

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

**ENERGY DIVISION**

**RESOLUTION E-3504  
AUGUST 18, 1997**

**RESOLUTION**

**RESOLUTION E-3504. EXECUTIVE DIRECTOR'S ORDER  
DISMISSING PROTESTS BY CORINNE D. GRANT AND BRUCE L.  
HOPPER TO PACIFIC GAS & ELECTRIC COMPANY'S CLAIM OF  
EXEMPTION FROM GENERAL ORDER 131-D PERMITTING  
REQUIREMENTS FOR THE RECONDUCTORING OF THE IGNACIO-  
SAN RAFAEL #1 115 KILOVOLT POWER LINE AND THE IGNACIO-  
SAUSALITO #1 AND #2 60 KILOVOLT POWER LINE.**

**BY ADVICE LETTER 1675-E FILED ON MAY 27, 1997.**

**SUMMARY**

Pacific Gas and Electric Company (PG&E) proposes to reconductor about 11.5 miles of the existing Ignacio-San Rafael #1 115 kilovolt (kV) power line, and about 15 miles of the Ignacio-Sausalito #1 and #2 60 kV power line in Marin County. PG&E states that in order to meet the normal load growth for the areas in Marin County served by these power lines, the line capacity must be increased by installing new conductor on the existing tower structures. Due to the additional weight of the new conductor, some of these towers may require minor modifications. In addition, PG&E intends to raise steel towers and poles higher than otherwise required in order to reduce electro-magnetic field (EMF) strength at ground level.

The modification of power lines is governed by General Order (GO) 131-D which requires either an application for a Permit to Construct or an informational advice letter if the project qualifies for an exemption, as specified in GO 131-D, Section III.B. PG&E filed Advice Letter No. 1675-E to claim exemption from the requirement to file for a Permit to Construct, as prescribed by GO 131-D, Sections XI.B and C. PG&E's claim of exemption is based on GO 131-D, Sections III.B.1.b. and e., which respectively exempt the "replacment of existing power line facilities or supporting structures with equivalent facilities or structures" and the "placing of new or additional conductors, insulators, or their accessories on supporting structures already built."

Corinne D. Grant and Bruce L. Hopper separately protested this advice letter, expressing concerns about the potential public health risk associated with the EMFs produced by these modifications. Mr. Hopper also cited the visual intrusion of tall power towers in central San Rafael. Based upon my review of these two protests and PG&E's responses, I am unable to conclude that any of the conditions specified in GO 131-D exist which would prevent the application of the exemptions claimed by PG&E. Therefore, these protests are dismissed for failure to state a valid reason.

## **BACKGROUND**

Electric utilities proposing to construct new power lines of 50 kV to 200 kV, or to upgrade or relocate existing power lines in that range, must comply with GO 131-D which, among other things, provides for filing an application for a Permit to Construct unless the project is exempt for certain reasons specified in Section III.B of the GO.

In Section XIII, GO 131-D provides that any person or entity may protest a claim of exemption for one of two reasons: (1) that the utility incorrectly applied a GO 131-D exemption, or (2) that one or more conditions exist which are specified in the GO to render the exemption inapplicable. If a timely protest is filed, construction shall not commence until the Executive Director has issued an Executive Resolution either requiring the utility to file an application for a Permit to Construct or dismissing the protest.

In Advice Letter No. 1675-E, PG&E proposes to re-conductor about 11.5 miles of the existing Ignacio-San Rafael #1 115 kilovolt (kV) power line, and about 15 miles of the Ignacio-Sausalito #1 and #2 60 kV power line in Marin County. PG&E states that in order to meet the normal load growth for the areas in Marin County served by these power lines, the line capacity must be increased by installing new conductor on the existing tower structures. Due to the additional weight of the new conductor, some of these towers may require minor modifications. In addition, PG&E intends to raise steel towers and poles higher than otherwise required in order to reduce electro-magnetic field (EMF) strength at ground level.

## **NOTICE**

PG&E distributed a Notice of Proposed Construction in accordance with Section XI of GO 131-D, including the filing and service of Advice Letter No. 16751-E in accordance with Section III of GO 96-A.

## **PROTESTS**

Corinne D. Grant submitted a protest to the Commission on June 25, 1997, challenging PG&E's claims for exemption from the permitting requirements of GO 131-D due to the possible increases in EMFs that the re-conductoring of the Ignacio-Sausalito #1 and #2 power line could produce and the consequent adverse biological effects on her young children. Ms. Grant states that one of the existing power line towers is within about 20 feet of her house, including her young daughters' bedrooms. Ms. Grant quotes a reviewer of a National Academy of Science report issued in October, 1996, as finding that the most important lesson of this report is that we need to do more to find out why there is a low statistical association between power lines and at least one form of childhood cancer. Ms. Grant notes the complexity and controversy surrounding the biological effects of EMF, but is concerned that the threat remains, albeit as yet unquantified.

PG&E responded late to Ms. Grant's protest on July 8, 1997, due to internal misrouting of her correspondence. In any event, PG&Es responded that the reconductoring of the Ignacio-Sausalito power line will not create any of the three conditions specified in GO 131-D, Section III.B.2 which render exemptions inapplicable:

1. It will not impact on an environmental resource of hazardous or critical concern where designated, precisely mapped and officially adopted pursuant to law by federal, state or local agencies.
2. PG&E does not plan further improvements to this line or other which will result in significant cumulative impacts in this area.
3. There is no reasonable possibility that the reconductoring project will have a significant effect on the environment due to unusual circumstances.

Bruce L. Hopper submitted a protest to the Commission on May 28, 1997, suggesting that the Ignacio-San Rafael 115 kV power line be undergrounded to eliminate the EMF risk to motorists using the new Anderson Drive extension currently under construction in San Rafael, along which the subject line runs. Mr. Hopper points out that undergrounding would also eliminate the unsightly power line towers in the center of the City of San Rafael.

PG&E responded to Mr. Hopper's protest on June 5, 1997, pointing out that the mechanism for undergrounding existing lines is set forth in Electric Rule 20 approved by the commission in Decision No. 90-05-032 (July 17, 1990). PG&E also responds that the reconductoring of the Ignacio-San Rafael 115 kV power line will not create any of the three conditions which would invalidate the exemptions it claims, specified in GO 131-D, Section III.B.2.

## **DISCUSSION**

Electric and magnetic fields are associated with all electrical appliances, power lines, wiring within buildings, and occur in nature. A controversy exists whether there are any health effects from exposure to EMFs. Experiments have shown that magnetic fields can cause biological effects in living cells, but it is not known whether these biological effects have any relevance to human health. To address these questions, the Commission undertook an investigation about five years ago, working with the California Department of Health Services (DHS), electric utilities and a "consensus group" made up of experts and consumers vitally interested in this subject. Due to the lack of scientific or medical conclusions about potential health effects from utility electric facilities and power lines, the Commission adopted seven interim measures that help to address public concern on this subject, including the deployment of no/low-cost steps to reduce EMF levels in new or upgraded facilities, EMF design guidelines for new and rebuilt facilities to reduce EMF levels, residential and workplace EMF measurement programs available to utility customers, and further education and research programs managed by DHS.

Pending conclusive scientific evidence of possible harm from utility facilities, the Commission has pursued a policy of avoiding any unnecessary new exposure if it can be avoided at a cost that is reasonable. The Commission is awaiting the results of the DHS-managed research program

August 18, 1997

within the next two years and in the interim, relies upon the DHS to provide guidance about any future identified public health risk.

As Ms. Grant's protest acknowledged, the question of EMF hazard is fraught with controversy. Just as she was able to find a reviewer of the National Academy of Science's October, 1996, report who cast its findings in a light favorable to further investigation, other views of the same report are available, as witnessed by these quote in the New York Times on November 13, 1996:

“... the panel concluded that ‘the evidence does not show that exposure to these fields presents a human health hazard.’ But critics of power lines are not going to accept the verdict without a struggle.”

More recently, a study completed by the National Cancer Institute under the leadership of Dr. Martha S. Linet has been widely reported upon. This collaboration between scientists at the National Cancer Institute and childhood leukemia specialists from the nation's leading medical centers reportedly found no evidence that electric power lines cause leukemia in children. (New York Times, July 3, 1997) The Los Angeles Times reported that the “American Cancer Society's vice president for epidemiology and surveillance research, Dr. Clark Heath, said the ‘extraordinarily well-done study’ makes ‘a strong statement about the lack of association’ between electric power lines and childhood leukemia.” (July 3, 1997)

PG&E's responses to both protests of these advice letters demonstrate that it has made reasonable use of the interim measures adopted by the Commission to prudently reduce EMF levels, including raising the levels of towers and poles to reduce EMF strength at ground level, employing its EMF Design Guidelines to prudently reduce EMF levels, and providing residential EMF measurement services to Ms. Grant. These services should continue to be available to Ms. Grant's household in the future, to enable her and her family to evaluate any changes in EMFs following the reconductoring of the power line near their house.

While this Commission certainly recognizes the public's fear of the apparent unknown regarding the health effects of EMFs, we are unable to find that any of the three conditions specified in GO 131-D as barring the claim of an exemption exist, to wit:

- a reasonable possibility that the activity may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped and officially adopted pursuant to law by federal, state or local agencies; or
- the cumulative impact of successive projects of the same type in the same place, over time, is significant; or
- there is reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

## **FINDINGS**

1. PG&E proposes to reductor about 11.5 miles of the existing Ignacio-San Rafael #1 115 kilovolt (kV) power line, and about 15 miles of the Ignacio-Sausalito #1 and #2 60 kV power line in Marin County. PG&E states that in order to meet the normal load growth for the areas in Marin County served by these power lines, the line capacity must be increased by installing new conductor on the existing tower structures. Due to the additional weight of the new conductor, some of these towers may require minor modifications. In addition, PG&E intends to raise steel towers and poles higher than otherwise required in order to reduce electro-magnetic field (EMF) strength at ground level.
2. As its grounds for exemption from a Permit to Construct, PG&E cites GO 131-D, Sections II.B.1.b. and e., which respectively exempt the "replacment of existing power line facilities or supporting structures with equivalent facilities or structures" and the "placing of new or additional conductors, insulators, or their accessories on supporting structures already built."
3. PG&E distributed a Notice of Proposed Construction in accordance with Section XI of GO 131-D, including the filing and service of Advice Letter No. 1675-E in accordance with Section III of GO 96-A.
4. Corinne D. Grant submitted a protest to the Commission on June 25, 1997, challenging PG&E's claims for exemption from the permitting requirements of GO 131-D due to the possible increases in EMFs that the reductoring of the Ignacio-Sausalito #1 and #2 power line could produce and the consequent adverse biological effects on her young children.
5. Bruce L. Hopper submitted a protest to the Commission on May 28, 1997, suggesting that the Ignacio-San Rafael 115 kV power line be undergrounded to eliminate the EMF risk to motorists using the new Anderson Drive extension currently under construction in San Rafael, along which the subject line runs, and to eliminate the visual intrusion of tall power line towers in central San Rafael.
6. PG&E responded both protests by arguing neither has demonstrated that its proposed power line modifications will create one of the three conditions specified in GO 131-D, Section III.B.2, which would bar PG&E from claiming exemption.
7. PG&E further referred Mr. Hopper to work with the underground utility committee of the City of San Rafael to pursue his idea through the existing process established by the Commission in D.90-05-032.
8. Pending conclusive scientific evidence of possible harm from utility facilities, the Commission has pursued a policy of avoiding any unnecessary new exposure to EMF if it can be avoided at a cost that is reasonable, as prescribed in its Decision No. 93-11-013.
9. PG&E's responses to both protests demonstrate that it has made reasonable use of the interim measures adopted by the Commission to prudently reduce EMF levels, including raising the levels of towers and poles to reduce EMF strength at ground level, employing its EMF Design Guidelines, and providing residential EMF measurement services to Ms. Grant.
10. These EMF measurement services should continue to be available to Ms. Grant's household in the future, to enable her and her family to evaluate any changes in EMFs following the reductoring of the power line near their house.

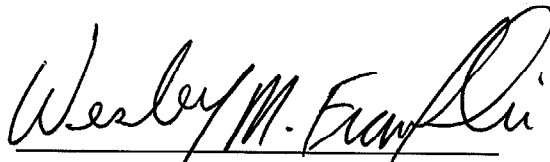
August 18, 1997

11. None of the issues raised by Ms. Grant or Mr. Hopper demonstrate that PG&E has incorrectly applied the exemptions it has claimed, nor that any of the three conditions preventing its claim exist. Neither has identified any environmental resource of hazardous or critical concern, cumulative impact of successive projects, or a significant environmental impact due to unusual circumstances.

**THEREFORE, IT IS ORDERED that:**

1. Corinne D. Grant's and Bruce L. Hopper's protests to Pacific Gas and Electric Company's Advice Letter No. 1675-E are dismissed.
2. This Resolution is effective today.

PUBLIC UTILITIES COMMISSION  
STATE OF CALIFORNIA

  
WESLEY M. FRANKLIN  
Executive Director