

Decision No. 87280

ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the matter of the application)
of SOUTHERN CALIFORNIA EDISON)
COMPANY for a certificate that the)
present and future public conven-)
ience and necessity require or)
will require construction and)
operation by applicant of 220 KV)
transmission lines from Jurupa)
Substation to Mira Loma Substation)
and from Jurupa Substation to)
Vista Substation.)

Application No. 54540
(Filed December 26, 1973)

William T. Elston, Attorney at Law, for
applicant.

Harry M. Dougherty, Attorney at Law, for
Jurupa Community Services District;
Thorpe, Sullivan, & Workman, by
Roger M. Sullivan, Attorney at Law,
for Fred McMurry; Pete Dangermond,
for Riverside County Parks;
William A. Worthington, Carl A.
Worthington, John R. Prewitt, and
Marjorie Seymour, for Rancho La
Sierra/Rancho Del Rio; and Marian C.
Carpelan and Ruth A. Kirkby, for
themselves; protestants.

Earl R. Shade, for Tri-County Conservation
League; and Ann Capell, Sarah W. Cooley,
Martha McLean, and Judith M. Orttung,
for themselves; interested parties.

James T. Quinn, Attorney at Law, and
Joseph D. McMahon, for the Commission
staff.

O P I N I O N

Southern California Edison Company (Edison) seeks an order of the Commission granting it a certificate that the present and future public convenience and necessity will require the construction and operation of 220 kv transmission lines from a proposed Jurupa Substation to Mira Loma Substation and from Jurupa Substation to Vista Substation.

EIR Process and Public Hearings

In compliance with the provisions of the California Environmental Quality Act (CEQA) and Rule 17.1 of the California Public Utilities Commission's Rules of Practice and Procedure, Edison filed with the application as a separate exhibit not physically attached to the application an Environmental Data Statement (EDS). Copies of the EDS were submitted to other public agencies having expertise in the various areas of environmental concern involved in the project. Where necessary, the Commission requested Edison to correct or amend the EDS.

The EDS and comments thereon were independently evaluated and analyzed by the Commission staff and were incorporated into a Draft EIR.

On June 6, 1975 the staff issued a notice of completion of the Draft EIR. The Office of Planning Research, State Clearinghouse, acknowledged receipt of the Draft EIR and assigned State Clearinghouse No. 75061714 to the project.

Notice to the public of completion of the Draft EIR was published in Riverside County in the Daily Enterprise and The Press on July 28 and August 4, 1975.

Between October 6, 1975 and May 13, 1976 twenty-one days of public hearings were held before Examiner Johnson in Riverside on all aspects of the application including the Draft EIR. Testimony and exhibits were presented on behalf of Edison by five witnesses, on behalf of the county of Riverside by its Parks Director, on behalf of the city of Riverside's Open Space Citizens Committee by a registered landscape architect, on behalf of Rancho La Sierra by a licensed architect, on behalf of a local ad hoc committee by a registered geologist, on behalf of Jurupa Community Services District by its general manager and by its president of the board of directors, on behalf of themselves by two individuals, and on behalf of the Commission staff by one of its engineers. In addition, statements in opposition to one or more of the alternate routes were made by 36 individuals on behalf of themselves, public or quasi-public bodies, and various organizations. These statements generally focused on the alleged lack of need of the proposed facilities and the alleged unacceptable environmental impact of their proposed location.

Concurrent briefs were filed on this matter on August 16, 1976 by Edison, by the Commission staff, by Marian C. Carpelan, Martha J. McLean, and Earl R. Shade (Interested Parties), by the Jurupa Community Services District (District), and by Rancho La Sierra/Rancho Del Rio (Rancho La Sierra).

The Final EIR of Examiner N. R. Johnson was issued on November 5, 1976. Exceptions to the Final EIR were filed by Edison, the city of Riverside, District, Rancho La Sierra, the city of Fontana, Lucia Moramarco, et al, Jurupa Unified School District, Jurupa Mountains Cultural Center, Parents of Jurupa, Inc., Jurupa Junior Women's Club, Circle J Arena Committee, Jurupa Chamber of Commerce, American Little League, West Riverside Businessmen's Association, Inc., and the Commission staff.

Replies to Exceptions were filed by Interested Parties.
The matter is now ready for decision.

Project Description

The project as proposed consists of two new 220 kv transmission lines connecting the proposed Jurupa Substation to be located in the city of Riverside to Edison's existing Mira Loma and Vista Substations. The line from the proposed Jurupa Substation to Mira Loma Substation would be approximately ten miles long and the line from the proposed Jurupa Substation to Vista Substation would be approximately 16 miles long. Both lines would consist of double circuit construction with initially one circuit installed.

The transmission lines would be supported by standard lattice steel towers and two types of aesthetic tubular steel structures commonly referred to as contemporary towers and contemporary poles. The lattice steel towers would average approximately 125 feet in height and the tubular steel poles and towers would average approximately 150 feet in height. Span lengths would vary from 600 to 1,700 feet depending on location and terrain. Each phase of the three-phase circuits would consist of two 1,033,500 circular mils aluminum core steel reinforced (ASCR) conductors spaced 16 inches apart horizontally and supported by a string of gray insulators approximately 9.5 feet in length. An overhead ground wire would be installed between the tops of all structures as a protection against lightening strokes. Each circuit would have a normal rating of 905 MW and be capable of handling 995 MW of load under emergency conditions.

Alternatives to Proposed Action

The alternatives to the proposed action set forth in Edison's EDS and the staff's Draft EIR and discussed on the record in this proceeding are alternate 220 kv routes between the proposed Jurupa Substation and the existing Mira Loma and Vista Substations, the installation of 220 kv circuits between Mira Loma and Vista Substations with the city of Riverside being served from the Vista Substation via an expanded 66 kv system, the installation of 220 kv circuits between Mira Loma and Vista Substations with the city of Riverside being served from the Vista Substation via 115 kv circuits, the no project alternative, and the undergrounding of all or portions of the proposed transmission lines.

Essentially two alternative 220 kv routes (northerly and southerly) between Jurupa and Mira Loma Substations were considered. The alternate northerly route runs east from the Mira Loma Substation in existing transmission line rights-of-way to Van Buren Avenue and hence southerly, generally along Van Buren Avenue, to the Santa Ana River then easterly to the proposed Jurupa Substation. Three variations to this route (2, 2A, and 2B) were considered. The preferred southerly Route 5A and its five alternatives generally run southerly from the Mira Loma Substation to a point approximately opposite the Jurupa Substation hence generally easterly along the Santa Ana River to the Jurupa Substation.

The Jurupa-Vista alternative 220 kv routes consist of a northern route with variations (Routes B, C, D, E, and F) and a southern route (Route A). The northern route lies within an existing transmission line corridor with poles of similar height and configuration to the proposed lines for a distance of 8.9 miles westerly from Vista Substation then southerly in a new corridor to

the Santa Ana River and easterly to the Jurupa Substation. Minor modifications to preferred Route F were discussed in detail on the record. These modifications consisted of relatively minor relocations intended to mitigate the more prevalent adverse visual impacts of the proposed lines.

One suggested modification to preferred Route F was a rerouting of a small portion of the line at the Jurupa tap to minimize the skylining effect on this route. Such a modification was opposed by the property owner on the basis that the moving of the line easterly from the property line would bisect his property and be deleterious to its utilization. In this witness' opinion, the adverse effect of the property bisection would outweigh the adverse visual impact of the skylined towers because an existing stone quarry already impairs the aesthetic value of the view.

Testimony was also presented advocating that a portion of preferred Route F be moved to the east of affected properties so as not to interfere with the view of the valley. These latter modifications, initially designated as the Bissiri Route and later referred to as Route G and Route G Alternate, would, according to the testimony of one of the property owners, minimize the adverse visual impact to the property owners directly east of Route F, and because it would, in his opinion, be possible to locate the poles inconspicuously below the skyline, the changes would not substantially adversely affect the property owners west of proposed Route F.

The visual impact of undergrounding the proposed lines would be negligible. Construction impact, however, would be high due to the fact that a trench would have to be constructed along the entire chosen route. According to the Draft EIR, the cost of undergrounding transmission lines of this voltage and capacity is prohibitive, being on the order of ten times the cost of overhead lines.

While the cost of undergrounding the entire line would be very high, the possibility of undergrounding those segments of the proposed lines that would have the greatest visual impact was discussed in detail on the record. The segments of lines discussed for possible undergrounding are delineated on Exhibit 40 and the costs of the entire routes including and excluding underground segments are tabulated in Exhibit 40-A.

The first such segment listed for possible undergrounding in Exhibit 40-A is that portion of alternate Route 2A paralleling alternate Route F from a point near Limonite Avenue and traversing generally easterly and southerly to the proposed Jurupa Substation. Undergrounding those two portions, assuming the selection of Routes 2A and F as the preferred routes for the project, is advocated as eliminating the reliability problem of two closely paralleling lines, mitigating the visual impact of the two lines in a sensitive area, answering the criticism of crossing an underground district at Limonite Avenue with overhead lines, and decreasing the danger of outages which could result from aircraft using the Riverside Municipal Airport. The additional cost of such undergrounding is estimated to be \$2,600,000.

Also considered for undergrounding were varying lengths of segments on the east-west portion of Routes 5 and 5A through the Santa Ana River flood plain. The estimated additional cost of undergrounding those segments ranged from \$4,390,000 for the entire east-west segment to \$2,385,000 for a segment from the Pedley Substation to a point approximately one-half the distance to the proposed Jurupa Substation.

Another segment considered for undergrounding at an additional cost of \$1,730,000 was that portion of Route A from Mount Rubidoux to the proposed Jurupa Substation.

At the present time five 66 kv circuits feed the city of Riverside from the existing Vista Substation. Edison owns these circuits to the city limits at which point the city of Riverside takes title to the lines. The existing capacity of these lines is 290 MW. It is estimated that Riverside's demand will exceed this amount by the year 1979. The record shows that the construction of these 66 kv lines is such that the capacity could be doubled by doubling the circuits. The resulting 580 MW capacity of these rebuilt circuits would meet the requirement of the city of Riverside until approximately the year 1995. Beyond that time it would be necessary to either install additional 66 kv circuits or provide an alternate source of supply to meet the anticipated continuing increase in Riverside's requirements.

Also considered in the record as an alternative to the proposed project was the doubling and reinsulating of the five existing 66 kv circuits serving Riverside for 115 kv service. Such a system would have a capacity of approximately 1,000 MW.

Need for the Project

Testimony presented by an Edison witness indicates that the Jurupa-Mira Loma and Jurupa-Vista 220 kv transmission lines are needed to (1) provide an economical and reliable 220 kv transmission source to the city of Riverside to meet forecast power demands and to satisfy Edison's contractual obligations to the city, (2) provide needed additional capacity to maintain reliability and adequacy for the Edison 220 kv transmission system east of the Mira Loma Substation, (3) postpone the need for major 220/66 kv

capacity additions at the Vista Substation, and (4) eliminate the need for constructing additional long 66 kv transmission lines between Vista Substation and the city of Riverside.

Testimony presented by the city of Riverside's Chief Electric Utility Engineer, Donald D. Campbell, indicated that an anticipated two percent per year population growth coupled with an expected increased usage per customer would result in an increase in peak demand of five percent per year. This five percent per year increase in demand would, according to the testimony, result in the city of Riverside's demand being 290 MW by the year 1979 or 1980 which the record shows is more than should be prudently served from the five existing 66 kv circuits serving Riverside from Edison's Vista Substation. If the predicted load growth materializes as anticipated, it is obvious that the capacity of the facilities serving the city of Riverside need to be increased by the year 1979 or 1980. It should be noted that a rate of load growth less than predicted will postpone the date for providing additional capacity but will not obviate its necessity.

With respect to the necessity of providing additional capacity to maintain reliability and adequacy for the Edison 220 kv transmission system east of the Mira Loma Substation, Edison's Chief Planning Engineer for transmission in the Electric System Planning Division, W. R. Schmus, testified that load studies have shown that when the Riverside load exceeds about 290 MW, an unexpected outage of one of Edison's Vista Substation 220/66 kv transformers will overload the remaining transformer. He further testified that approximately one year after Riverside's load reaches 290 MW, Edison's eastern load would exceed the existing substation transformer capacity at the Vista Substation and that the growing

loads in San Bernardino, Redlands, and communities extending east to Palm Springs will cause excessive loading on the existing area transmission lines. According to this witness' testimony, the proposed project will not only provide the transmission capacity needed to meet the anticipated increased area demands but will permit Edison to satisfy its transmission system design criteria specifying that the loss of a single transmission line will not interrupt a load nor result in the loading of parallel transmission lines in excess of their rating, nor will the simultaneous loss of two transmission lines interrupt a major load (400 MW or more) or cause the loading of the remaining transmission lines beyond their emergency rating.

It is apparent from the record that the proposed project or its equivalent is required to meet the increasing demands of the city of Riverside and Edison's eastern area. Failure to provide the increased capacity necessary to serve these increased demands will result in a decrease in the reliability of service for the area. In addition, failure of one of the 66 kv circuits serving Riverside during peak periods would overload the remaining four circuits and could eventually result in power outages for the region.

Environmental Matters

A comprehensive record on environmental matters was developed in this proceeding through 21 days of public hearings, preparation of the Draft EIR, consultation with public agencies, and presentation of expert testimony and exhibits by various parties, all of which are elements in the EIR process culminating in the preparation and issuance of the Final EIR. In addition, as previously summarized, exceptions and replies thereto have been filed to the Final EIR.

As provided in the Guidelines for the implementation of CEQA and this Commission's Rule 17.1, the Final EIR specifically addresses (a) the environmental impact of the proposed action; (b) any adverse environmental effects which cannot be avoided if the proposal is implemented; (c) mitigation measures proposed to minimize the impact; (d) alternatives to the proposed action; (e) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; (f) any irreversible environmental changes which would be involved in the proposed action should it be implemented; and (g) the growth-inducing impact of the action.

The conclusions set forth in the Final EIR on the environmental issues raised in this proceeding are:

- (1) There is a need to provide additional capacity to serve the city of Riverside by the year 1979.
- (2) There is a need to provide at least one additional 220 kv transmission line to serve the Vista Substation to insure the reliability of service for Edison's service area east of the Vista Substation.
- (3) With environmental impact as the primary consideration, the best of the several viable alternatives discussed on the record of this proceeding to meet these demands is to install a 220 kv transmission line between Edison's Mira Loma and Vista Substations in existing rights-of-way alongside the existing Mira Loma-Vista 220 kv lines and meet the increased requirements of the city of Riverside by increasing the capacity of the 66 kv system serving Riverside.

- (4) In the event it is decided to install the proposed Jurupa Substation and construct 220 kv lines from Mira Loma to Jurupa and from Jurupa to Vista Substations, Route 2A with the segments designated on Exhibit 40 installed underground and Route G as proposed by Jurupa Water District's president of the board of directors should be used.
- (5) Along the routes described in paragraphs (3) and (4) above the steps proposed to be taken to mitigate any deleterious consequences as described in Chapter 7 are adequate.
- (6) Under these circumstances no unacceptable effects will result from the project upon the aesthetic, historical, and archaeological environment within the vicinity.
- (7) The project as proposed will have a greater environmental impact than either of the alternatives described in paragraphs (3) and (4) above.
- (8) The unavoidable adverse environmental impact which will result from the construction and operation of the proposed project is the removal of relatively small amounts of protective vegetative cover which will result in some erosion from groundwater run-off until ground cover is reestablished.
- (9) The long-term effect of the construction and operation of the proposed project is the maintenance and enhancement of long-term productivity by supplying a need for electrical service reliability in the Edison service area.
- (10) The only irreversible environmental effects of the proposed project are the irretrievable consumption of labor and energy required to construct and operate the facility.
- (11) The project will produce insignificant growth-inducing impact on the area.

- (12) The proposed project as modified in paragraphs (3) and (4) above will not have a significant effect on the environment.^{1/}

Based on the above conclusions, it was recommended in the Final EIR that the necessary certification to construct either alternative set forth in paragraphs (3) and (4) above should be granted.

Exceptions by Edison

Edison filed eight exceptions to the Final EIR which may be divided into three main categories as follows:

- (1) Undergrounding portion of the proposed transmission lines is not supported on the record, is economically unfeasible, and is contrary to past Commission decisions;
- (2) There is insufficient evidence in the record to support a 66 kv alternative with a 220 kv substation located in the southwestern part of the city of Riverside; and
- (3) The Commission should consider Edison's proposed Mira Loma-Valley 500 kv transmission line in its environmental assessment of this project.

In its reply to exceptions, Interested Parties refuted all eight exceptions and supported the Final EIR.

^{1/} Section 15040 of the "Guidelines For Implementation of the California Environmental Quality Act of 1970" defines significant effect on the environment as: "Significant effect on the environment means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the activity including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."

The opening sentence of Edison's Exception No. 1 referring to paragraph 13 of Chapter 8 of the Final EIR states: "It is stated in the reference paragraphs, 'Undergrounding these two portions, assuming the selection of Routes 2A and F as the preferred routes for the project, is advocated as eliminating the reliability problem of two closely paralleling lines.'" This is an incomplete quote leaving the false impression that the sole criteria for the undergrounding of the two portions of line is the increase in reliability whereas the complete quote of that sentence of paragraph 13 is "Undergrounding these two portions, assuming the selection of Routes 2A and F as the preferred routes for the project, is advocated as eliminating the reliability problem of two closely paralleling lines, mitigating the visual impact of the two lines in a sensitive area, answering the criticism of crossing an underground district at Limonite Avenue with overhead lines and decreasing the danger of outages which could result from aircraft using the Riverside Municipal Airport." These latter three factors alone are more than sufficient justification for the undergrounding of the two portions in question. The increase in reliability by the elimination of such causes of outages^{2/} as lightening storms, tornadoes, fires, vandalism, or low-flying aircraft is an additional plus factor for such undergrounding. Edison argues that the installation of underground lines would not eliminate the

2/ "By placing one circuit in close proximity to another circuit, the probability of a single occurrence removing both circuits is increased. Such outages could be caused by lightening storms, tornadoes, fires, earthquakes, vandalism, low-flying aircraft, or of particular concern in this area, flooding."
(RT, page 351.)

possibility of outages due to earthquakes and flooding. Such a statement is equally applicable to overhead installations.

In support of its position that undergrounding is contrary to past practice, Edison quotes from Decision No. 80197 dated June 27, 1972 in Case No. 9245, our investigation into the construction of 220 kv La Mesa-La Cienega and La Cienega-El Nido electric transmission lines in part as follows: "If we were to make such an order after finding that the cities are 'average' cities then in fairness we would have to bury substantially all new transmission lines through residential areas no matter where on Edison's system..." and argues that this record "...contains no evidence to support the kind of findings one would expect considering Decision No. 80197." (Page 4 of Edison's Exceptions.) It should be noted that the above quote relates to the undergrounding of an entire line which was not recommended as a viable alternative in the Final EIR because of the prohibitive cost of such undergrounding whereas the Final EIR relates to the undergrounding of specified small segments of line. Furthermore, as noted by Interested Parties in its replies to exceptions, Decision No. 80197 states: "We further find that there is nothing unique in this area: there are no scenes of natural beauty, wilderness areas, large parks, recreational areas other than those usually found in small cities. . . . What we have here are average communities. . . . This finding of averageness is important...." In re Southern California Edison Company (1972) 73 CPUC 559, 564. Interested Parties correctly argue that the matters are not parallel because, as detailed in the record, Edison's preferred Route 5A would have an adverse effect on the Santa Ana River Regional Park with its "...scenes of natural beauty, wilderness areas, large parks, recreational areas...."

Paragraph 13 of Chapter 8 of the Final EIR sets forth the additional cost of undergrounding parallel portions of Routes 2A and F as \$2,600,000 and paragraph 14 sets forth the additional costs of undergrounding portions of Route 5A as ranging from \$2,385,000 to \$4,390,000. Edison takes exception to these statements and argues that the cost comparisons should relate the costs of the partially undergrounded alternative routes to the preferred routes rather than address the additional incremental costs of undergrounding a portion of the alternative routes as was done in paragraphs 13 and 14. According to Edison such a comparison would show a differential ranging from \$3.5 to \$5.6 million over the proposed project and argues that such an increase would cause the project not to be economically feasible. Interested Parties correctly argue that Edison's use of these figures is fallacious. Route 5A with or without partial undergrounding is not an alternative recommended in the Final EIR and the comparison of the overhead costs of one route with the costs of a partially undergrounded alternative route is invalid.

Edison also takes exception to that portion of paragraph 17 of Chapter 8 of the Final EIR indicating the possibility and/or feasibility of locating a substation in the southwest portion of Riverside stating that there is no testimony that such a substation would be feasible; that the environmental impact of such a substation has not been evaluated on this record; and that should continued 66 kv service be the choice of the Commission the siting of any alternative substation should be withheld until such time as one is applied for by the utility. The record is quite clear that it is Edison's practice to limit the size of a transmission substation to 600 MW; that the Vista Substation site is inadequate

to house a substation of 1,000 MW capacity; and that good engineering practice requires adequate separation of transmission substations. A substation in the southwestern portion of Riverside falls within these parameters but, as noted by Interested Parties in its replies to Edison's exceptions, the recommendation of the preferred alternative contained in the Final EIR contains no mention of the construction of such a substation but stated in part: "...and meet the increased requirements of the city of Riverside by increasing the capacity of the 66 kv system serving Riverside."

And, finally, Edison takes exception to paragraphs 73 and 83 of Chapter 13 of the Final EIR stating that the route of the proposed 500 kv Mira Loma-to-Valley transmission line is so problematical that its possible location cannot be considered as a valid argument for the selection of one route in preference to another on the bases: (1) the proposed route is logical; (2) the required property has already been purchased; and (3) the possibility of creating three separate and distinct transmission line corridors through the Jurupa Community Services District should be considered. Because of the ever-increasing controversies arising over environmental matters, we must agree with the conclusions set forth in paragraphs 73 and 83 of Chapter 13 of the Final EIR that the location of the 500 kv line is problematical and should not be herein considered in the selection of the best alternative route.

Exceptions by the City of Riverside

The city of Riverside joins in and incorporates Edison's exceptions except for all references which propose Route 5A as the preferred 220 kv transmission route from Mira Loma to Jurupa and that portion of Edison's Exception No. 8 which reads: "...or grant the certificate on condition that the City of Riverside bear the differential capital cost of the underground construction."

Interested Parties note that the exceptions were filed by the city's Department of Public Utilities rather than the city itself and that there has been no action by the Riverside City Council on bearing costs of undergrounding transmission lines as contrasted to official action, evidenced by the city council minutes of September 30, 1975 (Exhibit 48), as "not recommending the Santa Ana River route and supporting Routes 1 and 2."

Riverside proposes that Conclusion 1 appearing on page 13-21 of the Final EIR be modified to include a specific growth rate of its electric load of five percent per year. The inclusion of the specific growth rate is unnecessary and would add nothing to this decision.

Riverside also takes exception to Conclusion 3 appearing on page 13-22 of the Final EIR on the basis that a new major substation in the southwest portion of Riverside would not necessarily cause less environmental impact than the proposed Jurupa Substation and that the economical advantages arising from the additional voltage discount savings Riverside would gain from the Jurupa project were not given sufficient weight. As previously discussed, Conclusion 3 indicates that the increased requirements of the city of Riverside be met by increasing the capacity of 66 kv system serving Riverside and does not detail the manner in which the additional capacity will be provided. The record shows Edison's witness did not include voltage discount savings in his computations because of the difficulty of predicting the amount of such discounts that the Federal Power Commission would allow. In any event, the possible savings of slightly over a million dollars over the entire 20-year period is of questionable significance when compared to Riverside's costs of between \$51 to \$58 million over the same period.

Riverside also takes exception to Conclusion 4 on page 13-22 of the Final EIR, which indicates a preference for Routes 2A and G with specified portions undergrounded, on the bases that: (a) The undergrounding of both source lines under the Santa Ana River could decrease reliability, and (b) the undergrounding of approximately 3.6 circuit miles is disproportionately excessive when compared to the mileage of underground 220 kv circuits being planned by other utilities across the United States. As previously stated, the increase in reliability caused by undergrounding the parallel portions of Routes 2A and F was a plus factor in the conclusion that these portions of the lines should be undergrounded. Riverside's concern that both lines could be washed out at the same time because "common sense would suggest that scouring action that could undermine and wash out one line could quite possibly wash out the other line also" (page 7, Riverside's exceptions) appears to be unfounded. It is axiomatic that proper engineering would preclude the probability that even one of the two lines would be washed out. As for the contention that if Conclusion 4 be adopted, a disproportionate amount of line would be undergrounded as compared to the balance of the United States, it would appear that the impact of transmission lines is either given a lower priority in other states than in California or that such lines being planned in other states do not impact on regional parks or recreational areas.

Riverside also takes exception to Conclusion 7 stating that the project as proposed will have a greater environmental impact than either of the alternatives described in paragraphs (3) and (4). Conclusion 7 is fully supported on the record.

Exceptions by Rancho La Sierra

Rancho La Sierra takes exception to the conclusions in Chapter 13 of the Final EIR stating that the Environmental Assessment Report (EAR) of the city of Riverside satisfies the requirements of CEQA. Interested Parties concur with this exception. In support of its position, Rancho La Sierra argues that a complete reading of Riverside's EAR reveals that no consideration whatsoever was given to the environmental impact of transmission lines to and from alternative substation sites. We disagree. As stated in the Final EIR, the criteria for the selection of a specific substation site are strigent and, therefore, severely limit the number of available sites. The EAR states that it is the Riverside Public Utilities Department's belief that the Jurupa site will have the least environmental impact. Such a statement can only be based on a comparative analysis of several alternate sites.

Exceptions by District

District recommends that Edison's and Riverside's increased demands be met by the installation of a 220 kv line between Mira Loma and Vista Substations in the existing transmission line corridor and the expansion of the existing 66 kv system on the bases that such construction would not adversely impact the District, the city of Riverside, or any other area; would obviate the necessity of constructing the Jurupa Substation and thereby prevent the adverse environmental impact on the regional park; and would meet the objections of the Board of Supervisors of the County of Riverside and District.

District takes exception to the adoption of Routes 2A and G with specified portions undergrounded as described in Conclusion 4

on pages 13-22 of the Final EIR. The bases for its exceptions to the adoption of such routing and construction are: (a) Route 2A would have the greatest adverse environmental impact by traversing existing commercial, industrial, and residential areas of Glen Avon; (b) would result in a boxing effect when coupled with Route G; (c) would add to the existing nine transmission lines in the District and thereby result in an excessive number of lines in the District; and (d) would be contrary to the resolutions adopted by the Board of Supervisors of the County of Riverside and the Board of Directors of the Jurupa Community Services District.

Exceptions by Jurupa Unified School District

The Jurupa Unified School District endorses the installation of a 220 kv line between the Mira Loma and Vista Substations in the existing transmission line corridor and the expansion of the existing 66 kv system as a reasonable resolution to the problem of meeting Riverside's and Edison's increased demands. It takes exception, however, to the implication that the installation of partially undergrounded Routes 2A and G is an equally acceptable alternative. It is stated that: "While the routes proposed in Conclusion 4 have preferential features over other alternative routes initially considered, they still require new high power transmission corridors very close to some of the schools in this district. . . . We strongly protest any approval of Conclusion 4 as recommended without a supplemental environmental impact analysis of scientific evidence related to the effects of electromagnetic fields we requested in our written position October 1975 and restated above." Jurupa Unified School District further states:

"Enclosed you will find twelve pages of single-line research listings of a number of studies available in the National Library of Medicine

as identified by the Norris Medical Library at the University of Southern California's Health Sciences Campus. We believe it is the responsibility of the Commission to have its hearing officers or other competent authorities carefully examine this available scientific evidence prior to any consideration of Conclusion 4."

These twelve pages of listings translate to 37 citations of which only 16 are written in English. Of those 16 citations written in English, seven address the subject of the effect of high frequency electromagnetic fields on cardiac pacemakers, three refer to the health hazards from microwave radiation, two refer to the health hazards associated with nonionizing radiant energy (infrared and ultraviolet rays, laser beams, and radio waves), one relates to the propagation of plane waves through two parallel dielectric sheets, one refers to weather influences on mortality and morbidity, one relates to chick embryo development in a 26-khz electromagnetic field, and one relates to the biological effects in rodents exposed to 10^{-8} pulses of electromagnetic radiation; none of which are in any manner related to 220 kv transmission line construction and operation.

Exceptions by the Commission Staff

The Commission staff takes exception to the conclusion set forth in paragraph 32 on page 13-7 of the Final EIR which states: "The beneficial effects of the minor energy savings of the proposed lines are greatly exaggerated." It recommends that the conclusion be modified to read "As regards the communities of Glen Avon, Mira Loma and Pedley, the beneficial effects of the energy savings of the proposed lines would be minor." This point is well taken and will be adopted.

Exceptions by Others

Objections to the project as outlined in Conclusion 4 and in favor of the project as outlined in Conclusion 3 on page 13-22 of the Final EIR were filed by Lucia Moramarco, et al, the city of Fontana, West Riverside County Businessmen's Association, Inc., Jurupa Mountains Cultural Center, Jurupa Junior Women's Club, Jurupa Valley Multiple Listing Service, Jurupa Chamber of Commerce, Jurupa District of the American Little League, Parents of Jurupa, Inc., and the Circle J Arena Committee. The basis for the objections focus on the devaluation of property, the conflict with the Jurupa General Plan 1990, inadequate protection of the wildlife preserve of the Jurupa Mountains Cultural Center, and general adverse visual impact that the additional lines would impose along the proposed routes. In addition, the Jurupa Junior Women's Club notes that its name was included in the Final EIR with those opposed to Route 5A and not included as being specifically opposed to Routes F, G, and 2A in the Jurupa area and wishes it emphasized that although Route 5A is not particularly acceptable to them, their main concern lies with the adverse effects of the pole lines along routes in the Jurupa area.

The Commission has carefully considered the evidence on environmental matters, especially the contents of that Final EIR and the exceptions and replies thereto, and makes the following findings pursuant to Rule 17.1(j)(3) of its Rules of Practice and Procedure.

Findings

1. There is a need to provide additional capacity to serve the city of Riverside by the year 1979.

2. There is a need to provide at least one additional 220 kv transmission line to serve the Vista Substation to insure the reliability of service for Edison's service area east of the Vista Substation.

3. The best of the several viable alternatives discussed on the record of this proceeding to meet those demands is to install a 220 kv transmission line between Edison's Mira Loma and Vista Substations in existing rights-of-way alongside the existing Mira Loma-Vista 220 kv lines and meet the increased requirements of the city of Riverside by increasing the capacity of the 66 kv system serving Riverside.

4. The alterations to the proposed project described in Finding 3 mitigate or avoid the significant effects on the environment as identified in the Final EIR.

5. Under the project as approved no unacceptable effects will result from the project upon the aesthetic, historical, and archaeological environment within the vicinity.

6. Preferred Route 5A would have had an adverse environmental effect on the Santa Ana Regional Park with its scenes of natural beauty, wilderness areas, large parks, and recreational areas.

7. The unavoidable adverse environmental impact which will result from the construction and operation of the proposed project as modified is the removal of relatively small amounts of protective vegetative cover which will result in some erosion from groundwater run-off until ground cover is reestablished.

8. The long-term effect of the construction and operation of the proposed project as modified is the maintenance and enhancement of long-term productivity by supplying a need for electrical service reliability in the Edison service area.

9. The only irreversible environmental effects of the proposed project as modified are the irretrievable consumption of labor and energy required to construct and operate the facility.

10. The project as modified will produce insignificant growth-inducing impact on the area.

11. The mitigation of the significant effects on the environment resulting from alterations to the proposed project described in Conclusion 4 of Chapter 13 of the Final EIR are insufficient to justify the utilization of this alternative in preference to the alternative described in Conclusion 3.

12. The undergrounding of portions of Routes 2A and F described in Conclusion 4 as mitigating measures to increase reliability and to alleviate some of the adverse environmental effects of these alternative routes would be fully justified on this record had this alternative been adopted.

13. The route of the proposed 500 kv transmission line between the Mira Loma and the proposed Valley Substations is so problematical that its possible location cannot be considered as a valid argument for the selection of one route in preference to another.

14. The EAR of the city of Riverside regarding the site of the proposed Jurupa Substation satisfies the CEQA requirements with respect to this portion of the project.

15. The conclusion in the Final EIR stating "The beneficial effects of the minor energy savings of the proposed lines are greatly exaggerated" should read "As regards the communities of Glen Avon, Mira Loma, and Pedley, the beneficial effects of the energy savings of the proposed lines would be minor."

16. In conformance with this Commission's General Order No. 131, the construction and operation of Mira Loma-Vista 220 kv transmission line:

- (a) Is reasonably required to meet area demands for present and/or future reliable and economic electric service; and
- (b) Will not produce an unreasonable burden on natural resources, aesthetics of the area in which the proposed facilities are to be located, community values, public health and safety, air and water quality in the vicinity, or parks, recreational and scenic areas, or historic sites and buildings, or archaeological sites.

17. Present and future public convenience and necessity require the construction and operation of the project as modified.

Applicant is placed on notice that operative rights, as such, do not constitute a class of property which may be capitalized or used as an element of value in rate fixing for any amount of money in excess of that originally paid to the State as the consideration for the grant of such rights. Aside from their purely permissive aspect, such rights extend to the holder a full or partial monopoly of a class of business. This monopoly feature may be modified or canceled at any time by the State, which is not in any respect limited as to the number of rights which may be given.

The action taken herein is not to be considered as indicative of amounts to be included in future proceedings for the purpose of determining just and reasonable rates.

The Notice of Determination for the project is attached as Appendix A to this decision and the Commission certifies that the Final EIR has been completed in compliance with CEQA and the Guide lines and that it has reviewed and considered the information contained in the EIR.

Based on the foregoing findings the Commission concludes that the Mira Loma-Vista transmission line should be authorized in the manner set forth in the following order.

O R D E R

IT IS ORDERED that a certificate of public convenience and necessity is granted to Southern California Edison Company to construct and operate a 220 kv transmission line between existing Mira Loma and Vista Substations in the same rights-of-way and parallel to the existing Mira Loma-Vista 220 kv transmission lines.

The Executive Director of the Commission is directed to file a Notice of Determination for the project, with contents as set forth in Appendix A to this decision, with the Secretary for Resources.

The effective date of this order shall be twenty days after the date hereof.

Dated at San Francisco, California, this 3rd day of MAY, 1977.

Robert Bateman

President

William J. Lyons

John L. Stanger

Richard D. Howell

Commissioners