
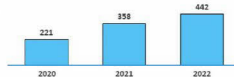
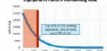




**Public Safety
Long Term Incentive Plan (LTIP)
Target Setting**

January 5, 2021



Evolution of the LTIP metric from units of work completed to amount of risk being reduced

| | 2020-2022 LTIP Plan | 2021-2023 LTIP Plan |
|--|---|--|
|  System Hardening | <ul style="list-style-type: none"> Risk Exposure - Count of circuit miles system hardening in High Fire Threat Districts (HFTD) and High Fire Risk Areas (HFRA). Goal was "1,021 circuit miles over 3 years; 235 miles hardened YTD in 2020"  | <ul style="list-style-type: none"> Risk Exposure - Count of circuit miles system hardened in the HFTD and HFRA Risk Profile - 80% of system hardening miles have to be highest risk miles; highest risk miles include - 1) top 20 % of the risk buydown curve; 2) fire rebuild and; 3) PPS mitigation miles Risk Effectiveness - Prioritizes higher risk reduction mitigation options (Undergrounding and Line removals)  |
|  Substation Enablement | <ul style="list-style-type: none"> Number of substations out of possible 64 substations that are "energizable" during a Transmission-Level PSPS event 62 high priority substations are now operationally ready within 48 hours (LTIP 3-yr 2.0 target = 50 substations) | <ul style="list-style-type: none"> Replace the Substation Enablement metric for the 2021-2023 LTIP Period with EVM Risk Reduction Public Safety Metric. Rational: <ul style="list-style-type: none"> 3 Year target has been achieved Improved weather forecasting capabilities reduces the criticality of number of substations needed to reduce PSPS impact |
|  Enhanced Vegetation Management (EVM) | <ul style="list-style-type: none"> No metric was established for EVM | <ul style="list-style-type: none"> Risk Exposure - Count of EVM miles worked in the HFTD and HFRA Risk Profile - 80% of EVM miles worked in the top 20% of the HFTD's includes fire impacted areas Risk Effectiveness - Execute work consistent with defined EVM scope |



Why System Hardening and Enhanced Vegetation Management?

System Hardening (SH) and Enhanced Vegetation Management (EVM) focus on mitigation of potential wildfire risk from Distribution Overhead Assets, which have resulted in a significantly higher number of ignitions (nearly 90% of the total CPUC Reportable ignitions from 2015 – 2020 YTD)

- Distribution assets represent high ignition risk due to a combination of high exposure area (overhead assets traversing HFTDs), proximity to risk factors (vegetation), and intrinsic asset characteristics
- SH and EVM mitigation work focus on mitigating these risk factors on Distribution Assets and are key mitigation programs to continue addressing potential wildfire risk

| Initiating Cause | 2015 - 2020 YTD ¹ CPUC Reportable Ignitions in HFTD | | Estimated Ignitions per 1,000 Circuit Miles in HFTD ² | |
|------------------------|--|--------------|--|--------------|
| | Distribution | Transmission | Distribution | Transmission |
| Equipment – PG&E | 217 | 30 | 8.5 | 5.4 |
| Vegetation | 305 | 11 | 11.9 | 2.0 |
| All Other ³ | 195 | 34 | 7.6 | 6.1 |

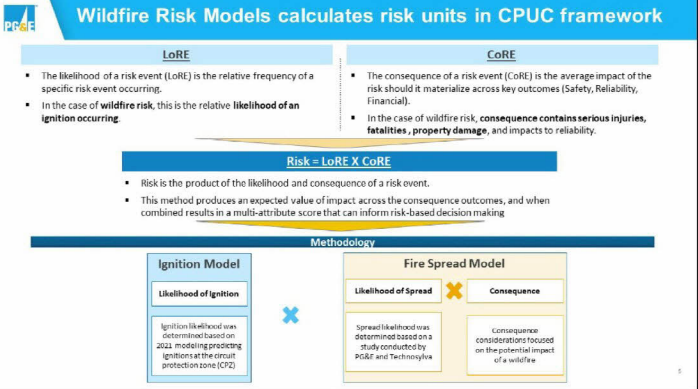
For Equipment-driven ignitions, the Distribution ignitions per Mile rate is 1.6x greater than Transmission

For Vegetation-driven ignitions, the Distribution rate is 6x greater than Transmission

1. YTD represents data as of the end of September, 2020
 2. Circuit mileage in HFTD areas source: 2020 Safety Plan – 25,998 of distribution overhead mileage in HFTD areas, 9,542 of transmission overhead mileage
 3. Other includes ignitions primarily driven by 3rd Party and Animal

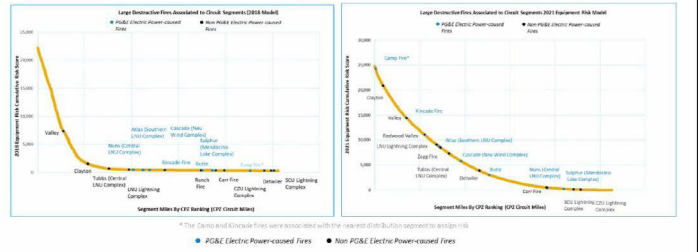
Risk Model and Risk Quantification

1/20/2020





Risk Profile Curve for the 2018 vs. 2021 Equipment Risk Model

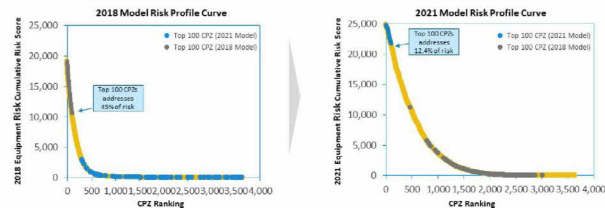


2021 Risk Model improves prediction of large destructive fires



Risk models provide risk profile curves to guide workplan

The risk profile curve shows *the amount of risk that can be addressed* with every subsequent mile within a Circuit Section or CPZ that is mitigated. This view illustrates the relative magnitude of risk associated with the top 100 CPZs and the visualization highlights the consolidation of risk by CPZ as you move down the prioritization list.

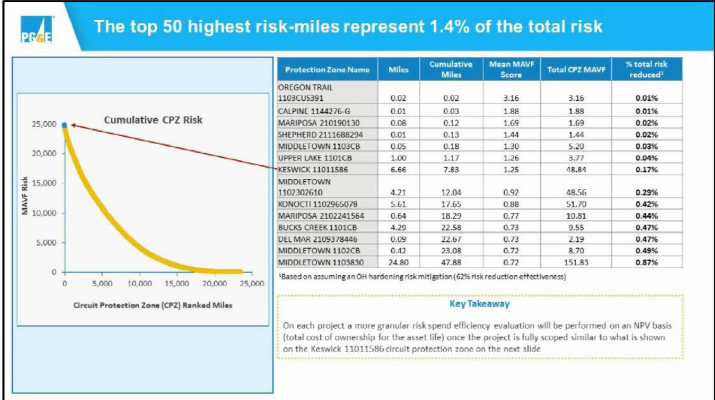


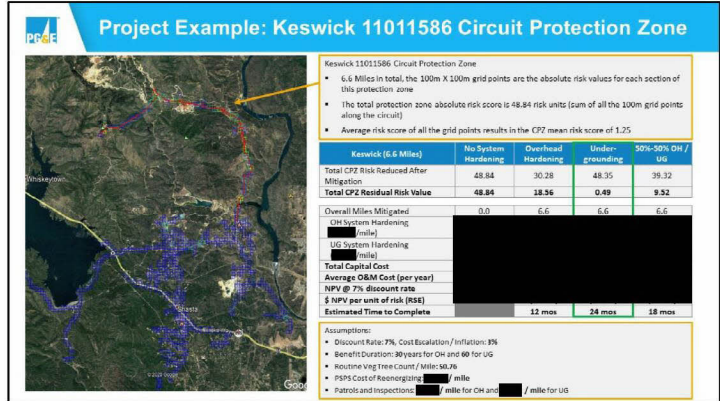
The improvement in the Risk Model results in a significant shift in the highest risk circuit protection zones

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Project Example

© 2025





Target Setting

H. Stevens

System Hardening

Conditions

Condition 1: 80%¹ of system hardening miles have to be highest-risk miles over the three-year period or LTIP is 0

Risk Profile (Highest Risk Miles defined as)

1. Top 20%² of risk buydown curve
2. Fire rebuild miles
3. PPS mitigation miles

Condition 2: Minimum percentage of miles mitigated with either Line Removal or Undergrounding over the three-year period or LTIP is 0

Risk Effectiveness

- 10% of Undergrounding or Line Removal work in the System Hardening project portfolio³

Risk Exposure

- Count of circuit miles system hardened in the HTD and HFRA

System Hardening Targets (Risk Miles)

| | LTIP 0.5 | LTIP 1.0 | LTIP 2.0 |
|-----------|----------|----------|----------|
| 2021 | 180 | 199 | 208 |
| 2022 | 423 | 464 | 485 |
| 2023 | 423 | 464 | 485 |
| 2021-2023 | 1,026 | 1,127 | 1,178 |

1. Basis of the 80% is to allow for operational execution considerations including permitting, weather related access, and mob/demob efficiencies
2. Basis of the top 20% correlates to ~70% of the risk on the risk buydown curve
3. Risk reduction effectiveness for Overhead Hardening is estimated at 62% and Undergrounding or Line Removal is estimated at 99%

System Hardening targets are set based on 2021 risk miles and program funding assumptions

Program Funding

- Forecast of [redacted] and [redacted] Mitigation capital spend in 2021 and 2022, respectively, consistent with the Proposed Decision Revision for the 2020-2022 GRC. 2023 forecast escalates 2022 by 10%.

Unit Costs

- Assume [redacted] circuit miles of Overhead SH work and [redacted] for Underground work

Program Duration

- Execution of the 13-year plan focusing on top 20% circuit protection zones by 2032

System Hardening LTIP Targets

| | LTIP 0.5 | LTIP 1.0 | LTIP 2.0 |
|-----------|----------|----------|----------|
| 2021 | 180 | 199 | 208 |
| 2022 | 423 | 464 | 485 |
| 2023 | 423 | 464 | 485 |
| 2021-2023 | 1,026 | 1,127 | 1,178 |

Targets are miles of system hardening work for specific risk-prioritized work

- The total mileage of the proposed 2021 Project Portfolio was set as the threshold goal (LTIP 0.5) for 2021
- LTIP 0.5 goal in 2022 reflects escalation of program funding level; the 2023 LTIP 0.5 goal is set equal to the 2022 level based on the 2023 GRC funding level forecast
- The target and stretch goals (LTIP 1.0, 2.0) were set as 10% and 15% higher, respectively

[redacted] includes scoping and engineering costs for future system hardening projects beyond 2021 and additional minor capital spend for other Wildfire Mitigation Programs

Enhanced Vegetation Management (EVM)

Conditions

Condition 1: 80%¹ of EVM miles have to be highest-risk miles over the three-year period or LTIP is 0

Risk Profile (Highest Risk Miles defined as)

- Top 20%² of risk model buydown curve
- Fire impacted miles

Risk Effectiveness

- Execute work consistent with defined EVM scope
 - Achieve 12' recommended radial clearance
 - Access viable potential trees including high risk species
 - Remove overhangs above and within 4 feet of power lines
 - Mitigate vegetative fuels under and adjacent to powerlines on targeted basis

Risk Exposure

- Count of EVM miles worked in the HFTD and HFRA

EVM Targets (Risk Miles)

| | LTIP 0.5 | LTIP 1.0 | LTIP 2.0 |
|-----------|----------|----------|----------|
| 2021 | 1,800 | 1,890 | 2,070 |
| 2022 | 1,800 | 1,890 | 2,070 |
| 2023 | 1,800 | 1,890 | 2,070 |
| 2021-2023 | 5,400 | 5,670 | 6,210 |

1. Basis of the 80% is to allow for operational execution considerations including permitting, weather-related access and, customer approvals
 2. Basis of the top 20% correlates to ~85% of the risk on the risk buydown curve



EVM targets are set based on work to be completed over the remaining twelve years of the program

Program Duration

- Assumes execution of the 12-year Enhanced Vegetation Management Plan (2021-2032)
- Evaluating viability of 10-year pace (2021-2030)

Program Funding

- Forecast of [redacted] and [redacted] spend on EVM program in 2021, 2022 and 2023 respectively (in alignment with POR)

Unit Costs

- Assumes [redacted] per miles of EVM work

Enhanced Vegetation Management LTP Targets

| | LTP 0.5 | LTP 1.0 | LTP 2.0 |
|-----------|---------|---------|---------|
| 2021 | 1,800 | 1,890 | 2,070 |
| 2022 | 1,800 | 1,890 | 2,070 |
| 2023 | 1,800 | 1,890 | 2,070 |
| 2021-2023 | 5,400 | 5,670 | 6,210 |

Targets are miles of EVM work for specific risk-prioritized work.

- The total mileage of the proposed 2021 Project Portfolio was set as the threshold goal (LTP 0.5) for 2021
- The target and stretch goals (LTP 1.0, 2.0) were set as 5% and 15% higher, respectively



Governance and Oversight

Wildfire Risk Governance Committee

- System Hardening project lists (by CPZ) consistent with the Target Setting methodology will be formally approved annually by the Chief Risk Officer
- Enhanced Vegetation Miles (by CPZ) consistent with the Target Setting methodology will also be formally approved annually by the Chief Risk Officer

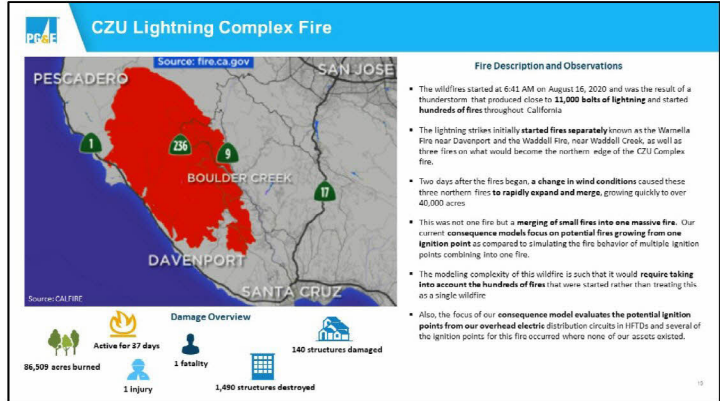
PG&E Board – SNO and Compensation Committees

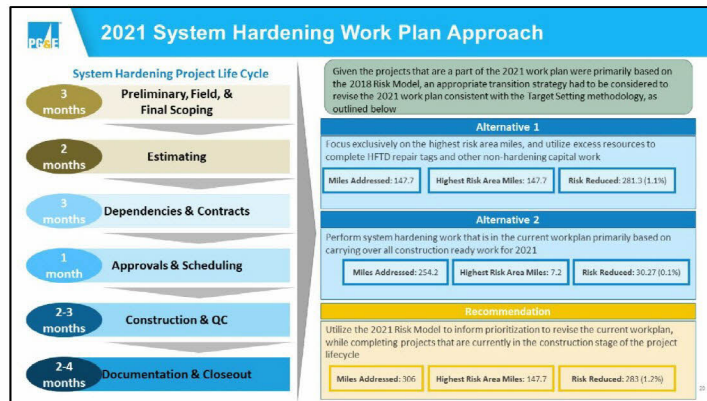
- Annual submission of a) System Hardening project list and b) specific locations of the Enhanced Vegetation Management miles to the SNO and Compensation Board Committees by the Chief Risk Officer
- Quarterly progress updates on plan vs. actual for both System Hardening and Enhanced Vegetation Management will be submitted to the SNO and Compensation Board Committees by the Chief Risk Officer

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Appendix

11/20/2014





Selected list of most destructive fires in the past thirty years

| Fire Name | Cause | Date | County | Area | Structures Damaged | Deaths | PG&E Electric Power caused Fire? |
|---|---------------------|---------|---|-----------|--------------------|--------|----------------------------------|
| Yupond - Commercial | Arson | Oct 05 | Alameda | 2600 | 20000 | 28 | No |
| Langley - Warehouse | Human Related | Oct 09 | Alameda | 28,000 | 350 | 1 | No |
| Chico - Electrical | Human Related | Oct 00 | San Diego | 272340 | 2800 | 15 | No |
| Old - Human Related | Human Related | Oct 00 | San Bernardino | 91,281 | 1,000 | 9 | No |
| Levin - Power Line | Human Related | Oct 00 | San Diego | 181,960 | 1,000 | 2 | No |
| Orange - Electrical | Human Related | Aug 15 | Los Angeles | 76,000 | 1,000 | 4 | No |
| Butte - Power Line | Power Line | Sep 10 | Alameda | 70,000 | 700 | 2 | Yes |
| Clayton - Arson | Arson | Aug 06 | Yuba | 5,500 | 500 | 0 | No |
| Penning - Arson | Arson | July 17 | Mariposa | 63,628 | 331 | 0 | No |
| Labon - Electrical | Electrical | Oct 17 | Napa and Sonoma | 38000 | 3300 | 20 | No |
| Blair - Power Line | Power Line | Oct 17 | Sonoma | 15,000 | 1,200 | 3 | Yes |
| Alisa - Power Line | Power Line | Oct 17 | Napa and Sonoma | 31,000 | 700 | 6 | Yes |
| Sanborn/Alisa - Power Line | Power Line | Oct 17 | San Diego | 98,000 | 600 | 9 | Yes |
| Cassock (Raw Wood Complex) - Power Line | Power Line | Oct 17 | Yuba | 5,000 | 264 | 4 | Yes |
| Wright - Power Line | Power Line | Oct 17 | Yuba | 2,000 | 160 | 0 | Yes |
| Thomas - Power Line | Power Line | Dec 17 | Ventura, Santa Barbara | 200,000 | 1,000 | 2 | No |
| Can - Human Related | Human Related | Jul 18 | Alameda, Contra Costa | 220,000 | 1,000 | 8 | No |
| Camp Fire - Power Line | Power Line | Nov 18 | Butte | 330,000 | 1800 | 80 | Yes |
| Woolsey - Under Investigation | Under Investigation | Nov 18 | Ventura | 98,000 | 1,400 | 8 | No |
| Wineville - Power Line | Power Line | Oct 18 | Sonoma | 77,700 | 370 | 0 | Yes |
| Redline - Human Related | Human Related | Nov 18 | Del Norte | 2,500 | 0 | 0 | No |
| August Complex - Under Investigation | Under Investigation | Aug 20 | Maricopa, Humboldt, Trinity, Tehama, Glenn, Butte, Colusa | 1,000,000 | 600 | 1 | No |
| North Complex - Under Investigation | Under Investigation | Aug 20 | Butte, Plumas, Yuba | 1,000,000 | 2,300 | 15 | No |
| UKL Lightning Complex - Under Investigation | Under Investigation | Aug 20 | Lake, Nevada, Wash, Colusa | 800,000 | 1,400 | 6 | No |
| CDL Lightning Complex - Under Investigation | Under Investigation | Aug 20 | San Diego, San Mateo | 88,500 | 1,400 | 1 | No |
| CDL Lightning Complex - Under Investigation | Under Investigation | Aug 20 | San Bernardino, Inyo, Mono, Calaveras | 390,000 | 300 | 0 | No |
| Green Fire - Under Investigation | Under Investigation | Sep 20 | Napa, Sonoma | 47,000 | 1,000 | 0 | No |
| Creek Fire - Under Investigation | Under Investigation | Sep 20 | Fresno, Modoc | 377,000 | 800 | 0 | No |

PG&E Electric Power caused by PG&E Electric Power lines
Fire caused by PG&E Electric Power lines