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Transmittal via email and through the Office of Energy Safety E-Filing System.

RE: WILLIAM B. ABRAMS COMMENTS ON THE UTILITY PROPOSED 2022 WILDFIRE MITIGATION PLAN UPDATES

INTRODUCTION

Since the PG&E Wildfires of 2017 and the establishment of the Wildfire Mitigation Plan Proceeding in October 2018 (R.18-10-007), I have put forward comments each and every year to the California Public Utilities Commission (CPUC) and our Investor Owned Utilities (IOUs). Within those comments, I have proposed specific risk management strategies, methodologies and tactics in an effort to ensure that no other families are forced to run from the flames of utility-caused wildfires. Indeed, I have been heartened to see some of these recommendations along with recommendations of other intervenors reflected within subsequent WMPs including those proposed for 2022.

However, while it is true that these strategy documents have grown in size and scope each year, it is also true that these plans have not kept up with the growing risks from utility-caused wildfires. As I look through the 2022 WMPs and compare those to prior years I believe we have fallen short due to the following two factors:

1. **Insufficient Risk Measurement and Management –** Utilities continue to look at risk reduction through too narrow of a lens rather than taking a "whole systems approach" and measuring complex and interdependent internal and external risk factors. Our IOUs focus almost exclusively on linear risks (risk of A factor causing ignition outcome B). In line with these measurement shortfalls, the WMPs tend to be tactical but NOT strategic. The unfortunate legislative and regulatory side effects of

this lack of measurement is that stakeholders debate the efficacy of tactics (exp. undergrounding vs. covered conductors vs. microgrids) rather than setting system wide risk reduction targets (exp. 10% YOY Risk Reduction). I have proposed remedies to this in prior comments and will not rehash them here. However, I do believe it would be prudent for the Office of Energy Infrastructure Safety (OEIS) to insist that IOUs identify the total and cumulative risk reduction achieved through their 2022 proposed risk reduction tactics.

2. **Misguided Focus on Financial Risk Avoidance** – Unfortunately, the proposed 2022 WMPs have moved away from their original intent to reduce wildfire ignitions and instead have been primarily leveraged by our Investor Owned Utilities to avoid financial liabilities (regulatory fines, criminal penalties, negative stock impacts). OEIS should push back against the efforts of the utilities to untie wildfire risks from investor risks through the misuse of these Wildfire Mitigation Plans. In an effort to remedy this core problem and within prior comments, I have suggested that the Commission and the Office of Energy Infrastructure Safety adopt policies and practices that tie IOU Return on Equity (ROE) to a "Return on Safety" (ROS) as bottom-line and complementary metrics. Unfortunately, we have seen in recent years that disconnected and insufficient regulatory fines along with certain legislative influences have undermined the original intent of the WMPs to become cohesive and comprehensive strategies to stop catastrophic wildfires.

COMMENTS

Through these comments, I will not reiterate and rehash the risk management methodologies and strategies that I have previously proposed as prudent remedies to address the growing wildfire risks. Instead, I will describe glaring deficiencies of the WMPs which include (1) an unwillingness to address and mitigate the causes to past catastrophic fires and (2) an unwillingness to pursue an integrated and sustainable wildfire mitigation strategy. These core deficiencies are clear across all of the 2022 WMP updates submitted by the major California Utilities. However, the Pacific Gas and Electric Company (PG&E) proposed 2022 Wildfire

Mitigation Plan is particularly problematic and should not be deemed as "reasonable" by the Office of Energy Infrastructure Safety.

Unfortunately, the defensive posture of PG&E and their primary focus on avoiding criminal and financial liabilities has caused them to largely put their head in the sand and claim plausible deniability with regards to this WMP update. PG&E putting forward this WMP and asking OEIS for approval is akin to an airline with a series of catastrophic airplane crashes and criminal convictions asking the FAA to certify them as safe before they have addressed the causes of past plane crashes. This is not reasonable. How many more catastrophic wildfires does PG&E need to cause before they step away from their "black swan" excuses and start to identify and remedy the causes of past fires? Before the 2018 PG&E Camp Fire there was the 2017 PG&E Honey Fire with some of the same causes and contributing factors. Before the 2019 PG&E Kincade Fire there was the 2017 PG&E Northern California Wildfires and the 2016 Sawmill Fire with many of the same causes and contributing factors. These are NOT "black swans" but common white swans that need to be specifically identified and remedied within the PG&E 2022 Wildfire Mitigation Plan if they are to be deemed reasonable by OEIS and approved by the commission.

Consider that on the same date that these WMP comments were due, Jill Ravich, Sonoma County DA clearly stated within her settlement announcement that PG&E operated recklessly and NOT reasonably with regards to the Kincade Fire. Subsequently, she did point out that the PG&E WMP was not final and that there was still time to make changes. However, this assumes that OEIS will consider the facts that the DA and CalFire investigations uncovered and expect that the PG&E WMP will address these failures. Will the commission and OEIS consider the clear evidence of a misguided PG&E WMP? Consider that among the extensive list of failures that caused the Kincade Fire, none are addressed within the proposed 2022 WMP. This is just one more example of how the PG&E WMP does not address the facts on the ground and their own failures. Of course, PG&E may want to point to their recent settlement as a way to avoid accountability for these lapses. However, OEIS should not consider PG&E's well-honed ability to negotiate away Kincade Fire and Dixie Fire criminal convictions as absolving them from their obligations to address these failures within their WMP. PG&E was able to settle the Kincade

Fire case and the Dixie Fire Case by financing the wildfire mitigation activities that are already their responsibility and by creating a system to bypass OEIS oversight responsibilities through financing new monitoring functions. These judicial and regulatory circumventions should necessitate more WMP scrutiny and not less.

As further evidence that the proposed PG&E WMP is unreasonable, please consider the attached transcripts from the February 9, 2022 and February 10, 2022 Kincade Fire pre-trial expert testimony along with the following matrix that maps the 39 expert-identified failures to glaring holes within the PG&E 2022 WMP:

Expert Testimony: Mr. Gary Uboldi, Fire Captain Specialist Peace Officer with the California Department of Forestry and Fire Protection who has investigated over 400 wildfires across his 20+ year career

Testimony Date: February 8, 2022 (See Attachment A: Pre-Trial Transcript)

#	**Expert Testimony/Evidence**	**WMP Gaps and Implications**	**Addressed in PG&E WMP?**
1	Pg. 54, line 17-21 "What caught my attention right off the bat was the isolators that were hanging in a vertical fashion off the tower. They were swinging back and forth significantly. I would say seven to eight feet back and forth…". Pg. 57, (lines 19-28) "if we just focus on those vertical insulator strings, did those move to the point where they were perpendicular to their current position? A. Yes. Q. They got all the way to perpendicular? A. They almost all the way to perpendicular. It was violently going out." Pg. 58, (lines 13-16) "I just want to make sure I understand you. And that movement that you observed, was that on just one of those three vertical insulator strings? A. On all three." Pg. 59 (lines 4-6) "I could see them all swinging in unison, and the insulators were swinging in unison with the wind."	Q: How has PG&E mitigated this to ensure that isolators are secured throughout their infrastructure and not swinging and causing sparks and catastrophic wildfires? Has PG&E made efforts to mitigate the swinging of vertical insulator strings now that this has been identified as a cause of catastrophic wildfire? What has PG&E changed in terms of their inspections and other mitigation activities to ensure this type of wildfire ignition never happens again?	NO: mentions insulators on pg. 150 as an asset and elsewhere and mentions insulator contamination on pg. 442 but does nothing to connect these assets to mitigation activities.

2	Pg. 60 (lines 12-17) "In regards to the spur ridge, we're going to have erratic winds that blow down and around the spur ridge causing eddy effects in there. Being that the wind is swirling around in that area, it may increase speed and intensity of the wind, make the direction of the fire behavior erratic and shift all over the place… It increased in intensity as I approached the tower, and becoming more and more exposed to the wind as I made my way out to the tower's location."	Q: How has PG&E mitigated these microclimate/wind effects by placing wind sensors at different elevations to pick up on these variations that contributed to Kincade Fire ignitions? Are wind sensors now placed closer to these towers to pick up these types of variations?	NO: Discusses "wind events" generally on pg. 99 and elsewhere but does nothing to connect this to mitigations for these causes.
3	Pg. 61 (lines 9-14, lines 18-20) "I was able to discern that it wasn't -- that the wires terminated at that pole. They didn't continue to the north. That only the other side, the far side continued to the north, and that these wires were terminated here at this location. They did not continue on… The termination points. They were cut here. They were cut or stopped here, here, and here. They didn't continue on, as the other sets."	Q: Has PG&E identified how they have mitigated these issues associated with line terminations? How does PG&E now ensure line terminations are secured and not causing similar fires?	NO: No discussion at all of termination points.
4	Pg. 67 (lines 3-5) "We knew something was up there but we couldn't -- it looked like a spaghetti of old wires"	Q: What mitigation has PG&E done to ensure old "spaghetti" wires like those indicated are not left dangling and causing fire risk across their infrastructure?	NO
5	Pg. 81 (line 1-2, 13-18) "We know that the wire was down for a while because due to oxidization and weathering… And weathering, oxidization, when we did pick it up there was nesting where it had been laying in the mud, and there was like a form built in the mud. So, it had been there for a significant time, at least through several rains."	Q: What operational practices and QA has PG&E incorporated into their risk mitigation to ensure old wires are not left abandoned on the ground around infrastructure?	NO
6	Pg. 83 (lines 5-12) "We believe once the fire progressed to the bottom of the canyon it then had the ability -- it turned and progressed upward, upslope with slope and made a hard run to the ridge line. And this was because it was shielded by the north wind. North wind would have been coming up over the top of that mountain and would be doing an eddy	Q: How has PG&E modified their vegetation management practices to accommodate slope as a factor that could lead to fire spread from their infrastructure? If a pole,	NO

	effect and pulling and drafting that fire all the way across."	tower or line segment is situated on a similar "upslope" how is PG&E mitigating the increased fire risk?	
7	Pg. 84 (lines 14-21) "Additionally, that's also a south-facing slope. So the fuel model on that side, the fuels on that side of the slope are going to have a lower water content or fuel moisture content then the fuels on the back side of that slope because the sun never touches it. So the plants on the back side of the slope are going to have a higher moisture content than the ones on the front side. They have also been preheated all day."	Q: Given these findings and the increased fire risk on "south-facing slopes", has PG&E modified their vegetation management practices to ensure this type of topography is treated differently or more regularly given the lower moisture content?	NO: Discusses topography generally on pg.88,92 and elsewhere but nowhere this particular effects and factors.
8	Pg. 85 (lines 9-14) "Additionally, with this type of fire, and it was ignited by sparks, we're not going to have one singular ignition point. We're going to have multiples. I use an example that if you took a grinder to metal you get a shower of sparks. It's going to be similar in nature."	Q: It is clear that the rust and neglect of the line caused a "shower of sparks." What has PG&E done to mitigate rust and corrosion on infrastructure that causes this shower effect with multiple ignition sources?	NO
9	Pg. 86 (lines 20-29) "Because the lack of fuel arrangement underneath the tower wasn't susceptible to fire. It wasn't support ignition. There was lack of available vegetation underneath the tower. Additionally, with the predominant wind coming out of the north and the height of the tower, when the embers were emitted from the top of the tower they were going to drift. They're extremely light, so they're going to want to carry in the wind. They're not going to drop directly to the ground underneath."	Q: Given this evidence that ember cast from transmission towers are "going to drift", what has PG&E done to alter their vegetation management practices around transmission towers? Where is this within their WMP?	NO
10	Pg. 96 (lines 18-21), Pg. 98 (lines 1-5) "What was odd about this configuration was that these ends were loose and there's nothing securing them, allowing them to have a substantial amount of movement back and forth. I had never seen that before… There's nothing holding them in place. Right now they're just dangling. Gravity is just holding	Q: What additional risk mitigation practices has PG&E implemented to ensure that jumpers are secured and not left "dangling" and susceptible to wind? Are rigid jumpers now more	NO

	them in that position. If the wind blows, they swivel, so allows this to swing back and forth."	often used? What added inspection criteria have been added so this never leads to another catastrophic fire again?	
11	Pg. 99 (lines 23-28) "9 and 10 was missing its cooling towers, which for the power plant to operate it needed cooling towers, which were large tubes that cool down the steam as it comes down, and then it has water that runs over redwood flats and basically reconstitutes the steam. That tower or that section of the building was missing…"	Q: How has PG&E mitigated these wildfire risks to ensure cooling towers are properly decommissioned or moth balled in response to these failures?	NO: Nowhere does it address cooling towers or these contamination risks.
12	Pg. 100 (lines 4-11) "It was steel, aluminum, I believe there was some copper, but there appeared to me they were recycling everything in there. All the metal off the facility. Piping, catwalks, stuff of that nature. Additionally, there was also vegetation that was growing up within the site, which being at other power plants, vegetation is a primary concern of fire spread to the power plants."	Q: Given this "primary concern," what added risk mitigation practices has PG&E implemented to address power plant vegetation management and metal recycling procedures?	NO
13	Pg. 111 (lines 5-14) "But then at 1/9, you saw another line break off, and that's the SMUD tap line that you described? A. Yes. Q. Did you follow it all the way to what you called, I believe, the Sonoma power plant? A. Yes. Q. Did you see it actually physically connected there? A. Yes."	Q: What risk mitigation has PG&E done to ensure decommissioned or moth balled lines are not energized and connected to power plants? How have inspection practices changed to ensure these failures are not repeated?	NO
14	Pg. 116 (lines 10-12) "Mr. Nolt believed it was, from what he could see, there was a possibility of low cycle fatigue." Pg. 128 (lines 1-3) "Did he confirm for you that there was low cycle fatigue that caused the break of the jumper? A. Yes, he did."	Q: Given that this "low cycle fatigue" was identified as a primary cause of the Kincade Fire, has PG&E reflected and corrected that issue within their WMP? Is added testing performed and/or different quality assurance checks to mitigate these risks?	NO

15	Pg. 131 (lines 14-17) "We were trying to determine the use of that section of line, running from 9 to 6, and we ended up determining with our generals, CPUC generals 95 that it was a possibility that it was an abandoned power line." Pg. 132 (lines 19-22) "I was unable to determine, being that the power lines were not connected to anything. And given the current condition of the power plant, I was unable to determine a use for those power lines."	Q: Given these failures to deal with abandoned infrastructure, how has PG&E identified the added mitigation activities since the Kincade Fire? How does PG&E now treat "abandoned" infrastructure differently within their WMP?	NO
16	Pg. 133-134 (lines 1-2) "There's holes in the fence in varies areas. Appeared to be from various stages of construction or demolition going on."	Q: What has PG&E done to ensure security fencing around their infrastructure is inspected and maintained given these findings? How does PG&E mitigate the security dangers of poorly maintained fencing?	NO
17	Pg. 137 (lines 17-21) "What I noticed was that these lines were cut right here, here, and here, effectively removing the jumpers. And additionally the insulators had been removed. So there should have been a jumper running down, hanging down with an insulator."	Q: What has PG&E done to mitigate the risks of misconfigured jumpers? Does PG&E now cut these within the manufacturing facility to ensure proper length and configuration?	NO: Jumpers are mentioned a few times within the WMP but these risks never addressed
18	Pg. 142 (lines 8-13) "My conclusion was, after ruling out all other causes, possible causes for the fire, that there was the wire on the tower of 1/6 came loose and contacted a grounded frame and caused a shower of sparks, which fell to the ground, igniting multiple origins in that area and causing the Kincade Fire."	Q: What has PG&E done to mitigate these risks and ensure that wires are secured and inspected within the shoe and do not come loose to cause future catastrophic wildfires?	NO
19	Pg. 142 (lines 17-22) "And specifically back on September 25 of 2016, did you respond to a vegetation fire in the vicinity of Geysers unit 5 and 6? A. Yes, I did. Q. And did that fire later become known as the Saw Mill Fire?" Pg. 145 (lines 14-19) "And you were able to see a V-shape pattern with respect to	Q: Given that the Saw Mill Fire pointed to the same or very similar infrastructure failures and mismanagement patterns as the Kincade Fire has PG&E finally included mitigation	NO

	Saw Mill? A. Yes. Q. Were you also able to see a V-shape pattern with Kincade? A. Yes."	activities for these issues within their WMP?	
20	Pg. 146 (line 27) to " Pg. 147 (line 8) "Q. So in your experience as a firefighter, when you're getting a wind reading, is that a surface level wind reading? A. Yes. Q. And in your experience, does that indicate anything to you about whether that wind would be stronger than the surface level wind up above? A. Yes. Q. And on that day, it was windy conditions? A. Yes, it was."	Q: Given that wind readings were different on the surface vs. up on poles and towers and these differences contributed to the miscalculations and causes of both the Sawmill and Kincade Fires, has PG&E accounted for different wind sensor placement of wind (ground-level vs. high up on tower) within their WMP?	NO

Expert Testimony: Mr. Gary Uboldi, Fire Captain Specialist Peace Officer with the California Department of Forestry and Fire Protection who has investigated over 400 wildfires across his 20+ year career

Expert Testimony: Mr. Joseph Hemstock, 38 Year as PG&E as Supervisory Inspector, Crew Foreman, Electrical Transmission Supervisor and other lead roles plus 10 years as PG&E consultant

Testimony Date: February 9, 2022 (See Attachment B: Pre-Trial Transcript)

#	**Expert Testimony/Evidence**	**WMP Implications**	**Addressed in PG&E WMP**
21	Pg. 185 (lines 17-28) "In your experience -- in your experience as a fire investigator, what if any similarities did you draw between the Sawmill Fire and the Kincade Fire? A. Geographical location was and positioning on the slope were very similar, in regards to that. They were both on spur ridges, which exposed the equipment to higher than normal weather conditions. Their abuse out there by the wind. Additionally, they had south-facing slopes, which also had fuel type with a lower than normal fuel moisture because it's exposed to the sun all day long, versus on the northern side, which would be in the shade.	Q: Given all these similar causes (loose wires, low-cycle fatigue, wind conditions, etc.) between the Sawmill Fire and the Kincade Fire why did PG&E still not mitigate these causes and include those mitigation tactics within their WMP?	NO

	Additionally, because of the wind we noticed there was low cycle fatigue issues with the wind beating up the equipment. In regards to low cycle fatigue, we believe the wires came loose on the Sawmill Fire and contacted that -- we believe that was due to low cycle fatigue, and also low cycle fatigue was an issue with the Kincade. Q. Did you -- how close were these locations? The location of the Sawmill Fire versus the Kincade Fire? A. Approximately three miles."	Given this failure pattern, why did PG&E state over and over again that the Kincade Fire was a "black swan?" Why did Bill Johnson, CEO dismissively state that "sometimes things just break" in reference to the Kincade Fire given this pattern and the clear failure of PG&E policies and practices?	
22	Pg. 183 (lines 22-25) "So what did you actually tell them on that day regarding your findings, your opinions regarding the cause of the Sawmill Fire? A. That we made sure that those wires are secured."	Q: When outside oversight agencies provide direction like "make sure those wires are secured" how does PG&E now make sure those instructions are documented and addressed? Where are these issues addressed in the PG&E WMP given that staff repeatedly did not heed these instructions?	NO
23	Pg. 203 (lines 10-25) "Q. And the February 2019 inspection report noted no problems with the jumpers, right? A. I believe that's what the report said, yes. Q. You also attached to your report of the Kincade Fire a report of a drone inspection from May of 2019, is that right? A. Yes. Q. So this would have been between five and six months before the Kincade Fire, is that right? A. Yes. Q. And the May 2019 inspection report says that it also looked at the conductors on the tower, right? A. I believe so. Q. And the May 2019 inspection	Q: How has PG&E modified their inspection practices and noted those changes within their WMP given that these inspections did not successfully catch the many failures in configuration and maintenance	NO

	report noted no problems with the conductors, right? A. I believe that's what the report stated."	practices that caused the Kincade Fire?	
24	Pg. 232 (lines 8-19) "Q. Okay. That area that you identified as the specific origin area, PG&E does not own that land, does it? A. No. Q. In fact, this tower, 1 over 6, the tower is located like 200 yards behind a gate, isn't it? A. That's a rough estimation, but yeah. I would say, yeah. Q. That gate is controlled by CalPine, right? A. I believe so. Q. CalPine is the owner of the plant, right? A. Yes.	Q: How has PG&E improved their policies and wildfire mitigation practices to more closely work with partners like CalPine to ensure access and maintenance issues do not impact safe operations of PG&E equipment?	NO
25	Pg. 238 (lines 17-24) "Now, on this page, page 5 towards the top, does it have -- does it include -- the inspection form, does it include a code for what certain numbers represent? A. Yes, it does have a condition code. Q. Is there also a condition code that says N/A? A. Yes. Q. And what does this form say N/A means? A. Not present.	Q: Given the ambiguity of "N/A" meaning 'not present" has PG&E revised their inspection forms to have less ambiguous and more accurate infrastructure evaluation and risk scoring? Are any changes reflected within their WMP?	NO
26	Pg. 260 (lines 7-24) "Q. Describe for us why it was -- describe your experience with this tower. A. It was a constant source of entertainment. It was -- because of its location to this unit here over on the side, what you don't see is the cooling towers for the Geysers unit. And those cooling towers are constantly spewing steam or, you know, vapors or whatever and what are contained within that. That would always go out over the tower. The prevailing winds always pushed it towards that tower. And obviously there -- originally this was all PG&E equipment, obviously. But it would cause problems with arcing. They would get operators up there -- even back when it was PG&E's -- would call up. There were people who would call me and say, hey, 01, that's lit up like a Christmas tree. Q. You said lit up like a Christmas tree? A. Yes."	Q: How has PG&E mitigated these risks to ensure "spewing steam" from cooling towers doesn't cause arcing as was identified as a "constant source of entertainment"? Where in the PG&E WMP does it reference changed mitigation practices due to this new information?	NO

27	Pg. 261 (lines 7 – 13) "Q. Okay. And describe what would happen. How would you fix that problem? A. Well, what I ended up doing is -- because of the level of contamination that was coming out of the cooling tower, what I ended up doing is replacing the insulators and then covering the insulators with silicone grease."	Q: Is this practice of "covering the insulators with silicone grease" the approved mitigation tactic of PG&E? If so, how is that reflected in their WMP and if not how has this poor maintenance practice been corrected?	NO
28	Pg. 263 (lines 11-22) "A. Oh, it would stop probably by sunup. Once the moisture, the moisture content in the air changed. Q. So it would be arcing throughout the night until weather conditions changed in the morning? A. Yeah. And I have guy there monitoring. Q. Someone would be there and they would stay there to make sure there's no issue? A. Well, yeah. If the arcing got to where it was a solid line of arcing, a solid all the way up, then if that happened he would have called me. And probably would have dumped the line and went up there and wipe the insulators or clean them or something."	Q: Is this practice of waiting till there is a "solid line of arcing" a prudent wildfire mitigation practice during the nighttime when moisture content causes frequent arcing? If so, where is this referenced in the PG&E WMP? If not, how has PG&E corrected this flawed practice?	NO
29	Pg. 264 (lines 5-12) "Q. What alert would go out so that someone would know it's even arcing? A. Just the visual from people that work at the Geysers, you know, prior to CalPine and PG&E folks. There's people on 24 hours. If they saw it, they would notify their folk at the Geysers. And then if it continued they'd get ahold of the Fulton operations center, and they would notify me."	Q: Is PG&E comfortable with this haphazard alerting practice or does a more standardized arcing alert need to be ingrained within their WMP and associated operations?	NO
30	Pg. 266 (lines 4-14) "A. At the time, I don't remember the period of time it was, but PG&E was injecting iron into the cooling water system. And in our meetings with the Geysers folks in Santa Rosa here, I asked them to make sure they notify me prior to injecting iron. Obviously iron and electricity, you don't really want them palling	Q: Is PG&E still injecting iron into cooling systems? If so, how is PG&E mitigating these "higher level" contamination risks	NO

	around. So they agreed that they would let me know. Sometimes they did and sometimes they didn't. But when the iron was injected, the steam coming off, it was a higher level of contamination than we were used to seeing."	and wildfire risks? How is this reflected within their WMP given that is a cause or a contributor of catastrophic wildfires?	
31	Pg. 266 (lines 15-22) "Q. In terms of higher level of what you were used to seeing, are you saying that just generally speaking there was contamination there? A. Of course. I mean look at the tower. You've seen that tower. There's no galvanizing left. Q. Is that based upon the proximity of the tower to the plant? A. Correct."	Q: Given that extreme corrosiveness is associated with towers close to power plants, how has PG&E mitigated risks specific to these towers? What WMP standards have been created to mitigate these risks?	NO
32	Pg. 269 line 26 – Pg. 270 line 14 - "Q. Can you explain to us how you wash insulators? A. There's several methods. The old style one that I was familiar with, because it was a long time ago, is you would send an apprentice lineman, de-energize the line, ground the line. You would send guys up there and they would take rags and Scotch-Brite and clean the insulators by hand. That was a long time ago, which we did quite a bit of. Then later on we came up, we had to wash -- a way to wash them while they were still energized. In the 90s we ended up with a vehicle that had a boom that would extend out 150 feet, and at the end it has a nozzle that's totally articulating and a huge tank of water, and then we would be able to wash insulators while the line is energized via that truck. And then after that we came upon heliwash and then we started using helicopters to wash the line."	Q: Are these "Scotch-Brite and "heliwash" practices still employed for cleaning insulators? Has this been standardized or do crew supervisors still have discretion of when to wash or replace? What WMP practices have standardized these practices given the known wildfire risks?	NO: The "scotch-brite" and "heliwash" techniques are not mentioned anywhere within the WMP. The degree these are approved techniques is questionable.
33	Pg. 270 (lines 15-27) "Q. And then the solution you came up with was to replace the insulators? A. Yes. One of the things we were looking to do was replace all the insulators there with a polymer insulator, which is not a ceramic insulator. The insulators that are up there right now in that picture are all ceramic. We were looking at polymers, because essentially a polymer absorbs	Q: Has PG&E standardized around polymer insulators as part of their wildfire mitigation activities? What percentage of PG&E insulators are still	NO

	the contamination. And the problem with polymers is they didn't have in those days a good track record, and we weren't going to take the chance of losing that circuit or any circuit due to insulator failure, which is -- you don't want to have that."	the old ceramic type? Why is this not mentioned within the WMP when it was a leading cause or contributing factor of catastrophic wildfires?	
34	Pg. 272 (lines 3-5) "Q. So those would all get changed every two years? A. It is my recollection is that's what I put in for, yeah."	Q: Has PG&E standardized to 2 year lifecycle for changing insulators? Has PG&E set standards in their WMP for insulator inspections to determine replacement given the risk of wildfire ignitions?	NO
35	Pg. 276 (lines 5-14) "A. No. I mean from this gentleman at CalPine who sent it to Kim Gutierrez, I'm not sure this information about these switches, additionally this, and worrying about potential line relay action due to -- that has nothing to do with what I understand. This from Kenny Gutierrez, would it be possible to drop the leads out there, out at 9 and 10, mothball it during the coming clearance. Q. So-- A. And I said yes."	Q: Do line crew supervisors still have the authority to "mothball" infrastructure with direction from outside sources? How has PG&E implemented corrective actions given the wildfire risks associated with how infrastructure is decommissioned or mothballed?	NO
36	Pg. 281 (lines 20-23) "Q. Okay. And you mentioned that you didn't consult with Jim Bowden. Is this the type of work that you consulted with an engineer on? A. No."	Q: Why isn't decommissioning infrastructure requiring an engineering consult? Given the evident wildfire risk has PG&E required engineering consults and direction on a	NO

		going forward basis as part of their WMP?	
37	Pg. 296 lines 9 to 297 line 1 - "A. Yes. It moves in the wind. Q. Okay. How much does it move in the wind? A. I don't know. I never been up there and watched it or measured it. I don't know. Q. Okay. And what about when this isn't there, when it's configured like this? Can this move in the wind? A. Well, the weight didn't change, so again, I'm not a wind calculator. I don't know. There are people who do that for PG&E. Q. Okay. Were there any wind calculations done prior to performing this work in May of 2006? MR. KRAVIS: Objection. Lack of foundation. THE COURT: Overruled. Do you know if any wind calculations were done? THE WITNESS: I imagine when they designed it and build it, it's part of the design criteria. PG&E designs at eight pounds of wind across one foot of conductor for one minute. Now eight pounds is roughly 57 miles an hour, and that's -- it has to be included in their calculations of wind and movement and weights and all that. It's all part of the design criteria."	Q: Given that this motion of the insulator string caused or contributed to the Kincade Fire has PG&E now measured these movements and identified wildfire mitigation practices and quality controls to remedy?	NO
38	Pg. 297 (lines 12-95) "Q. And my question to you, though, is when you did this work to disconnect the line from CalPine 9 and 10, or Geysers 9 and 10, excuse me, were there any wind calculations made at that time? A. Not that I'm aware of. Q. Was there any -- did your crew -- so you've told us you didn't consult with anyone outside of your crew. A. Consult with for? Q. Any engineers? A. Nope. Q. Okay. And to the best of your knowledge, did anyone in your crew consult with any engineers before doing this work? A. Not that I'm aware of."	Q: Is engineering design now required for these types of mothballing practices? Why is this not reflected within the WMP given the wildfire risk?	NO
39	Pg. 315 (lines 3-12, 26-28), pg. 316 (lines 1-5) "A. I don't need to talk to an engineer about the work. We know how to do the work. I think what you're referring to is I didn't talk to an engineer about the wind, is what you said earlier. Q. So you didn't talk to an engineer about the wind. Did you talk to an engineer about the actual work that was performed? A. No, I didn't. To do that work, no. I had the knowledge and training to do that work without an engineer reference… Q. Okay.	Q: Given the subsequent catastrophic fire, does PG&E now require an "engineering reference" for this type of line configuration work? Why are these	NO

	Approximately how many times have you created jumper configurations like what we're looking at in People's 94? A. How am I going to have that number in my head? How do I know how many times? I built a lot of transmission lines and all of them have dead ends and jumpers and stuff. I can't tell you the number of exactly 230 KV. Let's call it 20. I've done 20."	standards not set in the WMP?	

All of the questions above should have been addressed within the PG&E WMP especially considering that these issues caused and/or were significant contributors to the Kincade Fire ignitions. Given that PG&E negotiated their way out of criminal convictions, I am sure that PG&E will now claim that some of this testimony is inaccurate but that fact should not be a concern for OEIS. PG&E has already admitted that their equipment caused the Kincade Fire and yet has not identified or remedied these failures and/or others that they may choose to self-identify. This WMP is NOT reasonable. PG&E's refusal to identify the specific failed processes, failed assets, failed inspections, failed management practices within their WMP is NOT reasonable. PG&E's refusal to map these failures to new or improved mitigation tactics is NOT reasonable. I submit for OEIS and the commission to consider that approving the PG&E head-in-the-sand tactics and plans and expecting our communities to be safe and financially secure is absolutely NOT reasonable.

CONCLUSION

There was much discussion in the WMP workshops about "sustainable strategies" by our Investor Owned Utilities. However, I believe that the proposed Wildfire Mitigation Plans are not sustainable and, in many ways, not strategic. Instead, they are largely a list of tactics that are disconnected from the facts on the ground and the environment in which they operate. I have attached a Community Wildfire Protection Plan (CWPP) that should serve to illustrate this point (See Attachment C). The Sonoma County Community Wildfire Protect Plan is one of probably a hundred similar plans that stretch across California. The WMPs make no reference of these important strategic plans, make no attempt to integrate with them and more importantly don't capitalize on the important strategic gains from that potential integration. Within this CWPP there is reference to the "177 miles of high voltage transmission lines" that stretch across Sonoma County and there is much discussion about the risks posed by PG&E electrical

infrastructure. There is also mention of the great many PG&E caused fires that have devastated our communities.

Within this same Community Wildfire Protection Plan, it identifies infrastructure hardening, vegetation management tactics, resource constraints and many other parallels with the activities identified within our utility WMPs. Why do we not require these types of strategies to be integrated so we have more effective and efficient wildfire mitigation strategies? This type of strategic integration would and should facilitate joint work efforts to establish fuel breaks, fire breaks and other mitigations with the use of shared resources to accomplish common goals. Similarly, why do we not embrace scientific clearinghouses to vet our WMPs and ensure that they are science-based and connected to our changing environment? We have amazing academic institutions across California that focus on climate, ecology, urban planning and wildfire science specifically. Why are we not systematically and structurally engaging these subject matter experts to review, improve and approve these plans?

Our WMPs are not sustainable because they reside in IOU vacuums and are not connected to the on-the-ground realities that face our communities. As a wildfire survivor, I am not comforted by the fact that these plans do not directly address the causes of the fires that have devastated my community year-after-year. Moreover, these WMPs are not sustainable because the cost savings and efficiencies that could be gained from collaborative strategic efforts are not realized. Instead, our IOU plans represent disconnected tactics that don't effectively or efficiently address our growing wildfire threats. We can do better and tackle our shared wildfire risks if we truly adopt a collaborative mindset to how we move forward and improve these WMPs. Respectfully, I request that the Office of Energy Infrastructure Safety lead collaborative efforts and start to engage the diverse subject matter experts that stretch across the Great State of California. We can do better, together.

Respectfully Submitted,

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