

**PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

**ENERGY DIVISION**

**RESOLUTION E-4567**

**February 20, 2013**

**R E S O L U T I O N**

Executive Director Resolution E-4567. Pacific Gas and Electric Company Notice of Construction, Pursuant to General Order 131-D, For the construction of the Contra Costa-Moraga No.1 and No.2, 230kV Transmission Line—Cities of Antioch, Clayton, Concord, Orinda, Walnut Creek, and the County of Contra Costa.

**PROPOSED OUTCOME:** This Executive Director Resolution dismisses as invalid, protests from the Division of Ratepayer Advocates (DRA) and approves Pacific Gas & Electric Company's (PG&E's) Advice Letters 4058-E and 4058-E-A with an effective date of today.

**SAFETY CONSIDERATIONS:** PG&E proposes to raise the height of 14 lattice steel towers along the Contra Costa-Moraga 230 kilovolt (kV) transmission line in Contra Costa County to comply with CPUC General Order 95 and accommodate new Federal Energy Regulatory Commission (FERC) ground-to-conductor clearance requirements. General Order 95 codifies requirements for the construction, maintenance, and operation of overhead electric lines in California. A major goal of General Order 95 is to maintain adequate clearance between energized conductors and the ground so as to prevent dangerous contact with the line.

**Estimated Cost:** Actual costs are not available.

By Advice Letter 4058-E Filed on June 8, 2012.

By Advice Letter 4058-E-A Filed on December 14, 2012.

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## **SUMMARY**

This Executive Director Resolution dismisses as invalid, protests from the Division of Ratepayer Advocates (DRA) and approves Pacific Gas & Electric Company's (PG&E's) Advice Letters 4058-E and 4058-E-A with an effective date of today. Pursuant to this advice letter, PG&E proposes to raise the height of 14 lattice steel towers and perform one dead-end conversion along the Contra Costa – Moraga 230kV transmission lines in the cities of [Redacted]

[Redacted]

The Commission's General Order 131-D governs the planning and construction of electric generation, transmission/power/distribution line facilities, and substations. This project falls within and qualifies for the exemption cited by PG&E in their Advice Letters 4058-E and 4058-E-A.<sup>1</sup> None of the concerns raised by the protestants fits within the specific exceptions to the exemptions of GO 131-D, nor do the protestant's claims support a claim of misapplication of an exemption by PG&E. Therefore, the protest is denied for failure to state a valid reason.

## **BACKGROUND**

On June 8, 2012, PG&E filed Advice Letter 4058-E. To comply with California Public Utilities Commission (CPUC) General Order 95 and accommodate new Federal Energy Regulatory Commission (FERC) ground-to-conductor clearance requirements which are regulated by the North American Electric Reliability Corporation (NERC), PG&E plans to raise the height of 20 lattice steel towers along the Contra Costa– Moraga 230 kilovolt (kV) transmission line in Contra Costa County. PG&E later updated the scope of its project to raise the height of only 14 lattice steel towers and perform one dead-end conversion along the Contra Costa-Moraga 230 kV transmission line. The transmission line begins in the City of Antioch, west of the intersection of [Redacted] [Redacted] and traverses southwesterly through Antioch, unincorporated portions of Contra Costa County, the cities of [Redacted] [Redacted] near the intersection of [Redacted] [Redacted]. All 20 towers are located in PG&E's existing easement within

<sup>1</sup> General Order (GO) 131-D Section III.A provides exemptions from the CPCN requirement for construction involving “the replacement of existing power line facilities or supporting structures with equivalent facilities or structures, the minor relocation of existing power line facilities, the conversion of existing overhead lines to underground, or the placing of new or additional conductors, insulators, or their accessories on or replacement of supporting structures already built”.

the cities of [Redacted]

[Redacted] and unincorporated Contra Costa County (5 towers). PG&E will replace waist or top-cage extensions on the existing 89 to 117-foot-tall towers, increasing their height by approximately 11-16.5 feet.

PG&E asserted that in accordance with the CPUC's General Order 131-D Section III, Subsection A, the Project is exempt from permitting requirements as a "replacement of existing power line facilities or supporting structures with equivalent facilities or structures. (GO 131-D, § III.A.)"

On June 26, 2012, PG&E's Advice Letter AL 4058-E was protested by the City of Antioch. City of Antioch withdrew its protest on July 3, 2012.

On June 28, 2012, DRA filed a protest (June 2012 Protest) to the AL 4058-E filing. DRA's protest asserts that PG&E must file an application for a Certificate of Public Convenience and Necessity (CPCN) because:

- 1) The system operating voltage of 230 kV exceeds the 200kV threshold.
- 2) PG&E is proposing to increase the tower heights by 11 to 17 feet. As a result, the modifications will require significant structural analysis to support the conductors.
- 3) The taller towers may require evaluation by the Federal Aviation Administration.

On July 3, 2012, in response to the DRA protest, PG&E filed a letter to the CPUC Energy Division Director. In the letter, PG&E argued that:

- 1) The project does not come close to being a "major" transmission line construction.
- 2) The replacement of sections of a few transmission towers on a 27-mile transmission line clearly falls within the exemption for replacement of existing facilities with "equivalent" facilities.
- 3) Visual studies have indicated that tower raises of this type are not readily noticeable to area viewers; no cultural or biological impact is anticipated.
- 4) PG&E has confirmed, through use of the FAA's "Notice Criteria Tool" that allows entry of exact structure coordinates and heights to determine FAA requirements, that none of the tower raises that are part of this Project require a filing with the FAA.

On December 14, 2012, in response to a request from Energy Division staff for PG&E to clarify the information provided in Advice Letter 4058-E, PG&E filed Advice Letter 4058-E-A. PG&E reported that in response to the North American Electric Reliability Corporation (NERC) Alert, PG&E is to: 1) perform assessment, over a three-year period, of all applicable transmission facilities; 2) report to NERC on any findings; and 3) take prompt corrective actions to mitigate any identified discrepancies.

In the 4058-E-A filing, PG&E also updated the scope of the proposed Project. According to PG&E, this Project involves minor tower modifications to 15 out of approximately 126 towers along the 27-mile [Redacted] 230 kV Transmission Line. The existing towers range in height from 89 to 117 feet. PG&E plans to raise the height of 14 towers by replacing structure members, placing tower extensions that include replacing cross-arms, and relocating the conductors to the replacement cross-arms. In addition, PG&E will perform one "dead-end conversion," which consists of modifications to an existing tower to raise the connection points of the conductors. The conductors will not be replaced and the Project will not increase the voltage or capacity of the transmission line.

On January 7, 2013, DRA filed a protest (January 2013 Protest) to the AL 4058-E-A filing. In addition to reiterating the issues brought up in the previous protest, DRA brought up two additional issues:

- 1) PG&E has not provided studies or an evaluation of whether the line could be de-rated so that it complies with GO 95 minimum clearance requirements.
- 2) DRA recommends that the project be combined with mitigation works for the other circuits that PG&E is planning (in response to the NERC Alert) and the combined works should be submitted as a single CPCN application.

On January 9, 2013, PG&E filed a letter to the CPUC Energy Division Director. In addition to arguing on the previous issues brought up by DRA in its June 2012 Protest, PG&E addressed the two additional issues brought up by DRA in its January 2013 Protest.

- 1) PG&E argued that while the exemptions set forth under GO 131-D, Section III.A. do not require an alternatives analysis, de-rating of the Contra Costa-Moraga #1 and #2 lines is not feasible. The [Redacted] #1 and #2 230 kV lines directly serve the [Redacted] Substation and are 2 of the 6 major import lines that serve the [Redacted] load pocket. Without these lines, PG&E would not be able to serve all of the residents of Rossmoor or, under peak load conditions, [Redacted] load pocket.

- 2) PG&E argued that DRA's concerns about the costs of potential future projects to address potential discrepancies on lines other than the [Redacted] [Redacted] lines do not provide a valid basis for concluding that this minor maintenance Project is exempt from GO 131-D permit requirements.

## **NOTICE**

Notice of AL 4058-E and AL 4058-E-A was made by publication in the Commission's Daily Calendar. PG&E states that copies of the Advice Letters were mailed and distributed in accordance with Section III-G of General Order 96-B.

## **PROTESTS**

**Advice Letter AL 4058-E and AL 4058-E-A were protested by the Division of Ratepayer Advocates (DRA) and PG&E addressed the protests as described above.**

## **DISCUSSION**

**In October 2010, NERC issued an alert to transmission owners to assess discrepancies of their transmission facilities. Responding to the alert, PG&E is assessing its transmission facilities.**

In October 2010, NERC issued an alert to all transmission entities ("NERC Alert"). The NERC Alert identified a reliability concern associated with what NERC characterized as possible "significant and widespread" discrepancies between the design and actual field conditions of transmission facilities nationwide. The NERC Alert recommended that transmission entities: 1) perform an assessment, over a three-year period, of all applicable transmission facilities; 2) report to NERC on any findings; and 3) take prompt corrective action to mitigate any identified discrepancies. NERC Reliability Standards FAC-008-1 and FAC-009-1 require each transmission owner to have a documented Facility Rating Methodology (FRM) and to establish ratings for its transmission facilities consistent with its rating methodology. PG&E's FRM is contained in PG&E Utility Standards TD1004S and TD1004P-01 as well as Utility Work Procedure WP1004-04. In part, PG&E's FRM requires conductor clearances to "meet General Order (GO) 95 clearance requirements". (WP1004-04, p.1.)

**Assessing the transmission lines for discrepancies, PG&E used the current version of General Order 95.**

In response to the NERC Alert, PG&E has developed assessment plans and is assessing its transmission facilities.

For safety consideration, PG&E used the current version of the GO 95 minimum clearance requirements to assess its transmission facilities to identify discrepancies. PG&E stated that, “the use of current GO 95 minimum clearance requirements when assessing facilities for correct ratings is consistent with industry and good engineering practices.”

**PG&E identified discrepancies along the [Redacted] Transmission Lines and decided to raise tower heights to address those discrepancies.**

In assessing the Contra Costa-Moraga #1 and #2 transmission lines, based on the current version of the GO 95 requirements, PG&E discovered discrepancies that need to be addressed. An Engineering Assessment was conducted to determine if the lines could be de-rated to address the discrepancies. The assessment evaluated the impact of various power flows through the lines on the height of the line from the ground and concluded that to maintain the transmission rate that derived from the original transfer capability, the height of some towers along the route must be raised to meet GO 95 conductor-to-ground clearance requirements.

**CPUC staff needs to know enough details to approve all transmission construction proposals.**

While a CPCN is not required for this project, CPUC staff has the obligation to ensure the utilities provide safe and reliable utility service at reasonable rates. To this end, the CPUC Energy Division needs to know the background and details of transmission construction proposals. For example, a comprehensive mitigation plan in response to the NERC Alert would provide staff with useful information including the following assessments: the full scope of the GO 95 clearance discrepancies PG&E has discovered within the PG&E transmission system; options PG&E has considered in addressing those discrepancies; the nature of the safety and reliability risks to PG&E employees and the public and; the estimated cost of the overall Project.

Staff understands the complexity of the larger questions related to the NERC Alert and believes answers should be pursued by Energy Division Management independently of this Resolution.

**PG&E is allowed to reconstruct the existing transmission lines to meet the clearance requirements of the current version of General Order 95.**

PG&E's Facility Rating Methodology (WP 1004-04), referred to GO 95 as follows:

*"Safety:*

*Operating Pacific Gas and Electric Company's (the Company's) electrical system safely is everyone's responsibility. This rerate process ensures that transmission circuits operate within the approved conductor thermal limits and meet General Order (G.O.) 95 clearance requirements."*

The GO 95 in Section 12.2 stated that:

*"12.2 Maintenance of Lines*

*All lines and portions of lines shall be maintained in such condition as to provide safety factors not less than those specified in Rule 44.3. Lines and portions of lines constructed or reconstructed on or after the effective date of this Order shall be kept in conformity with the requirements of this Order.*

*The restoration of clearance originally established prior to the effective date of this Order, where the original clearance has been reduced by additional sagging or other causes, is not considered to be reconstruction and the reestablished clearance shall conform to the requirements of the rules in effect at the time the original clearance was established.*

*The changing of clearance for any other purpose is reconstruction and clearances so changed shall comply with the rules of this Order applicable to reconstruction."*

The FRM does not specify which version of GO 95 PG&E should use when rating the transmission lines. However, in deciding whether or not the actual field clearance is a discrepancy or not, PG&E used the current version of GO 95. PG&E noted that "the use of current GO 95 minimum clearance requirements when assessing facilities for correct ratings is consistent with industry and good engineering practices."

PG&E is allowed to reconstruct the existing transmission lines to meet the clearance requirements of the current version of GO 95.

**The discrepancies need to be addressed for power delivery needs of the newly interconnected generators.**

PG&E asserted that this Project is needed to provide the following functions: 1) to provide sufficient capacity for interconnecting the GenOn [Redacted] Power Plant, and 2) to provide adequate capacity for the [Redacted] [Redacted] load pocket.

Through exchange of emails with the CPUC Energy Division staff, PG&E asserted that this Project is “to help ensure capacity for GenOn Energy’s 760 MW [Redacted] Power Plant, which is scheduled to come online in May 2013, and for which PG&E is relying on to provide Resource Adequacy capacity later next year.” PG&E also asserted that “[t]he purpose of this work is to respond to the NERC Alert as discussed in PG&E’s supplemental response. This work is necessary to maintain the lines in compliance with GO 95 requirements, given existing line ratings, under all operating conditions. If PG&E is required to de-rate the lines, sufficient capacity may not be available for GenOn Energy’s 760 MW [Redacted] Power Plant, which is scheduled to come online this year.”

Staff is in agreement with PG&E’s assertion.

**The project does not constitute the construction of major transmission line facilities.**

Energy Division staff understand that PG&E’s proposed actions will be limited to raising the height of 14 lattice steel towers and to perform one dead-end conversion. Staff agrees with PG&E’s contention that the proposed construction does not constitute the construction of major electric transmission line facilities. Therefore, a CPCN is not required.

**FINDINGS**

1. In October 2010, NERC issued an alert to transmission owners to assess discrepancies of their transmission facilities. Responding to the alert, PG&E is assessing its transmission facilities.
2. Assessing the transmission lines for discrepancies, PG&E used the current version of General Order 95.
3. PG&E identified discrepancies along the [Redacted] Lines and is proposing to raise the height of 14 towers and perform one dead-end conversion to address those discrepancies.
4. On June 8, 2012, PG&E filed AL 4058-E; on December 14, 2012, PG&E filed AL 4058-E-A.
5. PG&E distributed Notice of Proposed Construction in accordance with General Order 131-D, Section XI. Paragraphs B.1 and B.2.
6. PG&E correctly followed the notification procedures required in GO 131-D for this project.



7. Advice Letter AL 4058-E and AL 4058-E-A were protested by the Division of Ratepayer Advocates.
8. Advice Letter AL 4058-E was protested by the City of Antioch.
9. The protest of the City of Antioch was withdrawn.
10. The Protestant raised concern regarding the exemption from filing a CPCN for the Project, and the additional concern of Project violation of FAA regulations.
11. PG&E responded to the protests of the Division of Ratepayer Advocates.
12. The project does not constitute the construction of major transmission line facilities.
13. GO 131-D provides that any person or entity may protest a claim of exemption for three reasons: 1) that the utility failed to provide proper notice; 2) that the utility incorrectly applied a GO 131-D exemption; 3) that any of the conditions exist which are specified in GO 131-D to render the exemption inapplicable.
14. The Protestant has not shown PG&E failed to provide notice or incorrectly applied a GO 131-D exemption. Also, the protestant has not shown that any of the conditions specified in GO 131-D Section III. B2 exists to invalidate the claimed exemption.
15. PG&E is allowed to reconstruct the Redacted No.1 and No.2, 230kV transmission lines to meet the clearance requirements of the current version of the GO 95.

**THEREFORE IT IS ORDERED THAT:**

1. The request of PG&E to raise the tower heights as requested in Advice Letter 4058-E-A is approved.

This Executive Director Resolution is effective today.

Dated February 20, 2013, at San Francisco, California.

/s/ PAUL CLANON  
PAUL CLANON  
Executive Director