



Public Utilities Commission
STATE OF CALIFORNIA

Citation Date: June 6, 2017

Citation #: D.16-09-055 E.17-06-001

Utility/Operator ID#: U39E

CITATION
ISSUED PURSUANT TO DECISION 16-09-055

Electrical Corporation (Utility) To Which Citation is Issued:

Pacific Gas and Electric Company (U39E)

OFFICER OF THE RESPONDENT:

Mr. Patrick M. Hogan
Senior Vice President, Electric Operations
Pacific Gas and Electric Company
77 Beale Street
San Francisco, CA 94105

CITATION:

Pacific Gas and Electric Company (PG&E or Utility) is cited for the following: 1) one violation that lasted 7 days, resulting in a financial penalty of \$350,000; and 2) a second violation resulting in a penalty of \$50,000. Safety and Enforcement Division (SED) discovered these violations in its investigation of Incident Number E20151018-01, which occurred on October 18, 2015, when a PG&E tower failed and fell to the ground. The total financial penalty for this citation is \$400,000.

VIOLATIONS:

PG&E is cited for violating General Order (GO) 95, Rule 31.1 and Rule 44.1, as described below. These violations occurred when PG&E used the incorrect batter angle for all four concrete footings and "stub angles" of Tower 61/268, which resulted in a low safety factor and caused the tower to fail and fall to the ground.

1. General Order 95, Rule 31.1 Design, Construction, and Maintenance, states:

Electrical supply and communication systems shall be designed, constructed, and maintained for their intended use, regard being given to the conditions under which they are to be operated, to enable the furnishing of safe, proper, and adequate service.

Tower 61/268's steel foundation stubs were designed to have a heel batter of 2-5/8 inches by 12-inches, however, the as-measured heel batter was 1-5/8 inches by 12-inches, resulting in misalignment and discrepancy. Therefore, PG&E did not construct its transmission tower foundation safely and adequately and is in violation of GO 95, Rule 31.1.



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PG&E's employees discovered the misalignment on September 9, 2015 and proceeded with constructing the tower without correcting the misalignment.

2. General Order 95, Rule 44.1 Installation and Reconstruction, states:

Lines and elements of lines, upon installation or reconstruction, shall provide as a minimum the safety factors specified in Table 4.

GO 95, Rule 44.1 requires the minimum safety factor of a steel tower of Grade "A" construction, including its foundation, to be 1.5. SED staff concluded that PG&E did not construct Tower 61/128's foundation stubs to meet GO 95's minimum safety factor, as the tower had an actual safety factor of 0.62. Therefore, PG&E is in violation of GO 95, Rule 44.1.

The tower was erected on September 9, 2015 and was in operation from October 11, 2015 through October 18, 2015 (7 days) with a subpar safety factor.

ENCLOSURES:

The following enclosures were used to establish the findings of fact:

Enclosure 1 – SED Incident Investigation Report, dated February 25, 2017

Enclosure 2 – PG&E Moss Landing Tower Collapse Direct Cause Analysis

Enclosure 3 – PG&E Moss Landing Tower Collapse Root Cause Analysis

Enclosure 4 – Root Cause Analysis Report Addendum

STATEMENT OF FACTS

The above violations are documented in the attached *Enclosure 1 – SED Incident Investigation Report* which is based on the following: SED's field observations, SED's lab observations, interviews conducted, and review of the Moss Landing Tower Collapse reports prepared by Exponent on behalf of PG&E (Enclosures 2, 3, and 4).



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SED CITATION ANALYSIS

Element	Staff Finding
Number of violation(s) and duration of violation(s)	<p>One violation of GO 95, Rule 44.1 from October 11, 2015 to October 18, 2015, (7 days) for constructing and operating a tower with a safety factor of 0.62.</p> <p>One violation of GO 95, Rule 31.1 for improperly installing the tower on September 9, 2015.</p>
Severity or gravity of the offense	<p>The incident resulted in damage to utility infrastructure (approximately \$3,018,000), claims made against the utility (approximately \$467,000 as of 3/17/17), and a sustained outage for 17 hours to 55,000 customers. Violations described in this citation did not create a significant hazard to public safety.</p>
Conduct of the utility	<p>Prior to the incident, PG&E had inadequate maintenance of legacy drawings, inadequate process for transfer of design-related information to construction crews, and inadequate training for dimensional tolerances and field issues. PG&E did not have a practice of documenting as-built dimensions and ensuring infrastructure met design requirements.</p> <p>At the time of the installation, PG&E incorrectly constructed the footings of the tower and connected the tower segments by force, resulting in an inadequate safety factor. The inadequate safety factor violation was not detected when the tower crew did their final inspections before putting the tower into service.</p> <p>After the incident, PG&E contracted Exponent to investigate causes and implemented corrective actions based on Exponent's recommendations. PG&E updated its standards for steel specifications, raised steel from a low risk to a high risk item, made recommendations to fabricator for improving steel fabrication, conducted an assessment of all steel currently in stock to remove "out of specification" steel, conducted field assessments for all towers installed in the last 24 months (from 5/19/16), reviewed current practices, and made recommendations to employees engaged in tower footings and structure erection on improving practices and skill requirements.</p>



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Prior history of similar violation(s)	<p>SED's incident investigations have found PG&E in violation of GO 95, Rule 31.1, 37 times since 1999. Examples include:</p> <p>E20051002-02 – PG&E in violation of Rule 31.1 for failing to show that a pole met the safety factors specified in Rule 44.1.</p> <p>E20080127-01 – PG&E in violation of Rule 31.1 for failing to perform repairs on a pole in a timely manner.</p> <p>SED's incident investigations have found PG&E in violation of GO 95, Rule 44, 6 times since 1999. Examples include:</p> <p>E20051002-02 – PG&E in violation of Rule 31.1 for failing to show that a pole met the safety factors specified in Rule 44.1.</p> <p>E20071204-02 – PG&E in violation of Rule 44.3 for not maintaining minimum pole safety factors listed in Rule 44.1, Table 4.</p> <p>E20111219-02 – PG&E in violation of Rule 44.1 for not maintaining line and elements of the line safety factor.</p> <p>E20120228-01 – PG&E in violation of Rule 44.3 for not maintaining minimum pole safety factors listed in Rule 44.1, Table 4.</p>
Self-reporting of the violation	Not self-reported; SED discovered the violations during investigation of the reported incident.
Financial resources of the utility	5.4 million electric customers; 4.3 million natural gas customers; \$7.094 billion authorized General Rate Case revenues for test year 2014.



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The totality of the circumstances	<p>Aggravating factors included the consequences of the incident (infrastructure/environmental damages and customer outages) and deliberate force fitting of the tower segments.</p> <p>Mitigating factors include the actions taken to address the violations and to prevent future occurrences once the utility recognized the underlying issues. To SED's knowledge, this is the first incident in which a new transmission structure failed due to incorrect construction practices.</p> <p>Other factors to consider are that PG&E was generally cooperative during SED's investigation, and PG&E possesses sufficient financial resources to pay the penalties.</p>
The role of precedent	Not applicable. To SED's knowledge, this is the first incident in which a new transmission structure failed due to incorrect construction practices.
Resultant Citation Taking All Of These Factors Into Account	\$400,000



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RESPONSE:

Respondent is called upon to provide a response to this Citation by: **5:00 PM on July 6, 2017**. By way of such response, Respondent, **within 30 calendar days**, must either pay the amount of the penalty set forth in this citation¹, or appeal² the citation. In addition, the Respondent must do one of the following:

- (1) For violations constituting immediate safety hazards: Respondent must immediately correct the immediate safety hazards.
- (2) For violations that do not constitute immediate safety hazards: Violations that do not constitute immediate safety hazards must be corrected within 30 days after the citation is served. If said violations that do not constitute immediate safety hazards cannot be corrected within 30 days, then the Respondent must submit a detailed Compliance Plan to the Director of SED within 30 days after the citation issues, unless the utility and the Director of SED, before the expiration of the 30 day period, agree in writing to another date, reflecting the soonest that the Respondent can correct the violations. The Compliance Plan must provide a detailed description of when the violation will be corrected, the methodology to be utilized, and a statement supported by a declaration from the Respondent's Chief Executive Officer or appropriate designee (CEO Declaration) stating that in the Respondent's best judgment, the time that will be taken to correct the violation will not affect the safety or integrity of the operating system or endanger public safety.

Note: Respondent will forfeit the right to appeal the citation by failing to do one of the options outlined above within 30 days. Payment of a citation or filing a Notice of Appeal does not excuse the Respondent from curing the violation. The amount of the penalty may continue to accrue until a Notice of Appeal is filed. Penalties are stayed during the appeal process. A late payment will be subject to a penalty of 10% per year, compounded daily and to be assessed beginning the calendar day following the payment-due date. The Commission may take additional action to recover any unpaid fine and ensure compliance with applicable statutes and Commission orders.

1 For fines paid pursuant to Pub. Util. Code §2107 and D.16-09-055 Respondent shall submit a certified check payable to California Public Utilities Commission using the attached Citation Payment Form. Upon payment, the fine will be deposited in the State Treasury to the credit of the General Fund and this citation will become final.

2 Respondent may Appeal this citation by completing and submitting a Notice of Appeal Form. Please see the attached document, "Directions For Submitting An Appeal To A Citation Issued Pursuant to Decision 16-09-055" for information on the appeals process and the attached "Notice of Appeal Of Citation Form."



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NOTIFICATION TO LOCAL AUTHORITIES:

As soon as is reasonable and necessary, and no later than 10 calendar days after service of the citation is effected, Respondent must provide a notification to the Chief Administrative Officer or similar authority in the city and county where the violation occurred. Within 10 days of providing such notification, Respondent must serve an affidavit to the Director of SED, at the mail or e-mail address noted below, attesting that the local authorities have been notified; the date(s) for when notification was provided; and the name(s) and contact information for each local authority so notified.

The CPUC expects the Utility to take actions, as soon as feasible, to correct, mitigate, or otherwise make safe all violations noted on the Citation regardless of the Utility's intentions to accept or appeal the violation(s) noted in the Citation.

A handwritten signature in blue ink, appearing to read "Elizaveta Malashenko", written over a horizontal line.

Elizaveta Malashenko

Director

Safety and Enforcement Division

California Public Utilities Commission

505 Van Ness Avenue

San Francisco, CA 94102

elizaveta.malashenko@cpuc.ca.gov



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CITATION PAYMENT FORM

I (we) _____ hereby agree to comply with this citation dated _____, and have corrected/mitigated the violation(s) noted in the citation on _____ and no later than _____, all work to make permanent corrections to any mitigated, or otherwise remaining concerns related to the violation(s) will be completed as noted in the Compliance Plan we have submitted to the Director of SED and, herewith, pay a fine in the amount of \$_____ as included in the citation.

Signature of Electrical Corporation's Treasurer, Chief Financial Officer, or President/Chief Executive Officer, or delegated Officer thereof

(Signature) (Date)

(Printed Name and Title)

Payment must be with a certified check made payable to the **California Public Utilities Commission** and sent to the below address. Please include the citation number on the memorandum line of the check to ensure your payment is properly applied.

California Public Utilities Commission
Attn: Fiscal Office
505 Van Ness Avenue
San Francisco, CA 94102-3298

NOTE: A copy of the completed Citation Payment Form must be sent to the Director of the Safety and Enforcement Division, via email or regular mail, to the address provided on the Citation.



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DIRECTIONS FOR SUBMITTING AN APPEAL TO A CITATION ISSUED PURSUANT TO DECISION 16-09-055

Within 30 calendar days of the Respondent being served with a **CITATION ISSUED PURSUANT TO DECISION 16-09-055**, Respondent may appeal the citation. Beyond 30 calendar days of being served with the citation, Respondent is in default and, as a result, is considered as having forfeited rights to appeal the citation. The Respondent must still correct the violation(s) as instructed in the Response section of this citation.

To appeal the citation, Appellant must file a Notice of Appeal (including a completed title page complying with Rule 1.6 of the Commission's Rules of Practice and Procedure, and attached Notice of Appeal Form) along with copies of any materials the Appellant wants to provide in support of its appeal with the Commission's Docket Office **and** must serve the Notice of Appeal, at a minimum, on

- 1) The Chief Administrative Law Judge (with an electronic copy to: ALJ_Div_Appeals_Coordinator@cpuc.ca.gov),
- 2) The Director of the Safety and Enforcement Division
- 3) The Executive Director
- 4) General Counsel
- 5) The Director of the Office of Ratepayer Advocates

at the address listed below within 30 calendar days of the date on which the Appellant is served the Citation. The Appellant must file a proof of service to this effect at the same time the Appellant files the Notice of Appeal. The Notice of Appeal must at a minimum state: (a) the date of the citation that is appealed; and (b) the rationale for the appeal with specificity on all grounds for the appeal of the citation.

California Public Utilities Commission
505 Van Ness Ave.
San Francisco, CA 94102
Attn: <Insert Title>

NOTE: Submission of a *Notice of Appeal Form* in no way diminishes Appellant's responsibility for correcting the violation described in the citation, or otherwise ensuring the safety of facilities or conditions that underlie the violations noted in the Citation.

Ex Parte Communications as defined by Rule 8.1(c) of the Commission's Rules of Practice and Procedure, are prohibited from the date the citation is issued through the date a final order is issued on the citation appeal.



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After receipt of the Appellant's *Notice of Appeal Form*, a hearing will be convened before an Administrative Law Judge. At least ten days before the date of the hearing, the Appellant will be notified and provided with the location, date, and time for the hearing. At the hearing,

- (a) Appellant may be represented by an attorney or other representative, but any such representation shall be at the sole expense of the Appellant;
- (b) Appellant may request a transcript of the hearing, but must pay for the cost of the transcript in accordance with the Commission's usual procedures;
- (c) Appellant is entitled to the services of an interpreter at the Commission's expense upon written request to the Chief Administrative Law Judge not less than five business days prior to the date of the hearing;
- (d) Appellant is entitled to a copy of or electronic reference to Resolution ALJ-299 Establishing Pilot Program Citation Appeal and General Order 156 Appellate Rules (Citation Appellate Rules); and
- (e) Appellant may bring documents to offer in evidence (Rule 13.6 (Evidence) of the Commission's Rules of Practice and Procedure applies) and/or call witnesses to testify on Appellant's behalf. At the Commission's discretion, the hearing in regard to the Appellant's appeal can be held in a CPUC hearing room at either of the following locations:

San Francisco:

505 Van Ness Avenue
San Francisco, CA 94102

Los Angeles:

320 West 4th Street, Suite 500
Los Angeles, CA 90013

The hearing(s) held in regard to the Appellant's appeal will be adjudicated in conformance with all applicable Public Utilities Code requirements.



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Enclosures to Accompany Utility Appeal

Utility to add list of Enclosures as appropriate: