UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

DOCKET 50-323

TESTIMONY OF ROSS W. WOODWARD
ON BEHALF OF
PACIFIC GAS AND ELECTRIC COMPANY
SEPTEMBER __, 1973

My name is Ross W. Woodward. My business address is 77 Beale Street, San Francisco, California 94106. I am Field Representative of the Line Construction Department for Pacific Gas and Electric Company. My duties as Field Representative of the Line Construction Department include the location and determination of the steps to be taken in tower line access road construction. In this regard I coordinate my activities with the Land Acquisition section of the Land Department and coordinate the activities of the Line Construction Department with property owners. I also coordinate the vegetation restoration program. Prior to my joining the Line Construction Department of Pacific Gas and Electric Company ten years ago, I spent four years with private contractors engaged in building hydro-electric dams and transmission lines, and prior to that, two years with the California State Division of Highways.

The transmission system for the Diablo Canyon Plant consists of the following lines:

Diablo-Gates Line: This is a 500 kv transmission line about 79 miles long from the site to the existing Gates Substation

in Fresno County, approximately 42 miles southwest of the town of Fresno.

Diablo-Midway Lines: These lines consist of two single circuit 500 kv transmission lines about 84 miles long from the site to the existing Midway Substation in Kern County, approximately 25 miles west of Bakersfield. Within the Company they are known as the Diablo-Midway Lines Nos. 2 and 3.

Tap Line: This is a double circuit 230 kv transmission line from the site to a connection with the existing Morro Bay-Mesa 230 kv transmission line at a point about 10 miles northeast of the site.

Construction of the Tap Line has been completed and the circuits energized. Construction of the No. 2 Diablo-Midway Line is approximately 98.6% complete. 100% of the right-of-way for this line has been acquired, and we expect to complete construction of it by the end of October.

Construction of the Diablo-Midway No. 3 line is only about 1.70% complete. Construction of this line was suspended by the AEC in an order dated February 4, 1972. The suspension was ordered pursuant to the revised regulations issued by the AEC implementing the National Environmental Policy Act of 1969 (NEPA), 10 CFR 50, Appendix D. The suspension was not protested by PGandE because it was to last only pending completion of the NEPA review of the impact of continued construction, which was estimated by the AEC staff in November 1971 to be eight months.

Our available crews were scheduled to take longer than that to complete the Diablo-Gates and Diablo-Midway No. 2 lines, which were not suspended.

The suspension unfortunately remains in effect today, although on April 19, 1973 PGandE filed a request that it be lifted following release of the Final Environmental Statement by the AEC staff. Thus, with the exception of a few towers near the town of Avila Beach which were set by helicopter in 1971 at the same time the corresponding towers of the No. 2 line were set and 12 foundations completed and one tower erected at Soda Lake, little work has been done on the No. 3 line, although all of the right-of-way has been acquired.

Because of the delay in commencing construction of the No. 3 line, we have had to lay-off 80 - 90 employees. Rather than complete the Diablo-Gates line on schedule and lay-off all our crews, we have extended the construction schedule for that line and kept a skeleton crew working in order to have a nucleus crew available when the suspension of construction of the Diablo-Midway No. 3 line is lifted. As of August 31, construction of the Diablo-Gates line was 94% complete. The entire right-of-way has been acquired, all access and spur roads have been constructed, and all stringing trails have been cleared. The area remaining to be crossed by the line is the area of least environmental significance, consisting of agricultural and oil field land. Thus, the remainder of my testimony will be devoted to a

discussion of the construction of the Diablo-Midway No. 3 line and the measures the Company has taken to lessen the environmental impact of construction of all three transmission lines.

Construction of the Diablo-Midway No. 3 transmission line will have a minimal effect on the environment. As previously stated construction of the Diablo-Midway No. 2 line is approximately 98.6% complete. The second Diablo-Midway line will parallel the first line over approximately 76.9% of its length at a center line distance of only 200 feet, and it will parallel the existing Morro Bay-Midway 230 kv line over approximately 15.4% of its length at a center line distance of 130 feet, a total parallel of approximately 92.3%. The lines to Midway split about 19 miles west of Midway and proceed on rights-of-way separated 3/4 to 3-3/4 miles to Midway Substation. The lines were split because to include them both on one right-of-way would have interfered with oil wells operating in the vicinity.

Where vegetation exists clearing for the No. 3 line will be minimal and will be conducted in accordance with applicable regulations. Aside from the tower sites the only clearing required will be for stringing trails to lay the conductor pulling lead lines and a portion of the spur roads. These will disappear when the vegetation is re-established following completion of construction.

Most of the necessary access roads have been constructed in connection with the No. 2 line, and only 14 miles of main-line

roads together with the necessary spur roads will be required to build the No. 3 line.

The question of the selection of the route for the Diablo-Midway transmission lines was considered at length by the California Public Utilities Commission after 26 days of adversary public hearings. The decision of the CPUC in that proceeding is included as Appendix O in Supplement No. 2 to the Diablo Canyon Environmental Report. Recently, the CPUC issued an order deleting the condition contained in paragraph 2 of its original order. A copy of this latest order is set forth in Exhibit ____ attached. Thus PGandE's choice of its transmission line routes was sustained in its entirety by the CPUC. Furthermore, since the Diablo-Gates and Diablo-Midway No. 2 lines are largely complete, the only possible line which could be rerouted would be the Diablo-Midway No. 3 line. However, relocation of the Diablo-Midway No. 3 line would result in a greater overall impact on the environment than maintaining the existing routes because of the need to construct additional access roads, laydown areas, construction yards, and camps for a new route.

Similarly, undergrounding any of the lines is not a viable alternative. Wholly aside from the tremendous additional expense involved as well as technological problems, constructing an underground transmission line would have a much greater impact on the environment than an overhead line. This evolves from the need to clear the right-of-way to bare soil to provide working

space to excavate trenches, bury pipes, and lay cables. In addition, a completely different alignment would be required and the area would have to be kept cleared to permit the lines to be maintained.

The most up-to-date construction techniques, based in part on experience already gained on this project, will be utilized in constructing the No. 3 line. In addition to conventional methods smaller, narrower equipment is being used on smaller, steeper roads; all-wheel drive and specialized off-highway vehicles are available to minimize road construction; minimal clearing of tower sites and conductor stringing trails is planned; helicopters will be used for much of the conductor pulling; a maximum effort by all concerned will be made to minimize the environmental impact.

Once construction of the lines has been completed the lines have little impact on the environment because they do not interfere with use of the land or natural resources beneath them.

The impact of construction of the transmission lines is being reduced by restorative measures now underway. These will be applied following construction of the No. 3 line as well. Major efforts have been made on erosion control which have been quite successful. These include revegetating disturbed areas by hydro, or hand, seeding, frequently using straw "rolled in" with sheeps-foot rollers, and sometimes covered with netting. Disturbed slopes around tower sites have been re-contoured to

conform as closely as possible with the original ground slope. In addition to the seeding and contouring work many drainage areas have been redesigned improving the drainage considerably. Hundreds of Monterey and Bishop Pine trees have been planted along road cuts and fills. Structures have been dulled and "non specular" conductor purchased. A continuing monitoring program for trouble spots is in effect and will continue throughout the construction program, with remedial action, if necessary, taking place immediately.

In paragraph 5 of its decision the CPUC directed PGandE to survey existing access roads and report in writing

> ". . . what action is now required to reasonably control erosion and to reasonably restore the areas affected by construction to their natural state."

This has been done. Copies of the text of the first three reports rendered to the CPUC in accordance with this paragraph are attached hereto as Exhibit _____. The reports show that considerable progress toward ultimate recovery already has been accomplished.

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