YOU CAN SUBMIT A QUESTION

You can submit a question using the Q&A window throughout the session.

If there is a similar question already being asked that you would like answered, you can click on the “thumbs up” icon next to the question to “like” it.

Please only submit questions that are relevant to the presentation and topics being presented.
PRESENTERS

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Los Angeles County

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Local Public Affairs

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Managing Director
Transmission & Distribution

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Senior Manager
Wildfire Safety

Katie Sloan
Vice President
Customer Programs & Services
AGENDA

• 2021 Wildfire Season
• SCE’s Wildfire Mitigation Activities
• Public Safety Power Shutoffs
• Reducing the Need for PSPS
• PSPS Communications
• Customer Programs & Resources
• Q&A
READY!
Create and maintain defensible space and harden your home against flying embers.

SET!
Prepare your family and home ahead of time for the possibility of having to evacuate.

GO!
Take the evacuation steps necessary to give your family and home the best chance of surviving a wildfire.

For more information: fire.lacounty.gov/rsg
Alert LA County: alert.lacounty.gov
California experienced another year of extreme wildfire activity, exacerbated by intensifying drought. Dry vegetation and strong winds continue to threaten our communities during year-round fire season.

6 OF THE 7 LARGEST CALIFORNIA WILDFIRES HAVE HAPPENED SINCE 2020*

*Source: https://www.fire.ca.gov/media/4jandlhh/top20_acres.pdf
REDUCING WILDFIRE RISK IN OUR COMMUNITIES

- Situational awareness, weather modeling and fire spread modeling
- Public Safety Power Shutoff criteria: Fire weather and PSPS conditions include strong winds, very dry vegetation and low humidity
- Aerial Fire Suppression
- Undergrounding
- Hazard Tree Management Program
- Covered Conductor
- System hardening and advanced technologies: covered conductor, fire-resistant poles and cross arms, fast-acting fuses, sectionalizing devices and new technologies such as Rapid Earth Fault Current Limiter (REFCL)
- Critical Care Back-up Battery program and rebates on portable power stations, generators and battery storage
- Equipment Inspections
- Microgrids
VIDEO: INSTALLING INSULATED WIRE AERIALLY
INSULATED WIRE IS ONE OF THE MOST EFFECTIVE MEASURES TO REDUCE WILDFIRE & PSPS RISKS IN SCE’S SERVICE AREA

Insulated wire is a very valuable tool to expeditiously and cost-effectively reduce wildfire risk specific to SCE

Undergrounding considered for certain locations based on risk profile

**Cost to Implement**
Insulated wire installation costs significantly lower than undergrounding
Undergrounding costs vary depending on construction methods, locational, and operational factors

<table>
<thead>
<tr>
<th>Vegetation Type</th>
<th>Cost per mile</th>
<th>$ in Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Evergreen Forest</td>
<td>~65-90% lower</td>
<td>~1.5-5.5</td>
</tr>
<tr>
<td>- Deciduous Forest</td>
<td>~0.6</td>
<td></td>
</tr>
<tr>
<td>- Broadleafed Forest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Chaparral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Grassland</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Desert Scrub</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Execution Speed**
Insulated wire can be deployed within 16–24+ months, and sometimes faster
Undergrounding generally takes 25–48+ months

<table>
<thead>
<tr>
<th>Actual installed miles of insulated wire vs. hypothetical undergrounded miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulated wire</td>
</tr>
<tr>
<td>Underground</td>
</tr>
</tbody>
</table>

**Unique Factors**
Undergrounding is considered where there is:
- High burn frequency
- Limited egress
- Wind speeds exceeding insulated wire PSPS thresholds
- Exceptionally high potential consequence (>10,000 acres)

Several hundred miles currently under consideration for additional enhanced mitigation, including undergrounding

---

1. Based on data provided in SCE’s 2022 WMP Update
2. Through March 31, 2022
3. Undergrounded miles is a hypothetical approximation of underground lines that could have been constructed through March 31, 2022, based on SCE’s assumptions and experience with planning and executing undergrounding projects
SCE estimates its wildfire mitigation and PSPS measures have reduced the risk of damage from catastrophic wildfires by 65% to 70%, relative to pre-2018 levels.

**ONGOING WILDFIRE MITIGATION EFFORTS**

~34% of overhead wire in high fire risk areas replaced with insulated wire

**Suite of mitigations** include system hardening, annual equipment inspections, vegetation management and situational awareness measures

**IMPROVED PSPS EXECUTION & CUSTOMER SUPPORT**

73% reduction in PSPS outage time in 2021 on frequently impacted circuits

81,000 customers removed from scope from exceptions and switching protocols

64 Community Resource Centers available

**AERIAL FIRE SUPPRESSION SUPPORT**

Contributed $18 million for the creation of the quick reaction force of the world’s largest helitankers

Used on more than 50 fires in 2021, helping to suppress fires in its early stages

---

1. A wildfire directly causing one or more deaths, damaging or destroying more than 500 structures, or burning more than 140,000 acres of land
2. Though March 31, 2022
3. Based on 2021 weather and fuel conditions
• A tool of last resort used during dangerous fire conditions (weather and fuels)

• De-energizing lines to prevent a spark from our equipment starting a significant wildfire

• Primarily impacts circuits in high fire risk areas

• Use of multiple methods to notify customers and partners in affected areas before, during and after a PSPS event

• In 2021, continued PSPS improvements and reduced frequency, scope and duration of PSPS
REDDUCING THE NEED FOR PSPS
2021 ACHIEVEMENTS AND 2022 PLANS

**Insulated Wire**
- Replaced an additional 1,500 miles of bare wire with insulated wire; 700 miles of expedited grid hardening to raise PSPS threshold prior to peak wind season. Plan to replace 1,100 miles in 2022; 270 miles of expedited grid hardening.

**Segmentation**
- Installed 23 additional remote-controlled sectionalizing devices to segment and isolate circuits during PSPS. Plan to add 15 devices in 2022.

**Weather Stations**
- Installed 400 additional weather stations for improved forecasting and accuracy of PSPS operations. Plan to add 150 weather stations in 2022.

**Switching Protocols**
- Removed 81,000 customers from PSPS scope through exceptions and switching protocols.

**Operational Protocols**
- Utilized up-to-date information on ground conditions (e.g., lack of vegetation) to assess wildfire threat and the need for PSPS.
## 2021 PSPS EVENTS

### Service Area Compared to 2020

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Customers Interrupted</th>
<th>Circuit Interruptions</th>
<th>Customer Minutes of Interruption</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020 Fire Season</td>
<td>~348K</td>
<td>~584</td>
<td>~388M</td>
</tr>
<tr>
<td>2021 Fire Season</td>
<td>~85K</td>
<td>~124</td>
<td>~105M</td>
</tr>
<tr>
<td>Delta</td>
<td>↓76%</td>
<td>↓79%</td>
<td>↓73%</td>
</tr>
</tbody>
</table>

### Los Angeles County Compared to 2020

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Customers Interrupted</th>
<th>Circuit Interruptions</th>
<th>Customer Minutes of Interruption</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020 Fire Season</td>
<td>~87K</td>
<td>~25</td>
<td>~97M</td>
</tr>
<tr>
<td>2021 Fire Season</td>
<td>~10K</td>
<td>~14</td>
<td>~15M</td>
</tr>
<tr>
<td>Delta</td>
<td>↓89%</td>
<td>↓44%</td>
<td>↓85%</td>
</tr>
</tbody>
</table>

85% REDUCTION IN CUSTOMER MINUTES OF INTERRUPTION IN LOS ANGELES COUNTY
EXPEDITED GRID HARDENING
ON CIRCuits IMPACTED BY PSPS IN LOS ANGELES COUNTY

Completed in 2021

• Expedited installation of*:  
  - 243 miles of insulated wire  
  - 6 sectionalizing devices  
  - 3 weather stations  
• Removed 7 circuits and 4 circuit segments from PSPS consideration  
• Raised PSPS wind threshold on 9 circuits

*Note: Number of total installed on all circuits in the county may be higher

Plans for 2022

• Expedite installation of:  
  - 82 miles of insulated wire  
  - 1 weather station  
• Raise PSPS wind threshold on 5 circuits

Target Completion Date:  
Oct. 1, 2022
EXAMPLE OF REDUCING THE NEED FOR PSPS

Circuit: Julius

Community: Santa Clarita/Canyon Country

Planned Work:
• Replace 2.2 miles of existing overhead wire with new insulated wire
• Implement operational protocols to raise PSPS windspeed thresholds

Expected Completion Date:
• 10/1/2022

Expected Improvements:
• 100% reduction in customer outage time, assuming the same weather conditions in 2020 and 2021
EXPECTED IMPROVEMENTS

With the implementation of our plans this year, we expect to see a **91% reduction in customer outage time** across these PSPS impacted circuits in Los Angeles County communities compared to 2020 and 2021, assuming the same weather conditions.

![Customer Outage Time by Circuit](chart)

**For circuit details and status, visit:** [sce.com/pspsenhancements](sce.com/pspsenhancements)

Updated: 05-02-2022

1) PSPS impacted circuits are circuits that have experienced one or more PSPS related outages in 2019-2021
2) Customer outage time is measured as total Customer Minutes of Interruption (CMI)
3) Bouquet, Conejo, Vicasa, and Whizzin calculations are in progress, so an estimated 75% improvement is shown (based on completed circuit calculation average improvement)
4) The Calgrove planned work is only a weather station for which benefits cannot be calculated
PSPS COMMUNICATIONS

Notifications
• SCE provides PSPS notifications through various communication channels
  • SCE Account Holders (email, text and voice call)
  • Address Level Alerts
• Sign up to stay informed before, during and after a PSPS event

SCE Outage Map
• Consolidated outage map that incorporates PSPS outages
Services offered: information, charging of mobile devices, assistive technology/medical devices, PSPS outage alert enrollment support, access to water, light snacks, ice and ice vouchers, restrooms, and small insulated bags to keep medication cool

Translations services for over 120 languages including American Sign Language (ASL)

Partnered with 211 to help customers with Access and Functional Needs (AFN) develop a resiliency plan and enroll in eligible assistance programs

211 provides specialized referrals for customers with AFN experiencing PSPS. Services include connecting customers to shelf-stable food, hot meal delivery, transportation and/or temporary shelter

SCE will improve communication methods, including videos utilizing ASL for marketing and PSPS notifications

Critical Care Backup Battery program and the In-Event Battery Loan pilot provide eligible customers with a portable backup battery to power assistive technology/medical devices during a PSPS event

Rebates on portable batteries and generators for customers residing in high fire risk areas on marketplace.sce.com
Website: sce.com/wildfire
Energized by Edison Stories & Videos: edison.com/wildfire-safety
Email: wildfireoutreach@sce.com
Social Media: @SCE on Twitter & Facebook
SCE Customer Support: 1-800-655-4555

LEARN MORE
• Visit our website to learn more about our wildfire safety efforts and Public Safety Power Shutoffs (PSPS)
• Provide feedback through the survey

SIGN UP
• PSPS alerts
• SCE’s Medical Baseline program
• SCE programs and rebates

BE PREPARED
• Be prepared with a safety preparedness plan, some basic supplies and advance planning
• Power outage tips
ADDITIONAL RESOURCES
Wildfire Mitigation Activities

SERVICE AREA

2021 Year End Progress Report
Data as of 12/31/21

Distribution Equipment Inspections
- 2021 Completed/Target: 179,600/163,000 inspections
- Completed Since 2018: 764,000+ inspections

Transmission Equipment Inspections
- 2021 Completed/Target: 20,800/16,800 inspections
- Completed Since 2018: 106,900+ inspections

Insulated Wire (Covered Conductor)
- 2021 Completed/Target: 1,500/1,000 circuit miles installed
- Completed Since 2018: 2,900+ circuit miles installed

Fast-Acting Fuses
- 2021 Completed/Target: 350/330 fuses installed or replaced
- Completed Since 2018: 13,300+ fuses installed or replaced

Hazard Tree Management
- 2021 Completed/Target: 131,400/120,000 trees assessed
- Completed Since 2018: 359,900+ trees assessed

Weather Stations
- 2021 Completed/Target: 400/375 weather stations installed
- Completed Since 2018: 1,460+ weather stations installed

Cameras currently provide visibility to about 50% of our high fire risk areas (HFRA) and the planned additional cameras in 2022 and beyond will increase coverage to nearly all of HFRA
- Completed Since 2018: 166 cameras installed

Aerial Fire Suppression Resources

Critical Care Backup Battery
- 2021 Completed: 6,000/3,600 batteries provided to eligible customers
- Completed Since July 2020: 6,740+ batteries provided to eligible customers

Community Resource Centers
- 64 sites available

Community Crew Vehicles
- 8 vehicles available

SCE contributed $18 million to support the creation of a quick reaction force of aerial firefighting assets across counties in SCE’s service area to coordinate and reach wildfires in their early stages. These unique water and fire retardant dropping helicopters have the capability to operate day and night.
Wildfire Mitigation Activities
LOS ANGELES COUNTY

2021 Year-End Progress Report
Data as of 12/31/21

SCE’s service area covers about 85% of Los Angeles County. About 382,500 customer accounts are served by circuits in high fire risk areas.

SCE tracks wildfire initiative progress by SCE districts and extrapolates to the county level as a reasonable approximation. There may be additional circuit miles of covered conductor installed due to fire restoration work.

<table>
<thead>
<tr>
<th>Wildfire Mitigation Activities</th>
<th>2021</th>
<th>SINCE 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISTRIBUTION EQUIPMENT INSPECTIONS</td>
<td>42,516 inspections</td>
<td>207,585 inspections</td>
</tr>
<tr>
<td>TRANSMISSION EQUIPMENT INSPECTIONS</td>
<td>4,633 inspections</td>
<td>23,537 inspections</td>
</tr>
<tr>
<td>COVERED CONDUCTOR</td>
<td>257 circuit miles installed</td>
<td>566 circuit miles installed</td>
</tr>
<tr>
<td>FAST-ACTING FUSES</td>
<td>87 fuses installed or replaced</td>
<td>3,405 fuses installed or replaced</td>
</tr>
<tr>
<td>SECTIONALIZING DEVICES</td>
<td>6 devices installed</td>
<td>26 devices installed</td>
</tr>
<tr>
<td>HAZARD TREE MANAGEMENT</td>
<td>17,877 trees assessed</td>
<td>24,081 trees assessed</td>
</tr>
<tr>
<td>WEATHER STATIONS</td>
<td>112 weather stations installed</td>
<td>378 weather stations installed</td>
</tr>
<tr>
<td>HIGH-DEFINITION WILDFIRE CAMERAS</td>
<td>56 cameras installed</td>
<td></td>
</tr>
<tr>
<td>COMMUNITY RESOURCE CENTERS</td>
<td>15 sites available</td>
<td></td>
</tr>
<tr>
<td>COMMUNITY CREW VEHICLES</td>
<td>8 vehicles available throughout SCE’s service area</td>
<td></td>
</tr>
</tbody>
</table>

Map 1. High Fire Risk Areas

Tier 2 – Elevated Fire Threat
Tier 3 – Extreme Fire Threat
SCE Service Area
County Lines

Los Angeles

SCE’s service area covers about 85% of Los Angeles County. About 382,500 customer accounts are served by circuits in high fire risk areas.
**Map 2. Situational Awareness**

- **Weather Stations**: 378 weather stations installed. Visit sce.com/weatherstations for real-time weather data.
- **HD Wildfire Cameras**: 56 high-definition wildfire cameras installed. Visit alertwildfire.org to view the live camera feeds.
HELPFUL INFORMATION & RESOURCES

SCE Wildfire Webpage – sce.com/wildfire

SCE Notifications
• Sign up for PSPS alerts – sce.com/pspsalerts
• Sign up for the Energized by Edison Wildfire Mitigation Newsletter – energized.edison.com/newsletter

Situational Awareness
PSPS maps and information – sce.com/pspss
• PSPS decision making – sce.com/pspdsm
• Role of weather in PSPS – sce.com/fireweather
• CPUC wildfire maps – ia.cpuc.ca.gov/firemap/
• Wildfire cameras – alertwildfire.org
• Weather stations – sce.com/weatherstations

Preparedness
• SCE emergency preparedness – sce.com/beprepared
• CAL FIRE preparedness – readyforwildfire.org

Vegetation Management
• Vegetation Management – sce.com/safety/power-lines; contact 1-800-655-4555 or safetrees@sce.com

Customer Programs & Rebates
• SCE Customer Programs & Resources – sce.com/customerresources
• SCE Marketplace (rebates and programs) – marketplace.sce.com
• SCE Medical Baseline Program – sce.com/medicalbaseline
• Self Generation Incentive Program (SGIP) – sce.com/sgip or selfgenca.com
• SCE Customer Support: 1-800-655-4555

Community Meetings
• Join SCE’s wildfire safety community meetings – sce.com/wildfiresafetymeetings

Energized by Edison
• Stories and videos on SCE’s wildfire mitigation efforts and PSPS – edison.com/wildfire-safety