

March 7, 2003

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File No. 023907-0037

Billie Blanchard, AICP  
California Public Utilities Commission  
c/o Aspen Environmental Group  
235 Montgomery Street, Suite 800  
San Francisco, CA 94104-2906

Re: A-02-09-043 – Application of Pacific Gas and Electric Company for a Certificate of Public Convenience and Necessity Authorizing the Construction of the Jefferson-Martin 230 kV Transmission Project – Comments of Pacific Gas and Electric Company on Scope of the Environmental Impact Report

Dear Ms. Blanchard:

On behalf of Pacific Gas and Electric Company (“PG&E”), we submit these comments on the scope of the Environmental Impact Report (“EIR”) to be prepared by the California Public Utilities Commission (“Commission” or “CPUC”) for the Jefferson-Martin 230 kV Transmission Project (“Jefferson-Martin Project” or “Project”).

**I. SUMMARY OF KEY POINTS**

Before we provide more detailed comments on the proper scope of the Jefferson-Martin Project EIR, we would like to highlight some points of particular concern. The most critical question to be resolved now is whether the EIR for the Jefferson-Martin 230 kV Project must include detailed analyses of various proposals to “piggyback” separate projects that would relocate significant portions of the existing 60 kV transmission system in the area despite the facts that such relocation projects: (a) would *not* further any of the objectives of the Jefferson-Martin 230 kV Project; (b) would *not* provide any reliability or economic benefits to ratepayers; (c) would *not* avoid or substantially lessen any of the significant effects of the Jefferson-Martin Project, but instead would cause adverse effects of their own; and (d) *would* increase statewide ratepayer costs by as much as \$146 million solely for the “visual benefit” of a limited number of residents and recreational users who arrived in the area long after the existing 60 kV line was built in 1950. PG&E respectfully submits that the California Environmental Quality Act (“CEQA”) does not compel this absurd result, but rather forbids it.

**A. The Scope of The EIR Analysis Must Relate to PG&E's CPCN Application**

PG&E has applied for a Certificate of Public Convenience and Necessity ("CPCN") to construct a *new 230 kV transmission line* to supply power to the San Francisco and northern San Mateo County area. PG&E's CPCN Application, which includes a detailed environmental assessment, describes the basic objectives of PG&E's Jefferson-Martin Project and provides a detailed description of the proposed Project and Project Alternatives. The Project objectives are met by the construction of the proposed new 230 kV transmission line along the proposed route or any of the alternative routes. Because CPUC rules require PG&E to recommend a specific proposed route for the Project, the Project description includes a proposal to modify existing electrical transmission facilities, including the existing 60 kV tower line between the Jefferson and Sneath Lane substations, *solely to accommodate* the new 230 kV circuit. The Application does not request approval from the CPUC to make any changes to the existing electric transmission system for any separate purpose. In short, the Application requests authorization to construct only the facilities necessary to enable PG&E to construct a new 230 kV circuit between Jefferson and Martin substations.

In an attempt to minimize the potential impacts of the new 230 kV line, PG&E has proposed to install the new line on a rebuilt version of the existing 60 kV line, thereby obviating the need to create a second transmission line corridor in the Project area. The Application discusses in detail the modification to the existing 60 kV system that would be necessary to accommodate the new line if, and only if, PG&E's proposed route (or a close variant thereof) is approved for construction.

If, on the other hand, the Commission approves a different route alternative outside the existing corridor – *e.g.*, alternative 1B in PG&E's Proponent's Environmental Assessment ("PEA") – none of the modifications to the existing 60 kV system would be required. In that event, modification of the existing transmission system would be beyond the scope of this proceeding and the EIR, as PG&E's Application does not request a CPCN for such work except as may be necessary (and within constitutional constraints) to mitigate any identified significant environmental impacts of the new 230 kV line *as approved by the CPUC*. Should the CPUC approve construction of the new 230 kV line entirely underground within a new corridor, as some commenters have recommended, the Project plainly would not result in any impacts that could be mitigated by the destruction and subsequent rebuilding of an existing 60 kV line.

The Committee for Green Foothills ("CGF"), the City of Daly City, and others have suggested including in the EIR various proposals to piggyback on PG&E's proposed Project new projects that would underground the existing 60 kV system in addition to construction of the new 230 kV transmission line. While the Commission may have the power to require relocation of existing electric transmission facilities under certain circumstances, which are not present here,

there is no application or other proceeding pending before the Commission that seeks authorization to relocate the existing 60 kV line system, PG&E's proposal to mitigate the potential impacts of the new 230 kV Jefferson-Martin transmission line by co-locating it with the existing 60 kV line notwithstanding. Proposals that the CPUC nevertheless require PG&E to use ratepayer money to remove existing facilities are beyond the scope of the EIR.

**B. The Project Alternatives Analyzed in the EIR *Must* Be Properly Focused on the Basic Project Objectives and *Must* Avoid or Substantially Lessen Significant Effects of the Project**

Proposals to underground the new 230 kV line *and* the existing 60 kV line are not legitimate alternatives to the Project under CEQA. Instead, these proposals are separate and distinct projects, referred to herein as "Existing 60 kV Relocation Projects." A proper CEQA alternatives analysis should be limited to project alternatives that are designed to meet the basic Project objectives and avoid or substantially lessen significant effects of the Project. Proposals to modify existing facilities that are unrelated to the construction of the new 230 kV line are separate projects. These proposals have nothing to do with PG&E's basic Project objectives and are, therefore, entirely different projects than what PG&E proposes in this Application. Moreover, any Project route that would place the new 230 kV circuit entirely underground will have no significant effects that would be reduced or avoided by modifying the existing 60 kV system. Indeed, modifications to the existing 60 kV system would likely cause additional environmental impacts. The CPUC should not include analyses of the Existing 60 kV Relocation Projects in the Jefferson-Martin EIR as doing so would mislead the public, and create a defect in the EIR under CEQA.

**C. In an EIR, Mitigation Measures *Must* Be Properly Focused on Project Impacts and *Must* Meet Constitutional Requirements**

CEQA recognizes that, to meet constitutional limitations, mitigation measures must relate to any significant impacts from the Project.<sup>1</sup> Under *Nollan v. California Coastal Commission*, there must be a nexus between the mitigation required as a condition of receiving the permit and the significant environmental impacts for which the mitigation is required.<sup>2</sup> Several public commenters have suggested that the existing 60 kV system should be placed underground in connection with the Jefferson-Martin Project. There can be no nexus between the impacts that would be caused by constructing the new 230 kV line in the "all-underground" route 1B alternative in the PEA, where it would be entirely invisible, and purported "mitigation" that consists of undergrounding an existing 60 kV line that presently sits in a *separate corridor*.

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<sup>1</sup> 14 CCR § 15126.4(a)(4)(A) - (B).

<sup>2</sup> *Nollan v. California Coastal Com'n*, 483 U.S. 825, 837 (1987).

#### **D. Various Proposals Present Technical and Economic Feasibility Concerns**

Project Alternatives proposed by members of the public also present feasibility concerns from a technical and economic standpoint. As discussed in detail in Section IV below, there are particular concerns with respect to the Project Alternatives that would partially underground the new 230 kV line in watershed lands. The same holds true of the proposed Existing 60 kV Relocation Projects that would underground the new 230 kV line and the existing 60 kV line outside of the existing overhead transmission corridor. The estimated costs of such Project Alternatives and Existing 60 kV Relocation Projects are significantly greater than the proposed Project because, among other things, undergrounding the 60 kV line requires an entirely new 60 kV cable system and a duct bank and trench almost twice as wide as for an underground 230 kV line alone.

These vastly increased costs mean that, even if the Existing 60 kV Relocation Projects were legitimate alternatives to the 230 kV Project, or if the Commission could establish some nexus between the impacts caused by the 230 kV Project and the “mitigation” of undergrounding the existing 60 kV line, these Existing 60 kV Relocation Projects would still be improper for detailed discussion in the EIR. Under CEQA, the “range of potential alternatives to the proposed [P]roject shall include those that could *feasibly* accomplish most of the basic objectives of the Project . . . .”<sup>3</sup> Further, one of the “factors that may be taken into account when addressing the feasibility of alternatives . . . [is] “economic viability . . . .”<sup>4</sup> In particular, the Existing 60 kV Relocation Project proposed by CGF, which is estimated to cost \$326,638,094, is infeasible from a cost perspective. (This is approximately \$146 million more than the proposed Project and \$110 million more than the complete undergrounding of the 230 kV line alone.) The technical feasibility issues and the estimated costs of these Project Alternatives and Existing 60 kV Relocation Projects are discussed in more detail below.

PG&E notes that the Commission previously has refused to impose such vast costs on ratepayers throughout the State to benefit disproportionately the few property owners along the route of a new transmission line. In one case, the Commission refused to order undergrounding because, among other things, the “project would, at best, benefit only Thanos and his neighbors and not the general public.”<sup>5</sup> Requiring ratepayers to pay \$146 million more to avoid putting the new 230 kV line in an existing transmission corridor, or \$110 million more to remove an overhead 60 kV line that was constructed in 1950, long before the neighboring property owners

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<sup>3</sup> 14 CCR § 15126.6(c). (Emphasis added).

<sup>4</sup> 14 CCR § 15126.6(f)(1).

<sup>5</sup> *Complaint of Thanos v. PG&E Co.*, Decision No. 8211023, 1982 LEXIS 1023 (CPUC Nov. 3, 1982) at \*27.

built or purchased homes near such line, would not only be economically infeasible, but also would be contrary to good public policy.

At an estimated cost of up to \$221 million, alternatives calling for partial undergrounding of the new line and, in some cases, the existing 60 kV line as well, in the watershed lands may in some cases rise to the level of being infeasible on economic grounds. While the cost of PEA alternative 1B is comparable, that alternative would involve far fewer environmental impacts and engineering challenges than would the partial undergrounding alternatives. Given the availability of alternative 1B, it may be appropriate to remove the partial underground proposals from detailed consideration in the EIR based on a combination of cost and environmental grounds.

**E. There Are Environmental Impacts Associated with the Proposals That Likely Will Have a Substantial Impact on the Project Schedule**

There are environmental impacts associated with the Project Alternatives and Existing 60 kV Relocation Projects. In particular, several of the Project Alternatives (and Existing 60 kV Relocation Projects) would cause impacts to serpentine habitats and may result in significant Project delays if, as expected, locally grown native seeds are required for revegetation of the disturbed areas. (It will take several years to grow sufficient native seed to revegetate the much larger disturbed areas that would result from partial undergrounding in the watershed lands). These and other environmental impacts are discussed in more detail in Section IV.B, below.

**II. PROPER CHARACTERIZATION OF THE PROJECT**

The purpose of this Project, which is described at length in PEA, is to construct a second major 230 kV independent transmission line pathway into the San Francisco and northern San Mateo County area. The California Independent System Operator (“ISO”) determined that the Jefferson-Martin 230 kV Transmission Project (without regard to route) is necessary to ensure the reliability of the transmission system in the Project area. Significantly, the ISO has *not* approved the separate relocation and undergrounding of the existing 60 kV line, nor any of the associated transmission system modifications, because no such changes are needed to ensure transmission system reliability or provide economic benefit to ratepayers. The PEA’s statement of the Project objectives follows:

- **Meet Electric Demand** – The first basic Project objective is to ensure that the electric system includes adequate capacity to safely and reliably serve the San Francisco and northern San Mateo County area, even under reduced generation scenarios. This is the basic purpose of the project.
- **Comply with Planning Criteria** – The second basic Project objective is to ensure that the northern San Mateo County area transmission system will continue to meet planning standards and criteria established by the ISO and the North American

Electric Reliability Council (NERC) to ensure the safety and reliability of the transmission system. These planning criteria must be met by the Project. Compliance with these criteria would also result in continued consistency with the pre-ISO planning guide entitled “Supplementary Guide for Application of the Criteria for San Francisco,” which was considered as part of the October 2000 stakeholder study.

- **Create a More Diverse Transmission System in the Area** – The third basic Project objective is to further increase transmission system reliability in the San Francisco and northern San Mateo County area by providing a second independent major transmission line pathway into the area. By meeting this objective, the Project would eliminate the “all eggs in one basket” concern that currently exists in the area.
- **Implement the ISO Board of Governors’ April 2002 Resolution** – The fourth basic Project objective is to implement the April 2002 ISO Board of Governors’ resolution approving the Jefferson-Martin Project for addition to the ISO-controlled grid, consistent with the ISO Tariff as adopted by the Federal Energy Regulatory Commission pursuant to the Federal Power Act.

PEA at 2-5. The PEA also contains a description of how the Project will achieve these objectives. If constructed along the specific route recommended by PG&E, the Project would consist of the following elements:

- Installation of a new, approximately 27-mile-long 230 kV transmission line with overhead and underground segments, with the first 14.7 miles of this line to be installed on a rebuilt version of PG&E’s existing Jefferson-Martin 60 kV double-circuit transmission line and the remaining 12.4 miles to be installed in a new underground duct bank, as further described in this PEA.
- Rebuilding the existing Jefferson-Martin 60 kV double-circuit tower line to enable the east side to operate at 60 kV and the west side at 230 kV. Approximately 100 structures will be replaced.
- Construction of a new transition station near the intersection of San Bruno Avenue and Glenview Drive just east of Skyline Boulevard/Highway 35 to transition from the 14.7-mile overhead 230 kV transmission line to the 12.4-mile underground 230 kV transmission line.
- Modification of the existing Jefferson and Martin substations to accommodate the new 230 kV transmission line.
- Modifications to equipment at the existing San Mateo, Ralston, Millbrae, and Monta Vista substations as described in Section 2.3.5.
- Modification of Hillsdale Junction switching station for new 60 kV arrangement as described in Section 2.3.5.

- Access Roads: Existing access roads will be used to the extent possible. In limited areas new cross-country access and access roads will be developed as proposed in Appendix A-1, Construction Methods Report Table.
- Pull Sites: These are areas used by the construction crews to pull and tension sock lines and inductors between towers and are shown in Appendix A-1, Construction Methods Report Table.

PEA at 2-22 and 2-25. The Notice of Preparation (“NOP”) includes a Project description that largely summarizes the Project description in the PEA.

During public scoping meetings under CEQA, members of the public have proposed Project Alternatives in the existing utility corridor that would meet basic Project objectives. Those alternatives include the following “partial undergrounding” alternatives: (1) placing the new 230 kV transmission line underground in the Lexington Avenue/Black Mountain Road section; and (2) placing the new 230 kV transmission line underground in the Burlington Heights/Skyline Frontage Road section. Members of the public have also proposed Project Alternatives in a new right-of-way. Those include the following: (1) moving the new 230 kV line and the existing 60 kV line overhead to the west of I-280 away from the Burlington Heights/Skyline Frontage Road section; and (2) re-routing the new 230 kV line and the existing 60 kV line overhead to the west away from the Lexington Avenue/Black Mountain Road section. Like the proposed Project, modifying the existing 60 kV system (*i.e.*, rebuilding the tower line) where the new 230 kV line would be placed near the existing transmission corridor in the latter two proposals would be necessary *only* to mitigate the potential impacts of the new 230 kV line by combining it with an existing line, rather than adding an entirely new line to the existing corridor.<sup>6</sup> Members of the public have also suggested a Project Alternative that uses a combination of the existing utility corridor and a new right-of-way in which the new 230 kV line is located underground in Canada Road (along route segment 1B described in the PEA) until Trousdale Drive, at which point it would transition overhead and continue along the proposed segment 1A route. As discussed in more detail in Section IV, below, these proposals present technical, economic, and environmental feasibility issues.<sup>7</sup>

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<sup>6</sup> Rebuilding the existing 60 kV line in these cases would avoid the need to create an entirely separate 230 kV tower line. Therefore, these alternatives are comparable to PG&E’s proposed Project, where PG&E has proposed to rebuild the existing 60 kV line only to accommodate the existing 60 kV line and thereby obviate the need to build a new set of structures solely for the new 230 kV line.

<sup>7</sup> The alternatives discussed in this paragraph are also referred to as “Partial Underground” Project Alternatives for the purposes of this letter.

Members of the public have also suggested various Existing 60 kV Relocation Projects in the existing utility corridor and new right-of-way<sup>8</sup>:

1. Members of the public have proposed Existing 60 kV Relocation Projects that involve undergrounding the new 230 kV line, which would eliminate all visual impacts of the proposed Project, yet still call for the CPUC to require the undergrounding, at ratepayer expense, of the existing 60 kV line in the existing utility corridor. Those are: (1) undergrounding the new 230 kV line *and* the existing 60 kV line along Lexington Avenue/Black Mountain Road; and (2) undergrounding the new 230 kV line *and* the existing 60 kV line along Burlington Heights/Skyline Frontage Road.

2. The City of Daly City has proposed an Existing 60 kV Relocation Project at the north end of the proposed Project route. In particular, the City has suggested that the new 230 kV transmission line depart Guadalupe Canyon Drive and be installed underground in a new right-of-way that would proceed cross-country directly to the Martin substation. That part of the City of Daly City's proposal is a legitimate alternative to the Project, although its routing through sensitive habitat areas in San Bruno Mountain does pose serious environmental concerns. However, Daly City has, in addition, requested the Commission to require PG&E to relocate, at ratepayer expense, the existing overhead 60 kV transmission lines in this location underground, even though the Jefferson-Martin Project will be built entirely underground in this area and therefore will not result in any visual impact that might be "mitigated" by relocating existing facilities.

3. CGF and several members of the public have endorsed PG&E's "all-underground" alternative route segment 1B (as opposed to the overhead route segment 1A, which is included in the proposed Project). As demonstrated in the PEA, and by common sense, approval of this alternative would eliminate all visual impacts of the Jefferson-Martin 230 kV Project. Nonetheless, these commenters have asked the CPUC to require PG&E to relocate, at ratepayer expense, the existing 60 kV transmission system between Jefferson and the intersection of Skyline Drive and Trousdale Drive in the City of Burlingame underground along route segment 1B. The Committee for Green Foothills has requested that the CPUC analyze this project in the Jefferson-Martin EIR. (For the purposes of this letter, this Existing 60 kV Relocation Project is referred to as the "230 kV/60kV All-Underground" Existing 60 kV Relocation Project.)

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<sup>8</sup> Existing 60 kV Relocation Projects one and two, below, are also referred to as "Partial Underground" Existing 60 kV Relocation Projects for the purposes of this letter.



### III. LEGAL ISSUES

#### A. Any CPUC Authority To Underground the Existing 60 kV Line Has Not Been Properly Invoked

CGF, the City of Daly City, and several individuals request the Energy Division to consider changes to the existing electric transmission system that are not included within the CPCN authorization sought by PG&E in this Application because they are not necessary to construct the new 230 kV transmission line or to mitigate any significant environmental impacts of the Project. In particular, the following requests are beyond the scope of the Project: (1) CGF and several individuals have requested the new 230 kV line to be located along route segment 1B<sup>9</sup>, where it would clearly have no significant aesthetic impacts, and have made the additional request that the Commission require PG&E to relocate the existing overhead 60 kV transmission line from its current location in the existing utility corridor to an underground location in Canada Road; (2) the City of Daly City has suggested that the new 230 kV transmission line depart Guadalupe Canyon Drive and be installed underground in a new right-of-way that would proceed cross-country directly to the Martin substation, where it would clearly have no significant aesthetic impacts, and has requested the Commission to require PG&E to relocate the existing overhead 60 kV transmission lines in this area to be relocated underground in this same location; and (3) several other individuals have requested that the Commission require PG&E to place the new 230 kV line *and* the existing 60 kV line underground along the Lexington Avenue/Black Mountain Road and Burlington Heights/Skyline Frontage Road areas.

PG&E's Application pending before the Commission does not request CPCN authorization to modify the existing electric transmission system other than to the limited extent necessary to construct the new 230 kV circuit in a way that minimizes potential impacts from a new 230 kV line. While such modifications are necessary to construct the line along PG&E's proposed route with no significant environmental impact, no such modification would be necessary were the CPUC to approve alternative 1B in the PEA or any other route that utilizes a corridor other than the existing 60 kV corridor. If CGF, the City of Daly City, or any other interested person wishes to have the Commission consider any modifications to the existing electric transmission system, it must first make a proper application to the Commission. No such application is under consideration. In any event, even if such application were made, it would be an entirely different project than what PG&E proposes in this proceeding, and would likely require independent CEQA analysis.

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<sup>9</sup> PEA at 3-28.

**B. Undergrounding the Existing 60 kV Line Is Not Permissible under CEQA**

**1. The EIR May Only Analyze Alternatives That Feasibly Attain the Basic Project Objectives and Avoid or Substantially Lessen Significant Effects of the Project**

The Project under consideration is the construction of a new 230 kV line between Jefferson substation and Martin substation. As discussed above, relocation of existing Jefferson-Martin electric transmission facilities underground is a separate project that has not been submitted by anyone to the CPUC for consideration. For that reason alone the CPUC should exclude from the EIR proposals that call for undergrounding the 60 kV line or other changes to the existing electric transmission system. Those Existing 60 kV Relocation Projects do not relate to the Jefferson-Martin Project objectives. Although CEQA requires a discussion of a range of alternatives to the Project, the EIR need examine in detail only the alternatives that the lead agency determines “would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project . . . .”<sup>10</sup> Those project objectives are defined by the applicant, not by the lead agency or any other interested party.<sup>11</sup> Nowhere in the Statement of Objectives in the PEA does PG&E mention the existing 60 kV line. Rather, the existing 60 kV line is raised in the Project description section of the PEA, where PG&E provides a detailed itemization of the facilities required to implement the Project if constructed along PG&E’s proposed route. That description explains that the Project will rebuild the 60 kV double-circuit transmission line for those portions of the line where the 230 kV will be overhead simply as a means to construct the new 230 kV line in a way that PG&E believes has the least environmental and community impacts.<sup>12</sup>

Not every alternative may be included in the EIR. In deciding what alternatives to consider in the EIR, the lead agency must use a “rule of reason.”<sup>13</sup> One of the principles of this “rule of reason” is that an agency must examine alternatives that meet no more and no less than the Project objectives. As one case has noted,

“Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal’s benefit against its environmental cost, consider mitigation

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<sup>10</sup> 14 CCR § 15126.6(a). *See also* 14 CCR § 15126.6(f).

<sup>11</sup> *See Citizens of Goleta Valley v. Board of Supervisors*, 52 Cal. 3d 553, 561 (1990) (en banc) (“As to the suggested Wallover alternative [inland site], the EIR explained: ‘Sites located inland from the ocean . . . have not been addressed since it is felt that oceanfront property is required to meet the basic objectives of the project.’”)

<sup>12</sup> PEA at p. 2-22.

<sup>13</sup> 14 CCR § 15126.6(f).

measures, assess the advantage of terminating the proposal (*i.e.*, the ‘no project’ alternative) and weigh other alternatives in the balance.”<sup>14</sup>

In short, the EIR must accurately reflect the Project objectives.

Here, the Project is the construction of the 230 kV line between Jefferson and Martin substations. The proposals to underground the 60 kV line are premised on distorted Project objectives. Suggesting that the EIR should evaluate placing the existing 60 kV line underground simply because PG&E’s proposed route would rebuild the existing 60 kV towers solely to minimize the potential impacts of a new 230 kV line is akin to arguing that the EIR should consider relocating the Jefferson or Martin Substations because the new 230 kV line will require modification of the facilities at such substations to accommodate the new 230 kV line. Plainly, these suggestions are not alternatives to PG&E’s proposed Project, but rather an attempt to impose the commentors’ proposed projects on top of PG&E’s proposed Project. That is not proper under CEQA and should be rejected by the Commission in preparing the EIR for PG&E’s proposed Project.

Alternatives must also reduce or avoid significant effects of the Project. If a new 230 kV circuit were placed underground, then the Project would have no significant impacts that would be reduced or avoided by modification of the 60 kV system. The 60 kV system is an existing facility and part of the baseline environmental condition. Indeed, any changes to this existing facility would likely have impacts to serpentine habitat of the area and would have other adverse environmental impacts.

2. **It Is Illegal To Require the Existing 60 kV Line To Be Placed Underground as a Mitigation Measure for Any Impacts Caused by a New Underground 230 kV Line Unless There Is a “Nexus” to Project Impacts and Unless the Mitigation Is “Roughly Proportional” to Those Impacts**

The U.S. Constitution prohibits public agencies from imposing conditions on a permit or license that amount to a “taking” under the Fifth Amendment of the U.S. Constitution. CEQA incorporates these constitutional requirements:

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<sup>14</sup> *County of Inyo v. City of Los Angeles*, 71 Cal. App. 3d 185, 192-93 (1977); *see also City of Santee v. County of San Diego*, 214 Cal. App. 3d 1438, 1456 (1989) (noting that without an accurate description of a project, an EIR will discuss inadequate project alternatives and will fail to formulate adequate mitigation measures).

“Mitigation measures must be consistent with all applicable constitutional requirements, including the following:

(A) There must be an essential nexus (i.e. connection) between the mitigation measure and a legitimate governmental interest. *Nollan v. California Coastal Commission*, 483 U.S. 825 (1987); and

(B) The mitigation measure must be ‘roughly proportional’ to the impacts of the project. *Dolan v. City of Tigard*, 512 U.S. 374 (1994). Where the mitigation measure is an ad hoc exaction, it must be ‘roughly proportional’ to the impacts of the project. *Ehrlich v. City of Culver City* (1996) 12 Cal. 4<sup>th</sup> 854 (1996).”<sup>15</sup>

Therefore, “[i]f the lead agency determines that a mitigation measure cannot be legally imposed, the measure need not be proposed or analyzed. Instead, the EIR may simply reference that fact and briefly explain the reasons underlying the lead agency’s determination.”<sup>16</sup> For the reasons discussed below, that is precisely the path the CPUC should take in responding to requests for consideration of Existing 60 kV Relocation Projects in this case.

As noted above in Section II, several commenters have suggested the CPUC consider certain modifications to the existing 60 kV transmission system in connection with the Jefferson-Martin Project. These suggested modifications can be divided in three categories:

(1) modifications that likely have a “nexus” to Project impacts and may be incorporated into the Project as mitigation measures; (2) modifications that may have a “nexus” to Project impacts; and (3) modifications that have no relationship to the Project impacts and clearly lack a legal “nexus.”

The first category of 60 kV system modifications includes the Project Alternatives that would relocate the new 230 kV line and the existing 60 kV line away from the residential areas along the Lexington Avenue/Black Mountain Road and Burlington Heights/Skyline Frontage Road sections. Like the proposed Project, modification of the existing 60 kV line for these Project Alternatives would have a “nexus” to Project impacts. In particular, relocating the existing 60 kV system to the location of the proposed new 230 kV system would avoid the need for a separate tower line for the 230 kV circuit. Like the proposed Project, the existing 60 kV tower line could be rebuilt as mitigation to avoid the impacts of the second tower line.

The second category of 60 kV system modifications includes those Partial Underground Existing 60 kV Relocation Projects that would place the new 230 kV line underground. As

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<sup>15</sup> 14 CCR § 15126.4(a)(4)(A) - (B).

<sup>16</sup> 14 CCR § 15126.4(a)(5) (emphasis added).

PG&E has noted previously, if the new 230 kV circuit is placed underground, no changes to the existing 60 kV system are needed and the existing baseline environmental condition would remain unchanged. If the new 230 kV circuit is located underground and the existing conditions aboveground remain unchanged, it is difficult to see how locating the 60 kV line underground would have a “nexus” to Project impacts. The existing 60 kV line would not need to be modified to accommodate the 230 kV line in those areas, and therefore could create no new impacts that might require mitigation. However, it is theoretically possible – though contrary to the well-supported visual analysis set forth in PG&E’s PEA – that the CPUC may be able to show that relocation of the existing 60 kV system underground in one area of the existing corridor would mitigate adverse visual impacts caused by the rebuilt overhead towers to be constructed in other areas. In order to legally support such mitigation, however, the CPUC must develop substantial evidence to demonstrate a constitutionally-required “nexus” between the adverse impacts and the proposed mitigation.

The third category of 60 kV system modifications includes the 230 kV/60 kV All-Underground Existing 60 kV Relocation Project proposed by CGF. In this case, there can be no “nexus” between the proposed “mitigation” of undergrounding the existing 60 kV line in Canada Road and the impacts caused by a new underground 230 kV line in Canada Road. If the new 230 kV line is located completely underground in Canada Road, there would be, quite simply, no adverse impacts that would be mitigated by modifications to the existing 60 kV system. Accordingly, there can be no constitutional “nexus” between impacts and mitigation.

Even where there is a “nexus” between mitigation measures and impacts, the Supreme Court in *Dolan v. City of Tigard* requires a “rough proportionality” between the extent of the impacts caused by the approval of the Project and the extent to which exactions actually mitigate those impacts.<sup>17</sup>

#### **IV. THE ROUTES PROPOSED IN PUBLIC SCOPING MEETINGS PRESENT FEASIBILITY CONCERNS**

Under CEQA, not every alternative must be discussed in the EIR. As discussed above, one limiting factor is that the alternative achieve “most of the basic objectives of the project.”<sup>18</sup> The CEQA Guidelines further provide:

“Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.”

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<sup>17</sup> *Dolan v. City of Tigard*, 512 U.S. 374, 391 (1994).

<sup>18</sup> 14 CCR § 15126.6.

In turn, “feasible” means “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.”<sup>19</sup> PG&E discusses the key feasibility concerns for both the Project Alternatives and the Existing 60 kV Relocation Projects. PG&E discusses the feasibility issues concerning these Existing 60 kV Relocation Projects without conceding or admitting that these additional projects are valid alternatives under CEQA.

**A. The Estimated Costs of The Partial Underground and 230 kV/60 kV All-Underground Proposals Represent a Substantial Increase from the Estimated Costs of PG&E’s Proposed Project**

**1. Overview of Cost Methodology**

PG&E’s detailed cost estimate for the proposed Project is contained in Tab B of its Application. The total cost estimate for the proposed Project is \$180,820,832. Those costs are discussed in detail in that Application.

The estimated costs of all of the proposals discussed in this letter are greater than PG&E’s estimated cost for the proposed Project. Those costs were calculated using the same design criteria standards with which PG&E calculated the cost of the proposed Project. The costs of these Project Alternatives and Existing 60 kV Relocation Projects are based on a combination of preliminary costs estimates that PG&E obtained from an independent engineering and construction firm, Black & Veatch, as well as PG&E’s estimates of its costs.

The Black & Veatch cost estimates are based on unit quantities of materials required. Quantities are based on conceptual engineering design involving site visits, field data gathering, general engineering design, selection of materials, preliminary structure designs, and input from PG&E and other consultants to define the scope of work required to construct the Project consistent with PG&E’s requirements. The unit labor-hour represents the number of estimated hours required to assemble and install the unit quantities. Labor hour units are derived from historical data and are adjusted based on recent input and bids from construction contractors in the Project area. The unit cost per labor-hour is derived based on typical labor costs for contractors involved in transmission line construction in the Project area. This rate is derived from historical data from recent work in the area, as well as recent bids received on similar

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<sup>19</sup> Cal. Pub. Res. Code § 21061.1. The Guidelines further provide that “[a]mong the factors that may be taken into account when addressing the feasibility of alternatives are “site suitability, economic viability, availability of infrastructure, general plan consistence, other plans or regulatory limitations, jurisdiction boundaries. . . and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site . . . .” 14 CCR § 15126.6(f)(1).

projects in the area. Engineering labor rates include an engineering rate multiplier, which accounts for overhead and facility costs related to engineering services. Engineering costs are assumed to be 3% of the total material, labor, construction management, and permit costs. A 12% profit margin is assumed and applied to all costs. Miscellaneous costs are added to the base price to account for possible differences in quantities and unit prices. The miscellaneous costs are determined by adding an additional 5% of material costs and 10% of labor costs.

Black & Veatch includes a 10% contingency for its estimates relating to underground transmission line work. Underground construction has many unknowns that may drive the total costs upward, such as geology and other underground facilities not discovered during the design phase that may lead to additional costs. PG&E then adds its estimated costs to Black & Veatch's cost estimates. PG&E includes a 5% contingency on Black & Veatch's total costs. In addition, as with the proposed Project, PG&E adds a 25% contingency to its own direct costs. The preliminary cost estimates also include the full four percent budget benchmark amount for electric and magnetic field ("EMF") reduction measures. Because the same cost estimating methodology is used for each of the alternative cost estimates, the cost estimates allow an "apples to apples" comparison of the relative costs of the different options considered.

As noted in its Response to CPUC Deficiency Request Nos. One and Two, undergrounding the new 230 kV transmission line is not feasible in the San Mateo Creek canyon crossing (between proposed new structures 6/37-7/39). To underground the new 230 kV transmission there would require technically challenging, time consuming and expensive construction in hilly terrain. Given the depth of the canyon and the high probability that the geological makeup of the area would be rock, a directional drill would not likely be feasible. Therefore, PG&E has assumed that all of the Partial Underground Project Alternatives and Partial Underground 60 kV Relocation Projects have an overhead crossing between proposed new structures 6/37 and 7/39.

All of the Partial Undergrounding Project Alternatives and Partial Undergrounding Existing 60 kV Relocation Projects will require significantly more environmental mitigation costs. Because such options would trench along the existing utility corridor rather than only relocate tower sites, a much greater area would be disturbed. Revegetation of this larger area alone will be quite expensive as resource agencies are likely to require that native plant seed be used for revegetation, thus requiring a number of seed collection and nursery planting events just to obtain the needed amount of native seed.

PG&E notes that the cost of placing the existing 60 kV line underground alongside a new underground 230 kV is substantially greater than the cost of maintaining the existing 60 kV line overhead. An entire new cable system is required for an underground 60 kV system; overhead transmission lines use conductors whereas underground transmission lines use cables. Therefore,

the overhead 60 kV transmission line cannot merely be taken off the overhead towers and placed alongside an underground 230 kV line. Moreover, although final engineering does not exist, the approximately two-foot duct bank needed for an underground 230 kV line alone is expected to need to expand to an approximately 3.75 foot-duct bank to accommodate both the 230 kV and 60 kV cables. Not surprisingly, this means a wider trench must be dug, more spoils will need to be transported to a landfill, and more clean backfill imported. Moreover, PG&E standards call for separate manholes for each circuit when two circuits are in a single duct bank for safety and electrical operations reasons. (PG&E currently believes that it may be feasible for both circuits to be placed in a single duct bank, but there is some concern that two separate duct banks, and thus two separate trenches, may be needed for safety and operational reasons. If so, the costs would significantly increase.) Likewise, removing the existing 60 kV conductor system results in increased costs as the existing overhead structures would have to be demolished and the impacted area would have to be restored.

PG&E is still investigating whether additional protection schemes are needed that could add approximately \$1 million to the Partial Underground cost estimates and approximately \$2 million to the 230 kV/60 kV All-Underground Existing 60 kV Relocation Project cost estimate. A special protection scheme to locate underground cable faults may be necessary to improve service restoration time to acceptable levels.

Transition structures are necessary for all of the Partial Underground Project Alternatives and Partial Underground Existing 60 kV Relocation Projects. These transition structures would be located at each end of the underground portions and would transition the 230 kV line (or the 60 kV line, in the case of the Partial Underground Existing 60 kV Relocation Projects) from an underground to an overhead configuration (or vice versa). The riser poles at each transition location would require additional equipment to be mounted on the poles, such as switches, lightning arresters, and potheads. If the special protection scheme is needed, additional protective devices would be mounted on the poles. If all of these devices cannot be located on one pole, then additional space may be required adjacent to the pole for other structures or cabinets. In addition, circuit switchers may be necessary to drop charging currents to the underground sections of the lines. This is because vacuum bottles or other attachments may not be capable of dropping the amount of current necessary to allow maintenance. If circuit switchers are necessary, an eight-to-ten foot tall additional structure next to the riser pole will likely be necessary for the circuit switcher.



2. **Description of Project Alternatives, Existing 60 kV Relocation Projects, and Their Costs**

The estimated costs of the various Project Alternatives and Existing 60 kV Relocation Projects are summarized in Table 1 on the following page. More specific descriptions are given below.

**TABLE 1**

	PG&E's Proposed Project in Application	230 kV UG Only for Lexington Ave./Black Mtn. Road Project Alternative	230 kV UG Only for Burlington Hts./Skyline Frontage Rd Project Alternative	230 kV UG Only for Combination of Lexington Ave./Black Mtn. Road and Burlington Hts./Skyline Frontage Rd. Project Alternative	230 kV Overhead Re- Route for Burlington Hts./Skyline Frontage Rd. Project Alternative	230 kV and 60 kV Overhead Re-Route for Burlington Hts./Skyline Frontage Rd. Project Alternative	230 kV UG and 60 kV UG for Lexington Ave./Black Mtn. Rd. Existing 60 kV Relocation Project	230 kV UG and 60 kV UG for Burlington Hts./Skyline Frontage Rd. Existing 60 kV Relocation Project	230 kV UG and 60 kV UG for Combination of Lexington Ave./Black Mtn. Road and Burlington Hts./Skyline Frontage Rd. Existing 60 kV Relocation Project	Project Alternative 1B in PG&E's Proponent's Environ- mental Assessment	230/60 kV All- Underground Existing 60 kV Relocation Project
OH 230kV Transmission Line	29,702,507	24,231,598	28,163,123	22,692,215	22,890,426	24,766,750	24,749,222	28,316,630	23,363,345		
UG 230kV Transmission Line	78,302,773	100,671,240	84,276,189	106,644,656	78,302,773	100,671,240	113,327,096	88,054,111	123,078,434	173,968,460	280,067,476
PG&E Internal Services	4,997,853	6,511,869	5,351,392	6,865,408	6,314,331	8,289,917	6,796,599	5,411,134	7,209,880	3,422,744	4,659,838
Substations Modification	34,593,333	36,460,895	36,460,895	36,460,895	36,460,895	36,460,895	36,460,895	36,460,895	36,460,895	30,416,679	33,582,337
Transition Station	1,698,296	1,698,296	1,698,296	1,698,296	1,698,296	1,698,296	1,698,296	1,698,296	1,698,296		
Line Protection	3,049,213	3,049,213	3,049,213	3,049,213	3,049,213	3,049,213	3,049,213	3,049,213	3,049,213	3,049,213	3,049,213
Land Acquisition	24,582,529	23,884,692	23,842,907	23,145,070	21,010,754	23,145,070	23,884,692	23,842,907	23,145,070	1,500,000	1,500,000
Permitting	3,779,230	3,779,230	3,779,230	3,779,230	3,779,230	3,779,230	3,779,230	3,779,230	3,779,230	3,779,230	3,779,230
<b>Total Cost</b>	<b>180,705,734</b>	<b>200,287,033</b>	<b>186,621,245</b>	<b>204,334,983</b>	<b>173,505,918</b>	<b>201,860,612</b>	<b>213,745,243</b>	<b>190,612,416</b>	<b>221,784,363</b>	<b>216,136,327</b>	<b>326,638,094</b>

OH = Overhead  
 UG = Underground

**a. Undergrounding the New 230 kV Line Along the Lexington Avenue/Black Mountain Road Section; No Modification to Existing 60 kV Line**

This Partial Underground Project Alternative for the new 230 kV line alters the proposed route by undergrounding the new 230 kV line starting near the Ralston Substation (proposed new structure 5/27) and ends near the Carolands Substation (proposed new structure 8/52). The route contains a canyon crossing at San Mateo Creek that is assumed to be overhead (proposed new structures 6/37-7/39). For this Project Alternative, with the exception of the canyon crossing, no modification to the existing 60 kV line is necessary or included. The preliminary estimated cost for the Project using only this Project Alternative is \$200,287,033.

**b. Undergrounding the New 230 kV Line Along the Burlington Heights/Skyline Frontage Road Section; No Modification to Existing 60 kV Line**

This Partial Underground Project Alternative for the new 230 kV line alters the proposed route by undergrounding the new 230 kV line starting at the proposed new structure 10/63 and ends at the proposed new structure 10/68. For this alternative, no modification to the existing 60 kV line is necessary or included. The preliminary estimated cost for the Project using this alternative is \$186,621,245.

**c. Undergrounding the New 230 kV Line Along Both the Lexington Avenue/Black Mountain Road and Burlington Heights/Skyline Frontage Road Sections; No Modification to Existing 60 kV Line**

This Partial Underground Project Alternative for the new 230 kV line alters the proposed route by undergrounding the new 230 kV line in both the Lexington Avenue/Black Mountain Road and the Burlington Heights/Skyline Frontage Road sections. For this alternative, no modification to the existing 60 kV line is necessary or included. The preliminary estimated cost for the Project using this alternative is \$204,334,983.

**d. Re-Routing the New 230 kV Line Overhead for the Burlington Heights/Skyline Frontage Road Section to the Western Side of I-280; No Modification to Existing 60 kV Line**

This Partial Underground Project Alternative for the new 230 kV line realigns the new 230 kV line in the section known as Burlington Heights/Skyline Frontage Road overhead to the west side of I-280. Under this alternative, a single-circuit 230 kV line would be constructed, and the existing 60 kV line would remain in its present location and configuration. Seven single-circuit 230 kV structures would be installed on the west side of I-280, adjacent to the existing surface road. The preliminary estimated cost for the Project using this alternative is \$173,505,918.

e. **Re-Routing the New 230 kV Line and the Existing 60 kV Line Overhead for the Burlington Heights/Skyline Frontage Road Section to the Western Side of I-280**

This Partial Underground Project Alternative realigns the new 230 kV line and the existing 60 kV line in the section known as Burlington Heights/Skyline Frontage Road overhead to the west side of I-280. Under this alternative, the existing 60 kV line and towers would be removed and disposed of and a new set of towers would be constructed for the existing 60 kV line and new 230 kV line. The preliminary estimated cost for the Project this alternative is \$201,860,612.

3. **A Description of Existing 60 kV Relocation Projects and Their Costs**

a. **Undergrounding the New 230 kV Line and the Existing 60 kV Line Along the Lexington Avenue and Black Mountain Road Section**

This commentor-proposed Existing 60 kV Relocation Project would alter the proposed Project by undergrounding the new 230 kV line, and add to it the ratepayer-funded undergrounding of the existing 60 kV line, beginning near the Ralston Substation (proposed new structure 5/27) and ending near the Carolands Substation (proposed new structure 8/52). Again, this route contains a canyon crossing at San Mateo Creek that is assumed to be overhead (proposed new structures 6/37-7/39). For this Existing 60 kV Relocation Project, there are significant additional costs associated with placing the existing 60 kV line alongside the new 230 kV line. The preliminary estimated cost for this Existing 60 kV Relocation Project is \$213,745,243.

b. **Undergrounding the New 230 kV Line and the Existing 60 kV Line Along the Burlington Heights/Skyline Frontage Road Section**

This commentor-proposed Existing 60 kV Relocation Project would alter the proposed Project by undergrounding the new 230 kV line, and add to it the ratepayer-funded undergrounding of the existing 60 kV line, starting at the proposed new structure 10/63 and ending at the proposed new structure 10/68. For this Existing 60 kV Relocation Project, there are additional costs associated with placing the existing 60 kV line alongside the new 230 kV line. The preliminary estimated cost for this Existing 60 kV Relocation Project is \$190,612,416.

c. **Undergrounding the New 230 kV Line and the Existing 60 kV Line Along Both the Lexington Avenue/Black Mountain Road and Burlington Heights/Skyline Frontage Road Sections**

This commentor-proposed Existing 60 kV Relocation Project would alter the proposed Project by undergrounding the new 230 kV line, and add to it the ratepayer-funded undergrounding of the existing 60 kV line, in the Lexington Avenue/Black Mountain Road

(between proposed structures 5/27 to 8/52, excluding the San Mateo Creek canyon crossing) and the Burlington Heights/Skyline Frontage Road (between proposed structures 10/63 to 10/68). Again, for this Existing 60 kV Relocation Project, there are additional costs associated with placing the existing 60 kV line alongside the new 230 kV line. The preliminary estimated cost for this Existing 60 kV Relocation Project is \$221,784,363.

**d. The 230 kV/60 kV All-Underground Existing 60 kV Relocation Proposal**

This proposal would construct the Project as described in PG&E's PEA alternative 1B, which calls for the new 230 kV line to be placed underground and thereby entirely eliminates all aesthetic impacts from operation of the Project. In addition, this proposal would add to the Project the removal and reconstruction of the existing 60 kV line within the area referred to in the PEA as segment 1B even though construction of the Project entirely underground means there would be no aesthetic impacts left to mitigate, and there is no electrical need to modify any existing facilities. In general, this segment begins at Jefferson Substation and ends at the intersection of El Camino Real and San Bruno Avenue. For this Existing 60 kV Relocation Project, there are enormous additional costs associated with placing the existing 60 kV line alongside the new 230 kV line. At the intersection of Skyline Boulevard and Trousdale Avenue, the existing 60 kV and the new 230 kV duct banks would separate and the new 230 kV circuit would travel east on Trousdale Avenue and the existing 60 kV circuit would travel westward along a watershed access road to proposed new structure 11/70. At that location, the existing 60 kV line would transition to an overhead configuration and would utilize the existing structures and conductor from this point north to Sneath Substation. There are additional costs in placing tap lines underground for this Existing 60 kV Relocation Project, as the underground 60 kV circuit would continue to service the existing substations and taps by various underground branches. The preliminary estimated cost for the Project using this Existing 60 kV Relocation Project is the most expensive of all – \$326,638,094.

**B. There are Environmental Impacts Associated with the Partial Underground and the 230 kV/ 60 kV All-Underground Proposals**

PG&E's proposed overhead route through the San Francisco watershed (segment 1A in the PEA) will result in only minor environmental impacts after implementation of the mitigation measures proposed in the PEA. Based on PG&E's initial review and pending further studies, those minor impacts are likely to result in a no jeopardy determination from the U.S. Fish & Wildlife Service under the federal Endangered Species Act ("ESA").

By contrast, the Partial Underground proposals will impact many times the acreage of sensitive serpentine habitats. Serpentine habitats contain unique assemblages of native plants and wildlife, due to special chemical and physical characteristics of the soils (high pH, high metals, shallow, rocky soils that drain quickly). Serpentine habitats are typically characterized by high proportions of native plants, and often provide habitat for rare plants and animals,

including the endangered Bay checkerspot butterfly, found in the serpentine areas of Edgewood Park. These soils and their habitat, when disturbed, are much more prone to invasion by exotic species and are difficult to restore to their pre-disturbance condition, since the physical characteristics of the soils (shallow, rocky) enhance their suitability for native species and rare plants, and these characteristics are difficult to reestablish once disturbed. For these reasons, mitigation even for temporary disturbance, and especially for disturbances such as trenching that change soil characteristics, is difficult. Impacts are considered more significant not only because the habitat is rare, but because it is extremely sensitive to disturbance and very difficult to restore or enhance. This would likely also result in more prolonged resource agency consultations and permitting and could result in Project delays. In addition, the City and County of San Francisco, as the resource manager of the watershed, may have significant concerns about potential biological impacts of the Partial Underground proposals.

**1. Environmental Impacts Associated with Project Alternatives**

**a. Undergrounding the New 230 kV Line Along the Lexington Avenue and Black Mountain Road Section; No Modification to the Existing 60 kV Line**

Undergrounding the new 230 kV line would require clearing a temporary work space for the trenching operation in the existing alignment; the temporary work area along the trench is estimated at a minimum of 40 feet in width and a preferred 50 feet in width. An additional area will be impacted to a lesser extent by equipment and vehicles passing the work area. A wider work area may be necessary depending on slope, location of existing towers, and the need for temporary stockpile locations. In addition, new access roads would be required along the right-of-way and between access points and the right-of-way. Although a portion of the cleared temporary work space could either be revegetated or be allowed to revegetate naturally, trees and deep-rooted shrubs would not be allowed to reestablish over or next to the duct bank. In this area, undergrounding could utilize the existing right-of-way and portions of access roads/fire breaks. However, the access road is narrow, and additional habitat would have to be disturbed for construction. Transition structures would be located at each end of the underground portions. Access vaults and manholes would be required in the serpentine habitat for the new 230 kV underground line.

Biological Resources. Along these areas, undergrounding could utilize a portion of the existing right-of-way and existing access roads/fire breaks. However, additional undisturbed habitat would have to be disturbed for construction. Vegetation in the disced firebreak and the access roads consists of early successional grasslands, with a larger component of forbs and annual grasses than the surrounding serpentine grasslands. Foodplants of several sensitive butterfly species are noticeably more prevalent in the disced areas, including creamcups and *Plantago erecta*. The temporary loss of habitat and biological resources during construction, possible permanent disruption of serpentine and potential endangered species habitat, and permanent clearing of the right-of-way would most likely constitute significant biological

impacts. Rare plant surveys have not been performed through these areas and impacts may be greater if rare plants are discovered in this area.

Based on its experience with similar projects, PG&E anticipates that the federal and state resource agencies will require temporary work areas outside the future access roads to be revegetated using a native grass grown from locally collected seed. This is to preserve the local adaptation and genetic makeup of these endemic species. Topsoils in these primarily serpentine areas would be stockpiled in a row along the trench, and subsoil stockpiled in a separate row. Soil would be replaced in the proper order after construction. Costs of revegetation and topsoil handling would be substantially higher for the underground option, since trenching work would occur along a 40-to-50 – foot – wide band estimated at about 8100 feet for the route along Lexington Avenue, and about 6500 feet along Black Mountain Road, and an additional area for the installation of manholes, for a total disturbance area of approximately 20 acres. The area disturbed by the comparable overhead line is approximately two acres. Revegetation of these areas could cost over \$600,000 to \$1,200,000.

A more significant issue for this large a revegetation area would be satisfying the likely requirement for a locally-collected seed source, since that much seed cannot be collected without having impacts on the local resource. An important feature of the revegetation plan PG&E proposes in the PEA is using local seed sources so that the genetic characteristics of the local serpentine species are maintained. Some of the important native grasses in the revegetation plan (*Nasella* spp.) require two years to propagate. Seed was collected last spring, and is now being grown in a nursery in the Delta. The crop from this first planting will be used to plant several fields of these local native species in order to get the hundreds of pounds of seed needed for revegetating approximately ten acres, the area anticipated to be impacted in PG&E's proposed Project. However, as noted in the previous paragraph, undergrounding would require approximately an additional ten acres to be revegetated in this area, for which there is currently not enough seed. To cultivate the additional amount of seed required to revegetate a disturbed area twice as large as originally planned would require at least one additional year, if not two, using the seed planned for revegetation in 2004. It is highly unlikely that the resource agencies would allow the Project to take place before the appropriate amount of seed is available, and therefore, the Project could be delayed. If the Project is allowed to proceed before sufficient seed is available, revegetation would likely be less successful and cause secondary, potentially significant impacts to native habitats through introduction of non-local seed or inappropriate species.

Trenching through this serpentine habitat may also require off-site mitigation in the form of restoration or enhancement of serpentine habitat to compensate for the temporary disturbance of the serpentine habitat, the permanent deterioration of the habitat caused by the disruption of the underlying, controlling geologic layers, and an intensive revegetation and serpentine habitat restoration program. Costs for mitigating these losses, which could include the requirement for off-site enhancement of serpentine habitats in addition to the revegetation described above, have

may be high, even if agency consultation allowed the project to trench through these serpentine habitats.

Visual Issues. The undergrounding operations will be visible from adjacent residential areas, local public roadways, and potentially from portions of I-280, as will the disturbed construction area while vegetation is becoming reestablished. The visual effects of tree removal may also be apparent from certain locations along Black Mountain Road. The transition structures to be located at each end of the underground segment(s) may be visible from portions of the I-280 corridor and/or from individual residences.

The 230 kV riser poles at each transition location would contain additional equipment, such as lightning arresters, and potheads. Moreover, additional space may be required adjacent to the pole for other structures or cabinets. Additionally, circuit switchers may be necessary to drop current to the underground portions of the line. This could require an eight-to-ten foot pole, and an additional area would have to be fenced off.

Cultural Resources. The proposed undergrounding would increase the likelihood of encountering subsurface cultural resources.

Land Use Issues, Temporary Construction Impacts. During construction, trenching and duct bank installation along the existing right-of-way would cause temporary noise and dust impacts on neighboring residences. The amount of devegetated area would be greater than for the overhead options, and impacts to air quality and temporary dust production would be greater.

Project Schedule Impacts. Although there is presently insufficient data regarding affected resources to estimate this alternative's impact on the Project schedule, there is the potential for this alternative to create project delays. Although the Bay checkerspot butterfly was not observed in the vicinity of the existing towers, the areas to the west do support the area of the butterfly's larval food plants and adult nectar plants. The sensitivity involved in working in serpentine habitat and in a habitat that possibility supports the Bay checkerspot butterfly may lengthen the project schedule.

In addition, there may be significant Project delays associated with reseeding. It may take up to two years to grow a sufficient quantity of native bunchgrasses. The seeds of native bunchgrasses that have been collected to-date will only cover ten acres. Therefore, a non-local seed supply, if it can be found, or a commercial supply of native grasses, may have to be used instead. Both of those options may have genetic impacts on the native habitat. Based on PG&E's experience with similar projects, resource agencies typically specify locally-collected seed in mitigation plans in sensitive areas. If locally-collected seed is required here, the Project will be delayed until sufficient locally-grown seed is grown out and multiplied. This may delay the Project schedule by as much as two years.



**b.       Undergrounding the New 230 kV Line Along the Burlington Heights/Skyline Frontage Road Section; No Modification to Existing 60 kV Line**

Undergrounding the line would require clearing a temporary work space for the trenching operation in the existing alignment; the temporary work area along the trench is estimated at a minimum of 40 feet in width and a preferred 50 feet in width. However, more space may be necessary. In addition, new access roads would be required along the right-of-way and between access points and the right-of-way. Although a portion of the cleared temporary work space could either be revegetated or be allowed to revegetate naturally, trees and deep-rooted shrubs would not be allowed to reestablish over or next to the duct bank. Along this area, undergrounding would be possible along the existing right-of-way or along existing access roads/fire breaks. Transition structures would be located at each end of the underground portions. Access vaults and manholes would be required for the new 230 kV underground line in this area. The additional impact area caused by the trenching and installation of vaults and manholes is about 4 acres.

Biological Resources. Along these areas, undergrounding would be possible along the existing right-of-way or along existing access roads. Vegetation in this area consists of a mix of native and non-native grasses, dense and decadent groves of planted Monterey pine, and a wide assortment of escaped ornamentals, which presumably originated from yard waste thrown over fences into the right-of-way. Rare plant surveys have not been performed for this area.

The right-of-way and temporary work areas outside the future access roads would be revegetated using a native grass mix. Costs of revegetation and topsoil handling would be substantially higher for the underground option, since trenching would occur along a 40-50-foot wide band over the 3,360 feet of this underground segment. The approximately four acres disturbed by undergrounding compares to 1/3 acre disturbed by the overhead project. About half of this area is regularly disced for a firebreak. Revegetation of these additional four acres could increase costs by about \$200,000.

As with the Project Alternative that would underground the new 230 kV line only for the Lexington Avenue/Black Mountain Road Section, revegetation of this area poses environmental issues. There is only sufficient seed of native bunchgrasses to revegetate a ten-acre area. Using non-native seeds may have genetic impacts on the native habitat. Again, impacts would be further exacerbated if rare plants are discovered in surveys.

Visual Issues. The undergrounding operations will be visible from adjacent residential areas, local public roadways, and potentially from portions of I-280, as will the disturbed construction area while vegetation is becoming reestablished. The visual effects of tree removal may also be apparent from certain locations along local roads. The transition structures to be located at each end of the underground segment(s) may be visible from portions of the I-280 corridor and/or from individual residences.

The 230 kV riser poles at each transition location would contain additional equipment, such as lightning arresters and potheads. Moreover, additional space may be required adjacent to the pole for other structures or cabinets. Additionally, circuit switchers may be necessary to drop current to the underground portions of the line. This could require an eight-to-ten foot pole, and an additional area would have to be fenced off.

Cultural Resources. The proposed undergrounding would increase the likelihood of encountering subsurface cultural resources.

Land Use Issues, Temporary Construction Impacts. During construction, trenching and duct bank installation along the existing right-of-way would cause temporary noise and dust impacts on neighboring residences. The amount of devegetated area would be greater than for the overhead options, and impacts to air quality and temporary dust production would be greater.

Project Schedule Impacts. Although there is presently insufficient data regarding affected resources to estimate this alternative's impact on the project schedule, there is the potential for this alternative to create project delays based on environmental concerns of constructing in the existing watershed.

As with the Project Alternative that would underground the new 230 kV line along the Lexington Avenue/Black Mountain Road Section, there may be Project delays associated with reseeded.

**c. Undergrounding the New 230 kV Line Along Both the Lexington Avenue/Black Mountain Road and Burlington Heights/Skyline Frontage Road Sections; No Modification to the Existing 60 kV Line**

The environmental impacts associated with this Project Alternative are the same as for the Project Alternatives that would underground the new 230 kV line in each of these sections. Those impacts are discussed in detail above.

**d. Re-Routing the New 230 kV Line Overhead for the Burlington Heights/Skyline Frontage Road Section to the Western Side of I-280; No Modification to the Existing 60 kV Line**

Moving the new 230 kV line overhead to the west of I-280 in this area would include disturbance of native grasslands and woodlands in a relatively undisturbed area. In addition, the towers west of I-280 would be highly visible from south-bound I-280, in an area that currently does not contain any transmission lines, and is essentially undisturbed visually. These impacts would likely be considered significant.

e. **Re-Routing the New 230 kV Line and the Existing 60 kV Line Overhead for the Burlington Heights/Skyline Frontage Road Section to the Western Side of I-280**

The environmental impacts of re-routing the new 230 kV line and the existing 60 kV line are largely the same as the impacts for the Project Alternative that would re-route the 230 kV line only for this section. This alternative would also include disturbance of the existing right-of-way for removal of the existing 60 kV towers.

f. **Moving the 230 kV Line West towards I-280 for the Lexington Avenue/Black Mountain Road Section; No Modification to the Existing 60 kV Line**

Relocating the new 230 kV transmission line overhead to the west towards I-280 and away from the residential areas would likely require additional new access roads to be established, and would move the line into a rich and undisturbed serpentine grassland habitat. Although the Bay checkerspot butterfly was not observed in the vicinity of the existing towers, the areas to the west does support the butterfly's larval food plants and adult nectar plants. Moving the line away from the existing disturbed areas of the fire break and access roads into undisturbed serpentine grasslands would increase the biological impacts of the Project. The only rare plant found within the Project vicinity was found in this area, and the potential for other rare plant populations to exist in the unsurveyed areas is higher in the undisturbed areas than in the fire breaks. It is possible that construction in this area could utilize helicopters and other mitigation measures described in the PEA for the portion of the line in Edgewood Park for a portion of this area, and thereby reduce the need for new access roads. In order to determine the feasibility of such measures, PG&E would need to consult with the federal and state agencies with jurisdiction over such measures, including the Federal Aviation Administration, CalTrans, SFPUC, and the interested resource agencies.

By shifting the alignment westward away from the residences along Lexington Avenue and Black Mountain Road, visual effects on these general residential areas would be somewhat reduced. Views of the towers from some number of individual residences may be increased, however. In addition, this alignment could potentially appear more visible as seen from some places along the I-280 corridor.

2. **Environmental Impacts Associated with Existing 60 kV Relocation Projects**

a. **Undergrounding the New 230 kV Line and the Existing 60 kV Line Along the Lexington Avenue and Black Mountain Road Section**

The environmental impacts associated with this Existing 60 kV Relocation Project are largely the same as for the Project Alternative that would underground the new 230 kV line only for this section, which are discussed in detail above. In addition, there would be impacts of

removing the existing 60 kV towers in these serpentine habitats. Tower removal would require disturbance at each tower site as the structures and footings are removed, and would require some new access roads and pull sites. Access vaults and manholes would be required in the serpentine habitat not only for the new 230 kV underground line, but also for a new, underground 60 kV line. The total disturbance area for this section is approximately 24 acres.

The 60 kV riser poles at each transition structure would contain additional equipment, such as switches, lightning arresters, potheads, and protection equipment. Moreover, additional space may be required adjacent to the pole for other structures or cabinets. Additionally, circuit switchers may be necessary to drop current to the underground portions of the line. This will probably require an eight-to-ten foot pole, and an additional area would have to be fenced off.

Project Schedule Impacts. Although there is presently insufficient data regarding affected resources to estimate this Existing 60 kV Relocation Project's impact on the project schedule, there is the potential for this Existing 60 kV Relocation Project to create project delays. The sensitivity involved in working in a serpentine habitat and the presence of food plants and larval food plants for the endangered Bay checkerspot butterfly may lengthen the project schedule. As with the Project Alternative that would underground the new 230 kV line for this section, it may take up to two years to grow the native bunchgrasses to the point where there is enough seed for revegetation of the area if the resource agencies require the use native seeds to revegetate the area immediately after construction. Moreover, additional time may be required to revegetate the area of the tower footprints. If non-native seeds are allowed for revegetation, this may cause significant impacts to native species.

**b.        Undergrounding the New 230 kV Line and the Existing 60 kV Line Along the Burlington Heights/Skyline Frontage Road Section**

The environmental impacts associated with this Existing 60 kV Relocation Project are largely the same as the Project Alternative that would underground the new 230 kV line for this section. Those impacts are discussed in detail above. In addition, there are associated environmental impacts of removing towers along the existing right-of-way. This would cause disturbance around each tower, along access roads, pull sites. Access vaults and manholes would be required not only for the new 230 kV underground line, but also for a new, underground 60 kV line. The total disturbance area in this section is approximately five acres.

The 60 kV riser poles at each transition structure would contain additional equipment, such as switches, lightning arresters, potheads, and protection equipment. Moreover, additional space may be required adjacent to the pole for other structures or cabinets. Additionally, circuit switchers may be necessary to drop current to the underground portions of the line. This will probably require an eight-to-ten foot pole, and an additional area would have to be fenced off.

Project Schedule Impacts. Although there is presently insufficient data regarding affected resources to estimate this Existing 60 kV Relocation Project's impact on the project schedule, there is the potential for this Existing 60 kV Relocation Project to create project delays based the environmental issues discussed above. As with the Project Alternative that would underground the new 230 kV line for this section, it may take up to two years to grow the native bunchgrasses to the point where there is enough seed for revegetation of the area if the resource agencies require the use native seeds to revegetate the area immediately after construction. Moreover, additional time may be required to revegetate the area of the tower footprints. If non-native seeds are allowed for revegetation, this may cause significant impacts to native species.

**c. Undergrounding the New 230 kV Line and the Existing 60 kV Line Along Both the Lexington Avenue/Black Mountain Road and Burlington Heights/Skyline Frontage Road Sections**

The environmental impacts associated with this Existing 60 kV Relocation Project are the same as for the Existing 60 kV Relocation Projects that would underground the new 230 kV line and the existing 60 kV line in each of these sections. Those impacts are discussed in detail above

**d. The 230 kV/ 60 kV All-Underground Existing 60 kV Relocation Project**

The impacts of undergrounding the existing 60 kV alongside the new 230 kV line in Canada Road are similar to those described in the PEA for Alternative 1B, with the addition of local road disruption and tree removal required to connect the existing 60 kV line to the substations and taps. For the most part, these connections would be made by undergrounding the taps from Canada Road or Skyline Road to the respective substations and taps along the line in this area. These include the Carolands, Ralston, and Hillsdale Substations and the Watershed and Crystal Springs taps. All of these could likely be connected to a new 60 kV transmission line in Canada Road or Skyline Road either under existing roadways or access roads (access roads in the watershed for Watershed Tap, along Bunker Hill Drive and Lexington Avenue for Ralston substation, Skyline Boulevard for Carolands Substation, and Crystal Springs Road for the Crystal Springs Tap). One bore under I-280 would be required from Canada Road to the Hillsdale Substation. This bore would require an additional work area on the west side of Canada Road in a wooded area and the removal of a number of trees on the east side of I-280, adjacent to the substation. The area of disturbance on the west end of the bore would be about 30' x 50' and the area of disturbance on the east end would be about 30' x 40'. These additional underground spurs or taps would increase the amount of area disturbed during construction, increasing traffic, noise, and air quality impacts over those occurring from undergrounding only the new 230 kV line. Access vaults and manholes would be not only for the new 230 kV underground line, but also for a new, underground 60 kV line.

In addition, there are associated environmental impacts of removing towers along the existing right-of-way. This would cause disturbance around each tower, along access roads, and at pull sites.

Finally, the existing 60 kV line will need to be removed in the 230/60 kV All-Underground Existing 60 kV Relocation Project. This includes 58 lattice towers and 14 lattice steel poles. Helicopters may be used for removal of some of the towers, however, due to flight and distance restrictions, some would be removed by ground crews and cranes. Crews will still need vehicle access to the sites accessed by helicopter to remove the top four feet of the footings.

### **C. There are Engineering Feasibility Issues Associated with the Partial Underground Proposals**

Alternatives or mitigations measures that pose technological concerns are not feasible under CEQA.<sup>20</sup> There are several critical concerns regarding technological feasibility for several of the proposals discussed here.

Location of the new 230 kV electric transmission line underground within the vicinity of the existing gas transmission facilities presents several significant issues that may impact costs. First, placing the new 230 kV line underground in the Partial Underground proposals may present compatibility problems with PG&E's existing underground gas transmission lines 109 and 132. PG&E has yet to review the final underground design for potential conflicts with gas transmission line operations. In general, the gas transmission lines in this area are not designed for traffic loading. Second, locating the new 230 kV electric transmission line in a gas line easement may also conflict with PG&E's existing gas transmission maintenance and operation plans. Finally, PG&E must make sure that the new underground 230 kV line would not interfere with the existing cathodic protection scheme for the gas pipelines and to ensure that the gas lines would not incur induced current. These concerns may require PG&E to implement protective measures that may substantially increase the cost of undergrounding the new 230 kV line in the existing utility corridor.

Alternatives that include undergrounding of 60 kV lines risk slower service restoration than is presently the case. When there is a fault on an overhead transmission line, leading the circuit breakers to open and thereby de-energizing the line, PG&E safety standards allow the automatic closing of the breakers to see if the fault has cleared itself (e.g. a branch that may have hit an overhead line might have slid to the ground without causing damage). If so, the line will be re-energized almost immediately. If not, PG&E will visually inspect the relevant portion of the overhead line to determine where the fault is located and fix the problem. Where an underground cable is involved, however, the process is more involved and can take considerably more time. PG&E safety standards generally do not allow automatic re-closing of breakers for

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<sup>20</sup> Cal. Pub. Res. Code § 21061.1.

underground lines to test if a fault has cleared. Determination of the fault's location requires testing between each manhole on the affected cable until the fault is found. The damaged cable must be removed from the duct bank and replacement cable installed. Then the replacement cable must be spliced into the remaining undamaged cable, a process performed by specialists from the cable's manufacturer and taking up to one week per splice. During this period of time, power must be re-routed around the damaged line. Where a tap into the 60 kV line occurs in the middle of an underground cable, power cannot be re-routed until the location of the fault is known. Thus, if there is a fault between Jefferson and Ralston substations, Watershed substation, which taps into that portion of the line and is a pumping station for Hetch Hetchy and the Mid-Peninsula Water District, will be forced off-line until the location of the fault is determined (up to 48 hours though PG&E usually is able to locate the fault more quickly).

## V. CONCLUSION

PG&E's Application is for the construction of a new 230 kV transmission line between Jefferson substation and Martin substation, and does not include modification of the existing transmission facilities other than as necessary to mitigate environmental impacts of constructing the new 230 kV line along the PG&E proposed route. Any proposal to require PG&E to modify existing facilities, *e.g.*, the 60 kV line, other than as part of the PG&E proposed route (or closely related variants for which the Commission can establish the constitutionally-required nexus), must be the subject of a different application to the CPUC. There is no Project objective to rebuild, relocate or remove the 60 kV line.

CEQA requires that the EIR focus on the Project, not more and not less. Project alternatives are those that accomplish the construction of the 230 kV transmission line between the Jefferson and Martin substations, without expanding the scope of the Project to undergrounding existing facilities. Within constitutional limitations, the EIR may also consider potential mitigation of any significant environmental impacts of such Project alternatives. The Existing 60 kV Relocation Projects are not Project alternatives and may only be considered as potential mitigation measures for any identified significant environmental impacts of legitimate Project alternatives. Determining whether partial undergrounding of the existing 60 kV line in the existing transmission corridor may serve as mitigation for allowing other portions of the new 230 kV line to be constructed overhead in the existing transmission corridor will require: (a) a determination whether there are any significant environmental impacts from the proposed overhead construction of the 230 kV line in those areas and, if so, (b) an analysis of the "nexus" and "rough proportionality" of such mitigation measures in accordance with the constitutional requirements recognized in the CEQA Guidelines. However, the 60 kV Relocation Project that proposes to relocate the existing 60 kV line underground where the entire new 230 kV line is constructed underground plainly is illegal, as there can be no such "nexus" or "rough proportionality" under those circumstances. The EIR is not required to, and should not, consider options that it would be illegal for the Commission to adopt.

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We appreciate this opportunity to comment on the scope of the Jefferson-Martin EIR. Please do not hesitate to contact me if you have questions or require clarification regarding any of the points raised in this letter.

Sincerely,

J. Wesley Skow  
of LATHAM & WATKINS LLP

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