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Decision 88-04-060 April 27, 1988

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

LOIS AND GEORGE FINDLEY, Complainants, vs. PACIFIC GAS AND ELECTRIC COMPANY, Defendant. (U39E)	Case 87-06-009 (Filed June 5, 1987)

George Findley, for himself, complainant.
Susan L. Rockwell, Attorney at Law, for Pacific Gas and Electric Company, defendant.
Patricia A. Bennett, Attorney at Law, for the Division of Ratepayer Advocates, intervenor.

O P I N I O N

The complaint of Lois and George Findley alleges that Pacific Gas and Electric Company (PG&E) proposes to construct a 115 kilovolt (kV) collector line to be installed along Harlan Road, San Joaquin County; that the line as proposed is unsafe to the public as it runs between two heavily travelled roadways (Interstate 5 and Harlan Road, a frontage road to Interstate 5, both running north and south); that Interstate 5 has a speed limit of 65 miles per hour and Harlan Road a speed limit of 55 miles per hour. The complainants also allege that there is an existing

utility easement already established along the east side of Harlan Road that PG&E refuses to use for the transmission line. The complainants further allege that the line as proposed to be constructed is unsafe and would create a hardship for complainants' business, which is located adjacent to Harlan Road. Complainants believe that Public Utilities Code § 761[1] applies to the location of the transmission line and authorizes the Commission to regulate its placement.

Answer to the Complaint

PG&E filed its Answer on July 13, 1987. It denies the allegations of the complaint except that it admitted that it is constructing a 115 kV transmission line on Harlan Road in San Joaquin County. PG&E denies that the line, its placement, or manner in which it is being constructed creates any safety hazard. PG&E asserts that the line's construction and placement conforms to all statutes, tariffs, Commission rules, and orders, and is below

1 "761. Whenever the commission, after a hearing, finds that the rules, practices, equipment, appliances, facilities, or service of any public utility, or the methods of manufacture, distribution, transmission, storage, or supply employed by it, are unjust, unreasonable, unsafe, improper, inadequate, or insufficient, the commission shall determine and, by order or rule, fix the rules, practices, equipment, appliances, facilities, service, or methods to be observed, furnished, constructed, enforced, or employed. The commission shall prescribe rules for the performance of any service or the furnishing of any commodity of the character furnished or supplied by any public utility, and, on proper demand and tender of rates, such public utility shall furnish such commodity, or render, such service within the time and upon the conditions provided in such rules."

the 200 kV lines standard of review in General Order (GO) 131-C.[2] PG&E also denies that the placement of the line will adversely affect complainants' business and property.

A public hearing was held on October 23, 1987 in Stockton at which testimony was taken and arguments heard. The matter was submitted on that date, subject to the filing of one late-filed exhibit which has not been received.

Witness for the Lathrop Municipal Advisory Council

By stipulation a witness, Karen Ojeda, Secretary and Member of the Lathrop Municipal Advisory Council, testified on behalf of the Council and the community of Lathrop, rather than on behalf of the complainants. Lathrop is an unincorporated community in the County of San Joaquin, lying south of the City of Stockton. The Council is not a governmental agency and its members are not elected by the community it represents. The function of the Council is to advise Supervisor Sousa, who represents District 1 on the Board of Supervisors of San Joaquin County. According to Ms. Ojeda the poles were installed about four or five feet away from the fogline along Harlan Road. That road is a two-lane road and the speed limit is 55 miles per hour. She believes that the placement of the poles on the west side of Harlan Road constitutes a hazard to traffic because: (1) the shoulder on the west side is now unusable as an escape for cars trying to avoid collision; (2) Harlan Road is the daily traffic route for the Manteca Unified School District buses; (3) fog conditions during particular parts

2 GO 131-C as relevant hereto is as follows: "IT IS HEREBY ORDERED that no electric public utility...shall begin construction...of major electric transmission line facilities which are designed for immediate or eventual operation at any voltage in excess of 200 kilovolts (kV)...without this commission's having first found that said facilities are necessary to promote the safety, health, comfort, and convenience of the public and that they are required by the public convenience and necessity."

of the year are very heavy in the area of Harlan Road; (4) emergency response teams for the community use the frontage road and would be endangered by the existence of the pole line on the west side of Harlan Road.

The witness identified petitions signed by over 400 concerned residents of the community of Lathrop. The witness also sponsored a series of 16 Polaroid photographs of the poles on Harlan Road. The photographs show the chain-link fence that separates the freeway right-of-way from the Harlan Road right-of-way. The poles are for the most part placed within inches of the chain-link fence on the west side of Harlan Road.

Witness for the Manteca-Lathrop Rural Fire District

James Ennis spoke on behalf of the Fire District in opposition to the location of the pole line. He feels that the existence of the poles along Harlan Road is a definite safety hazard to the community. The position of the Fire District is that the mitigation measures offered by the County of San Joaquin and the Commission staff will not solve the original safety issue. The Fire District believes that the poles should be moved.

Statement by Supervisor Sousa

Brian Nessler, Legislative Assistant for Supervisor William N. Sousa of San Joaquin County, read a written statement of position by Supervisor Sousa. Nessler was not under oath and Supervisor Sousa was not available for cross-examination. In his letter Supervisor Sousa asserts that Harlan Road is a heavily traveled frontage road which a speed limit of 55 miles an hour. The route is used by all types of vehicles and experiences heavy fog conditions in the winter months. Supervisor Sousa asserts that all of the power poles in question are within a car's width of the fog line. He asked that the defendant be required to relocate the poles to the east side of Harlan Road.

Complainants' Showing

Findley called as his first witness his traffic engineer Wilbur Elias. Elias worked for CalTrans for 25 years as a traffic engineer and since leaving CalTrans has been working as a consulting traffic engineer for 9 years. The prepared testimony of Mr. Elias was incorporated in a letter dated June 10, 1987 to an attorney for the complainants. The letter addressed itself to two aspects of the pole line: (1) the two poles proposed to be installed on the Findley property itself, which he identified as Poles 39 and 49; and (2) the hazards to the traveling public posed by the remainder of the pole line south of the Findley property.

According to Elias, Pole 49 is on the outside of a curve in Harlan Road, very close to the west edge of the pavement. The pole is located in a position that northbound traffic on Harlan Road that fails to safely negotiate the curve beginning at the Findley property could strike the pole even though it is on the opposite side of the road from northbound lanes. When Elias inspected the area he found numerous skid marks on the pavement and in the gravel shoulder on the east side of the street, indicating a tendency for northbound vehicles to go out of control when entering this right hand curve. South of the curve, Harlan Road is straight for about 1.5 miles, which may tempt drivers to get up to a speed that is higher than that which is needed to safely negotiate the curve. Elias also testified that Pole 39 is close to the edge of the pavement, (2 feet) and is in a position to interfere with truck movements in and out of the Findley property. Elias asserts that a better location for these poles is on the east side of Harlan Road. North of the Findley property the next series of poles are located on the east side of Harlan Road. In Elias' opinion the two troublesome poles, 39 and 49 could be located on the east side of Harlan Road as well.

Elias was also concerned about the pole line extending southward from the Findley property on the west side of Harlan

Road. This line is installed between the edge of the pavement of Harlan Road and the freeway chain-link fence. The poles are located so that there is, according to Elias, only five feet from the face of the pole to the white "fogline" on the pavement. In his opinion, these poles are also located in an extremely hazardous position and it would be far safer to locate them on the east side of Harlan Road. Locating the poles on the east side of Harlan Road will allow them to be much further from the edge of the pavement, and in a much safer location.

At the time the letter was written the pole line was not yet installed. However, when Elias first inspected the area before writing his letter, he saw the holes that had been dug for the poles and the poles that were lying along the side of the road. He used these observations to determine the proposed positions of the poles in the field. Elias has since looked at the pole line after the poles were installed. His opinion has not changed based on the pole line as actually constructed.

On cross-examination Elias defined the various terms used in traffic engineering. The fogline is a painted line on the pavement and it is generally set in from the edge of the pavement several feet to guide traffic during the fog. The distance from the center line from the roadway to the edge of the pavement is called the traveled way and the distance from the edge of the pavement to a fixed object is the clearance.

On further direct examination Elias stated that where speeds are approximately 55 to 60 miles per hour anything within ten feet of the edge of the traveled way must be considered to be extremely hazardous and should be relocated. Elias stated that he headed up a section in the Stockton District of the Division of Highways. The task of that section was to move any fixed objects within 10 feet of the edge of the traveled way so that they would be not closer than 30 feet from the edge of the traveled way. Objects that would be very expensive to relocate such as concrete

abutments, were softened by the placement of protective barriers around them, such as barrels filled with sand or water.

He did, however, qualify his testimony by stating that he realized that there are many two-lane roads in the State of California that have pole lines for mile upon mile that are less than ten feet from the edge of the traveled way and that it is not feasible to relocate pole lines everywhere in the state. Accordingly, it was state policy that if the pole lines were already in place an attempt would be made to remove them, if possible, or to in some way identify them with signs and reflectors. Elias did not recommend reflectors as being particularly valuable because they are primarily for night-time traffic, whereas most of the traffic accidents occur during daylight hours when traffic volumes are high.

Elias was asked what kinds of devices would be good as warnings for daytime travelers in and around the existing pole line. He stated that large yellow diamond signs would be good for this purpose. However, he noted that many studies on signs have found that people who are used to driving a particular road tune out the signs. They know the road so well that they drive according to the conditions. Elias did state that for strangers some kind of large diamond yellow sign would be a good idea. He also stated that a line of buttons along the fogline on the west side of Harlan Road, which would cause drivers to feel vibrations as their tires crossed the line of buttons, would help to warn drivers of danger.

Findley next called Rita Steiner, who lives at 11500 Harlan Road, Lathrop. She testified to an accident that occurred on April 9, 1986 in the immediate vicinity of her home. She sponsored a copy of a newspaper article, which showed a photograph of the vehicles involved in the accident. From her testimony and the article it appears that a flatbed truck was parked on the east side of Harlan Road on the shoulder beyond the fogline when a

northbound Pinto crashed into the rear of a forklift that was also parked behind the truck.

Findley next called Floyd Chamblin as a witness. He testified that PG&E had installed a pole on Findley's property in the position originally planned, rather than the position finally negotiated between PG&E and Findley. PG&E stipulated that if the pole was installed in the wrong location it would move the pole to the negotiated site.

Findley next called Tom Moody, 11421 Harlan Road, who resides directly across the street from the Findley property. Moody testified that the poles located adjacent to the chain-link fence are a hazard to southbound motorists on Harlan Road. He also stated that he is concerned about the high voltage power lines carried by the poles in question in the event that a motorist should strike a pole. If the pole falls it will either fall on the freeway or on Lathrop Road and someone's yard. He believes that the pole should be installed on the east side of the road in the existing right-of-way which is more distant from the fogline. He further testified that north of Harlan Road along El Dorado where these pole also run, PG&E has combined the existing power poles with these new high tension poles, thus putting all of the electric lines on one set of poles on one side of the road. He does not understand why PG&E could not have done that in the area in question along Harlan Road. Moody also believes that it was unsafe and unwise to build the 115 kV line above a 6-foot chain-link fence. Moody admitted on cross-examination that he was not an electrical engineer.

Findley next called Louis Segura. Segura has a trucking business and repair shop on Harlan Road in Lathrop. He moves trucks in and out of his yard to Harlan Road. He testified that the poles placed opposite his driveway impede trucks moving out of his yard. He believes the poles should be relocated on the east side of Harlan Road and is willing to donate portions of his

property for the placement of poles. Segura testified that his wife drives a school bus and he threatened revenge against the PG&E employees if the bus hit one of the poles and killed his son.

Findley next called David Gumpert as a witness. Gumpert moves convoys of trucks and vehicles up and down Harlan Road going into the Sharp Army Depot. He stated that because of the location of the poles near the fogline of the southbound lane of Harlan Road he would not be able to pull his convoys off the road into a safe position on the shoulder of the roadway in the event the convoy needed to stop. Instead the convoy would need to park in the lane of traffic which would cause an unsafe condition. He believes that the transmission lines should be buried undergound.

Findley next called Devon Fonseca as a witness. She was present when representatives of PG&E discussed the placement of poles near the Findley property with Mr. Findley. This was prior to the pole being erected on Harlan Road. She testified that Findley presented good reasons why the poles should not be placed in the planned location but that PG&E would not listen.

Mrs. Findley next testified on behalf of the complainants. She read a prepared statement which consisted almost entirely of argument. Although she was under oath, that fact does not enchance the weight to be given argumentative testimony.

Findley next called Bill Adams, a staff engineer, as a witness on his behalf. Between August 3 and August 10, 1987, Adams prepared a preliminary report in response to the request of Assemblyman Patrick Johnston. Adams sponsored the draft report as Exhibit 7 in these proceedings. On direct examination he stated that in his view safety is always a relative thing. He stated that the poles were relatively safe and simultaneously relatively unsafe. He stated in his report and reiterated that the poles would have been safer on the east side of Harlan Road. He added that the transmission line could have been put on the same poles with the existing distribution line on the east side of Harlan

Road. On further examination by the staff attorney Adams stated that his draft report was not fully reviewed by his superiors and that the staff's final report had been prepared by Mr. Copeland. He also stated that the report contained a great deal of personal opinion and that two areas of discussion in the report regarding cogeneration and tax issues are not offered as expert testimony. On cross-examination by PG&E Adams testified that transmission, distribution, and telephone cable could all have been placed on the same poles on the east side of the road. The source of his information was a PG&E employee, a Mr. Raymond.

Adams was Findley's last witness. However, Findley also sponsored several documentary exhibits which were either marked for identification or received into evidence.

Staff Evidence

The staff called Russell W. Copeland, Chief of the Service and Safety Branch of the Commission Advisory and Compliance Division, as witness for the staff. Copeland sponsored Exhibit 10, the staff's final report on the Harlan Road transmission line. In his report, Copeland explains that the Commission does not require PG&E to obtain a certificate of public convenience and necessity for the line. Under GO 131 the Commission only requires the utilities to obtain certificates for the construction of transmission lines whose operating voltage exceeds 200 kV. The Harlan Road transmission line is a 115 kV transmission line. In addition the Commission has not declared itself to be the lead agency regarding the administration of the California Environmental Quality Act as it pertains to the Harlan Road project. Rather, PG&E has applied to the State Lands Commission for a negative declaration regarding the project. That Commission has issued a Proposed Negative Declaration for comment but has not yet issued a final negative declaration.

Copeland also testified that PG&E had conducted a feasibility study in 1986 regarding the routing of the proposed 115

kV line. Upon completion of that study PG&E notified San Joaquin County and other local agencies of its intended route. Based on comments received from those agencies alignment changes were made to accommodate current land use or development plans. During erection of the poles PG&E applied to San Joaquin County for an encroachment permit on June 20, 1987. The San Joaquin County Department of Public Works issued the encroachment permit on July 7, 1987, subject to the condition that PG&E install additional reflectorization on the poles.

Copeland limited the remainder of his report to issues germane to safety and service. He pointed out that GO 95 (Rules for Overhead Electric Line Construction) does not specifically address the location of poles along a roadway. However, Rule 13 of GO 95 states:

> "These rules are not intended as complete construction specifications, but embody only the requirements which are most important from the standpoint of safety and service. Construction shall be according to accepted good practice for the given local conditions in all particulars not specified in the rules".

Copeland stated the issue to be decided by the Commission in this proceeding as follows: "Does construction of the 115 kV line by PG&E along Harlan Road constitute accepted good practice for the given local conditions?" Copeland considered traffic conditions and other conditions on Harlan Road to determine whether they differed from local conditions on other frontage roads or rural roads in San Joaquin County. He found that Harlan Road conditions do not differ from similar roads in the county. According to Copeland, all areas in San Joaquin County in the vicinity of the project are subject to high concentrations of fog during the winter. Many of the county roads similar to Harlan Road also have no speed restrictions other than a 55 mph maximum. Many of the roads have poles in close proximity to the shoulder of the road similar to Harlan Road. Copeland also examined accident

frequency rates and was informed by the Highway Patrol and the San Joaquin County Public Works Department that accident frequency rates for Harlan Road are no different than any other rural road in the county. Attached to Exhibit 10 is the San Joaquin County Public Works Department summary of all accidents occurring along Harlan Road between Lathrop Road and Roth Road for the period February 10, 1982 through May 5, 1987. The report shows that of 33 accidents occurring during the reporting period only two occurred in foggy weather. 25 accidents occurred during periods of clear weather. 11 of the accidents involved running off the roadway and colliding with a fence, pole, mailbox, sign, or other fixed object. The remaining 22 accidents all occurred within the roadway and only involved moving vehicles.

Copeland concluded that the placement of the poles along the west side of Harlan Road constitutes accepted good practice. In support of this conclusion he stated that the poles along Harlan Road are located from 4 to 8 feet off the fogline. This is closer to the roadway than many people would like as evidenced by the many persons protesting the poles' location. However, the poles are in place. He stated that we no longer have the luxury of moving the poles without incurring significant costs and delays. The location of the poles along Harlan Road in proximity to the roadway are not any worse than many other similar roads in the area. Vertical clearance for the lines is in accordance with GO 95 requirements. The structural quality of the poles is good. Accordingly, he concluded that PG&E's placement of the poles is in accordance with accepted good practice consistent with GO 95.

Copeland added that PG&E could take certain safety measures to lessen the increased safety risk that the existing route creates for the motoring public. He testified that PG&E should comply with the conditions stated on its encroachment permit and install additional reflectors or barriers recommended by the County Department of Public Works. Finally, Copeland recommended

that, conditioned on PG&E installing additional reflectors or barriers in accordance with recommendations of the County Department of Public Works, the Commission find that the present placement of the poles on the west side of Harlan Road by PG&E is in accordance with accepted good practice for the given local conditions.

On cross-examination, Copeland admitted that from a strictly safety standpoint the poles would be safer on the east side of Harlan Road. Copeland's answers on cross-examination indicated that he views safety in relativistic terms. For example, he said several times that the poles in their present location are safe. He also stated that if the poles were moved to the other side of the road they would be even more safe. And if they were no poles on either side of the road safety would be increased even more. He believes that the issue to be decided in this proceeding is whether or not the poles where they are now are an undue risk to the general public. He does not believe that the present pole locations are an undue risk.

PG&E's Evidence

PG&E called as its first witness Donald J. Foley formerly its Supervisor of Field Engineering for the Land Department. He is now employed as a consultant under contract to the Stockton Area Transmission Line Group, the cogenerators interested in the construction of the subject 115 kV transmission line. Foley was responsible for the location and approval of all facilities of the line, including the portion thereof on Harlan Road. In describing the criteria he used to locate the line he stated that no simple formula dictates where a transmission line should be routed. Rather, the route depends on many complex considerations. Over the years PG&E has developed feasibility study guidelines for locating transmission facilities. These guidelines consider the three main factors used in planning any electric line: engineering, economics, and environment.

Engineering factors require that the line be located where it can be built, operated, and maintained reliably and efficiently.

Economics are also important to any project, according to Foley. Generally, the most direct route is the least expensive both in terms of construction costs and in terms of minimizing losses of electricity.

Potential impacts to the environment are taken into consideration using the routing engineer's experience and the rules and regulations of the public agencies involved. In addition the utility tries to work with individual property owners to address their specific concerns.

These three factors, engineering, economics, and environment, are weighed against each other in order to select the best route at the lowest reasonable cost. Thus, the reasonableness of any given line includes engineering, aesthetic, environment, and social considerations.

Foley explained how Harlan Road was selected as the best route for this section of the transmission line. He explained that initially CalTrans specifically requested that PG&E minimize the crossings of Interstate 5 by the transmission line. PG&E met this concern by placing the line along Harlan Road on the eastern side of Interstate 5, thus insuring that the line would cross the freeway only once. If the line had been located on the western side of Interstate 5, the line would have crossed the freeway at least three times. This was a prime consideration in PG&E's decision process, according to Foley.

In addition, from an engineering standpoint there were no impediments, i.e., nothing which needed to be moved or built around, along Harlan Road so that the line could be easily built, maintained, and operated. The economics of the Harlan Road location were also favorable because of an existing franchise right-of-way along that county road. By using the county road PG&E

would not have to purchase private rights-of-way thus keeping the cost of the project down and lessening the impact to private property owners. Furthermore, Harlan Road is a more or less direct route between the generation sites for which the line would serve as a collector. PG&E did consider other alignments, including other franchise rights-of-way, but, in light of the foregoing considerations, other alignments were rejected in favor of Harlan Road.

During the feasibility study no environmental problems were identified in connection with the Harlan Road route. Harlan Road is a frontage road and there are properties which are associated with light industrial uses along it. The line therefore is not incompatible with these surroundings. Furthermore, there is nothing unusual about the width of the franchise right-of-way where the poles were to be placed. Foley also explained why the west side of Harlan Road was selected rather than the east side. He stated that there is an existing distribution line on the east side of Harlan Road with at least three telephone trunk cables on the distribution poles. These poles are taller than normal distribution poles in order to clear the walnut trees which grow along the east side of the road under the distribution line. If PG&E had decided to put the 115 kV transmission line on the east side of Harlan Road it would have had to overbuild the existing transmission line. Because of the trees and the clearance requirements between transmission, distribution, and telephone cables, PG&E would have had to either: (1) use extremely high poles, up to 100 feet, or (2) cut down all the walnut trees. In addition had PG&E chosen an east side overbuilt line, it would have had to shorten the span length and increase the number of poles required because of the weight of the extra lines or use steel poles entirely, again because of the increased weight. Either choice would have increased the construction costs of the line and created a greater visual impact.

Foley also explained that at the time PG&E did the routing feasibility study in the Spring of 1986, the telephone company's policy was to require undergrounding of their trunk cables whenever transmission lines were involved. This was because of potential line interference. Undergrounding the telephone trunk lines would have cost about an additional $1 million each mile for a 5-mile distance. Undergrounding is also required whenever steel poles are used.

Another factor Foley considered in selecting the west side of Harlan Road was that any future widening of Harlan Road or future development can only occur on the east side because the west side abuts Interstate 5 property. By locating the transmission line on the west side PG&E would avoid having to relocate the line to accommodate future development. Foley explained that the alignment and location of the transmission lines poles along the west side of Harlan Road are not unusual. PG&E's normal practice is to place its poles two feet inside the edge of the franchise right-of-way. PG&E followed this procedure along Harlan Road. The poles are set back at least four feet from the fogline as can be seen in the series of photographs taken of the poles in Exhibit 11. This is not an unusual location and poles comparably located are found throughout PG&E's system, according to Foley.

During the planning stages of the line Foley met several times with the Findleys. One of the Findleys' concerns was that the two poles adjacent to their property were on their property and not in the Harlan Road franchise area. The Findleys' hired a private land surveyor who confirmed that contrary to the Findleys' belief, the poles were in fact in a franchise right-of-way. Another of the Findleys' concerns was the possible interference with their trucking operations caused by an overhead guywire at the south end of their property. To accommodate Findleys' concern Foley agreed to keep the overhead anchor wire at least 20 feet in the air at the self-supporting stub pole and 50 feet in the air at

the transmission line pole. Findley was also concerned with the location of the pole adjacent to the northerly end of his property. PG&E agreed to move the location of the pole 20 feet to the north to resolve this concern.

According to Foley, the above concerns were the only ones expressed as of the time of their last meeting on March 12, 1987. The traffic safety question apparently became an issue at a later date, according to Foley. Later, when he was informed of Findleys' safety concerns, he requested that a check be made into the accident record of Harlan Road. The San Joaquin County Department of Public Works, Traffic Division, was contacted for the information. This information indicated that poles along the west side of Harlan Road would not make Harlan Road appreciably more or less dangerous based on the past accident history of that road. The San Joaquin County Department of Public Works did issue an encroachment permit for the Harlan Road section of the line along the west side of Harlan Road. A copy of the permit is a part of Exhibit 11.

PG&E next called Charles R. Nordfelt, Consulting Traffic and Civil Engineer, as its next witness. Nordfelt is a former employee of CalTrans, a civil engineer by profession who worked for the State from 1949 to 1983 in the Design Construction and Traffic Departments of CalTrans. He was District Traffic Engineer from 1957 until his retirement in 1983 for District 4 (San Francisco office) which included the nine San Francisco Bay Area Counties. He was responsible for traffic operations on all state highways and freeways. He is a registered Civil Engineer and Traffic Engineer. He was asked by PG&E to review the section of Harlan Road from Roth Road to Lathrop Road from a traffic safety standpoint vis-a-vis the recently installed wooden and steel poles along the Interstate 5 right-of-way fence. In the course of his review he visited the Harlan Road area in question and formed an opinion about the position of the poles on Harlan Road. In his opinion the placement

of the poles conforms to good traffic safety engineering practice. He stated that although specific rules governed the placement of fixed objects on freeways, there are no rigid rules governing the placement of fixed objects on non-freeways because of the wide variety of conditions. Their placement depends upon engineering judgment. He further stated that on roads that are not freeways individual trees and utility poles are usually not shielded unless they are located in a position where there is a prior history of cars running off the road or conditions related that indicate a potential for run-off road accidents. This is because the guard railing increases overall fixed object exposure.

Nordfeldt also examined the accident history supplied by the San Joaquin County Department of Public Works and tabulated the types of accidents which had occurred during the five-year study period. He stated that of the 33 accidents reported 18 were intersection-type accidents, 10 were run-off road accidents, and 5 were other accidents such as rear-end collisions and U-turns. Of the 10 run-off road accidents only one was within the straight-away section of Harlan Road between Schilling Road and the southerly end of the Findley property. This accident involved a northbound vehicle which overturned. In the five-year period of the study there were no run-off road accidents in the southbound direction along the Interstate 5 fence. Of the 9 remaining run-off road accidents 6 occurred on the curving portion of Harlan Road from the southerly end of the Findley property to Roth Road and the other three occurred between Lathrop Road and Shilling Road. He stated that the accident data confirmed the fact that a straight highway alignment has a low potential for run-off road accidents. Since there had been only one accident on the straight section of Harlan Road in five years, it was his opinion that the likelihood of having a run-off road accident involving the poles is very small.

Nordfelt also testified concerning the pole placements on the curving section of Harlan Road from the southerly end of the Findley property to Roth Road. He stated that the fact that six accidents had occurred on this section would not change his opinion of the safety of the pole placements. He said that, looking at the pole placements shown on Exhibit 11, of the three poles on that section only one is placed on the outside of the curve for southbound traffic. Because of centrifugal force, it would be unusual for a car to run off the road to the inside of a curve where the other two poles are located for southbound traffic. The poles at the southerly end of the section in question are on the east side and the accidents reported in the County Accident Report involved vehicles travelling in the southbound lane. Thus the poles, had they been in place at the time of the accidents, would not appear to have made any impact. Finally, Nordfelt testified that based on actual traffic counts conducted by San Joaquin County in 1980 and 1982 Harlan Road is fairly lightly trafficed, that is between 1,000 and 3,000 cars per day.

PG&E next called as a witness David H. Shaffner, Senior Electrical Engineer in the Overhead Transmission Lines Section of the Electrical Engineering Department. Shaffner supervised the design of the transmission line in question. Shaffner described the alignment of the transmission line along Harlan Road. He stated that it is in a franchise position, which means that the poles are two feet inside the edge of the franchise right-of-way, in accordance with PG&E's normal practice for locating lines along easements. The span lengths along this portion of the line average about 350 feet with heights of poles averaging 75 feet, which is also normal. Wood poles were used primarily; however, some steel poles were used in areas where Harlan Road formed an S-shaped bend. PG&E tried to minimize the number of angle points around the turns because angle points require guying and anchoring of the particular poles. Additional rights-of-way would have to have been acquired

for these locations. In areas where PG&E could not guy the poles, self-supporting tubular steel poles were used.

Shaffner was asked whether the Harlan Road line could have been located on the same side of the road as the existing distribution line. He replied that the existing poles on the east side of Harlan Road already support distribution lines and telephone trunk cables. He added that those poles would not have been strong enough to support the transmission, distribution, and telephone cables combined. Occupying the east side of Harlan Road would therefore require replacing each pole with a much taller pole in order to provide the clearances between the lines and cable required by General Order 95. Besides being taller, the poles would have to be bigger in diameter in order to support the total weight. Additionally, the new line would require additional angle points which require self-supporting steel poles or guy poles to be placed on the west side of Harlan Road. Finally, because of other clearance requirements in General Order 95, trees would need to be cut back or removed. All of these changes would create a greater visual impact than now exists.

Shaffner also described the placement of the wood pole located at the south end of the Findley property. He stated that the pole was placed at that point to be able to make the turn around the bend on Harlan Road. Originally, a guywire and anchor were to be placed on the property in order to support the wood pole. Findley was concerned that this would affect his operations, since he uses the south end of his property as a driveway for his trucks. Findley stated that he needed at least a 20-foot clearance from the guywire. To accommodate this request PG&E replaced the anchor with a self-supporting steel pole and a supporting guywire 20 feet above the ground. A pole on the north end of the Findley property was moved 20 feet to allow for a school bus stop.

PG&E next called Masami Kurihara, a protection engineer in its San Joaquin Regional Office. His responsibilities include

providing settings for all protective relays on transmission systems using voltages 115 kV and below. In other words, he is responsible for setting the relays that will protect these systems by detecting and de-energizing short-circuit faults on the proposed line. He is familiar with the transmission line from a protection standpoint; and he set the relays to provide protection against short circuits on that line.

He explained that as with all PG&E transmission and distribution lines, both phase and ground fault protection will be provided. This means that relays are used to detect whenever the lines touch each other or contact ground. And then circuit breakers automatically disconnect the line from the power source, thus de-energizing the line. Under normal conditions on a three-wire circuit such as the proposed Harlan Road Line, normal currents with normal voltages are present in the lines. The normal currents flow only in the three conductors. No ground currents flow under normal conditions. Kurihara explained that if two or three energized lines, either transmission or distribution, contact each other, a short circuit occurs. The short circuit causes the normal current and voltage magnitudes to change so that the current magnitudes increase and the voltage magnitudes decrease. The relays at the power source sense these changes in magnitudes and cause the circuit breaker associated with the lines to open and de-energize the line. This is called phase-fault protection.

Ground fault occurs when a line contacts ground, and abnormal current flows from that line to ground and then returns to the power source through the ground. Ground fault sensing relays, as differentiated from phase fault sensing relays, are used to detect this condition. Under normal conditions, there is no normal ground current present in a three-wire circuit such as the proposed line. Therefore, ground relays can be set to operate at much lower current tripping values than the phase protective relays.

According to Kurihara PG&E provides phase and ground protection for all of its circuits throughout its system, including the proposed line. The protective schemes have been in use for many years throughout PG&E's system.

Development Since Hearings in October 1987

On December 17, 1987, the State Lands Commission and PG&E entered into an addendum to a lease covering portions of the lands upon which the proposed transmission lines are to be built. The lease contains a condition pertaining to the Harlan Road section of the transmission line, as follows:

> "Leasee agrees as a condition of this lease that prior to commencing construction on, over or under the lands subject to this lease it will comply with those safety measures or conditions deemed appropriate by the California Public Utilities Commission (CPUC) or the Board of Supervisors of San Joaquin County (Board) including any requirements for (a) installation of guard rails or other safety measures and/or (b) relocation of the power poles along Harlan Road from the west side to the east side, and/or for any other requirement that might be imposed for traffic safety purposes."[3]

On January 12, 1988, the San Joaquin County Board of Supervisors approved a staff recommendation to require certain mitigation measures regarding the power poles along Harlan Road in the area of Lathrop. A copy of the minutes of the January 12, 1988, Board of Supervisors Meeting is attached to correspondence of PG&E dated January 27, 1988. We mark the minutes Exhibit 17 for identification and take official notice of their contents.

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3 A copy of the addendum to the lease between the State Lands Commission and PG&E is attached to correspondence from PG&E dated January 13, 1988. We mark the addendum as Exhibit 16 for identification and also take official notice of the contents of that agreement.

The recommendations of the Department of Public Works of the County of San Joaquin concerning the Harlan Road transmission lines are contained in a letter dated January 8, 1988, from the office of the County Counsel to the Board of Supervisors. In that letter the County Counsel recommends that the Board of Supervisors direct the Department of Public Works to monitor construction of mitigating measures along Harlan Road adjacent to the PG&E power poles between Roth and Lathrop Roads. A copy of the letter of January 8, 1988, of the County Counsel to the Board of Supervisors is attached to correspondence from PG&E dated January 13, 1988, which we have marked Exhibit 16 for identification. We take official notice of its contents.

The actual mitigation measures recommended by the Department of Public Works of the County of San Joaquin, are contained in a memorandum entitled "Traffic Investigation Summary" that is attached to Exhibit 16. The memorandum is drafted by Sukh S. Chahal, P. E., Senior Civil Engineer, Traffic Engineering Division. In the memo Mr. Chahal recommends:

> "It is the recommendation of the Public Works Department that the Pacific Gas and Electric Company's poles may be located according to the following minimum standards of horizontal clearance:
>
> "A. Poles should be outside the clear roadside recovery area [a]...minimum [of] ten feet (10') outside the shoulder.
>
> OR
>
> "B. Poles should be at least six feet (6') from travel way provided a six inch (6") high concrete curb, at least four feet (4') from the travel way and two feet (2') from the pole, is constructed.
>
> OR

"C. Poles less than six feet (6') from travel way should be protected by 'Guard Rail' in addition to concrete curb described in paragraph B above."

We take official notice of these recommendations.

Discussion

Public Utilities (PU) Code § 1702 provides:

"Complaint may be made by...any...person... setting forth any act or thing done or omitted to be done by any public utility...in violation or claimed to be in violation, of any provision of law or of any order or rule of the Commission. . . ."

The Commission has not regulated the construction of transmission lines under 200 kV. Under General Order 131 the Commission requires utilities to obtain certificates of public convenience and necessity only for the construction of transmission lines whose operating voltage exceeds 200 kV. Since it does not issue any license, permit, or certificate in connection with the construction of 115 kV transmission lines, the Commission is not the lead agency for the purpose of administering the California Environmental Quality Act, as it may pertain to the project complained of. Rather, PG&E has applied to the State Lands Commission for a negative declaration regarding the project.

Furthermore, at all stages pertinent to the construction of the transmission line along Harlan Road, PG&E was in contact with the San Joaquin County agencies with responsibility over the use of county roads for these purposes. At the request of the county PG&E applied for and received from the San Joaquin County Department of Public Works an encroachment permit, granting to PG&E authority to install the poles on condition that additional reflectorization was attached to them.

The only rule, statute, or regulation that has been identified on this record as pertaining to the construction of the

Harlan Road transmission line is GO 95 (Rules for Overhead Electric Line Construction). Although GO 95 does not specifically address the location of poles along the roadway it does state that: "Construction shall be according to accepted good practice for the given local conditions in all particulars not specified in the rules." (GO 95, Rule 13.)

Both PG&E's traffic engineering consultant and the staff witness testified that the poles as installed by PG&E were constructed according to accepted good practice for the local conditions. The staff witness testified that poles constructed contiguous to the paved county roads in a manner similar to the Harlan Road line were common throughout the local area. PG&E's traffic engineering consultant testified that the poles as constructed were not in violation of any recognized traffic engineering standards.

PG&E's supervising design engineer testified that if the line had been constructed in the existing easement on the east side of Harlan Road that taller poles would have been required to comply with the separations requirements of General Order 95. The existing pole line on the east side of Harlan Road carries both telephone and electric distribution lines over walnut trees. Much taller and larger poles would have been required to provide adequate separation between the walnut trees and the telephone lines, between the telephone lines and the distribution lines, and between the distribution lines and the transmission lines in order to comply with existing regulations. Thus, a pole line construction project on the east side of Harlan Road would have been much more costly than the one constructed to the west, since it would have involved removal of the existing line and replacement of all poles with taller, sturdier, and more expensive poles. In addition, since development is expected along the east side of Harlan Road, construction of a new pole line carrying three different services along the east side may have required expensive

relocation in the event that development did in fact occur in future years.

PG&E's traffic engineering consultant analyzed the traffic report prepared by the county tabulating 33 reported accidents in the five-year period. His analysis showed that 18 of the 33 accidents were intersection-type accidents, 10 were run-off road accidents, and 5 were other type of accidents. Only one of the 10 run-off road accidents was within the straight-away section of Harlan Road south of the Findley property. This accident involved a northbound vehicle (that is, the lane of traffic not adjacent to the pole line). That vehicle overturned. In the five years covered in the county's accident report there were no run-off road accidents in the southbound direction along the Interstate 5 fence (that is, the lane of traffic adjacent to the pole line in question). The consultant concluded that the accident data confirmed that a straight highway alignment has low potential for run-off road accidents. In his opinion the straight section of Harlan Road has a very small likelihood of run-off road accidents involving the transmission line poles.

The expert traffic engineering consultant for PG&E also testified regarding the nine remaining run-off road accidents. Six of these accidents occurred on the curving portion of Harlan Road between the south end of the Findley property and Roth Road. The other three occurred to the south of the Findley property between Lathrop Road and Schilling Road, also on a curving section. We will not concern ourselves with the three accidents that occurred between Schilling and Lathrop Roads, since no party focused attention upon these accidents. However, it is interesting to note that the transmission line shifts from the west side of Harlan Road to the east side just south of Schilling Road. In other words, where southbound cars would enter a left-hand curve, the pole line shifts from the outside of the curve to the inside of the curve, reducing the probability of automobile/pole collisions in that

vicinity for speeding southbound cars entering the left-hand curve south of Schilling Road. Run-off road accidents occurring at this curve should, due to centrifugal force, exit the paved road surface to the west of Harlan Road and away from the pole line in this area.

We will now analyze the six run-off road accidents that occurred during the study period in the area of Roth Road south to the end of the Findley property. This is the curved section of road in this area. We will number these accidents one through six.

1. In this solo accident a northbound car collided with a raised divider 12 feet west of Harlan Road on Roth Road. The location of this accident suggests that the driver was northbound at the intersection of Harlan Road and Roth Road and failed to negotiate the left-hand turn onto Roth Road because the driver was under the influence. This accident could not have involved the transmission line poles due to its location.

2. This solo accident occurred 75 feet south of Roth Road on Harlan Road. The driver of the vehicle was northbound on Harlan Road and apparently failed to negotiate the westerly curve at that point immediately before the intersection of Harlan Road with Roth Road. The accident report does not state which side of the road the vehicle ran off of, but centrifugal force would have carried him to the outside or east side of the road where PG&E Pole No. 3-1 is placed. This is the first pole beyond the Findley property to the north; but it is not one of the poles complained of in this proceeding. The driver in this accident was under the influence. It is not possible to tell from the evidence whether he would have collided with the Pole No. 3-1 if it had been in place on the date of the accident.

3. This solo accident occurred about two-tenths of a mile south of Roth Road on Harlan Road. The driver was northbound on Harlan Road when he ran off the road colliding with a sign, pole, and fence. The accident occurred at night-time, 0145 hours, during

rain and the pavement was wet. It cannot be determined exactly where the driver ran off the road. However, it may have been in the long sweeping easterly curve that begins just south of the Findley property. Without large scale maps of this section of Harlan Road and without knowing whether the two-tenths miles distance specified in the report is an estimate or an actual measurement it cannot be determined whether the accident occurred in the straight-away on Harlan Road or in the curved section. If it occurred in the curved section, centrifugal force might have carried the vehicle into the southbound land and off the road in the vicinity of Pole 3.3 on the west side of Harlan Road. However, this is speculation.

4. This accident occurred 75 feet south of Roth Road. It involved a northbound car running off the road and striking a parked tractor-trailer. The driver was under the influence. This accident is similar to accident No. 1 and appears to have involved a failure of the driver to negotiate the westerly curve immediately before the intersection of Harlan Road with Roth Road. Centrifugal force would have carried the automobile to the outside of the curve where, presumably, the tractor-trailer was parked. There is a transmission line pole in this vicinity but it cannot be determined from this record whether the automobile would have struck this pole had it been constructed on the date of the accident. However, the pole in question, No. 3-1, is not one of those complained of.

5. This accident occurred on April 8, 1986, when a northbound automobile ran off the east side of Harlan Road 1,056 feet south of Roth Road, striking a parked forklift and pushing it into a parked tractor-trailer. Both the forklift and the tractor-trailer were parked on the paved shoulder, about 1-2 feet east of the fogline. The driver had been drinking. The weather was clear and dry and the time was 2105 hours. This is the same accident to which witness Rita Steineb testified (Tr. 35 et seq.). A news photograph of the accident scene is Exhibit 5. The photograph

shows that the right front of the Pinto struck the left side of the forklift. The poles in question are not on the side of the road where this accident occurred.

6. This solo accident occurred 1,056 feet (2/10ths of a mile) south of Roth Road on Harlan Road. A northbound vehicle ran off the road colliding with a power pole in clear, dry weather and during daylight hours. The driver was under the influence. This accident is in a similar location and is similar in characteristics to accident No. 3. Again it cannot be determined exactly where this accident occurred, vis-a-vis the pole located at the south end of the Findley property. However, since the accident report states that the northbound vehicle collided with a power pole, and since there were no power poles installed on June 26, 1986 on the west side of Harlan Road in this vicinity, the run-off road accident must have occurred to the east where a power pole line existed on the date of the accident.

Accident No. 6 is similar to No. 3, which also involved colliding with a pole. The report of No. 3 does not say that the pole was a power pole, but, since no poles were on the west side of the road in 1983 the likelihood is that the run-off road accident occurring on November 20, 1983 was to the east side of the road away from the transmission line poles.

PG&E's expert witness testified that the above six accidents occurred on the curving portion of Harlan Road between the south end of the Findley property and Roth Road. It may be inferred from this testimony that the expert witness measured that distance and determined that it was 2/10ths of a mile or less. He further stated that the pole placements in this curved section involved only one pole on the outside of the curve for southbound traffic. He apparently failed to observe, however, that the accidents reported involved northbound vehicles. It would be unusual for southbound vehicles to go off the road between Roth Road and the south end of the Findley property because the distance

is relatively short and the speeds that could be reached from the intersection would be less than the speeds that could be achieved on the straightaway section for northbound cars entering the curved section at the south end of the Findley property. PG&E's expert did not testify regarding his expert opinion of the pole placements near or on the Findley property as they related to northbound traffic, the direction of travel of five of the six vehicles involved in run-off-road accidents during the study period. Pole 3-3 at the south end of the Findley property would be on the outside of the curve for this direction of traffic as would Pole 3-2. However, Pole 3-2 appears to be near the transition point between the easterly curve and the beginning of the westerly curve for northbound traffic. Accordingly, it is unlikely that Pole 3-2 at the north end of the Findley property would be struck by northbound cars going out of control at the beginning of the curving section at the south end of the Findley property. The expert witness for the complainants testified to the hazard of Pole 3-3 vis-a-vis northbound traffic. He stated that that pole is on the outside of a curve on the road, very close to the west edge of the pavement (7-1/2 feet) and is exactly in the head-on position of northbound traffic on Harlan Road, just past the beginning of the curve. He also stated that he saw numerous skidmarks on the pavement and in the gravel shoulder on the side, indicating a tendency for northbound vehicles to go out of control when entering this curve. South of the curve, Harlan Road is straight for about 1-1/2 miles, which may tempt drivers to accelerate their vehicles to a speed that is higher than that which is needed to negotiate the curve safely. Findley's expert on cross-examination stated that while he was with CalTrans anything within 10 feet of the edge of the traveled way was to be considered to be extremely hazardous. However, Findley's expert talked about the hazard of Pole 3-3 for northbound traffic. For northbound traffic the pole face is 27 feet 7 inches from the centerline of the road. In other words, the

distance of this particular pole from the traveled way for northbound traffic is almost 28 feet, much greater than the 10 feet that the expert considered to be extremely hazardous. The position of Pole 3-3 vis-a-vis northbound traffic, is, according to the expert, exactly in the head-on position of northbound traffic on Harlan Road. Thus, vehicles travelling northbound on Harlan Road on the straight-away section would have to continue their straight course in an undeviating manner in order to strike the pole. They must make no effort to negotiate the easterly-tending curve but must maintain their due north direction across the centerline, across the oncoming lane of traffic, across the opposite fogline, across the opposite shoulder, and off the paved way 7-1/2 feet in order to strike the pole. The skidmarks to which the expert testified show that drivers do not tend to go off the road in this fashion, but they make efforts to slow down or to correct their course. The PG&E photograph of Pole 3-3 in the exhibits to Exhibit 11 show skidmarks in the roadway but none in the direction of the pole itself.

We do not agree with complainants' expert that Pole 3-3 is in a hazardous location vis-a-vis northbound traffic. In our view it is improbable that an inattentive or even an inebriated driver would drive straight through a curving section without the slightest attempt to negotiate the curve, crossing the on-coming lane of traffic, the shoulder, and the unpaved section and driving into a power pole. Indeed, the accident history near this location shows that the accidents have actually occurred on the east side of the road rather than on the west side for northbound traffic. The accident history of the straight stretch, the 1-1/2 miles south of the Findley property, shows no run-off road accidents during the study period. Complainants' theories about the hazardous location of Pole 3-3 or of the pole line have not been borne out either in the testimony of their expert or in the actual accident history of this location. Accordingly, we will not order PG&E to relocate any

portion of the Harlan Road line between Lathrop Road and Roth Road. However, we believe that the mitigation measures specified by the Department of Public Works of the County of San Joaquin should be implemented by PG&E and we will so order.

Notwithstanding the decision which we reach in this case, it appears reasonably necessary and timely to make a comprehensive review of the subject matter, criteria, considerations and guiding principles underlying the location and approval of all facilities of transmission lines that are near or located within the traffic right of way. We would like to develop a record which reviews the present rules and regulations, considerations and responsibilities now utilized by agencies having some jurisdiction over pole placement including our own Commission. We are aware of a growing body of information that includes studies of U.S. Department of Transportation, Federal Highway Administration and other National Safety organizations and Universities (Northwestern University and Texas A&M University)[4] that have looked into this matter. A comprehensive review of the matter could assist this commission in charting a future path that may lead us into rulemaking or may suggest the need for legislation or other action by local or other state agencies. Therefore we will direct staff to provide us with a report reviewing the current status of the traffic safety regulation of transmission lines close to traffic rights-of-way, and outlining areas of inquiry that would likely prove fruitful should we decide to open a formal proceeding on these issues.

We are interested in the consideration of traffic safety of the motoring public in pole and line placement, and how and in

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4 A recent example is: Final Report No. FHWA/RD 86/154; September 1986. Topics include: Safety, vehicle collisions with poles, break away timber poles, crash cushioning and development of a Safety Program.

what manner that can best be accomplished now and in the future by the utilities and the bodies who grant approval.

Findings of Fact

1. The present placement of the transmission lines poles on the west side of Harlan Road by PG&E is in accordance with accepted good practice for the local conditions in rural San Joaquin County.

2. Pole 3-3 is not in a hazardous location, vis-a-vis northbound traffic.

3. Neither Pole 3-3 nor 3-2 impede the movement of Findley's trucks in and out of his property.

4. The mitigation measures recommended by the Department of Public Works of the County of San Joaquin will increase the safety of Harlan Road between Lathrop and Roth Road where PG&E has constructed the transmission line poles on the west side of the road.

Conclusions of Law

1. PG&E should install the mitigation measures recommended by the Department of Public Works in accordance with the memorandum attached to Exhibit 16 within 6 months from the effective date of this order.

2. The complaint should in all other respects be denied.

O R D E R

IT IS ORDERED that:

1. Pacific Gas and Electric Company shall install the mitigation measures recommended by the Department of Public Works of the County of San Joaquin in accordance with the memorandum attached to Exhibit 16 within 6 months from the effective date of this order.

2. The complaint is in all other respects denied.

3. Staff shall submit a report to the Commission reviewing the current status of the traffic safety regulation of transmission poles and lines located proximate to traffic right-of-way and shall recommend areas of inquiry should the Commission decide to open a formal proceeding to address them.

This order becomes effective 30 days from today.

Dated APR 27 1988, San Francisco, California.

STANLEY W. HULETT
President
DONALD VIAL
FREDERICK R. DUDA
G. MITCHELL WILK
JOHN B. OHANIAN
Commissioners

I CERTIFY THAT THIS DECISION WAS APPROVED BY THE ABOVE COMMISSIONERS TODAY.

Victor Weisser, Executive Director

ALJ/RTB/rsr ALT-COM-FRD H-5a

Mailed

Decision 88 04 060 APR 27 1988 ORIGINAL APR 29 1988

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

LOIS AND GEORGE FINDLEY, Complainants, vs. PACIFIC GAS AND ELECTRIC COMPANY, Defendant. (U39E)	Case 87-06-009 (Filed June 5, 1987)

George Findley, for himself, complainant.
Susan L. Rockwell, Attorney at Law, for Pacific Gas and Electric Company, defendant.
Patricia A. Bennett, Attorney at Law, for the Division of Ratepayer Advocates, intervenor.

O P I N I O N

The complaint of Lois and George Findley alleges that Pacific Gas and Electric Company (PG&E) proposes to construct a 115 kilovolt (kV) collector line to be installed along Harlan Road, San Joaquin County; that the line as proposed is unsafe to the public as it runs between two heavily travelled roadways (Interstate 5 and Harlan Road, a frontage road to Interstate 5, both running north and south); that Interstate 5 has a speed limit of 65 miles per hour and Harlan Road a speed limit of 55 miles per hour. The complainants also allege that there is an existing

portion of the Harlan Road line between Lathrop Road and Roth Road. However, we believe that the mitigation measures specified by the Department of Public Works of the County of San Joaquin should be implemented by PG&E and we will so order.

Notwithstanding the decision which we reach in this case, it appears reasonably necessary and timely to make a comprehensive review of the subject matter, criteria, considerations and guiding principles underlying the location and approval of all facilities of transmission lines that are near or located within the traffic right of way. We would like to develop a record which reviews the present rules and regulations, considerations and responsibilities now utilized by agencies having some jurisdiction over pole placement including our own Commission. We are aware of a growing body of information that includes studies of U.S. Department of Transportation, Federal Highway Administration and other National Safety organizations and Universities (Northwestern University and Texas A&M University)[4] that have looked into this matter. A comprehensive review of the matter could assist this commission in charting a future path that may lead us into rulemaking or may suggest the need for legislation or other action by local or other state agencies. Therefore we will direct staff to provide us with a report reviewing the current status of the traffic safety regulation of transmission lines close to traffic rights-of-way, and outlining areas of inquiry that would likely prove fruitful should we decide to open a formal proceeding on these issues.

We are interested in the consideration of traffic safety of the motoring public in pole and line placement, and how and in what manner that can best be accomplished now and in the future by

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Findings of Fact

1. The present placement of the transmission lines poles on the west side of Harlan Road by PG&E is in accordance with accepted good practice for the local conditions in rural San Joaquin County.

2. Pole 3-3 is not in a hazardous location, vis-a-vis northbound traffic.

3. Neither Pole 3-3 nor 3-2 impede the movement of Findley's trucks in and out of his property.

4. The mitigation measures recommended by the Department of Public Works of the County of San Joaquin will increase the safety of Harlan Road between Lathrop and Roth Road where PG&E has constructed the transmission line poles on the west side of the road.

Conclusions of Law

1. PG&E should install the mitigation measures recommended by the Department of Public Works in accordance with the memorandum attached to Exhibit 16 within 6 months from the effective date of this order.

2. The complaint should in all other respects be denied.

O R D E R

IT IS ORDERED that:

1. Pacific Gas and Electric Company shall install the mitigation measures recommended by the Department of Public Works of the County of San Joaquin in accordance with the memorandum attached to Exhibit 16 within 6 months from the effective date of this order.