State of California – A Natural Resources Agency
Gavin Newsom, Governor

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Caroline Thomas Jacobs, Director

November 8, 2021

Lenneal Gardner
Principal Attorney
Trans Bay Cable
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San Francisco, CA 94129
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**Subject:** **Office of Energy Infrastructure Safety Issuance of Trans Bay Cable's 2021 Safety Culture Assessment per Public Utilities Code Sections 8389(d)(4)**

Dear Mr. Gardner:

Enclosed is the 2021 Safety Culture Assessment (SCA) report for Trans Bay Cable, LLC, (TBC) conducted by DEKRA on behalf of the Office of Energy Infrastructure Safety (Energy Safety) in fulfillment of Public Utilities Code Section 8389(d)(4). This is the first annual SCA under this statute and as such provides a baseline for future comparison. Energy Safety will use the SCA reports to assess safety culture outcomes over time and incorporate continuous learning into the SCA process.

The enclosed report includes as an attachment (at Section 8.1) TBC's full written response to the draft report provided to TBC on October 28, 2021, for factual review and correction. TBC provided its written response and any relevant factual corrections on November 4, 2021. DEKRA and Energy Safety incorporated TBC's clarifications of fact where appropriate within the body of the report. These clarifications and corrections consist of the following:

- Cover Page: "Trans Bay Cable Transmission" was changed to "Trans Bay Cable."
- Page 1: "Trans Bay Cable" was changed to "Trans Bay Cable, LLC."
- Page 1: "The primary wildfire risk occurs at its terminal substation units" was changed to "The primary wildfire risk occurs at its terminal substation unit in Pittsburgh, California."

TBC can satisfy the "good standing" requirement in Public Utilities Code Section 8389(e)(2) by agreeing to implement all of the findings (including recommendations for improvement) of its most recent SCA. This may be done by submitting a letter to this effect via E-Filing on the 2021 Safety Culture Assessments docket (Docket #2021-SCAs).[1]

[1] The 2021 Safety Culture Assessments docket can be accessed at https://efiling.energysafety.ca.gov/EFiling/DocketInformation.aspx?docketnumber=2021-SCAs.

Sincerely,

*Melissa Semcer*

Melissa Semcer
Program Manager, Electric Safety Policy Division
Office of Energy Infrastructure Safety

cc:
Caroline Thomas Jacobs,
Director, Office of Energy Infrastructure Safety

Sara Moore,
Wildfire Safety Analyst, Office of Energy Infrastructure Safety

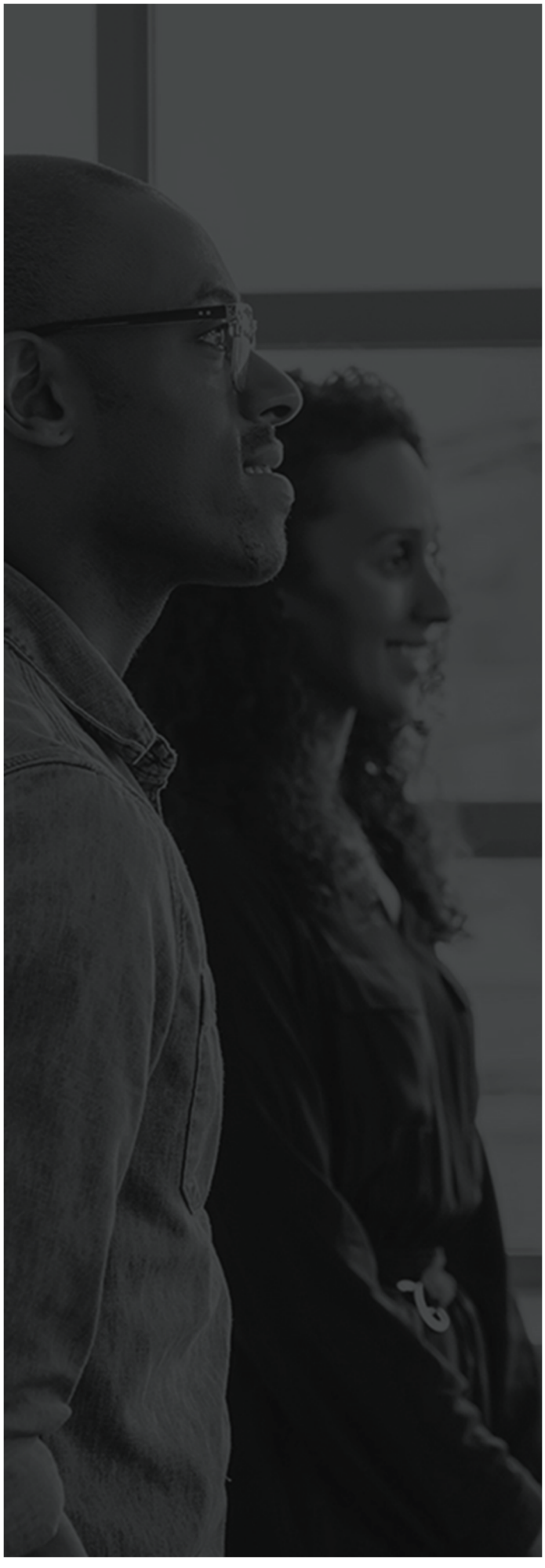
Service List for Docket #2021-SCAs

# SAFETY CULTURE ASSESSMENT

**TRANS BAY CABLE**

**NOVEMBER 2021**

DEKRA



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# 1. Executive Summary

In 2019, California Assembly Bill 1054 added an annual safety culture assessment requirement to the Public Utilities Code. Public Utilities Code Section 8389(d)(4) requires the California Public Utilities Commission (Commission or CPUC), in consultation with the Wildfire Safety Division—as of July 1, 2021, now the Office of Energy Infrastructure Safety (Energy Safety), a new department under the California Natural Resources Agency—to develop a process for an annual Safety Culture Assessment for each electrical corporation. The annual Safety Culture Assessment process (approved by the Commission in 2020 in Resolution WSD-011) includes a workforce survey, a management self-assessment, submission of supporting documentation, and interviews. Not all components apply to all electrical corporations: independent system operators are required to submit some components of the supporting documentation. Energy Safety contracted with DEKRA Services, Inc., (DEKRA) to conduct the inaugural 2021 annual Safety Culture Assessment for each electrical corporation. The Safety Culture Assessments took place in May and June 2021. In the course of these assessments the safety culture of Trans Bay Cable was assessed with respect to both personal and wildfire safety.

Trans Bay Cable, LLC, a unit of NextEra Energy, Inc., is responsible for the maintenance and operation of the Trans Bay Cable, a high-voltage direct current underwater cable interconnection between San Francisco and Pittsburg, California. The primary wildfire risk occurs at its terminal substation unit in Pittsburg, California.

Energy Safety required independent transmission operators, including Trans Bay Cable, to submit supporting documentation including its safety culture objectives for the next 12 months and three years and also its summary of lessons learned from the previous 12 months for the Safety Culture Assessment. Both Trans Bay Cable and Horizon West are subsidiaries of NextEra Energy and submitted identical supporting documentation. As a result, there are significant similarities between the two companies' Safety Culture Assessment reports.

According to the supporting documentation submitted by Trans Bay Cable on May 14, 2021, the organization has established objectives that incorporate both leading (training and risk mitigation) and lagging indicators (recordable injuries) and has included contractors into its training plan. In addition, the leadership of Trans Bay Cable states that it is focused on cultivating a culture of continuous improvement, openness, and trust through implementation of its Guiding Principles and Human Performance Excellence tools.

There are opportunities to improve Trans Bay Cable's safety culture objectives. Specifically, there is no three-year plan for improving the safety culture. What plan there is lacks specific actions to monitor, govern, or sustain the change. Furthermore, the risk mitigation objectives do not appear to proactively address risk detection.

To drive consistent improvement in its safety culture throughout the organization, Trans Bay Cable should act on the following recommendations:

1. Integrate actions for progressively building the safety culture into a three-year safety culture plan.
2. Build sustainment activities into the safety culture objectives.
3. Ensure the Safety Risk Mitigation objective incorporates both regular and proactive risk identification activities, including wildfire risk.

Incorporating these recommendations into Trans Bay Cable's safety culture strategy and objectives will enable the organization to continue to advance the culture for wildfire and personal safety. A detailed narrative on the information collected from the supporting documentation and the corresponding assessment and findings is provided below.

# 2. Overview

Assembly Bill 1054, signed by Governor Newsom in July 2019, states that "[b]y December 1, 2020, and annually thereafter, the [California Public Utilities Commission], after consultation with the [Wildfire Safety Division], shall adopt and approve […] [a] process for the division to conduct annual safety culture assessments for each electrical corporation" (Public Utilities Code Section 8389[d][4]).[1]

On November 30, 2020, the California Public Utilities Commission (Commission or CPUC) issued its approval for a process for conducting annual safety culture assessments for each electrical corporation in Resolution WSD-011.[2] On January 22, 2021, the Wildfire Safety Division (WSD) at the CPUC published the Safety Culture Assessment (SCA) Requirements of Electrical Corporations (2021 Requirements).[3] The 2021 Requirements set out the key components of the SCA process: a workforce survey, a management self-assessment, submission of supporting documentation, and interviews. The 2021 Requirements also provide guidance as to which components apply to which electrical corporations.

The first SCA under Public Utilities Code Section 8389(d)(4) took place in May and June 2021 under the WSD's direction. On July 1, 2021, the WSD transitioned to the Office of Energy Infrastructure Safety (Energy Safety), a new department under the California Natural Resources Agency. The first SCA reports are being issued under the direction of Energy Safety.[4]

The present SCA process is intended to be complementary to, and not a replacement for, ongoing work to improve safety culture at each electrical corporation. Energy Safety

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[1] The full text of Pub. Util. Section 8389 can be found here: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=8389.&lawCode=PUC (accessed July 16, 2021).

[2] Resolution WSD-011 "Resolution implementing the requirements of Public Utilities Code Sections 8389(d)(1), (2) and (4), related to catastrophic wildfire caused by electrical corporations subject to the Commission's regulatory authority," dated November 19, 2020, and issued November 30, 2020: https://energysafety.ca.gov/wp-content/uploads/docs/misc/docket/352490594.pdf (accessed August 18, 2021). Also see the attachments to WSD-011, including Attachment 4 "Annual Safety Culture Assessment Process Proposal," dated November 2020: https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf (accessed August 18, 2021).

[3] Safety Culture Assessment: Requirements of Electrical Corporations (published Jan. 22, 2021, accessed July 16, 2021): https://energysafety.ca.gov/wp-content/uploads/docs/safety-culture-assessments/wsd-safety-culture-assessment-requirements-final-20210122.pdf.

[4] Pursuant to Public Utilities Code Section 326(b), on July 1, 2021, the WSD transitioned from the CPUC into the Office of Energy Infrastructure Safety (Energy Safety) under the California Natural Resources Agency. Energy Safety "is the successor to" and "is vested with all of the duties, powers, and responsibilities of the Wildfire Safety Division" (Government Code Section 15475). WSD is used to describe the work of the WSD prior to July 1, 2021. Energy Safety is used to describe the work of Energy Safety beginning on July 1, 2021. Any references to WSD action post July 1, 2021, or to Energy Safety action prior to July 1, 2021, are inadvertent and should be interpreted as the actions of WSD or Energy Safety as appropriate.

seeks to develop a longitudinal view of safety culture across electrical corporations to identify best practices and relative gaps, along with an understanding of each electrical corporation's relative strengths and weaknesses. Ultimately, Energy Safety seeks to assess safety outcomes over time and incorporate continuous learning into the assessment process.[5]

Different components of the SCA target different parts of the electrical corporation's workforce, and different components apply to different types of electrical corporations (see Section 2.1 below). The workforce survey is intended to target electrical corporation employees (including frontline workers and supervisors) and contractors who are engaged in wildfire hazard mitigation activities, for example workers performing vegetation management or installing system hardening infrastructure.[6] The management self-assessment and supporting documentation components are intended to be completed by electrical corporation employees capable of: evaluating the corporation's presently employed practices and capabilities regarding safety, identifying a target level on the four-point scale for each question by the end of 2022 based on wildfire mitigation and safety initiatives planned in the coming year, and describing its plan to realize that target.[7] The interview component is intended to support the workforce survey and management self-assessment by asking additional questions of those who may have participated in those components for further context. The interviews are intended to help DEKRA interpret the results of the survey and self-assessment more accurately and better identify the priority areas that electrical corporations should focus on improving.[8] Independent transmission operators are only required to participate in the supporting documentation component.

## 2.1 Components of the SCA

As stated above, the key components of the SCA are a workforce survey, a management self-assessment, submission of supporting documentation, and interviews. Not every component applies to every electrical corporation. An overview of the SCA components, together with guidance on which electrical corporations must complete each SCA component, is below. Note that electrical corporations are categorized as follows for this purpose:

[5] Safety Culture Assessment: Requirements of Electrical Corporations (2021), p. 3.
[6] Safety Culture Assessment: Requirements of Electrical Corporations (2021), p. 8.
[7] Safety Culture Assessment: Requirements of Electrical Corporations (2021), p. 14.
[8] Safety Culture Assessment: Requirements of Electrical Corporations (2021), p. 35.

- **Large electrical corporations ("Large IOUs"[9])**: Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), Southern California Edison Company (SCE).
- **Small and multi-jurisdictional electrical corporations ("SMJUs"[10])**: Liberty Utilities (CalPeco), PacifiCorp, Bear Valley Electric Service, Inc.
- **Independent transmission operators ("ITOs")**: Horizon West Transmission, Trans Bay Cable.

| Requirement | Electrical corporations that must complete this requirement |
|---|---|
| Workforce survey | Large IOUs, SMJUs |
| Management Self-assessment and plan summary | Large IOUs |
| Supporting documentation<br>Section 1: Safety culture objectives | Large IOUs, SMJUs, ITOs |
| Supporting documentation<br>Section 2: Summary of lessons learned | Large IOUs, SMJUs, ITOs |
| Supporting documentation<br>Section 3: Summary plan for the following year | Large IOUs |
| Supporting documentation<br>Section 4: Documentation to support responses to the management self-assessment | Large IOUs |
| Interviews | To be determined by Energy Safety upon review of submissions |
| Observational visits | To be determined by Energy Safety upon review of submissions |

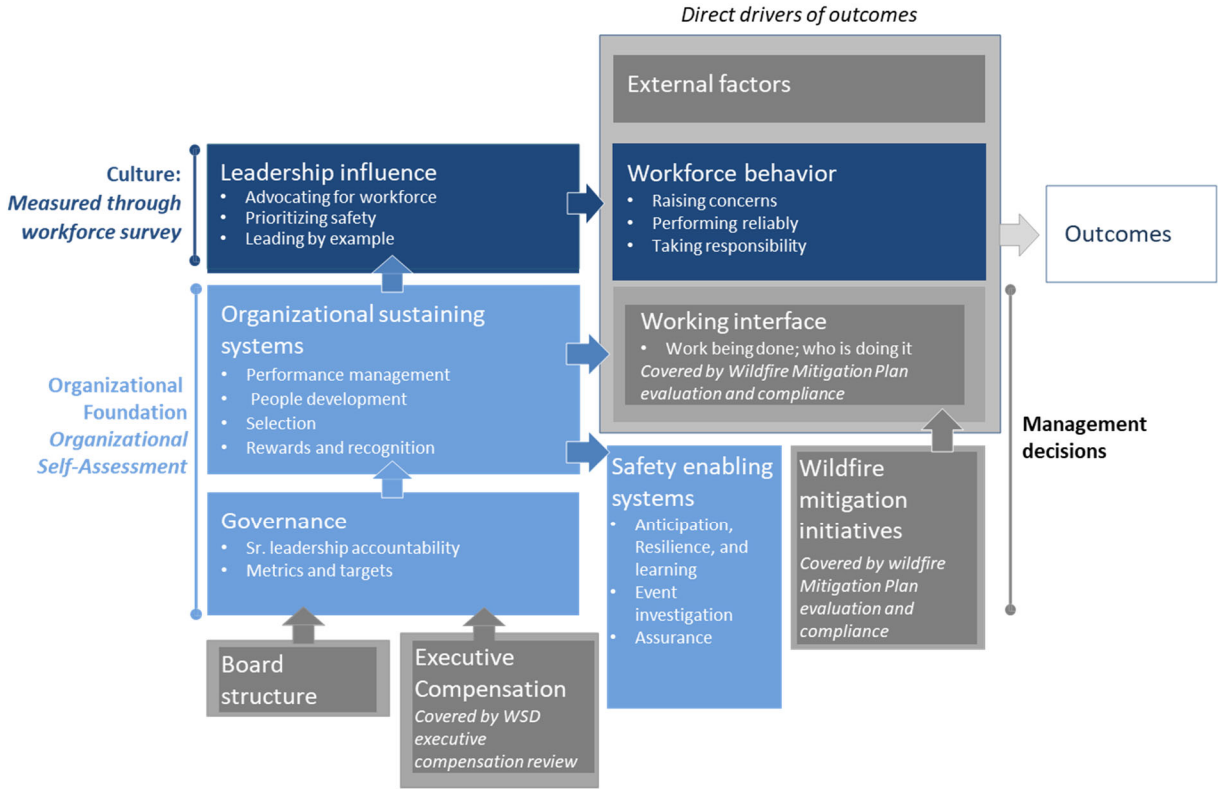
[9] IOU: investor-owned utility.
[10] SMJUs: small and multi-jurisdictional utilities.

## 2.2 Framework for the SCA

The abovementioned components of the SCA (a workforce survey, a management self-assessment, submission of supporting documentation, and interviews) all inform the SCA findings. The SCA components are designed to be administered annually such that progress on the SCA can be measured over time. This is the inaugural assessment and will provide the baseline for evaluating progress in future years. Figure 1 below shows the elements of the organization's culture and foundation assessed by different components of the SCA.

The workforce survey component was designed to evaluate leadership's influence on the culture and the impact that it has on worker behavior. This was supplemented with follow-up interviews of frontline employees and supervisors. The management self-assessment component was designed to evaluate the organizational sustaining and safety enabling systems that undergird and reinforce every safety culture. In addition, the self-assessment measured the electrical corporation's approach to governance of its safety culture. The self-assessment was also supplemented by a focus group comprised of electrical corporation staff members who participated in the organization's self-assessment responses.

**Figure 1. Framework for the Safety Culture Assessment**




Source: Resolution WSD-011 Attachment 4 "Annual Safety Culture Assessment Process Proposal" (2020), p. 9.

## 2.3 Supporting Documentation Collected

As an independent transmission operator, Energy Safety required Trans Bay Cable to submit the following supporting documentation:

1. Safety culture objectives for the next 12 months.
2. Safety culture objectives for the next three years.
3. A description of lessons learned since the most recent Safety Culture Assessment.[11]

Independent transmission operators were not required to participate in any interviews or observational visits in 2021.

The documentation submitted by Trans Bay Cable is included in Section 6 of this report.

## 2.4 Next Steps in Assessment Process

This is the first annual Safety Culture Assessment under Public Utilities Code Section 8389(d)(4) and as such provides a baseline for future comparison. Following the publication of this report, Trans Bay Cable may agree to implement its findings to demonstrate "good standing" per Public Utilities Code Section 8389(e)(2).[12]

[11] As 2021 is the first year of the annual Safety Culture Assessment under Public Utilities Code Section 8389(d)(4), the electrical corporation was asked to evaluate lessons learned since its "most recent" safety culture assessment (if any), and specifically to: "[d]escribe how the electrical corporation's objectives and priorities with respect to safety culture have evolved over the past year. Outline any major themes and lessons learned over the past 12 months and subsequent actions taken. If you have not completed a safety culture assessment in over three years, consider your safety culture as it exists today and describe the major themes that exist today." (See Section 6.4 "Lessons Learned" below for more information.)

[12] Pub. Util. Section 8389(e)(2), "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" (accessed July 16, 2021): https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=8389.&lawCode=PUC.

# 3. Findings

## 3.1 Strengths

Trans Bay Cable's safety culture objectives for the next year and the next three years cover employee safety and health, motor vehicle safety, contractor safety, and safety risk mitigation. The Lessons Learned section of the supporting documentation highlights several elements of Trans Bay Cable's safety culture that it is actively trying to improve. DEKRA's review identified three primary strengths:

### 3.1.1 Trans Bay Cable employs two leading indicators of safety performance in addition to its lagging indicators.

Organizations with advanced safety culture maturity evaluate safety performance by tracking not just lagging indicators[13] such as injuries but also leading indicators[14] to provide a holistic picture of safety. In addition to tracking recordable injuries, Trans Bay Cable tracks two leading indicators. The first is the identification and mitigation of safety risks. Proactively identifying safety risks and then taking actions to mitigate them strengthens an organization's ability to address exposure[15] before an incident[16] occurs. The second leading indicator Trans Bay Cable tracks is training completion. Effective compliance training is necessary and often correlates with lagging indicators of safety performance such as recordable incidents. It should be noted that compliance training alone is not sufficient for controlling exposure.

### 3.1.2 Trans Bay Cable incorporates contractors into its safety culture objectives.

Another strength of Trans Bay Cable's approach to safety culture is its incorporation of contractor training into the organization's safety culture objectives. In less mature organizations, contractors are regarded as only a peripheral factor in safety performance. Highly mature organizations, however, understand that world-class safety performance requires that all contractors are woven into the safety training and systems of the parent organization.

[13] Lagging Indicators: here, an outcome or output measure that is backward-looking, describing a past event.
[14] Leading Indicators: here, an input measure that is predictive of a future event.
[15] Exposure: here, a state of vulnerability to injury that exists when a person comes in contact with a hazard. Exposure reduction or exposure control results from separating the person from the hazard and protecting the person from the vulnerability raised by the hazard (for example, by wearing protective equipment).
[16] Incident: here, an unplanned, undesired event that adversely affects normal operations.

### 3.1.3 Trans Bay Cable, through its Guiding Principles, is focused on building a culture of trust and workforce involvement to improve safety.

Lastly, Trans Bay Cable, through its Guiding Principles, recognizes the need for involvement and accountability by both leaders and frontline employees to address hazards, cultivate trust, and improve safety.[17] This culture is exemplified by such programs as "see something, say something, do something" at every level of the organization. Furthermore, Human Performance Excellence (HPE) tools have been provided to the workforce and are discussed monthly.

## 3.2 Opportunities

DEKRA's review also identified opportunities to improve Trans Bay Cable's safety culture objectives and actions:

### 3.2.1 There is no three-year plan for improving the safety culture.

In Trans Bay Cable's supporting documentation, no distinction is made between the Safety Culture Objectives for the next year and for the next three years. With a three-year horizon, the organization should set forth a broader, more strategic view of how it plans to improve its safety record and how its progress will be evaluated. For example, if Trans Bay Cable believes that adherence to its Guiding Principles and cultivation of a "culture of continuous improvement, openness, and trust" are critical to its success, it should create metrics to track its progress toward these goals over the next three years.

### 3.2.2 The safety culture strategy lacks specific actions to monitor, govern, and sustain the change.

Secondly, although cultivating a culture of trust and implementing HPE tools are critical to safety improvement, the only actions taken to further these goals are monthly discussions.[18] Furthermore, while training compliance is necessary, Trans Bay Cable must explain how its leadership is ensuring that compliance training is resulting in behavior change on the ground and in the path of the work. It's not clear that Trans Bay Cable has an effective execution or sustainment plan, or a governance process to ensure progress and remove obstacles.

[17] From the Trans Bay Cable SCA supporting documentation Lessons Learned, Table 1.3, Major Themes or Lessons Learned column: "Guiding Principles: All injuries are preventable, Every day safety is my responsibility, Leadership is accountable for preventing injuries, and See something, Say something, Do something."
[18] From the Trans Bay Cable SCA supporting documentation Lessons Learned, Table 1.3, Actions Taken column: "HPE tools are discussed at least monthly with the team."

### 3.2.3 Risk mitigation objectives do not appear to proactively address risk detection.

Trans Bay Cable's risk mitigation system only focuses on the timely mitigation of risks entered into the Safety Activity Management System.[19] There are no objectives for regular, proactive risk-identification activities, nor is there an explicit acknowledgement of wildfire risks. Trans Bay Cable needs a system to proactively track and mitigate known and potential risks, including both wildfire and personal safety risks, in the work environment.

[19] "Safety Activity Management System (SAMS) entries are addressed timely" is a progress metric given by Trans Bay Cable for both the 12-month and 3-year time horizons (Tables 1.1 and 1.2). The further description of how this reduces risk in both tables reads: "Ensure risks are timely mitigated thereby protecting our staff."

# 4. Recommendations

## 4.1 Integrate actions for progressively building the safety culture into a three-year safety culture plan.

Culture change does not occur overnight and requires continuous emphasis and monitoring. Therefore, looking three years into the future, Trans Bay Cable should identify specific markers and objectives that demonstrate adherence to its Guiding Principles and progress toward fulfilling its goal of having a culture of continuous improvement, openness, and trust.

- **Observation:** Trans Bay Cable has no three-year plan for improving its safety culture.
- **Goal of Recommendation:** Creation of a three-year plan for improving the corporation's safety culture including specific markers and objectives that demonstrate adherence to Trans Bay Cable's Guiding Principles and progress toward fulfilling its goal of having a culture of continuous improvement, openness, and trust.
- **Verification Method:** In next year's reporting on Trans Bay Cable's safety culture objectives provide a detailed description of the corporation's three-year plan for improving its safety culture, including benchmarks relevant to the corporation's goals regarding adherence to the Guiding Principles and continuous improvement, openness and trust.

Conducting this exercise and monitoring the results will necessitate additional sustainment activities to ensure progress continues and obstacles are removed.

## 4.2 Build sustainment activities into the safety culture objectives.

Monthly meetings to discuss safety performance, Human Performance Excellence (HPE) tools, or the workplace culture typically are insufficient to produce sustained change. Behavioral expectations for frontline supervisors and workers need to be clearly articulated, championed, reinforced, and tracked over time to truly drive lasting change.

- **Observation:** Trans Bay Cable holds monthly meetings to discuss the Guiding Principles, HPE tools, and review safety improvement plans. Monthly meetings such as these may be insufficient to produce sustained change.
- **Goal of Recommendation:** Increase the number of measures reinforcing and tracking behavioral expectations for frontline supervisors and workers regarding safety culture.
- **Verification Method:** In next year's reporting on Trans Bay Cable's safety culture objectives provide a detailed list of measures instituted or planned that reinforce and track behavioral expectations for frontline supervisors and workers regarding safety culture.

## 4.3 Ensure the Safety Risk Mitigation objective incorporates both regular and proactive risk identification activities, including wildfire risks.

Addressing risks in a timely manner is only one aspect of risk mitigation. Risk exposures also need to be identified and tracked proactively, including wildfire risks. Proactively identifying and tracking both wildfire and personal safety risks provides the organization with a better understanding of the exposures in the work environment and, when paired with risk mitigation activities, will enable the organization to improve its safety culture.

- **Observation:** Trans Bay Cable's safety culture objectives do not appear to proactively address risk detection. The one risk mitigation objective calls for addressing detected risks in a timely fashion but does not go further.
- **Goal of Recommendation:** Increased level of detection and tracking of risks. Risks should be tracked proactively. Risks that are tracked should include wildfire risks. Detection and tracking should go beyond the reporting protocols in the corporation's Safety Activity Management System.
- **Verification Method:** In next year's reporting on Trans Bay Cable's safety culture objectives provide a detailed description of how the corporation is detecting and tracking risks, including wildfire risks.

# 5. Conclusion

This report provides the findings from Trans Bay Cable's first Safety Culture Assessment under Public Utilities Code Section 8389(d)(4). It gives Energy Safety a baseline measurement of Trans Bay Cable's current safety culture for future comparison. Following the publication of this report, Trans Bay Cable may agree to implement its findings to demonstrate "good standing" per Public Utilities Code Section 8389(e)(2).

This process is intended to be complementary to, and not a replacement for, ongoing work to improve safety culture at Trans Bay Cable. Energy Safety seeks to develop a longitudinal view of safety culture across electrical corporations to identify best practices and relative gaps, along with an understanding of Trans Bay Cable's relative strengths and weaknesses. As stated above, Energy Safety ultimately seeks to assess safety culture outcomes over time and incorporate continuous learning into the SCA process.[20]

[20] Safety Culture Assessment: Requirements of Electrical Corporations (2021), p. 3.

# 6. Data Attachments

## 6.1 Safety Culture Objectives

The text in the tables below, other than the instructions and headings, is as it was received from the electrical corporation, presented without revision.

**Instructions**

Provide a description of the electrical corporation's objectives with respect to safety culture, over the next 12 months and over the next three years.

**Trans Bay Cable Response**

Trans Bay Cable LLC (TBC) (U934-E) provides the following information regarding its safety culture objectives. Operating its facilities in a safe and reliable manner is the number one priority of TBC, and TBC implements the following safety objectives on a daily basis to ensure the safe operation of its facilities.

### 6.1.1 Safety Culture Objectives for the next 12 months

| A. Objective | B. Progress metrics or cultural indicators used to track progress | C. Target for 12 months from submission | D. Description of how this objective will reduce wildfire risk to the public or risk to employees conducting wildfire mitigation work |
|---|---|---|---|
| Employee Safety and Health | Number of OSHA Recordable Injuries<br>Annual training for employees | 0<br>100% | Ensures employees understand the components of Safety and current metrics |
| Motor Vehicle Safety | Number of preventable accidents | 0 | Employees practice safe driving |
| Contractor Safety | All contractors to receive sites training | 100% trained | Ensures contractors are familiar with the station, that the contractors understand the fire related requirements, and are prepared for the planned work and contingencies |
| Safety Risk Mitigation "Sub-zero Injuries" | Safety Activity Management System (SAMS) entries are addressed timely | Addressed within specified time period depending on severity | Ensure risks are timely mitigated thereby protecting our staff |

### 6.1.2 Safety Culture Objectives for the next 3 years

| A. Objective | B. Progress metrics or cultural indicators used to track progress against this objective | C. Target for 12 months from submission | D. Description of how this objective will reduce wildfire risk to the public or risk to employees conducting wildfire mitigation work |
|---|---|---|---|
| Employee Safety and Health | Number of OSHA Recordable Injuries<br>Annual training for employees | 0<br>100% | Ensures employees understand the components of Safety and current metrics |
| Motor Vehicle Safety | Number of preventable accidents | 0 | Employees practice safe driving |
| Contractor Safety | All contractors to receive sites training | 100% trained | Ensures contractors are familiar with the station, that the contractors understand the fire related requirements, and are prepared for the planned work and contingencies |
| Safety Risk Mitigation "Sub-zero Injuries" | Safety Activity Management System (SAMS) entries are addressed timely | Addressed within specified time period depending on severity | Ensure risks are timely mitigated thereby protecting our staff |

## 6.2 Lessons Learned

The text in the tables below, other than the instructions and headings, is as it was received from the electrical corporation, presented without revision.

**Instructions**

Describe how the electrical corporation's objectives and priorities with respect to safety culture have evolved over the past year. Outline any major themes and lessons learned over the past 12 months and subsequent actions taken. If you have not completed a safety culture assessment in over three years, consider your safety culture as it exists today and describe the major themes that exist today.

**Trans Bay Cable Response**

TBC has not completed a safety culture assessment within the last three years, as such the following responses reflect a consideration of the company's safety culture as it currently exists and describes/identifies major themes that exist today.

### 6.2.1 Lessons Learned since most recent Safety Culture Assessment

| A. Major Themes or Lessons Learned | B. Actions Taken |
|---|---|
| ZERO injuries is the only acceptable target | Corporate Message and Leadership models this theme |
| Guiding Principles: All injuries are preventable, Every day safety is my responsibility, Leadership is accountable for preventing injuries, and See something, Say something, Do something | Business Unit Guiding Principles that are discussed at least monthly |
| Practice Human Performance Excellence (HPE) | HPE tools are discussed at least monthly with the team |
| Cultivate a Culture of Continuous improvement, openness, and trust<br><br>Strive for Sub-zero Injuries | Monthly meeting to review safety improvement plans with leadership – Sub Zero Safety Improvement Program |

# 7. Glossary of Terms

| Term | Definition |
|---|---|
| Behavior-Based Safety (BBS) | A broad term used to describe programs for improving workplace safety by observing and analyzing employees' behavior while they work. |
| Black Swan | Unpredictable events that are beyond what is normally expected and have potentially severe consequences. |
| CPUC Reportable Ignition | A fire-related event meeting the following conditions: (1) A self-propagating fire of material other than electrical and/or communication facility, (2) The resulting fire traveled greater than one linear meter from the ignition point, (3) The electrical corporation has knowledge that the fire occurred. Electrical corporations must submit to the CPUC information about this event that is useful in identifying operational and/or environmental trends relevant to the event. (See CPUC Decision 06-04-044 and Resolution E-4184.) |
| Drills | Coordinated, supervised activities designed to test work team responses to various planned upset conditions. |
| Event Learning | An approach to understanding incidents and events that evaluates the entire system leading to an event to better understand the causes of actions. The focus of event learning is primarily on how to alter the system to make it less likely for the factors that caused the event to recur rather than to assign blame or define a single root cause factor. |
| Executive Leadership | The highest level of management in an organization, reports to the CEO. |
| Exposure | A state of vulnerability to injury that exists when a person comes in contact with a hazard. Exposure reduction or exposure control results from separating the person from the hazard and protecting the person from the vulnerability raised by the hazard (for example, by wearing protective equipment). |
| Exposure Management Training | A training that emphasizes a proactive approach to safety through identifying and controlling exposure for self and others and is foundational for leaders to move beyond the traditional and reactive incident management approach to safety. |

| Term | Definition |
|---|---|
| Failsafe | A system or plan that comes into operation in the event of something going wrong or that is there to prevent such an occurrence. |
| Frontline Supervisors | The first level of leadership that has direct oversight of employees within operational units of the organization. |
| High Risk Situations | Work activities or situations that have previously been shown in incident data to be consistent with serious or fatal incidents. |
| High Value Controls | The hierarchy of controls consists of five layers of defenses used to protect against hazards in the workplace ranging from the most effective (Elimination) to the least effective (personal protective equipment or PPE). The layers are Elimination, Substitution, Engineering, Administrative, and PPE. High value controls are Elimination, Substitution, and Engineering because the effectiveness of the control is not susceptible to human error. |
| Human Performance Reliability | The suite of knowledge, skills and capabilities required to anticipate, control, and respond to unplanned issues and error. |
| Incident | An unplanned, undesired event that adversely affects normal operations. |
| Individual Contributor | An employee who is not in a management position or has any employees directly reporting to them. |
| IOU | Investor-owned utility. |
| ITO | Independent transmission operator. |
| Lagging Indicator | An outcome or output measure that is backward-looking, describing a past event. |
| Leading Indicator | An input measure that is predictive of a future event. |
| Learning Organization | An organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights. |
| Likert Scale | A rating system commonly used in questionnaires and survey research to measure people's attitudes, perceptions, and opinions. |

| Term | Definition |
|---|---|
| Near Miss | An unplanned event that did not result in injury, illness, or damage, but had the potential to do so. |
| Operations | The parts of a business that affect the production, distribution, and service necessary for a company to function. For the purposes of this assessment, electrical operations, field services, transmissions, substations, and distribution are considered part of operations, but generation is not. |
| Operational Leadership | Levels of management within operations ranging from frontline supervisors (who have direct oversight of employees) to executive level senior operational leaders (e.g., COO). |
| OSHA Reportable Incidents | Fatal and extremely serious injuries or illnesses, such as amputation, eye loss, in-patient hospitalization, or fatality, required to be reported to OSHA within defined time periods. "OSHA" stands for the Occupational Safety and Health Administration of the United States Department of Labor. |
| Root Cause Analysis | A systematic process for identifying root causes of problems or events and an approach for responding to them. |
| SMJUs | Small and multi-jurisdictional utilities. |
| Systemic Risk | Vulnerabilities that could result in cascading or broad failures across the utility. |
| Upset Conditions | Interruptions in the regular running of work processes or other planned activity. |
| Weak Signal | An indicator of a potentially emerging issue that may become significant in the future. |

# 8. Other Attachments

## 8.1 Written Comments from Trans Bay Cable

Following are the written comments from Trans Bay Cable dated November 4, 2021, "RE: Resending/ FW: Draft Report: Safety Culture Assessment."

[Via Email]

RE: Resending/ FW: Draft Report: Safety Culture Assessment

Thu 11/4/2021 5:48 PM

From: Gardner, Lenneal <lenneal.gardner@transbaycable.com>

[…]

One, below please find TBC comments on the report. Two, attached are comments for requested edits to correct minor errors in the Draft Report. Thank you again and please feel free to contact me if you have any questions.

---

**Trans Bay Comments to Draft Report: Safety Culture Assessment**

Trans Bay Cable appreciates the opportunity to review the findings of the Report: Safety Culture Assessment and to provide comment. Pursuant to our consultation with Energy Safety and DEKRA, we will include in the next annual assessment additional information about our existing safety culture and related programs which include proactive hazard assessments.

It is noteworthy to highlight that Trans Bay Cable is a relatively small organization and facility. As such, Trans Bay Cable was only to submit a 12 month plan, a 3 year plan, and Safety Culture Themes. The Trans Bay Cable system comprises a submarine transmission cable connected to substations in Pittsburg and San Francisco, CA. The only above ground transmission elements are in the hardscaped substations which are encompassed by a 12-foot concrete wall. Additionally, only the Pittsburg substation is considered for wildfire mitigation as it is adjacent to, but not located in, a Tier 2 Fire-Threat area. The San Francisco substation is in a fully urbanized area and is not in a Fire-Threat area or adjacent to any wildland urban interface (WUI).

Trans Bay Cable's operations leadership champions safety and reinforces expectations through several avenues:

- Business unit leadership (inclusive of the SVP) conduct periodic all-hands safety calls to communicate business unit level safety expectations, reinforce near and long term strategy, and openly share operating experience.
- After any injury, the impacted operations leadership conducts a post-event lessons learned call with operations leadership across the enterprise to detail the event, share investigative efforts, and solicit feedback and suggestions for mitigating activities from the greater field operations leadership team.
- Details of events, investigative activities, and lessons learned are distributed to the entire organization (both supervision and workers) through our edge bulletin program. Edge bulletins are routinely reviewed during monthly safety meetings and posted on bulletin boards in the service centers, where applicable.

To ensure safety related behavior changes are being executed on the job site, Trans Bay Cable has tools such as:

- Safety tailboards that are routinely reviewed by field operations leadership. Tailboards reinforce hazard awareness and recognition training by requiring on-site field personnel to do job-specific identification of hazards and discussion of mitigating actions.
- Leaders or peers perform observations of employee work behaviors to ensure that training in safety principles or human performance excellence (HPE) tools are being performed in the field. These observations are entered and tracked on the Safety Activity Management system (SAM). Observations can be as simple as observing that a peer uses 3-points of contact when exiting a vehicle.
- Entries to SAM ensure focus is not only on root cause with a preventative mindset of events as they occur, but also provides analytics to alert leadership of trends across our teammate safety.

Lastly, Trans Bay Cable has had admirable performance with:

- Near Miss Events: 0
- Injuries: 0
- OSHA Recordables: 0
- Risk events: 0
- Utility Inspection Findings: 0
- Utility Wildfire Ignitions: 0

**Sincerely,**

**Lenneal Gardner**

Lenneal Gardner | Regulatory & Business Manager | **Trans Bay Cable LLC**

P.O. Box 666 | Pittsburg, CA 94565 | ☎: 415-291-2290 (Desk)

✉: lenneal.gardner@transbaycable.com ✉: lenneal.gardner@nexteraenergy.com

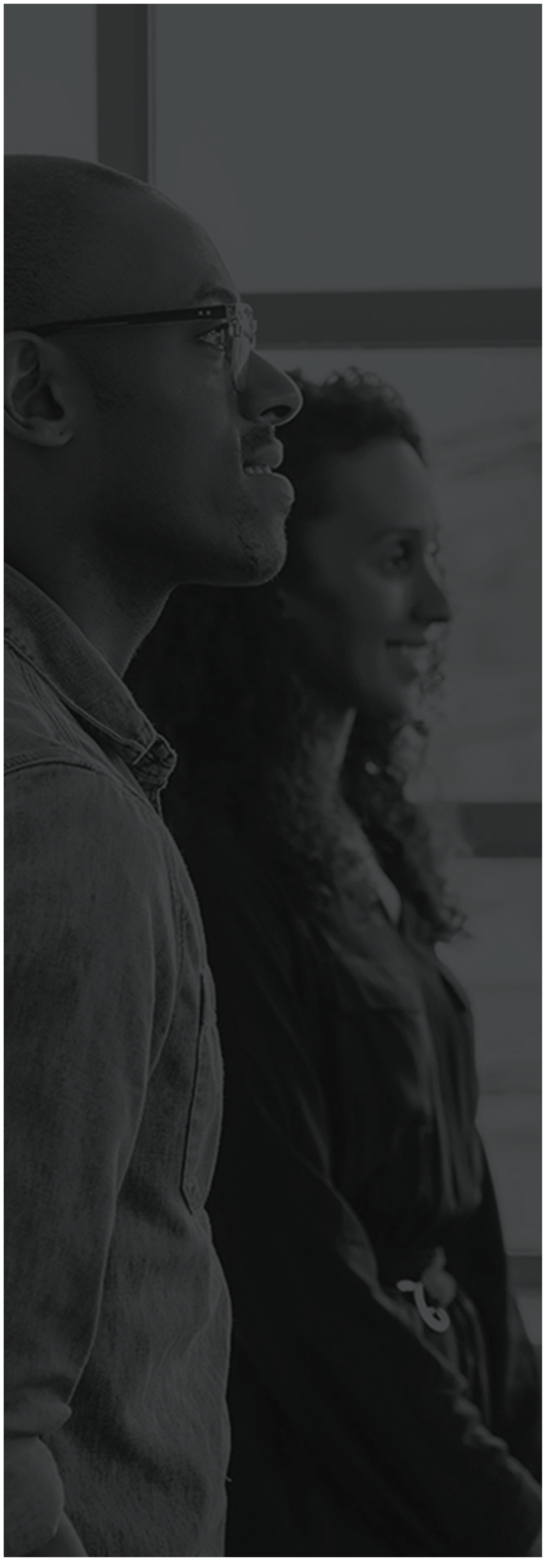
# SAFETY CULTURE ASSESSMENT

DRAFT

**TRANS BAY CABLE TRANSMISSION**

**NOVEMBER 2021**

DEKRA



# Table of Contents

# 1. Executive Summary

In 2019, California Assembly Bill 1054 added an annual safety culture assessment requirement to the Public Utilities Code. Public Utilities Code Section 8389(d)(4) requires the California Public Utilities Commission (Commission or CPUC), in consultation with the Wildfire Safety Division—as of July 1, 2021, now the Office of Energy Infrastructure Safety (Energy Safety), a new department under the California Natural Resources Agency—to develop a process for an annual Safety Culture Assessment for each electrical corporation. The annual Safety Culture Assessment process (approved by the Commission in 2020 in Resolution WSD-011) includes a workforce survey, a management self-assessment, submission of supporting documentation, and interviews. Not all components apply to all electrical corporations: independent system operators are required to submit some components of the supporting documentation. Energy Safety contracted with DEKRA Services, Inc., (DEKRA) to conduct the inaugural 2021 annual Safety Culture Assessment for each electrical corporation. The Safety Culture Assessments took place in May and June 2021. In the course of these assessments the safety culture of Trans Bay Cable was assessed with respect to both personal and wildfire safety.

Trans Bay Cable, a unit of NextEra Energy, Inc., is responsible for the maintenance and operation of the Trans Bay Cable, a high-voltage direct current underwater cable interconnection between San Francisco and Pittsburg, California. The primary wildfire risk occurs at its terminal substation units.

Energy Safety required independent transmission operators, including Trans Bay Cable, to submit supporting documentation including its safety culture objectives for the next 12 months and three years and also its summary of lessons learned from the previous 12 months for the Safety Culture Assessment. Both Trans Bay Cable and Horizon West are subsidiaries of NextEra Energy and submitted identical supporting documentation. As a result, there are significant similarities between the two companies' Safety Culture Assessment reports.

According to the supporting documentation submitted by Trans Bay Cable on May 14, 2021, the organization has established objectives that incorporate both leading (training and risk mitigation) and lagging indicators (recordable injuries) and has included contractors into its training plan. In addition, the leadership of Trans Bay Cable states that it is focused on cultivating a culture of continuous improvement, openness, and trust through implementation of its Guiding Principles and Human Performance Excellence tools.

There are opportunities to improve Trans Bay Cable's safety culture objectives. Specifically, there is no three-year plan for improving the safety culture. What plan there is lacks specific actions to monitor, govern, or sustain the change. Furthermore, the risk mitigation objectives do not appear to proactively address risk detection.

To drive consistent improvement in its safety culture throughout the organization, Trans Bay Cable should act on the following recommendations:

1. Integrate actions for progressively building the safety culture into a three-year safety culture plan.
2. Build sustainment activities into the safety culture objectives.
3. Ensure the Safety Risk Mitigation objective incorporates both regular and proactive risk identification activities, including wildfire risk.

Incorporating these recommendations into Trans Bay Cable's safety culture strategy and objectives will enable the organization to continue to advance the culture for wildfire and personal safety. A detailed narrative on the information collected from the supporting documentation and the corresponding assessment and findings is provided below.

# 2. Overview

Assembly Bill 1054, signed by Governor Newsom in July 2019, states that "[b]y December 1, 2020, and annually thereafter, the [California Public Utilities Commission], after consultation with the [Wildfire Safety Division], shall adopt and approve […] [a] process for the division to conduct annual safety culture assessments for each electrical corporation" (Public Utilities Code Section 8389[d][4]).[1]

On November 30, 2020, the California Public Utilities Commission (Commission or CPUC) issued its approval for a process for conducting annual safety culture assessments for each electrical corporation in Resolution WSD-011.[2] On January 22, 2021, the Wildfire Safety Division (WSD) at the CPUC published the Safety Culture Assessment (SCA) Requirements of Electrical Corporations (2021 Requirements).[3] The 2021 Requirements set out the key components of the SCA process: a workforce survey, a management self-assessment, submission of supporting documentation, and interviews. The 2021 Requirements also provide guidance as to which components apply to which electrical corporations.

The first SCA under Public Utilities Code Section 8389(d)(4) took place in May and June 2021 under the WSD's direction. On July 1, 2021, the WSD transitioned to the Office of Energy Infrastructure Safety (Energy Safety), a new department under the California Natural Resources Agency. The first SCA reports are being issued under the direction of Energy Safety.[4]

The present SCA process is intended to be complementary to, and not a replacement for, ongoing work to improve safety culture at each electrical corporation. Energy Safety

[1] The full text of Pub. Util. Section 8389 can be found here: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=8389.&lawCode=PUC (accessed July 16, 2021).

[2] Resolution WSD-011 "Resolution implementing the requirements of Public Utilities Code Sections 8389(d)(1), (2) and (4), related to catastrophic wildfire caused by electrical corporations subject to the Commission's regulatory authority," dated November 19, 2020, and issued November 30, 2020: https://energysafety.ca.gov/wp-content/uploads/docs/misc/docket/352490594.pdf (accessed August 18, 2021). Also see the attachments to WSD-011, including Attachment 4 "Annual Safety Culture Assessment Process Proposal," dated November 2020: https://energysafety.ca.gov/wp-content/uploads/docs/wmp-2021/docs/352460864.pdf (accessed August 18, 2021).

[3] Safety Culture Assessment: Requirements of Electrical Corporations (published Jan. 22, 2021, accessed July 16, 2021): https://energysafety.ca.gov/wp-content/uploads/docs/safety-culture-assessments/wsd-safety-culture-assessment-requirements-final-20210122.pdf.

[4] Pursuant to Public Utilities Code Section 326(b), on July 1, 2021, the WSD transitioned from the CPUC into the Office of Energy Infrastructure Safety (Energy Safety) under the California Natural Resources Agency. Energy Safety "is the successor to" and "is vested with all of the duties, powers, and responsibilities of the Wildfire Safety Division" (Government Code Section 15475). WSD is used to describe the work of the WSD prior to July 1, 2021. Energy Safety is used to describe the work of Energy Safety beginning on July 1, 2021. Any references to WSD action post July 1, 2021, or to Energy Safety action prior to July 1, 2021, are inadvertent and should be interpreted as the actions of WSD or Energy Safety as appropriate.

seeks to develop a longitudinal view of safety culture across electrical corporations to identify best practices and relative gaps, along with an understanding of each electrical corporation's relative strengths and weaknesses. Ultimately, Energy Safety seeks to assess safety outcomes over time and incorporate continuous learning into the assessment process.[5]

Different components of the SCA target different parts of the electrical corporation's workforce, and different components apply to different types of electrical corporations (see Section 2.1 below). The workforce survey is intended to target electrical corporation employees (including frontline workers and supervisors) and contractors who are engaged in wildfire hazard mitigation activities, for example workers performing vegetation management or installing system hardening infrastructure.[6] The management self-assessment and supporting documentation components are intended to be completed by electrical corporation employees capable of: evaluating the corporation's presently employed practices and capabilities regarding safety, identifying a target level on the four-point scale for each question by the end of 2022 based on wildfire mitigation and safety initiatives planned in the coming year, and describing its plan to realize that target.[7] The interview component is intended to support the workforce survey and management self-assessment by asking additional questions of those who may have participated in those components for further context. The interviews are intended to help DEKRA interpret the results of the survey and self-assessment more accurately and better identify the priority areas that electrical corporations should focus on improving.[8] Independent transmission operators are only required to participate in the supporting documentation component.

## 2.1 Components of the SCA

As stated above, the key components of the SCA are a workforce survey, a management self-assessment, submission of supporting documentation, and interviews. Not every component applies to every electrical corporation. An overview of the SCA components, together with guidance on which electrical corporations must complete each SCA component, is below. Note that electrical corporations are categorized as follows for this purpose:

[5] Safety Culture Assessment: Requirements of Electrical Corporations (2021), p. 3.
[6] Safety Culture Assessment: Requirements of Electrical Corporations (2021), p. 8.
[7] Safety Culture Assessment: Requirements of Electrical Corporations (2021), p. 14.
[8] Safety Culture Assessment: Requirements of Electrical Corporations (2021), p. 35.

- **Large electrical corporations ("Large IOUs"[9])**: Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), Southern California Edison Company (SCE).
- **Small and multi-jurisdictional electrical corporations ("SMJUs"[10])**: Liberty Utilities (CalPeco), PacifiCorp, Bear Valley Electric Service, Inc.
- **Independent transmission operators ("ITOs")**: Horizon West Transmission, Trans Bay Cable.

| Requirement | Electrical corporations that must complete this requirement |
|---|---|
| Workforce survey | Large IOUs, SMJUs |
| Management Self-assessment and plan summary | Large IOUs |
| Supporting documentation<br>Section 1: Safety culture objectives | Large IOUs, SMJUs, ITOs |
| Supporting documentation<br>Section 2: Summary of lessons learned | Large IOUs, SMJUs, ITOs |
| Supporting documentation<br>Section 3: Summary plan for the following year | Large IOUs |
| Supporting documentation<br>Section 4: Documentation to support responses to the management self-assessment | Large IOUs |
| Interviews | To be determined by the WSD upon review of submissions |
| Observational visits | To be determined by the WSD upon review of submissions |

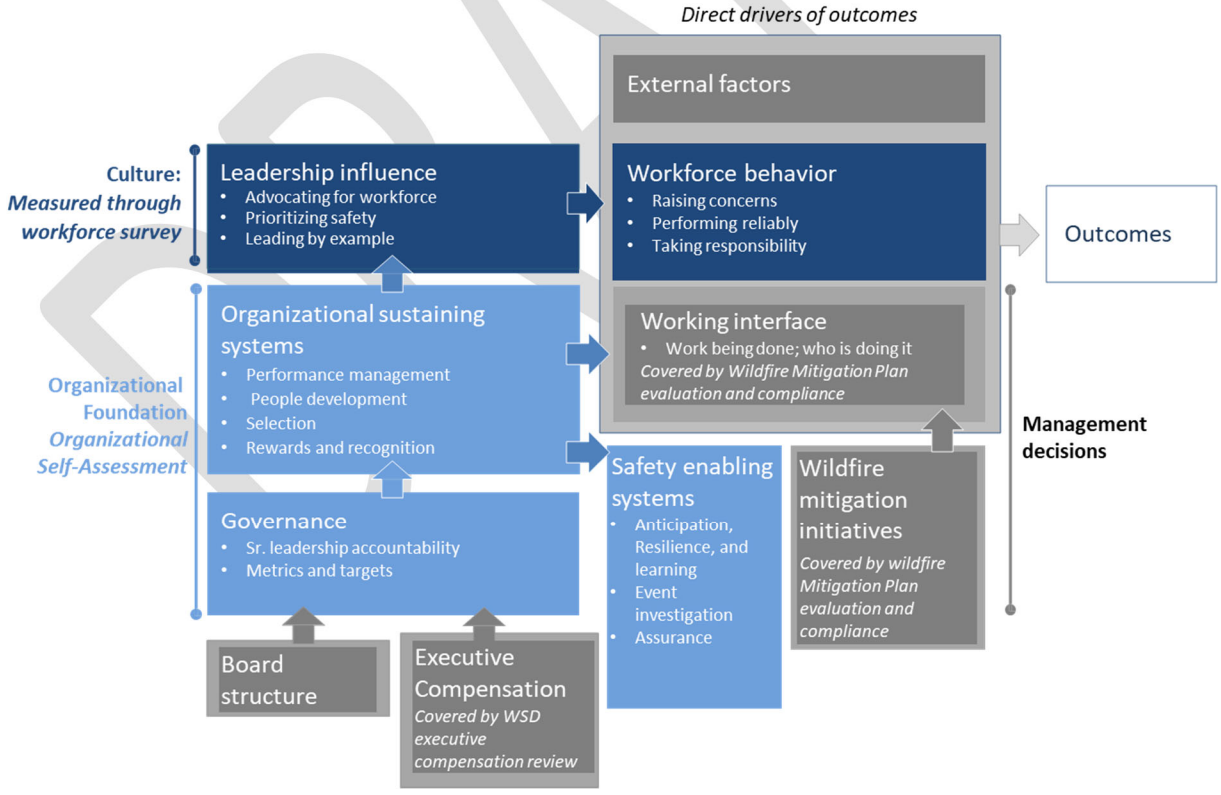
[9] IOU: investor-owned utility.
[10] SMJUs: small and multi-jurisdictional utilities.

## 2.2 Framework for the SCA

The abovementioned components of the SCA (a workforce survey, a management self-assessment, submission of supporting documentation, and interviews) all inform the SCA findings. The SCA components are designed to be administered annually such that progress on the SCA can be measured over time. This is the inaugural assessment and will provide the baseline for evaluating progress in future years. Figure 1 below shows the elements of the organization's culture and foundation assessed by different components of the SCA.

The workforce survey component was designed to evaluate leadership's influence on the culture and the impact that it has on worker behavior. This was supplemented with follow-up interviews of frontline employees and supervisors. The management self-assessment component was designed to evaluate the organizational sustaining and safety enabling systems that undergird and reinforce every safety culture. In addition, the self-assessment measured the electrical corporation's approach to governance of its safety culture. The self-assessment was also supplemented by a focus group comprised of electrical corporation staff members who participated in the organization's self-assessment responses.

**Figure 1. Framework for the Safety Culture Assessment**




Source: Resolution WSD-011 Attachment 4 "Annual Safety Culture Assessment Process Proposal" (2020), p. 9.

## 2.3 Supporting Documentation Collected

As an independent transmission operator, Energy Safety required Trans Bay Cable to submit the following supporting documentation:

1. Safety culture objectives for the next 12 months.
2. Safety culture objectives for the next three years.
3. A description of lessons learned since the most recent Safety Culture Assessment.[11]

Independent transmission operators were not required to participate in any interviews or observational visits in 2021.

The documentation submitted by Trans Bay Cable is included in Section 6 of this report.

## 2.4 Next Steps in Assessment Process

This is the first annual Safety Culture Assessment under Public Utilities Code Section 8389(d)(4) and as such provides a baseline for future comparison. Following the publication of this report, Trans Bay Cable may agree to implement its findings to demonstrate "good standing" per Public Utilities Code Section 8389(e)(2).[12]



[11] As 2021 is the first year of the annual Safety Culture Assessment under Public Utilities Code Section 8389(d)(4), the electrical corporation was asked to evaluate lessons learned since its "most recent" safety culture assessment (if any), and specifically to: "[d]escribe how the electrical corporation's objectives and priorities with respect to safety culture have evolved over the past year. Outline any major themes and lessons learned over the past 12 months and subsequent actions taken. If you have not completed a safety culture assessment in over three years, consider your safety culture as it exists today and describe the major themes that exist today." (See Section 6.4 "Lessons Learned" below for more information.)

[12] Pub. Util. Section 8389(e)(2), "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" (accessed July 16, 2021): https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=8389.&lawCode=PUC.

# 3. Findings

## 3.1 Strengths

Trans Bay Cable's safety culture objectives for the next year and the next three years cover employee safety and health, motor vehicle safety, contractor safety, and safety risk mitigation. The Lessons Learned section of the supporting documentation highlights several elements of Trans Bay Cable's safety culture that it is actively trying to improve. DEKRA's review identified three primary strengths:

### 3.1.1 Trans Bay Cable employs two leading indicators of safety performance in addition to its lagging indicators.

Organizations with advanced safety culture maturity evaluate safety performance by tracking not just lagging indicators[13] such as injuries but also leading indicators[14] to provide a holistic picture of safety. In addition to tracking recordable injuries, Trans Bay Cable tracks two leading indicators. The first is the identification and mitigation of safety risks. Proactively identifying safety risks and then taking actions to mitigate them strengthens an organization's ability to address exposure[15] before an incident[16] occurs. The second leading indicator Trans Bay Cable tracks is training completion. Effective compliance training is necessary and often correlates with lagging indicators of safety performance such as recordable incidents. It should be noted that compliance training alone is not sufficient for controlling exposure.

### 3.1.2 Trans Bay Cable incorporates contractors into its safety culture objectives.

Another strength of Trans Bay Cable's approach to safety culture is its incorporation of contractor training into the organization's safety culture objectives. In less mature organizations, contractors are regarded as only a peripheral factor in safety performance. Highly mature organizations, however, understand that world-class safety performance requires that all contractors are woven into the safety training and systems of the parent organization.

[13] Lagging Indicators: here, an outcome or output measure that is backward-looking, describing a past event.
[14] Leading Indicators: here, an input measure that is predictive of a future event.
[15] Exposure: here, a state of vulnerability to injury that exists when a person comes in contact with a hazard. Exposure reduction or exposure control results from separating the person from the hazard and protecting the person from the vulnerability raised by the hazard (for example, by wearing protective equipment).
[16] Incident: here, an unplanned, undesired event that adversely affects normal operations.

### 3.1.3 Trans Bay Cable, through its Guiding Principles, is focused on building a culture of trust and workforce involvement to improve safety.

Lastly, Trans Bay Cable, through its Guiding Principles, recognizes the need for involvement and accountability by both leaders and frontline employees to address hazards, cultivate trust, and improve safety.[17] This culture is exemplified by such programs as "see something, say something, do something" at every level of the organization. Furthermore, Human Performance Excellence (HPE) tools have been provided to the workforce and are discussed monthly.

## 3.2 Opportunities

DEKRA's review also identified opportunities to improve Trans Bay Cable's safety culture objectives and actions:

### 3.2.1 There is no three-year plan for improving the safety culture.

In Trans Bay Cable's supporting documentation, no distinction is made between the Safety Culture Objectives for the next year and for the next three years. With a three-year horizon, the organization should set forth a broader, more strategic view of how it plans to improve its safety record and how its progress will be evaluated. For example, if Trans Bay Cable believes that adherence to its Guiding Principles and cultivation of a "culture of continuous improvement, openness, and trust" are critical to its success, it should create metrics to track its progress toward these goals over the next three years.

### 3.2.2 The safety culture strategy lacks specific actions to monitor, govern, and sustain the change.

Secondly, although cultivating a culture of trust and implementing HPE tools are critical to safety improvement, the only actions taken to further these goals are monthly discussions.[18] Furthermore, while training compliance is necessary, Trans Bay Cable must explain how its leadership is ensuring that compliance training is resulting in behavior change on the ground and in the path of the work. It's not clear that Trans Bay Cable has an effective execution or sustainment plan, or a governance process to ensure progress and remove obstacles.

[17] From the Trans Bay Cable SCA supporting documentation Lessons Learned, Table 1.3, Major Themes or Lessons Learned column: "Guiding Principles: All injuries are preventable, Every day safety is my responsibility, Leadership is accountable for preventing injuries, and See something, Say something, Do something."
[18] From the Trans Bay Cable SCA supporting documentation Lessons Learned, Table 1.3, Actions Taken column: "HPE tools are discussed at least monthly with the team."

### 3.2.3 Risk mitigation objectives do not appear to proactively address risk detection.

Trans Bay Cable's risk mitigation system only focuses on the timely mitigation of risks entered into the Safety Activity Management System.[19] There are no objectives for regular, proactive risk-identification activities, nor is there an explicit acknowledgement of wildfire risks. Trans Bay Cable needs a system to proactively track and mitigate known and potential risks, including both wildfire and personal safety risks, in the work environment.



[19] "Safety Activity Management System (SAMS) entries are addressed timely" is a progress metric given by Trans Bay Cable for both the 12-month and 3-year time horizons (Tables 1.1 and 1.2). The further description of how this reduces risk in both tables reads: "Ensure risks are timely mitigated thereby protecting our staff."

# 4. Recommendations

## 4.1 Integrate actions for progressively building the safety culture into a three-year safety culture plan.

Culture change does not occur overnight and requires continuous emphasis and monitoring. Therefore, looking three years into the future, Trans Bay Cable should identify specific markers and objectives that demonstrate adherence to its Guiding Principles and progress toward fulfilling its goal of having a culture of continuous improvement, openness, and trust.

- **Observation:** Trans Bay Cable has no three-year plan for improving its safety culture.
- **Goal of Recommendation:** Creation of a three-year plan for improving the corporation's safety culture including specific markers and objectives that demonstrate adherence to Trans Bay Cable's Guiding Principles and progress toward fulfilling its goal of having a culture of continuous improvement, openness, and trust.
- **Verification Method:** In next year's reporting on Trans Bay Cable's safety culture objectives provide a detailed description of the corporation's three-year plan for improving its safety culture, including benchmarks relevant to the corporation's goals regarding adherence to the Guiding Principles and continuous improvement, openness and trust.

Conducting this exercise and monitoring the results will necessitate additional sustainment activities to ensure progress continues and obstacles are removed.

## 4.2 Build sustainment activities into the safety culture objectives.

Monthly meetings to discuss safety performance, Human Performance Excellence (HPE) tools, or the workplace culture typically are insufficient to produce sustained change. Behavioral expectations for frontline supervisors and workers need to be clearly articulated, championed, reinforced, and tracked over time to truly drive lasting change.

- **Observation:** Trans Bay Cable holds monthly meetings to discuss the Guiding Principles, HPE tools, and review safety improvement plans. Monthly meetings such as these may be insufficient to produce sustained change.
- **Goal of Recommendation:** Increase the number of measures reinforcing and tracking behavioral expectations for frontline supervisors and workers regarding safety culture.
- **Verification Method:** In next year's reporting on Trans Bay Cable's safety culture objectives provide a detailed list of measures instituted or planned that reinforce and track behavioral expectations for frontline supervisors and workers regarding safety culture.

## 4.3 Ensure the Safety Risk Mitigation objective incorporates both regular and proactive risk identification activities, including wildfire risks.

Addressing risks in a timely manner is only one aspect of risk mitigation. Risk exposures also need to be identified and tracked proactively, including wildfire risks. Proactively identifying and tracking both wildfire and personal safety risks provides the organization with a better understanding of the exposures in the work environment and, when paired with risk mitigation activities, will enable the organization to improve its safety culture.

- **Observation:** Trans Bay Cable's safety culture objectives do not appear to proactively address risk detection. The one risk mitigation objective calls for addressing detected risks in a timely fashion but does not go further.
- **Goal of Recommendation:** Increased level of detection and tracking of risks. Risks should be tracked proactively. Risks that are tracked should include wildfire risks. Detection and tracking should go beyond the reporting protocols in the corporation's Safety Activity Management System.
- **Verification Method:** In next year's reporting on Trans Bay Cable's safety culture objectives provide a detailed description of how the corporation is detecting and tracking risks, including wildfire risks.

# 5. Conclusion

This report provides the findings from Trans Bay Cable's first Safety Culture Assessment under Public Utilities Code Section 8389(d)(4). It gives Energy Safety a baseline measurement of Trans Bay Cable's current safety culture for future comparison. Following the publication of this report, Trans Bay Cable may agree to implement its findings to demonstrate "good standing" per Public Utilities Code Section 8389(e)(2).

This process is intended to be complementary to, and not a replacement for, ongoing work to improve safety culture at Trans Bay Cable. Energy Safety seeks to develop a longitudinal view of safety culture across electrical corporations to identify best practices and relative gaps, along with an understanding of Trans Bay Cable's relative strengths and weaknesses. As stated above, Energy Safety ultimately seeks to assess safety culture outcomes over time and incorporate continuous learning into the SCA process.[20]



[20] Safety Culture Assessment: Requirements of Electrical Corporations (2021), p. 3.

# 6. Data Attachments

## 6.1 Safety Culture Objectives

The text in the tables below, other than the instructions and headings, is as it was received from the electrical corporation, presented without revision.

**Instructions**

Provide a description of the electrical corporation's objectives with respect to safety culture, over the next 12 months and over the next three years.

**Trans Bay Cable Response**

Trans Bay Cable LLC (TBC) (U934-E) provides the following information regarding its safety culture objectives. Operating its facilities in a safe and reliable manner is the number one priority of TBC, and TBC implements the following safety objectives on a daily basis to ensure the safe operation of its facilities.

### 6.1.1 Safety Culture Objectives for the next 12 months

| A. Objective | B. Progress metrics or cultural indicators used to track progress | C. Target for 12 months from submission | D. Description of how this objective will reduce wildfire risk to the public or risk to employees conducting wildfire mitigation work |
|---|---|---|---|
| Employee Safety and Health | Number of OSHA Recordable Injuries<br>Annual training for employees | 0<br>100% | Ensures employees understand the components of Safety and current metrics |
| Motor Vehicle Safety | Number of preventable accidents | 0 | Employees practice safe driving |
| Contractor Safety | All contractors to receive sites training | 100% trained | Ensures contractors are familiar with the station, that the contractors understand the fire related requirements, and are prepared for the planned work and contingencies |
| Safety Risk Mitigation "Sub-zero Injuries" | Safety Activity Management System (SAMS) entries are addressed timely | Addressed within specified time period depending on severity | Ensure risks are timely mitigated thereby protecting our staff |

### 6.1.2 Safety Culture Objectives for the next 3 years

| A. Objective | B. Progress metrics or cultural indicators used to track progress against this objective | C. Target for 12 months from submission | D. Description of how this objective will reduce wildfire risk to the public or risk to employees conducting wildfire mitigation work |
|---|---|---|---|
| Employee Safety and Health | Number of OSHA Recordable Injuries<br>Annual training for employees | 0<br>100% | Ensures employees understand the components of Safety and current metrics |
| Motor Vehicle Safety | Number of preventable accidents | 0 | Employees practice safe driving |
| Contractor Safety | All contractors to receive sites training | 100% trained | Ensures contractors are familiar with the station, that the contractors understand the fire related requirements, and are prepared for the planned work and contingencies |
| Safety Risk Mitigation "Sub-zero Injuries" | Safety Activity Management System (SAMS) entries are addressed timely | Addressed within specified time period depending on severity | Ensure risks are timely mitigated thereby protecting our staff |

## 6.2 Lessons Learned

The text in the tables below, other than the instructions and headings, is as it was received from the electrical corporation, presented without revision.

**Instructions**

Describe how the electrical corporation's objectives and priorities with respect to safety culture have evolved over the past year. Outline any major themes and lessons learned over the past 12 months and subsequent actions taken. If you have not completed a safety culture assessment in over three years, consider your safety culture as it exists today and describe the major themes that exist today.

**Trans Bay Cable Response**

TBC has not completed a safety culture assessment within the last three years, as such the following responses reflect a consideration of the company's safety culture as it currently exists and describes/identifies major themes that exist today.

### 6.2.1 Lessons Learned since most recent Safety Culture Assessment

| A. Major Themes or Lessons Learned | B. Actions Taken |
|---|---|
| ZERO injuries is the only acceptable target | Corporate Message and Leadership models this theme |
| Guiding Principles: All injuries are preventable, Every day safety is my responsibility, Leadership is accountable for preventing injuries, and See something, Say something, Do something | Business Unit Guiding Principles that are discussed at least monthly |
| Practice Human Performance Excellence (HPE) | HPE tools are discussed at least monthly with the team |
| Cultivate a Culture of Continuous improvement, openness, and trust<br><br>Strive for Sub-zero Injuries | Monthly meeting to review safety improvement plans with leadership – Sub Zero Safety Improvement Program |

# 7. Glossary of Terms

| Term | Definition |
|---|---|
| Behavior-Based Safety (BBS) | A broad term used to describe programs for improving workplace safety by observing and analyzing employees' behavior while they work. |
| Black Swan | Unpredictable events that are beyond what is normally expected and have potentially severe consequences. |
| CPUC Reportable Ignition | A fire-related event meeting the following conditions: (1) A self-propagating fire of material other than electrical and/or communication facility, (2) The resulting fire traveled greater than one linear meter from the ignition point, (3) The electrical corporation has knowledge that the fire occurred. Electrical corporations must submit to the CPUC information about this event that is useful in identifying operational and/or environmental trends relevant to the event. (See CPUC Decision 06-04-044 and Resolution E-4184.) |
| Drills | Coordinated, supervised activities designed to test work team responses to various planned upset conditions. |
| Event Learning | An approach to understanding incidents and events that evaluates the entire system leading to an event to better understand the causes of actions. The focus of event learning is primarily on how to alter the system to make it less likely for the factors that caused the event to recur rather than to assign blame or define a single root cause factor. |
| Executive Leadership | The highest level of management in an organization, reports to the CEO. |
| Exposure | A state of vulnerability to injury that exists when a person comes in contact with a hazard. Exposure reduction or exposure control results from separating the person from the hazard and protecting the person from the vulnerability raised by the hazard (for example, by wearing protective equipment). |
| Exposure Management Training | A training that emphasizes a proactive approach to safety through identifying and controlling exposure for self and others and is foundational for leaders to move beyond the traditional and reactive incident management approach to safety. |

| Term | Definition |
|---|---|
| Failsafe | A system or plan that comes into operation in the event of something going wrong or that is there to prevent such an occurrence. |
| Frontline Supervisors | The first level of leadership that has direct oversight of employees within operational units of the organization. |
| High Risk Situations | Work activities or situations that have previously been shown in incident data to be consistent with serious or fatal incidents. |
| High Value Controls | The hierarchy of controls consists of five layers of defenses used to protect against hazards in the workplace ranging from the most effective (Elimination) to the least effective (personal protective equipment or PPE). The layers are Elimination, Substitution, Engineering, Administrative, and PPE. High value controls are Elimination, Substitution, and Engineering because the effectiveness of the control is not susceptible to human error. |
| Human Performance Reliability | The suite of knowledge, skills and capabilities required to anticipate, control, and respond to unplanned issues and error. |
| Incident | An unplanned, undesired event that adversely affects normal operations. |
| Individual Contributor | An employee who is not in a management position or has any employees directly reporting to them. |
| IOU | Investor-owned utility. |
| ITO | Independent transmission operator. |
| Lagging Indicator | An outcome or output measure that is backward-looking, describing a past event. |
| Leading Indicator | An input measure that is predictive of a future event. |
| Learning Organization | An organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights. |
| Likert Scale | A rating system commonly used in questionnaires and survey research to measure people's attitudes, perceptions, and opinions. |

| Term | Definition |
|---|---|
| Near Miss | An unplanned event that did not result in injury, illness, or damage, but had the potential to do so. |
| Operations | The parts of a business that affect the production, distribution, and service necessary for a company to function. For the purposes of this assessment, electrical operations, field services, transmissions, substations, and distribution are considered part of operations, but generation is not. |
| Operational Leadership | Levels of management within operations ranging from frontline supervisors (who have direct oversight of employees) to executive level senior operational leaders (e.g., COO). |
| OSHA Reportable Incidents | Fatal and extremely serious injuries or illnesses, such as amputation, eye loss, in-patient hospitalization, or fatality, required to be reported to OSHA within defined time periods. "OSHA" stands for the Occupational Safety and Health Administration of the United States Department of Labor. |
| Root Cause Analysis | A systematic process for identifying root causes of problems or events and an approach for responding to them. |
| SMJUs | Small and multi-jurisdictional utilities. |
| Systemic Risk | Vulnerabilities that could result in cascading or broad failures across the utility. |
| Upset Conditions | Interruptions in the regular running of work processes or other planned activity. |
| Weak Signal | An indicator of a potentially emerging issue that may become significant in the future. |

# 8. Other Attachments

## 8.1 Written Comments from Trans Bay Cable

Following are the written comments from Trans Bay Cable dated [--], 2021.