

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
1. Scaling of business operations				
1.a	Identify the maximum customer outage that could occur during a PSPS, and the commensurate bandwidth requirements for both web and call services that must be available at all times.	This wildfire season	<p>A Public Safety Power Shutoff (PSPS) event that impacts PG&E's entire service territory could affect all of its 5.4 million electric customers. The likelihood of an event of this scale occurring is extremely low, however in an abundance of caution, by next wildfire season, PG&E is looking into additional hardware and capacity to accommodate an outage at this scale. PG&E is currently stress testing its website to accommodate 2.5 million users accessing the site in one hour.</p> <p>Based on the October 9 PSPS event, PG&E recognizes the need to enhance the website bandwidth. Following the event, PG&E's Information Technology (IT) team has made the following enhancements for any future events:</p> <ul style="list-style-type: none"> • Increased memory and central processing units (CPUs) on pge.com systems currently in PG&E's data center • Moved specific components/features of the website to cloud-based solutions that can scale up and down, as needed – these features are the ones most heavily used during the event (e.g., address look up and file download) • Strengthened integration between PG&E's customer, communication, and operation teams to determine and anticipate traffic/load needed to simulate during testing • Increased monitoring thresholds of pge.com so that IT operations is alerted when CPU utilization reaches 60% (a decrease from 80%) • Increased availability of systems by leveraging a content delivery network (CDN) such that PG&E swings over to a backup site in the event of high traffic or compromised infrastructure (contracting with Akamai) • Conducting detailed review of denial of service providers and other cyber security functions to ensure there are no gaps • Confirmed PG&E call center has the bandwidth to withstand up to 3,900 concurrent calls <p>As was done during the last PSPS event, PG&E will also seek assistance and guidance from the State Chief Information Officer (CIO), IT consultants, and other agencies as needed during future events as needed.</p>	<p>Status: complete</p> <p>PG&E has confirmed that we are prepared for another PSPS event that could be as large as or larger than the event on October 9. Please refer to the 10/17 response for detail on specific actions taken.</p> <p>Other supporting activities are in progress and are described below</p>
1.b	Develop protocols to immediately enlist surge capacity and/or supplemental resources to address shortfalls in real time. Establish specific response-time goals/metrics and triggers to ensure resource availability to meet these goals.	This wildfire season/ long-term	<p>PG&E has already moved specific components/features of the website to cloud based solutions that can scale up and down, as needed – these features are the ones most heavily used during the event (e.g., address look up & file download). PG&E has also increased monitoring thresholds of pge.com so that IT operations is alerted when CPU utilization reaches 60% (a decrease from 80%).</p> <p>PG&E is in the process of establishing and documenting specific response-time goals/metrics and triggers to ensure resource availability to meet these goals. PG&E will provide these goals/metrics to the California Public Utilities Commission (CPUC) as the information becomes available</p>	<p>Status: ongoing / in progress</p> <p>PG&E stabilized the PSPS-related features (e.g., address look up, outage maps, file download). They all have been built to dynamically scale to meet the load that comes to the site. The site is behind a CDN as well and has been in production since Tuesday morning, 10/22/19. They were all tested to 2.5 million transactions per hour. Outage Maps was tested to 3.1 million transactions per hour. Additionally, PG&E has developed and documented "playbooks" for how to redirect and failover to back up systems and has tested the ability to do so should pge.com experience performance issues in the future. The highest peak load we have seen in this current PSPS event is 3.3 million transactions per hour and the CDN is now serving 94.9 percent of the content and internal servers are running at under 10 percent capacity.</p> <p>PG&E response-times for all PSPS features are averaging under one second even during the peak load.</p>
1.c	Perform a risk assessment of business operations and document the utility's capabilities and gaps for handling high traffic to websites, increased call center volume, and potential impacts on utility	Next wildfire season	<p>PG&E is in the process of performing a risk assessment of business operations and documenting the capabilities and gaps for handling high traffic to the website, increased call center volume and potential impacts on utility communications. This information will be used to inform next steps in key focus areas.</p>	<p>Status: ongoing / in progress</p> <p>No updates, status is still the same as in 10/17 response</p>

	communications from associated interruption of telecommunications networks.		During the last event, PG&E coordinated with the State CIO to assist with performance and load testing and architectural review of new. PG&E will continue to coordinate with and leverage them, as well as IT consultants, for upcoming events, if needed.	As was done during the last PSPS event, PG&E did host two people from the State Chief Information Officer (CIO) and IT consultants to review all work completed during the past two weeks. All feedback was positive with no additional recommendations.
No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
1. Scaling of business operations				
1.d	Ensure website capabilities that are critical for PSPS information dissemination function in a cloud environment and are thoroughly tested in accordance with industry best practices.	This wildfire season/ By next wildfire season	PG&E recognizes website functionality is required now and going forward. PG&E moved specific components/features of the website to cloud based solutions that can scale up and down as needed – these features are the ones most heavily used during the event (e.g., address look up, outage maps). These sites are being performance tested using J Meter and other Amazon Web Services (AWS) and simulate an external load of up to 1 million users accessing the site in two minutes. This is more than double the number of users that accessed the site in two minutes during the previous event. PG&E will scale the website to accommodate known volume and have increased and will continue to increase its external load capacity and bandwidth accordingly. This is anticipated by next wildfire season.	Status: ongoing / in progress PG&E completed all functional and load testing on features and systems required for PSPS. They were all tested to 2.5 million transactions per hour. Outage Maps was tested to 3.1 million transactions per hour. Additionally, PG&E has developed and documented “playbooks” for how to redirect and failover to back up systems and has tested the ability to do so should pge.com experience performance issues in the future. The highest peak load we have seen in this current PSPS event is 3.3 million transactions per hour and the CDN is now serving 94.9 percent of the content and internal servers are running at under 10 percent capacity.
1.e	Perform performance and stress testing of websites, customer portals and underlying infrastructure, develop procedures to identify and manage cyber-attacks (e.g. Denial of Service) that are launched concurrently with a PSPS event, and develop back-up sites as a contingency in case main website goes down.	This wildfire season/ long-term	PG&E will conduct the following performance tests on pge.com monthly with LoadRunner simulating 1 million users in two minutes: <ul style="list-style-type: none"> • Load tests – Max load on production is considered • Stress tests – Increased load to check how it performs • Endurance tests – Load test for a longer duration of time • Breakpoint tests – Increase the load until the system crashes PG&E will scale the website to accommodate known volume and have increased and will continue to increase its external load capacity and bandwidth accordingly. This is anticipated by next wildfire season.	Status: ongoing / in progress PG&E completed functional and load testing on systems and features required for PSPS by 10/21/19. We will performance test prior to the start of PSPS events in the future to confirm all systems are performing as needed to support the event.
1.f	Establish a partnership with the California State Threat Assessment Center and the California Cyber Security Integration Center to receive threat information to PG&E networks and to receive State technical assistance when necessary during high profile PSPS events.	This wildfire season/ long-term	PG&E has a close partnership with the California Cyber Security Integration Center (Cal-CSIC) and collaborates on intelligence sharing and receives daily intelligence reporting from the Cal-CSIC to include during PSPS events. PG&E has ongoing collaboration discussions regarding network traffic analysis and incident response. Regarding the California State Threat Assessment System (Cal-STAS), PG&E closely collaborates with the Cal-STAS to include bi-directional intelligence sharing, cyber-incident investigation support and instructional sessions. The Cal-STAS conducts ongoing intelligence collection and sharing regarding PG&E breach support, cyber and typo-squat identification and network scanning to complete Baseline Attack Surface Reports specifically for PG&E.	Status: ongoing / in progress No updates, status is still the same as in 10/17 response
1.g	Establish solutions for handling increased volumes of calls to the call centers, including setting specific response-time goals and ensuring resource availability to meet those goals. To accomplish this, PG&E and the other state IOUs shall increase the workforce in this area so that there are adequate resources to manage this highly critical function.	This wildfire season/ long-term	To support increased call volumes during a PSPS event, PG&E established the following solutions: <ul style="list-style-type: none"> • Move to emergency calls only (now known as PSPS Call Strategy which includes down wires, gas leaks, outages and PSPS calls only) with general inquiries being handled by PG&E’s automated telephone system and digital channel. • Utilize multiple staffing levers to supplement existing personnel in the Contact Centers. These levers include: Max Staffing, Billing and Credit Customer Service Representatives (CSRs) and upfront interactive voice recordings (IVR) messaging intended to allow customers to self-serve in the web. This strategy will allow PG&E to meet the response time goals as established by the CPUC metrics listed below: <ul style="list-style-type: none"> • Service Level of 76 percent of the calls answered in 60 seconds or less by Live Agent or IVR 	Status: complete To support increased call volumes during a PSPS event, PG&E has implemented the following call center strategy for this active PSPS event: <ul style="list-style-type: none"> • Trained >150 Billing and Credit Customer Service Representatives (CSRs) to handle PSPS-related calls • Provided upfront interactive voice recordings (IVR) to allow customers to self-serve and limit call volume • Developed the PSPS Call Strategy, which only accepts emergency calls related to PSPS (e.g., wires down, gas leaks, outages when PSPS is active). Note: this strategy is reconsidered if call volume can be adequately handled using the additional CSRs and IVR messaging This strategy allowed for PG&E to exceed call center response time goals for this event as established by the CPUC metrics listed below: <ul style="list-style-type: none"> • Goal: 76% of the calls answered in <60 seconds by Live Agent or IVR

		<ul style="list-style-type: none"> Emergency calls answered in 15 seconds or less 	<ul style="list-style-type: none"> a. Actual for active PSPS event: >97% of calls answered in ≤60 seconds • <u>Goal</u>: Emergency calls answered in 15 seconds or less <ul style="list-style-type: none"> a. Actual for active PSPS event: Emergency calls answered in 3 seconds
--	--	--	--

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
2. Coordination with counties and tribal governments				
2.a	Collecting feedback from local governments (cities and counties) impacted by PSPS events that took place the week of October 7, 2019 and identifying specific actions to be taken to address such feedback.	This wildfire season	<p>PG&E is committed to listening and gathering feedback from impacted communities. As a first step, on Wednesday, October 16, PG&E leadership held two conference calls with counties impacted by the latest PSPS event. During the calls, PG&E received input about how the company can better coordinate and communicate with communities during future PSPS events, with a focus on “quick wins” for immediate process improvements.</p> <p>In the coming weeks, PG&E officers will meet in-person with communities impacted by the latest PSPS events. These meetings will provide counties with an additional opportunity to provide feedback on various topics related to the latest events. This includes, but is not limited to, the notification process, event execution, restoration and information needed to better support the community’s response needs.</p> <p>After all meetings are complete, PG&E will identify specific actions from feedback received and address key issues identified as quickly as possible.</p>	<p>Status: ongoing / in progress</p> <p>On Wednesday, October 16, PG&E leadership held two conference calls with counties impacted by the October 9/12 PSPS event. Representatives from approximately 30 counties participated in the calls. Feedback and lessons learned that could be implemented for immediate process improvements were prioritized and longer-term enhancements will be addressed in the weeks to come. Following the conference calls, PG&E planned to begin meeting in-person with all impacted communities; however, the current weather events necessitated activating the EOC for a potential PSPS and no additional listening sessions have been hosted at this time.</p> <p>We anticipate reaching out to communities to begin scheduling meetings once the current event has passed.</p>
2.b	Identify resources (Emergency Operations Center liaisons) that can be embedded 24/7 in County Emergency Operations Centers (EOCs) during events. The EOC liaisons shall be trained in emergency response, in accordance with Standardized Emergency Management System (SEMS) and have working knowledge of utility operations and business processes.	This wildfire season/By next wildfire season	<p>Effective immediately, when PG&E’s EOC is activated for a potential PSPS event, PG&E will make liaison representatives available to be embedded in the local jurisdiction’s EOC, if one has activated and a PG&E liaison is requested.</p> <p>By the next wildfire season, PG&E will be coordinating with the State to receive assistance on providing Standardized Emergency Management System (SEMS) training to EOC staff, including the liaison representatives that may be embedded in the local jurisdiction’s EOC. Please see section 4.a for additional information regarding SEMS training.</p>	<p>Status: ongoing / in progress</p> <p>When PG&E activated its Emergency Operations Center (EOC) on October 20, dedicated PG&E points of contact reached out to all potentially impacted counties and tribes and offered to be embedded in their local EOC and/or coordinate to have county representatives attend PG&E’s EOC. PG&E also offered to have GIS experts visit their EOC or assist with any mapping questions. As of October 22, four counties requested embedded PG&E liaison support (see No. 3a below for more detail)</p> <p>PG&E will continue to coordinate with the State to receive assistance on providing Standardized Emergency Management System (SEMS) training prior to the next wildfire season.</p>
2.c	Develop and implement processes that will ensure that County EOC liaisons will have the latest PSPS event information during PSPS events and are enabled and empowered to resolve local issues as they arise.	This wildfire season	<p>The PG&E liaison representatives embedded in the County EOCs will have direct communication with PG&E’s EOC and can work with the EOC to resolve any local issues that may arise. At PG&E’s EOC, liaison representative(s) will be dedicated to intake inquiries and track down answers.</p>	<p>Status: complete</p> <p>New processes are in-place and functioning. For the current PSPS event (October 23-25), PG&E liaison representatives embedded in County EOCs have direct communication with PG&E’s EOC and work with the EOC to resolve any local issues that may arise. At PG&E’s EOC, liaison representatives are dedicated to intaking inquiries and tracking answers.</p> <p>In addition, a 24-hour bridge line was established on October 21 to provide another channel for impacted cities, counties and tribes to ask questions. The conference call line is staffed 24/7 and any inquiries are captured and shared with the dedicated points of contact to resolve.</p>

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
2. Coordination with counties and tribal governments				
2.d	Establish a more effective communication structure with county and tribal government emergency management personnel. This communications structure shall be separate and unique from general updates to local governments and other stakeholders to allow for emergency personnel to receive the support and information required to properly respond.	This wildfire season	<p>During the last event PG&E identified points-of-contacts for each potentially impacted county and tribal government support and respond to unique, local inquires and will continue to provide points-of-contact in future events. These points-of-contacts will have direct communication with PG&E's EOC and received information for the local jurisdictions.</p> <p>The point-of-contact is in addition to the following regularly established communication channels:</p> <ul style="list-style-type: none"> • Live calls to Public Safety Answering Points (PSAPs) and County OES. Before customers are notified, PG&E will call primary contacts to provide notice of a PSPS event. • Thrice-daily operational briefing calls. These calls will provide situational awareness updates directly from the PG&E Emergency Operations Center (EOC). • A dedicated 24-hour e-mail and phone line monitored by the PG&E EOC. Partners can reach PG&E EOC staff with any questions or requests for information by e-mailing PGELiaisonOfficer@pge.com. • Automated call, text and e-mail updates throughout the PSPS event. • Information uploaded to the secure data transfer portal and PG&E website. Event-specific information will be uploaded first to PG&E's secure data transfer portal (pge.com/pspsportal) and then to the publicly available website (pge.com/pspsseventmaps). 	<p>Status: ongoing / in progress</p> <p>As noted in section 2b, after PG&E's EOC was activated, dedicated PG&E points of contact reached out to all potentially impacted counties and tribes. PG&E has found this to be effective in responding to unique, local inquiries quickly, as well as providing event information such as news releases.</p> <p>PG&E also continued to use the regularly established communication channels (noted in the 10/17 response to the Commission) to provide event-specific information for the current PSPS event (10/23-10/25). These include:</p> <ul style="list-style-type: none"> • Live calls to Public Safety Answering Points (PSAPs) and County OES. Before customers are notified, PG&E will call primary contacts to provide notice of a PSPS event (Completed 10/21) • Thrice-daily operational briefing calls. These calls will provide situational awareness updates directly from the PG&E EOC (Started on 10/22). • A dedicated 24-hour e-mail and phone line monitored by the PG&E EOC. Partners can reach PG&E EOC staff with any questions or requests for information by e-mailing PGELiaisonOfficer@pge.com (Ongoing). • Automated call, text and e-mail updates throughout the PSPS event (Initial Notification Sent 10/22). <p>Information uploaded to the secure data transfer portal and PG&E website. Event-specific information is uploaded first to PG&E's secure data transfer portal and then to the publicly available website (Completed on 10/22).</p>
2.e	Phone calls must be manageable and allow for two-way dialogue with each county and tribal government emergency personnel. The CPUC recommends holding calls individually with counties when possible, or at a minimum considering grouping counties in accordance with PG&E identified geographic regions (1-9) or developing some other format. For example, attempting to take questions with hundreds of people on a conference phone call is not feasible.	By next wildfire season	<p>As mentioned in section 2.d, PG&E identified and will continue to have points-of-contacts for each county that will allow for two-way dialogue. In addition, to better assist with providing real-time updates, during the last PSPS event, PG&E began utilizing a conference line with an operator for the thrice-daily Operational Briefing calls. This new tool expanded the number of participants that were able to join, ensured participants were able to clearly hear the PG&E situational awareness update and provided a systematic approach for the questions and answers portion of the call. PG&E will be utilizing this tool in future PSPS events and is also considering a WebEx based tool to allow posting of documents and ability to view written questions.</p> <p>PG&E believes there is value to providing consistent information to all potentially impacted communities at the same time and will continue to host thrice-daily calls in future PSPS events.</p> <p>PG&E also understands that the number of participants on these calls can make it difficult to ask questions. Accordingly, PG&E's point-of-contact can help support and respond to unique, local inquires to streamline the Operational Briefings.</p> <p>As noted above, PG&E will be meeting with the communities impacted by the last PSPS event for feedback. This includes input on the Operational Briefings and whether regional calls would be preferred. Based on the feedback, PG&E may make updates to the call structure before the next wildfire season.</p>	<p>Status: ongoing / in progress</p> <p>As mentioned in section 2b, dedicated PG&E points of contact will continue to be the primary mechanism for impacted counties and tribes to receive localized information. This allows for two-way dialogue and quicker response times for unique, local inquires.</p> <p>In addition, as a lesson learned from the October 9 event, PG&E moved from twice-daily operational briefings with local agencies to thrice-daily briefings, and leveraged a conference line with an operator for the thrice-daily Operational Briefing calls. This new tool expanded the number of participants that were able to join, ensured participants were able to clearly hear the PG&E situational awareness update, and provided a systematic approach for questions and answers. PG&E will be utilizing this tool in future PSPS events and has also begun utilizing a WebEx-based tool to allow posting of documents and ability to view written questions so as to enable a visual component to conference calls. This will allow participants to see real-time weather data, Community Resource Center locations and status, and the latest situation report, including potential customer impacts. PG&E will also consider a regional call structure for future large-scale events as suggested by the</p>

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
				CPUC, while also keeping in mind that many counties indicated a preference for a single call with a more streamlined structure.
2. Coordination with counties and tribal governments				
2.f	Develop processes and procedures for sharing information of medical baseline customers that can be impacted by a specific PSPS event. Per CPUC Executive Director directive issued on October 8, 2019, the utilities are expected to share medical baseline information with counties and tribal governments, if requested, without a memorandum of understanding or non-disclosure agreement during PSPS events. Also, utilities must ensure that the information can be shared with-county and tribal government emergency response personnel in a confidential manner that limits access to include only intended recipients of the information.	This wildfire season	<p>Recognizing the need for local first responders to assist the vulnerable population when PG&E's EOC is activated for a potential PSPS event, PG&E will follow the process implemented after the October 8 letter from the CPUC, to provide the names and addresses of medical baseline customers within the impacted jurisdiction.</p> <p>To ensure PG&E is providing sensitive customer information in a confidential manner that limits access to only intended recipients, PG&E will continue to work with communities to execute non-disclosure agreements for information for advanced planning.</p>	<p>Status: complete</p> <p>Process is in place to share lists of medical baseline customers within the impacted jurisdiction, even without an NDA, as directed by the CPUC.</p> <p>Additionally, as of the 10/23 PSPS event, PG&E began providing to the impacted jurisdictions, on a regular schedule, lists of medical baseline customers who have not confirmed receipt of their notifications. These lists are snapshots in time, and PG&E continues to make contact attempts to contact these customers and confirm receipt of their notifications.</p>
2.g	Develop and validate the list of critical facilities by coordinating with counties, tribal governments and Cal OES ahead of the events.	This wildfire season/ long-term	<p>As part of the overall Community Wildfire Safety Program, in July 2019, PG&E initiated an outreach campaign to 267 cities and counties to confirm and verify critical facilities and infrastructure within their jurisdiction.</p> <p>As part of the campaign, a request was made to each jurisdiction to identify additional facilities and infrastructure they deem to be critical and believe ought to be included in PG&E's critical facilities and infrastructure list. To date, PG&E has received input from over 85 cities and counties. PG&E has reviewed and updated records with a critical facility identifier based on feedback received, including adding over 500 critical facilities to PG&E critical facility designation (where an address match was found), and confirmed over 800 critical facilities were already designated as critical.</p> <p>These critical facility designations are leveraged by PG&E to provide prioritized restoration during any outage (including PSPS), as well as for providing prioritized customer notifications. These notifications include a specialized notification script in alignment with public safety partners.</p> <p>The notifications direct them to PG&E PSPS event maps page, includes a link to a webpage of consolidated impacted sites and provides an option to connect with PG&E's call center for escalated needs.</p> <p>Finally, these designations are also used to ensure up to date contact information is obtained and maintained annually for these facilities.</p>	<p>Status: ongoing / in progress</p> <p>As part of this PSPS event, once PG&E's EOC was activated, dedicated PG&E point of contacts coordinated with potentially impacted counties and tribes to review the proposed scope of the event and any critical facilities within the area. This is to help ensure PG&E has identified all of the potentially impacted critical facilities prior to de-energization.</p> <p>Additionally, during an active PSPS event, PG&E customer representatives are making direct contact with assigned critical facilities customers to supplement the automated notifications that these critical facilities receive during an event.</p> <p>PG&E continues to maintain critical facility designation in alignment with the CPUC's PSPS definition of critical facilities. PG&E will maintain an open dialog with local agencies, welcome feedback from these agencies, and will continue to identify additional facilities in their jurisdictions if necessary.</p>
2.h	Identify impacts on major transportation systems, including tunnels and railroad systems. PG&E shall coordinate with the California Department of Transportation (Cal TRANS) and the appropriate railroad and rail transit entities ahead of events to identify major transportation infrastructure that needs to be monitored during PSPS events.	This wildfire season/ long-term	<p>PG&E will continue to coordinate with transportation customers which include CalTrans, BART and other critical service providers to further understand and more effectively plan for the various PSPS outage scenarios. Included in this planning should be the societal impacts that a disruption in service, whether highway or public transport, will have on PG&E's communities and customers.</p> <p>PG&E proposes that California Governor's Office of Emergency Services (Cal OES) lead a comprehensive review of potential impacts of extended outages (e.g., PSPS, earthquakes) on all major transit providers, with support from those customers, as well as PG&E and the other California IOUs.</p>	<p>Status: ongoing / in progress</p> <p>In the current and recent PSPS events, PG&E has leveraged a review process at both the regional and local level to address and limit potential transportation disruptions based on the anticipated customer impacts, such as by providing backup power.</p> <p>Additionally, as described in section 3.a, PG&E is also working with CalTrans (in addition to counties and CalOES) to establish a means to share maps that illustrate potential outage impacts through ArcGIS Online cloud sharing, which allows near real-time, synchronized connection to PG&E data systems for their use in evaluating potentially impacted areas during PSPS events.</p>
2.i	Identify critical fuel supply needs and develop advance plans for coordination with fuel suppliers and refineries to ensure continuity of fuel supplies.	This wildfire season/ long-term	<p>PG&E will continue to coordinate with fuel suppliers and refineries to further understand and more effectively plan for the downstream impacts of a PSPS event on the ability to safely operate refineries. Included in this planning should be the societal impacts that a</p>	<p>Status: ongoing / in progress</p> <p>In the current PSPS event, PG&E is in close coordination with Kinder Morgan to ensure their safe operations. As a critical facility, PG&E continues to follow the same process of</p>

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
			<p>disruption to the fuel supply has on the transportation sector including airports, gas stations and other fuel-based businesses.</p> <p>PG&E proposes Cal OES lead a comprehensive review of potential impacts of extended outages (e.g., PSPS, earthquakes), on refineries and business dependent on fuels for operations, with support from those customers, as well as PG&E and the other California IOUs.</p>	<p>coordinating with fuel suppliers and refineries to ensure continuity of fuel supplies, as well.</p>
2. Coordination with counties and tribal governments				
2.j	Develop processes and procedures for sharing information on critical facilities with counties and local governments during events. This must include a solution for sharing information with counties and local governments even if there is no existing memorandum of understanding of non-disclosure agreement.	By next wildfire season	<p>Currently, PG&E provides the names and addresses of critical facilities within an impacted jurisdiction through a secure data transfer portal to those that have an executed non-disclosure agreement.</p> <p>PG&E understands the CPUC's preference is that the information is provided, when PG&E's EOC is activated for a potential PSPS event, to any impacted jurisdiction that is requesting the information. PG&E will work with the CPUC to determine the process for sharing critical facilities information to jurisdictions so that it meets the local response needs while complying with customer privacy laws and regulations.</p>	<p>Status: ongoing / in progress</p> <p>PG&E provides the names and addresses of critical facilities within the impacted jurisdiction through a secure data transfer portal, if requested. The information is accompanied by an email from PG&E to the interested jurisdiction with additional guidance regarding confidentiality and privacy regulations.</p> <p>For advanced planning purposed, PG&E is providing sensitive customer information in a confidential manner that limits access to only intended recipients. PG&E will continue to work with counties and local governments to execute non-disclosure agreements for this information.</p>
2.k	Coordinate advance planning with county and tribal governments to identify locations for PSPS-specific community resource centers. These locations should be identified in a collaborative manner with local emergency response personnel and include agreement that the locations are appropriate to meet local requirements and needs. The list of possible locations for community resource centers should be known to local governments ahead of events and, during events, the coordination should be focused on which specific location to open. PG&E shall also work with counties and local governments to reach understanding on standards for operation (e.g., services available, operational hours).	This wildfire season/ long-term	<p>PG&E recognizes this is needed and will continue to work with local government and tribes to receive feedback on potential Community Resource Center (CRC) locations. PG&E has identified CRC locations in 40 counties, and since May 2019, has been actively working to execute agreements for sites with the property owners identified by the counties.</p> <p>The last PSPS event highlighted the opportunity to more effectively plan and work with local governments to understand their needs and preferences for location of CRCs, and to update PG&E's selection criteria to include cell service availability.</p> <p>PG&E plans to re-circulate the list of CRC sites to cities and counties and continue to solicit their feedback and suggestions on better locations. This will result in outreach to identified property owners to secure agreements.</p>	<p>Status: ongoing / in progress</p> <p>Once PG&E's EOC was activated on 10/20, dedicated PG&E points of contact coordinated closely with the potentially impacted counties and tribes to review the proposed scope of the event and receive input on possible locations for the CRCs. This included phone calls and an email (sent 10/21) that included a list of previously identified CRC locations in each county and solicited input. PG&E reviewed feedback from the county and tribe, worked collaboratively to stand up locations that met key criteria (e.g., ADA accessibility, environmental compliance), and secured final agreement from agencies on the locations identified.</p> <p>Note that PG&E has committed that all CRC locations will be ADA accessible and the hours of operation were also extended by two hours from 6pm to 8pm daily. New hours of operations for the CRCs are 8am to 8pm.</p> <p>Additionally, PG&E still plans to develop a CRC playbook in collaboration with local governments to understand their general needs, preferences, and priorities for CRC locations - while also clarifying the criteria with local agencies for mobilizing CRCs. To build out the playbook, PG&E will leverage previous input received from counties and tribes, and will re-circulate the list of potential CRC sites to solicit more feedback</p>
2.l	Plan town hall style meetings or in-person public information dissemination gatherings to report back to the impacted communities following the PSPS event.	By next wildfire season	<p>In preparation for next wildfire season, PG&E will be conducting the following outreach as soon as possible, which leverages existing plans and lessons learned from this year's engagement outreach strategy:</p> <ul style="list-style-type: none"> • Meetings with cities, counties, customers and community groups • Community open houses across the service area • Planning workshops with cities, counties and public safety agencies • Monthly informational webinars and podcasts • Weekly meetings with state agencies including the CPUC, Cal OES and CAL FIRE and the other investor-owned utilities <p>PG&E will also leverage existing customer research channels to share, test and modify customer communications and experience.</p>	<p>Status: ongoing / in progress</p> <p>Given the current PSPS event underway, no update at this time.</p>

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
3. Accuracy and availability of maps				
3.a	Work with Cal OES to develop better processes for sharing maps, including working on following a model that includes direct integration between respective GIS systems. Cal OES has worked with utilities, including PG&E, to ensure maps with planned and actual PSPS impacts are provided in a timely manner. During the most recent PSPS event, PG&E was consistently falling behind on providing maps that matched its latest estimates of PSPS impacts.	This wildfire season	<p>PG&E has established a process to create potential outage maps and data products (KMZs, GIS shapefiles and PDF) as soon as the event scope is established by the company's meteorology teams. PG&E has received and incorporated input from Cal OES on the methodology for creating the buffered outage polygons used to illustrate impact areas on these maps, as well as alignment on data products with data summary files. As part of publishing event data, PG&E creates data products which are posted to a secure data transfer portal for advance notice to state and local agencies, and public data products which are posted to the PG&E website.</p> <p>Based on feedback from the last event, PG&E is evaluating different methods for producing maps that provide a higher level of precision of the potential outage impacts. Effectively immediately, PG&E will work with Cal OES and other agencies to refine the process for sharing maps, including working on a model that more effectively integrates between respective GIS systems.</p>	<p>Status: ongoing / in progress</p> <p>To help affected counties affected by the 10/23 PSPS event, PG&E has offered GIS specialist support, either on-site or remotely, to provide expedited sharing of maps that illustrate potential outage impacts. As of end of day on 10/23, of the 18 agencies (CalOES, Caltrans, and 16 counties) PG&E extended this offer to, 4 have accepted remote support.</p> <p>In addition, PG&E worked with CalOES, Napa County, Sonoma County, and Butte County to establish a means to share maps that illustrate potential outage impacts through ArcGIS Online cloud sharing, which allows near real-time, synchronized connection to PG&E data systems for their use in evaluating potentially impacted areas during PSPS events.</p> <p>As of 10-23-19, PG&E is also working with Caltrans, Lake County and Calaveras County today to set them up with ArcGIS Online cloud sharing capabilities.</p>
3.b	Establish processes and systems for distributing maps with boundaries to impacted counties and tribal governments that correspond to the latest PSPS impact information being provided.	This wildfire season	<p>PG&E currently shares data products and maps to agencies through a secure data transfer portal. In order to enable more efficient data product sharing, PG&E is now working on a sharing process using an online GIS portal, which will be available this wildfire season.</p> <p>In addition, as stated in section 3.a, PG&E has received and incorporated input from Cal OES on the methodology for creating the buffered outage polygons used to illustrate impact areas on these maps. Based on feedback from the last event, PG&E is evaluating different methods for producing maps that provide a higher level of precision of the potential outage impacts.</p>	<p>Status: ongoing / in progress</p> <p>In addition to the portal referenced in the 10/17 response, PG&E has also established the GIS sharing platforms further detailed in 4a of this week's response.</p>
3.c	Develop dynamic maps that can be used for customers and members of the public to look up their specific address and obtain information about the PSPS event (potential for de-energization, status of de-energization, restoration estimation). These mapping solutions also need to be performance and stress tested to ensure they will be available during the most critical times (i.e., high volume web traffic).	This wildfire season	<p>PG&E recognizes this is needed and has a solution in place for dynamic maps that customers can use to look up their specific address.</p> <p>As referenced in section 3.a, PG&E is evaluating different methods for producing maps with higher level of precision of the potential outage impacts. PG&E recognized that during the last event, the maps were not available due to the website failure. PG&E has already moved this specific component/feature of the website to cloud based solutions that can scale up and down, as needed. For additional information on the performance and stress testing, please reference section 1.d.</p> <p>Once de-energization is complete, customers are directed to the website to receive estimated time of restoration (ETOR). As a contingency, if this website is down, users will get automatically redirected to a fail over site "Critical Web" which provides the same outage information. This contingency is currently in place.</p>	<p>Status: ongoing / in progress</p> <p>No updates, status is still the same as in 10/17 response</p>

No	Issue	Issue	Timing	10-17-19 Response
3) Accuracy and availability of maps				
3.d	Develop processes and procedures for back-up mapping solutions in case of GIS failure (e.g., partnering with additional industry providers of maps and having the ability to promptly create maps with PSPS boundaries and make publicly available.)	By next wildfire season	<p>PG&E plans to move to a secure online GIS system (REST) to enable easier and more reliable file sharing.</p> <p>Since every PSPS event impacts different areas of PG&E's territory and portions of the company's circuits, it is important to be able to create maps based on the specific event. PG&E will continue to look into alternative options and contingencies to account for a potential GIS failure.</p>	<p>Status: ongoing / in progress</p> <p>No updates, status is still the same as in 10/17 response</p>
3.e	Develop capabilities to make maps available beyond the PG&E website, such as providing maps to media outlets and on social media and alternative platforms.	This wildfire season	<p>PG&E recognizes that during the last PSPS event the company's ability to reliably share maps of impacted areas failed, causing confusion on a number of levels. As noted in Section 1, PG&E has enhanced the capacity and bandwidth of pge.com. With these improvements now in place, pge.com will remain the primary source of maps for customers, media and the general public during shutoffs. As pge.com has capabilities to allow for address specific lookups and downloads, it is the most useful source of information.</p> <p>PG&E will augment the website with additional event-specific information made available through social media channels. Additionally, similar to the recent event, PG&E is prepared to share county PDF maps via social media channels should pge.com experience any issues. PG&E has also looked into alternative platforms to share maps with media and other external parties if the website were to experience any issues and is currently working to harden and enhance those platforms.</p>	<p>Status: complete</p> <p>PG&E will continue to augment the website with additional event-specific information made available through social media channels. Additionally, similar to the recent event, PG&E is prepared to share county PDF maps via social media channels should pge.com experience any issues. PG&E has also looked into alternative platforms to share maps with media and other external parties if the website were to experience any issues and is currently working to harden and enhance those platforms.</p>

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
4. Mobilizing, organizing, and decision-making for widespread emergency events				
4.a	PG&E must follow Standardized Emergency Management System (SEMS) in emergencies and PSPS events to ensure consistency among emergency management and public safety agencies. PG&E must ensure that its personnel involved in PSPS response in Emergency Operations Centers and its liaisons to counties and tribal government emergency personnel are trained in SEMS. If PG&E requires assistance in SEMS training, PG&E shall communicate training requirement needs to Cal OES and the CPUC.	This wildfire season/By next wildfire season	<p>PG&E recognizes the need to train personnel involved in PSPS response in EOC and its liaisons to counties and tribal government emergency personnel in Incident Command System (ICS) concepts. At the request of the CPUC, PG&E created a plan to certify the applicable personnel at the FEMA/NIMS level and shared the plan with Cal OES. PG&E received feedback from Cal OES with the request to consider following the SEMS process in lieu of the FEMA plan, and leverage the California Specialized Training Institute.</p> <p>PG&E accepted this feedback and built a plan to certify applicable personnel in SEMS with the intent to implement beginning Q1 of 2020. PG&E attended an Executive PSPS Meeting with State Agencies on September 30, 2019 and learned of the potential of SEMS training being made available to IOU's at Cal OES. PG&E intends to participate in these training sessions offered by the State as soon as the training schedule is made available. PG&E will keep the internal SEMS training plan on file as a contingency measure.</p>	<p>Status: ongoing / in progress</p> <p>PG&E has been in contact with CalOES since the meeting with State Agencies on September 30, 2019 and intends to participate in the trainings made available to the IOUs. PG&E will remain in contact with CalOES and await on the SEMS training schedule.</p>
4.b	Develop a process for providing enhanced transparency and visibility of PSPS decision-making process during events, including the factors that PG&E is taking into account as it considers de-energizing lines.	This wildfire season	The factors taken into account for the decision to de-energize lines are listed in PG&E's PSPS report to the CPUC in accordance with ESRB-8, submitted to the CPUC for each PSPS event. PG&E will work with the CPUC and other agencies to provide further transparency in the decision-making process and to meet their preferred mode of receiving information.	<p>Status: ongoing / in progress</p> <p>In developing the event footprint and scope for the current October 23 PSPS event, PG&E explained the company's scoping methodology with CAL FIRE senior leadership, CalOES's senior leadership team, and SED at 1000 on October 22. The meeting included a review of PG&E's meteorological analysis of the event, expected system impacts across transmission and distribution systems, the expected event timeline, and expected county and customer impacts as currently scoped. At the suggestion of meeting attendees, the same information was then shared with counties during PG&E's 12:30 local agency briefing on 10/22.</p>
4.c	Document the utility's decision-making process for PSPS events, including identifying and documenting the authorities of the Senior Officer in Charge, or equivalent position, and how all elements of the utility emergency operation are clearly aligned under the command of this position.	This wildfire season	<p>The decision-making process has been documented and shared with the responsible PG&E participants involved in the decision. For a PSPS event, the Officer in Charge (OIC) is responsible for making the following decisions:</p> <ul style="list-style-type: none"> • Approving the transmission lines directly in-scope for the PSPS event • Approving initial customer notifications • Approving de-energization of distribution and transmission circuits within the scope • Approving "All Clear" and the start of restoration activities <p>The EOC commander for each event is charged with executing each OIC decision.</p>	Status: complete
4.d	Identify and document all executives with the title of Vice President or equivalent, and above, with responsibilities in PSPS decision-making	This wildfire season	<p>The following Vice Presidents have PSPS decision making responsibilities for the 2019 wildfire season:</p> <ul style="list-style-type: none"> • Michael Lewis (Senior Vice President of Electric Operations) • Sumeet Singh (Vice President of Asset & Risk Management, Community Wildfire Safety Program) • Ahmad Ababneh (Vice President of Electric Operations Major Projects and Programs) <p>In 2020, the responsibility will be expanded to the following Vice President of Electric Operations:</p> <ul style="list-style-type: none"> • Tom French (Vice President of Electric Transmission Operations) • Ken Wells (Vice President of Electric Distribution Operations) 	Status: complete

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
4) Mobilizing, organizing, and decision-making for widespread emergency events				
4.e	Identify and document all board members, and board committees, with oversight of PSPS decision-making.	This wildfire season	PG&E's Board of Directors do not have direct oversight of PSPS decision-making. In addition, the Compliance and Public Policy board committee provides oversight of the Wildfire Safety Plan which also includes the PSPS program.	Status: complete
4.f	Describe all ways in which the utility has used monetary and other incentives to ensure that executives make PSPS decisions that protect life and safety.	This wildfire season	The current annual incentive plans at PG&E are the Corporate CEO Plan and Short-Term Incentive Plan (applicable to officer-level and below employees). While these plans do not have a specific PSPS measure, they do include a focus on wildfire risk reduction and overall public safety, and incentives under both plans can be reduced to zero by the Board of Directors should a catastrophic event occur. PG&E does not currently have an approved incentive plan for senior officers.	Status: complete

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
5. Restoration and mutual assistance				
5.a	<p>PG&E must take all possible measures to accelerate restoration from de-energization during PSPS events. Per Commission Decision 00-05-002*, after major storms, utilities must restore service in less than 12 hours on average. At a minimum, this should be the goal for utility-caused outages such as a PSPS event. PG&E shall also request resources through-mutual assistance processes early in an event. In instances PG&E believes it can perform restoration with internal resources, it shall evaluate if it can perform the work faster with the support from mutual assistance and request mutual assistance resources if it can accelerate restoration time. PG&E must also take into account the possibility of outages and fires unrelated to PSPS and the need to perform restoration work in response to those events as well.</p> <p>*00-05-022</p>	This wildfire season	<p>PG&E has taken measures to accelerate the restoration process resulting from PSPS events. PG&E also continues to conduct After Action Reviews to identify gaps and create corrective actions to strengthen existing processes.</p> <p>PG&E developed a PSPS restoration process and plan in 2019, applicable to both the transmission and distribution system. The PSPS restoration plan includes air resources in the form of thirty-five (35) Exclusive Use Helicopter contracts and an elaborate ground resource plan. Assignment of air resources are defined and executed from within the Operations Section at the EOC. The ground resource plan includes an ICS-based command structure, designed to increase safety margin for PG&E employees performing patrol and restoration activities, while reducing overall restoration time. With regard to the distribution system, custom circuit segmentation plans were established with the intent to place the distribution system in a favorable posture to support safe and rapid restoration. These circuit segmentation plans are implemented immediately following de-energization and in advance of the "All Clear" being declared by the OIC.</p> <p>In addition, an Electric Distribution Emergency Center (EDEC) was formed to coordinate operational activities with the existing Electric Transmission Emergency Center (ETEC), both of which report to the Operations Section of the EOC. The EDEC and ETEC teams coordinate the de-energization and re-energization operating sequences based on a number of factors, including but not limited to transmission system stability (in coordination with CAISO), customer load restoration, restoration of critical and essential customers, etc.</p> <p>PG&E evaluates the scope of a PSPS event and makes a determination with respect to requesting additional resources through existing mutual assistance protocols. PG&E considers the results of the mutual assistance request (number of crews committed by foreign utilities and municipalities), as well as the anticipated time it will take for these crews to arrive on the PG&E system, receive onboarding training per process and be deployed into the field resource pool. PG&E considers whether or not an augmented field workforce will reduce overall restoration times if it believes it can perform restoration solely with internal resources, including onsite contractors. PG&E also takes into account the potential need for mutual assistance crews to perform repair activities associated with damage found following PSPS events, non-PSPS-related power outages and active fires.</p> <p>PG&E acknowledges Commission Decision 00-05-022 and the Joint Proposal cited within. PG&E also acknowledges Standard 12: Restoration Performance Benchmark For A Measured Event as defined in Attachment 1. Because Commission Decision 00-05-022 predates the establishment of PSPS plans by any California IOU, PG&E's understanding is that it was intended to apply to traditional weather and storm-related events as opposed to PSPS-related power outages. PG&E welcomes discussion regarding whether to incorporate PSPS-related outages into the Commission Decision, including the establishment of restoration metrics.</p> <p>Nevertheless, PG&E believes PSPS restoration performance in 2019 across events that occurred in June, September and on October 5th are within expectations as defined in Commission Decision 00-05-022. PG&E is currently evaluating restoration metrics associated with the October 9th PSPS event.</p>	Status: complete

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
6) Restoration and mutual assistance				
5.b	PG&E must take all possible measures to provide accurate restoration estimates to emergency personnel and the public at large. PG&E must also develop processes and procedures to share real time restoration numbers with counties and tribal governments.	This wildfire season	<p>PG&E is taking all possible measures to provide accurate restoration estimates to emergency personnel and the public at large. PG&E has also developed an internal process to create and manage ETOR information for agencies and customers, specific to PSPS events. PG&E continues to conduct After Action Reviews to identify gaps and create corrective actions to strengthen existing processes.</p> <p>Power outages associated with PSPS events are managed and responded to differently than traditional weather-related power outages, in the fact that power is proactively shutoff in advance of high wind activity. When wind conditions are deemed safe, PG&E crews are required to perform visual patrols via ground, foot and air prior to re-energizing equipment and restoring customers. PG&E has created an internal tool to assist in the creation of ETOR's associated to PSPS events. The internal tool factors in the number of miles of conductor that need to be patrolled and number of resources needed to perform the patrol. This data, coupled with the duration of the weather event, informs the overall creation of ETORs.</p> <p>ETORs are communicated to agencies via state and county agency conference calls throughout the PSPS event. In addition, ETORs are communicated to customers and the broader public via media press releases, social media channels, the pge.com webpage and blast IVR messages in which customers can choose how they want to be informed (telephone, text message, email, etc.). In addition, customers can call PG&E and speak to a Customer Service Representative to obtain an ETOR.</p> <p>PG&E has recently developed restoration status reports that are communicated to County Agencies on a periodic basis. Reports include number of customers impacted, number of customers restored, number of medical baseline customers impacted, number of medical baseline customers restored, number of critical and essential customers impacted, number of critical and essential customers restored. The report provides these details on a county by county basis – restoration progress is communicated on the state and county agency conference calls. PG&E intends to expand this report to include tribal governments.</p>	<p>Status: ongoing / in progress</p> <p>PG&E is working to extend restoration status reports to include tribal governments. As mentioned previously, these reports include number of customers impacted, number of customers restored, number of medical baseline customers impacted, number of medical baseline customers restored, number of critical and essential customers impacted, number of critical and essential customers restored. Tribal governments will be added to the County by County list.</p>

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
6. Consultants and resources on call				
6.a	PG&E must prepare for situations where unexpected issues or events (e.g., wildfire, earthquake, cyber-attack etc.) occur concurrently with a PSPS event. It is not possible to anticipate every possible scenario and/or issue that can arise which could compound a PSPS event. Nevertheless, PG&E must take steps to have resources of various capabilities available in order to scale a response and assist with problem solving. This could, for example, involve standing contracts with a range of technical experts and general consultants who are available to step-in and manage issue resolution. PG&E shall develop a list of existing and possible future agreements for on-call resources that can be called upon in case of an emergency.	This wildfire season	PG&E recognizes the need to be prepared for situations where unexpected issues or events occur concurrently with a PSPS event. PG&E intends to take steps to have resources of various capabilities available in order to scale a response and assist with problem solving. PG&E already maintains existing contracts with Price Waterhouse Copper and Cadmus contract agencies. To further augment this support capability, PG&E is pursuing a contract with Accenture with a deliberate focus on crisis management and event response.	<p>Status: ongoing / in progress</p> <p>PG&E has made a request to Accenture consulting to augment its existing contractor base. Contract finalization is in progress.</p>

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
7. Steps to minimize scope of future PSPS				
7.a	Overview of risk-based models PG&E has employed for prioritizing the hardening of infrastructure. As part of this description, identify factors that comprise that model and the weight ascribed to it, and also describe any other feature of this model.	Long-Term	<p>PG&E has developed a circuit (e.g., distribution or transmission line) prioritization model for both distribution and transmission assets to determine a wildfire risk score for each circuit based upon different components of risk. This wildfire risk score establishes the priority of hardening efforts for distribution and transmission circuits.</p> <p>Wildfire risk is calculated using three components: likelihood of failure, likelihood of spread and consequence, and egress. These three components are defined as follows:</p> <ul style="list-style-type: none"> • Likelihood of failure: relative risk of a circuit causing an outage and ensuing ignition • Likelihood of wildfire spread and consequence score: relative probability of ignition spread and quantity of homes or timber affected if ignition occurs • Egress score: ease of access to a community exit and extent of exit, for a mass evacuation <p>For transmission assets, additional factors were also considered when developing a transmission circuit (e.g., line) risk scoring. This includes the consideration of the operational priority list of transmission lines from PG&E's Grid Operations, the list of the top 20 Fire Index Areas (FIAs), and transmission system modeling. The top 20 FIAs were identified based on analysis of the past 30 years of weather data and 11 years of outage history and identify FIAs that rank highest in terms of likelihood of experiencing a PSPS event. Transmission system modeling considers the age, design, and historical operational performance to determine the likelihood of a specific transmission asset failure under certain wind loading conditions.</p> <p>Because of these other factors to consider, transmission assets were prioritized in the following order:</p> <ul style="list-style-type: none"> • Transmission lines that met three critical conditions: a) high operational priority (as defined by PG&E's Grid Operations), b) high wildfire risk area, and c) within the top 20 FIAs based on weather conditions • Transmission lines with both a) high operational priority and b) high wildfire risk • Transmission lines that are within the top 20 FIAs and high wildfire risk areas. Ranking follows the results of transmission system modeling by asset and wind speed percent de-rate • Remaining transmission lines in high wildfire risk areas ranked by wildfire risk score 	<p>Status: ongoing / in progress</p> <p>No updates, status is still the same as in 10/17 response</p>
7.b	Summary of hardening priority levels ascribed to infrastructure that was shut off in PSPS and how prior hardening efforts could have been adjusted to minimize the scope of this PSPS event.	This wildfire season	<p>PG&E is in the process of compiling the hardening priority for all electric circuits during this PSPS event and will provide the hardening levels ascribed to these circuits in PG&E's next update to the commission.</p> <p>Distribution: As part of post-PSPS analysis, PG&E will evaluate both the hardening efforts completed and any damage or hazards found on circuits that were de-energized. This analysis will inform PG&E's hardening prioritization efforts and potential PSPS thresholds. As PG&E continues to collect additional operational performance information on hardened portions of its system, PG&E plans to calibrate its PSPS thresholds with actual asset performance information on a continuous basis as more data is collected. Going forward, PG&E expects to adjust the scope of future PSPS events to account for data supported system hardened performance.</p> <p>Transmission: As described in the response to 7a, PG&E has completed modeling of its transmission system that considers the likelihood of a specific transmission asset failure under certain wind loading conditions. This model factors the age, design and past operational performance to determine the likelihood of a transmission asset failure during a wind loading conditions. This information was taken into account to be able to minimize the scope of this PSPS event.</p>	<p>Status: ongoing / in progress</p> <p>Given the current PSPS event underway, no update at this time.</p>

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
7. Steps to minimize scope of future PSPS				
7.c	In the immediate term, PG&E should consider alternative mechanisms of reducing scope of PSPS events, particularly by prioritizing risk-deduction measures for distribution and transmission lines that serve larger populations and critical infrastructure.	By next wildfire season/ long-term	<p>In the intermediate term, PG&E is exploring the following for immediate action that can be taken to minimize the size and scope of PSPS events. This includes:</p> <ul style="list-style-type: none"> • Accelerate the installation of additional sectionalizing devices that provide more flexibility for reducing the number of customers impacted by PSPS events • Accelerate targeted transmission and distribution system hardening for locations that have been impacted repeatedly during the last few PSPS events to minimize risk of line de-energization • Continue enhanced vegetation management efforts along lines that traverse high-fire threat district Tier 2 and Tier 3 areas • Identifying locations and pre-installing temporary mobile generation to critical load system pockets and customers that may be affected in future PSPS events • Leveraging transmission asset performance information obtained from this year's PSPS events to calibrate the current transmission system model to validate, and adjust the likelihood of transmission asset failure • Accelerating the Right-of-Way Expansion Program (Vegetation) affecting critical transmission lines during recent PSPS 	<p>Status: ongoing / in progress</p> <p>No updates, status is still the same as in 10/17 response</p>

No	Issue	Timing	10-17-19 Response	Week of 10-21-19 Update
8. Additional Assistance				
8.	If PG&E requires additional assistance from the State in order to execute this critical mission, PG&E needs to communicate what resources it needs and the CPUC will work with State agency partners to take appropriate steps	This wildfire season	<p>PG&E requires assistance from the state to identify and maintain an up to date list of critical state services that can be shared with PG&E in advance of and during PSPS events.</p> <p>PG&E will also work with the CPUC to determine the process for sharing critical facilities information to jurisdictions so that it meets the local response needs while complying with customer privacy laws and regulations.</p> <p>In addition, PG&E proposes that California Governor's Office of Emergency Services (Cal OES) lead a comprehensive review of potential impacts of extended outages (e.g., PSPS, earthquakes), on all major transit providers refineries and business dependent on fuels for operations, with support from those customers as well as PG&E and the other California IOUs.</p> <p>By the next wildfire season, PG&E will be coordinating with the State to receive assistance on providing Standardized Emergency Management System (SEMS) training to EOC staff, including the liaison representatives that may be embedded in the local jurisdiction's EOC. Please see section 4.a for additional request regarding SEMS training.</p>	<p>Status: ongoing / in progress</p> <p>As noted in section 2.j, PG&E has developed a process for sharing critical facilities information to jurisdictions so that it meets local response needs while complying with customer privacy laws and regulations.</p> <p>PG&E will continue to work with the state on the additional items listed in the 10/17/19 update.</p>