CALIFORNIA PUBLIC UTILITIES COMMISSION
Utilities Division
Environmental Impact Branch

DRAFT ENVIRONMENTAL IMPACT REPORT

SAN ONOFRE TO ENCINA
230 kV TRANSMISSION LINE

San Diego Gas & Electric Company
Application No. 58282
SCH 78121189

San Francisco, California
April 1979

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CHAPTER 1

INTRODUCTION

A - APPLICATION

1. San Diego Gas & Electric Company (SDG&E) filed Application No. 58282 accompanied by an Environmental Data Statement (EDS) with the California Public Utilities Commission (Commission) on August 8, 1978. In the application, SDG&E requested a Certificate of Public Convenience and Necessity to construct and operate segments of a single circuit 230 kV transmission line from the San Onofre Nuclear Generating Station Switchyard to the Encina Generating Station Switchyard. On August 15, 1978, SDG&E filed a motion that a Negative Declaration be issued rather than a Draft Environmental Impact Report (DEIR) for the above application.

B - PROCEDURAL HISTORY

2. The Commission's General Order No. 131-A requires utilities to obtain approval prior to constructing and operating electric transmission lines that will be operated at voltages in excess of 200 kV. Before the utility is given this authority it must demonstrate to the Commission that the proposed project will serve the public convenience and necessity.

3. Rule 17.1 of the Commission's Rules of Practice and Procedure sets forth the methods for implementation of the California Environmental Quality Act (CEQA) of 1970. Under this Rule the Commission is required to prepare environmental documents on projects for which the Commission has the principal responsibility for approval (Lead Agency).

4. On October 26, 1978, the Commission staff, pursuant to the provisions of Section 65941 of the Government Code conditionally accepted SDG&E's application and undertook the preparation of an Initial Study to determine whether or not the motion for a Negative Declaration should be accepted.

5. On November 8, 1978, a Notice of Preparation of a Draft EIR accompanied by an Initial Study (recommending that SDG&E's request for a Negative Declaration be denied and that the application be processed with a Draft and Final EIR) was issued.

6. On January 30, 1979, the Commission, in its Decision No. 89905, ordered an amendment to its Rule 17.1 by incorporating a revised Rule 17.1 and additional Rules 17.2 and 17.3, and adopted an Information and Criteria List. These revisions and additions were made pursuant to the requirements of Assembly Bills 884 which amended the California Environmental Quality Act of 1970 (CEQA) and 2825 which is a clean-up bill modifying the amendments in AB 884. Among the Bill's provisions are specific time limits for different steps in the project evaluation process and a mandate to all state agencies to specify in advance the information which will be required in each type of project application the agency may receive.

7. Under revised and amended Rule 17.1, an applicant is required to provide a Proponent's Environmental Assessment (PEA) of the proposed project. The PEA shall analyze in depth only those impacts which are significant or potentially significant and where the Commission is the Lead Agency under CEQA, shall include the names and mailing addresses of all owners of land over, under or on which the project, or any part of the project may be located, and owners of land adjacent thereto.

8. SDG&E's originally filed EDS will satisfy the PEA requirement and this Draft EIR makes reference to the names and addresses of land owners in Appendix E.

C - DRAFT ENVIRONMENTAL IMPACT REPORT

9. SDG&E's EDS and addenda thereto have been reviewed by the staff for form, adequacy and objectivity. These documents have been incorporated into this Draft EIR by reference. The EDS and addenda

were also reviewed by certain state and local governmental agencies. Their comments are included in Appendix D. SDG&E was then requested to respond to these comments along with other comments compiled by the Commission staff in the form of Environmental Impact Inquiries (EIIs). SDG&E's responses to these comments are included in Appendix E.

10. The Draft EIR includes the following: (1) Chapters 1 through 11 which consist of a project summary, and (2) Appendices consisting of additional and pertinent information.

11. In accordance with CEQA and Rule 17.1, this Draft EIR and/or Notice of Completion will be sent to the county and municipal planning commissions and legislative bodies for each city and county affected by the project, the state highway engineer, other organizations and individuals having previously requested notification and owners of land as described in Paragraph 7. Notice will also be given to the general public by advertisement once a week for two consecutive weeks in a newspaper or newspapers of general circulation in the county in which the project will be located.

12. Copies of this Draft EIR will be available for review by members of the public at the Commission offices in Los Angeles and San Francisco, at the offices of SDG&E Company and at local libraries in the cities of Carlsbad and Oceanside. Additionally, this Draft EIR will be available to the public who may be charged for the cost of reproduction and handling.

D - PUBLIC HEARINGS

13. Unless the Commission, presiding officer or Administrative Law Judge by order otherwise provides, public hearings shall be held on this Draft EIR if a protest or motion for a hearing is received. If no protest or motion is received within 30 days following the Notice of Completion of this Draft EIR, the Final EIR may be completed and certified without hearing.

E - FINAL EIR

14. A Final EIR shall be prepared and filed in conformance with CEQA and Commission Rule 17.1 as revised and amended. The Final EIR will be based on the Draft EIR and evidence obtained through any public hearings held on the Draft EIR.

CHAPTER 2

PROJECT DESCRIPTION

A - LOCATION

1. The project as proposed by SDG&E consists of a single circuit 230 kV transmission line and is located entirely within an existing transmission line corridor between San Onofre Nuclear Generating Station south of San Clemente and Encina Generating Station south of Carlsbad. The project's alignment extends south from the San Onofre Nuclear Generating Station through Camp Pendleton and the eastern portions of the cities of Oceanside and Carlsbad. South of Carlsbad the alignment turns west and extends to Encina Generating Station. The total length of the project is approximately 23.9 miles.

2. Of the 23.9 mile project length, 0.6 miles will be new construction. The remaining 23.3 miles of the project consist of stringing conductors on existing towers. A schematic map of the project is shown on Figure 2-1 and a map of the new construction areas is shown on Figure 2-2.

B - CHARACTERISTICS

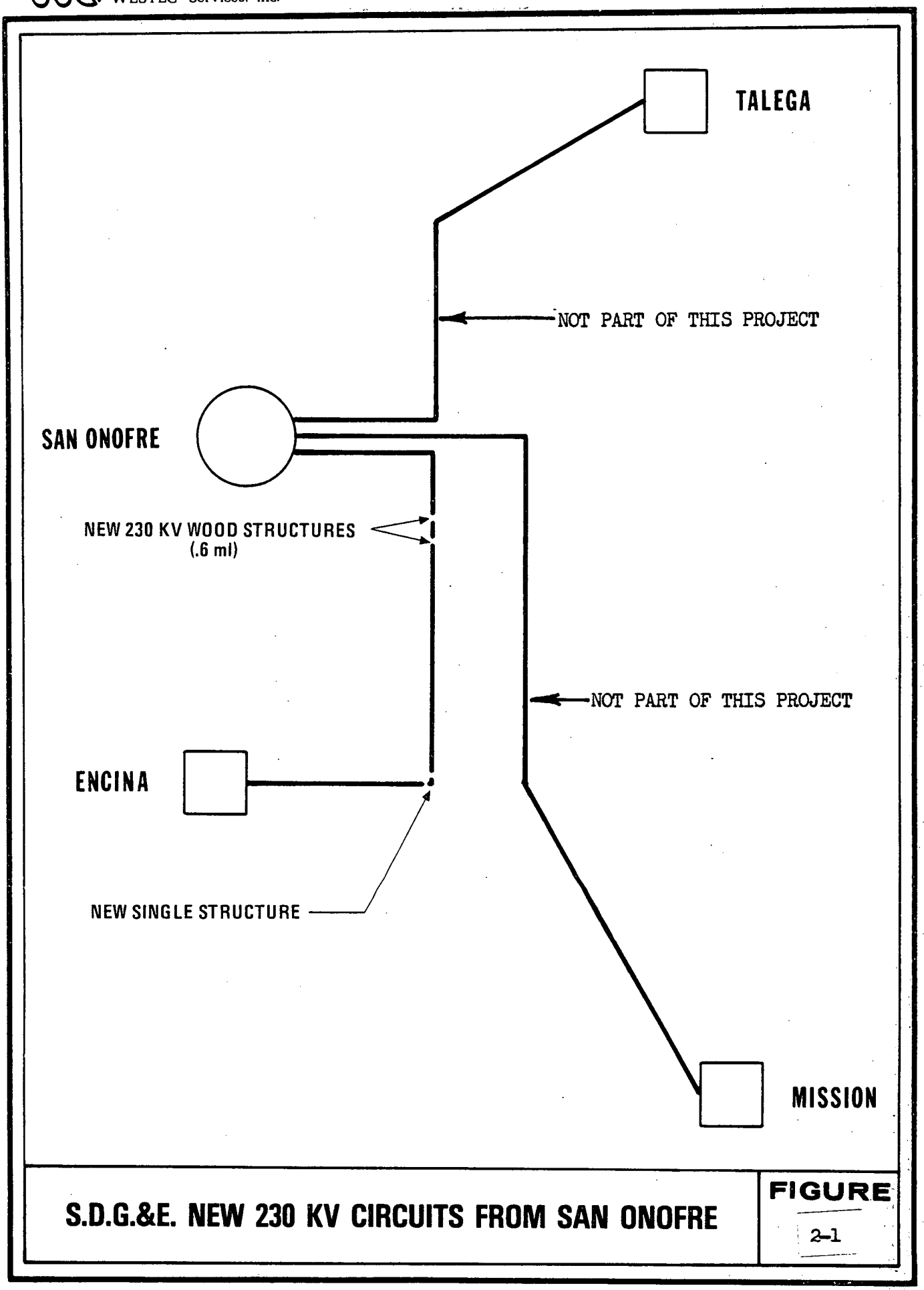
3. As mentioned in Paragraph 2, approximately 23.3 miles of the project consist of stringing conductors on existing towers. Three-phase circuit conductors will be strung in a vacant vertical position on existing steel lattice towers within the existing transmission line corridor.

4. New construction consisting of an estimated six wooden "H" pole structures designed for single circuit horizontal configuration will be constructed east of Oceanside in a 0.6 mile length of corridor. This will permit a reduced tower height in the vicinity of Oceanside Airport.

Additionally, a new steel lattice tower will be constructed south of Carlsbad in the "Encina Hub" area where the project turns west to the Encina Generating Station. This tower is necessary to provide adequate clearances between new and existing circuits. These new construction areas are shown as Areas A and B on Figure 2-2. The tower type and placement of the wooden "H" pole structures is shown on Figure 2-3 and the new lattice tower is shown on Figure 2-4.

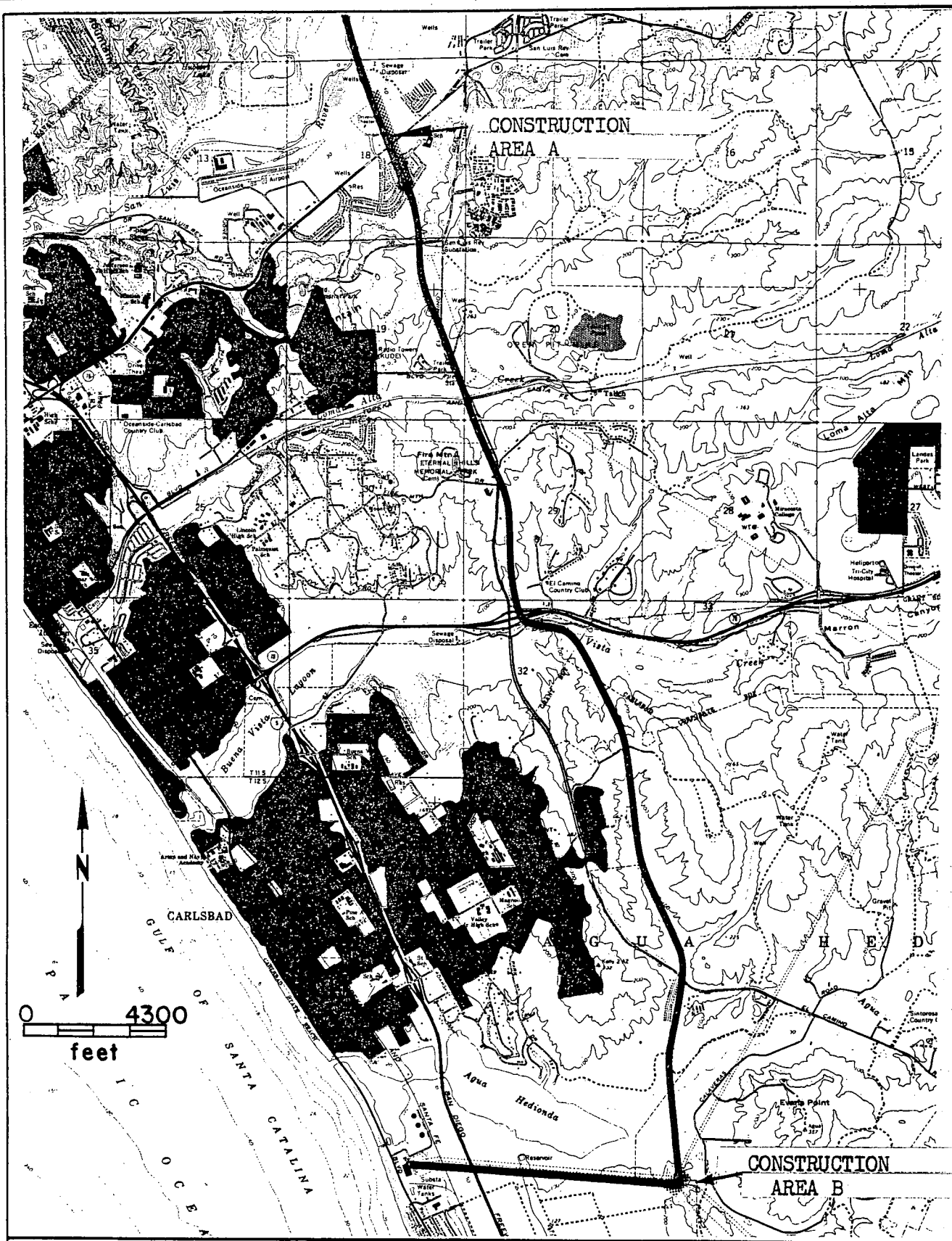
5. The proposed conductor type will be an aluminum conductor with steel reinforcement (ACSR/AW) and will be sized at 1033.5 Kcmil. The configuration will be three-phase horizontal in the area of new wooden "H" pole construction. The capacity of the three-phase circuit will be 1030 Amps and the voltage will be 230,000 volts.

6. Additional information concerning the project description may be found in SDG&E's EDS, Section II pages 5 through 16 which has been incorporated by reference into this Draft EIR.



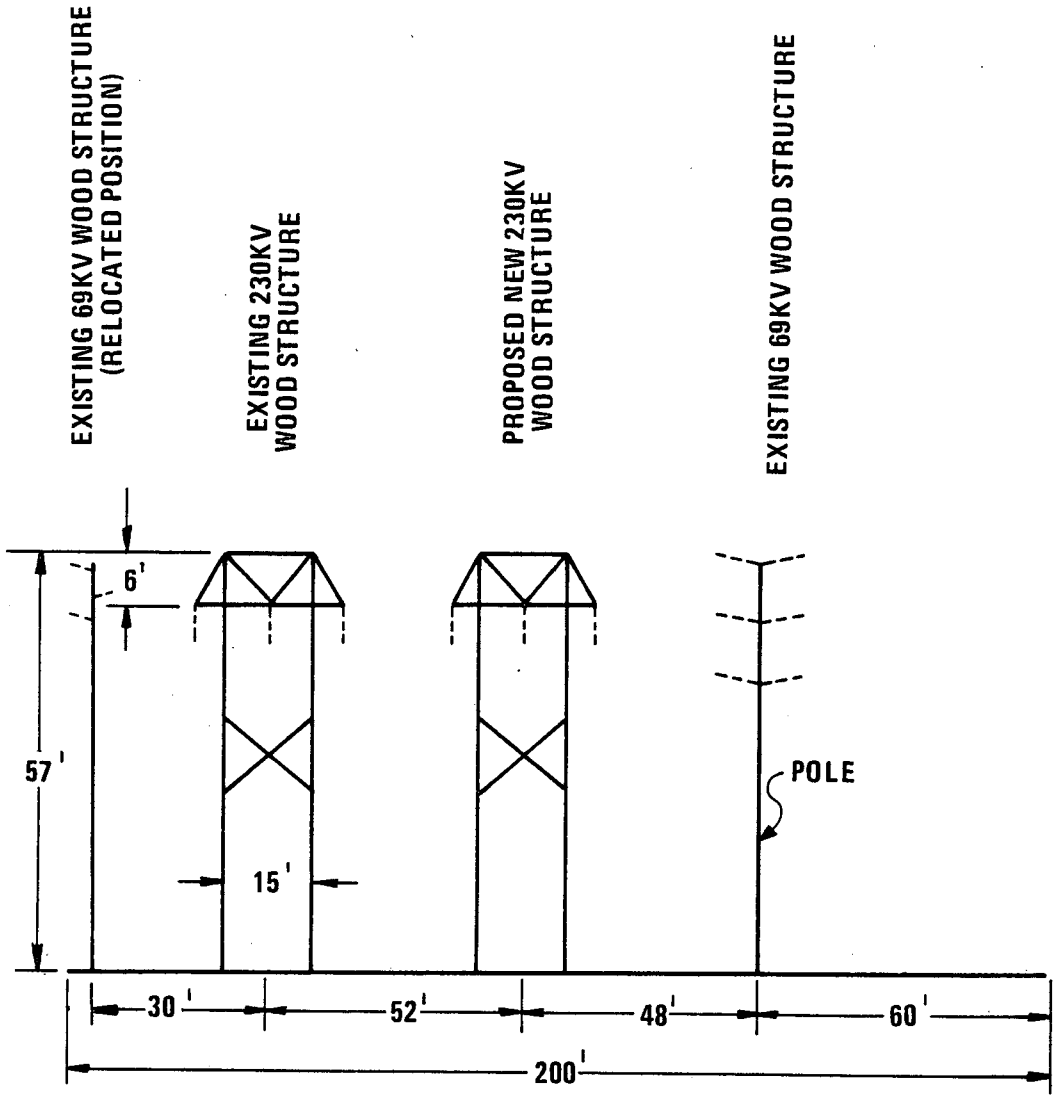
S.D.G.&E. NEW 230 KV CIRCUITS FROM SAN ONOFRE

FIGURE 2-1



Areas of New Construction

FIGURE 2-2



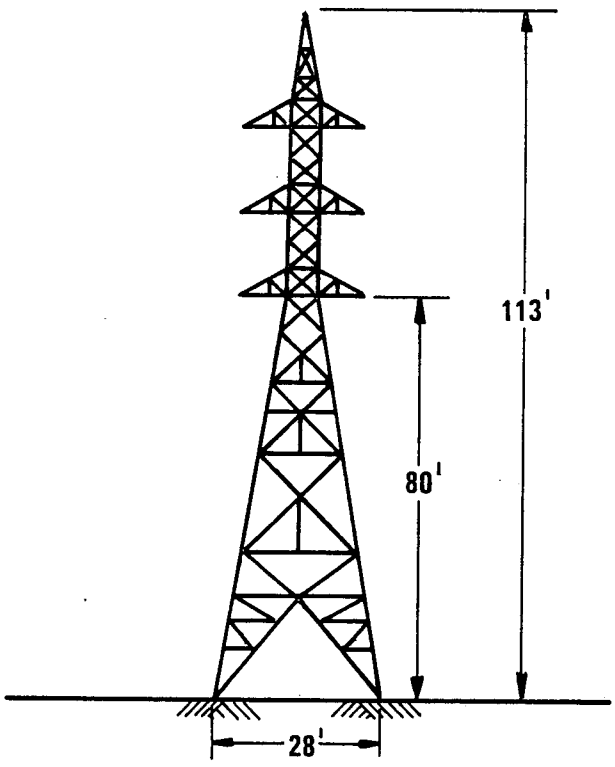
Construction Area A

NOTE: 1) ALL TOWER DIMENSIONS TYPICAL
2) MIN. CONDUCTOR CLEARANCE TO GROUND 30 FEET

LOOKING NORTH

SAN ONOFRE – ENCINA 230 KV LINE RIGHT OF WAY
CROSS SECTION OCEANSIDE AIRPORT SEGMENT

FIGURE
2-3



LATTICE TOWER

Construction Area B

NOTE: 1) ALL DIMENSIONS ARE TYPICAL
2) MIN. CONDUCTOR CLEARANCE TO GROUND 30 FEET

SAN ONOFRE – ENCINA 230 KV LINE SINGLE STEEL TOWER AT ENCINA HUB

FIGURE 2-4

CHAPTER 3

NEED FOR THE PROJECT AND GROWTH INDUCING IMPACTS

A - Historic

1. Data submitted with SDG&E's Application No. 53369 for its Encina Power Plant Unit No. 5 indicated an estimated annual peak demand of 1,760 MW in 1975[1] and 1,910 in 1976, respectively. However, the recorded peak demands were 1,619 MW in 1975 and 1,716 in 1976.[2] This reduction in peak demand coincided with conservation measures brought about by the energy crisis of 1973 and 1974.

2. This growth reduction stopped in 1976 at which time the demand for electrical energy began to expand again, although at a reduced rate.

B - Present

3. The Comprehensive Planning Organization (CPO) of the San Diego Region has submitted population trends to the staff indicating that in 1975[3] there were about 75,000 people in the project area. SDG&E records[1] show that there was a maximum of 2409 MW available to meet the area needs. At the time, these values were considered necessary to

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1/ Revised load and resources information for Encina Unit 5 - Oct. 1, 1974 "Peak demand recorded and projected" Appendix C EDS.

2/ SDG&E response to EII No. SOE 107

3/ R.C.P. Series IV Revision B Forecast 1975-1985 - CPO, San Diego, CA

preserve adequate reliability. However, on March 8, 1978, SDG&E experienced a system disturbance resulting in a local service outage. The California Public Utilities Commission in OII No. 4 - dated June 9, 1978, recommended, among other things that, construction of the San Onofre - Encina Transmission Line be advanced from the planned September 1980 date to the summer of 1979. This OII further stated that by doing so - "the reliability of the whole system would be vastly improved".

4. On the basis of the above recorded population and system capability, there is an average relation of these identities of 0.032 MW/inhabitant. This ratio includes a margin ratio of capacity to demand of 2,409 MW to 1,619 MW or 1.49.

C - Future

5. On the basis of interpolating the CPO estimates of future population, the subject area will have an estimated population in 1983 of 104,750. The estimated SDG&E system capability is 3,388 MW.

6. In 1975, the ratio of peak demand to population was 0.022 MW per area inhabitant and the historic relation of system capacity to annual peak demand was 1.49. This latter figure is considered to include an adjustment for conservation as reflected in the decreased peak demands in 1973 and 1974.

7. Based on the 1975 ratio of system capacity to population (0.032 MW/inhabitant), the system in 1983 will require a total system capability of 3,352 MW in this area.

8. The Commission staff performed a regression analysis of the historical peak demands for the years 1965 - 1978 and estimated the peak demand for 1983 to be 2,297 MW. Using the 1975 ratio of capacity to peak demand (1.49) the area will require a system capability of 3,422 MW.

9. The preceding figures show estimates of the system capability needs in 1983 or (1) 3,352 MW and (2) 3,422 MW, within 2% of one another and 1% of the estimated SDG&E system capability of 3,388 MW.

D - GROWTH INDUCING IMPACT

10. Very little permanent growth within the project area is anticipated by the construction and future maintenance of the proposed project. The construction of the line will temporarily introduce construction crews to the area for a period of about 8 months. Because the project is located within an existing tower occupied transmission line corridor, permanent growth due to future maintenance of the line is not expected to have a significant effect.

11. Of primary importance, is the growth permitted by the increase of transmitted power to the Applicant's service area. Of the projected 1,000 MW increase by 1983, this project will supply approximately 20%. While other factors such as local government's development policies, availability of labor supply, economic climate, etc. may induce growth, the elimination of a project such as this would be growth limiting and other means of supplying the power would be required in order to continue growth.

CHAPTER 4

DESCRIPTION OF ENVIRONMENTAL SETTING

A - LAND RESOURCES

1. The proposed projects' location is totally within an existing transmission line corridor which has already impacted the land along its route. Elevations along the 23.9 miles of proposed route vary from a few feet above sea level to a high of nearly 600 feet. About 15 percent of the route crosses active alluvial plains. Most of the remaining portions of the route cross over terrain that has been topographically modified during the Pleistocene epoch into a series of emergent marine terraces.

2. The Cristianitos Fault is the only pertinent fault that crosses the route. It is not considered to be capable of producing an earthquake. Other faults that cross the route are pre-pleistocene and are also considered not to be capable of earthquake activity. Geologic hazards along the route do not constitute a significant constraint. Off-site seismic activity on potentially active faults such as the Elsinore, Rose Canyon and Nacion Faults could produce project area ground accelerations up to .39g from a magnitude 7 event resulting in landslides on over-steepened slopes and the possibility of liquefaction in certain areas.

3. Soils along the route are highly erosive in nature and constitute soil erosion potential. Evidence of landslides in several areas near the project route exist.

4. Flooding along the San Luis Rey River, Santa Margarita River and San Onofre Creek together with a few lesser drainages constitutes significant design constraints. On the San Luis Rey River, water surface from a standard project flood is estimated to be eight feet above the ground surface of the proposed route.

5. More detailed information on Land Resources is contained in the Applicant's EDS in Sections 3.1.1 through 3.1.10.

B - VEGETATION, WILDLIFE AND HABITAT

6. The existing right-of-way, where the proposed project will be located, has basically ruderal vegetation having been previously disturbed. It is occupied by a variety of introduced forbs and grasses. These species are common weedy plants which rapidly invade disturbed areas. In certain areas the vegetation is Southern Coastal Sage Scrub.

7. The right-of-way crosses two sensitive habitat areas along Buena Vista Creek south of Hagmar Drive and the Agua Hedionda Lagoon. The area along Buena Vista Creek consists of a riparian woodland habitat and the Agua Hedionda Lagoon consists of a coastal salt marsh habitat.

8. No high interest plant species as listed by the California Native Plant Society or the U.S. Fish and Wildlife Service have been observed along the right-of-way.

9. The majority of the right-of-way throughout its length and width has been previously disturbed. Wildlife utilization of the right-of-way is transient in nature with the exception of a few rodent species. Avifauna consisting mainly of urban adopted species exist along with common mammals and reptiles. One species, Belding's Savannah Sparrow, existing along the right-of-way in the Agua Hedionda Lagoon is listed by the California Department of Fish and Game as an endangered species.

10. Further information concerning vegetation, wildlife and habitat may be found in the EDS in Sections 3.2.1 through 3.2.3.

C - AIR QUALITY AND HYDROLOGY

11. The climate of the project area is relatively mild. Temperatures are moderate with average ranges from 50°F to mid 70°F. Precipitation occurs in modest amounts with the highest rainfalls occuring from November through April.

12. Data obtained from the Oceanside Station of the San Diego Air Pollution Control District indicates that air quality problems related primarily to photochemical smog (ozone), hydrocarbons and total suspended particulates exist in the project area. With the exception of particulates, each of these categories became worse from 1975 to 1976.

13. Corona discharges from the existing transmission lines in the project area can potentially result in the generation of ozone and oxides of nitrogen. However, it is expected that the amount generated is low and not measurable above the ambient at ground level adjacent to the lines.

14. Surface water flooding especially within the flood plain of the San Luis Rey River may rise eight feet above the base of the transmission lines during the standard project storm. Ground water in the San Luis Rey River alluvium occurs at a depth of about 25 feet. Shallow perched ground water may be encountered in the new construction areas of this project.

15. Detailed information on air quality and hydrology may be found in Sections 3.3 and 3.4 of the Applicant's EDS.

D - LAND USE AND SOCIO-ECONOMIC FACTORS

15. The existing right-of-way for the proposed project passes through a number of different types of land use, most predominant of which are military, urban, agricultural and transportation. The majority of the project lies within Camp Pendleton.

17. Area A of new construction lies within or adjacent to land zoned for urban use and is within the flight path of Oceanside Airport. The single area of new construction in the Encina Hub (Area B) is located in land zoned as open space.

18. The 1977 population for the cities of Oceanside and Carlsbad was approximately 62,100 and 30,000 respectively. Oceanside had a housing stock of 24,271 units and Carlsbad had a housing stock of 9,300 units. Taxable sales were $163.3 million for Oceanside in 1976 and $118.0 million for Carlsbad in 1977.

19. More information concerning land use and socio-economic factors may be found in the Applicant's EDS in Sections 3.5 and 3.6, and in Appendix D of the EDS.

E.- CULTURAL RESOURCES

20. Prehistoric occupation of the project area by Native American people began approximately 12,000 to 8,000 years ago. In this period, the San Dieguito people were the sole inhabitors. About 7,000 years ago to about 3,000 years ago the La Jolla - Pauma Culture existed. The Pauma aspect of this culture was located in inland regions. About 2,500 years ago to 1,000 years ago the Dieguito and Luiseno lived and hunted in the area.

21. Evidence of the San Dieguito peoples culture have been located at the oldest sites. These are generally situated on Knoll and Mesa tops. Typical cultural debris on the San Dieguito sites include flaking debris, large chopping scraping tools and blades. The La Jolla cultural pattern is the most frequently occuring type of site. These sites are usually located on lower terraces and hills above water courses. The La Jolla sites consist of large activity areas and include shellfish processing camps, stone tool workshops and milling sites. Extensive camps have included human burials, faunal remains and fire hearths. The late milling cultutal pattern of the Dieguitos and Luisenos is evidenced at

elevations lower than either the La Jolla or San Dieguito cultural patterns. The sites frequently contain ceramics, projectile points, milling equipment and stone tool manufacturing debris.

22. A thoroughly comprehensive report covering archaeological site locations throughout the project area has been completed by WESTEC Services, Inc. for SDG&E, included as an addendum to the EDS and incorporated by reference into this Draft EIR.

23. The report (Addendum No. 3 to the EDS) identifies 13 archaeological sites and six isolate artifact locations within or adjacent to the right-of-way boundaries. Three of these sites identified as W-1527, W-120 and W-1778 are located within the new construction areas of the proposed project. Also included in the report are discussions of potential adverse impacts and suggested mitigation measures to minimize or limit these impacts, specifically those sites within new construction areas or conductor stringing operation sites.

24. Detailed and expansive information pertaining to cultural resources may be found in Section 3.7 and Addenda 1 through 3 of the EDS.

F - AESTHETICS AND NOISE

25. The area has been visually impacted by existing transmission lines throughout the proposed project route. The most prominent visual aspects of a transmission line are its towers. Existing towers along the route vary from single pole steel towers to wooden "H" frame structures and lattice towers.

26. Ambient noise levels along the existing right-of-way vary from approximately 35 dB(A) within the Camp Pendleton area to a high of 70 dB(A) along Mission Avenue. The areas of new construction have ambient noise levels 60 to 63 dB(A) for Area A and 35 dB(A) for Area B.

27. More information concerning aesthetics and noise may be found in Sections 3.8 and 3.9 of the EDS.

CHAPTER 5

ENVIRONMENTAL EFFECTS OF THE PROJECT

A - LAND RESOURCES

1. Because of the limited scope and size of the construction areas, it is not expected that any unacceptable or significant impact on land resources will occur.

2. The only environmental concerns of major consequences along the 23.3 mile segment of right-of-way that will not be subject to new construction involves possible impacts to archaeological sites and the highly erosive nature of the soils. A potential exists for soil erosion in areas where new or expanded access roads are required.

3. Ground accelerations from a magnitude 7 earthquake on the Rose Canyon Fault could cause line breakage. However, the proposed line would be no more susceptible to damage than the existing lines.

4. Areas of new construction lie on relatively flat land and appear not to be subject to erosion or landslide potential. Flooding within the San Luis Rey River is a possibility. However, the new construction will be no more susceptible to damage than the existing transmission line structures.

B - BIOLOGICAL RESOURCES

5. The proposed projects' construction and line stringing activities will take place in established right-of-way with existing access roads. It is not expected that a significant impact will occur to biological resources by the construction and operation of this project.

6. The endangered species within the project area such as Belding's Savannah Sparrow will not be affected by any new construction since its preferred habitat is removed from proposed construction areas.

7. The riparian woodland habitat is present along the San Luis Rey River and Buena Vista Creek. It is not expected to be impacted by the proposed project because the habitat is spanned by the lines and no direct construction activity is anticipated.

C - AIR QUALITY AND HYDROLOGY

8. Localized short-term impact on air quality will result from the construction activities of stringing new conductors and constructing towers. Construction dust and noise will be generated by the movement of vehicles over dirt roads. Because of the limited size of construction activities and their short-term effect, it is not anticipated that an unacceptable or significant impact on the environment will occur.

9. The corona effect from the operation of the proposed project could cause increases in ozone. However, such increases are expected to be low and not measurable above the ambient at ground level.

10. Other effects of corona such as visible light, radio and TV interference, induced currents etc. have been discussed in detail in Section 4.3 of the Applicant's EDS. No significant or unacceptable impact is anticipated from these effects.

11. Surface water quality may be affected as a result of construction activities along access roads. Minor silting may occur as a result of new construction. This, however, will be a one-time impact and is not anticipated to have an unacceptable effect.

D - LAND USE AND SOCIO-ECONOMIC IMPACTS

12. No major incompatibilities with respect to land use is foreseen from the construction and operation of this proposed project. Throughout its entire length, the project is within a tower occupied transmission line corridor.

13. Some annoyance may be experienced from construction noise and dust and major transportation corridors may be temporarily affected by construction activities.

14. No major socio-economic impact is anticipated from the construction and operation of the project. A maximum of 20 persons is anticipated as the work force. Considering the total population of the area and the temporary nature of the work, the effect from this work force appears to be insignificant. The completed project will generate additional public revenue without incurring additional public expense.

E - CULTURAL RESOURCES

15. Several sites have been identified as having archaeological value. Most of these sites have little potential for impact because they occur on that portion of the project where no new construction is planned.

16. Three sites identified as W-1527, W-120 and W-1778 occur where new construction activities occur and may be impacted by the proposed project. Because of the proposed mitigation measures, it is not expected that they will experience an unacceptable impact.

17. Additional information on the possible impacts to these sites may be found in the Applicant's EDS, Section 4.7 and Addenda 1, 2 and 3.

F - AESTHETICS AND NOISE

18. The scenic quality of the area through which the proposed project passes consists of a unique combination of pastoral scenes and rolling land forms and is considered to have significant aesthetic value.

19. The addition of this project to the visual scene is not expected to be a significant impact because the majority of the project does not consist of new construction. The limited scope of new construction while having an additive visual impact is within an existing tower occupied transmission line corridor.

20. Construction noise will temporarily impact the project area. Such activities as helicopter pulled cables, tensioning, tower erection and trucking will create noise of varying degree.

21. Because the construction noise is temporary and no nighttime work is planned, it is not anticipated that a significant or unacceptable impact will occur.

22. Detailed discussion on aesthetics and noise may be found in the Applicant's EDS in Sections 4.8 and 4.9.

G - COMMENTS ON THE EDS AND RESPONSES THERETO

23. Comments on the EDS were received from the State of California's Division of Mines and Geology, Department of Fish and Game and Department of Transportation, and the City of Oceanside's Planning Department.

24. These comments along with the staff's comments on the project were sent to the Applicant in the form of Environmental Impact Inquiries. The Applicant reviewed and responded to these Inquiries. The Inquiries and responses to Inquiries are included in Appendices D and E of this Draft EIR.

CHAPTER 6

MITIGATION MEASURES

A - LAND RESOURCES

1. Maximum use of existing access roads and equipment placement areas is planned. This procedure will minimize grading and landform alteration and reduce erosion potential. The structural design of the new towers is planned to accommodate the anticipated seismicity and tower foundation design will take into consideration flood prone areas.

B - BIOLOGICAL RESOURCES

2. Although no direct disturbance is planned to the preferred habitat of endangered species such as Belding's Savannah Sparrow, it is planned to restrict access to the right-of-way affected portion of Agua Hedionda Lagoon. It is further planned, that helicopter stringing activities not occur during the nesting season (May to August).

C - AIR QUALITY AND HYDROLOGY

3. Maximum utilization of existing access roads along with watering equipment to reduce dust during construction are mitigative measures to be undertaken that will minimize the impact on air quality.

4. The use of properly designed insulation and maintenance procedures which includes insulator inspection and cleaning will be employed to minimize the corona effect. Within the right-of-way, permanent objects of a conductive material that are large enough to develop voltages above normal human sensitivity will be grounded or shielded.

5. By using existing access to the maximum, potential effects of siltation in water courses will be minimized. Tower foundations will be designed to resist wash-out in flood prone areas. Excavated soil is planned to be compacted thereby reducing erosion and siltation effects.

D - LAND USE AND SOCIO-ECONOMIC CONSIDERATIONS

6. To the maximum extent possible, stringing equipment will be kept out of traveled lanes and time of day operations (avoiding peak hours) will be considered. New construction work in Area A will be curtailed if high winds and blowing dust create hazardous conditions to the operation of Oceanside Airport.

7. Since there does not appear to be adverse impacts to the socio-economics of the project area, no particular mitigation measures are planned.

E - CULTURAL RESOURCES

8. A detailed and comprehensive report was prepared to identify cultural resource sites within the entire project area. This report has been added to the EDS as Addendum No. 3 and incorporated by reference into this Draft EIR.

9. This report suggests the following mitigation measures:

(a) A controlled, accurate instrument survey for the location of the perimeters of the sites within the Applicant's rights-of-way will be made to provide a more accurate means for assessing possible impacts.

(b) and (c) Based on the survey, avoidance of site by construction constraints should be investigated and where possible implemented.

(d) Where avoidance of the site is not feasible, contact should be made with appropriate native American representatives to ascertain the existence of any religions or sacred values associated with the site. The site may be capped to preserve the resource. A professional archaeologist should be employed to analyze any data removed from the site.

10. Specific mitigation measures were recommended for Sites W-120 and W-1527.

F - AESTHETICS AND NOISE

11. No mitigative measures are proposed for aesthetics since no significant impact is perceived. Some annoyance from construction noise may occur to residents of the area. This impact will be mitigated by scheduling the construction so that no nighttime or weekend work will occur.

CHAPTER 7

ALTERNATIVES TO THE PROPOSED ACTION

A - ALTERNATE ROUTES

1. Routes at locations other than that proposed would leave the existing corridor free of further expansion and impact. However, an alternate route removed from the corridor and placed on virgin land would have a potential for greater impact since the majority of the proposed line could be placed in a vacant position on existing towers and existing access roads can be used. For these reasons, alternate routes were not considered feasible.

B - ALTERNATE DESIGNS

2. The possibility exists of using differently designed towers within the areas of new construction. However, the proposed tower designs are consistent in size and shape with the existing towers. A different design would not blend with existing towers and would tend to be more visually prominent.

3. The present design of wooden "H" pole structures in Construction Area A meets the FAA requirements for clearances under the Oceanside Airport approach. However, the Applicant has indicated in its responses to Environmental Impact Inquiries SOE 101 and 102 that a lattice tower design featuring a double circuit configuration with a position left vacant is feasible and would be in compliance with FAA height requirements.

4. If such a design were used, the existing one-mile subcorridor east of the proposed project could be eliminated and its single circuit 230 kV line placed in the vacant position. This would leave the area occupied by the subcorridor free of transmission lines and available for other uses. Of course, dissimilar towers would then occupy the main corridor.

5. SDG&E currently has before the Commission, Application No. 58436 for another 230 kV transmission line between SONGS and Mission Sub. In this area, the Mission line is proposed to be in the subcorridor. If these two projects are approved and the alternate as described above chosen, then another double circuited lattice tower line could be constructed in the main corridor thereby eliminating the existing wooden "H" pole structure. The towers in the main corridor would then be similar.

C - NO PROJECT ALTERNATIVE

6. Significant consequences such as local service outage and a possibility of system outage are projected if a no project alternative is selected. The need for providing reliable and continuous electrical service has been discussed in Chapter 3. Failure to complete the project would ultimately deprive SDG&E Company's customers of the benefits of the power generated at San Onofre and would result in potential overloads to the existing system.

CHAPTER 8

UNAVOIDABLE ADVERSE IMPACTS

1. Because of the mitigation measures proposed and the limited scope of the project, the unavoidable adverse impacts related to this project appear to be small.

2. The one-time disruption to traveled ways and the noise and dust of construction, while mitigated, will nevertheless be somewhat annoying. A one-time commitment of energy and nonrenewable resources is required for the construction of this project. These impacts are unavoidable and adverse.

CHAPTER 9

THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

1. The short-term use of the local environment is estimated to be nine months. This is the time that it will take the 20-man crew to complete this project. The nature of the work will not concentrate the activity at any one spot for very long and will be in conformity to all existing environmental protection regulations. A careful examination of the proposed operations indicates the environment will suffer no significant or long-term impact.

2. This project will enhance the region's long-term productivity by improving the reliability of the electric system. This reliability will come from access to power importation from an intertie with Southern California Edison Company during credible outage conditions. In addition, this project provides additional outlet capacity for the Encina No. 5 Unit, thus increasing the reliability of the system.

CHAPTER 10

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

1. The following resources will be committed to this project:

Resource	Commitment
Manpower	Fabrication, construction, transportation, maintenance
Energy	Manufacturing, construction, maintenance
Materials	Metals, foundation, wires
Space	Use of existing right-of-way

2. Manpower will be used for a short time during the production, manufacture, fabrication, transportation and construction of this project. No portion of these involvements is considered to interrupt, divert or terminate any other basic need of society. No energy involved in the process will deprive other segments of society their basic needs. The materials involved will be salvageable and therefore cannot be considered an irretrievable commitment of resources. The fact that existing rights-of-way will be used is an increased efficiency in the use of existing commitments of land resources.

CHAPTER 11

ENERGY CONSERVATION PROGRAMS

1. The applicant has committed itself to conservation programs in residential, commercial and industrial markets, and in load management and voltage reduction.

2. Of particular interest to a project such as this is load management and voltage reduction. The applicant's 1978 submittal to the Public Utilities Commission concerning energy conservation programs in load management and voltage reduction has been included in this Draft EIR as Appendix F.

APPENDIX A

AGENCIES CONSULTED

1. The staff has contacted the following agencies in relationship with their concern about this project:

   A. Federal Aviation Administration

   B. State of California
      Office of Historic Preservation

   C. The City of Oceanside

2. The report has been mailed to the following agencies for their review and comments:

   A. Federal Aviation Administration

   B. United States Marine Corps

   C. Nuclear Regulatory Commission

   D. State of California
      Office of Planning and Research

   E. City of Oceanside

   F. City of Carlsbad

   G. County of San Diego

   H. Comprehensive Planning Organization of
      San Diego

APPENDIX B

STAFF QUALIFICATIONS

Name and Address

Richard Tom
455 Golden Gate Avenue
San Francisco, California 94102

Position and Employer

Senior Utilities Engineer
California Public Utilities Commission
Utilities Division, Environmental Impact Branch

Background and Qualifications

B.S Degree in Civil Engineering
San Francisco State University

Registered Civil Engineer, State of California

Member of Professional Engineers in California Government

Employed by the California Public Utilities Commission since January, 1975. Experience with the Commission included three years in the Hydraulic Branch, participation in tariff and service matters. Current position is Unit Head in the Environmental Impact Branch, with responsibility for preparing Environmental Impact Reports.

Employed by the State of California, Department of Transportation from 1957 to 1974. Experience included 10 years in field surveys and construction supervision, and $7\frac{1}{2}$ years in design office, including $4\frac{1}{2}$ years as Project Engineer and 3 years as District Design Reviewer.

Name and Address

Joseph D. McMahon
455 Golden Gate Avenue
San Francisco, California 94102

Position and Employer

Associate Utilities Engineer
California Public Utilities Commission
Utilities Division, Environmental Impact Branch

Background and Qualifications

B.S. Degree in Civil Engineering, 1962
University of New Mexico, Albuquerque

Registered Civil Engineer, State of California

Member of American Society of Civil Engineers
Member of American Public Works Association
Member of PECG

Employed by California Public Utilities Commission since November, 1973. Experience with the Commission consists of reviewing utility Environmental Data Statements and preparing Environmental Impact Reports.

Employed by City of San Mateo, Public Works Department as an Associate Engineer from March, 1966 to November, 1973. Supervised seven engineers and technicians whose work assignments dealt with design, construction, and environmental matters and with related economics.

Name and Address

Leo H. Moir
455 Golden Gate Avenue
San Francisco, California 94102

Position and Employer

Associate Utilities Engineer
California Public Utilities Commission
Utilities Division

Background and Qualifications

University of Idaho - B.S. Geology
Registered Mechanical Engineer, State of California

Employed by the Commission since 1971, working in areas of pipeline and utility safety operations; operating revenues and expenses; results of corporate operations; steam system operations; and environmental impact of utility construction projects.

APPENDIX C

INCORPORATION OF THE ENVIRONMENTAL DATA STATEMENT AND ADDENDA

APPENDIX C

THE ENVIRONMENTAL DATA STATEMENT (EDS) COMPILED BY SAN DIEGO GAS & ELECTRIC COMPANY (SDG&E) ALONG WITH ADDENDA 1, 2 AND 3 PREPARED BY WESTEC SERVICES, INC. FOR SDG&E IS HEREBY INCORPORATED INTO THIS DRAFT ENVIRONMENTAL IMPACT REPORT SUBJECT TO CHANGES, MODIFICATIONS AND/OR ADDITIONS MENTIONED HEREIN IN CHAPTERS 1 THROUGH 11 AND APPENDICES D AND E.

COPIES OF THE EDS AND ADDENDA MAY BE REVIEWED AT THE PUBLIC UTILITIES COMMISSION OFFICES IN SAN FRANCISCO AND LOS ANGELES, AT SAN DIEGO GAS & ELECTRIC COMPANY'S OFFICE IN SAN DIEGO, AT THE OFFICES OF THE CITIES OF CARLSBAD AND OCEANSIDE AND AT LOCAL PUBLIC LIBRARIES.

ADDITIONALLY, THIS DRAFT EIR HAS BEEN SENT TO THE VARIOUS AGENCIES LISTED IN APPENDIX A.

APPENDIX D

ENVIRONMENTAL IMPACT INQUIRIES

CALIFORNIA PUBLIC UTILITIES COMMISSION

Utilities Division

Environmental Impact Branch

ENVIRONMENTAL IMPACT INQUIRIES

To

San Diego Gas & Electric Company

PROPOSED SAN ONOFRE - ENCINA 230 kV

TRANSMISSION LINE

APPLICATION NO. 58282

Item No.	Description
SOE-101	Please investigate the effect on this project if the existing (shoofly) subcorridor near Oceanside was eliminated and its transmission line placed on double circuited towers in the main corridor.
SOE-102	In connection with SOE-101, can maximum FAA requirements for tower heights be maintained by the elimination of the subcorridor.
SOE-103 through SOE-106	These item numbers are letters from State and Local agencies expressing comments on the project and are included on the following pages.

Memorandum

SOE - 103

To : L. Frank Goodson
Projects Coordinator
The Resources Agency

Date : December 19, 1978

From: Siang S. Tan-Santa Ana Office
28 Civic Center Plaza, Rm. 642
Santa Ana, CA. 92701
Tele: (714) 558-4187
ATSS: 657-4187

From : Department of Conservation
Division of Mines and Geology
107 South Broadway, Los Angeles 90012

Subject: SCH No. 78121189, Enviornmental Data Statement, San Onofre to Encina Transmission Line

The subject report does not adequately contain the necessary geologic data in order to fully evaluate the potential geologic hazard effecting the subject sites. No detailed engineering geologic map was submitted by the applicant. The necessary mitigation measures are not described in a proper adequate manner. The soils investigation report (Appendix A) does not include a map showing the borings drilled for this study.

In preparing the geologic report of the subject sites, the applicant should follow the guidelines as stated in our publications, CDMG Note Numbers 37, 44 and 46, which are among others required by the State Board of Registration for Geologists and Geophysicists in the policy statement on the adequacy of professional geological work.

Siang S. Tan

Siang S. Tan, Geologist
CEG 975

APPROVED:

James F. Davis, State Geologist
RG 3468

APPROVED:

Land Resource Protection Unit
DATE: 1/3/79

SST:JFD:bb

cc: P.Y. Amimoto
C.H. Gray, Jr.

STATE OF CALIFORNIA—RESOURCES AGENCY EDMUND G. BROWN JR., Governor

DEPARTMENT OF FISH AND GAME
1416 Ninth Street
Sacramento, CA 95814
16) 445-3535

JDM

January 12, 1979

ENVIRONMENTAL IMPACT GRA
JAN 22 1979
F- A-59282

Mr. Richard Tom
Public Utilities Commission
350 McAllister Street
San Francisco, CA 94102

Dear Mr. Tom:

The Environmental Data Statement for the San Onofre to Encina 230 KV Transmission Line has been circulated among our staff. The following comments are submitted for your consideration.

Although we agree that the majority of the transmission line would not seriously impact fish or wildlife values, there are areas within its corridor in which significant impacts could occur. The riparian habitat along the San Luis Rey River and the marsh habitat and salt flats of Agua Hedionda Lagoon are particularly sensitive in this regard. We request the opportunity to review specific plans for each of these areas as they become available. These plans should be superimposed on maps outlining riparian habitat on the San Luis Rey River, and the distribution of Salicornia and the expected nesting area of the California least tern at Agua Hedionda Lagoon. This is necessary so we can evaluate the potential impacts of this transmission line on natural resources within the lagoon. The Department would favor a construction moratorium during the spring and summer months (April through August) if this were the only way by which the well being of the Belding savannah sparrow and the California least tern could be insured.

If it will be necessary to work within the high water mark of any streambed, whether it be permanently flowing or intermittent in nature, notification to the Department of Fish and Game pursuant to Sections 1601-03 of the Fish and Game Code will be required. This notification and the subsequent agreement must be completed before work within the streambed begins.

Thank you for the opportunity to review this EDS. If you have any questions, please contact Robert D. Montgomery, Regional Manager of Region 5 at 350 Golden Shore, Long Beach, CA 90802. The telephone number is (213) 590-5113.

Sincerely,

E C Fullerton

Director

STATE OF CALIFORNIA — BUSINESS AND TRANSPORTATION EDMUND G. BROWN JR., Governor

DEPARTMENT OF TRANSPORTATION

DISTRICT 11, P.O. BOX 81406, SAN DIEGO 92138

January 17, 1979

ENVIRONMENTAL IMPACT BRANCH

JAN 19 1979

SD-76
PM 2.9
SCH #78121189

A58282 JPM

CERTIFIED MAIL

Mr. Richard Tom
Project Engineer
Environmental Impact Branch
California Public Utilities Commission
350 McAllister Street
San Francisco, CA 94102

Dear Mr. Tom:

Notice of Preparation, San Onofre - Encina
230-KV Transmission Line (SCH #78121189)

As noted in your initial study, CALTRANS will be a Responsible Agency for permits at several highway crossings. Identification of these locations in the environmental documents, together with any associated impacts and mitigations, will aid the process. Our Permit Engineer is Don Newman, (714) 294-5392.

CALTRANS is proposing to widen State Route 76 where the transmission lines cross the highway near Frontier Drive in Oceanside. Coordination with our Right-of-Way Utility Agent, Luther Whitaker, at 294-5351 is recommended.

Sincerely,

Jacob Dekema
District Director of Transportation

By James T Cheshire
James T. Cheshire
Chief, Environmental Planning Branch

JTC:ec

SOE - 106

CITY OF OCEANSIDE

JDM

PLANNING DIRECTOR

December 18, 1978

ENVIRONMENTAL IMPACT BRANCH

DEC 21 1978

A-58282

Mr. Richard Tom, Project Engineer
Public Utilities Commission
California State Building
San Francisco, CA. 94102

Subject: San Diego Gas and Electric Company's Proposed San Onofre-Encina 230 KV Transmission Line, Application No. 58282

Dear Mr. Tom:

Thank you for the opportunity to comment on the Environmental Data Statement, Notice of Intent for this project. It seems that most potential areas of concern were identified for the City of Oceanside, however, it would be helpful and germaine to the project to address the following in more specific detail:

Geologic and Soils Conditions: Selective location of towers out of oversteepened slope areas is encouraged as feasible within the context of location alternatives for the existing right-of-way alignment. Use of recommendations from the soils engineering report for adequate tower footing design is concurred with as a mitigation measure where this is not feasible. Hazards from downed lines as a result of seismic shaking and related slope failure was not explicitly described and the feasibility of mitigation addressed.

Hydrology:

Flooding: The Los Angeles office of the U.S. Army Corps of Engineers has been working on updating 100 year storm projections for the San Luis Rey River. Also, modification of Henshaw Dam to conform with State Division of Dams Safety regulations is being studied for implementation by Vista Irrigation District. Two documents address the most recent published updates regarding storm flow projections: The San Luis Rey River, Design Memorandum No. I, U.S. Army Corps of Engineers, Los Angeles District Office, 1977 and the Draft EIR for Modification of Henshaw Dam and Warner Ranch Groundwater Program prepared for Vista Irrigation District by Leeds, Hill and Jewett, Inc. of San Francisco, June 1978. Also, the Los Angeles Office of the U.S. Army Corps of Engineers is presently working on undating mapped floodway and floodplain alignments in conjunction with studying a floodplain management/flood control project jointly with the City for the river.

CITY HALL 320 N. HORNE ST. OCEANSIDE, CA 92054 TELEPHONE 714-439-7272

The Draft EIR should assess force and duration projections at the location of any proposed tower subject tc flooding and engineered structural mitigation measures. Potential hazard to surrounding land uses should be identified. Other mitigation for this problem, if feasible, could be investigation of tower spacing to avoid location in areas subject to flooding.

Water Quality: Specific locations of access roads should be identified and erosion control techniques mentioned on page 90, should be described, such as immediate establishment of temporary cover following any grading activity for new access, establishment of permanent erosion control, selective grading techniques, and seasonally controlled grading activity.

Biotic Resources: Biotic surveys for areas where existing access roads will not be utilized as mentioned on page 91 seem appropriate to assess biotic impacts and to derive appropriate mitigation.

Installation Adjacent to Oceanside Airport and Existing Subdivision in its Vicinity: Height compliance with FAU regulations should be verified. Will the right-of-way be screened and protected from encroachment by children residing in the subdivision?

Freeway 76: The Draft EIR consultants may wish to contact Region 11 CALTRANS office regarding the present status of proposed improvements of Freeway 76 to determine the relationship of Freeway crossing methods to the CALTRANS project. A Draft Environmental Impact Statement on the Freeway 76 Project is on public review until Jan. 10, 1979 and can be obtained by contacting Mr. John Frojen, Environmental Analysis Division at (714) 294-5199.

Air Quality:

Ozone and NOx: An explicit statement of the potential adverse effects associated with these in the Draft EIR may be helpful for the general public.

Regional Conditions: Page 69 indicates that effects on the regional air cell were not felt to be significant. However, the project will provide increased outlet for Unit No. 5 at the Encina Generating Station from Unit No. 2 at the San Onofre facility and potentially from Unit. No. 3. Increased service capacity, in times when it does not merely provide backup, can constitute potentially significant cumulative air quality impacts due to intensification of land uses. This can, of course, generate increases in point-sources and automobile trip generation. It seems important that the Draft EIR consider this question in more depth.

Growth Inducement: Previous comments under Air Quality would also apply to assessment of growth-inducement. What relative increase in Encina Circuit service capacity can be identified? Can this be identified on the basis of projected availability to specific types of user groups?

Irreversible and Irretrievable Effects: The project represents a commitment to local usage of energy production capabilities, raw materials and production of waste products associated with San Onofre's increased generating capacity. It seems appropriate to incorporate environmental review documentation on the plant by reference into the Draft EIR to demonstrate this relationship.

Sincerely,

Beth A. Perlmutter

BAP/jb

BETH A PERLMUTTER
Environmental Analyst

CALIFORNIA PUBLIC UTILITIES COMMISSION
Utilities Division
Environmental Impact Branch

Environmental Impact Inquiry

To

San Diego Gas & Electric Company

Proposed San Onofre - Encina 230 kV

Transmission Line

Application No. 58282

Item No.	Description
SOE-107	Please prepare a tabulation of annual peak demands of record for the period 1965 - 1978. If possible, show this peak for the area to be served by the Encina Substation.
SOE-108	Please prepare a list showing names and addresses of owners of property adjacent to areas of new construction along the proposed transmission line.

APPENDIX E

RESPONSES TO ENVIRONMENTAL IMPACT INQUIRIES

SAN DIEGO GAS & ELECTRIC COMPANY
P.O. BOX 1831 SAN DIEGO, CALIFORNIA 92112
(714) 232-4252

FILE NO. PUF 100

February 21, 1979

ENVIRONMENTAL IMPACT BRANCH
FEB 22 1979
A-58282

D.B. Steger
Chief Environmental Engineer
California Public Utilities Commission
California State Building
San Francisco, California 94102

Gentlemen:

SAN ONOFRE TO ENCINA 230kv TRANSMISSION LINE
CPUC APPLICATION NO. 58282

With this letter, San Diego Gas & Electric Company is responding to your Environmental Impact Inquiries received February 2, 1979, concerning the above-referenced project.

One concern I had following our meeting with DickTom and Joe McMahon was the slippage by one full month of the Draft Environmental Impact Reports for Encina and Mission projects. My concern is that unforseen obstacles may arise further down the review process that will impact the schedule. We collectively need to make every attempt at minimizing any further delays, especially on the front-end of the EIR preparation.

Should you or your staff have any questions, please contact Bob Meinzer, Senior Engineer, at the above address or telephone (714) 232-4252, Ext. 2175.

Thank you for your anticipated efforts at expediting these two important projects.

Very truly yours,

Gary D. Cotton

Gary D. Cotton
Manager
Licensing & Environmental

GDC:RPM:z
Attachment

cc: RSPedersen
LEDeSimone
VPMaster
EMGabrielson

RESPONSES TO ENVIRONMENTAL IMPACT INQUIRIES
SAN ONOFRE TO ENCINA 230 KV TRANSMISSION
LINE APPLICATION NO. 58282

Item No.	Description
SOE 101:	Please investigate the effect on this project if the existing (shoofly) subcorridor near Oceanside was eliminated and its transmission line placed on double circuited towers in the main corridor.
SOE 102:	In connection with SOE-101, can maximum FAA requirements for tower heights be maintained by the elimination of the subcorridor.
Response:	The existing facility now occupying the right-of-way proposed for use by this project was originally constructed with lattice towers in 1966. Subsequent to operation of the line, the City of Oceanside requested that an alternative design be utilized for the area under the approach to the Oceanside Airport to result in a lower profile. This request resulted in modifications of the facility in 1967 to the present H-frame construction. The lower, wider H-frames in turn necessitated the use of the subcorridor to accommodate the existing and planned transmission facilities in the immediate area. From an engineering viewpoint, lattice tower construction in the primary corridor near the airport is feasible and would result in the elimination of the subcorridor. Such towers would be in compliance with FAA height requirements. The additional cost associated with the lattice tower alternative would be approximately $41,000. SDG&E is pursuing the alternatives for the Oceanside Airport area with the City of Oceanside and will keep the CPUC advised of further developments on this subject.

Item No.	Description
SOE 103	Letter from Siang S. Tan - Department of Conservation Division of Mines & Geology, To: L. Frank Goodson Projects Coordinator - The Resource Agency, Dated: December 19, 1978 Subject: SCH No. 78121189, Environmental Data Statement, San Onofre to Encina Transmission Line
Response:	The California Division of Mines & Geology requests detailed engineering geology studies of the proposed project before they can adequately assess potential geologic impacts. However, as stated in the Introduction to the EDS (p. 2) and in the State EIR Guidelines (Section 15151b), an environmental document is not intended to constitute an engineering study, nor does it relieve SDG&E of their responsibility to assure that any necessary engineering studies (including an engineering geology report) are prepared. In accordance with the intent of CEQA, however, the EDS does evaluate potential geologic hazards and their effect on the proposed project and on the environment. The potential geologic hazards addressed generally follow CDMG Note 46, as requested in the letter of comment by CDMG. In addition, where areas of potential concern are identified, appropriate mitigation measures are suggested. The geologic impact analysis and discussion of mitigation measures are in sufficient detail to document that there are no geologic hazards that cannot be readily mitigated to the degree that they will not constitute a significant constraint to the project. Detailed engineering geology studies will be undertaken prior to final design where any new lattice towers are planned (unless such information already exists for that location). The studies will be conducted in accordance with all applicable guidelines.
SOE 104:	Letter from R. C. Fullerton - Department of Fish & Game, To: Mr. Richard Tom - Public Utilities Commission Dated: January 12, 1979
Response:	The CDFG requests the opportunity to review specific plans as they become available for development in the areas of the riparian habitat along the San Luis Rey River and the marsh habitat and salt flats near Agua Hedionda Lagoon. They request that the development plans be superimposed on maps outlining the San Luis

Item No.	Description
Response (continued):	Rey River riparian habitat, and the California least tern nesting area and distribution of Salicornia subterminals around Agua Hedionda Lagoon. CDFG also concurs with the EDS in that avoidance of construction activities near the Lagoon during the months of April through August to lessen disturbance of the nesting activities of the Belding savannah sparrow and the California least tern would be favored if either is found to be nesting within the area of influence. The maps requested by CDFG would very graphically illustrate biologically sensitive areas and their spatial relationship to proposed construction sites. Such maps would be useful not only to CDFG but to SDG&E in planning construction activities, including equipment staging and other possible off-site vehicular movement, so that impacts to sensitive areas are avoided. It is thus recommended that the preparation and review of maps showing specific development plans superimposed over biologically sensitive areas, as described above, be included as a mitigation measure for this project. It is further recommended that equipment or staging areas be located as far away from sandy beach areas as possible, to minimize disturbance and loss of habitat. Compliance with Section 1601-03 of the Fish & Game Code will be undertaken if applicable.
SOE 105	Letter from James T. Cheshire, Chief, Environmental Planning Branch-Department of Transportation To: Mr. Richard Tom, Project Engineer-Public Utilities Commission, Dated January 17, 1979 Subject: Notice of Preparation, San Onofre-Encina 230kv Transmission Line (SCH #78121189)
Response	The Department of Transportation (CalTrans) letter indicates that identification of highway crossing location of the transmission line along with any impacts and mitigation should be provided for highway crossing permits. Such information will be provided to CalTrans when application is made for these permits. In addition, CalTrans will be consulted prior to final engineering

Item No.	Description
Response (continued):	design to coordinate with CalTrans requirements or plans for highway modifications. Since there are existing transmission lines at these crossing locations, no further impacts or mitigation are anticipated.
SOE 106	Letter from Beth A. Perlmutter, Environmental Analyst-City of Oceanside To: Mr. Richard Tom, Project Engineer-Public Utilities Commission, Dated December 18, 1978 Subject: San Diego Gas & Electric Company's Proposed San Onofre-Encina 230kv Transmission Line, Application No. 58282.
Response	Geological and Soils Conditions: Concern was expressed over hazards from downed transmission lines as a result of seismic ground shaking and related slope failure. Hazards due to downed lines (due to any cause, including those stated above) are discussed under the heading of "Safety" on p. 89 of the EDS, and appropriate mitigation measures are covered on p. 100 of the EDS. Hydrology Flooding: As stated on p. 91 of the EDS, the design of transmission line tower foundations in the floodway of the San Luis Rey River will take into account the possibility of flood flow velocities of an erosive magnitude. Prior to final project design, the latest information regarding potential flood flow parameters (inundation area, flow velocities, peak flow volumes and duration, etc.) will be obtained from the U.S. Army Corps of Engineers who, as stated in the City of Oceanside letter of comment, are presently working in the area. It should be noted that the existing structures in the area proposed for new construction have experienced 100 year flood conditions twice in the recent past without adverse effect. Water Quality: With regard to the possibility of erosion from newly graded surfaces and resulting water quality problems the erosion control measures suggested by the City of

Item No.	Description
Response (continued):	Oceanside in their letter of comment will, be used by SDG&E for any grading activities.

Biotic Resources: No response necessary.

Construction Near Oceanside Airport and Existing Subdivision: See response to SOE 101, 102.

Proposed transmission line will be constructed in existing right-of-way adjacent to existing transmission line. No further screening is anticipated.

Air Quality: The project will not provide "increased outlet" for Unit No. 5 at the Encina Generating station. The project will provide transmission capacity for bringing power from San Onofre Unit #2 to the SDG&E service territory. Since San Onofre Unit #2 will be a baseload resource, a beneficial effect on air quality is expected as a result of the substitution of nuclear power for oil fired generation within the regional air cell. Air quality impacts related to growth inducement are addressed in the following section.

Growth Inducement: The treatment of growth inducing impacts related to the availability and use of the power associated with San Onofre Unit #2 (SONGS 2) is properly a subject for the environmental review and certification of the power producing unit itself.

SONGS 2 has already received certification by the CPUC and is currently undergoing final licensing for operation by the Nuclear Regulatory Commission.

The proposed project, on the other hand, will merely provide transmission capacity to deliver such power from SONGS 2 to the SDG&E service territory.

The certification of SONGS 2 and the proposed project have been treated separately by the responsible regulatory agencies.

Item No.	Description
Response (continued):	The utilization of SONGS 2 power within the SDG&E service territory was considered during certification of the plant. Therefore, as indicated in the EDS on p. 107, the proposed project is not viewed as being growth inducing either within, or without, the SDG&E service territory. Irreversible & Irretrievable Effects: The "commitment to local usage of energy production capabilities, raw materials and production of waste products associated with San Onofre's increased generating capacity" was made by the CPUC upon certification of SONGS 2. As indicated above, the proposed project represents a separate application with the purpose of accommodating that commitment. As such, no significant irreversible and irretrievable effects are anticipated as a result of this project.

SAN DIEGO GAS & ELECTRIC COMPANY
P.O. BOX 1831 SAN DIEGO, CALIFORNIA 92112
(714) 232-4252

March 15, 1979

PUF 100
xCAB 500

Mr. Don B. Steger
Chief Environmental Engineer
California Public Utilities Commission
California State Building
San Francisco, California 94102

Dear Don:

APPLICATION NO. 58282, SAN ONOFRE - ENCINA 230 kV TRANSMISSION LINE

In response to your March 6, 1979 Environmental Impact Inquiries regarding the proposed San Onofre to Encina 230 kV Transmission Line, SDG&E offers the following responses:

SOE-107: Please prepare a tabulation of annual peak demands of record for the period 1965-1978. If possible, show this peak for the area to be served by the Encina Substation.

Response: See Attachment A

SOE-108: Please prepare a list showing names and addresses of owners of property adjacent to areas of new construction along the proposed transmission line.

Response: See Attachment B

I trust our prompt response to your Environmental Impact Inquiries enables your agency to meet April 5, 1979, for distribution of the Draft Environmental Impact Report.

Should you have any questions on our responses, please contact Bob Meinzer, Senior Engineer, at (714) 232-4252.

Sincerely,

Gary D. Cotton, Manager
Licensing & Environmental

GDC:RPM:mdm
Enclosures

cc: L. E. De Simone
R. S. Pedersen

ATTACHMENT A

Response to SOE-107

Year	Annual Peak Demand	Date
1965	870	12-16
1966	904	12-21
1967	1035	12-13
1968	1148	12-19
1969	1219	12-18
1970	1342	12-17
1971	1487	12-13
1972	1600	12-11
1973	1549	1-4
1974	1498	12-23
1975	1619	9-23
1976	1716	8-30
1977	1746	9-7
1978	1981	9-25

Note: Data on peak demand is for overall San Diego Gas & Electric Company's service territory. Data for individual areas is not routinely tabulated.

Reference to Attachment B

Attachment B is a list of names and mailing addresses of all property owners adjacent to the new construction areas. There are no owners of land over, under, or on which the proposed project may be located other than the applicant.

As required by revised and amended Rule 17.1, a Notice of Completion will be sent to each of these owners of land.

APPENDIX F

APPLICANT'S ENERGY CONSERVATION PROGRAMS

LOAD MANAGEMENT

SDG&E has established a corporate goal to develop a comprehensive load management program. We are committed to developing and conducting meaningful programs which will determine the customer and Company benefits from time-of-use rates, load deferral on major appliances of residential, commerical and industrial customers and the complementing benefits of time-of-use rates and control in combination.

SDG&E's cooperative efforts with the DOE, FEA, the California Public Utilities Commission and the California Energy Commission are part of the work we have begun in support of this goal. We believe that the experiments we are undertaking will provide the data necessary to make the decisions on the best mix of programs to use as well as information to make accurate estimates on the diversified load. Upon completion of this program and others being done throughout the state, we will be in a position to evaluate the cost/benefit analysis of a comprehensive Load Management program.

We have taken a very active interest in maximizing our conservation efforts through the implementation of time-of-use rates. These rates were implemented in September 1977 on all customers with over 4500 kw of demand. Each customer was contacted by the Commercial Sales Representative assigned to this account to explain the incentives and the reason for the rate. The tariff is unique in that the customer's demand charge is based upon his demand at the time of SDG&E's peak,

month-by-month. This ties the impacts from the rate more closely to coincident demand, which is the most significant factor in determining capacity needs.

Computer generated load profile graphs have been prepared for each of the customers currently on the tariff, comparing consumption before and after implementation of TOU rates, for each of the six months since implementation. As sufficient experience is gained, we will be prepared to use this data to evaluate responses attributable to the time-of-use rates.

On all customers with demands between 500 kw and 4500 kw we have installed magnetic tape metering equipment for recording customer's energy use by time-of-day. A new tariff was filed with the CPUC on November 1, 1977. It has been delayed pending final CPUC approval.

Along with DOE and American Science and Engineering, we are beginning tests on a two-way communication system that utilizes our existing distribution power lines to carry signals from our substations to the customer's meter and back. The equipment is currently being installed on our system, using circuits originating from two substations.

This system has the potential to provide direct communication with every customer meter location. This will give us the capability to accomplish five basic tasks:

(1) Keep track of a customer's consumption by time-of-day and accumulate the reads for three separate time periods for time-of-use billing.

(2) Cycle high demand appliances off and on during times of peak demands thus lowering the peak itself.

(3) Quickly shed noncritical loads during system emergencies which might help prevent large scale outages.

(4) Monitor and control the distribution network by collecting information about voltage, current kilowatt, and KVAR data as well as performing control functions such as capacitor and circuit switching. The system will allow us to quickly activate switches and locate circuit faults during power outages.

(5) Collect customer load profile data - the system will allow us to remotely collect 15-minute demand data.

This test will go on for two years and will involve a total of 740 customers.

In conjunction with this test, SDG&E is cooperating with the FEA Electric Utilities Demonstration Project in eight separate tests:

(1) Commercial/Industrial with demand greater than 4500 kw.

(2) Commercial/Industrial with demand between 500 kw and 4500 kw.

(3) Load Control for Commercial/Industrial with demand below 500 kw.

(4) Residential load control.

(5) Residential time-of-use and load control.

(6) Residential time-of-use.

(7) Commercial/Industrial with demand below 500 kw time-of-use.

(8) Multi-Family Dwelling Time-of-Use and Appliance Load Control.

In cooperation with other utilities in the state that are conducting complementary studies, we hope to hasten the development of information that will allow each utility to make the corporate decision for integrating load management programs into every day operational use.

We have, in conjunction with the Department of Energy and Systems Control, Inc., entered into a joint effort to document the impacts of future load management and distribution automation functions on the design of SDG&E's new Energy Management System facilities and to generalize these findings for industry-wide application. SDG&E is combining the use of energy management and load management techniques to decrease SDG&E future fuel-oil requirements.

The integration of these two systems will allow proper selection of generating mix and improvement in our system load factors.

We feel certain that these programs we have undertaken will do much to increase our knowledge of load management and help us do our job more effectively.

Upon adoption by the Energy Commission of Load Management Standards, SDG&E may be expanding our Load Management Programs to comply with such standards.

VOLTAGE REDUCTION CONSERVATION PROGRAM

Background

Phase I

In February, 1977, the California Public Utilities Commission requested that SDG&E implement a reduction in the voltage level served to the residential and commercial customers throughout our service territory. By revising the settings on transformer load tap changers (LTC's), reduction was achieved in 107 substations during 1977. These substations serve a total of 355 distribution circuits which represent approximately 73 percent of the customers on our system. In order to insure that the integrity of the reduction accomplished in Phase I is maintained, all low voltage complaints from circuits involved in Phase I are being screened and the corrective actions taken in each case monitored. This insures that no changes are made in an LTC setting by field personnel in order to correct an isolated voltage problem on a circuit.

During 1979, we will re-examine all residential/light commercial substations in our system to determine whether conditions have changed enough to allow Phase I type reductions on circuits which did not qualify for reduction during the initial program.

Monitoring Program

In December of 1977 SDG&E began implementation of a monitoring program designed to measure consumption savings resulting from voltage reduction. This program measures energy consumption of 15 minute intervals at six substations. The six substations include one military base, two primarily commercial loads, one primarily industrial load and two primarily residential loads. We will add four substations to our monitoring program. Three of these will be added during 1978 and the fourth will be completed during the first quarter of 1979. The purpose of these additions is to improve the geographic and economic mixture of the residential areas being monitored. This expansion will bring the number of monitored substations to ten. We are also perfecting a methodology for analyzing the data from the monitoring program which will compensate for variables such as weather, days of the week, etc. This analysis, combined with the large amount of data we are collecting should produce a very accurate measure of consumption savings resulting from voltage reduction on residential, commercial and industrial circuits.

Phase II

In April, 1978 the CPUC requested that SDG&E begin work on Phase II of the Conservation Voltage Reduction Program. The goal of Phase II is the reduction of our

present system voltage bandwidth by 50%. The CPUC indicated that the first step to be accomplished in Phase II was conducting "economic analyses comparing the costs of distribution feeder improvements to the projected energy savings." In order to respond to the commission's request, a project group has been established and a program format developed. This program consists of several parallel efforts.

An extensive study of possible designs for a typical distribution circuit operating within the narrower Phase II voltage bandwidth is being made. This study is divided into a secondary and primary study. In the secondary study a 274 lot subdivision is used to develop optimum secondary system designs for various secondary voltage drops. These designs are not limited to existing design guidelines or use of stock equipment. All avenues of design and equipment are being investigated in an effort to develop the most cost effective approach to Phase II. A similar approach will be used on a representative primary circuit. It is our intent to use the results of the study in three ways. First, to perform a preliminary cost/benefit analysis; second, for development of new design standards; and third, as guidelines for conversion of existing circuits to the new bandwidth.

Efforts have begun to determine what types of equipment are being used on 208 volt services. The feasibility of performing a customer survey is being studied. The

purpose of studying 208 volt services is to allow us to anticipate any problems which might occur with dual range (240/208 volt) or misapplied 230 volt equipment when the bandwidth is narrowed.

Two computer programs will be developed in 1979 to aid in the Phase II study. The first program will determine the percentage of residential, commercial, industrial and agricultural load that is pre ent on each circuit in the system. This data will be stored in a history file for a specific number of years to aid in analyzing the impact of normal system growth on the conservation effects of voltage reduction. The second program will determine the kwhr sales for each circuit in the system.

Conclusion

It is this company's policy to constantly review our progress in the area of Conservation Voltage Reduction. If it becomes evident during 1979 that additions of new programs will enable us to move forward in a more vigorous manner, these programs will be implemented as quickly as possible.