



Washington Department of Natural Resources

Electric Utility Wildland Fire Mitigation Plan Template Development and Deployment

Proposal Due: September 13, 2023

Provided to:

Washington DNR
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Contracts and Procurement Specialist –
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September 13, 2023

David Gomez
Contracts and Procurement Specialist – Wildland Fire Management & Aviation
Washington Department of Natural Resources
1111 Washington Street SE
Olympia, WA 98504-7037

Subject: Electric Utility Wildland Fire Mitigation Plan Template Development and Deployment

Dear Mr. Gomez:

Guidehouse Inc. (Guidehouse) is pleased to submit to the Washington Department of Natural Resources (DNR) our proposal in response to the Work Order Request for Proposal (RFP) Electric Utility Wildland Fire Mitigation Plan Template Development and Deployment. Guidehouse is excited for the opportunity to demonstrate our unique qualifications to support you on this important project. We understand that this work is extremely important to the communities of Washington and we are ready to support the Washington Department of Natural Resources as your partner in utility safety.

Our team will leverage our experience and knowledge of utility best practices and applicable regulations to promote the safety of electric transmission and distribution infrastructure and related facilities to develop a wildland fire mitigation plan (WMP) template and compile and summarize existing WMPs. Our experience includes, but is not limited to:

- Utility Operations
- Utility Vegetation Management
- Wildfire Mitigation Plans
- National Electric Code (NEC)
- NERC/WECC Reliability Standards (including FAC-003 Transmission Vegetation Management)
- National Electric Safety Code (NESC)

Why Guidehouse is the Right Partner. Our combined capabilities bring effective solutions to complex issues. The Guidehouse team offers experienced, qualified, and able individuals for the tasks required by Washington Department of Natural Resources. This includes a well-rounded team with key individuals, as well as deep bench strength professionals including utility operations specialists, engineers, vegetation management professionals, arborists auditors, inspectors, risk assessment specialists, UAV/drone operators, document control specialists, and safety monitors, should they be needed.

In our role assisting utilities with wildfire mitigation, we play a significant role in ensuring the safety of the public. From reviewing and inspecting the critical infrastructure that we rely upon. We take pride in delivering solutions that improve the lives of the public.



If you have any questions about our response, please contact me at (916) 631-3227 or at clopes@guidehouse.com. We are confident that you will find that our proposal offers the best value solution to the Washington Department of Natural Resources.

Sincerely,

Collin Lopes
Partner

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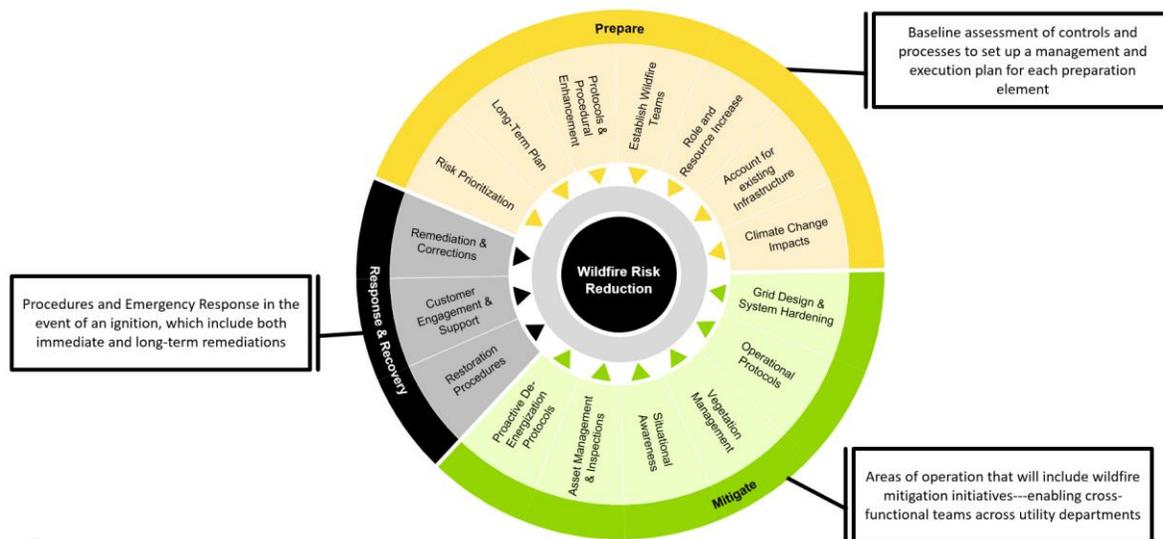
1.0 Executive Summary

Wildfire has always been present in Washington forests and wildlands, but the nature of wildland fires has changed due to human presence, especially in the wildland urban interface, and its impacts on resource management practices and ignitions, including by energized electric assets. The challenge presented by climate change with hotter temperatures and less consistent precipitation patterns has expanded the length of wildfire season and increased the severity and intensity of fires. To reduce the fire and public safety risk posed by utility operations, Guidehouse proposes to utilize its experience drafting and evaluating utility wildfire mitigation plans in California and elsewhere to assist the Washington Department of Natural Resources (DNR) with the development and deployment of a standardized Electric Utility Wildland Fire Mitigation Plan (WMP) template in accordance with Washington’s HB 1032. Wildfire mitigation plans should ensure utilities implement strategies to prevent ignitions, improve situational awareness, increase resilience, and promote public safety. Additionally, Guidehouse proposes to prepare a Compilation and Summary of Existing WMPs prepared by investor-owned utilities (IOUs) and public utilities operating in Washington state and elsewhere to provide the DNR, including the Wildland Fire Prevention Committee, and other stakeholders an understanding of the state of utility wildfire mitigation and prevention efforts.

2.0 Developing an Electric Utility Wildland Fire Mitigation Plan Template

Guidehouse proposes to develop and deliver a WMP template in accordance with the mandates set forth in WA HB1032 and deliver the completed template by or before the completion date of December 31, 2023. The template will draw upon the efforts by other states, including but not limited to, California, Nevada, and Oregon, as well as our experience developing plans in those states and through our work as an independent evaluator of over 20 utility wildfire mitigation plans.

From this experience, Guidehouse has observed that an effective WMP should include the following:



As can be seen above, there are three phases of a WMP: 1. Prepare, 2. Mitigate, and 3. Response & Recovery. In the prepare phase, utilities should undertake a baseline assessment of the controls and processes to address wildfire risk. Utilities need to assess their risk due to their infrastructure, climatology, topology, and current fire mitigation posture and ensure sufficient resourcing and planning to mitigate the present and evolving risks. The mitigation phase is comprised of the actions necessary to reduce wildfire risk and should include efforts centered around system hardening, operational practices, vegetation management, situational awareness, asset management and inspections, and, whether, and under what conditions, a utility will employ proactive de-energization. Finally, the response and recovery phase includes restoration procedures, customer engagement and support, and remediation and corrections.

This approach is reflected in the mandates of HB 1032. Specifically, the template developed by Guidehouse will address or specifically include the elements recommended by HB 1032 including:

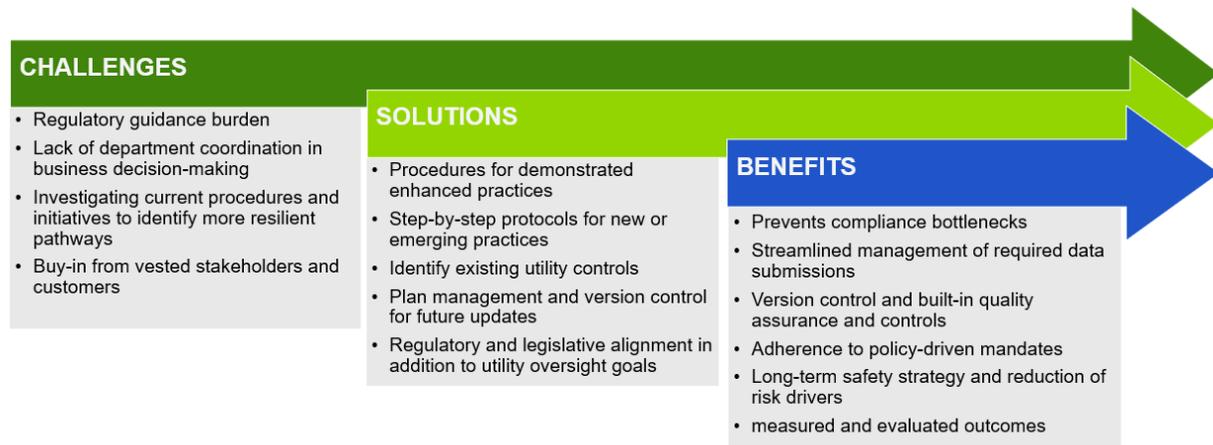
- Conducting vegetation management along transmission and distribution lines and near associated equipment;
- Inspecting infrastructure, scheduling and conducting maintenance and repair activities, and maintaining records;
- Modifications or upgrades to facilities and construction of new facilities to incorporate cost-effective measures to minimize fire risk;
- Identification of wildfire prevention programs, including adoption of new technologies to harden utility infrastructure;
- Operational procedures that reduce wildfire risk;
- Identification of appropriate widths for vegetation management and rights-of-way, including the consideration of fire-resistant vegetation alternatives; and
- Developing public and interested parties' engagement and communication plans that address wildfire safety and risk mitigation.

Other areas we will likely incorporate into the template include, but are not limited to:

- **Roles and responsibilities** – identification of those responsible for the execution of the wildfire mitigation plan.
- **Risk assessment and mapping** – identifying which circuits and segments pose the highest risk of igniting a wildfire.
- **Situational awareness and forecasting** – increasing the understanding of real-time and expected conditions allows utilities to react appropriately through operating and maintenance practices and enables communication with at risk communities.
- **Identification of metrics** – utilities need to measure their performance of mitigation activities as well as conditions and events that make wildfire ignitions more likely.
- **Proactive de-energization in extreme conditions** – while de-energization is a blunt instrument that should only be deployed under extreme conditions, all utilities should discuss whether and when such actions may be deployed, and if it will not be employed why not.

- **Emergency response and recovery** –utilities must have emergency plans to respond to fires or de-energizations and restoration procedures to safely restore power after such an event.

The effort to develop a template should focus on what challenges the state and utility are looking to solve, the range of solutions, and the expected benefits to those solutions. It is important to maintain focus and not try to solve every potential problem or eliminate every risk. The goal should be to reduce public safety risks in an efficient and cost-effective manner.



Guidehouse has developed WMPs for large and small utilities including public utilities in several western states.¹ Additionally, Guidehouse served as an independent evaluator of more than 20 wildfire mitigation plans and is part of a team the California Office of Energy Infrastructure Safety of Qualified Independent Evaluators. Finally, Guidehouse has supported the implementation of such plans. Through these varied experiences, we have developed a broad base of knowledge of what measures are most effective to reduce utility wildfire risk and promote public safety.

Finally, Guidehouse understands that not all utilities face the same risks or have the same resources to mitigate risks. Guidehouse also appreciates the diversity of terrain and climatology that exists across Washington. Accordingly, the template will set forth minimum standards but will retain flexibility to allow the applicable utilities to reduce risk in a manner that best suits their system, needs, capabilities, and resources which should be determined through a risk assessment process like the one illustrated below.

¹ This includes the development of a WMP for Chelan Public Utility District in 2021.



2.1 Develop a project to meet the deliverable schedule

Upon receiving an award under this RFP, Guidehouse will develop a project plan (in MS Project or Excel, depending upon the desires of the client) that covers the development of the template, consultation, and incorporation of feedback from the WA DNR stakeholders and partners, and complete the effort by the deadline of December 31, 2023. This schedule will include the consultations with the identified stakeholders, milestones for draft template deliveries, and delivery of the final draft. Additionally, Guidehouse will identify dates associated with the report on the compilation and summary of existing wildfire mitigation plans to be delivered on or before February 1, 2024.

2.2 Consult on elements to include in the Template with stakeholders and partners

Guidehouse anticipates the majority of its consultations with the listed stakeholders by and through the DNR, particularly the Utility Wildland Fire Prevention Committee. Due to the brief timeline, the opportunities to interact with each of the stakeholder groups to gain their input and feedback will necessarily be limited. Accordingly, Guidehouse anticipates ten stakeholder meetings. During these meetings, Guidehouse will provide the stakeholders with the draft template as well as feedback already received from stakeholders. Guidehouse will then walk through the template discussing minimum standards and best practices for cost-effective fire reduction. In follow-up meetings Guidehouse will highlight modifications and sticking points, if any, and aim to drive towards consensus on template language. Guidehouse will staff each meeting with three consultants, two of which will be subject matter experts.

2.3 Deliver a final draft Template to Commerce

Following the stakeholder consultations Guidehouse will review all comments, objections, and suggestions set forth by the stakeholders and incorporate them into the Wildfire Mitigation Plan Template. This Template will then be submitted to the Washington Department of Commerce to review and to provide feedback.

2.4 Complete the Template

Guidehouse will finalize and complete the template after it reviews any outstanding comments, objections, and suggestions set forth by Commerce and the other stakeholders. Guidehouse will submit the completed template by or before December 31, 2023.

2.5 Answer initial questions posed by Commerce and the Legislature

Guidehouse will review and respond to each question posed by the Washington Department of Commerce and the Legislature. Guidehouse will also host a live question and answer session, as needed, to discuss issues raised and explanations for why a particular standard or practice is or is not included in the WMP Template. Guidehouse will lean upon its experience in developing and evaluating other WMPs to guide these efforts.

3.0 Compile and Summarize Existing Electric Utility Wildland Fire Mitigation Plans

During the course of the preparation of the template, Guidehouse will review the existing WMPs available from Washington utilities. Following the review, Guidehouse will produce a report that provides a compilation and summary of the existing WMPs. In this report, Guidehouse will highlight best practices and areas for improvement. Guidehouse may also incorporate best practices from WMPs, federal/state guidance, and other sources to offer suggestions for improvement.

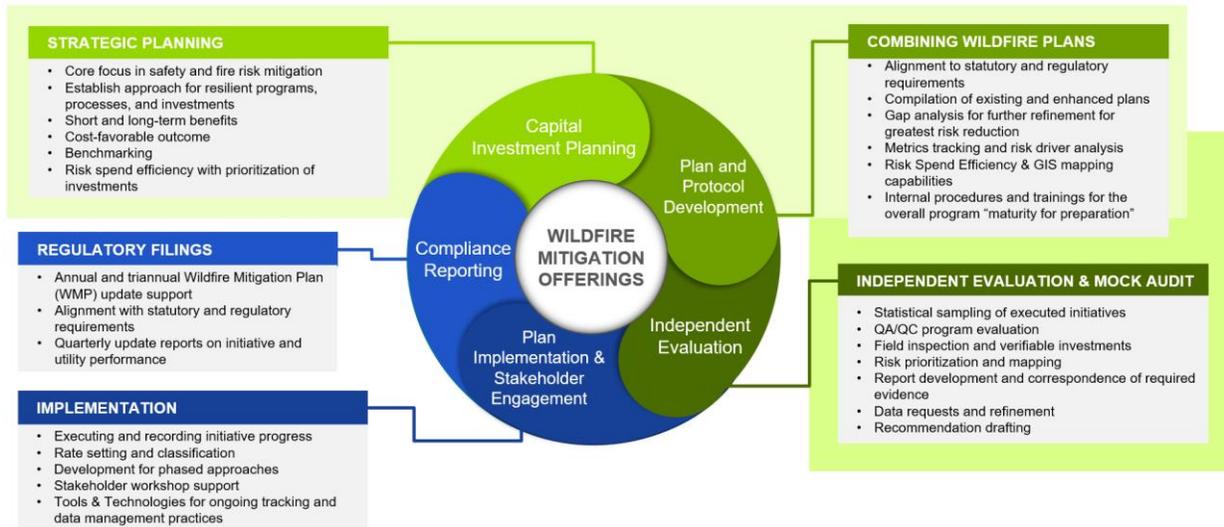
4.0 Cost Proposal

Guidehouse proposes to perform all the tasks and complete the two deliverables identified in the RFP for a total of \$175,000 fixed fee amount inclusive of all time and materials and travel. Guidehouse anticipates one to two trips consisting of two consultants to meet with the WA DNR Utility Wildland Fire Prevention Committee. The amount will be billed at the delivery of each deliverable: WMP template, compilation and summary of existing wildfire mitigation plans, and Question and Answer facilitation for the WA Department of Commerce and State Legislature.

Work Order Payment Schedule		
Deliverable	Estimated Delivery Date	Amount
1. WMP Template	December 31, 2024	\$100,000
2. Compilation & Summary of Existing Wildlife Mitigation Plans	February 1, 2024	\$65,000
3. Question & Answer facilitation with WA Department of Commerce and State Legislature	April 1, 2024	\$10,000
Project Total		\$175,000

5.0 Qualifications

The image below illustrates past and ongoing wildfire mitigation efforts Guidehouse has led or delivered for its clients.



Specific project examples are detailed below, more are available upon request.

Client	Project Name	Dates of Project	Project Description
<p>Bear Valley Electric Service (BVES)</p>	<p>Wildfire Mitigation Plan Development and Support</p>	<p>2019-Present</p>	<ul style="list-style-type: none"> • Guidehouse drafts and supports BVES in their development of and implementation of its Wildfire Mitigation Plan, Quarterly Data Reports, Quarterly Notification Letters, and Annual Reports on Compliance. • Guidehouse helps BVES respond to data requests from Energy Safety, Cal Advocates, and third-party intervenors. • Supported the development of associated plans and exercises for Public Safety Power Shutoffs, emergency response planning, and quality assurance/quality control programs.
<p>NV Energy</p>	<p>Natural Disaster Protection Plan</p>	<p>2019-2022</p>	<ul style="list-style-type: none"> • Advised NV Energy in the development and implementation of its Natural Disaster Protection Plan in accordance with legislative and regulatory requirements. The NDPP considered high-likelihood, high-impact natural disasters that could impact NVE’s electric infrastructure. Guidehouse advised in four key areas: prepare – mitigate – respond – recover. • Set forth Procedural enhancements and investment recommendations. • Engage vested stakeholders across county emergency management, fire districts, law enforcement, tribal councils, telecommunication companies, federal and state land management, as well as the public. • Develop tracking and monitoring protocols for evaluating risk reduction effectiveness.
<p>Southern California Edison PacifiCorp dba Pacific Power²</p>	<p>Wildfire Mitigation Plan Qualified Independent Evaluation</p>	<p>2020 - 2023</p>	<ul style="list-style-type: none"> • Guidehouse conducted an Independent Evaluation as part of an Energy Safety Qualified Independent Evaluator team to evaluate Wildfire Mitigation Plan activities performed in 2020, 2021, and 2022. • Issued data requests for supporting documents to evaluate comprehensiveness of the activities completed. • Sampled evidence of performance and incorporated field visits into assessments and findings. • Conducted interviews for all wildfire initiatives. • Completed a review of funding for all wildfire initiatives. • Issued recommendations to improve the implementation of the Wildfire Mitigation Plan. • Guidehouse issued an Independent Evaluation report describing each’s WMP performance meeting initiative targets, funding targets, and QA/QC programs. • Guidehouse provided the report to Energy Safety for public posting.

² Guidehouse has only reviewed PacifiCorp’s California WMP.

<p>Burbank Water and Power</p>	<p>Wildfire Mitigation Plan Independent Evaluation</p>	<p>2020, 2023</p>	<ul style="list-style-type: none"> • Guidehouse conducted an Independent Evaluation of BWP’s Wildfire Mitigation Plan in 2020 and 2023. • Issued data requests for supporting documents to evaluate comprehensiveness of the Plan • Issued recommendations to improve the Wildfire Mitigation Plan • Guidehouse issued an Independent Evaluation report that included a best practice evaluation matrix • Guidehouse presented its findings to the BWP Board and the Burbank City Council
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6.0 Proposed Personnel

Key personnel – The key personnel for this effort are:



Name	Responsibilities and Qualifications
Andrew Dressel	Project Oversight, Director in Charge, Primary Point of Contact – 15 years utility operations experience, 4+ years of utility wildfire mitigation program design and evaluations
Larry Gelbien	Technical Lead – 30+ years of utility engineering operations and planning experience, 5+ years of utility wildfire mitigation
Alejandro Gonzalez	Project Manager – Over 15 years utility experience in engineering, operations, regulatory compliance, and wildfire mitigation
Adam Daly	Subject Matter Expert – assisted in the development, implementation, maintenance, and independent evaluation of more than 15 wildfire mitigation plans

Additional Guidehouse staff will support for research, drafting, and project administration. Resumes for the additional staff are available upon request.

Appendix A. Resumes

Andy Dressel

Director

Andrew.Dressel@guidehouse.com

Salt Lake City, UT

Direct: 916-350-0003

Professional Summary

Andy is a Director in the Energy, Sustainability & Infrastructure Practice in the Risk, Compliance, and Security team at Guidehouse. Mr. Dressel is an experienced electric industry consultant and attorney. He advises Fortune 500 companies, regulators, municipal utilities, technology providers, and independent power producers on regulatory compliance, risk management, policy, and strategic matters. Andy has extensive compliance program management experience, as both a regulator and a practitioner, including developing and implementing internal audit plans, conducting internal and mock audits, and assessing audit, risk, and compliance readiness.

Areas of Expertise

- **Wildfire Mitigation:** Develop and independently evaluate wildfire mitigation plans at over 15 utility clients to promote public safety and ensure regulatory compliance. Guide clients on utility best practices to reduce ignitions, reduce public safety power shutoffs, and increase system resilience.
- **Project Management:** Lead and manage complex projects for timely, cost-effective delivery for clients. Develop project plans, implement project schedules, communicate effectively with the client and team members, and drive decisions to ensure project success.
- **Risk and Controls Evaluations and Advancement:** Manage and run risk assessments to identify and assess risks to drive risk-informed decision making. Examine utility operations to identify regulatory, legal, financial, and operational risks, develop risk management plans, and assess and implement internal controls.
- **NERC Reliability Program Development and Implementation:** Advise clients at all stages of reliability compliance program development and execution from blank sheet to mature operations. Bring substantial experience to enhance compliance performance and avoid common pitfalls across both the critical infrastructure protection (CIP) and operations and planning (O&P) suites of reliability standards. support development and implementation of risk-based compliance programs to comply with North American Electric Reliability Corporation reliability standards.

Professional Experience

Guidehouse

Risk and Controls Identification, Assessment, and Implementation

- Lead internal control evaluations, identify risks to utility operations especially regulatory obligations (e.g. NERC Reliability Standards), assess control design effectiveness and process efficiency.
- Deliver recommendations for processes, procedures, and operational improvements by developing project plans and coordinating activities.

Gap Assessments

- Identify client weaknesses and gaps through a comparative analysis against regulatory standards and industry best practices.
- Develop comprehensive roadmaps to improve current shortcomings and improve program or process maturity.
- Assess organizational structure and process effectiveness, provide guidance to clients to align goals and resources.

NERC Compliance

- Assess program management and implementation effectiveness of compliance programs and deliver guidance to reduce compliance risk.
- Provides guidance on standards, the CMEP, Rules of Procedure, and enforcement processes to guide expectations and evaluate needs for ongoing compliance, audits, spot checks, and mitigation plans.
- Possesses broad and deep understanding of the Reliability Standards (both O&P and CIP), internal compliance programs, and internal controls.

Guidehouse

- Advise clients on risk and regulatory compliance at the program level and at the task level.
- Lead risk identification and internal controls mitigation efforts across compliance programs and organizations.
- Lead complex regulatory compliance efforts with utilities and power providers of all sizes and ownership structures to prepare regulatory submissions, support audits, and more.
- Deliver comprehensive NERC compliance guidance.
- Developed compliant wildfire mitigation plans and independent evaluations for California-based investor owned and publicly owned utilities.

Grid Subject Matter Experts (GridSME)

- Advised clients on NERC compliance matters including developing several compliance programs from start-up.
- Developed several CIP programs for organizations not previously subject to the NERC standards.
- Delivered reports to regulators on changing operational oversight of the Western Interconnection.

- Provided legal advice on all matters in a rapidly growing consulting business.

North American Electric Reliability Corporation

- Provided legal support to reliability standards development including filing petitions and motions, advising standards drafting teams, participating in regular meeting with FERC staff, and served as legal liaison to the NERC Standards Committee.

Western Electricity Coordinating Council

- Served as legal liaison to the Transmission Expansion Planning Policy Committee.
- Provided legal review for compliance and enforcement activities.
- Led a risk assessment of the Western Interconnection.

Work History

- Director - Risk, Compliance, and Security – Guidehouse
- Associate Director Risk, Compliance, and Security – Navigant/Guidehouse
- Director of Regulatory Compliance and Legal Counsel - GridSME
- Attorney - NERC
- Legal Counsel - WECC

Certifications, Memberships, and Awards

- Member of California (2013-present), Utah (2009-present), and Pennsylvania (2007-present) Bar
- Member of Energy Bar Association (2010-present)
- Chair of Energy Bar Association Reliability and Security Committee (2015)

Education

- JD – Vermont Law School (2007)
- BS – Resource Conservation – University of Montana (2003)
- Professional Certificate, Cybersecurity: Technology, Application, and Policy – Massachusetts Institute of Technology
- Professional Certificate, Energy Innovation and Emerging Technologies – Stanford University

Larry Gelbien

Principle - Engineering Operations and Planning

larry.gelbien@guidehouse.com
Burlington, MA
Direct: 781.248.6301

Professional Summary

Larry is a Principle in the Energy System Transformation area at Guidehouse. His area of expertise is in developing strategic business plans, providing support for grid modernization, evaluating reliability programs, recommending grid resiliency, and deploying smart grid technology programs. Larry supports clients in leading large complex organization changes and project initiatives. Many of his recent projects included wildfire mitigation planning, Distributed Energy Resource (DER) integration, process change implementation, operational performance, engineering excellence, litigation support services and system planning.

Prior to joining Guidehouse, Larry was the Vice President of Engineering for NSTAR Electric (now Eversource Energy), with 30 years of utility experience in developing, designing, and implementing key initiatives such as process change to improve business performance. Larry's role at NSTAR Electric included the development of major capital projects (transmission lines, substation, and distribution). Larry worked directly with the Project Management organization to assure projects were executed and completed on time and at budget.

Areas of Expertise

- **Wildfire Mitigation Plans:** Since 2018 develop wildfire mitigation plans for major utilities in CA and NV. Performed independent evaluation of wildfire mitigation plans. Developed wildfire mitigation best practices for IOU.
 - **Regulatory Support for Clients:** Represented clients at the federal and state levels on energy matters and develop reports for clients on Federal Energy Regulatory Commission (FERC) orders and state orders and dockets,
 - **Litigation Support Services:** Worked directly with utilities and their legal representation to perform root cause analysis of major incidents. Provided support in the preparation of pending litigation.
- Smart Grid Initiatives:** Support clients in the development of grid modernization strategic roadmaps, regulatory filings, and tactical implementation plans. Develops solutions using non-wires alternatives, energy storage, grid self-healing, demand response, advanced metering, and customer systems.
- **Advanced Technology Support:** Implement advanced systems such as DMS, GIS, OMS, SCADA/RTU communications, energy storage, fiber optics, radio, and microwave communications to support business functions.
 - **Capital Projects:** Development and execution of major capital projects. In-depth hands on knowledge of the Planning, Design, Engineering and executive of major substation, transmission, and distribution projects.

- Professional Experience

As the former NSTAR VP of Engineering:

Investigation of Major Incidents

- Lead the investigation of three major events to determine the root cause while preparing for potential litigation: 1) Substation Fire, 2) Employee fatality, and 3) Underground equipment failures.

Electric Utility Capital and Expense Budget

- Responsible for engineering all Substation, Transmission, and Distribution capital work plan projects. Held the lead responsibility in the development of the annual capital budget, including coordinating the input of various departments (Station Capacity, Station Reliability, Transmission and Distribution) to produce an integrated plan. In addition, Larry coordinated activities with Project Management and Supply Chain to coordinate the long lead time items.
- Larry was also responsible for the development and implementation of the reliability O&M budget and implementation.

Electric Utility Reliability Programs

- **Distribution Automation / Grid Self-Healing Projects:** Larry implemented a Distribution Automation system which resulted in a significant reduction in customer outages. During a one coastal storm, over 71,000 customers did not experience a power outage due to the operation of the system and another 163,000 customers were restored in less than five minutes. Transmission line sensors were incorporated into the system to determine the location of transmission damage in a shorter time period.
- **Substation Automatic Bus Restoral:** To improve the reliability of the distribution substations, Larry implemented a bus restoration program, to assure a transmission line or transformer outage did not cause customer outages. This program resulted in the reduction of customer outages at a minimal expense.
- **BPS Transmission Station Control and Protection Upgrade:** In accordance with NERC and ISO new requirements, Larry's team designed and installed a fully integrated dual system protection with all control wiring pre-assembled and tested at all BPS Substations. Due to the standardized design developed, engineering and manufacturing time as well as cost of execution was reduced substantially. Since these projects were needed to be worked with the stations energized and in service, a careful implementation plan to cut over into the new system was developed. Larry's engineering team provided guidance to ensure continued safe operation of the stations and personnel safety.
- **Worst Performing Circuits Program:** Larry developed a comprehensive program to address the worst performing circuits and penalty circuits. These were circuits that were on the poor performing (worst 5%) circuit list for the past two years. Engineering developed specific improvement plans for each circuit consisting of circuit walk downs, conversions, establishing new source, installation of automatic switches, inspection programs and rebuilds.

Work History

- Principle – Engineering Operations and Planning, Guidehouse
- Director, Guidehouse
- VP of Engineering, NSTAR Electric
- Director of Distribution Engineering, NSTAR Electric
- Director Telemetry Solutions (Communications), KeySpan

Certifications, Memberships, and Awards

- Certificate, Power Technology Incorporated (PTI) Electric Transmission and Distribution
- IEEE, Distributed Generation Working Committee Member
- NERC Compliance Officer
- Four patents for smart grid technology

Education

- MBA, Nichols College
- Bachelor's Degree, New York Institute of Technology

Thought Leadership

Publications and Presentations

- DistribuTECH, Non-Wires Alternative (NWA) speaking arrangement, January 2017
- DistribuTECH, Instructor, Utility University, Distributed Generation class, January 2016
- Restructuring Roundtable, presentation and panel, November 2012
- Open Cape Summit presentation, May 2011
- IEEE conference presentation on IPP, September 2010
- Harvard University presentation on Smart Grid, May 2010
- Environmental Business Council, Energy Seminar, January 2010
- *Smart Grid Today* article, "Grid Self-Healing," November 2009
- ISO Smart Grid Forum presentation, May 2009
- Speaking engagement, Grid InterOp conference, Grid Self-Healing, November 2009

Alejandro Gonzalez

Managing Consultant

alejandro.gonzalez@guidehouse.com
Salt Lake City, UT
Direct: 916-631-32523.

Professional Summary

Alejandro has professional experience in multiple roles related to technology including asset management, systems performance analytics, cybersecurity implementation, project management, systems development, and development of policies and procedures. Alejandro's experience includes managing renewables systems projects for RES, administering SCADA/EMS and cyber security practices for Austin Energy, and leading the evaluation of cyber and physical security systems of electric companies for Texas RE. Most recently Alejandro has worked with numerous companies in various technology projects as a Consultant with Guidehouse. In these roles Alejandro evaluated systems, investigated issues, provided solutions, built tools, managed assets, wrote policies and procedures and implemented them.

Areas of Expertise

- **Asset Management:** Using management tools and communicating with stake holders Alejandro has a high capacity for tracking assets electronically or physically.
- **Cyber Security:** Using multiple tools in the industry that track Cyber security information such as operating system, logical ports and services, patching and software vulnerabilities. Can assess and provide guidance on best practices for Cyber Security posture of systems using existing client systems.
- **NERC Compliance:** Evaluates evidence to confirm compliance and provides guidance on existing gaps for the NERC CIP and O&P standards. Can also assist in using existing client system to produce appropriate evidence to confirm compliance. Alejandro can also develop polices and procedures for an overall governance program of the NERC compliance standards.

Professional Experience

Guidehouse

Wildfire mitigation

Wildfire Mitigation Plan Development

- Reviewed and assessed current BVES Wildfire Mitigation Plan practices
- Assisted in the development of current BVES Wildfire Mitigation Plan ensuring plan
- Provide guidance for best practices using current industry methods for Wildfire Mitigation Plans to improve grid resilience and public safety
- Assisted in the independent evaluation of Wildfire mitigation Plans for multiple clients
- Completed evaluation and assisted in the development of the first Wildfire mitigation Plan according to State of California Public Utilities Code 8387 for multiple clients

British Columbia Hydro (BC Hydro)

NERC Compliance and MRS Assurance

- Developed compliance tool for assessing MRS(NERC) compliance applicability for all Capital improvement projects

- Reviewed all 1100+ standard Requirements that are applicable to BC Hydro to ensure every requirements was included as part of the assessment of the MRS Applicability tool
- Designed and programed too in excel format to include automated efforts with minimal effort from project managers to run through all applicable requirements reducing the effort from a from a multi-week evaluation down to 30 mins.
- Assist with post MRS applicability evaluation efforts in assurance that the compliance activities applicable to each project are followed through
- Provide guidance on compliance approach and actionable items to ensure every project is compliant with O&P and CIP requirements for capital improvement projects
- Hired as Staff augmentation for continuous compliance process and procedure improvement ensuring consistency, reducing workload and ensuring compliance is maintained.

Florida Power & Light(FPL)

Cyber Security and NERC Compliance

- Completed a full assessment of change management program to identify compliance gaps for CIP-010
- Assisted in evaluation of Change manage system and helped determine the correct steps for documenting each sub requirement for CIP-010 R1
- Provided guidance on how CIP-010 R1 is tied to other standards and how the new methods could be leveraged for Standards such as CIP-007, CIP-005 and CIP-011
- Developed a white paper to provide technical reasoning for CIP-010 Change management process and procedures with clear arguments using NERC standard language and Guidelines and Technical basis information proving FPL was compliant with the current methods.

Transbay(TBAY)

Cyber Security and NERC Compliance

- Identified the ports and services being used in all systems and assisted in tailoring the configurations to the minimum ports and services required to run system
- Completed full assessment of most critical systems to ensure NERC compliance
- Assisted in Audit preparation by performing a mock audit of critical NERC standards
- Completed gap analysis and provided mitigations steps and additional controls to strengthen compliance program

AES(S-Power)

Cyber Security and NERC Compliance

- S-Power is a developer, owner, and operator of utility-scale wind and solar assets. The company develops utility-scale projects and sells the power to large off takers such as commercial businesses or utilities. The work with S-Power consisted in evaluating their entire Cyber Security and NERC posture and provide program improvements including network equipment, servers, appliances, desktops and their virtual environment. Additional work is being performed to assist S-Power in transitioning from a low impact to medium impact registration and the necessary work required to become compliant by the required deadline.
- Identified the ports and services being used and provided guidance on removal of risky services, justifications for necessary ports and services and compliance gaps to meet the CIP-007 requirements.
- Evaluated password manager and identified use cases for features that can be used to facilitate compliance requirements and security improvements.
- Completed a compliance evaluation for multiple CIP requirements from a documentation perspective, identified gaps and provided guidance on tool upgrades that would assist with automation and compliance improvements.
- Assisted with procurement for baseline, AV/AM, back-up/recovery, SEIM and software integrity verification tools required to meet multiple CIP requirements.

California Department of Water Resources (CDWR) 2019 - 2021

- The California Department of Water Resources is part of the California Natural Resources Agency and is responsible for the management and regulation of the State of California's water usage. The project includes assisting CDWR in developing a procurement program that meets the CIP-013 NERC supply chain requirements and Executive Order 13920.
- Assisted with development of vendor questionnaire tool used to evaluate the security risk of vendors for products and services prior to procuring them.
- Assisted in developing mitigations for CIP-013 requirements where the vendors may not contractually be able to or refuse to assist CDWR meet the requirements.
- Assisted in developing a supply chain risk mitigation (SCRM) plan that will be used by CDWR to ensure meeting the NERC CIP requirements.

Los Angeles Department of Water and Power (LADWP) 2019- 2021 Cyber Security and NERC Compliance

- For LADWP, one of the largest municipal utilities in the country, Alejandro helped evaluate internal cyber security controls. The project consisted in looking at evidence of methods being used, evaluating their tools and providing guidance on how to improve cyber security controls. The evaluation included their Incident Response Plans and Recovery Procedures.
- Provided guidance on cyber security compliance requirements for multiple systems. This involved interviewing multiple groups, evaluating their compliance documentation and providing a gap analysis. Additionally, Alejandro has evaluated audit evidence prior to sending to compliance enforcing entity to ensure there were no gaps.
- Created guidance documentation for performing internal evaluation of cyber security compliance requirements. This project consisted in developing step by step instructions on how to evaluate compliance documentation, methodologies, risks and controls on all cyber security related systems.
- Provided guidance on multiple scenarios for equipment upgrades to ensure compliance of NERC requirements.

American Electric Power (AEP) 2019- 2020

Cyber Security, NERC Compliance, Asset Management

- AEP is one of the largest utilities in the country with offices in several states. Assisted in implementing controls on cyber security systems from the result of control evaluations. This includes working with multiple groups, providing methods to complete implementation of controls and reviewing the implementation to ensure it meets the recommendation from the control evaluations.
- Developed a method to automatically produce a large set of data into a spreadsheet that was once being compiled manually. This project consisted in having a centralized data warehouse where the large set of data can be produced from. This required working with multiple groups that owned data sources, ensuring the data was being delivered into the data warehouse and evaluating the output of the data to ensure it was complete and accurate. We assisted with providing strategies on how to ensure each section was complete, methods for evaluating the data accuracy, controls to maintain the data and provided a project plan to ensure completion of the project.
- Provided AEP guidance on securely handling network activities for inbound and outbound communications, including encryption, multifactor authentication and remote access methods.

Consolidated Edison 2020

Cyber Security

- Consolidated Edison provides electricity to 10 million people in the New York City area. Assisted with review of critical communication networks for cyber security risks and reporting of results.

Texas Reliability Entity (Texas RE)2017 - 2019

Cyber Security, NERC Compliance, Asset Management

- Entrusted with leading Critical Infrastructure Protection (CIP) and Operations & Planning (O&P) audits of multiple electric companies. This involved coordinating with the companies' audit lead, creating presentations for the teams involved, coordinating schedules and travel of auditors, ensuring a full evaluation is complete and writing a final report of results.
- Performed CIP and O&P audits, including documenting deficiencies, evaluating controls and presenting findings to many electric companies. This involved evaluating cyber security procedures provided from the company, asking question for clarification online and in person, documenting in detail what was determined, providing recommendations, and writing a report of the evaluation. Evaluations included Incident Response Plans and Recovery Procedures. Table-top exercises, actual incidents and how recovery was performed was also evaluated. Alejandro was collaborated on CIP-013 Supply Chain Risk Management standards on audit approach for upcoming implementation requirements.

Austin Energy

Cyber Security, NERC Compliance, Asset Management 2012- 2017

- Administered tools used for ongoing cyber security compliance requirements. Some of these tools included Industrial Defender which produced baseline reports ensuring that all changes to systems were being recorded. Nexpose Rapid 7 which was used for performing network discovery scans and system vulnerability assessments. Windows System Update Services for updating windows systems with security patches. Periodic evaluation of third-party hash signatures were performed to ensure software integrity was maintained when software was obtained from online source.
- Assisted administration of SCADA system operation and security, ensured cyber security compliance, and developed tools to enhance productivity. This included installing new equipment, ensuring we had a recovery method for each one, monitored logs for any performance issues and responded to technical problems affecting operations. Additionally, database updates to the SCADA/EMS system was performed, for equipment upgrades in the field along with validating functionally prior to delivering upgrade to operators for field operations.
- Entrusted with completion of required cyber security compliance plans and procedures. This included evaluating current systems, determining how cyber security compliance was going to be applied, documenting the steps for on-going implementation, testing procedures for performance and implementing them. Plans and procedures created, tested and implemented included Incident Response Plans and Recovery Procedures.

Renewable Energy Systems (RES)-Americas 2011-2012

Asset Management

- Ensured the finalization of procurement and installation of photo voltaic solar panels. This included communicating with procurement managers that informed each step from manufacturing to delivery. Alejandro inspected each shipment container and approved them for delivery to construction site for staging and installation. Installation was monitored daily and ensured it was according to design.
- Developed mapping system that enables a user to view manufacture performance data and physical location of solar panels. This involved pulling data from a database for each solar modal, individually scanning them to identify in the field and developing a mapping to locate them. The data also provided performance statistics based on voltages of each panel and how they were configured in the field. Full review was completed with this data and Alejandro provided guidance for adjustments of solar panel installations to improve energy efficiency and monitored for completion.

Work History

- Managing Consultant, Guidehouse
- Managing Consultant, Navigant

- Cyber Security and Physical Security Analyst, Texas Reliability Entity
- Critical Infrastructure Protection Engineer, Texas Reliability Entity
- SCADA/EMS Analyst, Austin Energy
- Electrical Construction Inspector, Renewable Energy Systems America

Certifications, Memberships, and Awards

- OSHA 30 Certified

Education

- Bachelor of Science in Electrical Engineering – University of Texas Pan-American(RGV)

Adam Daly

Senior Consultant

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Professional Summary

As a senior consultant with Guidehouse’s Global Energy, Sustainability & Infrastructure Practice, Adam supports the assessment and development of business strategies, organizational structures, and business processes for utility clients. He conducts assessments and evaluations of client business processes and internal controls as well as compliance as it relates to NERC Reliability. Upon evaluation of these processes he designs, recommends, and implements process improvements throughout power system operations. His process improvement and project management experience allows him to manage projects from inception to completion while ensuring the deliverables of all parties involved provide the most effective client solutions. He has demonstrated success in data driven decision making, allowing for fair assessment of all available project options; analyzing processes and developing programs and tools to support continuous quality improvement; evaluation of compliance as it relates to NERC Reliability and its associated standards; and intercompany communication allowing for smooth transitions and overall project buy-in.

Areas of Expertise

- Process Improvement
- Control Evolution & Development
- Utility Wildfire Mitigation
- Project Management
- Advanced Excel
- Compliance Program Assessment
- Compliance Audit Support
- Data Analysis/Manipulation

Professional Experience

Guidehouse

Wildfire Mitigation

- Develop and evaluate wildfire mitigation plans to promote public safety and ensure regulatory compliance.
- Ongoing wildfire regulatory management and Wildfire Mitigation Plan (WMP) support for Bear Valley Electric service (BVES) for the last 1.5 years.
- Independent Evaluator for Southern California Edison, PacifiCorp, and Liberty Utility 2020 WMPs.
- Guide clients on utility best practices to reduce ignitions, reduce public safety power shutoffs, and increase system resilience.

NERC Compliance and Audit Preparation

- Managed and assist with the preparation of several large and medium utility compliance audits by assessing program documentation and evidence to determine compliance with NERC Critical Infrastructure Protection (CIP) and Operations and Planning (O&P) Reliability Standards.
- Supported mock audits by coordinating all efforts with compliance managers and client personnel, to ensure audit readiness.
- Developed compliance cheat sheets to be used by client personnel before an audit/audit interview to verify compliance and personal preparedness.
- Assisted with the preparation and refinement of Reliability Standard Audit Worksheets (RSAWs) development, by providing guidance on document content and file management.
- Supported coaching of client personnel on audit techniques and interview readiness, with focus on areas that are typically scrutinized by the regulator performing the audit.
- Identify internal controls that support ongoing compliance with NERC Standards.

Control Program Evaluation, Development/Strengthening, and Management

- Key project management role of an enterprise-wide risk assessment and internal controls mitigation at one of the largest publicly owned utilities. This project is directly overseen by the utility CEO and Board Committee
- Led subject matter expert interviews to identify both documented and undocumented controls in internal policies and procedures
- Generated recommendations based on document review and subject matter expert interviews to assist the business units in their effort to achieve policy and process excellence
- Developed controls database to allow client to have record of current controls as well as to assist with the continued effort to create more controls to protect the business and its employees
- Assisted client in continued development of a world class control program via documenting and expanding upon existing processes, while mapping controls (both documented and undocumented) to the stages in said processes

Sweet Candy Company

- Member of the Process Improvement Team (PIT) working towards making production more efficient through continuous improvement projects and standard operating procedures
- Analysed capital improvement projects and advise on their impact on production capacity, existing equipment, staffing and ROI
- Monitored data associated with key sales accounts using MXP and RetailLink while determining product upsells and consolidation to improve revenue
- Implemented a production coordinator program which greatly improved cross departmental communication
- Learned to navigate the ambiguity of a family owned and operated business that is 120 years

Trimr

- Member of the design team that created new stainless steel shaker configuration using product comparison and testing to reduce overall production cost by 8% per bottle
- Designed and constructed primary test apparatus which allowed for product testing and advancement of early designs

CNH Industrial

- Responsible for redesign of major subassembly area reducing motion and ergonomic/safety risk, while increase production efficiencies
- Managed line balancing and logistics creating a more balanced workload and improving employee moral
- Acted as liaison between union employees and engineering management communicating production concerns while eliminating distrust

Work History

- Senior Consultant, Guidehouse
- Process Improvement Specialist, Sweet Candy Company
- Design Engineer in R&D and Product Testing, Trimr
- Manufacturing Transmission Engineer Intern, CNH Industrial

Certifications, Memberships, and Awards

- Engineer in Training Certification: 15-886-16
- Six Sigma Green Belt

Education

- Master of Business Administration, David Eccles School of Business, University of Utah
- Master of Science, Mechanical Engineering, University of Utah
- Bachelor of Science, Mechanical Engineering, University of Utah