

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking to
Examine Electric Utility De-
Energization of Power Lines in
Dangerous Conditions.

Rulemaking R.18-12-005
(Filed December 13, 2018)

**MUSSEY GRADE ROAD ALLIANCE BRIEF ON THE ORDER TO SHOW CAUSE
REGARDING PACIFIC GAS AND ELECTRIC COMPANY'S ACTIONS
DURING THE OCTOBER 2019 POWER SHUTOFF EVENTS**

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1. INTRODUCTION

Pursuant to Rule 13.11 of the Rules of Practice and Procedure of the California Public Utilities Commission (CPUC or Commission) and the Assigned Commissioner and Administrative Law Judge’s Procedural Schedule Ruling of the Order to Show Cause,¹ the Mussey Grade Road Alliance (Alliance or MGRA) files this opening brief.

On December 19, 2018, the Commission opened an Order Instituting Rulemaking (OIR) to Examine Electric Utility De-Energization of Power Lines in Dangerous Conditions.² The Alliance filed Comments on the Rulemaking on February 8, 2019 in accordance with instructions in the OIR,³ thus fulfilling requirements for obtaining party status as per the OIR⁴ and Rule 1.4(a)(2) of the CPUC Rules of Practice and Procedure. MGRA hereby complies with instructions in ALJ Semcer’s March 12, 2019 Party Status Ruling,⁵ requiring parties to specify the method and date by which they obtained party status in all filings for this proceeding.

2. PROCEDURAL HISTORY

After its initiation in 2018, the first phase of Rulemaking R.18-12-005 culminated in the issuance of Decision D.19-05-042, laying out PSPS guidelines for utilities to follow if forced to resort to power shutoff (“PSPS”) as a last-resort option to prevent wildfire ignition. Phase 2 of this proceeding was initiated in August 2019 in order to further develop regulation related to utility power shutoff.⁶ Before Phase 2 made significant progress, utilities reacted to fire weather events in September and October 2019 by initiating a number of power shutoffs. The most extensive and impactful events were those of PG&E, affecting over two million of residents across dozens of

¹ R.18-12-005; ASSIGNED COMMISSIONER’S AND ASSIGNED ADMINISTRATIVE LAW JUDGE’S RULING REGARDING THE PROCEDURAL SCHEDULE OF THE ORDER TO SHOW CAUSE PHASE OF RULEMAKING 18-12-005; September 21, 2020. (Scheduling Ruling)

² R.18-12-005; ORDER INSTITUTING RULEMAKING; December 19, 2018. (OIR).

³ R.18-12-005; MUSSEY GRADE ROAD ALLIANCE COMMENTS ON THE DE-ENERGIZATION ORDER INSTITUTING RULEMAKING (OIR); February 8, 2019. (MGRA OIR Comments)

⁴ OIR; p. 15.

⁵ R.18-12-005; Email Ruling Adopting Protocol for Noting Party Status in Filings; March 12, 2019. (Party Status Ruling)

⁶ R.18-12-005; ASSIGNED COMMISSIONER’S PHASE 2 SCOPING MEMO AND RULING; August 14, 2019. (Phase 2 Scoping Memo)

counties in its service area. On October 14, 2019, Commission President Marybel Batjer issued a letter to PG&E in response to the widespread and very public disruption caused by the October 9th – 12th PG&E de-energization. In her letter, President Batjer discussed the failure of the PG&E website during the shutoff event and the impact of this failure.⁷ On the same day, Governor Gavin Newsom wrote to President Batjer, expressing that he was “profoundly disappointed in PG&E. By their own admission they were not adequately prepared for the outages, which led to many serious missteps. This lack of preparation and poor performance is particularly alarming given that, prior to the event, PG&E responded to the scrutiny and questioning of multiple state and local agencies by asserting that it could handle a PSPS event without the need for additional assistance.” He also urged President Batjer to “hold PG&E accountable”.⁸

The present track of the current proceeding was opened when the Assigned Commissioner and Assigned Administrative Law Judge issued a Ruling ordering PG&E to show cause why it should not be penalized for violations of Section 451 of the Public Utilities Code, Commission Decision D.19-05-042 and ESRB-8.⁹ On December 4, 2019, the Commission held a Pre-Hearing Conference for the Order to Show Cause phase of this proceeding. During the PHC, Alliance Spokesperson Diane Conklin raised the issue of the failure of PG&E’s website during the October 9-12th power shutoff event, stating that knowledge of the reasons that PG&E’s website failed might throw light on the PG&E safety culture.¹⁰

⁷ California Public Utilities Commission; Letter from President Marybel Batjer to PG&E Chief Executive Officer William Johnson; October 14, 2019; p. 2: “A major failure was PG&E’s public website crashing and becoming unusable during the most critical times in their event. A cornerstone of the PG&E PSPS public information effort was to drive the public and government agencies to its website for all information, including maps of outages and other important data. This site was highlighted to provide real-time, life-saving information. Unfortunately, the website crashed within the first 24 hours and company representatives struggled to provide necessary information to their customers, the public, and frontline safety officials with affected state, county and tribal governments.”

⁸ Office of the Governor; Letter from Gavin Newsom to CPUC President Marybel Batjer; October 14, 2019; p. 2.

⁹ R.18-12-005; ASSIGNED COMMISSIONER AND ASSIGNED ADMINISTRATIVE LAW JUDGE’S RULING DIRECTING PACIFIC GAS AND ELECTRIC COMPANY TO SHOW CAUSE WHY IT SHOULD NOT BE SANCTIONED BY THE COMMISSION FOR VIOLATION OF PUBLIC UTILITIES CODE SECTIONS 451 COMMISSION DECISION 19-05-042 AND RESOLUTION ESRB-8; November 12, 2019.

¹⁰ R.18-12-005; December 4, 2019 Pre-Hearing Conference; p. 132: “We believe the Commission should closely examine the decisions made regarding the design, development and operation of PG&E’s website. Specifically, it should closely probe whether the availability and scalability failure associated with the October 9th shutoff was due to improper planning at the corporate level and whether -- or whether PG&E’s IT team was given inadequate design specifications or whether PG&E’s website was incorrectly designed or constructed to cope with foreseeable load peaks. Knowing the answer to this question may further illuminate

PG&E served its testimony on February 5, 2020.¹¹ MGRA sent data requests to PG&E on January 30 and February 7, 2020. MGRA and other parties prepared and served testimony on February 28, 2020. MGRA's was the only testimony providing a technical analysis of PG&E's website failure.¹² PG&E's data request responses to MGRA were attached as appendices to MGRA's testimony.

The COVID-19 pandemic soon began to impact the procedural schedule. On March 9, 2020, Ms. Conklin sent an email to President Batjer, ALJ Stevens, and ALJ Poirer expressing concern over in-person evidentiary hearings scheduled for April.¹³ PG&E requested a COVID-related delay in the rebuttal testimony deadline, which was granted by ALJ on March 12, 2020.¹⁴ As per this ruling, PG&E served its rebuttal testimony on April 7, 2020.¹⁵ Then, on April 16, 2020, ALJ Poirer filed an email ruling holding the procedural schedule, including evidentiary hearings and briefing, in abeyance until further notice.¹⁶

The proceeding was re-initiated with ALJ Poirier's email ruling of June 19, 2020 setting a status hearing and directing parties to file a joint response regarding settlement activities, stipulated facts, and whether evidentiary hearings would be required.¹⁷ In response, discussions began between PG&E and parties on our around June 25th to clarify items in dispute and procedural issues. Additionally, discussions between opposing parties began to find areas of common interest. As MGRA was the only party providing technical analysis of PG&E's website failure, MGRA worked

PG&E's corporate safety culture, and therefore, have some bearing on its culpability. The alliance intends to collaborate with intervenors in developing a factual basis for the Commission to make this determination."

¹¹ R.18-12-005; PG&E-01; PACIFIC GAS AND ELECTRIC COMPANY PUBLIC SAFETY POWER SHUTOFF EVENT ORDER TO SHOW CAUSE OPENING TESTIMONY; February 5, 2020. (PG&E Testimony)

¹² R.18-12-005; MGRA-01; DIRECT TESTIMONY OF THE MUSSEY GRADE ROAD ALLIANCE PG&E ORDER TO SHOW CAUSE; February 12, 2020. (MGRA Testimony)

¹³ Email from Diane Conklin to President Batjer and ALJs Steven and Poirer; "Procedural Questions Regarding COVID-19, Including R. 18-12-005 and Other Proceedings"; March 9, 2020.

¹⁴ R.18-12-005; Email ruling; RE: R.18-12-005, PG&E PSPS Order to Show Cause - Procedural Request for Extension; March 12, 2020.

¹⁵ R.18-12-005; PG&E-02; "PACIFIC GAS AND ELECTRIC COMPANY DE-ENERGIZE POWER LINES REBUTTAL TESTIMONY; April 7, 2020. (PG&E Rebuttal)

¹⁶ R.18-12-005; EMAIL RULING CLARIFYING PROCEDURAL SCHEDULE - ORDER TO SHOW CAUSE PHASE OF R.18-12-005; April 16, 2020.

¹⁷ R.18-12-005; ADMINISTRATIVE LAW JUDGE'S E-MAIL RULING DIRECTING PARTIES TO MEET AND CONFER AND SETTING TELEPHONIC STATUS CONFERENCE; June 19, 2020.

directly with PG&E representatives to identify areas of dispute and to determine if stipulations could be made. MGRA and PG&E reached a set of acceptable stipulations by July 7, 2020. The status conference was held on July 9, 2020, during which MGRA confirmed that it had reached an agreement on stipulations with PG&E, and would not itself require evidentiary hearings contingent on the stipulations being moved into the evidentiary record.¹⁸ The stipulations reached by PG&E and MGRA are were admitted into the record are incorporated into exhibit PG&E-04.

On July 29th, ALJ Poirer issued another email ruling directing parties to meet and confer and setting the date of a second status conference.¹⁹ MGRA participated in the preparation of the joint stipulations filed by PG&E on August 24, 2020²⁰ and attended the status conference on August 27, 2020. On September 21, 2020, the Assigned Commissioner and Assigned ALJ issued a ruling determining that evidentiary hearings would not be necessary contingent on PG&E's clarification of outstanding issues, and setting a briefing schedule.²¹

To facilitate admission of evidence, PG&E worked with parties to facilitate early admission of evidence via a joint filing.²² In this motion, MGRA's testimony PG&E's responses to MGRA's data requests were designated as exhibit "MGRA-01". On October 22, 2020, the motion to enter MGRA's testimony into the record was granted.²³

3. OVERVIEW OF ISSUES

The purpose of this proceeding is to determine whether PG&E violated Public Utilities Code Section 451 and requirements for PSPS laid out in D.19-05-042 and ESRB-8. The Alliance's contribution to this proceeding is comprised of analysis of PG&E's website failure and whether this

¹⁸ R.18-12-005; Telephonic Proceeding Transcript; July 9, 2020; p. 10.

¹⁹ R.18-12-005; ADMINISTRATIVE LAW JUDGE'S E-MAIL RULING DIRECTING PARTIES TO MEET AND CONFER AND SETTING STATUS CONFERENCE; July 29, 2020.

²⁰ R.18-12-005; RESPONSE OF PACIFIC GAS AND ELECTRIC COMPANY (U 39 E) AND THE JOINT RESPONDENTS TO ADMINISTRATIVE LAW; August 24, 2020; p. 4; fn 3.
JUDGE'S AUGUST 14, 2020 RULING

²¹ R.18-12-005; ASSIGNED COMMISSIONER'S AND ASSIGNED ADMINISTRATIVE LAW JUDGE'S RULING REGARDING THE PROCEDURAL SCHEDULE OF THE ORDER TO SHOW CAUSE PHASE OF RULEMAKING 18-12-005; September 21, 2020. (Scheduling Ruling)

²² R.18-12-005; R.18-12-005, PG&E's and Joint Active Parties' Motion to Move Exhibits Into the Record; October 13, 2020.

²³ R.18-12-005 (OSC PHASE) ADMINISTRATIVE LAW JUDGE'S EMAIL RULING ON THE MOTIONS TO MOVE EXHIBITS INTO THE RECORD; October 22, 2020.

failure was foreseeable and preventable. That PG&E’s website failed, that this failure caused further disruption, inconvenience, and harm to residents and public safety partners, and that PG&E was at fault for allowing the website failure to occur are not matters of dispute. As summarized in Commission President Marybel Batjer’s October 14th letter to PG&E CEO William Johnson, “*A major failure was PG&E’s public website crashing and becoming unusable during the most critical times in their event. A cornerstone of the PG&E PSPS public information effort was to drive the public and government agencies to its website for all information, including maps of outages and other important data. This site was highlighted to provide real-time, life-saving information. Unfortunately, the website crashed within the first 24 hours and company representatives struggled to provide necessary information to their customers, the public, and frontline safety officials with affected state, county and tribal governments.*”²⁴

3.1. PG&E Website Testimony and Position Regarding External Factors

PG&E has admitted and apologized for its failure to keep the website operational during the outages.²⁵ However, PG&E in its testimony and rebuttal attempts to downplay the scale of PG&E’s website failure and attribute it to extenuating circumstances. PG&E’s witness Mr. Arora, for example, contests the OSC Rulings assertion that “PG&E’s website was unavailable during most of the time of the PSPS event. This meant that customers and government agencies were unable to obtain information on the outage or other important data,”²⁶ stating that “the extent of the website outage was narrower than described” and that: “Third-party analytics show that almost 3 million unique visitors successfully visited PGE.com between October 9 and 12 – including 1.4 million on October 9, the day of the de-energization.”²⁷

²⁴ MGRA Testimony; p. 3; citing Batjer letter.

²⁵ PG&E Rebuttal Testimony; pp. 4-1 – 4-2:

“In this proceeding, PG&E’s opening testimony specifically acknowledged that ‘its public website is one of the primary sources of information for its customers, Public Safety Partners, and the general public,’ that there were periods where ‘the website was unavailable during the October 9-12 PSPS event,’ and that the unavailability of the website “caused hardship to its customers.” citing PG&E Opening Testimony pp. 4-13. “PG&E Corporation’s President and Chief Executive Officer Bill Johnson acknowledged that PG&E’s implementation of the October 9-12 event ‘suffered from significant shortcomings in execution.’ Addressing the website specifically, Mr. Johnson ‘apologize[d] for the hardship and the lack of information’ that was caused by the website’s inaccessibility and made clear that it ‘cannot happen again.’” Citing Transcript of Emergency PSPS Meeting at pp. 12 and 17.

²⁶ OSC Ruling; p. 3.

²⁷ MGRA Testimony at pp. 6-4; citing PG&E Testimony pp. 4-8.

PG&E also points to a number of external factors, over which it claims it had no control and no ability to foresee, as leading to its website outage. Among these factors were:

- *“There were almost a million page requests from users outside of California during the event.*
- *PG&E.com traffic was “multiplied” by third party websites such as news organizations.*
- *50-60% of transactions were by “repeat users”.*
- *Downloads of PSPS maps put an additional ‘strain’ on the system.”²⁸*

PG&E argues that these factors, which it did not and could not reasonably foresee, were responsible for overburdening the PG&E website.

3.2. Overview of MGRA Testimony and Conclusions

Analysis by the Alliance’s expert based upon data request responses from PG&E revealed that that the role of exogenous circumstances in PG&E’s website failure was overstated in PG&E’s testimony, and that many of these claimed factors were either insufficiently quantified or foreseeable. MGRA’s expert concludes that PG&E’s website failure would have been avoidable had PG&E made sufficient effort to understand customer usage during PSPS events, if it had paid attention to warning signals, if it had adequately tested its servers, and if it had taken remedial action based on the shortcomings it would have found had it done these things.

Specific findings refuting PG&E’s position were:

- PG&E provides no quantitative justification for its claim that map downloads slowed its servers.
- PG&E should have anticipated that while customers waiting for power shutoff would have to repeatedly visit its website to obtain updates.
- PG&E should have anticipated that as the point-of-truth for PSPS information, news sites and other third-party sites would re-direct web traffic to PG&E’s website.

²⁸ MGRA Testimony at p. 11; citing PG&E Testimony; p. 4-9, PG&E Testimony; p. 4-11 and Appendix B; PG&E Data Request Response MGRA_002-Q08.

- A smaller power shutoff event on September 23rd and 25th caused a measurable spike in PG&E web traffic, which if scaled up to the size of the October 9th – 12th event would indicate that CPU limits would be reached on key servers.

The MGRA testimony also analyzes PG&E’s recovery of its web servers and preparations for the late October power shutoff events. MGRA’s expert acknowledges the rapid response of PG&E’s IT team, which re-architected key components of its website within a period of less than two weeks. While laudable, PG&E’s achievement demonstrates that had it done adequate testing and acted upon earlier warnings it could have prevented the October 8th through 12th website outages, even if it had recognized them as late as September 25th.²⁹

3.3. PG&E Rebuttal

PG&E’s rebuttal testimony provides little additional information that backs up the assertions that were made in its testimony, and relies instead on repeating the same fallacious arguments made in its testimony. Notably, though, PG&E’s expert concedes MGRA’s point that PG&E did not do load testing on its “static content” servers, which failed during the PSPS event.³⁰ PG&E’s rebuttal testimony does provide additional information about PG&E’s historical large-scale outages caused by winter storms and why PG&E believed this historical data provided support for its belief that PG&E’s servers could withstand a major PSPS event.³¹ Why PG&E’s belief was ill-founded will be discussed in the subsequent sections. PG&E’s expert also rejects MGRA’s conclusion that the September 2019 PSPS events provided forewarning of the October 9-12th website failure, but fails to provide any data supporting this assertion.³²

3.4. Stipulations

While disputes between PG&E and MGRA are not wholly resolved, PG&E is generally aware that its website failure might have been avoided if other actions had been taken. In light of

²⁹ MGRA Testimony; p. 6: “...the outages experienced by users could have been avoided had PG&E done adequate capacity / load testing, estimated load traffic based on the September 23-25 PSPS event, and put in place the measures it used to increase the capacity of its website between October 9th and 23rd.”

³⁰ PG&E Rebuttal Testimony; p. 4-4.

³¹ Id; pp. 4-4 – 4-5. Fn 14 states in part that: “PG&E accepts MGRA’s broader point and has acknowledged that its failure to test its static content servers to a higher level was a mistake on its part.”

³² Id.

the preference by the Commission to avoid evidentiary hearings if possible and the general difficulties of conducting fair hearings remotely, MGRA and PG&E were able to agree on a number of stipulations. The Alliance believes that while not completely resolving all factual disputes, these stipulations should allow the Commission to reach the same conclusions that would have been reached had the evidentiary record been more fully developed.

The MGRA/PG&E stipulations, contained in exhibit PG&E-04, read as follows:

1. While a number of unanticipated external factors testified to by PG&E and acknowledged by MGRA such as third-party usage, bot traffic, out of state traffic, and map downloads, aggravated the strain on PG&E's content servers, PG&E believes and acknowledges that the majority of the traffic leading to the October 9-12 PG&E website outage came from PG&E customers.

2. Had PG&E correctly understood how its customers would use its website under power shutoff conditions, it is likely PG&E would have also understood that single and repeat customer traffic would be more likely during power shutoff than during other types of customer outages such as winter storm outages. Consequently, PG&E would likely have adjusted its capacity and testing to account for the extra load during power shutoffs.

3. Prior to the October 9-12 power shutoff, PG&E did not make adequate efforts to anticipate peak customer web traffic arising from a power shutoff event.

The Alliance believes that these stipulations constitute an adequate admission on the part of PG&E that its October 9-12th website was foreseeable and preventable.

4. FACTS SURROUNDING THE PG&E WEBSITE OUTAGE

This section will discuss in more detail the specific factual assertions made in PG&E's testimony and rebuttal and in MGRA's testimony.

4.1. Burden of Proof

The current phase of the proceeding was initiated by a ruling titled "ASSIGNED COMMISSIONER AND ASSIGNED ADMINISTRATIVE LAW JUDGE'S RULING

DIRECTING PACIFIC GAS AND ELECTRIC COMPANY TO SHOW CAUSE WHY IT SHOULD NOT BE SANCTIONED BY THE COMMISSION FOR VIOLATION OF PUBLIC UTILITIES CODE SECTIONS 451 COMMISSION DECISION 19-05-042 AND RESOLUTION ESRB-8.” Specifically, the ruling itself states that: “IT IS RULED THAT Pacific Gas and Electric Company *shall show cause why it should not be sanctioned* by the Commission for its failure to properly communicate with its customers and coordinate with local governments during the Public Safety Power Shutoff events during October 9-12, 2019 and October 23-November 1, 2019 in violation of Public Utilities Code Section 451, Decision 19-05-042 and Resolution ESRB-8.”³³ (emphasis added)

It is the Assigned Commissioner’s and Assigned Administrative Law Judge’s clear intent that the onus be placed onto PG&E to show why it should not be sanctioned. The fact of the website outage and its impacts are incontrovertible. It is PG&E’s responsibility under this ruling to provide clear and convincing evidence of any circumstances that would lessen its culpability. Partial or unconvincing evidence are not sufficient. Gaps in the evidentiary record should be weighed in a manner favoring a determination of culpability unless PG&E makes a convincing and unrefuted argument to the contrary.

MGRA makes a number of showings in its testimony that PG&E’s claims that exogenous event impacts were significant causes of its website failure lack adequate factual support. In these cases, the Commission should properly decide that claims based on inadequate factual support cannot be used as cause for PG&E to not be sanctioned.

4.2. The Mussey Grade Road Alliance Testimony

The Alliance testimony was prepared by its expert witness Joseph W. Mitchell, Ph.D., who has been preparing expert testimony, comment, and other CPUC submissions for the Alliance since 2007. Dr. Mitchell, whose first career was as an experimental particle physicist, has also authored academic articles on wildfire science and the electric utility wildfire problem. With MGRA, he has been involved in the utility power shutoff problem since SDG&E’s original de-energization application A.08-12-021, and has made numerous substantive contributions on this topic at the

³³ OSC Ruling; p. 6.

Commission. Unlike earlier submissions, the MGRA testimony in the present proceeding relies on Dr. Mitchell's experience in the software industry, which was his "day job" between 1996 and 2019. This experience provided contact and expertise in a number of the tools, technologies, and practices used by PG&E in the maintenance of its website, and guided the MGRA data requests and analysis regarding the PG&E website failure. Dr. Mitchell's vitae are attached as Appendix A of the MGRA testimony in exhibit MGRA-01.

Some of Dr. Mitchell's experience that is directly relevant to this proceeding includes:

- *Using Amazon Web Services (AWS) cloud-based architecture and tools to build and run "scalable" applications and services, in other words that could add more computing resources as needed.*
- *Installing, configuring, running, and debugging high-volume applications on Linux-based servers.*
- *Capacity planning and resource allocation for AWS-based services, including cost reduction.*
- *Performance and capacity testing of applications and services through web interfaces.*
- *Techniques for providing high-availability services, and their importance...*
- *Analysis and debugging of application service outages.*³⁴

Dr. Mitchell was careful not to overstate his experience and set realistic expectations regarding his testimony: *"This testimony is intended to give a high-level critical overview of the PG&E outage by someone with two decades of information technology experience. I am not an architect of web services or infrastructure, and I have not designed or built a multi-tier web application for use by millions of people, as the PG&E IT team have done. This testimony is not intended to be used to provide criticisms of the choice of any specific hardware or software by PG&E, or of the design or implementation of its website. Neither should the absence of such criticism in this testimony imply that I think that PG&E's design choices and implementation were correct or optimal. Instead, I will be applying general IT principles, general principles of high availability and cloud infrastructure, as well as logic to the testimony and responses from PG&E in*

³⁴ MGRA Testimony; MGRA-01; p. 3.

order to reach conclusions regarding the PG&E website outage and how it might have been avoided.”³⁵

Review of the MGRA testimony shows that it succeeds in its goals. Aside from any technical errors that the PG&E IT team might have made, the PG&E website failure can be attributed largely to a lack of “customer empathy”: the failure to understand how customers would act in the situation that PG&E had placed them. Teasing this conclusion out of the PG&E testimony and data request responses was well within the scope of Dr. Mitchell’s experience as a scientist and engineer. Indeed, the fact that co-authored stipulations could be readily agreed to by PG&E and MGRA suggests that the high-level diagnosis reached in the MGRA testimony is reasonable and not particularly controversial. As to the specifics, there remain a number of differences between MGRA and PG&E regarding interpretation of the facts, and these are discussed in the following sections.

4.3. Scope of the PG&E Website Outage

Details of the PG&E website outage were described by PG&E in a number of fora, including in Chapter 4 of PG&E’s testimony in the sections authored by Lori Geoffroy and Rajesh Arora. Mr. Arora takes issue with the assertions of the OSC ruling and states that “the extent of the website outage was narrower than described” and that: “Third-party analytics show that almost 3 million unique visitors successfully visited PGE.com between October 9 and 12 – including 1.4 million on October 9, the day of the de-energization.”³⁶

Nevertheless, the testimony admits a number of issues and failures:

- Mr. Arora states that on “the morning of Tuesday, October 8, PGE.com experienced severe performance issues which caused some customers to experience longer wait times or to see ‘site not found.’”³⁷

³⁵ Id; p. 4.

³⁶ PG&E Testimony; p. 4-8.

³⁷ Id.

- The Address Look-up Tool, which allowed users to determine whether their address would be directly affected by a PSPS event,³⁸ was unavailable during the outage, and was taken out of service at 8:34 a.m. on October 8th and replaced with a general map tool on October 9th.³⁹
- The attempt to switch PG&E’s website over to a backup site failed.⁴⁰
- The primary problem causing website unavailability was the saturation of PG&E’s “static content” servers, which store and serve PG&E’s website page data.

PG&E provided a number of responses to MGRA data requests that further illuminate the extent and cause of PG&E’s website failure:

- PG&E’s website recorded nearly 200,000 page requests per hour. Its static content servers experienced issues when the number of page requests exceeded 150,000 requests per hour and when their CPU usage exceeded 80% of capacity.⁴¹
- The page requests measured by PG&E do not include unsuccessful attempts to reach the website, so the real traffic is likely larger than the 200,000 per hour reported by PG&E.⁴²
- The PG&E backup site did not include a number of tools that would be needed during a PSPS event, such as the Address Lookup Tool and Google Maps shapefile rendering.⁴³

In conclusion, the impacts of the website outage were not overstated in President Batjer’s letter to PG&E CEO Johnson or in the OSC Ruling. PG&E does not even know the number of people denied access to their site, because they have no way of knowing when an attempted connection never reaches their site. Additionally, some tools that were of special value during a PSPS event were unavailable.

³⁸ PG&E Testimony; p. 4-4.

³⁹ MGRA Testimony; p. 7. Cites: Appendix B; DR Response MGRA_002-Q35. See also PG&E Testimony; p. 4-12.

⁴⁰ PG&E Testimony; p. 4-11.

⁴¹ MGRA Testimony; p. 8.

⁴² Id.

⁴³ Id; p. 7.

4.4. Failure of PG&E’s Static Content Servers

The failure of PG&E’s static content servers was responsible for the most widespread and disruptive customer impacts. Static content servers hold the “web page” documents and send this data to users when they try to access the site. If the connection fails or if the server does not respond, the web page will not load and an error page may appear in the user’s browser. The static content servers failed because they had insufficient resources to handle all of the incoming requests.⁴⁴ The reasons why these servers had insufficient resources and were untested are laid out in this section.

4.4.1. Inappropriate use of historical data

PG&E’s IT team erroneously believed that its website had adequate capacity for a major PSPS event. According to the testimony of Mr. Arora, three of the factors that led PG&E to believe that the PG&E servers had adequate capacity were:

- The average annual availability of the PG&E website in 2018 was 99.94%
- Server capacity in percentage of available CPU that was utilized was under 5%
- PG&E had a backup site capable of handling “100 times the normal traffic of PGE.com”.⁴⁵

According to MGRA’s testimony, these are not adequate criteria for judging website capacity. MGRA’s expert found that PG&E’s average annual availability was reasonable by industry standards (though not “excellent”), but average capacity is not a proper indicator of peak traffic.⁴⁶ Likewise, the fact that *average* CPU usage was under 5% tells us nothing about peak load conditions. In fact, PG&E’s servers began to show performance problems when the CPU usage exceeded 60%, a factor of 18 over average usage.⁴⁷ PG&E states that its normal level of page requests is 10,000 per hour, and that during the October 9-12th incident its servers began to experience issues at a request rate of 150,000 per hour – a factor of 15 higher than average.

⁴⁴ PG&E Testimony; p. 4-7.

⁴⁵ Id.

⁴⁶ MGRA Testimony; pp. 12-13.

⁴⁷ MGRA Testimony; p. 13; citing R.18-12-005; BI-WEEKLY REPORT OF PACIFIC GAS AND ELECTRIC COMPANY (U 39 E) IN COMPLIANCE WITH JANUARY 30, 2020 ASSIGNED COMMISSIONER’S RULING; February 10, 2020; p. 5. (February 10 Bi-Weekly Report)

Therefore, the failure of the PG&E website occurred at approximately the web traffic levels at which failure would be expected given the website servers' design capacity.⁴⁸

4.4.2. Failure to anticipate peak load

The key to server performance is peak load under PSPS conditions, not average load. It is in this area that PG&E's shortcomings become most evident. The MGRA testimony observes: "As to how PG&E estimated what its expected website traffic would be during a PSPS event: ***PG&E didn't estimate PSPS-related website traffic.*** In their own words: 'PG&E's IT group did not utilize a specific estimation prior to October 2019, as to the number of customers that it anticipated would be affected by future PSPS outages.' Its claimed reasons for not doing so are 1) they did not know the number of customers that would be affected by PSPS events and 2) even if they did know, this has no direct correlation to website traffic."⁴⁹

PG&E's claim that the IT team did not know the number of customers that were to be experiencing a PSPS event is disturbing and demonstrates a lack of due diligence. Whether it was the IT department's obligation to obtain this information from PG&E's operation team or whether it was PG&E's operations department that should have informed IT is irrelevant. The fact that this communication did not occur is the responsibility of PG&E's management.

4.4.3. Website traffic correlates with affected customers

As to the other claim that the number of users during PSPS has no direct correlation with website traffic is blatantly false, as MGRA demonstrated in its testimony. Listed below is a table containing a list PG&E's shutoff events, the number of customers affected, and peak web traffic in pages per hour.⁵⁰

⁴⁸ MGRA Testimony; p. 13. fn. 42.

⁴⁹ MGRA Testimony; pp. 13-14; citing: Appendix B; PG&E Data Request Response MGRA_002-Q09 and MGRA_002-Q10.

⁵⁰ MGRA Testimony; p. 19.

Date	Customers	Pages/Hour	Reference
9/23	26,000		PG&E Public Safety Power Shutoff (PSPS) Report to the CPUC, October 10, 2019; p. 1.
9/25	49,000	50,000	PG&E Public Safety Power Shutoff (PSPS) Report to the CPUC, October 10, 2019; p. 1.
10/5	11,300	12,600	PG&E Public Safety Power Shutoff (PSPS) Report to the CPUC October 5-6, 2019 De-Energization Event; p. 1
10/9-10/12	729,000	200,000	PG&E Public Safety Power Shutoff (PSPS) Report to the CPUC October 9-12, 2019 De-Energization Event; p. 10
10/26-11/1	941,000	220,000	PG&E Public Safety Power Shutoff (PSPS) Report to the CPUC October 26 & 29, 2019 De-Energization Event; p. 1

Table 1 - PG&E autumn 2019 PSPS events, with number of affected customers and peak web traffic in pages per hour.

It should be noted that the web traffic listed for the October 9-12th event may be an underestimate, since the number listed represents only successful connections to the PG&E website.⁵¹ The MGRA testimony refutes PG&E’s claim that “the website traffic experienced during a PSPS event does not directly correlate with the total number of customers that are de-energized over the course of a PSPS event.”⁵² MGRA’s expert performed a correlation analysis using the data in Table 1 using the “CORREL” function of Microsoft Office Excel. He found that the correlation between web page visits and number of affected users was 0.988, with a value of 0.95 indicating statistical significance. Hence, there was a direct correlation observed between number of users affected by power shutoff and the level of peak web traffic.⁵³ Note that “direct correlation” does not mean a 1:1 relationship but rather that there is a general trend that events affecting more customers will generate more web traffic. This notion would appear to be elementary, which makes it surprising that PG&E would have resisted it in its rebuttal testimony.

⁵¹ Id.

⁵² MGRA Testimony; p. 20; citing Appendix B; PG&E Response to MGRA Data Request MGRA_001-Q06, MGRA_001-Q07, and MGRA_002-Q23.

⁵³ MGRA Testimony; p. 20; fn. 57.

4.4.4. PG&E gets a September warning

PG&E's failure to anticipate the correlation between web traffic and affected customers led it to overlook a critical warning sign. The September 25th event indicated in Table 1 showed a measurable spike in web traffic. The following figure shows in more detail the traffic on pge.com over the period from September 15th to November 1st 2019:

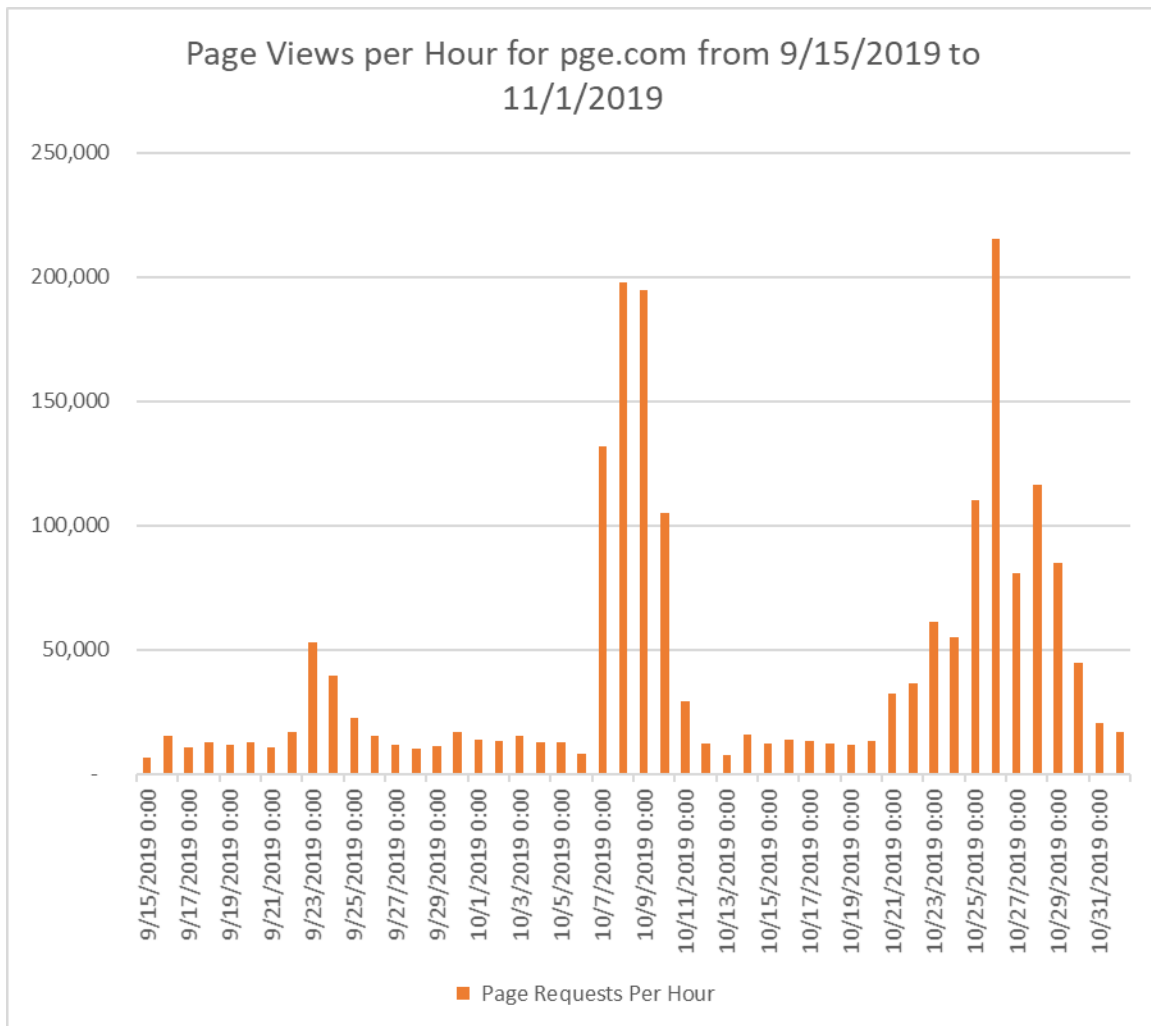


Figure 1 - PG&E website pge.com web traffic in page views per hour between 9/15/2019 and 11/1/2019.⁵⁴

There is a clear peak evident between September 23rd and September 25th. Furthermore, this peak is nearly 5 times the normal background rate of 10,000 per day. Applying a simple extrapolation, were this peak to be increased by a factor of 3, to 150,000, it follows that the CPU

⁵⁴ MGRA Testimony; p. 18.

loading would increase to over 50% of capacity, which is, according to PG&E, approximately the level at which performance issues begin to be seen. The September 23rd-25th event affected only 50 – 70,000 customers, and this was enough to bring the static content servers to 1/3 of their maximum capacity. The October 9th-12th event would affect ten times more customers. This was clear evidence, if PG&E had been looking for it, that a major PSPS event would be likely to bring down their website.

In PG&E’s rebuttal testimony, Mr. Arora takes issue with MGRA’s analysis of the September 23rd to 25th event and denies its applicability to the October 9th-12th shutoff event. Though Mr. Arora states that “PG&E disagrees with MGRA’s analysis for a variety of reasons”,⁵⁵ he neglects to state what those reasons are. As per the discussion of the necessary burden of proof in Section 4.1, it is PG&E’s responsibility to provide evidence that it should *not* be sanctioned. Hence Mr. Arora’s objections to MGRA’s argument should be given no weight.

4.4.5. Failure to do performance testing

One area where PG&E and MGRA agree is that PG&E erred in not doing performance testing of the static content servers in order to simulate large PSPS events. As MGRA’s testimony explains: “Performance testing (also known as ‘stress testing’ or ‘load testing’) uses automated tools to test the website itself or a test or ‘pre-production’ copy of the website. The load used in the simulation is usually somewhat larger than the maximum load anticipated in order to ensure a safety factor and because surprises happen. This is considered a best practice and is essential for high-availability software and web services.”⁵⁶ As Mr. Arora states in rebuttal testimony, PG&E “acknowledged that its failure to test its static content servers to a higher level was a mistake on its part.”⁵⁷

4.4.6. PSPS events are not like winter storms

The reason that Mr. Arora states that PG&E was not concerned with potential PSPS load is that the October 2019 de-energization events “were not the first events in PG&E’s history that

⁵⁵ PG&E Rebuttal Testimony; p. 4-5; fn. 14.

⁵⁶ MGRA Testimony; p. 16.

⁵⁷ Op. Cite.

would drive customers (and others) to the PG&E website.”⁵⁸ It is not until the rebuttal testimony that Mr. Arora explains what these events were, specifically citing three winter storms in 2017 that each affected over 500,000 customers.⁵⁹ So fundamentally, PG&E’s overconfidence stemmed from the fact that its static content servers had functioned adequately during winter power outages affecting approximately the same number of customers that its PSPS program would. Customer behavior, however, would be expected to be very different in the lead up to and execution of a PSPS event than it would be during a power outage due to winter storms. The first notice that a customer typically gets of a power outage during a winter storm is when their lights go off. The outages are unplanned. Customers in these circumstances may not even be able to access the PG&E website due to power loss affecting their computers and networks. In the lead up to a PSPS event, on the other hand, numerous notifications are sent out to customers warning them of the impending outage and directing them to the PG&E website for further information. Customers anticipating PSPS need to use the PG&E website to see whether they will be affected and to get updates throughout the course of the event. There is a fundamental difference in customer experience between winter storm and PSPS events that should have been anticipated by someone at PG&E – if not the IT division then the operations group. The fact that no one thought about it demonstrates a lack of customer empathy.

That PG&E’s efforts were not adequate is clear in retrospect and should have been clear prior to the event, and this assertion is not disputed by PG&E. The third point of stipulation between MGRA and PG&E reads: “Prior to the October 9-12 power shutoff, PG&E did not make adequate efforts to anticipate peak customer web traffic arising from a power shutoff event.”⁶⁰

4.5. Exogenous Factors Affecting PG&E’s Website

Throughout its testimony and other presentations on the October 8th – 12th website issues PG&E emphasizes a number of exogenous factors contributing to the load on its website, factors which it claims it could not have anticipated. PG&E thereby seeks to reduce its culpability. MGRA analyzes these factors and while all of them increase the load on PG&E’s website, MGRA’s

⁵⁸ PG&E Testimony; p. 4-7.

⁵⁹ PG&E Rebuttal Testimony; pp. 4-4 – 4-5.

⁶⁰ Exhibit PG&E-04.

testimony concludes that the primary reason for PG&E's website failure was that more PG&E customers were using its website than it had anticipated and designed for.

4.5.1. Repeat users

One of the contributing factors mentioned by PG&E is that a substantial volume of its website traffic, 50-60% of it, was from "repeat users",⁶¹ or users who would return to the website more than once. As explained in MGRA's testimony, these were mostly PG&E customers who "were also legitimate web traffic that should have been anticipated by PG&E."⁶² MGRA's testimony explains that:

*"Leading up to and during a "PSPS" event, the typical user will need to know if they are in the planned shutoff area. As more information becomes available as the weather event approaches and arrives, PG&E updates its plans and schedule for de-energization. Therefore, the information the customers require is dynamic, and only by repeat visits to the website can they have up-to-date information that they can use to plan for their safety, protection, and comfort. PG&E acknowledges that PSPS events are dynamic and that their 'scope is dependent upon constantly changing weather conditions and other factors...' This naturally implies that in order to have up-to-date information a user may need to revisit PG&E's website periodically in order to see whether there have been any changes to the geographic area or timing of power shutoff. Regardless, PG&E made no estimation of the number of times that users would repeatedly visit their website. PG&E's apparent surprise that users would re-visit their website indicates a lack of customer empathy and understanding of how its customers would use the website during a PSPS event. This oversight contributed to their underestimation of website traffic during major PSPS events."*⁶³

"Repeat users" therefore do not represent a reasonable exogenous factor because they are legitimate PG&E customers and PG&E should have anticipated repeat traffic.

⁶¹ PG&E Testimony; p. 4-9.

⁶² MGRA Testimony; p. 15.

⁶³ Id; citing Appendix B; PG&E Data Request Response MGRA_002-Q23 and Appendix B; PG&E Data Request Response MGRA_002-Q18.

4.5.2. Website traffic from outside of California

PG&E also claims that over the course of the October 8th-12th website incident almost a million page requests came from outside of California.⁶⁴ This is a substantial volume of traffic, but still represents only a fraction of requests experienced by the PG&E website. As detailed in the MGRA testimony: “The PG&E testimony states that there were over 3 million visits to the website *from unique users*. PG&E also states that 50-60% of web traffic was *from repeat users*. All repeat users are unique users, so all repeat users will have visited the website more than once. Hence, the total number of page requests is substantially larger than 3 million, and the overall fraction of visits by users outside of California is significantly smaller than 30%.”⁶⁵ (Emphasis added in original.)

While national and global interest might have been anticipated from a shutoff event of such a massive scale, this interest does not represent any more than a fraction of the website traffic. Proper performance testing generally tests at load levels exceeding the anticipated traffic,⁶⁶ so had PG&E anticipated its customer website load properly and ensured it could handle anticipated loads, it likely would have been able to handle the extra traffic from outside of California as well.

4.5.3. Third-party traffic redirection

Another factor contributing to the load on PG&E’s static content server was the fact that third party sites, such as news sites, were re-directing users to PG&E’s website, which it claims “multiplied” the web traffic.⁶⁷ In neither of its submitted sets of testimony nor in any MGRA data request response did PG&E ever quantify or justify this claim. MGRA’s testimony notes that: “since the PG&E website was the ‘point of truth’ for information regarding its power shutoff, this redirection of traffic by third-party sites to the PG&E website was legitimate and should have been anticipated by the PG&E team.”⁶⁸

The claim that traffic was “multiplied” by third party sites is finally addressed in the MGRA/PG&E stipulations, in which PG&E concedes that: “PG&E believes and acknowledges that

⁶⁴ PG&E Testimony; p. 9.

⁶⁵ MGRA Testimony; p. 14.

⁶⁶ MGRA Testimony; p. 16.

⁶⁷ PG&E Testimony; p. 4-9.

⁶⁸ MGRA Testimony; p. 15.

the majority of the traffic leading to the October 9-12 PG&E website outage came from PG&E customers.”⁶⁹

4.5.4. Map downloads

Another factor contributing to website load is that PG&E allowed the download of maps from its static content servers. PG&E provided no data supporting this claim in its testimony or data request responses.⁷⁰ In its data request responses, it was unable to quantify how many or what types of downloads occurred, or to provide any quantification of this “strain” placed on its server by these downloads.⁷¹

PG&E does not meet the burden of proof to show that map downloads substantially contributed to performance issues on its website.

4.5.5. Summary: PG&E customers were responsible for most web traffic

In its stipulations with MGRA, PG&E concedes that most web traffic was the result of legitimate PG&E customers:

“While a number of unanticipated external factors testified to by PG&E and acknowledged by MGRA such as third-party usage, bot traffic, out of state traffic, and map downloads, aggravated the strain on PG&E’s content servers, PG&E believes and acknowledges that the majority of the traffic leading to the October 9-12 PG&E website outage came from PG&E customers.”⁷²

4.6. Recovery of the PG&E Website

MGRA summarizes PG&E’s website recovery in its testimony.⁷³ Stated briefly, in addition to upgrades of its infrastructure, PG&E worked with vendors and partners Second Watch and ESRI

⁶⁹ Exhibit PG&E-04; p. 1.

⁷⁰ MGRA Testimony; pp. 14-15.

⁷¹ MGRA Testimony; Appendix B; PG&E Data Request Responses MGRA_002-Q26, MGRA_002-Q27, MGRA_002-Q28, MGRA_002-Q29, MGRA_002-Q31.

⁷² Exhibit PG&E-04; p.1.

⁷³ MGRA Testimony; pp. 8-11.

to move components into the cloud and to identify performance issues. PG&E then made substantial changes to its infrastructure in the days following the October 8th-12th website incident. These changes constituted what is effectively a re-architecting of major system components, including moving its map downloads and Address Lookup Tool onto the web-based Amazon cloud, and moving content from its web servers onto a “content delivery network”.⁷⁴ These upgrades allowed PG&E’s website to operate without performance issues during the PSPS event initiated on October 26th.

For PG&E to accomplish these tasks within ten days was acknowledged by MGRA’s expert as “a remarkable achievement”,⁷⁵ one that Mr. Arora claims required some PG&E employees “working dozens of hours straight”.⁷⁶ However, knowing that PG&E was capable of rapidly upgrading its website, the Commission must ask what would have happened if PG&E had realized its peril earlier? Even if it had recognized the warning signs as late as September 25th, PG&E could have undertaken urgent measures to fortify its website to prepare for high user traffic. One must conclude that the PG&E website outage was indeed avoidable had PG&E understood how its customers would use its website under PSPS warning conditions and done adequate performance testing.

5. COMPLIANCE WITH PUC CODE 451, D.19-05-042, AND ESRB-8

There seems to be no dispute that the PG&E website failed, and little dispute that it was PG&E’s responsibility to keep the website available. There is general agreement that the primary load on the web servers was due to PG&E customers, and that PG&E should have anticipated this load and tested its servers accordingly. This section addresses whether the PG&E shortcomings in this regard represent violations of Public Utilities Code Section 451 and Commission Resolution ESRB-8, and if so what the consequences of this violation should be.

5.1. Public Utilities Code Section 451

PUC Code Section 451 states in part:

⁷⁴ Id; citing: MGRA Testimony Appendix B; DR Responses MGRA_002-Q33, MGRA_002-Q34, MGRA_002-Q35, MGRA_002-Q38.

⁷⁵ MGRA Testimony; p. 21.

⁷⁶ PG&E Rebuttal Testimony; p. 4-6.

Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities ... as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.

The failure of PG&E's website presents a violation of PUC Section 451.

The PG&E website is a service providing critical information to PG&E customers, and depends upon the instrumentalities of the various servers and systems responsible for the operation of the website, including the static content servers, the Address Lookup Tool, and the availability of maps. The website, particularly in a period leading up to and through a PSPS event, is a necessary component of PG&E's communication with its customers, and was necessary to promote:

- Safety – PG&E's website was used to communicate up-to-date information with its public safety partners, with the media, and with the public. PG&E and other IOUs coined the term "Public Safety Power Shutoff" to denote proactive de-energization as a wildfire ignition prevention method. Failure to provide information regarding PSPS therefore directly impacts public safety. PG&E had to migrate data files from its website onto a cloud-based service in order to allow its public safety partners to access them.⁷⁷ Lack of availability of the PG&E website also affected the safety of those in wildfire areas, such as residents evacuating from the Kincadee fire.
- Health – Vulnerable populations and medical baseline customers were particularly affected by power shutoff and therefore doubly dependent on accurate information from PG&E. PG&E's website was intended to be the primary source of accurate and timely information regarding the geographic areas affected by and timing of the power shutoff event. Lack of access to the PG&E website therefore directly affected safety and health risk for vulnerable populations.
- Comfort and convenience – Residents affected by the PG&E power shutoff were unable to plan their activities because they were not provided up-to-date and accurate information regarding the geographic area affected by and timing of PG&E's power shutoff and re-energization. This failure of communication affected their ability to comfortably endure or avoid the power shutoff, and the time wasted by ill-fated

⁷⁷ MGRA Testimony; p. 8.

attempts to reach the PG&E site or in downloading inaccurate maps caused customer inconvenience.

The previous sections demonstrate that PG&E’s attempt to operate its website during a PSPS event as well as its prior planning were *inadequate*, and that PG&E’s expectation that its website could remain functional during a major PSPS event was *unreasonable*.

The Commission should therefore find that PG&E’s website failure constitutes a violation of Public Utilities Code Section 451.

5.2. D.19-05-042

The Commission Decision D.19-05-042 lays out a number of requirements regarding de-energization that relate to the IOUs’ websites:

Page 96 - *“The electric investor-owned utilities must provide up-to-date information, including a depiction of the boundary of the de-energization event, on their websites’ homepage and a dedicated PSPS webpage regarding the de-energization event.”*

Appendix A, p. A14 – *“With the goal of having a common understanding of situational awareness among public safety partners throughout California, each electric investor-owned utility must clearly articulate thresholds for strong wind events as well as the conditions that define “an extreme fire hazard” (humidity, fuel dryness, temperature) that the electric investor-owned utility evaluates in considering whether to de-energize. This information may vary for different jurisdictions and topographies; however, the information must be provided to and be readily available to public safety partners and the public.[cite] [citation] For example, on the utility’s website.”*

Due to availability issues with PG&E’s website:

- customers were not provided with accurate and up-to-date information regarding the boundary of the de-energization event,
- customers were not able to reach PG&E’s dedicated PSPS webpage regarding the de-energization event, and
- the public was not able to access information regarding the criteria PG&E used to determine its de-energization threshold.

Therefore, the Commission should find PG&E in violation of Decision D.19-05-042.

5.3. ESRB-8

On page 6 of ESRB-8, the following requirement is stated:

- *The IOU shall ensure that de-energization policies and procedures are well-communicated and made publicly available, including the following:*
 - *Make available and post a summary of de-energization policies and procedures on its website.*

During the time that PG&E was experiencing website availability issues, its customers would not have access to its de-energization policies and procedures. While this lack of availability only extended through the outage, this is exactly the period that customers would have the most interest in and need for knowledge of PG&E’s de-energization policies and procedures. Hence, PG&E’s website failure constitutes a violation of ESRB-8.

5.4. Consequences

MGRA members and those we advocate for, not being PG&E customers, were not affected by PG&E’s October 9th-12th de-energization event and website outage commencing on the 8th. However, we do live in an area subject to de-energization and it is in our interest that electric utilities exercise all due diligence to ensure that de-energization follows all Commission guidelines and public utilities law in order to minimize its extent and impact. There should therefore be consequences for utilities that fail in this charge.

Our expert concludes that PG&E’s website failure was a result of “primarily due to a lack of adequate capacity planning, testing, and knowledge of its customer base.”⁷⁸ While this failure was not malicious, our expert notes that the PG&E testimony and data request responses “lack transparency and demonstrate an unwillingness to take full responsibility for the website incident of

⁷⁸ MGRA Testimony; p. 22.

October 8th through 12th.”⁷⁹ While PG&E ultimately admitted some of its key shortcoming in the MGRA/PG&E stipulations, the process was too difficult. PG&E would have served itself and the Commission much better by being more open and honest about how it let this issue get past them. The Commission should consider this as it determines penalties. Likewise, the Commission should not ignore PG&E’s rapid and professional response in recovering and subsequently improving its website under very tight deadlines.

The Commission should also carefully consider the input of ratepayer advocates who directly represent the PG&E service area. The voices of those who suffered through PG&E’s failure should have a major role in determining what penalties should be assessed against PG&E. TURN provides a cogent argument for assessing penalties against PG&E for its website outage in its testimony,⁸⁰ and the Alliance would consider the penalties proposed by TURN reasonable.

One general area of concern that the Commission should address is that while PG&E received numerous claims for damages related to its October 2019 outages, it has not paid these claims because it claims that: “Tariff Rule 14 allows PG&E to shut off power when in its sole opinion it deems it necessary for public safety and states that PG&E may interrupt service without liability.”⁸¹ PG&E’s Tariff Rule 14 states that: “PG&E will not be liable for interruption or shortage or insufficiency of supply, or any loss or damage of any kind of character occasioned thereby, if same is caused by inevitable accident, act of God, fire, strikes, riots, war, or any other cause except that arising from its failure to exercise reasonable diligence.” However, it is the Commission, not PG&E, that is tasked with determining reasonableness of power shutoff under ESRB-8.⁸² The Commission has made no finding as to the reasonableness of PG&E’s actions during the October 2019 power shutoff events. In fact, this phase of the proceeding may find that PG&E’s power shutoff, or elements of it, were not reasonable. If this is the case, PG&E should be directed not only to pay appropriate amounts for damage claims, but to additionally compensate claimants for unreasonable delay in compensation. More generally, the Commission should address the question of whether IOUs can or should deny compensation to customers harmed by a PSPS event in lieu of a Commission determination of reasonability.

⁷⁹ Id.

⁸⁰ TURN-02; pp. 9-11.

⁸¹ CalAdvocates-01; Supporting Attachments PUBLIC-40 – PUBLIC 41.

⁸² pp. 5, 8.

6. CONCLUSION

The Mussey Grade Road Alliance appreciates this opportunity to present its findings and conclusions to the Commission regarding PG&E's website outages from October 8th through the 12th. That the PG&E website failed to operate during the critical period of the October 8th-12th PSPS events is incontrovertible. MGRA's testimony definitively shows that this outage was foreseeable and preventable. The stipulations reached between MGRA and PG&E likewise show that PG&E admits that it could and should have prevented the website outages. By allowing its website to fail, PG&E denied its customers access to critical information at a critical time, and thereby violated Public Utilities Code 451, ESRB-8, and D.19-05-042. The Commission should carefully weigh the factual record presented by MGRA as well as input from ratepayer advocates when assessing any penalties for these violations.

Respectfully submitted this 30th day of October, 2020,

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