

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



October 14, 2021

Via Electronic Filing

Caroline Thomas Jacobs, Director
Office of Energy Infrastructure Safety
California Natural Resources Agency
Sacramento, CA 95184
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**Subject: Application of the Public Advocates Office for
Participation in the Wildfire Risk Modeling Working
Group Case No. #Risk-Model-Group**

Dear Director Thomas Jacobs,

Per the Wildfire Risk Modeling Working Group presentation by Suzie Rose on October 6, 2021, please find enclosed the Public Advocates Office at the California Public Utilities Commission's (Cal Advocates') submission of required materials to participate in the Wildfire Risk Modeling Working Group (Application), detailed below:

- One page describing any relevant experience related to risk modeling, utility risk assessment, and/or wildfire risk, and description of intended areas of interest and participation during the working groups
- Resume(s) demonstrating any relevant experience

Please contact Program Manager Nathaniel Skinner (Nathaniel.Skinner@cpuc.ca.gov) or Program and Project Supervisor Matthew Karle (Matthew.Karle@cpuc.ca.gov) with any questions or follow-up relating to this Application.

Caroline Thomas Jacobs, OEIS

October 14, 2021

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Sincerely,

/s/ CAROLYN CHEN

Carolyn Chen
Attorney

Public Advocates Office
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102
Telephone: (415) 703-1980
E-mail: Carolyn.Chen@cpuc.ca.gov

Public Advocates Office – Wildfire Safety Section

Cal Advocates has taken part in the development of Wildfire Mitigation Plans (WMP) and utility models and tools used to evaluate risk. Cal Advocates has reviewed utility WMPs since 2019 and continues to be involved in the review of quarterly data reports and initiative updates. Cal Advocates is also actively involved in the Safety Model Assessment Proceeding (SMAP) and Risk Assessment Mitigation Phase (RAMP) proceedings, which have led to the creation of the Multi-Attribute Value Functions used by IOUs in their current risk models.

Matthew Yunge has worked as an engineer for the CPUC for approximately five years. As advisory staff with the CPUC's Safety and Enforcement Division (SED), Matthew reviewed the 2019 and 2020 WMPs that were submitted by electric utilities. He attended seminars that focused on new technologies that could aid in predicting and responding to fires. He has also conducted investigations regarding electric utilities and fires. With Cal Advocates, Matthew Yunge reviewed the 2021 SCE and PacifiCorp WMPs. He participated in the CPUC's RAMP and SMAP proceedings from 2016 to 2018. He is also involved in using risk model outputs in geospatial contexts to evaluate utility prioritization.

Alan Wehrman has worked with the CPUC for three and a half years, first as a gas safety engineer with SED and later joining Cal Advocates' Wildfire Safety Section. Alan is Cal Advocates' lead analyst for PG&E's WMP and actively monitors developments in PG&E's risk models, vegetation management plans, and grid hardening plans. They also monitor the CPUC's Enhanced Oversight and Enforcement process, which placed PG&E into step one of six for its failures to appropriately target its vegetation management practices to high-risk circuit segments in 2020.

Matthew Karle is the supervisor of the Wildfire Safety Section and has worked with the CPUC for nine years, with two years in the Cal Advocates' Wildfire Safety Section. In 2020 and 2021 he reviewed the SDG&E and PacifiCorp WMPs. He also oversees Cal Advocates' review of utility filings related to WMPs and safety certifications.

Justin Hagler has worked as a regulatory analyst with the CPUC for six years. For the last two years he has participated in the Public Safety Power Shutoff proceedings at the CPUC and has assisted in reviewing PSPS-relevant sections of the utility WMPs.

Nathaniel Skinner is the program manager of the Cal Advocates Safety Branch. He has managed Cal Advocates staff on a variety of safety proceedings at the CPUC since the creation of the Cal Advocates (then Office of Ratepayer Advocates) Energy Safety Section in 2015. He has overseen Cal Advocates' involvement in the CPUC's SMAP, RAMP, PSPS, and WMP proceedings, as well as a host of safety-related proceedings concerning gas utilities.

Cal Advocates plans to participate at each of Energy Safety's proposed risk modeling working group meetings. Cal Advocates seeks to ensure that each component of future risk models is as consistent and comparable as possible with the other IOUs, and conforms to best practices. Additionally, Cal Advocates will attempt to ensure that each step of model development is transparent and validated by stakeholders and independent experts.

Alan Wehrman

they/them

alan.wehrman@cpuc.ca.gov

Professional Experience

California Public Utilities Commission Utilities Engineer San Francisco, CA 2020-Present

- Utilities engineer in the Wildfire Safety Section of the Public Advocates Office of the CPUC.
- Reviewed Wildfire Mitigation Plans and other wildfire-related filings from electric utilities.
- Reviewed GIS data submissions of electric utility assets.
- Co-authored over one hundred pages of comments and recommendations related to PG&E's 2021 Wildfire Mitigation Plan.
- Participated as a panelist in the Wildfire Risk Modeling Coordination Workshop held on October 5-6, 2021.

California Public Utilities Commission Utilities Engineer San Francisco, CA 2018-2020

- Utilities engineer in the Gas Safety & Reliability Branch of the Safety & Enforcement Division of the CPUC.
- Working in teams of 3-6, performed audits of investor-owned natural gas utilities. Reviewed operations & maintenance procedures and programs for compliance with state and federal gas safety regulations. Inspected operations and maintenance records to ensure procedures were being followed.
- Performed solo audits of master-metered natural gas distribution systems and small propane systems.
- Investigated consumer complaints and incidents to determine possible noncompliance with regulations. Wrote reports of investigation summary and findings.
- Conducted in-person inspections of gas facilities, construction activities, operations and maintenance work, and integrity management activities.
- Prepared GSRB's portion of the CPUC's annual report to the governor's office.

Delos CTO, Co-founder San Francisco, CA 2015 - 2017

- Co-founded a company focused on applying insights from satellite imagery to improve disaster risk models for the property insurance market.
- Wrote algorithms in Python to segment and classify satellite images using machine learning techniques.
- Utilized GIS tools (ArcGIS, QGIS, MapBox) to generate risk maps for natural disasters.

SSL Mechanical Engineer Palo Alto, CA 2009 - 2015

- Designed and supported manufacturing of antenna components for commercial communications satellites.
- Responsible engineer for sine/random vibration test, acoustic loading, thermal cycling, and photogrammetry surface measurement of completed assemblies.
- Investigated nonconformances during manufacturing, assembly, and test. Determined root causes and implemented corrective actions to prevent similar issues in the future.
- Discovered a critical design failure of a high-profile antenna during environmental testing. Supported and coordinated design, manufacturing, and assembly teams to effect a repair and maintain the schedule.
- Pioneered process improvements to simplify or automate labor-intensive tasks related to design and test.

Summary of Skills and Knowledge

- Registered Professional Engineer in California, license M 39792.
- Experience enforcing state and federal safety regulations for gas and electric utilities.
- Experience with GIS and analysis of satellite imagery.
- Mechanical design, including solid modeling and vibrational analysis. Experience designing low-margin graphite composite and metallic components for extreme conditions in orbit.
- Experience mechanical testing of graphite composite and metallic components in environmental testing.

Education

California Polytechnic State University

San Luis Obispo, CA

Justin Hagler

505 Van Ness Blvd, San Francisco, CA, 94102

415-703-5355 | justin.hagler@cpuc.ca.gov | www.linkedin.com/in/justinhagler13

Work Experience & Leadership:

California Public Utilities Commission- Public Advocates Office, San Francisco, CA **July 2021- Present**
Public Utilities Regulatory Analyst 5

- Manage the Public Advocates Office's policy response to Public Safety Power Shutoff proceedings at the California Public Utilities Commission.
- Monitor multiple Commission proceedings for linkages between the Investor-Owned Utilities' Public Safety Power Shutoff programs and wildfire mitigation efforts.
- Draft recommendations for the Commission to hold California's Investor-Owned Utilities accountable for proper execution of wildfire mitigation and public safety measures.

California Public Utilities Commission- Public Advocates Office **October 2019- July 2021**
Public Utilities Regulatory Analyst 4

- Provided management with analysis and recommendations for improving new proposed regulations relating to California Utilities' Public Safety Power Shutoff programs.
- Reviewed proposed regulations and Utility power shutoff reports and drafted formal comments for submittal to the Commission.
- Led a team of junior staff members to assist in analysis and compliance reviews of utility wildfire mitigation actions, including widespread power shutoffs.

California Public Utilities Commission- Energy Division **May 2018- October 2019**
Public Utilities Regulatory Analyst 3

- Responsible for management of multi-million-dollar energy efficiency evaluation, measurement, and verification contracts to ensure success of the State's energy efficiency programs.
- Managed the state's Energy Efficiency Potential and Goals study, which forecasted load reductions attributable to many different types of energy efficiency measures.
- Drafted original research comparing Heating, Ventilation, and Air Conditioning savings patterns to wholesale energy prices and greenhouse gas emissions at the International Energy Program Evaluators Conference.

California Public Utilities Commission- Energy Division **May 2016- May 2018**
Public Utilities Regulatory Analyst 2

- Responsible for the coordination and inter-agency process alignment of electric transmission planning inputs for California's new Integrated Resource Planning process.
- Acted as liaison between the CPUC, the California Independent System Operator, and the Western Electricity Coordinating Council.
- Successfully orchestrated widespread adoption of planning inputs created by the Commission's integrated resource planning process.

California Public Utilities Commission- Energy Division **March 2015- May 2016**
Public Utilities Regulatory Analyst 1

- Worked under supervision of a senior analyst to develop policy recommendations for the California Independent System Operator's transmission planning process.
- Represented the CPUC at west-wide transmission planning meetings to support California's renewable energy goals and maximize value for California's electric ratepayers.

- Worked directly for an administrative law judge to provide analysis and advisement in controversial transmission project applications before the Commission.
- Conducted a quantitative analysis of emerging renewable energy curtailment problems prior to the adoption of new planning targets in Senate Bill 350.

Smart Grid Library

July 2013- January 2015

Research Analyst

- Conducted complex research in support of client projects.
- Developed definitions of electric power industry terms and jargon to publish the “Smart Grid Dictionary”, which helped clients understand the technologies most applicable to their projects.
- Provided analysis of vehicle-to-grid communications protocols and aggregating industrial combined heat and power capabilities into a grid operator dispatchable resource (a virtual power plant).

Education:

University of California, Berkeley

August 2009- May 2013

B.S. Environmental Science, Policy, and Management: Society & Environment

About me:

I enjoy competitive target archery, rock climbing, and getting lost in California’s mountains. I am an avid fan of my alma mater’s football team (Go Bears!) and the San Francisco Giants.

References available upon request.

Matthew A. Karle
505 Van Ness Ave
San Francisco CA 94102
415 703 1850
matthew.karle@cpuc.ca.com

Education

Master of Arts in Government December 2010
California State University, Sacramento

Bachelor of Arts in Political Science and English Literature May 2006
San Francisco State University

Experience

Program and Project Supervisor, Public Advocates Office
Energy Safety Branch
July 2021 – present

- Supervisor for the Wildfire Safety section of the Safety Branch.
- Oversees staff in reviewing matters under consideration before the Office of Energy Infrastructure Safety, including Wildfire Mitigation Plans and safety certificate requests.

Public Utilities Regulatory Analyst V, Public Advocates Office
Energy Safety Branch
September 2019 – July 2021

- Senior Analyst in the Wildfire Safety section of the Safety Branch.
- Lead Analyst in review of SDG&E's annual Wildfire Mitigation Plans.
- Responsible for reviewing and drafting comments on matters under consideration before the Office of Energy Infrastructure Safety.

Public Utilities Regulatory Analyst V, Public Advocates Office
Electricity Pricing and Customer Programs Branch
July 2016 – September 2019

- Senior Analyst in the Rate Design section.
- Project coordinator in GRC Phase 2 filings for all three large electric IOUs in California.

- Expert witness on marginal customer access costs, revenue cycle services costs, and for policy matters regarding the transition of electric customers to default time-of-use rates.
- Represented the Public Advocates Office in stakeholder working groups relating to default time-of-use rate implementation policy, and time-of-use related marketing, education, and outreach.

Public Utilities Regulatory Analyst IV, Energy Division
February 2016 – July 2016

- Lead ED analyst on advice letter filings and proceedings relating to petroleum pipeline transportation rates.
- Lead ED staff for spending accountability report relating to PG&E's 2017 GRC filing.
- Responsible for reviewing and processing utility advice letter filings, including writing staff disposition and draft resolutions relating to filings; and advising management and Commissioner's offices.

Public Utilities Regulatory Analyst I-III, Office of Ratepayer Advocates
Energy Cost of Service and Natural Gas Branch
May 2012 – 2016

- Lead ORA analyst on issues relating to electric and natural gas general rate case plant depreciation. Served as subject matter expert on gas pipeline corrosion control, and pipeline injection of biomethane.
- Responsible for representing utility ratepayers through sponsoring and defending in cross examination expert testimony before the Commission in general rate cases and other natural gas related proceedings; representing ORA in ex parte meetings with Commissioners and their advisory staff; reviewing utility advice letter filings and representing the agency in protesting such filings as necessary.

References

Nat Skinner
Program Manager, Energy Safety Branch
Public Advocates Office
California Public Utilities Commission
nws@cpuc.ca.gov
415 703 1393

Matthew Yunge, PE

Matthew.Yunge@cpuc.ca.gov • (415) 703-1667

Objective

Joining the Risk Model Technical Working Group.

Professional Experience

CPUC Public Advocates Office – Senior Utilities Engineer October 2020-Present

San Francisco, California

- Reviewed 2021 Wildfire Mitigation Plans (WMP).
- Reviewed utility Quarterly Initiative Updates and Quarterly Data Reports.
- Reviewed utility Public Safety Power Shutoff reports.

CPUC Safety and Enforcement Division – Utilities Engineer March 2018-October 2020

San Francisco, California

Electric Safety and Reliability

- Conducted field investigations in response to electric safety and reliability incidents.
- Responded to electric safety-related customer complaints.
- Conducted audits of electric distribution facilities, power plants, and substations.

Wildfire Mitigation Plans

- 2019: Reviewed the WMPs of PG&E and PacificCorp.
- 2020: Reviewed WMP sections related to meteorology and vegetation management.

CPUC Office of Ratepayer Advocates – Utilities Engineer February 2016-February 2018

San Francisco, California

Risk Assessment Mitigation Phase – I.16-10-015

- Reviewed and analyzed safety-related utility information on a variety of risks affecting utility operations.
- Developed recommendations for further development of the energy utilities' risk-assessment methods.

Education

California Polytechnic State University – San Luis Obispo

Bachelor of Science in Mechanical Engineering, June 2011

Concentration: HVAC

Computer Skills

- QGIS, ArcGIS Pro, Microsoft Power BI, WindNinja.

Nathaniel Winfield Skinner, PhD

505 Van Ness Ave, San Francisco, CA

Phone (415) 703-1393

Email: nathaniel.skinner@cpuc.ca.gov

Experienced management professional and expert witness on electric and natural gas safety issues.

RELEVANT PROFESSIONAL EXPERIENCE

Public Advocates Office at the California Public Utilities Commission

San Francisco, CA

Program Manager (July 2019 – Current)

Program and Project Supervisor (August 2013 – June 2019)

- Provides programmatic management and direction to a team of 22 consisting of four sections addressing safety policy, safety analytics, wildfire safety, and financial cost and impacts
- Advises executive management
- Advocates on energy safety issues, such as natural gas and electrical safety and rate issues to decision-makers
- Provides expert testimony and expert witness skills to natural gas and safety cases
- Negotiates stipulations and settlements with utilities and other parties in proceedings
- Develop basic training curriculum for new Public Advocates Office staff
- Guides, mentors, and leads supervisory team to develop their skills, improve work products, and provide regular developmental feedback; and to guide them in doing this for their staff

California Public Utilities Commission, Energy Division

San Francisco, CA

Senior Regulatory Analyst (PURA IV, V) (October 2010 – August 2013)

Regulatory Analyst (PURA III) (August 2009 – October 2010)

Junior Regulatory Analyst (PURA I, II) (October 2008 – August 2009)

- Lead analyst for Long Term Procurement Planning (physical energy infrastructure), in which resource needs are assessed for local areas, renewable integration, and overall system reliability
- Lead analyst for coordinating with Energy Commission forecasting and collaboration with the California Independent System Operator for renewable integration and other electricity planning
- Researched and developed new procedures, presentation materials and timelines, and reviewing and editing documents for utility long-term procurement planning
- Utilized analytical and research techniques to ensure prompt compliance with diverse Commission orders
- As lead analyst for utility quarterly compliance reporting, led a team of 8 auditors and 3 analysts, and reduced the audit time by 25% while expanding capacity by 60%
- Coordinated interagency and inter-utility efforts to quantify energy efficiency in state-wide demand forecasting

Global Green USA, Security & Sustainability Program (Legacy of the Cold War Program)

Washington, DC

Intern (May 2007 – August 2007)

- Researched Baltic Sea chemical weapons dumping issues as related to the Nord Stream pipeline including outreach and research in Danish, Swedish, and Norwegian languages; this was presented to the Director and used in further projects regarding ending the threat of chemical weapons

Costco Wholesale, Inc

Issaquah, WA

Inventory Control Specialist (September 2005 – April 2006)

Major Sales (August 1999 – September 2005)

EDUCATION

Walden University

Minneapolis, MN

Doctorate of Philosophy, Public Policy & Administration (2010 – 2018)

- Emphasis in Homeland Security Policy
- Dissertation: Transportation Electrification and Hospital Emergency Planning
<https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=7403&context=dissertations>

Monterey Institute of International Studies

Monterey, CA

Master of Arts, International Policy Studies (2008)

- Specialization in Environmental Security

University of Washington

Seattle, WA

Bachelor of Arts with Distinction (Scandinavian Area Studies) (2005)

Bachelor of Arts (Political Science; Minor in History) (2005)

PROFESSIONAL CERTIFICATIONS & TRAINING

- **API 1173** (2017) *Houston, TX*
- **California Leadership Academy**
 - Manager Development Program (2020)
 - Supervisor Development Program (2014)
- **Supplemental Analyst Training** (2009-2010) *San Francisco, CA*
 - Project Management for Analysts
 - Problem Solving Methodology and Tools
- **Center for the Study of Energy Markets** *Berkeley, CA*
 - Economics of Energy and the Environment (June 2010)
 - Economic Fundamentals of Electricity Regulation and Markets (March 2009)
- **Cybersecurity and Cyberterrorism** (Fall 2009) *U of WA, Online*

OTHER SKILLS & ACTIVITIES

Employee Award for Leadership, CPUC

PADI Divemaster, and Master SCUBA Diver

Black Belt in Shudokan Karate-do

Selected Testimony, Comments, and Publications

2018, Skinner. Transportation Electrification and Hospital Emergency Planning

<https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=7403&context=dissertations>

2019, Obiora, Skinner. Reply Comments of the Public Advocates Office on the Joint Assigned Commissioner's and Administrative Law Judge's Ruling on Proposals to Improve the Safety Culture of Pacific Gas and Electric Company and Pacific Gas and Electric Corporation.

2019, Obiora, Skinner. Comments of the Public Advocates Office on the Joint Assigned Commissioner's and Administrative Law Judge's Ruling on Proposals to Improve the Safety Culture of Pacific Gas and Electric Company and Pacific Gas and Electric Corporation.

2019, Skinner, Obiora. Opening Comments of the Public Advocates Office on the Questions in the Assigned Commissioner's Scoping Memo and Ruling [on Whether Pacific Gas and Electric Company's Organizational Culture and Governance Prioritize Safety].

2019, Yip-Kikugawa, Skinner, Botros, Bach, Li, Harahsheh, Lievanos. Comments of the Public Advocates Office on November 2018 Submission of Southern California Edison Company's Risk Assessment and Mitigation Phase.

2019, Chase, Hook, Lievanos, Skinner, Stannik. Public Advocates Office Comments on the [2019] Wildfire Mitigation Plans.

2018, Tudisco, Molla, Bach, Skinner. Comments of the Office of Ratepayer Advocates on November 2017 Submission of Pacific Gas and Electric Company's Risk Assessment and Mitigation Phase.

2017, Skinner, Botros. Public Supplemental Testimony on the Safety of [Natural Gas Transmission] Line 1600.

2017, Skinner, Botros. Amended Prepared Testimony on the Safety of [Natural Gas Transmission] Line 1600.

2017, Sheppard, Yunge, Lee, Ezekwo, Stannik, Skinner. Comments of the Office of Ratepayer Advocates on November 2016 Submission of Southern California Edison Company's Risk Assessment and Mitigation Phase.

2016, Skinner. Safety, Risk, and Integrated Planning [on Pacific Gas and Electric Company's Test Year 2017 General Rate Case].

2014, Tudisco, Opening Comments of the Office of Ratepayer Advocates Regarding the Refined Straw Proposal on a Risk-Based Decision-Making Framework to Evaluate Safety and Reliability Improvements and Revise the General Rate Case Plan for Energy Utilities.

Selected Media Appearances & References

Bloomberg. 2020, Dec 31. PG&E may face \$166 million penalty for mismanaging blackouts.

<https://www.bloomberg.com/news/articles/2020-10-31/pg-e-should-pay-166-million-penalty-for-blackouts-agency-says>

Fox KTVU. 2020, Nov 17. PG&E disputes \$166 million fine linked to 2019 shut offs. https://youtu.be/pSq_W3nfBqc

Politico. 2020, Nov 1. PG&E should be fined \$166M for 2019 power shutoffs, PUC consumer advocates say.

<https://subscriber.politicopro.com/article/2020/10/30/pg-e-should-be-fined-166m-for-2019-power-shutoffs-puc-consumer-advocates-say-1332878>

Nat Skinner and his team's work have been featured in the following print/online media:

The New York Times, Bloomberg, San Francisco Chronicle, Los Angeles Times, Sacramento Bee, U.S. News & World Report, Politico, Mercury News, Miami Herald, Kansas City Star, Yahoo Finance, Motley Fool, NASDAQ, International Business Times, Energy Central, I360 Energy, East Bay Times, San Luis Obispo Tribune, Bakersfield Californian, Fresno Bee, Merced Star, Modesto Bee, Santa Rosa Press Democrat, Washington Times, The News & Observer, New Haven Register, The Reporterville Recorder, SF Gate, Yahoo News, Times Union, MSN, KSRO, SiliconValley.com, The Register Citizen, The Middletown Press, Sierra Sun Times.

Nat Skinner and his team's work have been featured on the following television stations:

CBS Sacramento, KRON 4, KTLA, KTVU, KCRA, ABC Sacramento, Fox 5 San Diego, Fox40, ABC 30, ABC23, KRCR News Channel 7, ABC 10 News Mornings, NBC Bay Area News, Spectrum News 1 (San Fernando Valley), ABC Palm Springs, KFSN 30 Action News.

Nat Skinner and his team's work have been featured on the following radio stations:

KQED / National Public Radio, KQED Forum, KCBS-AM, Capitol Public Radio Sac, KFBK Radio.