2022 Public Safety Power Shutoff (PSPS) Preparedness

July 13, 2022
Grid Hardening & Mitigation Efforts
Jonathan Woldemariam, Director of Wildfire Mitigation
SDG&E Committed to Risk Reduction

Reducing wildfire risk & PSPS impacts through:

- **Advanced risk modeling & situational awareness** leveraging artificial intelligence

- **Continued grid hardening** by increasing strategic undergrounding & covered conductor to achieve further reductions on distribution fault rate

- **Increased customer support** by expanding AFN support services & leveraging renewable resources

- **Ongoing preparation** through EOC exercises, community outreach, public education & public safety partnerships

<table>
<thead>
<tr>
<th>WMP Progress</th>
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<tbody>
<tr>
<td><strong>45%</strong></td>
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</table>

| 84% | Reduced fault rate on the transmission system |

| **100%** | Ignition reduction when sensitive relay settings enabled |

| **100%** of HFTD drone inspections completed in 2022 |

| **100%** | Ignition reduction from fuses in HFTD |

| **12,500** | Trees per year with enhanced vegetation clearance |

Reduced fault rate  
• on the distribution system  
• on the transmission system  

100% Ignition reduction when sensitive relay settings enabled  

100% of HFTD drone inspections completed in 2022  

100% Ignition reduction from fuses in HFTD  

12,500 Trees per year with enhanced vegetation clearance
Risk Assessment Overview

Wildfire Next Generation System (WiNGS)

2022 Year to Date Accomplishments

- Implemented new WRRM model to improve consequence modeling
- Significantly progressed automation of WiNGS Planning model
- Continued migration of risk models to Amazon Web Services (AWS)
- Improved model predictive power by incorporating additional data sources
- Upgraded WiNGS Ops and Planning dev environment to Azure Dev Ops

2022 Year-End Plan

- Implement model pipelines in AWS for enhanced automations
- Develop software application for improved user-model interactivity and visualizations
- Complete automation of WiNGS Planning model
- Deploy WiNGS Planning model to AWS
- Wind-based vegetation POF model deployed in AWS by 9/1
## PSPS Mitigations – Projections & Results

### Reduced Number of Customers Impacted

<table>
<thead>
<tr>
<th></th>
<th>3-Year Proposed Total</th>
<th>2022 Projected Total</th>
<th>2021 Total</th>
<th>2020 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PSPS Sectionalizing</td>
<td>30,830</td>
<td>7,145</td>
<td>9,961</td>
<td>13,724</td>
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</tbody>
</table>

### 2022 Projections vs. Results vs. Since 2020

<table>
<thead>
<tr>
<th></th>
<th>2022 Projections</th>
<th>YTD* 2022 Results</th>
<th>Since 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSPS Sectionalizing</td>
<td>10 Locations</td>
<td>6 Locations</td>
<td>34 Locations</td>
</tr>
<tr>
<td></td>
<td>4,607 Customers</td>
<td>7,508 Customers</td>
<td>22,589 Customers</td>
</tr>
<tr>
<td>Strategic Undergrounding</td>
<td>65 Locations</td>
<td>11.07 Miles</td>
<td>41.5 Miles</td>
</tr>
<tr>
<td></td>
<td>2,533 Customers</td>
<td>708 Customers</td>
<td>518 Customers</td>
</tr>
<tr>
<td>Microgrids</td>
<td>2 Locations</td>
<td>1 Location</td>
<td>6 Locations</td>
</tr>
<tr>
<td></td>
<td>5 Customers</td>
<td>1 Customer</td>
<td>578 Customers</td>
</tr>
</tbody>
</table>

### 2022 Projections vs. YTD* 2022 Results vs. Since 2020

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<thead>
<tr>
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<th>2022 Projections</th>
<th>YTD* 2022 Results</th>
<th>Since 2020</th>
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</thead>
<tbody>
<tr>
<td>Camera Installations</td>
<td>8</td>
<td>3</td>
<td>21 Camera Installations</td>
</tr>
<tr>
<td>Weather Station Upgrades</td>
<td>20</td>
<td>3</td>
<td>76 Weather Station Upgrades</td>
</tr>
<tr>
<td>Situational Awareness</td>
<td>60</td>
<td>12.6</td>
<td>43.1 Miles</td>
</tr>
<tr>
<td>Covered Conductor</td>
<td>5</td>
<td>24.66</td>
<td>438.5 Miles</td>
</tr>
<tr>
<td>Traditional Hardening</td>
<td>5</td>
<td>24.66</td>
<td>438.5 Miles</td>
</tr>
</tbody>
</table>

*YTD as of 6/30

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5
Public Education/Notifications
Zoraya Griffin, Senior Communications Manager
Notifications & Communications

2021 Customer Feedback
• Increase amount of notifications/updates
• Accuracy of notifications/updates
• Simplification of PSPS webpage & PSPS App
• Understanding of the PSPS customer journey and available resources
• In-event translation service at CRC’s
• Increase public education Spanish delivery

2022 Enhancements
• Expanded notifications
• Release of SDG&E Alexa Skill
• PSPS webpage simplification & streamline
• Increased public education – PSPS customer journey experience
• Increased resources/assistance promotion – Wildfire Safety Fairs, CRCs, in-event communications
• CRC onsite translation services available, including ASL
• Customized Tribal communications and channel expansion
• Increased year-round local media engagement
• Dedicated Spanish communications team
• Increased testing of public awareness
Public Awareness & Communications

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

**Before Event**
- Year-long public education campaign
- TV, Radio, streaming radio, social media, digital, print PSAs
- Online Influencers
- Wildfire Safety Fairs & In-community events
- In-community newsletters, newspapers, community social media pages
- Community bulletins/posters, Community Stores, Supermarkets, Laundromats, Barber Shops
- Airport, train and bus depots video monitor messaging
- Athletic Events- stadium ads
- Increased media and journalist education effort
- Message amplification by CBOs & partners
- Public education in-language & accessible communications
- Simplified PSPS & Wildfire Safety webpages
- Power outage & preparedness videos
- Multiple customer & CBO surveys & research
- Dedicated Spanish communications team

**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
- Message amplification by CBOs & partners
- Customer notification refinement to accommodate in-language & AFN customers
PSPS Website Overview

Key Features and Content

- **Address lookup tool**
  - Customers can input their address and see if they are at risk, de-energized, patrolling or re-energized.
- **Map** with affected areas (heat map technology; AFN)
- **Customers and communities** at risk and shut off
  - Updated in real-time as customers are de- and re-energized
- **Community Resource Centers** (CRCs)
  - CRC look-up (customers input their address to find closest CRCs)
  - Addresses, amenities, hours and more information.
- **AFN** resources, landing page and personalized experience.

2022 Enhancements and Outlook

- **Accessibility**: Partnered with Center for Accessible Technology (C4AT) to build best-in-class accessible website and mobile app; implemented AudioEye tool.
- Utilized **customer feedback** from 2021 event, e.g. adding Google map links to CRCs and font size for customers affected.
- Improved **mobile experience**, better layout elements, font sizing.
- Website is built on Amazon Web Service’s (AWS) cloud infrastructure.
  - Web servers auto-scale based on traffic and bandwidth needs increase.
- Utilizes a Content Delivery Network (CDN) and Web Application Firewall (WAF) to ensure stability and performance (“Black Friday” performance)
- Coded “lite” to help low-bandwidth customers
AFN Expanded Support in 2022

Data
Enhanced database of individuals with AFN + self-identification campaign

Accessibility
24/7 on-demand American Sign Language (ASL) comms., fully accessible websites & notifications

Medical Baseline
Trained In Home Support Services Staff to increase outreach & dedicated marketing campaigns

PSPS Support
Renewed and expanded partnership opportunities

Community Partners
45 dedicated High Fire Threat District partners - increased support

Marketing + Research
Robust marketing campaign & dedicated AFN research panel
AFN PSPS Support

Community Resource Centers
Enhanced support including privacy screens, signage, dedicated parking and on-site ASL interpretation

Tribal Communities
Southern Indian Health Council (SIHC) & Indian Health Council (IHC) partners provide resiliency items, generators and other needs to tribal communities

Centralized Resource Hub
211 San Diego and 211 Orange County connect customers to resources and direct support from 1,000+ orgs (24/7/365, in 200+ languages)

Food Support
SD Food Bank & Feeding SD partners provide mobile food pantries at rural, tribal and PSPS sites, with warm food provided as needed

Transportation
FACT paratransit partnership provides accessible transportation to customers' location of choice

Hotel Stays
Salvation Army partnership provides no-cost hotel stays
Community - Based Organization Coordination

- Enhanced PSPS engagement efforts targeting trusted CBOs located in or reach customers in HFTD

- Wildfire Safety Fairs located in Ramona, Julian, Alpine and Valley Center

- Mini-Wildfire Safety Fairs in targeted communities within HFTD
2022 CRC Operational Strategy

Locations and Support Offerings:

• 11 indoor CRCs are available*

• 3 new mobile CRCs available for deployment

• Standard Services are provided at each location

• Enhanced Offerings are available, if needed
  – Warm meals
  – Cell phone charging
  – Power inverters
  – Blankets

*Net change from 2021 is zero. Boulevard replaced Jacumba due to greater community benefit.

Comprehensive Site List: https://www.sdge.com/wildfire-safety/community-resource-centers
Backup Generation Programs
Jon Kochik, Customer Integrated Solutions Manager
## Backup Generator & Battery Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>Generator Grant Program</th>
<th>Generator Assistance Program</th>
<th>Standby Power Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overview</strong></td>
<td>Portable backup battery provided to qualifying MBL or AFN customers in the HFTD at no charge (active Jun-Dec)</td>
<td>Portable fuel generator &amp; backup battery (portable power station) rebates for qualifying HFTD customers, additional rebate for CARE customers (active Jun-Dec)</td>
<td>Provides a permanent generator to customers that have a high risk of experiencing a PSPS</td>
</tr>
</tbody>
</table>
| **2022** | • Target: 600 - 700 batteries  
• Including AFN with disabilities, temp-sensitive and self-identified  
• Online customer request form  
• Continuing to evaluate program options for 2022 and 2023 | • Target: 1,250 rebates  
• Update rebate process to allow purchase at additional retailers  
• Include more models with safety features to qualified product list  
• Higher rebates for portable power stations | • On track towards 3yr target of 900  
• Integrate & test non-fossil fuel solutions  
• Continue to expand mobile home parks, schools, critical facilities & Community Resource Centers candidates |
| **Program Results to Date** | • 3,802 delivered since 2019  
• Streamlined process for active PSPS deliveries and Indian Health Council  
• 98% of customers very satisfied, 94% very prepared | • 2,040 rebates provided since 2020  
• 88% of customers are somewhat to very satisfied with rebate process | • 558 residential generators installed, with 296 currently in process  
• 6 commercial installed, with 15 currently in process  
• Began installation of Mobile Home Park resilience solution (solar + battery) |
Partner Outreach and Engagement

Local Government Outreach
- Listening Sessions
- Webinars
- EOC Tours
- Quarterly Contact Update
- Notifications Exercise

Tribal Outreach
- Tribal Emergency Manager EOC Tour
  - Listening sessions
  - Survey and focus groups
  - Feedback implementation

Liaison Functions
- Trained Liaison Officers to embed in local EOCs
  - Ability to host partner Agency Representatives
  - Coordination with local governments, public safety partners and tribes
Each community now has several rows nested underneath to display incoming sectionalizing device data.

Search capability
Can show only one status at a time
Expandable rows
Public Safety Partner Mobile App

- Going live Sept. 2022
- Near real-time mapping capability with a link to secure GIS portal
- Ability to “follow” multiple jurisdictions
- Ability to customize push notifications
- Devices listed by community with impact information
- Resource page for additional resources
  - Social media kit
  - 24/7 contact information
  - Community flyer
Critical Infrastructure Coordination
Alex Moffat, Manager of Business Services
Meetings & Feedback

Partnerships
• Partnered with Telcos to ensure SDG&E’s 800 numbers are not listed as SPAM

Webinars
• Two webinars planned with Critical Facilities & Infrastructure - late July & early August

Feedback
• Streamline outreach efforts for information gathering

Outreach & Resources

• Annual assessment of 1,400 unique CFI customers’ emergency preparedness
  o Revised emergency preparedness survey
  o Updates to 27k+ CFI accounts (contacts, BUG capabilities, emergency preparedness)
  o Inform customers of resiliency and emergency preparedness

• Dedicated CFI website

Resources
• SDG&E does not provide emergency backup generation
• Emergency backup generation is considered during events where health, life or safety of the community is at risk
Exercise Lessons Learned
Jessica Kunert, Emergency Management Training Manager
## 2022 PSPS Opportunities

<table>
<thead>
<tr>
<th>Improvement Opportunity</th>
<th>2022 Programmatic Responses</th>
</tr>
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<tbody>
<tr>
<td>• The primary public safety partner notification system degraded forcing the successful use of back-up processes with no impact to notifications.</td>
<td>• The technical problem was identified and corrected.</td>
</tr>
<tr>
<td>• Segments of the PSPS notification process were not completed in sequence.</td>
<td>• Currently updating documentation and training to ensure responders can activate secondary protocols.</td>
</tr>
<tr>
<td>• Increased number of new Emergency Operations Center responders.</td>
<td>• Successfully piloted an approval process and codifying into documentation and training.</td>
</tr>
<tr>
<td>• Limited sandbox environments strain exercise realism.</td>
<td>• Incorporated basic EOC procedures into Summer Readiness Training.</td>
</tr>
<tr>
<td></td>
<td>• Developing targeted training for new responders.</td>
</tr>
<tr>
<td></td>
<td>• Developing a proposal to design training environments for applicable systems.</td>
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</tbody>
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Thank you