</p>	65 Miles 2,533 Customers	26 Miles 242 Customers	15.5 Miles 276 Customers	 <p>Generator Grant Programs</p>	3,000 Customers	2,310 Customers	1,300 Customers
 <p>Microgrids</p>	2 Locations 5 Customers	0 Locations 0 Customers	6 Locations 578 Customers	 <p>Generator Assistance Programs</p>	1,250 Customers	735 Customers	

Reduced PSPS Customer Impacts

Compared to similarly rated PSPS' in 2020

$$\text{PSPS Score} = \text{Top 20 Gust Avg} \times \% \text{ Stations Above 95th} \times \frac{\text{FPI}^2}{C}$$



How strong?



How widespread?



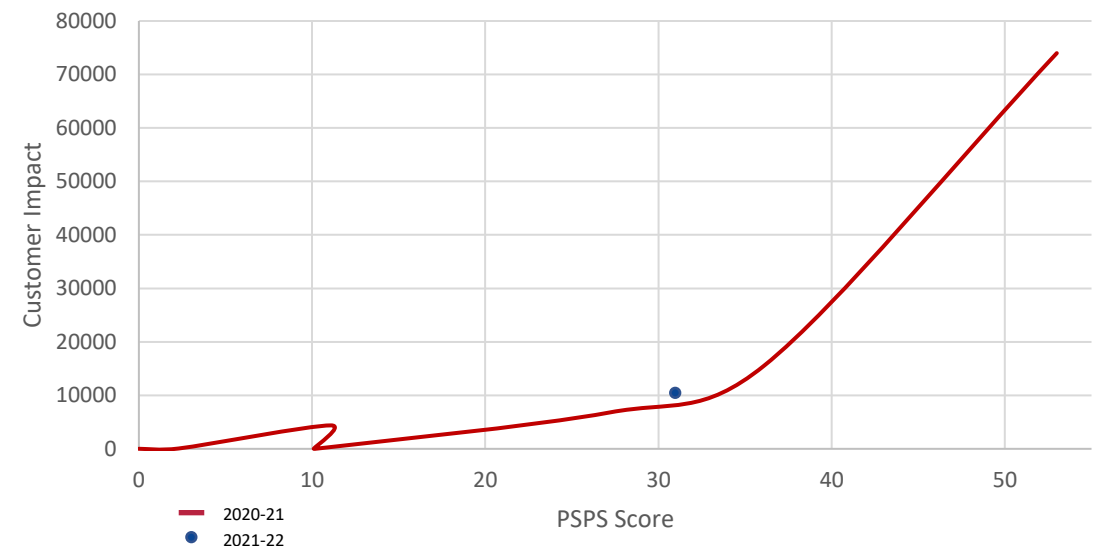
Weather/fuels?

2020-21

	Top 20 Gust Avg	% Above 95 th	FPI	PSPS Score	PSPS Impact
Sep. 8-9	43 mph	7.0%	Extreme (15)	2.3	49
Sep. 28-29	30 mph	0%	Extreme (15)	0	0
Oct. 26-27	46 mph	35.7%	Elevated (14)	11.1	4,373
Nov. 26-28	48 mph	36.2%	Elevated (13)	10.2	0
Dec. 2-5	71 mph	95.9%	Extreme (15)	53.0	73,977
Dec. 6-9	59 mph	78.6%	Extreme (15)	36.1	15,528
Dec. 23-24	57 mph	81.6%	Elevated (13)	27.2	6,797
Jan. 14-16	56 mph	36.2%	Elevated (12)	10.1	0

2021-22

	Top 20 Gust Avg	% Above 95 th	FPI	PSPS Score	PSPS Impact
Nov. 24-26	57 mph	79.8%	Elevated (14)	30.1	5,858





Microgrids & Temporary Generators



Continued investment in sustainable solutions that provide resiliency to customers impacted by a PSPS

2021 Accomplishments:




- Significant progress at Cameron Corners. Necessary adjacent undergrounding completed
- Construction completed at CAL FIRE's Ramona Air Attack Base
- Introduced mobile battery energy storage units to replace diesel temporary generators & provide mobile EV charging at Community Resource Centers

2022 Planning:

- Commissioning of Ramona Air Attack Base & Cameron Corners microgrids
- Complete land acquisition for Butterfield Ranch & Shelter Valley locations, with issuance of request for proposals for construction contracts
- Design & engineering of additional microgrid sites identified from WiNGS modeling
- Continue to explore mobile battery energy storage units in different applications & uses to verify robustness and flexibility



Backup Generator & Battery Programs

Program	Generator Grant Program	Generator Assistance Program	Fixed Backup Power
Summary	<p>Portable backup battery provided to qualifying MBL or AFN customers in the HFTD at no charge</p> 	<p>Portable fuel generator & backup battery (portable power station) rebates for qualifying HFTD customers, additional rebate for CARE customers</p> 	<p>Provides a permanent generator to customers that have a high risk of experiencing a PSPS</p> 
2021 Accomplishments	<ul style="list-style-type: none"> Delivered 2,310 batteries (116% of 2,000 target); 3,795 total since 2019 47 backup batteries delivered to AFN customers Streamlined process for Indian Health Council 98% of customers are very satisfied, 94% are very prepared 	<ul style="list-style-type: none"> Issued 1,850 rebates (target = 1,250). 2,040 total since 2020 735 redeemed by customers 88% of customers are somewhat to very satisfied with rebate process 	<ul style="list-style-type: none"> >465 generator install agreements signed; >350 operational by year's end Began installation of Mobile Home Park resilience solution (solar + battery)
2022 Planning	<ul style="list-style-type: none"> Target: 3,000 batteries Continuing to evaluate competitive bids for program support Develop online customer request form 	<ul style="list-style-type: none"> Target: 1,250 rebates Update rebate process to allow purchase at additional retailers Include more models with safety features to qualified product list 	<ul style="list-style-type: none"> Target: 470 generators Integrate & test non-fossil fuel solutions Expand to 2 mobile home parks, 2 schools, critical facilities & Community Resource Centers

Questions?

Mona Freels
Emergency Operations Services
Manager
mfreels@sdge.com

