

**From:** [Richard Lam](#)  
**To:** [McCartney, Tyson](#); [Daleo, Michael](#); [Terzich, Christina P](#); [Inglin, Damian](#); [Webb, Jimmie](#); [Veihl, Richard K](#); [White, Ryan](#)  
**Subject:** RE: (External):RE: Hold IOU WUI Research Coordination - Fuel Clearing and Modification Study  
**Date:** Thursday, December 7, 2023 11:58:13 AM  
**Attachments:** [image00001.png](#)  
[IOU Questionnaire.docx](#)

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<!--[if lte mso 15 || CheckWebRef]-->

[Richard Lam](#) has shared a OneDrive for Business file with you. To view it, click the link below.

 [IOU Questionnaire.docx](#)

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Hi Folks,

I apologize as I have not gotten the answers back from the SCE SME's at this time. I have collected all the records from SDG&E and PG&E's emails and placed it in this document for us to edit/review accordingly and as soon as I have the SCE input, we can go ahead and do that. Again apologize for dropping the ball here.

Best regards,

**Richard Lam**

Technology & Initiative Management  
Asset Strategy & Planning – Wildfire Safety  
Cell: [909.824.4467](#)

**From:** [McCartney, Tyson](#) <[tyson.mccartney@pge.com](mailto:tyson.mccartney@pge.com)>

**Sent:** Thursday, December 7, 2023 11:24 AM

**To:** [Daleo, Michael](#) <[MDaleo@sdge.com](mailto:MDaleo@sdge.com)>; [Terzich, Christina P](#) <[CTerzich@sdge.com](mailto:CTerzich@sdge.com)>; [Richard Lam](#) <[Richard.Lam@sce.com](mailto:Richard.Lam@sce.com)>; [Inglin, Damian](#) <[DSI4@pge.com](mailto:DSI4@pge.com)>; [Webb, Jimmie](#) <[JWebb@sdge.com](mailto:JWebb@sdge.com)>; [Veihl, Richard K](#) <[RVeihl@sdge.com](mailto:RVeihl@sdge.com)>; [White, Ryan](#) <[RWhite3@sdge.com](mailto:RWhite3@sdge.com)>

**Subject:** (External):RE: Hold IOU WUI Research Coordination - Fuel Clearing and Modification Study

**Classification:** Internal

Team,

Below are PG&E survey responses for discussion. Please note that I added two bonus questions.

Survey

1. What is the scope of your Fuels Management (FM) program (e.g., do you clear around structures, create fuel breaks adjacent to roads, or within easements)?
  - a. PG&E has two core programs that manage fuels in a manner that aligns with this question.
  - i. Vegetation Control (VC): Year-round maintenance of poles supporting non-exempt equipment as defined by the California Power Line Fire Prevention Field Guide

1. 10ftx8ft firebreaks are inspected and maintained with 1-3 visits per year based on surrounding site conditions.
2. Risk is assessed at each location (low or elevated) based on a standardized risk assessment
3. Bareground target/objective
- ii. Utility Defensible Space (UDS):
  1. Fuel modification to 50ft around select poles and towers.
  2. Break up vertical and horizontal continuity of fuels, removal of dead downed fuels, limbing lower canopy of trees and reduction of ladder fuels.
  3. Shaded Fuelbreak model to avoid adverse environmental impacts or conflict with Forest Practice Rules. Generally not resulting in tree removals
  - a. There are other programs that have similarities but regulatory drivers, process, procedures and clearances are variable
- i. Transmission Roads access and maintenance
- ii. IVM program for transmission ROWS
- iii. Fee Strip Management Program (weed abatement on PG&E owned property)
- iv. Wood Management for tree mortality and WMP mitigation programs
- v. Ad-hoc tags from T&D system inspections (GO 165)
  2. Do you perform FM on distribution and/or transmission facilities?
    - a. VC: Majority is targeted at Distribution but we have included Transmission Switches in SRA/FRA/HFTD/HFRA
    - b. UDS: Majority is targeted at Distribution but we have included Transmission Switches in SRA/FRA/HFTD/HFRA
  3. Do you perform radial ground clearances around structures and/or linear easement clearing?
    - a. Radial clearance for VC and UDS
  4. Is the FM work limited to HFTD/HRFA?
    - a. Program target SRA/FRA/HFTD/HFRA
  5. Is the FM work determined by a risk-based analysis?
    - a. VC schedule not risk model informed but standard requires initial clearing on all poles by fire season declaration date. Maintenance and Reclear cycles follow initial clearing
  6. Do you perform FM year-round?
    - a. VC's annual schedule begins in October and initial clearing carries into May/June. June-September targets maintenance and reclears for non-herbicide treatment locations (~40-60% of inventory, regionally varied)
  7. Do you limit FM work performed around poles/towers to just those subject to Public Resources Code 4292?
    - a. VC: Yes
    - b. UDS: Scope has varied since program start in 2021. First two years targeted mainly distribution poles including carrier poles. 2023 populations targeted equipment supporting poles and incorporated Transmission Switches and piloted maintenance at previously completed UDS locations.
  8. Do you have a targeted % of retained vegetation ground cover as part of your scope?
    - a. VC: No unless otherwise constrained or in alignment with exemptions in 14 CCR 1255

- b. UDS: no targeted percentages but the goal is to modify fuels avoid adverse environmental impacts or conflict with Forest Practice Rules. Generally, not resulting in tree removals.
- 9. Do you perform FM work on agency lands (e.g., USFS, BLM, State Park, Wildlife Refuge, Caltrans, tribal)?
  - a. VC: Yes, the program is compliance driven and requires work in all jurisdictions and ownership unless documented as a constraint
  - b. UDS: Workplans are generally unbiased to land ownership. Environmental review process or permissioning of work will identify potential constraints. The program is discretionary/optional
- 10. Do you experience environmental and/or permitting challenges with FM work?
  - a. VC: Yes
  - b. UDS: Yes
    - Both program experience limited work delays, scope adjustment or documented work limitations or restrictions and small subsets of the targeted populations
- 11. Do you have a targeted number of structures, acres to complete annually?
  - a. VC: Yes based on non-exempt equipment inventory verified annually by inspection
- i. 2023 initiated more robust integration of select exempt equipment~9-10k poles
  - b. UDS: Variable based on available funding
- i. 2021 ~5,500 locations (generally model driven identification and prioritization of work , limited projects from local requests)
- ii. 2022 ~ 7,500 locations (first full year, generally model driven identification and prioritization of work, limited projects from local requests)
- iii. 2023 ~150 risk model informed/2022 carry-over, ~650 Transmission Switches, ~480 maintenance locations. (Budget reduced for 2023 based on OEIS feedback and GRC programmatic adjustments)
- 12. Has your company performed any internal or third-party study on the application and efficacy of FM as it relates to scope and ignition mitigation?
  - a. For 2023, both VC and UDS location review has been integrated into incident investigations

PG&E Requested - Additional Questions/Discussion

- 13. How have you integrated maintenance into your FM program?
  - a. PG&E – Started initial maintenance of select work completed in 2021 to evaluate benefits, costs and need.
- 14. How does the program integrate management of annual grass and forb crops (flashy fuels)
  - a. Learnings pending from 2023 maintenance work, observations and experience.
  - b. Integrate customer agreements to improve longevity and benefits of initial work?

Thanks

**Ty McCartney**

Manager - Vegetation Asset Strategy & Analytics

Wildfire Risk Management

Pacific Gas and Electric Company

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*The measures included in this email are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.*

**From:** Daleo, Michael <[MDaleo@sdge.com](mailto:MDaleo@sdge.com)>

**Sent:** Tuesday, November 21, 2023 12:54 PM

**To:** Terzich, Christina P <[CTerzich@sdge.com](mailto:CTerzich@sdge.com)>; McCartney, Tyson <[tyson.mccartney@pge.com](mailto:tyson.mccartney@pge.com)>; Richard Lam <[Richard.Lam@sce.com](mailto:Richard.Lam@sce.com)>; Inglin, Damian <[DSI4@pge.com](mailto:DSI4@pge.com)>; Webb, Jimmie <[JWebb@sdge.com](mailto:JWebb@sdge.com)>; Veihl, Richard K <[RVeihl@sdge.com](mailto:RVeihl@sdge.com)>; White, Ryan <[RWhite3@sdge.com](mailto:RWhite3@sdge.com)>  
**Cc:** McCartney, Tyson <[TLMx@pge.com](mailto:TLMx@pge.com)>

**Subject:** RE: Hold IOU WUI Research Coordination - Fuel Clearing and Modification Study

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Greetings [Christina](#),

Please see below SDG&E's draft questionnaire related to our Fuels Management Program.

1. What is the scope of your Fuels Management (FM) program (e.g., do you clear around structures, create fuel breaks adjacent to roads, or within easements)?

The purpose of SDG&E's Fuels Modification Program is to reduce the risk of point source wildfire ignition in high fire risk areas, and to protect electrical infrastructure by reducing the intensity of wildfires originating outside the right-of-way. The Fuels Modification Program targets select distribution poles subject to Public Resources Code (PRC) 4292, high risk circuits, and low environmental/cultural impact. The scope of work includes thinning fifty (50) feet around select poles by reducing the vegetation cover to less than 30%, creating areas of separation between stands of woody vegetation, and removing fast-burning fuels like dry grasses and dead/down vegetation.

In addition to FM activities performed by the Vegetation Management Dept, SDG&E performs additional fuels management activities including: Fuels Grant Program (administered by Fire Science and Climate Adaptation Dept) - provides grant funding to local tribes and agencies for the creation of fuels breaks adjacent to roads and utility easements; and Transmission corridor fuels break (administered by Land Services Dept) – removal of vegetation within transmission corridors to reduce fuels through mechanical thinning and the use of goats. The responses below are specific to the Veg Mgmt Fuels Modification activities.

2. Do you perform FM on distribution and/or transmission facilities?

The Fuels Modification Program activities are performed almost exclusively on distribution poles.

3. Do you perform radial ground clearances around structures and/or linear easement clearing?

SDG&E performs radial ground clearances of 50ft around the distribution poles.

4. Is the FM work limited to HFTD/HRFA?

SDG&E's FM work is limited to the HFTD.

5. Is the FM work determined by a risk-based analysis?

The FM work is determined by a risk-based analysis which prioritizes poles within high risk circuits and wildfire risk modeling.

6. Do you perform FM year-round?

Typically, FM work is performed outside bird nesting season (September through

February); however, there are plans to expand the scheduling of this work throughout the calendar year following environmental review and protocols.

7. Do you limit FM work performed around poles/towers to just those subject to Public Resources Code 4292?

FM work is performed around poles subject to PRC 4292 where there is a higher relative ignition potential.

8. Do you have a targeted % of retained vegetation ground cover as part of your scope?

SDG&E’s target is to reduce vegetation ground cover to 30% or less, and to create 6 feet of lateral and 3 foot vertical separation between adjacent vegetation.

9. Do you perform FM work on agency lands (e.g., USFS, BLM, State Park, Wildlife Refuge, Caltrans, tribal)?

Currently, SDG&E performs FM primarily on privately-owned property, and select locations on BLM and tribal land.

10. Do you experience environmental and/or permitting challenges with FM work?

SDG&E conducts an annual internal environmental and cultural review of selected FM sites to avoid impacting sensitive areas. Fuels modification activities on USFS, State Parks, Caltrans, and military bases are currently excluded due to agency restrictions or permitting/mitigation.

11. Do you have a targeted number of structures, acres to complete annually?

Under its Wildfire Mitigation Plan, SDG&E targets to complete Fuels Modification activities on 500 structures annually.

12. Has your company performed any internal or third-party study on the application and efficacy of FM as it relates to scope and ignition mitigation?

SDG&E performed a third-party study on the application and efficacy of its Fuels Modification activity, however, the results were mainly inconclusive due to the relative lack of ignition data.

Happy Thanksgiving all!

Thanks,

**Michael Daleo**

*Vegetation Management WMP Manager*

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-----Original Appointment-----

**From:** Terzich, Christina P <[CTerzich@sdge.com](mailto:CTerzich@sdge.com)>

**Sent:** Thursday, November 9, 2023 2:16 PM

**To:** tyson.mccartney; Richard Lam; Inglin, Damian; Webb, Jimmie; Daleo, Michael; Veihl, Richard K

**Cc:** McCartney, Tyson

**Subject:** Hold IOU WUI Research Coordination - Fuel Clearing and Modification Study

**When:** Occurs every 2 week(s) on Thursday effective 11/9/2023 until 12/29/2023 from 1:00 PM to 2:00 PM (UTC-08:00) Pacific Time (US & Canada).

**Where:** Microsoft Teams Meeting

Research Initiation Form

Cal Poly's Role: Cal Poly is the lead/prime

Sponsor: Investor-Owned Utilities Consortium Sponsor Contact: [tyson.mccartney@pge.com](mailto:tyson.mccartney@pge.com) Prime  
Sponsor: Investor-Owned Utilities Consortium Proposal Deadline: Fri, 12/01/2023 Pass-through  
Entity: Investor-Owned Utilities Consortium Working Proposal Title: Optimum Vegetation Clearance  
to Protect Electrical Transmissions & Distribution Towers/Poles Request for Proposal (RFP) /  
Solicitation Document Type: Other Information RFP / Solicitation Other Information:  
Current Practice

- Brush clear 10' from the base of pole, in line with compliance requirement
  - Each year, proactively select 500 high risk poles to perform fuels management for a 50' radius
- Goal

- Determine optimum brush clearing/fuel management distance(s) to mitigate ignition risk
- o Different conditions and/or types of pole mounted equipment may have different optimum clearance distances

#### Request for Support

- Investigate what, if any, research has previously been conducted related to:
  - o Brush clearing around utility poles
  - o Optimum brush clear distance(s) and corresponding parameters
  - o Historic ignition distances from utility poles
  - o Theoretical ignition distances from utility poles
  - o Projection distances associated with pole mounted equipment failure, may vary depending on equipment type
- Initiate a work plan to fill any data gaps in the above with the WUI leading the research

Action Items from 11/9/2023 Meeting:

Action Items. [Mike D](#) to prepare a veg/fuel management current practice questionnaire for each utility to fill out which will include SDG&E's responses. [Richard L](#) to update the current scope based on input from SCE SMEs based on the three topic areas that he outlined in the meeting. I will prepare an agenda for next meeting on Dec 7th and circulate ahead of time. Make sure to forward the meeting to all of the pertinent SMEs.

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