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September 14, 2022

Via Electronic Filing

Caroline Thomas Jacobs, Director
Office of Energy Infrastructure Safety
California Natural Resources Agency
715 P Street, 20th Floor
Sacramento, CA 95814
caroline.thomasjacobs@energysafety.ca.gov

Re: PG&E's Request for 2022 Safety Certification Pursuant to P.U.C. § 8389

Dear Director Thomas Jacobs:

Pacific Gas and Electric Company (PG&E) respectfully submits this request for an annual safety certification pursuant to the requirements contained in paragraphs (1), (2), (3), and (5) of Public Utilities Code (P.U.C.) Section 8389(e). Our most recent safety certification was issued on January 31, 2022. As required by P.U.C. Section 8389(f)(2), we hereby submit this request for a new safety certificate prior to the expiration of our current certificate. This request is made in accordance with the guidance outlined in the Office of Energy Infrastructure Safety's (Energy Safety) final 2022 Safety Certification Guidelines (2022 Guidelines), issued on August 25, 2022.

Paragraph (1) of Section 8389(e): *"The electrical corporation has an approved wildfire mitigation plan."*

PG&E's 2021 Wildfire Mitigation Plan was approved on September 22, 2021. Pursuant to P.U.C. Section 8389(e)(1), a utility must have an approved wildfire mitigation plan (WMP) in order to apply for a safety certification. P.U.C Section 8386.3(a) states that a utility's approved WMP "shall remain in effect" until Energy Safety approves that utility's subsequent plan.

On February 25, 2022, we submitted our 2022 WMP.[1] On May 26, 2022, Energy Safety requested we modify our 2022 WMP before making a decision on whether it should be

[1] *See* PG&E 2022 WMP (Feb. 25, 2022).

approved.[2] On July 26, 2022, we submitted our Revised 2022 WMP[3] and a draft decision is anticipated on October 6, 2022.[4] In the 2022 Guidelines, Energy Safety instructs that:

> Should a required element of the request for Safety Certification be pending approval with Energy Safety (i.e. Safety Culture Assessment Report, WMP final Decision) at the time the request for Safety Certification is due, the electrical corporation may submit the request without the missing element.[5]

Thus, as directed, we are submitting this request while we await Energy Safety's decision on our 2022 WMP.

Paragraph (2) of Section 8389(e): ***"The electrical corporation is in good standing, which can be satisfied by the electrical corporation having agreed to implement the findings of its most recent safety culture assessment, if applicable."***

P.U.C. Section 8389(e)(2) requires a utility to agree to implement the findings of its most recent safety culture assessment as part of the safety certification process. Our most recent Safety Culture Assessment was issued by Energy Safety on October 6, 2021.[6] The Safety Culture Assessment evaluated our safety culture through the use of workforce surveys, management self-assessments, and interviews, and provided six recommendations. These recommendations and our progress in implementing them are provided in Paragraph 7 below.

On October 25, 2021, we notified Energy Safety that we agreed to implement all of the findings and recommendations in the Safety Culture Assessment and committed to work with Energy Safety and its third-party contractor, DEKRA, regarding this implementation.[7] We will continue to provide updates on our implementation progress of the 2021 SCA recommendations in our Quarterly Notification submissions.

Paragraph (3) of Section 8389(e): ***"The electrical corporation has established a safety committee of its board of directors composed of members with relevant safety experience."***

P.U.C. Section 8389(e)(3) requires an electrical utility to create a safety committee of its board of directors that is composed of members with relevant experience. We established the Safety and Nuclear Oversight (SNO) Committee to promote a robust safety culture through the oversight of goals, programs, policies, and practices. The SNO Committee is comprised of members of our Board of Directors and its responsibilities include, among other things, overseeing the Community Wildfire Safety Program, the Enhanced Powerline Safety Settings

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[2] *See* Revision Notice for PG&E's 2022 WMP Update (May 26, 2022) and Revision Notice Correction for PG&E's 2022 WMP Update (June 6, 2022).

[3] *See* PG&E Revised 2022 WMP (July 26, 2022).

[4] *See* Extension Letter on PG&E's Draft Decision (September 14, 2022).

[5] *See* 2022 Safety Certification Guidelines (Aug. 25, 2022), p. 6.

[6] We anticipate our 2022 Safety Culture Assessment will be issued on December 29, 2022. As noted above, Energy Safety has directed us to submit this application while we await the final 2022 Safety Culture Assessment. *See* 2022 Safety Certification Guidelines (Aug. 25, 2022), p. 4.

[7] *See* PG&E Acceptance Letter of the 2021 Safety Culture Assessment (Oct. 25, 2022).

(EPSS) program, and the Public Safety Power Shutoff program. In addition, the SNO Committee monitors and reviews the adequacy and direction of the corporate safety function, with the Chief Risk Office and Chief Safety Officer reporting to the Committee.

The SNO Committee is composed of Chair Cheryl F. Campbell, Jessica L. Denecour, Admiral Mark E. Ferguson III, W. Craig Fugate, Michael R. Niggli, and William L. Smith. There have been no changes to the membership of the SNO Committee since our last application for safety certification. Details of each Board member's safety-specific education, training, and professional experience are included here as Attachment A.[8]

Description of How the Safety Committee Aligns with the Overall Company Governance

It is the fundamental responsibility of the SNO Committee to advise and assist the Board of Directors on all safety matters, including both public and employee safety. The SNO Committee is empowered to act independently of other Board committees and is not subject to direction or limitation by any other committee.[9] The Committee meets at least six times per year and retains the power to utilize, at the company's expense, the services of independent third-party experts, advisors, or counsel to assist it in its responsibilities. Additionally, the SNO Committee has the right to request and receive reasonable resources from the Board to facilitate its mission. The SNO Committee's duties and responsibilities function in lockstep with our entire Board of Directors, each of whom is committed to the safety of our employees, our contractors, and the communities we serve.

Report on Significant Topics Covered by the SNO Committee

As described above, the SNO Committee advises the Board of Directors on all safety matters including key topics such as wildfire safety, employee and contractor safety, and public safety. A complete description of the topics covered by the SNO Committee is included in our Quarterly Notification submissions since our last application for safety certification.[10] Some of the significant safety topics covered by the SNO Committee include:

- PG&E's 2021 WMP;
- PG&E's enterprise safety strategy;
- PG&E's Enhanced Vegetation Management program;
- The safety performance of the Diablo Canyon Power Plant;
- Cybersecurity and changes to cybersecurity laws;
- PG&E's information technology Disaster Recovery program;
- The results of Energy Safety's Safety Culture Assessment;
- The results from the quarterly audits related to safety;
- Proposed safety metrics to be used in the Short-Term and Long-Term Incentive Plans;

[8] These safety qualifications were also included with our 2021 application for safety certification. *See* PGE 2021 Safety Certification Request, Attachment B (Nov. 12, 2021).

[9] However, the SNO Committee remains subject to any applicable legal or stock exchange standards.

[10] *See* PG&E 2021 Q4 Quarterly Notification (Feb. 1, 2022), pp. 6-7; PG&E 2022 Q1 Quarterly Notification (May 2, 2022), p. 7; PG&E 2022 Q2 Quarterly Notification (Aug. 1, 2022), p. 9.

- The response to a transmission system-wide blackout; and
- Risks related to emergency preparedness and response.

Description of Actions Recommended by the SNO Committee and Implemented by PG&E

A complete list of actions recommended by the SNO Committee, as well as the implementation status of those recommendations, can also be found in our Quarterly Notifications.[11] Some of the significant recommendations made by the SNO Committee and implemented by PG&E include, among others:

- Obtaining more information about technology disaster recovery;
- Identifying ways to reduce the number of third-party safety incidents involving car/pole collisions;
- Exploring ways to better understand employee sentiment about safety;
- Identifying best practices for training on body mechanics and ergonomics; and
- Closely tracking the progress of our undergrounding efforts of overhead electric assets in High Fire Threat Districts.

We will continue to provide updates on the recommendations of the SNO Committee and our progress implementing those notifications through our future Quarterly Notification submissions.

Paragraphs (4) and (6) of Section 8389(e): ***"The electrical corporation has established an executive incentive compensation structure approved by the division and structured to promote safety as a priority and to ensure public safety and utility financial stability with performance metrics for all executive officers, including incentive compensation based on meeting performance metrics that are measurable and enforceable, for all executive officers as defined in Section 451.5" and "the electrical corporation has established a compensation structure for any new or amended contracts for executive officers as defined in Section 451.5…."***

P.U.C. Sections 8389(e)(4) and (6) require that an electrical corporation provide documentation that it has established an executive incentive compensation structure that has been approved by Energy Safety. In order to obtain Energy Safety's approval, this compensation structure must promote safety as a priority, ensure public safety and utility financial stability through the use of performance metrics for executive officers, and include incentive compensation that is based on meeting measurable and enforceable performance metrics.[12] Additionally, this compensation structure must be based on, among other things, the principles of strict limitations on guaranteed cash, the elimination of guaranteed monetary incentives, incentivizing long-term performance, and the minimization of indirect compensation.[13] On July

[11] *See* PG&E 2021 Q4 Quarterly Notification (Feb. 1, 2022), pp. 7-8; PG&E 2022 Q1 Quarterly Notification (May 2, 2022), pp. 7-8; PG&E 2022 Q2 Quarterly Notification (Aug. 1, 2022), p. 9.

[12] P.U.C. § 8389(e)(4).

[13] P.U.C. § 8389(e)(6).

28, 2022, Energy Safety formally approved our 2022 executive compensation structure as meeting these statutory requirements.[14]

Paragraph (5) of Section 8389(e): *"The electrical corporation has established board-of-director-level reporting to the commission on safety issues."*

Our Board of Directors is dedicated to achieving safe utility operations, fostering a strong safety culture, and continuing to invest substantial time and attention to safety issues. Pursuant to P.U.C. Section 8389(e)(5), electrical utilities must establish board-of-director-level reporting on safety issues. We established Board-of-Director level reporting to the Commission on safety issues prior to its initial request for a safety certification in 2019 and have continued this practice to the present. Energy Safety's 2022 guidance on the safety certification process explains that this requirement can be "met in a transparent manner" by a utility participating in a joint public meeting held by the Commission and Energy Safety in which the utility provides a detailed presentation discussing its safety performance.[15]

A joint public meeting with the Commission and Energy Safety is scheduled for September 22, 2022. Presenting at this meeting on our behalf will be Board Member and Chair of the SNO Committee Cheryl F. Campbell, Executive Vice President, Operations and Chief Operating Officer Adam L. Wright, and Executive Vice President and Chief Risk Officer/Chief Safety Officer Sumeet Singh. The presentation materials to be used will be available on PG&E's website following the September 22, 2022, meeting.[16]

Paragraph (7) of Section 8389(e): *"The electrical corporation is implementing its approved wildfire mitigation plan" and "shall file a notification of implementation of its wildfire mitigation plan with the office and an information-only submittal with the commission on a quarterly basis that details the implementation…."*

P.U.C. Section 8389(e)(7) requires a utility applying for safety certification to implement its approved WMP and to submit Quarterly Notifications that provide details on this implementation process. Included here are each of our Quarterly Notifications filed since our last application for a safety certification. These submissions include:

1. PG&E 2021 Q4 Quarterly Notification, dated February 1, 2022;[17]
2. PG&E 2022 Q1 Quarterly Notification, dated May 2, 2022;[18]
3. PG&E 2022 Q2 Quarterly Notification, dated August 1, 2022;[19]

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[14] *See* Approval of PG&E's 2022 Executive Compensation Structure (July 28, 2022).

[15] *See* 2022 Safety Certification Guidelines (Aug. 25, 2022), p. 5.

[16] *See* 2022 Safety Briefing Presentation Materials (September 22, 2022).

[17] *See* PG&E 2021 Q4 Quarterly Notification (Feb. 1, 2022).

[18] *See* PG&E 2022 Q1 Quarterly Notification (May 2, 2022).

[19] *See* PG&E 2022 Q2 Quarterly Notification (Aug. 1, 2022).

Each of these Quarterly Notifications details our meaningful progress in the implementation of our WMP, including the continued progression toward each of the targets set forth in our plan. Additionally, each describes the implementation of our most recent safety culture assessment, contains a statement on the recommendations of the SNO Committee meetings from the previous quarter, and describes the status of implementing such recommendations. A further detailed explanation of our progress made in implementing our most recent safety culture assessment can be found in the presentation materials for the September 22, 2022, joint public safety meeting.[20]

Our most recent Quarterly Notification provides information through June 30, 2022. Since that time, the list below offers an updated view of our progress on the implementation of our WMP, as of August 31, 2022:

- 21 targets have been completed;
- 23 targets have met all internal milestones and are on track for timely completion;
- 10 targets are on track for timely completion but have fallen behind our internal milestones, requiring the creation of catchback plans.

Please refer to Attachment B for further details on our progress implementing our WMP targets, including our delayed targets.

Additionally, as required by Energy Safety's 2022 Safety Certificate Guidelines, PG&E provides the following update on progress made on our most recent Safety Culture Assessment recommendations, which includes, among other items:

- Recommendation # 1: Build leadership skills and ensure frontline supervisors are demonstrating those skills regularly in the field to improve the work environment for wildfire and personal safety.
    - Establishing a Leadership Development program to train our leadership;
    - Increased the frequency with which our leaders visited the field;
- Recommendation # 2: Establish a governance structure to ensure effective implementation and tracking of the 2025 Workforce Safety Strategy.
    - Consolidating the Safety and Risk business units under a single Chief Safety and Chief Risk Officer;
    - Adding components of our Workforce Safety Strategy to our 2022 Tactical Implementation Plans;
- Recommendation # 3: Execute the strategy with active leadership by senior executives to ensure implementation.
    - Reviewing the progress against our plan with our senior leadership team every week;
- Recommendation # 4: Leverage the new safety management system to improve the flow of information up, down, and across the organization and provide a single mechanism for reporting and tracking wildfire concerns.
    - Deploying operating reviews with safety messages across the entire enterprise;

[20] *See* 2022 Safety Briefing Presentation Materials (September 22, 2022), pp. 21, 29.

    - Executing practical problem solving to improve communication of potential and actual injuries and fatalities;
- Recommendation # 5: Increase engagement on the safety culture assessment within the workforce supporting wildfire mitigation initiatives.
    - Providing work time for completion of the survey to increase participation;
    - Implemented additional coworker communications and promotional events to further increase participation;
- Recommendation # 6: Recognize and take action to mitigate the safety concerns posed by interactions with certain discontented members of the public.
    - Providing de-escalation training to workers in the field to address situations with hostile customers;
    - Successfully negotiating with previously hostile individuals to access over 150 properties.

For a comprehensive description of our actions taken to implement our most recent safety culture assessment, please refer to the presentation materials for our joint public safety briefing.[21]

Through our Quarterly Notification submissions, we will continue to provide Energy Safety, the Commission, and stakeholders with updates on our progress in implementing our 2022 WMP and our most recent Safety Culture Assessment recommendations. We look forward to continuing to work together to improve the safety of our workers and the communities they serve.

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After timely submitting this request and satisfying each of the statutory requirements and guidance conditions outlined by Energy Safety, we respectfully ask Energy Safety to issue a safety certification within the prescribed time period of 90 days. Should Energy Safety have any questions regarding this request, please do not hesitate to contact Meredith Allen, Vice President, Regulatory Affairs at meredith.allen@pge.com.

Sincerely,

Sumeet Singh
EXECUTIVE VICE PRESIDENT, CHIEF RISK OFFICER and CHIEF SAFETY OFFICER
PACIFIC GAS AND ELECTRIC CORPORATION

[21] *See* 2022 Safety Briefing Presentation Materials (September 22, 2022).

Attachment A

Cheryl F. Campbell

A. SNO-Specific Education and Training

- Xcel Energy (Denver, CO), 2004 – 2018
  Senior Vice President (2011 – 2018); Vice President—Colorado Operations (2009 – 2011); Director, Asset Strategy (2004 – 2009)
  Participated in a number of safety programs and trainings, including several focused on developing safe workplace practices and behaviors, safety leadership, safety culture, identifying hazards, and behavioral safety in general. Participated in a number of safety meetings annually—including monthly work group safety meetings, quarterly regional safety meetings (with line workers), and annual working foreperson conferences for linepersons and fitters (which discussed safety issues at the line level, understanding risk, and communicating safety concerns with co-workers who are not following safety procedures). Also interacted regularly with safety speakers at these annual conferences, including individuals who had suffered serious injuries from safety incidents in the utility industry. Routinely interacted with and spoke about safety at annual safety kick-off meetings, mid-year safety campaigns, and on regular crew visits in the field.

- Pacific Gas and Electric Company and PG&E Corporation (San Francisco, CA), 2019
  Board Member
  As a member on the Boards of PG&E Corporation and Pacific Gas and Electric Company (together, PG&E), including during the on-boarding process, received general information regarding safety programs and culture at the companies, and received more targeted safety training regarding, among other things, hazards and associated mitigations for field work in connection with PG&E's gas and electric operations and power generation.

- As part of the ongoing training and education provided by PG&E, conducted 7 field visits and facility tours to meet with employees, observe employees and contractors performing work in the field, and tour safety training facilities and operating facilities.

B. Direct, Supervisorial or Management Level SNO-Specific Work Experience

- Xcel Energy (Denver, CO), 2004 – 2018
  Senior Vice President (2011 – 2018); Vice President—Colorado Operations (2009 – 2011); Director, Asset Strategy (2004 – 2009)
  As Senior Vice President, led the gas business unit across eight states with 2 million customers. Responsible for both employee and public safety. Member of the Executive Safety Team, which met quarterly with the Corporate Safety VP to review and discuss successes as well as continuous improvement for safety overall. Performance metrics in both areas improved significantly during tenure in both the gas unit and enterprise wide.

  Also served as Chair, President and CEO of WestGas InterState, Inc., a FERC-regulated interstate gas pipeline subsidiary of Xcel Energy.

  As VP of Colorado Operations, responsible for gas operations within the state of

Colorado. Began the first in-line inspection (pigging) program at Xcel Energy in Colorado in 2008. Successfully led efforts to develop a distribution asset renewal program, focused on leak prone pipe (cast iron, bare steel, and early polymers)—obtaining support from both senior executives and the Colorado PUC. This program was later rolled into Xcel Energy's Distribution Integrity Management Program (DIMP). Met regularly with field employees—at job sites and service centers—discussing safety and challenges.

As Director of Asset Strategy, led the development of integrity management programs, which are developed to reduce the risk of and improve the safety of key infrastructure. Included developing programs for performing maintenance, hydrostatic pressure testing, well testing, and processes for testing and replacing assets. Also improved record keeping and data processes across a number of areas, including asset data, maintenance records, and inspection information. Developed a data-driven risk management system in partnership with various state public utility commissions to assess risk, and set acceptable risk levels. Was a member of the Executive Safety Team from 2011 to retirement in 2018. Met quarterly to discuss safety progress, culture change, and safety culture issues. Provided direction to the Corporate Safety department on the effectiveness or specific safety programs. Regularly met with line-level employees and the technical staff, along with the safety leadership team, to discuss current safety issues and potential safety issues. Attended quarterly employee driven safety meetings, where employees would raise safety issues or concerns. Workshopped solutions to quickly implement responses to those concerns together with employees and the safety leadership team.

Worked with the Corporate Vice President for Safety to set annual safety performance targets, review program effectiveness, discuss enterprise-wide as well as gas-specific safety concerns, and identify best practices at peer firms. Also worked closely with the Xcel Energy Board of Directors, particularly the Safety and Operational Committee, to discuss gas asset risks and safety culture, safety management systems, and related topics.

In addition to the regular quarterly meetings on the Safety Executive Team, and quarterly employee-led safety meetings, met monthly with gas leaders across the enterprise from 2012 to 2018 to discuss employee and public safety issues. Focus was on close calls/near misses, incidents where employees had failed to follow safety procedures, safety management systems, and effectively implementing "change management." Began implementation of American Petroleum Institute Recommend Practice 1173, concerning the development of an Enterprise Safety Management System. Completed the initial analysis and stages or implementation during tenure.

- Colorado Interstate Gas Company (Colorado Springs, CO), 1984-2003
  Variety of positions, including Engineer to Director.
  Experience includes design, operations, strategic planning, mid-stream operations, supply management and regulatory (FERC). All leadership positions included responsibility for safety of the employees and public around system infrastructure.

Member of the leadership team during the implementation of one of the first comprehensive In-line Inspection (ILI) programs in the country—now an industry standard.

- Gold Shovel Association (Tempe, AZ), January 2019 to
  February 2020 - Executive Director
  February 2020 to present – Vice Chair of Board of Directors
  for Gold Shovel Association Executive Director
  Lead non-profit organization aimed at reducing damage to underground infrastructure, including, gas, electric, water, and telecommunications infrastructure, during excavations. Companies that participate have seen significant reductions in the damage caused during excavations. Pacific Gas and Electric Company and the City of Sacramento are members of the Association.

C. <u>SNO-Specific Board of Directors Experience</u>

- PG&E Corporation and Pacific Gas and Electric Company, 2019 – present.
  Chair of each company's Safety, Nuclear and Operations committee.
  Regularly interface with PG&E's Chief Safety Officer, setting expectations, discussing programs, reviewing metrics.

- American Gas Association Operations Management Committee (Washington, D.C.), 2009 – 2018
  Executive Committee Member, Operations Management Committee Chair (2017)
  Group meets regularly to discuss overall gas operations and safety-specific issues, including public safety, worker safety, and cyber-security. Group consists of senior industry leaders representing about 45 companies across the nation, representing the majority of customers and assets in the gas industry. Participated in meetings in the aftermath of the San Bruno tragedy and other incidents to develop proactive industry positions on improving safety and operations. Also regularly attended annual Executive Safety Summits, focusing on industry hazards, safety management systems, safety culture, interacting with local emergency responders, worker safety, and damage prevention. Participated in the AGA Peer Review program—with Xcel Energy being reviewed in 2015. As part of that commitment/participation, acted as the Executive peer reviewer for ConEd. The program is a one-week intense review of a company's programs around safety and operations, including employee interviews and site visits. At the end of the week, the Executive peer reviewer provides the company with feedback on leading practices as well as opportunities for improvement.

- Department of Transportation Gas Pipeline Advisory Committee (GPAC) (Washington, D.C.), 2014 – 2018
  Member
  The GPAC is an integral part of the process for making changes to the federal safety regulations for gas pipelines. It includes representatives from industry, government and the public. During tenure on the GPAC, the group discussed regulatory updates/changes to a wide variety of safety regulations including pipeline integrity management (transmission and distribution), plastic piping, construction inspection, damage prevention, management of change Operator Qualification, and record keeping. Also discussed and provided guidance on the implementation of congressional mandates passed in the wake of the San Bruno

tragedy. Participated in a task force aimed at reducing barriers to implement pipeline safety management systems (SMS). Worked with industry groups and individual companies to assess SMS adoption and implementation status, and assess impediments to rapid implementation.

- Dynamic Risk (Calgary, Canada), December 2018 – present
  Consultant and Independent Panel Member
  The Massachusetts Department of Utilities retained Dynamic Risk to perform an assessment of the safety and integrity of gas infrastructure within the state of Massachusetts after the Merrimack Valley event in September 2018. As an Independent Review Panel member, reviewed 11 companies—including investor-owned utilities, privately-owned providers, and municipal utilities—including plans and programs, Operations & Maintenance manuals, work procedures, and overall operations. Performed field site visits, discussing processes & procedures, employee safety and public safety with various field crews. Final report complete and available online.
  The Massachusetts Department of Utilities hired Dynamic Risk in fall 2019 to perform a safety assessment of the newly installed facilities due to several identified shortfalls in abandonment and leaks on newly installed assets. Participated and directed work on assessment – final report available in 2020.

D. <u>Other Previous and Current Board Positions</u>

- Hoffman Southwest (Orange County, CA), 2018 – Present
  Independent Director, Audit Committee Member

- JANA Technology (Toronto, Canada), January 2020 – present. Advisory Board member for privately held company focused on asset risk assessment/prediction and data management. Privately held.

- Colorado Oil & Gas Association (Denver, CO), 2010 – 2018
  Director

- Engineering Advisory Council—College of Engineering, Colorado University, Boulder (Boulder, CO), 2016 – 2018
  Member

- Building Opportunity Through Leadership & Diversity (BOLD) —College of Engineering, Colorado University, Boulder (Boulder, CO), 2012 – 2015
  Advisory Council Member

- Public Education and Business Coalition (PEBC) (Denver, CO), 2010 – 2014
  Member of the Finance Committee

- Junior Achievement of Southern Colorado (Colorado Springs, CO), 1990 – 2002
  Board Member, Member of Strategic Planning Committee

E. <u>Other Current Professional Commitments</u>

- N/A

Jessica L. Denecour

A. SNO-Specific Education and Training

- (Masters Degree awarded) M.S., Cyber Security Operations and Leadership, University of San Diego, San Diego, CA - 2017 (attended 2015-2017)
- Yearly Corporate Employee Safety and Security training at Varian Medical Systems (2006-2017)
- Stanford University Executive Institute (2008) included some material on risk management

B. Direct, Supervisorial or Management Level SNO-Specific Work Experience

- Lead cybersecurity function as Chief Information Officer at Varian Medical Systems from 2006-2017
- Lead cybersecurity function as VP of Infrastructure at Agilent Technologies (2000-2004)
- At Varian Medical as a member of the executive team, we built a safety and security culture as our products and software were under FDA regulation and our mission was to save lives (our products treated cancer). Safety was critical as we were dealing with radiation and people lives as a result.

C. SNO-Specific Board of Directors Experience

- Chair of CyberSecurity Committee (board director) at MobileIron (2017-2020)
- Member of Audit committee (board director) at MobileIron (2017-2020)
- Chair of Technology and CyberSecurity committee (board director) at Pacific Gas and Electric (June 2020 – June 2021)

D. Other Previous and Current Board Positions

- Board Director at the Children's Discovery Museum of San Jose (2010-2017) which included oversight on risk, safety, and technology/security

E. Other Current Professional Commitments

- N/A

Admiral Mark E. Ferguson III

A. SNO-Specific Education and Training

- Qualified as damage control assistant and gas fee engineer, US Navy Firefighting School, Philadelphia, PA (1992).

- Qualified as Landing Signal Officer to oversee shipboard aviation safety for operation of helicopters from vessels at sea (1992).

- Qualified as a nuclear propulsion engineer by US Navy/Department of Energy (1992). Trained in radiological controls, electrical safety and shipboard safety programs incident to the operation and maintenance of naval nuclear power plants. Qualified as engineering officer of the watch for naval nuclear power plants.

B. Direct, Supervisorial or Management Level SNO-Specific Work Experience

- Damage Control Assistant, USS South Carolina (CGN 37) (1989-1992). Responsible for management of all shipboard firefighting, flooding control, damage control, and fire safety programs for a vessel with crew of over 400 personnel. Certified as the ships' gas free engineer.

- Nuclear Propulsion Engineer, USS South Carolina (CGN-37) (1979-1983). Engineering officer of the watch, supervised the operation of shipboard nuclear power plants.

- Reactor Officer, USS Dwight D. Eisenhower (CVN-69) (1989-1992). Responsible for the safe operation, maintenance, and training and certification of 400 assigned personnel for two nuclear reactors onboard an aircraft carrier.

- Commanding Officer, USS Benfold (DDG 65) (1995-1997). Responsible for operations and the management of all safety programs for a vessel with crew of 300 personnel.

- Commander, Destroyer Squadron 18 (2000-2001). Responsible to certify safe operation and provide oversight of safety programs for six ships and 1500 personnel.

- Co-Chair, US Navy Safety Council (2011-2014). Responsible for safety policy, funding, and management of accident reporting and lost work statistics for the Navy Department and a 320,000 workforce.

- Chair, Nuclear Weapons Council (2011-2014). Responsible for management of physical security and security personnel certification for the Navy's nuclear weapons stockpile.

- Commander, US Naval Forces Europe and Africa (2014-2016). Responsible for physical security of five installations and management of personnel security, operational safety programs and vehicle safety programs for over 10,000 personnel stationed in Europe and Africa.

C. SNO-Specific Board of Directors Experience

- VSE Corporation, Alexandria VA (2017- Present). As member of audit and governance committees, oversees the VSE industrial safety programs in the refurbishment and repair of military and commercial vehicles, ships and aircraft.

D. Other Previous and Current Board Positions

- Navy Federal Credit Union, Merrifield, VA (2007-2008). Volunteer official and board member for world's largest credit union, serving members of the armed forces.

- Navy Marine Corps Relief Society, Arlington, VA (2008-2011). Society provides financial assistance, counseling, and in-home nurse care to Navy and Marine Corps service members and their families.

- Center for Naval Analyses, Arlington, VA (2017-Present). Chairman of the audit committee and member of ethics and governance committee for a not-for-profit federally-funded research and development center.

- VSE Corporation, Alexandria, VA (2017-Present). Member of the audit committee, compensation and human resources committee, and governance committee.

E. Other Current Professional Commitments

- Institute for Defense Analysis: Senior Advisor to the Defense Science Study Group (DSSG). This is a program of education and study that introduces science and engineering professors to the security challenges of the United States. The program is directed by the nonprofit Institute for Defense Analyses (IDA) and is sponsored by the Defense Advanced Research Projects Agency (DARPA).

- MK3 Global LLC: Defense consulting firm that advises on leadership, digital transformation, operational design, and planning of military operations. Evaluates the NATO exercise program with a focus on leader performance. MK3 Global LLC is a service-disabled, veteran-owned small business.

W. Craig Fugate

A. SNO-Specific Education and Training

- State of Florida: Certified Paramedic/Firefighter.

B. Direct, Supervisorial or Management Level SNO-Specific Work Experience

- Emergency Manager, Alachua County, Fl (1987-1997). Disaster Planning and Response Coordination, included hazardous materials, and the Crystal River Nuclear Power Plant (50 miles Emergency Planning Zone).

- Director, Florida Division of Emergency Management (2001-2017). Oversaw the State's Nuclear Power Plant Exercise Program, Hazardous Material Program, and response to all Governor Declared Disasters as the Governor's Authorized Representative and State Coordinating Officer.

- Administrator, FEMA (2009-2017). Coordinated on behalf of the President response and recovery to all Federally declared disasters.

C. SNO-Specific Board of Directors Experience

- N/A.

D. Other Previous and Current Board Positions

- America's Public Television Stations.

- At-Large Trustee (2017 – Present).

E. Other Current Professional Commitments

- Craig Fugate Consulting LLC.

- One Concern, Chief Emergency Management Office.

- North Florida Amateur Radio Club (Amateur Radio Emergency Services).

Michael R. Niggli

A. SNO-Specific Education and Training

- As an executive officer and director of several companies, participated in safety education and training for electric, natural gas, water and nuclear facilities. Involved in setting corporate safety metrics, establishing safety reporting procedures, directing the installation of substantial safety related equipment, and implementing new safety protocols designed to improve the level of safe operations for our employees, customers and the general public.

- Safety education and training includes body mechanics, safe work processes, hazardous chemical awareness and handling, the use of radiation measuring devices, cardio-pulmonary resuscitation, electrocution, fire response, hypothermia responses, ignition prevention and emergency communications.

- Merchant Mariners certification (Captain's License) which indicates proficiency in safe operation of small vessels.

B. Direct, Supervisorial or Management Level SNO-Specific Work Experience

- President & COO, San Diego Gas & Electric Co (2006-2013). Served in various roles including President & COO wherein had responsibility for all electric and gas operations for the Company. This included the safe operation of the electric and gas facilities, safety of employees, contractors, customers and the general public.

- President of Sempra Generation (2001-2006). President of Sempra Energy's international power generation company. This included the development, construction, operation and maintenance of power plants in California, Arizona, Nevada, Texas and the Republic of Mexico. Responsible for safe operation and compliance with all State and National standards for power plant operation.

- Chairman of the Board, CEO, & President of Sierra Pacific Resources & Nevada Power Company (1998-2001). Served in various roles with overall responsibility for operation of these two companies which were independent entities and later merged operations. The companies provided regulated utility service for electric, natural gas and water operations. Safe operation of these facilities and the production of safe drinking water for customers were top priorities.

- San Onofre Nuclear Power Plant; Administrative Committee Representative for SDG&E (approx. 1984-86). Served as the Owner's Representative for administration and operation of the SONGS facility, including reviews of safety protocols, safety protocols and operating performance.

- Following the devastating wildfires in San Diego County in 2007, had the lead responsibility for the company's efforts to enhance the safety and effectiveness of electric facilities, the safety practices of employees, and communication with customers and the general public. Instituted many new programs, processes, safety protocols and innovations over the next half dozen years. These included the first "Power Safety Power Shutoff" (PSPS) program in the State of California, installation of weather monitoring stations, employment of professional meteorologists, extensive collaboration with state and local firefighting agencies, development of

new communications tools and websites for informing the public of the status of service in fire prone areas and the potential for PSPS events, purchase of the world's largest water carrying helicopter for dual use with firefighting and construction activities, the use of "pan, tilt and zoom" cameras mounted on our electric transmission towers and equipped with infrared detection capabilities, advanced vegetation management practices, the prohibition of cell phone use in company vehicles, the "electronic tagging" of our impacted field employees to ensure that we knew of their field location during fire season, the establishment of an "aircraft operations center" to coordinate with local authorities as we constructed major electric facility additions, the mounting of high capacity fiber optic lines on our electric transmission towers for joint use of agencies and universities in our fire prevention efforts, among other initiatives.

C. <u>SNO-Specific Board of Directors Experience</u>

- Board of Directors, ESS, Inc. (2015-present).
- Board of Directors, American Transmission Co. (2016-present).
- Board of Directors, ESVAL Water Company (2015-present).
- Board of Directors, ESSBIO Water Company (2015-present).
- While serving on these Boards of Directors, acted as a primary advocate for safe operations, establishment of appropriate safety metrics, contractor safety improvement programs and employee safety improvement.

D. <u>Other Previous and Current Board Positions</u>

- ESS Inc. (2018 – Present).
- American Transmission Company (2017 – Present).
- ESVAL (2015 – Present).
- ESSBIO (2015 – Present).
- Sierra Pacific Resources, Chairman of the Board, CEO, President (2000-2001).
- Nevada Power Co., Chairman of the Board, CEO, President (1998-2000).

E. <u>Other Current Professional Commitments</u>

- Beyond the current Board assignments, also serves on the Board of Directors of the Great Basin National Park Foundation, a non-profit organization which supports the mission of environmental stewardship, public outreach and interpretation of the resources of the Great Basin National Park.

William L. Smith

A. SNO-Specific Education and Training

- Completed numerous safety and safety management classes over 37-year career with BellSouth/AT&T (1979-2016). These included general safety, safe driving, aircraft safety, office safety, trenching and shoring safety, and a variety of safety classes relating to working in aerial plant facilities.

- Completed all PG&E corporate safety classes during 2020, including helicopter safety and nuclear safety.

B. Direct, Supervisorial or Management Level SNO-Specific Work Experience

- Managed AT&T's Technology Operations organization of over 100k employees and approximately 50k contractors for several years. These responsibilities included all aspects of operational safety in a large field organization.

- Worked closely with all US Government agencies on cyber security cases, involving cyber security attacks from foreign and domestic entities.

- Worked in the heavy construction industry and operated many types of large construction equipment.

C. SNO-Specific Board of Directors Experience

- Served on several public company boards over the last twenty years, most in the tech or related to the tech industry. All included general employee safety issues.

- Represented PG&E one EEI during the second half of 2020.

- Serve on the Advisory Board of Tillman Global Holding, LLC, a provider of communications infrastructure around the world.

D. Other Previous and Current Board Positions

- Previously served as a director of Oclaro, Inc. (telecommunications) (2009 to 2012, 2018).

E. Other Current Professional Commitments

- N/A

Attachment B

2022 WMP Targets Status Update

There are 54 Targets in the 2022 WMP due in 2022. See Table 1 below for the status by Plan Area.

Table 1: Overall Summary of WMP Targets due in 2022[1]

Plan Area	On Track	At Risk	Off Track	Completed	Total
A. Risk Assessment and Mapping	3	1		1	5
B. Situational Awareness and Forecasting	3	2		1	6
C. Grid Design and System Hardening	7	5		3	15
D. Asset Management and Inspections	3	1		7	11
E. Vegetation Management and Inspections	6			4	10
F. Grid Operations and Protocols				4	4
G. Data Governance		1			1
H. Resource Allocation Methodology	1				1
J. Stakeholder Cooperation & Community Engagement				1	1
Total	**23**	**10**	**0**	**21**	**54**

Table 2: "Off Track" or "At Risk" 2022 WMP Targets Details:

2022 WMP Targets in "Off Track" or "At Risk" status (as of 8/31)	
A.02 Transmission Modeling Enhancements - Threat and Hazard Risk Drivers	**2022 Target:** Develop Threat and Hazard (Risk drivers) sub-models that cover: Threats (e.g., Atmospheric corrosion, Underground corrosion, Fatigue, Mechanical Wear, Decay, Contamination, Vibration), and Hazards (primarily Wind). Conduct assessment to determine whether newly developed sub-models are to be included in the WTRM model. **2022 Progress:** We are "At Risk" due to a resource capability gap. The Headcount Governance Committee has approved the Data Scientist position, and we are working to hire. A catchback plan is being executed and the program is expected to return to the original target by September 30, 2022.
B.02 Weather Stations - Installations and Optimizations	**2022 Target:** Install or Optimize 100 weather stations. A unit is deemed "installed" when it is in service and verified as operating. A unit is deemed "optimized" when a weather station is moved from an existing location to a new location for the purposes of improving our understanding of the weather conditions in the area. **2022 Progress:** We are behind the target of 70 with 67 units completed year-to-date, due to the project not having enough sites cleared through permitting processes to meet YTD target. We are still on track to complete the target of 100 new or optimized weather stations by the end of the year. The catchback plan is being executed to address the delays. We are expected to return to original target by the end of September.

[1] Status color: Blue = "Completed on Time" - complete pending validation; Green = "On Track" – meets original target; Amber = "At Risk" – not meeting YTD original target and has an approved catch back plan; Red = "Off Track / Missed" – not meeting YTD original target and does not have an approved catch back plan.

2022 WMP Targets in "Off Track" or "At Risk" status (as of 8/31)	
B.05 Early Fault Detection (EFD) – Installations	**2022 Target:** Install Early Fault Detection (EFD) sensors on 2 circuits feeding into HFTD areas or HFRA. **2022 Progress:** We are behind the year-to-date target of 1 with 0 units completed. Delays were caused by longer than expected contract negotiations with product vendor and delays in publishing installation standards for estimation to begin designs. The installation standard was published in August. Estimation and permitting are in progress with escalated priority. Catch-back plan will complete installation on both circuits targeted in the WMP commitment in December.
C.04 Distribution Line Motorized Switch Operator (MSO) - Replacements	**2022 Target:** Replace at least 50 of the 104 remaining Motorized Switch Operators that are located within or are energizing line sections that feed into HFTD areas or HFRA. **2022 Progress:** We are behind the target of 34 units with 18 units completed August year-to-date. Materials and resource priority were given to the new PSPS devices commitment due by September 1, 2022, and devices in support of EPSS. A catch-back plan is being executed and we expect to meet the WMP Commitment of 50 MSO devices replaced by December 31, 2022.
C.05 SCADA Recloser Equipment – Installations	**2022 Target:** Install 17 substation SCADA enabled reclosers on circuits serving line sections that feed into HFTD areas or HFRA, barring any exceptions due to connectivity issues necessary to SCADA-enable the recloser. **2022 Progress:** We are behind the target of 11 units with 7 units completed August year-to-date. Materials and resource priority were given to the new PSPS devices commitment due by September 1, 2022, and devices in support of EPSS. A catch-back plan is being executed and we are expecting to return to the original target in November.
C.06 Fuse Savers (Single Phase Reclosers) – Installations	**2022 Target:** Install 80 single phase recloser sets in HFTD areas or HFRA. **2022 Progress:** We are behind the target of 51 units with 24 units completed August year-to-date. Materials and resource priority were given to the new PSPS devices commitment due by September 1, 2022, and devices in support of EPSS. A catch-back plan is being executed and the materials availability issue identified in July was largely resolved in August, providing enough supply to meet the EOY goal. We have line of sight to meet the WMP commitment of 80 Fuse Savers installed and commissioned by the end of the year.
C.09 Emergency Back-up Generation – Equip PG&E Service Centers & Materials Distribution Centers	**2022 Target:** Equip 15 PG&E Service Centers or Materials Distribution Centers sites with emergency back-up generation to allow the sites to operate with the same amount of functionality as they would if they were being fed from their normal utility power source. **2022 Progress:** We are behind the YTD target of 12 with 10 units completed year-to-date. Contributing factors for falling behind in August include supply chain delays in critical electrical components required for operation, gas generator service pressure issues still awaiting root cause resolution, and delays in generator

2022 WMP Targets in "Off Track" or "At Risk" status (as of 8/31)	
	installation awaiting Tier 4 emissions compliance clearance. These factors impacted construction schedules, which impacted our August completion projections. A catchback plan is in place, and we are expected to be back on track to meet the original target by September 30, 2022.
C.10 10K Undergrounding	**2022 Target:** Complete at least 175 circuit miles of undergrounding work. The 175 circuit mile target includes undergrounding taking place as part of both System Hardening (Section 7.3.3.17.1), Butte County Rebuild efforts (Section 7.3.3.17.6) including a small volume of previously hardened overhead lines that are being placed underground, and any other undergrounding work performed in HFTD or fire rebuild areas. **2022 Progress:** We are behind the year-to-date target of 109 with 88.4 circuit miles completed. The scoping of 2022 miles was not completed in a timely manner resulting in delays in getting work to estimating and into construction. More than 100 additional miles are in progress or ready for construction and a project-by-project plan is in place to deliver on the original WMP commitment of 175 miles by the end of the year.
D.05 Infrared Inspections – Distribution	**2022 Target:** Complete infrared inspections on a minimum of 9,000 distribution circuit miles in PG&E's asset registry as of January 1, 2022, in HFTD areas or HFRA, barring External Factors. Any assets identified after January 1, 2022, with a field installation date on or before 2020 will be inspected within 90 days of when added to the asset registry. Any assets identified after January 1, 2022, with a field installation date in 2021 or 2022 will not be in scope for inspection as part of this 2022 WMP target. **2022 Progress:** We fell behind the original year-to-date target of 3,500 with 3,278 units completed. The Dist IR experienced a delay in issuance of the work authorization/purchase order to the contractor performing the work. This was due to technical issues, resource changes and review time for authorization. A catchback plan has been created to capture these units in a subsequent month. The purchase order is in place and work is in progress. We expect to be back on track to meet the original target by September 30, 2022.
G.01 Data Governance - Identify and Centralize High Priority Data	**2022 Target**: The target has three components all due by the end of year: 1. Document and implement a process to identify data gaps in Foundry for critical risk drivers 2. Identify and incorporate new high-priority datasets into Foundry in support of analytic products 3. Identify and incorporate 20 new, foundational ontology objects into Foundry **2022 Progress**: We fell behind on the third target component. A prioritized list of the 20 targeted ontology objects has been defined and development is underway. A catchback plan is in place and tracking to address identified issues.

Table 3: 54 "Targets" in the 2022 WMP due in 2022

Plan Area	2022 WMP Targets [2] (progress as of 08/31)			
A. Risk Assessment and Mapping	A.01 - Distribution Modeling Enhancements	A.02 - Transmission Modeling Enhancements	A.03 - PSPS Consequence Model	A.04 - Wildfire Consequence Model Enhancements - Ingress/Egress
	A.05 - Wildfire Consequence Model Enhancements - Resistance to Control			
B. Situational Awareness and Forecasting	B.01 - FPI and OPW Modeling - Revision Evaluation	B.02 - Weather Stations - Installations and Optimizations	B.03 – High-Definition Cameras - Installation	B.04 - Distribution Fault Anticipation (DFA) - Installations
	B.05 - Early Fault Detection (EFD) - Installations	B.06 - Line Sensor - Installations		
C. Grid Design and System Hardening	C.01 - Expulsion Fuse - Removal	C.02 - Distribution Sectionalizing Devices	C.03 - Transmission Line Sectionalizing	C.04 - Distribution Line Motorized Switch Operator (MSO) - Replacements
	C.05 – SCADA Recloser Equipment - Installations	C.06 - Fuse Savers (Single Phase Reclosers) - Installations	C.07 - Temporary Distribution Microgrids	C.08 - Rincon Transformer Fuse - Replacement
	C.09 -Emergency Back-up Generation	C.10 - 10k Undergrounding	C.11 - System Hardening - Distribution	C.12 - System Hardening - Transmission
	C.13 - Surge Arrestors Removal	C.14 - Remote Grid - Operate New SPS Units	C.15 Butte County Rebuild - Undergrounding	
D. Asset Management and Inspections	D.01 - Detailed Inspections - Distribution HFTD Inspections	D.02 - Detailed Inspection Transmission – Ground	D.03 - Detailed Inspection Transmission – Climbing	D.04 - Detailed Inspection Transmission – Aerial
	D.05 - Infrared Inspections - Distribution HFTD	D.06 - Supplemental Inspections - Distribution Subs	D.07 – Supplemental Inspections – Transmission Subs	D.08 - Supplemental Inspections - Hydroelectric Subs and Powerhouses
	D.09 - Asset Inspections - Quality Assurance	D.10 HFTD/HFRA Open Tag Reduction – Distribution	D.11 HFTD/HFRA Open Tag Reduction - Transmission	
Plan Area	2022 WMP Targets (progress as of 08/31) Continued			

[2] Red dotted outline = Target is partially or completely due prior to the end of 2022 (12/31).

Status color: Blue = "Completed on Time" - complete pending validation; Green = "On Track" – meets original target; Amber = "At Risk" – not meeting original target and has an approved catchback plan; Red = "Off Track / Missed" – not meeting original target and does not have an approved catchback plan.

E. Vegetation Management and Inspections	E.01 - Enhanced Vegetation Management	E.02 - Pole Clearing Program	E.03 - LiDAR Ground Inspections – Distribution	E.04 - LiDAR Routine Inspections - Transmission
	E.05 - Vegetation Management - Quality Assurance and Quality Verification	E.06 - Defensible Space Inspections - Distribution Substation	E.07 - Defensible Space Inspections - Transmission Substation	E.08 - Defensible Space Inspections - Hydroelectric Subs and Powerhouses
	E.09 - Utility Defensible Space - Distribution	E.10 Pole Clearing in State Responsibility Areas (SRA)		
F. Grid Operations and Protocol	F.01 - EPSS - Settings Design and Test	F.02 - EPSS - Install Settings on Distribution Line devices	F.03 - EPSS - Develop Enablement Standards and Procedures	F.04 - EPSS - Reliability Improvements
G. Data Governance	G.01 - Data Governance - Identify and Centralize High Priority Data			
H. Resource Allocation Methodology	H.01 - Risk Spend Efficiency - Develop and Share Governance Process			
J. Stakeholder Cooperation and Community Engagement	J.01 - Community Engagement - Meetings			