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Decision 96-01-012 January 10, 1996

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of Sierra Pacific Power Company for a Certificate of Public Convenience and Necessity to Construct and Operate the Alturas Transmission Line Project.	)))))	ORIGINAL Application 93-11-018 (Filed November 9, 1993)

INTERIM OPINION

Contents

Summary

Sierra Pacific Power Company (Sierra) asks for a certificate of public necessity and convenience (CPCN) to construct a 345,000 volt (345 kV) overhead electric transmission line and two related substations (Project) in northeastern California. (See infra at 20 for a description.) We will grant the CPCN subject to conditions.

Procedural Background

Sierra filed its application for a CPCN on November 9, 1993. Following requests by the Commission Advisory and Compliance Division (CACD) for supplementation and the responses of Sierra, CACD accepted the application as complete on February 14, 1994. Sierra further amended the application on October 4, 1994. CACD determined that an environmental impact report was required pursuant to the California Environmental Quality Act (CEQA). CACD caused a draft (DEIR/S) and final environmental impact report/statement (FEIR/S) to be prepared, as discussed in more detail in our companion decision (D.) certifying the FEIR/S (D.95-12-013). No protests to the application were filed. A prehearing conference was held on February 6, 1995 in Susanville, California. Evidentiary hearings were held by the assigned administrative law judge (ALJ) in Susanville, California on May 22-25, 1995 and in San Francisco on June 1, 1995. The application was ordered submitted on the concurrent reply briefs filed August 18, 1995.[1]

Several interested parties appeared at the evidentiary hearings. One, the Lassen Municipal Utilities District (LMUD), supported the Project. Others opposed the Project, or the location of one of the proposed substations, on various grounds. Of these, one group, Neighbors Opposing Power Encroachment (NOPE), had concerns that were focused on the northern end of the Project, near Alturas, California. The remaining parties were

Sierra County, California, Citizens for the Preservation of Long Valley (Long Valley), Border Town residents[2] (Border Town), Green Gulch Ranch (Green Gulch), and Friends of Peavine, Inc. (Peavine). These parties had concerns that were focused on the southern end of the Project, near Border Town and Reno, Nevada. Appendix A lists appearances.

In addition to Sierra, LMUD filed a brief in support of the Project. Long Valley filed a brief that opposed the Project solely with respect to the siting of the Border Town Substation. Peavine filed a brief in opposition to the Project on the grounds that it was not needed. Green Gulch and Sierra County filed briefs in opposition to the Project on the grounds that a portion of the transmission line and the Border Town Substation should be sited in Nevada. Border Town filed a brief in opposition on similar grounds and a claim of violation of due process. NOPE filed a brief in opposition to the project on several grounds, including the lack of provision in the Project budget for additional costs of construction that NOPE believes will be required for stream and wetland crossing, seismic considerations, and placing portions of the line underground.

Sierra, NOPE, Peavine, Border Town, and Green Gulch filed comments on the proposed decision of the ALJ filed November 20, 1995. Sierra filed reply comments to the comments of Green Gulch.

Jurisdiction

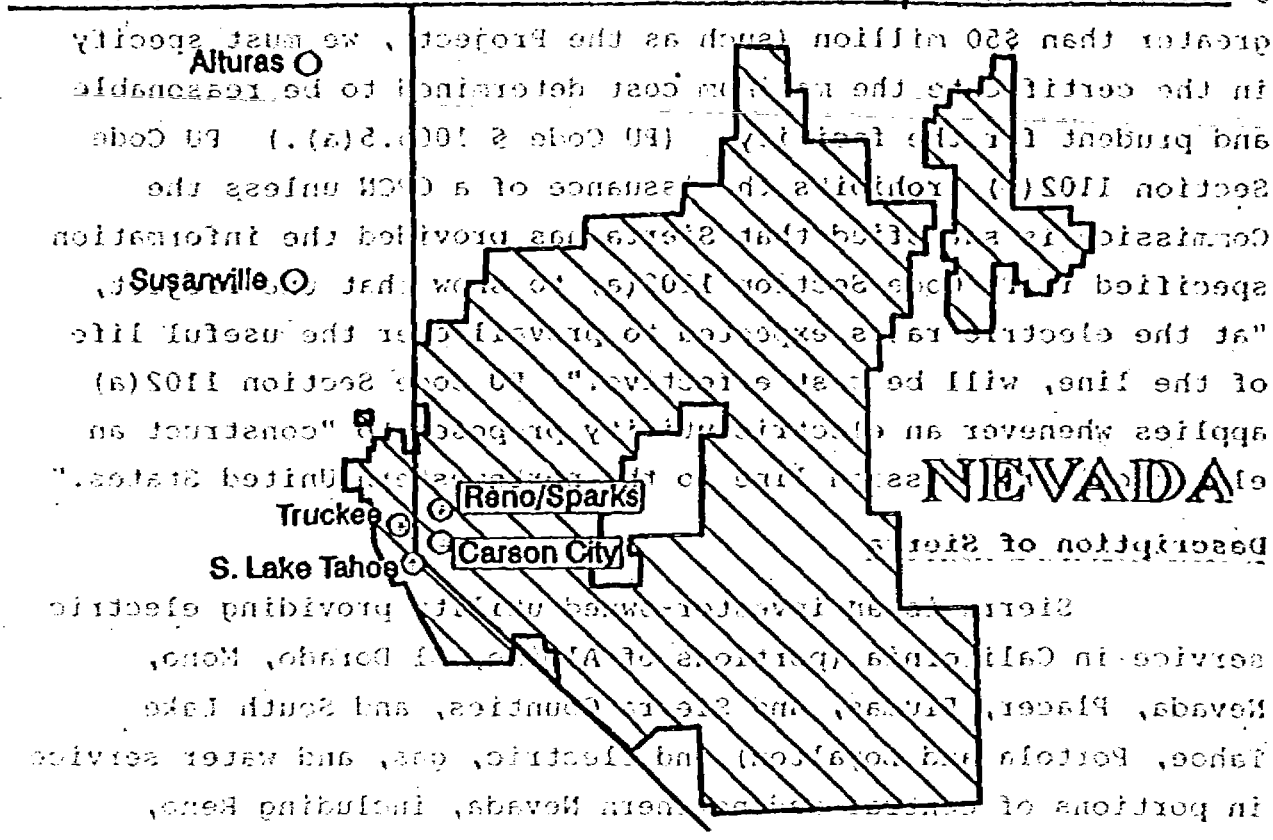
In general, no electric utility (such as Sierra) may construct any line without first obtaining from the Commission a CPCN. (PU Code § 1001.) The Project is an electric transmission line designed for operation in excess of 200 kV in California. Accordingly, pursuant to our General Order (G.O.) 131-D, Sierra may not construct it until we have first found that the proposed facilities "are necessary to promote the safety, health, comfort,

and convenience of the public, and that they are required by the public convenience and necessity." In doing so, we must include consideration of the following four factors: (1) community values, (2) recreational and park areas, (3) historical and aesthetic values, and (4) influence on the environment. (PU Code § 1002(a).) In the case of facilities with an estimated cost greater than $50 million (such as the Project), we must specify in the certificate the maximum cost determined to be reasonable and prudent for the facility. (PU Code § 1005.5(a).) PU Code Section 1102(b) prohibits the issuance of a CPCN unless the Commission is satisfied that Sierra has provided the information specified in PU Code Section 1102(a) to show that the Project, "at the electric rates expected to prevail over the useful life of the line, will be cost effective." PU Code Section 1102(a) applies whenever an electricutility proposes to "construct an electrical transmission line to the northwestern United States."

Description of Sierra

Sierra is an investor-owned utility providing electric service in California (portions of Alpine, El Dorado, Mono, Nevada, Placer, Plumas, and Sierra Counties, and South Lake Tahoe, Portola and Loyalton) and electric, gas, and water service in portions of central and northern Nevada, including Reno, Sparks, and Carson City. (See Fig. 1.) It has received approval of applications before this Commission and authorities in other states to merge (the Merger) with Washington Water Power Company (WWPC). (See ___ CPUC2d ____ (1995) (D.95-10-045).)

Figure 1
Service Territory of Sierra
(from FEIR/S)



Forecasts of Electrical Demand

In our 1990 decision granting a CPCN to Southern California Edison Company for a 38-mile 220 kV transmission line, we discussed our process for these types of applications. (In re Southern California Edison Company (1990) 37 CPUC2d 413.) We quoted a 1981 decision on intervenor compensation, where our decision had turned on whether the proceeding was judicial or legislative in nature. (Id. at 433.) In the 1981 case, we said:

> Our decision making process in certification proceedings involves more than a narrow application of facts to law in the classifical [sic] judicial mode. Once we have made the benchmark quasi-judicial decision that a proposed project conforms to the officially adopted forecast, there remain many facts that are considered on a quasi-legislative basis. These include the cost of the project, its likely impact on rates, operating and reliability factors, safety, and environmental impacts. The range for exercise of our discretion is very broad. There is no fixed framework of narrow factual issues which governs the decision-making process. Our process is quasi-legislative on these questions.

(In re Southern California Edison Company (1981) 7 CPUC2d 75, 89.) Therefore, we first ask if the Project conforms to the officially adopted forecast.

Applicable Systemwide Forecast

The Nevada Public Service Commission (NPSC) has approved Sierra's 1993 Resource Plan[6], which projects that the average annual growth rate of demand on Sierra's electrical system from 1993 through 2001 will be 2.3%. NPSC's assessment, to the extent that it is not inconsistent with the projections of the California Energy Commission (CEC) discussed below, constitutes the applicable systemwide forecast.[7]

California Energy Commission Forecast

Approximately 92% of Sierra's electrical load is attributable to Nevada[8], so it is not surprising that little attention has been paid to California resource planning issues for Sierra. (Tr. at 1028.) The CEC lumps Sierra's California service area into a residual category with several other small California utilities.[9] (CEC, 1992 Electricity Report (1993) Appendix C, C-21.) CEC projects that through 2013 the average annual growth rate in electrical energy use applicable to Sierra's California service area will be 1.12%. (Id. at C-28.) CEC projects that the average annual growth rate in peak demand over the same interval will be 1.35%. (Id. at C-29.)

Consistency of NPSC and CEC Forecasts

It does not appear that the NPSC and CEC forecasts of growth rates in electrical energy are inconsistent so much as incommensurate. The forecasts cover different intervals. Neither makes a direct estimate of average annual growth rates in the California portion of Sierra's service area. Sierra forecasts of load in its California service area exceed the CEC projections slightly, 1.5% to 1.8%, compared to 1.12%. (Tr. 1041-42.) This does not materially change the overall projections, however. Sierra's retail demand is nearly 1,200 megawatts (MW). (Tr. at 635.) Accordingly, if a 1.12% growth rate is applied (beginning in 1992) to the estimated California demand responsibility of 96 MW (8% of 1,200 MW) while the 2.3% systemwide annual growth rate is applied to the remainder, year 2011 projected systemwide demand in MW differs by less than 0.4%. This is not a material difference, and we conclude that Sierra's projections conform to the officially adopted forecast.

Need for the Project

Purposes of the Project

Sierra identified five purposes of the Project in its application, as amended: (1) to supply emergency protection for the Reno/Lake Tahoe customer loads; (2) to increase the reliable capacity of its existing system; (3) to connect Sierra to a new market for purchase of low-cost electricity; (4) to create capacity that could be used by other electric utilities and independent power producers; and (5) to provide future possible service to LMUD.

Split Jurisdiction Complicates Analysis

An awkward feature of the Project is that most (85% of the length of transmission line and both new substations) of the construction will occur in California, and most of the power delivered (approximately 92%) through the Project will be consumed outside California. It is awkward not because we are parochial but because neither this Commission nor our Nevada counterpart is in an ideal position to assess the Project as a whole.

We could more readily assess the need for the Project if Sierra operated entirely within California. Then there would be no question that the California public was our exclusive concern. (See In re Southern California Edison Co. & San Diego Gas & Electric Co. (1977) 82 CPUC 775, 788.) Because such a large proportion of Sierra's demand is in Nevada, the NPSC was probably little troubled by California questions in determining that the Project should be approved[11] and is "required to meet existing and future needs in Sierra's transmission system." (NPSC Order at 41.)

We can neither second guess the NPSC on whether the Project fulfills a transmission resource need on a systemwide

basis, of a utility they primarily regulate, nor can we abdicate our own duty to determine whether the Project (a portion of the costs of which fall on California ratepayers and much of the impact of which will be felt by California residents) meets a need of a utility we secondarily regulate. We must, rather, examine the Project from a California perspective to determine if this systemwide improvement is in the public interest.[12]

California Perspective on Project Need

Sierra generates no electricity in California, so its electricity imports meet all of its California demand. Assuming it could find an appropriate location, Sierra could build new generation in California. This is not one of the alternatives that we considered in the FEIR/S, and it would be odd if we were to require an investor-owned utility to construct new generation facilities at the very time we were encouraging other investor-owned utilities to rely more upon regional markets for power.

No power will reach California customers directly through the proposed Project, which does not include any new interconnections to serve California customers.[13] Sierra will continue to route deliveries through existing local transmission systems in the Reno area.[14] Sierra could meet all of its California demand through purchases over an existing intertie with Pacific Gas and Electric Company's (PG&E's) system. (Tr. at 1274.) Instead, it imports from or through Nevada to serve nearly 100% of that demand. (Ex. 9 at 3.) Apparently, taking energy over the PG&E intertie is more expensive than obtaining it from other sources. (Tr. at 1274.) Otherwise, Sierra would make more use of the PG&E intertie since it is a net importer of energy. (See "Existing Conditions in Sierra's System," infra p. 12). Furthermore, requiring Sierra to rely solely upon the PG&E intertie to serve the California portion of its service area would require, in effect, that the California and Nevada

transmission systems be controlled through a switch, because the capacity of the PG&E intertie is not sufficient to support Sierra's deficit in capacity on a systemwide basis. (Tr. at 1248.)

Purely from the standpoint of assessing the need for the Project, no compelling policy reason requires that the California portion of Sierra's service area be served independently from the rest of Sierra's system. California benefits ratably in systemwide improvements.[16]

Existing Conditions in Sierra's System

The balance sheet of transmission planning includes generation and imports as assets and consumption, generation reserves, and exports as liabilities.

Sierra has approximately 1,000 MW of generation capacity. (Tr. at 1249.) Sierra purchases geothermal power and biomass resource power from within its control area, and these amount to approximately 100 MW.

Sierra's net import capacity is 360 MW. (Ex. 3 at 4.)

Sierra has committed its import capacity as follows:

Customer	MW
Truckee Donner PUD	7
Mt. Wheeler Power	40
BPA/Wells Rural Electric	65
BPA/Harney Electric	30
Sierra's imports for retail sales[17]	257
Total	399

Deducting Sierra's retail peak load from assets leaves approximately 180 MW of capacity (representing its reserve capacity) which is less than Sierra's contractual commitments to other utilities of 242 MW. Accordingly, Sierra is liable to accommodate growth in its retail load or in the loads of its wholesale customers, and it cannot accommodate other u(Ex. 3 at 7.)

Sierra is able to import in excess of its net capacity because the loads of the wholesale customers listed above are subject to interruption without notice when Sierra's 345 kV Idaho intertie is open. (Tr. at 1251-52.)

Although power generated by others within Sierra's control area is exported over Sierra's facilities, Sierra has minimal export capacity. (Ex. 3 at 4.)

Sierra's peak load is approximately equal to the sum of its own generation plus purchases less reserve requirements. (Tr. at 1250.) This amounts to approximately 1,177 MW.

Project Purposes in Relation to Existing Conditions

Emergency Protection for Reno/Lake Tahoe Customer Loads

Sierra relies heavily on limited transmission capacity into the Reno area. (Ex. 11 at 18.) Because Sierra's California service territory is served by a transmission system that is tightly integrated, interruption of service to the Reno area will result in interruption of service to the Tahoe districts in California. (Tr. at 1270.) Sierra has experienced several blackouts in the Reno-Tahoe area. (Id. at 17.) At least one such blackout, which Sierra's witness described as "complete," occurred on February 16, 1990. (Id.) The cause of the blackout was a snow storm that caused simultaneous failures on Sierra's PG&E intertie and the existing twin 345 kV transmission lines from Tracy to Valmy.[18] (Id.)

Increasing Reliable Capacity

Deducting Sierra's retail peak load from assets leaves approximately 180 MW of capacity (representing its reserve capacity), which is less than Sierra's contractual commitments to other utilities of 242 MW. Accordingly, Sierra is unable to accommodate growth in its retail load or in the loads of its wholesale customers, and it cannot accommodate other utilities or

independent power producers seeking to wheel power through, or export power from, Sierra's territory. In addition, Sierra's purchases of short-term firm capacity and economy energy are limited by import capacity constraints. (Tr. at 1255.) Sierra projects that its total capacity requirements will exceed its firm resources beginning in the winter of 1996-97. (Ex. DLN-R5 to Ex. 11.)

The Project could relieve this difficulty. The Project would be capable of transmitting up to 300 MW to or from the Hilltop Substation. (Tr. at 1267.) However, Sierra does not plan to rely on purchases of power through the Project to obtain the increased capacity directly. (In Attachment 1 to its Application, Sierra stated that it would be using the Project "primarily for emergency support.") Instead, the Project would increase the transfer capacity of the existing intertie with the Idaho Power Company (Idaho intertie) from 360 MW to about 500 MW, or an increase of 140 MW. (Ex. 3 at 3.) This is due to permitting relaxation of an existing restriction that limits power flow on the Idaho intertie because of a lack of backup transmission paths to absorb any interrupted power flow when the Idaho intertie is open. (Id.) The Project would increase the total import capacity of Sierra's system by 300 MW. (Id. at 29.)

New Markets for Purchase of Low-Cost Electricity

The Project would connect to an existing Bonneville Power Administration (BPA) 230 kV transmission line near Alturas, California, not far from the Oregon border.[19] BPA is one of several power producers in the Northwest who are potential sources of low-cost electricity that could be delivered through the Project. (Tr. at 1266.)

Creation of Capacity for Others

Sierra has agreed to additional capacity to increase its contractual commitments to others, as follows:

Customer	MW Increase
Truckee Donner PUD	12
Wheeler Power	60
BPA/Wells Rural Electric	10
BPA/Harney Electric	5
Total	87

In addition, Sierra may enter into a new arrangement with Plumas/Sierra Rural Electric Association, which serves portions of Sierra County, for sales of energy. (Tr. at 1270.) Another new use made possible by the Project would be wheeling of power through Sierra's territory. PacifiCorp represents one utility that would be able to transmit power. (Tr. at 1271.) Small California utilities and utility districts are another possible group of wholesale customers for energy or wheeling. (Id.) Sierra has received requests from independent power producers located in Nevada for transmission capacity to export energy to California. (Tr. at 1255.)

Possible Future Service to LMUD

LMUD claims credit for originating the concept of the Project. In its October 4, 1994 amendment to its application, Sierra stated that one of the Project objectives was to create additional capacity to provide cost-effective, reliable electric utility services to other potential customers." It also noted that negotiations with LMUD "have progressed such that a conditional Letter of Understanding is likely to be executed in the near future [which] will provide in pertinent part that in the event all specified conditions are satisfied, the Project could provide electric services to the Lassen community no earlier than approximately 2004." Neither Sierra nor LMUD introduced the Letter of Understanding or any other agreement between them into evidence. The evidence showed that no direct

intertie exists between Sierra's system and that of LMUD. The evidence also showed that LMUD could benefit from such a tie and that for the purpose of constructing such a tie, Project alignments closer to LMUD's service area were preferable to alignments more distant. No evidence was presented on the possible costs of constructing such a tie and associated improvements or whether such costs could be financed by LMUD.

Conclusion Regarding Need for Project

Sierra has demonstrated that it needs additional transmission line capacity in its system by its showing that its existing transmission line resources into the Reno/Tahoe area are inadequate to provide reliable service.[20]

No weight can be given to the role of the Project in providing access to new markets for economy energy. If Sierra were proposing the Project solely for its capacity benefits, we would have no choice but to deny a CPCN. (PU Code § 1102(b); PU Code § 701.1; see also In re Pacific Gas and Electric Company (1991) 39 CPUC2d 615, 633; In re Pacific Gas and Electric Company (1991) 41 CPUC2d 175, 181.) Sierra has neither procured firm capacity contracts for energy to be delivered from the Northwest over the Project, nor has it produced any evidence to show that sufficient capacity will be available on the spot market at the unpredicted times when it will be needed. Although Sierra may benefit from being able, from time to time, to make economy purchases (and we express no opinion as to the soundness or lack of soundness of such a strategy), opportunistic energy purchases do not, by themselves, justify investment in a major transmission line.

We can also give no weight to the potential of the Project to increase Sierra's import capacity over its existing interties, for the same reason.

Sierra commented on the proposed decision and criticized the lack of weight given to other factors. Sierra argues that the testimony showed that its pending merger with WWPC will "take the place of firm power contracts from the Northwest." The requirements of PU Code Section 1102(b) are not so easily satisfied.

Sierra cites a table attached to an exhibit to Exhibit 1 that Sierra argues "shows the operating reserve benefits and firm resources [which] are acquired, or firmed up via the merger." That table, however, purports to present an analysis of a range of "potential savings" over an undiscounted 10-year period to both Sierra and WWPC. The statute requires "sufficient reliable information to enable the [C]ommission to determine that the proposed line, at the electric rates expected to prevail over the useful life of the line, will be cost effective." (PU Code § 1102(b).) The useful life of the Project is undeniably greater than 10 years, and Sierra presented no evidence on the forecast cost of electricity, as required by the statute, only on "potential savings." (Id.)

Sierra also argues that the mere fact it is connecting to a Bonneville Power Administration Line does not require the application of PU Code Section 1102(a), because the Project will allow Sierra will access WWPC's capacity and energy and to increase the transfer capacity of the existing intertie with Idaho Power Company. This would be a more compelling argument if the statute read "an electrical corporation proposing to construct an electrical transmission line to the Bonneville Power Administration's service area" rather than "to the northwestern United States." The language of the statute takes in an indefinite, but potentially broad area, and without more evidence of legislative history, we are unable to say that the term "northwestern United States" excludes Washington and Idaho.

Green Gulch, in its comments on the proposed decision, argues that the Commission cannot isolate Sierra's objective of providing emergency voltage support. Since Sierra has failed to provide the showing that PU Code Section 1102(a) requires, Green Gulch argues, the Commission has no discretion and must deny their application.

We think that Green Gulch's argument ignores the problem that the statute intends to address, which is the long-term stability of prices for imported energy. Although Sierra advances the potential for economy energy as one of the purposes of the Project, it is not the sole purpose, and Sierra has made a sufficient showing that the Project can be justified on the basis of other objectives, without taking into account purported benefits from energy imports. Since we are giving no weight to the role of the Project in permitting energy imports for consumption, it would serve no useful purpose to determine forecast costs, feasibility of negotiating long-term contracts or the possibility of direct purchases from Canada. We give the statute the sensible construction that it applies in circumstances in which the cost-effectiveness of a proposed transmission line depends on the cost of energy imports.

Nor can we give much, if any, weight to the role of the Project in providing capacity for the benefit of others, as described above beginning on page 14 under the heading "Creation of Capacity for Others." Sierra argues, in its comments on the proposed decision, that we should give more weight to the role of the Project in meeting the needs of Sierra's retail and wholesale customers in California and Nevada. Sierra argues that the record shows Truckee Donner is presently a full requirements customer of Sierra and that the Project would permit that system to "become a firm partial requirements customer, if it so desires." This argument seems to suggest that the Project is not necessary to meet Sierra's duty to serve Truckee Donner, rather

than the opposite. As for the Nevada customers, Sierra suggests that (a) comity, the reciprocal regard for our sister jurisdiction, demands recognition of the role of the Project in Nevada as an element of the public interest we determine, and (b) since California benefits ratably in system-wide improvements, Sierra should be credited for the role of the Project in expanding service in Nevada.

While we recognize NPSC's determination of need with respect to Nevada aspects as valid, the duties imposed on Sierra in Nevada are not directly relevant to the duties of Sierra with which we must be concerned, which are those necessary to meet its California obligations. Those obligations are very much a minority interest in Sierra's overall position, because its load is so heavily concentrated in Nevada, compared to California. It is for those reasons that we assign "little" weight to the role of the Project in Nevada.

The other parties fall into two categories: those for which arrangements have been made, and those for which no arrangements have yet been made.

Included in the first category is a single California entity, the Truckee Donner Public Utilities District (Truckee Donner), which would become a full requirements customer of Sierra if the Project is constructed. While Truckee Donner might benefit by taking all of its energy needs from Sierra, almost nothing in the record provides any evidence concerning Truckee Donner's system and prospects. Nor has Sierra shown that it is under a duty to meet Truckee Donner's full requirements. As for the non-California entities, those have no bearing on whether the Project is in the California public interest. (See In re Southern California Edison Company and San Diego Gas & Electric Co. (1977) 82 CPUC 775, 788.) It is no part of Sierra's

California duty to serve that the Project may assist those wholesale customers elsewhere.

Included in the second category are LMUD, Plumas-Sierra Rural Electric Association, PacifiCorp, California municipal utility districts, independent power producers, and other possible future customers of Sierra who have made no firm offer, so far as the record shows, to obtain services that depend on the Project.

Basically, the Project must stand or fall based on its ability to provide emergency voltage support to Sierra's system.

Description of the Project

Overview

The proposed route of the Project extends approximately 164 miles through portions of Modoc, Lassen, and Sierra Counties in California. (See Fig. 2.) The final 26 miles are in Nevada. Sierra also proposes to construct a new 230/345 kV substation near Alturas, California (Hilltop Substation) and a new 345 kV switching substation in California near the Nevada state line at Border Town (Border Town Substation). Sierra plans to connect the Project with new substation additions to be constructed at its North Valley Road Substation in Reno.

Transmission Structures

Sierra proposes to use steel structures to support the transmission line. (Ex. 2 at 4.) Three types of structures would be used, depending on conditions. (Id.) Generally, along the length of the line, structures would be tubular, weathering-type structural steel in an H-frame (twin poles connected by a cross beam) configuration (tangent structures). (Id.; see Fig. 3.) These would stand 70 to 130 feet above the surface, depending on a variety of factors, such as terrain. (Id.) Where the line changes direction, a three-pole tubular, weathering-type

Figure 2
Location Map
(from FEIR/S)

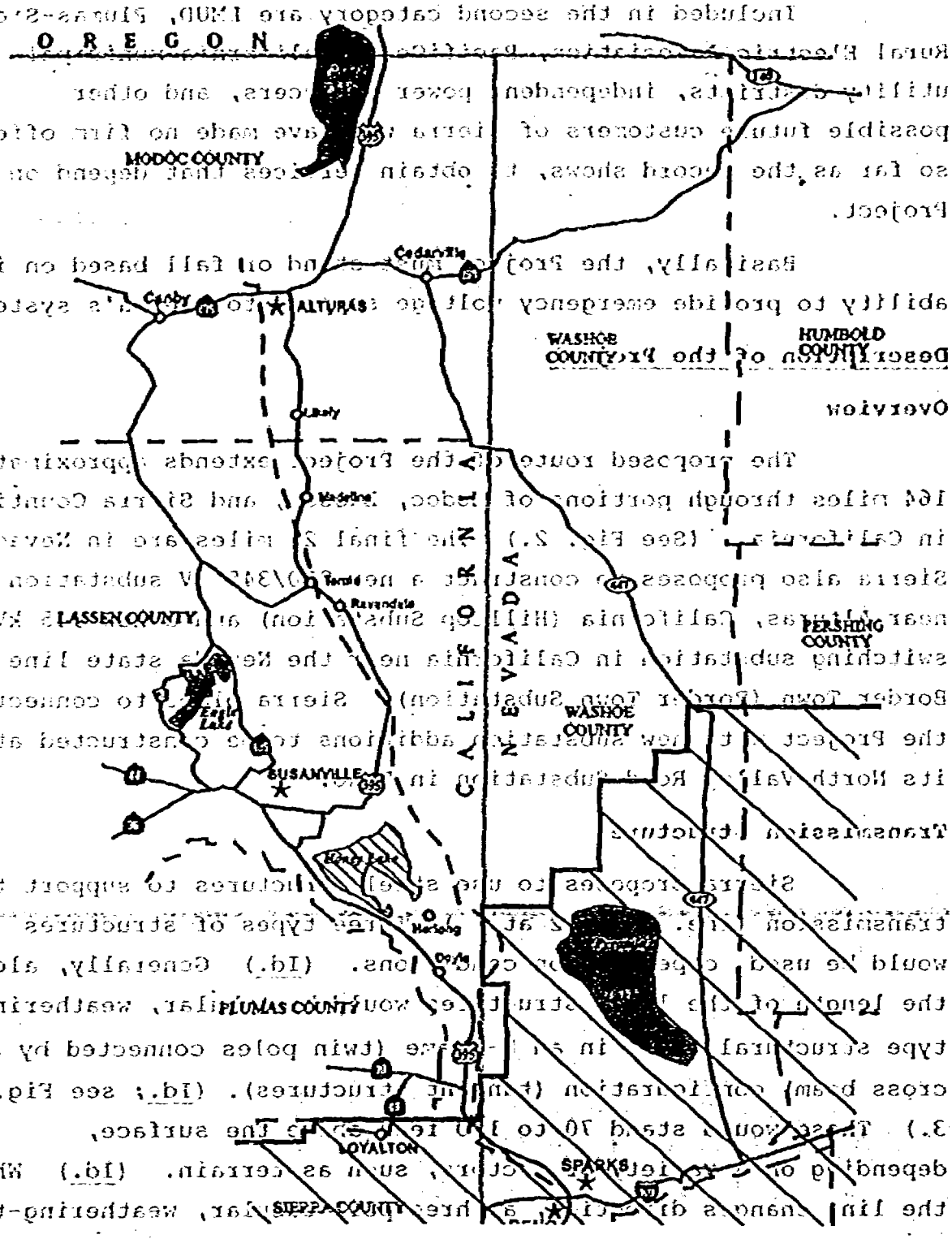
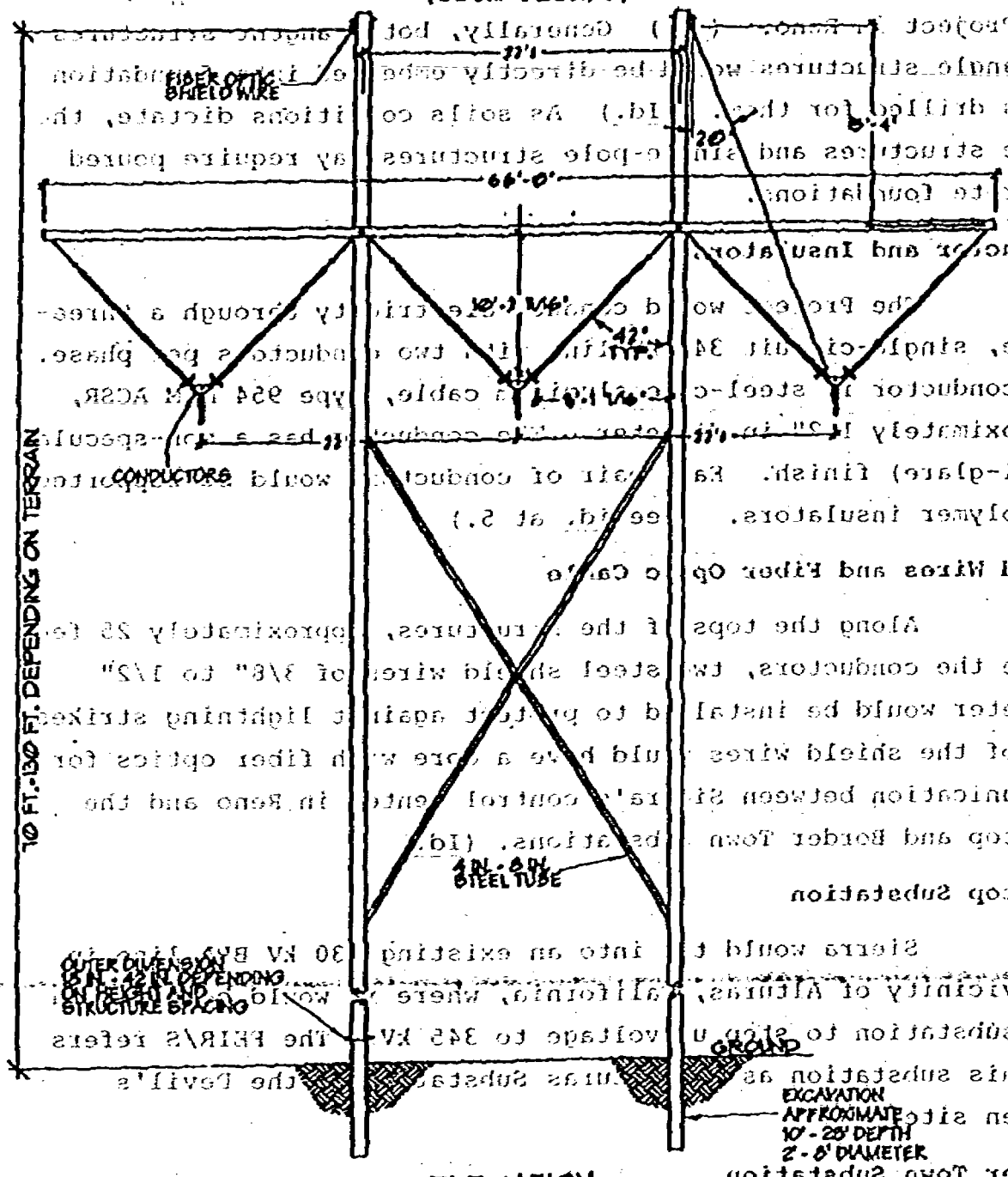
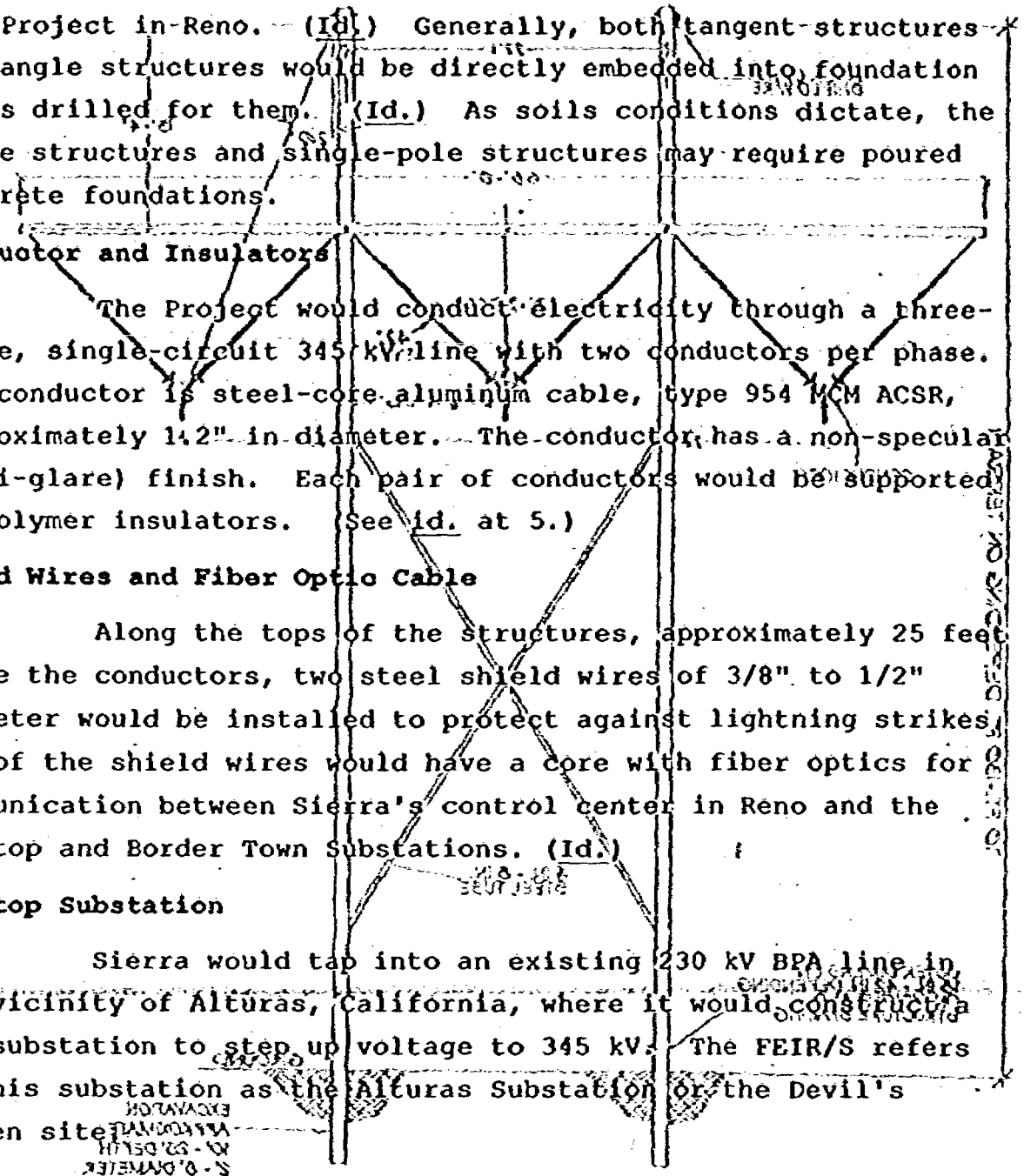


Figure 3
Typical Transmission Line Structure
(from FEIR/S)



ELEVATION
NO SCALE

steel structure with guy wires would be used (angle structures). (Id.) Single-pole structures would be used near the terminus of the Project in Reno. (Id.) Generally, both tangent structures and angle structures would be directly embedded into foundation holes drilled for them. (Id.) As soils conditions dictate, the angle structures and single-pole structures may require poured concrete foundations.



Conductor and Insulators

The Project would conduct electricity through a three-phase, single-circuit 345 kV line with two conductors per phase. The conductor is steel-core aluminum cable, type 954 MCM ACSR, approximately 1.42" in diameter. The conductor has a non-specular (anti-glare) finish. Each pair of conductors would be supported by polymer insulators. (See id. at 5.)

Guard Wires and Fiber Optic Cable

Along the tops of the structures, approximately 25 feet above the conductors, two steel shield wires of 3/8" to 1/2" diameter would be installed to protect against lightning strikes. One of the shield wires would have a core with fiber optics for communication between Sierra's control center in Reno and the Hilltop and Border Town Substations. (Id.)

Hilltop Substation

Sierra would tap into an existing 230 kV BPA line in the vicinity of Alturas, California, where it would construct a new substation to step up voltage to 345 kV. The FEIR/S refers to this substation as the Alturas Substation or the Devil's Garden site.

Border Town Substation

Sierra proposes to construct an additional substation in California near Border Town, Nevada. The purpose of this substation is to control power flow over the transmission line

through use of a phase angle regulating transformer (phase shifter).

North Valley Road Substation Improvements

At its existing North Valley Road Substation in Reno, Sierra would add additional 345 kV works to permit the proposed transmission line to interconnect with its local transmission network.

Construction Plans

Sierra plans to begin construction of the Project as soon as a CPCN is granted and other required approvals are obtained. (Ex. 2 at 6.) Construction would begin with site preparation at the Border Town Substation and the Hilltop Substation. (Id.) In the spring, construction would continue with structural and electrical work at the substations and erection of transmission line structures. (Id.) Sierra hopes to complete construction by the end of 1996 so that the Project will be available during Sierra's peak winter demand. (Id.) It is not known how the delay in the start of construction beyond Sierra's original start date will affect Sierra's ability timely to complete construction.

Estimated Costs

Sierra would construct the Project with a combination of its own personnel and contractors. (See Ex. 4 at 3.) The estimated capital cost of the Project, including permitting, right-of-way acquisition, design, construction, project administration, and environmental mitigation is $119,730,000. (Ex. 4 at 2 and Ex. CM-1 to Ex. 4.) The following table summarizes Sierra's estimate of costs:

Company labor	$ 453,000
Direct transportation	15,200
Environmental permits	2,213,500
Additional permits	190,500
Agency reimbursement	2,091,000
Right-of-way acquisition	5,933,300
Land use permits	210,000
Environmental mitigation	4,730,000
Legal consultant	235,700
Contingencies	21,500
Subsistence/travel/miscellaneous	75,000
Permitting and right-of-way subtotal	**$ 16,168,700**
Company labor	$ 869,200
Direct transportation	133,650
Surveying/mapping	1,610,000
Design services	150,000
Materials	29,080,164
Construction contract labor	11,518,750
Contingencies	1,151,875
Subsistence/travel/miscellaneous	250,000
Transmission line design/construction subtotal	**$ 44,763,639**
Company labor	$ 1,585,226
Direct transportation	598,936
Materials/vouchers	21,189,088
BPA system improvements	2,000,000
Contingencies	700,000
Subsistence/travel/miscellaneous	543,805
Substation design and construction subtotal	**$ 26,617,055**

Company labor	$ 84,640
Direct transportation	7,290
OPGW	2,556,187
OPGW hardware	410,268
Fiber optic repeater equipment	401,871
Transfer trip equipment	150,956
SCADA equipment	37,450
Two-way radio equipment	331,700
Stock materials	2,000
Contract labor	88,000
OPGW installation	902,496
Contractor mobilization	10,000
Miscellaneous vouchers	150,000
Telecommunications subtotal	$ 5,132,858
Overhead	$ 6,233,660
Escalation	4,906,772
Allowance for funds used during construction	5,907,316
Add-ons subtotal	$ 27,047,748
Total project cost estimate	$119,730,000

Financial Impacts of the Project

Ratepayers

Based on 8% California demand responsibility, credit for wheeling revenues expected, and a levelized fixed charge rate of 12.08363%, Sierra estimated in its application that the cost of the Project allocable to California ratepayers would be approximately $810,000 per year, which represents approximately 1.5% of the total California revenue to Sierra. Sierra has not determined when, if ever, it would seek to have such cost included in rates. Sierra currently estimates that the Project will have no effect on rates. (Tr. at 1031.) (Id.)

Shareholders

Sierra intends to finance the Project as part of its overall financing plan for the company. (Ex. 1 at 5.) Sierra plans to use traditional financing during the time that the Project would be constructed, a mix of long-term debt and equity financing in roughly equal proportion, and some preferred stock. (Tr. at 1034.) Although the Project, in combination with other planned construction over the next few years, will cause Sierra's return on equity to drop in 1998, the decline is due to an assumed 12-month regulatory lag between the time the capital improvements, such as the Project, are placed in service and the date on which rates are adjusted to reflect the addition to rate base. (See Ex. 1 at 6.)

Sierra proposed, in connection with its Merger, to freeze the nonfuel component of its California electric rates until 2000. (Tr. at 1043.) This will lengthen the regulatory lag beyond the assumed 12-month period. However, because Sierra's California revenues following the Merger would be an even smaller proportion than at present, and because the revenue of Sierra after the Merger would be more than twice as great as at present, the effect of the Project on return on equity in combination with the Merger does not appear to be alarming. (See Tr. at 1047-48.)

Leaving aside the effect of the Merger, Sierra's balance sheet would reflect the Project by an increase in assets of approximately $120 million with a corresponding increase in liabilities of approximately $60 million in long-term debt and $60 million in liabilities. (Tr. at 1045.) The Project would enhance cash flow by approximately $5 million per year based, presumably, on Sierra's plans to add it to rate base in other jurisdictions. (Id.) It does not appear that the Project would have an adverse effect on shareholders.

Significant Environmental Effects of the Project

Beneficial Effects

The FEIR/S identifies temporary employment of local workers, a temporary increase in local demand for consumable materials and increased motel and restaurant business, and increased sales and property tax revenues to county and state government as beneficial effects of the Project.

Adverse Effects that Can be Mitigated or Avoided

The FEIR/S identifies several significant environmental effects of the Project that can be mitigated or avoided to an extent that they are not significant. The FEIR/S describes a Mitigation, Monitoring, Compliance and Reporting Plan process that is intended to assure that mitigation measures are implemented effectively.[21] The Mitigation, Monitoring, Compliance and Reporting Plan (Plan) set out in Appendix B describes how the following adverse effects may be mitigated or avoided. The Plan is based upon the "Proposed Project" as described in the FEIR/S, as modified by the selection of Alternative Segment Z and an adjustment to the alignment of the Project in the vicinity of the Alturas Substation to minimize effects of crossing Rock Creek, each as described in the FEIR/S.

Air Quality

Construction of the Project would result in raising dust (particulate emissions).

Biological Resources

Construction of the Project would result in the disturbance and temporary or permanent loss of plant communities and special status plants, animals and habitat (including special status bats, pygmy rabbits, raptor nest sites, and sage grouse leks). Portions of the Project cross mule deer winter, holding, and migration habitat and pronghorn winter, migration, and

kidding habitat. Portions of the Project cross sage grouse brood habitat. Portions of the Project cross pygmy rabbit habitat. Portions of the Project cross big game habitat, and overland travel may disturb the habitat. Construction activities, the transmission line, and substations will result in killing some animals. Increased human presence may indirectly affect wildlife along portions of the Project.

Cultural Resources

Construction of portions of the Project may result in disturbing or removing surface or subsurface significant or unevaluated cultural resource sites and disturbance to context, setting, feeling, or association of cultural resource sites. Unauthorized collection or vandalism of significant or unevaluated cultural resource sites may occur in portions of the Project.

Energy and Utilities

Construction of the Project could conflict with existing utility lines. Construction of the Project could result in restricted access for utility emergency response units. Construction of the Project in conjunction with other projects could result in cumulative effects.

Geology, Soils, and Paleontology

Fault displacement could collapse transmission line structures along portions of the Project. Strong ground shaking (earthquakes) could collapse the structures or substations. Portions of the Project traverse areas subject to landslides or slope instability. Portions of the Project would result in the loss or reduced accessibility to mineral resources. Construction of the Project will require grading, resulting in ground disturbance/erosion. Portions of the Project traverse areas with corrosive soils that may affect steel or concrete. Portions of the Project traverse areas with expansive soils. Construction of

portions of the Project may result in the loss, destruction or alteration of paleontological resources (fossils).

Hydrology

Construction of portions of the Project may result in scour and erosion of stream beds. Construction of portions of the Project may be subject to flooding. Construction of the Project may result in sediment loading of surface waters. Construction of the Project may result in accidental contamination of surface waters and ground water. Construction of portions of the Project may affect ground water flow.

Land Use, Recreation, and Educational, Religious or Scientific Uses

Construction of the project will disturb residential, recreational, and agricultural uses as a result of increased human intrusions into relatively undeveloped areas through constructing or upgrading roads, blading rough areas, and installing the transmission line. Construction of portions of the Project may result in the temporary loss of use of grazing and disturbance to grazing animals. Grazing animals may be lost during construction through open fences or gates temporarily removed during construction. Construction of portions of the Project may result in temporary loss cropland use. A portion of the Project would cross a state wildlife area, which would be degraded by the transmission line. Other projects in Modoc and Lassen Counties may have cumulative effects with the Project. Construction of the Project could disturb sensitive noise receptors.

Public Safety and Health

Operation of the Project could induce currents and voltage on nearby conducting objects that are not properly grounded. Construction and operation of the Project could create potential hazards such as shock, fuel ignition, and fire.

Hazardous substances, could be released to the environment as a result of the Project.

Socioeconomics and Public Services

Isolated portions of the Project could adversely affect property values. Construction of the Project could cause fires, thereby placing additional demand on public services. The construction of portions of the Project could result in minor disruption of grazing and crop activity.

Transportation and Traffic

Construction of the Project may create increased accident risk for motorists, pedestrians, and bicyclists during construction. Construction of the Project may result in roadway blockages and traffic congestion. Construction of the Project may result in blocked access to adjacent properties. Construction of the Project may obstruct pedestrian or bicycle routes or reduce their safety. Construction of the Project may restrict access for emergency response units. Portions of the Project may interfere with navigable airspace or decrease air safety. Construction of the Project in conjunction with other possible projects could create cumulative impacts.

Visual Resources

The Hilltop Substation and its transmission line structures will be made more visible by clearing juniper adjacent to Crowder Flat Road for access road construction. Nighttime illumination of the Hilltop Substation and the Border Town Substation may cause light scatter and glare. A portion of the Project would encroach into the Skedaddle Wilderness Study Area.

Adverse Effects that Cannot be Mitigated or Avoided

The FEIR/S identifies several significant environmental effects of the Project that cannot be mitigated or avoided, as follows:

Disturbance to context, setting, feeling, or association of certain cultural resource sites.

2. Degradation of quality of residential land uses resulting from permanent change in character of residential environment.

3. Degradation of quality of certain recreational land uses resulting from permanent change in character of recreational environment.

4. Significant degradation of scenic quality in certain locations.

5. Possible disruption of transportation by accident or structural failure of Project resulting in blockages of highways and/or rail facilities.

Statement of Overriding Considerations

CEQA, PU Code Section 1102(a), and the Public Interest

As required by CEQA, we cannot approve the Project unless we find that the Project has been changed to mitigate or avoid each significant effect on the environment or that specific considerations make the mitigation measures or alternatives identified in the FEIR/S infeasible and specific overriding economic, legal, social, technological, or other benefits of the Project outweigh the significant effects on the environment. (Pub. Res. Code § 21081.) In addition, we have the independent but overlapping obligation to consider community values, recreational and park areas, historical and aesthetic values, and the influence of the Project on the environment. (PU Code § 1002(a).) In deliberating upon such findings and considerations, we engage in our usual quest to determine whether a particular project proposal is in the public interest, but do so in a way that is informed by our specific statutory duties in the Resource Code and PU Code. That is fundamentally a process of determining

whether the benefits of the Project outweigh, on the whole, its detriments.

Sources Considered

We rely heavily on the FEIR/S to identify environmental issues raised by the Project.[22] Our CACD, in cooperation with the Bureau of Land Management (BLM), retained and supervised independent experts to evaluate the Project in relation to its proposed location. As part of the process of preparing the FEIR/S, staff and experts sought the views of a wide variety of public agencies and solicited comments from the public. The FEIR/S contains an extensive response to comments received from other agencies and the public on the environmental effects of the Project.

In addition, the assigned ALJ conducted four evenings of public participation hearings on the DEIR/S at locations along the route of the Project (Alturas, Susanville, Loyalton, and Reno). The separate evidentiary hearings (also conducted in Susanville) contain extensive testimony concerning the effects of the Project. Also, the Commission has received correspondence concerning the Project from a variety of persons. Finally, the assigned ALJ conducted four days of evidentiary hearings on the Application.

We feel confident that this process has resulted in identifying to us all of the important issues.

Community Values

Meaning of "Community Values"

The Legislature did not define what it meant by the term "community values" in PU Code Section 1102(a). At various times we have treated it as synonymous with "sentiment" or with the comments of local governmental agencies. On very precise Code and PU Code. That is fundamentally a process of determining

definition can be given beyond a due regard for the views of those most directly affected by the Project.[23]

Views of Elected Officials

Two members of Congress represented the California districts affected by the Project wrote the assigned Commissioner in support of the Project. Representatives Wally Herger and John Doolittle cite tax benefits to local jurisdictions along the proposed alignment, access to energy, and possible future access to the Project's fiber optic line for telecommunications service.

Views of County Governments

The Board of Supervisors of Modoc County, California "feels that the [P]roject has little benefit to the county" but goes on to comment that Sierra's preferred alignment should be moved north by 300 feet along its first several thousand feet, and that the transmission line be buried for a distance of several thousand feet beyond that. (Resolution 95-35.) Alternatively, if another alignment identified in the FEIR/S is required, that segment, in the vicinity of Alturas, should be buried. The reason given is "to reduce the visual skylining effects." (See infra at 40.) Finally, the Modoc County supervisors recommend that Sierra be required to install fiber-optics telephone service to the Citizen Utilities central office in Alturas as a mitigation measure.[24]

The Board of Supervisors of Lassen County "supports the location of the 345 kV transmission line, subject to reasonable mitigation of land use conflicts and environmental impacts, generally along the State Highway 395 corridor and the east side of Honey Lake Valley." (Resolution 94-102.) The Lassen supervisors oppose moving the alignment of the transmission line to the east because it would make future connection by utilities serving Lassen County infeasible,

The Board of Supervisors of Sierra County "does not object to the overall (Project) goals of providing more reliable and economically beneficial sources of power." (Resolution 95-081.) However, the Sierra County supervisors do oppose "that portion of the proposed transmission route through Long Valley (west of the Peterson Range in the Highway 395 corridor) [and] the siting of the proposed Border Town transmission substation." (Id.; see also Resolution 95-128.) In its brief, Sierra County argued that the location of the Project in Sierra County is inconsistent with its general plan and zoning ordinances, which limits development to agricultural uses, wildlife management uses, large lot residential uses and scenery. Sierra County presented no evidence as to the content of its general plan or zoning ordinances, however, and the Sierra County supervisors did not mention the general plan or zoning ordinances in their resolutions opposing the project. (Resolution 96-026; Resolution 95-081; Resolution 95-128.)

Neither Lassen County nor Modoc County appeared as a party; their recorded views were brought to our attention by other parties.

Views of Cities

None of the cities incorporated in Modoc, Lassen, or Sierra Counties made an appearance in this proceeding or commented on the DEIR/S.

Views of Private Individuals and Groups

The other source of community values are private individuals and groups. Some of these participated in this proceeding, and others spoke at the public participation hearings. They expressed a variety of viewpoints that differ from the positions taken by their elected officials. Those viewpoints ranged from the purely private (such as Irwin Allara's belief that the right-of-way for the Project would further limit

access to his property), to views that express beliefs that may be widely shared in their communities. Although we cannot abdicate our responsibilities by acting only in the face of unanimous public opinion, we do have an obligation to listen to expressions of community value before taking our decision. Accordingly, it is appropriate to review what private persons have been telling us about the Project and its effects on community values.

One strong theme in the public participation hearings is that the Project may affect the way of life of residents. As Lorraine Flournoy told us in Alturas: "We don't live in the city. We live here because we can see the mountains. We can see thundershowers without looking at power lines. We can see the stars at night. We don't want to look from here to Reno at this horrible, ugly line." (Tr. at 18.) Those of us who have never lived in rural America, out of the commuting range of cities, should not underestimate how deeply people can feel about living where construction is not a prominent part of the landscape. (See infra at 39.)

Compounding this concern is the thought that the first transmission line will beget others, either in the same right-of-way or nearby. (See infra at 47.) In the words of Patricia Cantrell: "(b)ut if we let one come in, as I said to you earlier ... we're going to have God knows how many." (Tr. at 56.)

A third theme is self-determination. Sally Clark remarked: "We are not insignificant. As you can see, we are very educated people. We are hard-working people, and we have rights, and we are getting kind of tired of outsiders coming into Modoc County and telling use what we have to do." (Tr. at 53.)

A final theme is fear of the unknown. Lorraine Flournoy was also concerned about health risks to her children: "(A)ll the private party studies, scientific studies say that

(electric and magnetic fields are) not safe, or they are not sure." (Tr. at 16.) (See infra at 48.)

Views Concerning Effects in Nevada

As part of the co-operative effort with the BLM (the lead federal agency for the preparation of the environmental impact statement required pursuant to the National Environmental Policy Act), the assigned ALJ conducted a public participation hearing in Reno, Nevada. Many of the representatives and individuals who spoke there had concerns relating to the effects of the Project in various parts of the Reno, Nevada area. Some of those concerns were similar to concerns expressed at the California hearings, and others were unique to Nevada. While recognizing the equal dignity of Nevada residents and their concerns, we are not the proper body to consider whether the effects of the Project in Nevada are such that the Project should be approved, modified, or denied. That is the responsibility of the cooperating federal agencies and of the NPSC. (See regulations prescribed by the Secretary of Resources to be followed by all state and local agencies in California in the implementation of CEQA (CEQA Guidelines) § 15277.)

The Significant Effect on Cultural Resources

The Project has effects on a variety of prehistoric and historic sites. For the most part, those effects can be mitigated by implementing a proper monitoring and treatment plan. In three portions of the Project, however, mitigation will not avoid disturbing the context, setting, feeling, or association of the affected sites. It is impossible to imagine one's self transported to the early years of this century when viewing an historic site with a 345 kV transmission line in the scene.[25]

In the vicinity of Ravendale, in Lassen County, two historic sites potentially eligible for inclusion on the National Register of Historic Places would experience the intrusion of the

Project. One is described in the FEIR/S as the "remains of a ranch complex, consisting of remnants of a well, pumphouse, and well-preserved trough." (FEIR/S at C.4-22.) The other is the historic townsite of Termo, where the Project would cross historic trash scatters and a collapsed telephone line. (Id.)

Various sections of U.S. Highway 395, including sections still in use and derelict, abandoned sections, are potentially eligible for inclusion on the National Register of Historic Places and would be similarly affected. (Id. at C.4-24.)

In the vicinity of Herlong, in Lassen County, lies another historic site potentially eligible for inclusion on the National Register of Historic Places which would be similarly affected. This site is the location of a settler's grave. (Id.)

Green Gulch argued in its comments on the proposed decision that historic sites potentially eligible for inclusion on the National Register of Historic Places exist within Long Valley. Green Gulch cites the testimony of Janet Loverin, who presented testimony concerning the characteristics of the upper end of Long Valley as a traditional Western ranching community. (Ex. 13, at 3.) That testimony, however, only establishes that "'rural historic landscapes' have been acknowledged as a significant aspect of preservation." (Id.) It does not establish that the upper end of Long Valley is either a rural historic landscape or that as a rural historic landscape it is potentially eligible for inclusion on the National Register of Historic Places.

Green Gulch also cites a letter included in the comments section of the FEIR/S from an architectural historian who stated that certain buildings and other "resources are eligible under Criterion A(x) and C." (FEIR/S at G-400.) Although the FEIR/S is part of the record of this matter, it is not possible to give the comments evidentiary weight. The letter is

an attachment to the comments of Long Valley on the FEIR/S. (FEIR/S at G-375.) The letter is dated April 3, 1995 and Long Valley could have offered it in evidence at the hearings but did not do so. No foundation exists for the credentials of this source as an expert on historic resources. Other parties were not permitted to cross examine this source. Long Valley did not offer the letter in commenting on the DEIR/S to show that sites potentially eligible for inclusion on the National Register of Historic Places exist in the upper end of Long Valley, but to support its statement that it had "3 obvious historic buildings on the site." (FEIR/S at G-375.) However, our experts, in responding to the comment for the FEIR/S concluded that the buildings were "not a historic property" as defined in the implementing regulations for the National Register of Historic Places. (FEIR/S at H-990.) We conclude that no evidence on the record establishes the potential eligibility of the upper end of Long Valley for inclusion on the National Register of Historic Places.

The Significant Effect on What People See

The FEIR/S identifies three other significant effects that also relate to the fact that the Project will be visible.[26] This is the same general effect from the separate perspectives of residents in their homes, hikers, hunters, and other recreational users in the outdoors, and viewers at particular locations on roads and highways. It should go without saying that the same individual could be affected in more than one capacity.

The Significant Effect on Residents

The FEIR/S identified residences within the nominal right-of-way[27] (within 330 feet on either side of the centerline of the Project alignment) and nearby (within 2,000 feet of the centerline). A Lassen County residence in the Secret Valley area lies within 150 feet from the centerline. In the Alturas

area, 13 residences (1,000-2,000 feet) are located nearby the Project. Near Madeline in Lassen County, the Project is within 1,000 feet of one residence and within 1,250 feet of another residence. Near Termo in Lassen County, the Project is within 600 feet of a residence. In the Secret Valley Area, the Project is within 400-1,000 of approximately five residences. Near Wendel, the Project is within 500-1,500 feet of four residences. Near Seven Lakes Mountain, the Project is located approximately 1,500 from a residence. Near Hallelujah Junction, the Project is located 800 feet from a residence. At least 28 residences in California, therefore, are located within 2,000 feet of the Project and, presumably, people living there will be able to see the Project either directly or on their way to and from home.

The Significant Effect on Recreationists

The public and private lands that the Project crosses have many recreational uses, including hiking, wood cutting, hunting, fishing, off-road vehicle travel, scenic enjoyment, and communing with history. Placing the Project has a significant effect on the quality of the recreational experience in three locations: the Tule Patch Spring Rest Area on Highway 395; the Infernal Caverns Battleground Memorial Monument; and the Lassen Red Rocks Scenic Area.

The Significant Effect on Travelers

The FEIR/S identifies several segments of the Project that have significant effects on the visual environment of travelers.

Near Alturas, the Project would be visible in the middle distance from Crowder Flat Road. As the Project crosses Daggert Canyon and traverses a plateau, it would be "skylined" on the horizon when viewed from Crowder Flat Road. It would again be skylined from Crowder Flat Road as it descends the plateau

toward Highway 299. The Project would also cross Highway 299, where it would be visible overhead and to either side.[28]

Near the Dry Creek Fire Station in Lassen County, the Project would again be prominent against the skyline where it would cross a valley.

Where the Project would parallel Highway 395 in Lassen County, it would be a dominant feature from foreground to the distant background. In the vicinity of the Tule Patch Spring Rest Stop on Highway 395, the Project would be a dominant foreground feature.

Near Wendel Road, where the Project would ascend the southern ridge of the Skedaddle Mountains it would contrast relatively strongly with the existing rugged ridges thus diminishing the rather dramatic scenic quality of the view. Further along Wendel Road, the Project would cut across the view of the Wendel Cliffs.

In the narrow gap between Seven Lakes Mountain and the Diamond Mountains, the Project would parallel Highway 395 and appear as a prominent or dominant feature, impairing views to the Peterson Mountains to the south, the narrow canyon, and Long Valley Creek and its wetland vegetation.

In the vicinity of Lassen Red Rocks, the Project would be visible as a dominant and prominent feature in foreground/middleground views from Highway 395 and Red Rock Road, interfering with the views of red rock formations in the background.

In Sierra County, the Project, including the Border Town Substation, would obscure views of Long Valley and the hills beyond. Sierra County and Green Gulch argue that the Project would destroy the pastoral character of upper Long Valley, which is much the same objection. In light of the conclusion in the FEIR/S, we need not determine the controversy between the parties

whether Long Valley qualifies as "pristine" in light of the low rise providing some separation from nearby development at Border Town.

The Contingent Significant Effect on Transportation

The FEIR/S concludes that "the occurrence of a major accident could result in a significant unmitigatable impact if arterial roadways and/or railroad tracks were to be blocked for an extended period of time." (FEIR/S at C.12-22.)

Infeasibility of Mitigating these Significant Effects

Each of the foregoing significant environmental effects (discussed above beginning on page 39) could be substantially mitigated by constructing an underground conduit for the transmission line. Although high-voltage transmission lines are sometimes constructed underground for short distances in very constrained circumstances, it is not feasible to do so for the Project. We know of no comparable transmission line in the United States that has been put underground over a distance of more than a fraction of the Project alignment.[22] The FEIR/S concluded that although underground construction would mitigate or avoid some significant environmental effects of the Project, it would potentially create greater adverse environmental impacts due to the necessity for excavation along most of the right-of-way and the potential for release of fluids used for cooling.

Possibility of Avoiding these Significant Effects

All of the significant effects can be avoided by not constructing the Project at all in California. If we conclude that the Project as proposed is not in the public interest, we will not grant a CPCN. Accordingly, the arguments of parties opposing the Project that it should not be located in California (or at least should avoid Sierra County) because it might be possible to construct it entirely in Nevada (or at least on the

east side of the Peterson Mountains, thus avoiding Sierra County) will be rejected. We cannot conclude that any party has shown that constructing a hypothetical substitute for the Project in Nevada is in the public interest.[30] We will not, therefore, grant a CPCN that is conditioned upon constructing the Project entirely in another state instead of in California because there is simply insufficient information about any such hypothetical substitute. The Project must stand or fall as Sierra has proposed it, subject to the alternative alignments that we evaluated in the FEIR/S to address specific issues in California and the limited question as to whether the Border Town Substation is necessary in light of the possibility of locating its equipment at an existing substation.

The adverse effect of the Project on views of Lassen Red Rocks can be avoided by selecting an alternative alignment preferred by BLM.[32] However, that alignment would increase several significant environmental effects on biological resources, cultural resources, energy and utilities, geology, soils, and paleontology, and transportation and traffic compared to the proposed alignment of the Project, and would still result in a significant environmental effect on other views that cannot be avoided. (FEIR/S at D-5, G.13-61.) Sierra commented on the proposed decision of the ALJ that the Commission should adopt the alternative alignment (Segments S and U) preferred by BLM, with additional mitigation measures, in preference to the route it proposed in its application (Segment T).

Because "BLM has indicated an unwillingness to grant an easement to Sierra for this portion," Sierra proposes that the Commission reject Sierra's preferred alignment in favor of the alignment that the FEIR/S identifies as the environmentally preferred alignment for CEQA purposes. Sierra offers to provide 20 acres of "offsite mitigation to reduce the environmental impacts associated with" Segments S and U, in addition to the 4

acres that Sierra states are required by the FEIR/S. Sierra's proposal, however, does not respond to the issue, which is balancing of several environmental factors.

The competing alignments both affect scenic resources. They have different effects on some other aspects of the environment. Alternative Segments S and U have less impact on the views of Lassen Red Rock, less effect on grazing areas, and would result in fewer disturbances to existing undeveloped residential, recreational, and agricultural uses because Segments S and U would cross land that has more existing access routes. (FEIR/S, at D-23.) In other respects, Segment T is superior because it is shorter, crosses fewer different varieties of habitat, avoids crossings of Long Valley Creek, avoids historic and archaeological sites that Segment S would effect, avoids crossing a potentially active fault, requires less grading than Segment S, poses less potential for disruption of existing utility services, is further from anticipated future projects, thereby reducing the potential for cumulative construction impacts, crosses roads and railroads in fewer locations, and is further from Highway 395, thereby minimizing traffic disruption. (Id.) The acquisition of an additional 20 acres for off-site mitigation cannot avoid all of these additional effects of Segments S and U.

It seems to us that incurring these effects of Segments S and U is too high a price to pay for protecting the views of Lassen Red Rocks simply because BLM has purportedly "indicated an unwillingness to grant an easement." Accordingly, we will not condition our approval of Sierra's application on selection of Segments S and U over Sierra's proposed alignment. Sierra is free to move to amend its application for good cause shown in the event that BLM denies Sierra the easement required to construct Segment T and such denial has become final and unappealable.

Other Effects of the Project Raised by Parties

Whether the Border Town Substation is Necessary

Sierra County, Long Valley, Green Gulch and Border Town argue that eliminating the Border Town Substation is in the public interest because Sierra could construct additions to its existing North Valley Road Substation in Reno[33] that would perform the same function. They also argue that moving the substation improvements would also permit routing of the transmission line along a Highway 395 corridor that would not disturb the views or pastoral character of upper Long Valley and would leave unchanged its recreational uses and potential.[34] Peavine suggests that Sierra selected the location of the Border Town Substation based solely upon its ownership of property in the vicinity.[35]

Long Valley's witness Solaro, a professional electrical engineer, testified that the transmission functions assigned to the Border Town Substation could as well be accomplished by expanding the North Valley Road Substation in Reno.[36] (Ex. 8 at 4.) In his view, it made no sense to construct an entirely new facility to accommodate a phase shifter unless additional high-voltage interconnections to neighboring utilities or installing local distribution for the surrounding area was required. (Id. at 5.) However, Solaro testified that he did not perform any power flow analysis concerning placement of the phase shifter nor has he ever participated in the planning or installing of a phase shifter. (Tr. at 808-09.)

Sierra's witness, Owens, a professional civil engineer, estimates that it would cost between $3 million and $9 million more to construct the required improvements at North Valley Road. (Tr. at 1000.) Some savings for electrical equipment could be realized by using the North Valley Road Substation. (Tr. at 1081.) However, those savings are more than offset by

differences in the earth work required to prepare the two sites. A balanced cut-and-fill grading of the Border Town Substation site, which is relatively level, would be required. (Ex. 12 at 5.) For the North Valley Road site, however, approximately 250,000 cubic yards of earthwork would be required. (Tr. at 1221.) Based on experience with other parts of the North Valley Road site, a balanced cut-and-fill may not be possible because of the unsuitable nature of the soils. (Ex. 12 at 6.)

Sierra's witness Nelson, who is a professional electrical engineer, testified that the phase shifter should "not be imbedded within Sierra's network transmission system."[37] (Ex. 11 at 4.) If a phase shifter for a high-voltage transmission line such as the Project is located within the network, adding parallel network transmission lines bypasses the phase shifter, making it ineffective. (Id.; Tr. at 1053.) If the phase shifter were located at the North Valley Road Substation, Sierra anticipates that growth in the Stead area north of Reno would result in bypass. (See Tr. at 1072.)

Border Town argues that the North Valley Road Substation is "on the edge of the network as it exists at this time." Sierra's witness agrees that location represents the edge of the network transmission system, but "[o]nly as it exists today." (Tr. at 1060.) Future growth in the areas served by the North Valley Road Substation would make it not cost effective to connect new network transmission to the Sierra side of the phase shifter if it were constructed at the North Valley Road Substation. (Tr. at 1064.)

Parties opposing the Border Town Substation have not convinced us[38] that it is unnecessary in light of Sierra's evidence of the substantially greater construction costs to add the improvements required to perform the same function at the North Valley Road Substation and the likelihood that future

growth in its service territory would render such improvements useless in time.[39] There is no merit to the argument that we should require Sierra to make its plans for meeting such growth part of its present CPCN application because that is a matter for the NPSC to determine. Sierra has made a sufficient showing that constructing the improvements at North Valley Road would be imprudent.

Whether the Project Makes Future Projects More Likely

NOPE, Sierra County and Border Town argue that the Project will inevitably be followed by additional projects. The only such project that NOPE identified was a possible future extension from the Hilltop Substation to the Captain Jack Substation, which is approximately 50 miles to the north.[40] (Tr. at 1260.) That extension is not part of the application, and would be subject to its own proceeding. It is certainly the case that a proposal to construct a line from the Captain Jack Substation to Alturas (at least under Sierra's sponsorship) is highly unlikely to occur without the Project. But that is a long way from concluding that such line is made certain by the Project.

Border Town argues that Sierra planned the Border Town Substation specifically for the purpose of accommodating future high-voltage interties, but concedes there is no evidence on the record about other interties. Sierra County argues that "[t]here exists strong evidence to support a conclusion that Lassen Municipal Utility District, Sierra Plumas Rural Electric Cooperative, and discussions which have occurred between Sierra Pacific and the Transmission Agency of Northern California point to the potential for Sierra Pacific to wheel power from the Border Town Substation and even create further demands for a trans-Sierra transmission corridor." Sierra County cites no part of the record to show where such evidence may be found.

There is some merit to the concern that the existence of the Project would make it easier to argue that another project would represent less of a disturbance to the status quo, since the setting had already been affected. It would be equally the case, however, that constructing the Project allows the argument that no new project should be permitted because of the cumulative effect when added to the Project. As far as the likelihood of constructing parallel transmission lines within the Project right-of-way, Sierra's witness Olack, a professional engineer, testified that he considers construction of a second 345 kV line within that right-of-way infeasible. (Tr. at 800.)

Sierra also plans to reserve space at the Border Town Substation for a second 345 kV phase shifter, should one be required in the future for reliability and phase angle capacity needs. (Ex. 11 at 7; Tr. at 1002.) Sierra has other substations in which it has multiple phase shifters for those purposes. (Tr. at 1013.) Sierra has no plans to construct a second transmission line to terminate at this location. (Ex. 11 at 10.) No evidence was presented to show that any other entity plans another transmission line that would necessarily terminate at that location.

We conclude that the mere possibility that future projects may be proposed in the vicinity of the Project is insufficient grounds to conclude that the Project is not in the public interest. We will, however, retain sufficient jurisdiction over future improvements that would connect to the Project to assure that no future intertie at either Border Town Substation or Hilltop Substation or elsewhere along the California route of the Project[41] will be constructed without our further review.

Whether Sierra's EMF Measures are Adequate?

The questions whether Sierra's electrical and magnetic field (EMF) reduction measures are adequate under the

Commission's "low-cost, no-cost" guideline on the grounds that the costs attributed to EMF measures by Sierra are too low. (In re Potential Health Effects of Electric and Magnetic Fields of Utility Facilities (1993) 52 CPUC2d 1, 9.) For new facilities, such as the Project, we directed that "low-cost options shall be implemented to the extent approved through the project certificate process." (Id.) We defined low cost "to be in the range of 4 percent of the total cost of a budgeted project." (Id.) We directed the utilities "to use 4 percent as a benchmark in developing their EMF mitigation guidelines." (Id.) While declining to establish 4 percent as an absolute cap, however, we also encouraged utilities "to use effective measures that cost less than 4 percent." (Id.) Therefore, Peavine's argument that Sierra fails to adequately discharge its responsibility to mitigate EMF effects of the Project because it is proposing to spend less on that purpose that we require is without merit.

NOPE argues that the benefits of increasing the width of the Project right-of-way are illusory, since the EMF is unaffected by ownership of the property on which it is measured. This is true, but misses the point, which is to minimize exposure by excluding occupancy of the right-of-way.[42] The FEIR/S recommends that the affected counties establish a 300-foot setback from the centerline of the Project in order to minimize exposure.

Whether the Merger Eliminates the Capacity Needs

Peavine suggests that the Merger eliminates the need for the Project because it would permit Sierra to share generation reserves with WWPC's existing plant. Even if sufficient reduction in generation reserves on Sierra's system were to occur, however, Sierra's ability to provide reliable service to its California customers would remain vulnerable to

failure without an additional, independent, high-voltage transmission line.

Whether the Project Benefits Modoc County Electrical Service

Sierra's witness Nelson testified that the Project would provide voltage support to existing transmission systems serving the Alturas, Canby, Lakeview, and Cedarville areas. (Ex. 3 at 19.) This would avoid some transmission system outages that currently result in customer service disruption. (Id.) The Project would create a third tie for those systems. (Tr. at 1272-73.)

No other party presented any evidence on the existing transmission systems. NOPE argues in its reply brief that the Project is of no benefit to the area because it already has excess capacity. NOPE cites its conversations with various local utility officials to support its argument, but that hearsay, even under our relaxed evidentiary rules, is inadmissible when a party seeks to introduce it after hearing. Even if admitted, NOPE's evidence does not rebut Sierra's showing that the Project would avoid customer service disruptions. We think that the Project does provide a benefit in this respect, even if it is minor, to residents of Alturas and surrounding communities.

Analysis of Benefits and Detriments

Sierra has demonstrated that it requires an additional high-voltage transmission line to provide reliable service to its California customers. Sierra has proposed to construct that line from Alturas, California, to Reno, Nevada for a variety of reasons, the most important of which are that one end of the line must connect with an existing high-voltage line and the other end must terminate in Reno (because that is where Sierra's California territory takes it service and existing transmission lines into Reno are insufficiently reliable). Constructing the Project, as proposed, would accomplish that objective and, in addition,

facilitates possible future interconnection with LMUD and may indirectly improve electric service reliability in the Alturas area modestly.

On the other hand, many believe that the Project would intrude visually in an inappropriate manner. The FEIR/S goes so far as to characterize some visual aspects of the Project as "significant environmental effects that cannot be avoided or mitigated." (Id.)

Taking into account the vastly greater economic costs of placing the Project underground, it is not feasible to successfully construct the Project by that means due to the prohibitively high cost of cooling systems and other special design requirements. (FEIR/S at B-84-85.) The benefit of the Project in facilitating the provision of reliable electric service by Sierra to its California territory outweighs the significant environmental effects that cannot be avoided or mitigated and that benefit outweighs the effects of the Project on Long Valley, as well.

Construction Cost Cap

Claimed Additional Geotechnical Costs

NOPE argues that Sierra has greatly underestimated the cost of construction for the Project. NOPE believes that Sierra will be required to construct many permanent road crossings of streams. NOPE also believes that Sierra will be required to rebuild the Project in the vicinity of the Likely Fault and that such contingency should be part of the construction cost estimate.

NOPE's witness Armstrong, a registered geologist, testified that the Project crossed at least 80 streams or wetlands. (Ex. 6 at 3.) However, Sierra's witness Owens, a professional engineer, testified that Sierra plans no permanent

road access stream crossings and that Sierra's cost estimate included the temporary road stream crossings required to construct the Project. (Ex. 12 at [illegible].)

NOPE's witness also testified that the Project alignment lies in part directly on the Likely Fault. (Ex. 6 at 4.) The witness identified the existence of the fault from a review of the DEIR/S. (Id.) The witness testified that he examined the Likely Fault and observed surface disturbance, which he associated with the fault (Tr. at 838), but he did not testify that he conducted any field reconnaissance, geologic mapping, remote sensing investigation, geophysical investigation, or specific literature review aside from the DEIR/S. The witness presented no analysis of the maximum displacement, sense of movement, or expected recurrence interval of movement. The witness testified that the United States Geological Survey (USGS) classifies the Likely Fault as active, contradicting the classification in the DEIR/S that the Likely Fault is only potentially active. (FEIR/S at C.6-16.) On examination, however, the witness based the conclusion that the fault is active on unnamed studies by the Department of Water Resources at one point (Tr. at 824), which were current as of 1952 (Tr. at 834), additional unspecified information of USGS at another point (id.) and later claimed that he derived his information from the Department of Mines and Geology (Tr. at 836.) By contrast, the discussion of geology in the DEIR/S and FEIR/S represents a thorough review with citation to the relevant publications of the USGS, California Department of Water Resources, California Division of Mines and Geology, the Nevada Bureau of Mines and Geology, and other sources in the professional literature concerning conditions along the Project alignment, including faults. We can give little credence to the unsupported opinion of NOPE's witness in light of a reasoned assessment by our own experts that reaches the opposite conclusion.[43]

NOPE also believes that its estimate of $45 million to construct the Project underground in the vicinity of Alturas should be added to the cost estimate. NOPE suggests that the costs of all-weather access to the Hilltop Substation and upgrading or reconstructing the existing 230 kV BPA line to which the Project would connection should be added.[11] Finally, NOPE thinks that provision should be made for ultimate decommissioning of the transmission line when it is no longer needed. None of these suggestions has any substantial basis or merit.

Fiber Optics Communications

Sierra proposes to use the transmission line guard wires (which protect the conductors from lightning strikes) to perform the additional function of carrying telecommunications from the Hilltop and Border Town Substations to Sierra's control center in Reno. One of the guard wires, therefore, will contain a fiber optic core capable of carrying high-speed, high-volume communications. The cost of this telecommunications system is substantial, over $5 million for direct costs alone. (See supra at 26.)

Sierra's witness Olack testified that neither the Hilltop Substation nor the Border Town Substation will have personnel stationed at such locations on a regular basis. (Tr. at 796-96.) Sierra presented no evidence concerning the portion of the capacity provided by the fiber optic communications system that will be required for operation of the Project. (Id.; see also id. at 594.) The use of fiber optic communications technology represents the most cost-effective alternative, compared to microwave, satellite, or standard telephone. (Id. at 797.) No evidence was presented to show whether that conclusion was based on any assumption about the charges that Sierra could impose for leasing bandwidth on its fiber optic system.

[11] NOPE's witness in light of a reasoned assessment by our own experts that reaches the opposite conclusion.

While we approve of electric utilities taking advantage of the opportunity presented by this unobtrusive secondary use of transmission lines, we think that electric ratepayers should be required to bear only the marginal cost of the capacity actually necessary for utility operations. Where the electric utility elects to install a high-capacity system, but declines to show how that capacity will be used, we cannot conclude that the associated costs are prudent. If Sierra wants to be in the communications infrastructure business as a sideline, we have no objection[45]; we do object to Sierra building its network at the expense of electrical customers. Sierra may include the marginal cost of the additional capacity needed for Project communications, but it will have to show, in an appropriate proceeding, of what those marginal costs consist. In the meantime, we will deduct this element from the construction cost cap as follows:

Project total	**$119,730,000**
Telecommunications direct costs	**5,132,858**
Add-ons proportionate share	**227,212**
Adjusted total	**$114,369,930**

Cost Controls

Sierra appears to have adequate accounting and management controls in place to assure that the Project will not exceed its estimated costs. Sierra appears to have no procedures in place that will result in, or even encourage, completion of the Project for substantially less than the estimate. (See Tr. at 785-86.) Success appears to be defined as bringing in the Project for not a cent more than the estimate. So far as the record reflects, none of Sierra's vendors or managers has any incentive to complete assigned work for two cents less than the estimate. We will set the construction cost cap (exclusive of

the fiber optic communications component, as discussed above on page 54) at 90% of Sierra's estimate (exclusive of the estimated costs of environmental mitigation, monitoring, and reporting[16]) to encourage Sierra to develop such incentives, as follows:

Project total	$119,730,000
Telecommunications adjustment	5,360,070
Subtotal	114,369,930
Project management adjustment @10% (exclusive of environmental mitigation, monitoring, and reporting)	10,963,993
Adjusted total	$103,405,937

Sierra may move to increase the construction cost cap to 100% of the above subtotal by an appropriate showing that it has instituted construction management techniques reasonably calculated to reduce actual expenditures below budgeted amounts.

Costs of Environmental Mitigation and Monitoring

Sierra included $4,730,000 for the costs of environmental mitigation as a line item in its proposed construction cost cap. Sierra admits that the cost of environmental mitigation measures proposed in the DEIR/S could be substantially more than its original estimate. (Tr. at 774.) However, Sierra estimates that other line items in its estimate have decreased sufficiently to offset such increase. (Tr. at 779.)

As Green Gulch points out in its comments on the proposed decision, CEQA requires that we adopt "a reporting or monitoring program for the changes made to the [P]roject or conditions of [P]roject approval, adopted in order to mitigate or avoid significant effects on the environment." (PRC Code § 21081.6.) The mitigation measures set forth in Appendix B in the

proposed decision filed November 20, 1995 did not contain a formal monitoring program, but relied instead on the Executive Director to further refine and effectuate those measures. A separate formal monitoring program has been added to Appendix B to clarify the scope of the monitoring that we will require and to emphasize that the mitigation measures described in Appendix B, and in more detail the FEIR/S, are to be fully and completely implemented during the course of construction of the Project and thereafter as set forth in Appendix B.

In administering such a monitoring program, the Commission will incur costs for which it has not specifically budgeted. The principal cost will be to employ staff independent of the Commission staff to carry out on-site monitoring of construction and to report to the Commission on the effectiveness of mitigation measures. These are costs which the Commission would not incur but for the Project; such costs ought to be recovered from Sierra, and we so order.

Endangered Species

The California Department of Fish and Game (CDFG) notified the Commission on December 14, 1995 that it would issue its biological opinion (Opinion) concerning the Project pursuant to the California Endangered Species Act (CESA). CDFG provided the form of its Opinion, which was subject to revision, but the Commission did not receive the Opinion until January 8, 1996, after the Commission's meeting of December 20, 1995, at which this matter had been set for decision.

Section 2090 of the Fish and Game Code requires the Commission to consult with the CDFG, under certain circumstances, to ensure that any action authorized by the Commission is not likely to jeopardize the continued existence of any endangered or threatened species. This requirement is in addition to our responsibilities under CEQA to consult with responsible state

agencies. (CEQA § 21104.2.) Fish and Game Code Section 2090(b) requires CDFG to issue "a written finding, based on its determination of whether a proposed project would jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of the species."

The Opinion concludes that the Project would not be likely to jeopardize the continue existence of [the bald eagle, Swainson's hawk, peregrine falcon, greater sandhill crane, bank swallow or willow flycatcher] provided the conditions to avoid jeopardy identified in the [Opinion] are fully implemented and adhered to." The conditions that CDFG identifies are consistent with those adopted by this decision. CDFG believes that it is desirable to require Alternative Segment WCFG to be followed in order to protect the willow flycatcher. We have determined, on the basis of the FEIR/S, that Segment W is preferable because it has substantially less visual impacts on Border Town and Highway 395 travelers. CDFG found, however, that Segment W could be used under certain conditions.

Fortunately, the Project is unlikely to require removal of potential habitat that the willow flycatcher may seek to exploit in the future. The riparian willows that this bird species could exploit for perching and/or breeding habitat during June through August are in the immediate vicinity of open streams. We have adopted mitigation measures that generally discourage construction activities for the Project in such locations. The Opinion is concerned with construction that would occur within 100 yards of willows on Long Valley Creek during the period June 1-August 15. Accordingly, we shall not permit construction during such period annually within such radius unless the Executive Director determines in consultation with CDFG that an on-site survey has shown no willow flycatchers are there present during such period. In the event that construction

occurs which will result in the removal of such willows, the Executive Director shall require habitat restoration consistent with the specific measures set forth in the Opinion. In no event, however, shall the Executive Director permit removal of riparian habitat that he determines to be such pursuant to the mitigation measures described in Appendix B.

Findings of Fact

1. Sierra is an electric utility subject to the jurisdiction of the Commission.

2. Sierra is an investor-owned utility providing electric service in California (portions of Alpine, El Dorado, Mono, Placer, Plumas, and Sierra Counties, and South Lake Tahoe, Portola and Loyalton) and electric, gas, and water service in portions of central and northern Nevada, including Reno, Sparks, and Carson City.

3. Sierra has received authority from this Commission and authorities in other states to merge with WWPC.

4. Sierra filed its application for a CPCN on November 9, 1993 for a certificate of public necessity and convenience to construct the Project, a 345,000 volt (345 kV) overhead electric transmission line and two related substations in northeastern California.

5. Following requests by CACD for supplementation, and the responses of Sierra, CACD accepted the application as complete on February 14, 1994.

6. Sierra further amended the application on October 4, 1994.

7. CACD determined that an environmental impact report was required, pursuant to the CEQA, and CACD caused a DEIR/S and a FEIR/S to be prepared.

8. No protests to the application were filed. A prehearing conference was held on February 6, 1995 in Susanville, California. Evidentiary hearings were held by the assigned ALJ in Susanville, California on May 22-25, 1995 and in San Francisco on June 1, 1995. The application was ordered submitted on the concurrent reply briefs filed August 18, 1995.

9. The Project is an electric transmission line designed for operation in excess of 200 kV in California.

10. The estimated construction cost of the Project is $119,700,000.

11. The NPSC has approved Sierra's 1993 Resource Plan which projects that the average annual growth rate of demand on Sierra's electrical system from 1993 through 2001 will be 2.3%.

12. Approximately 92% of Sierra's electrical load is attributable to Nevada.

13. The CEC lumps Sierra's California service area into a residual category with several other small California utilities.

14. CEC projects that through 2013 the average annual growth rate in electrical energy use applicable to Sierra's California service area will be 1.12%.

15. CEC projects that the average annual growth rate in peak demand over the same interval will be 1.35%.

16. The NPSC and CEC forecasts of growth rates cover different intervals, and neither makes a direct estimate of average annual growth rates in the California portion of Sierra's service area.

17. Sierra forecasts of load in its California service area exceed the CEC projections slightly, 1.5% to 1.8%, compared to 1.12%.

18. The difference between Sierra's forecast and CEC's forecast is not material.

19. Sierra identified five purposes of the Project in its application, as amended: (a) to supply emergency protection for the Reno/Lake Tahoe customer loads; (b) to increase the reliable capacity of its existing system; (c) to connect Sierra to a new market for purchase of low-cost electricity; (d) to create capacity that could be used by other electric utilities and independent power producers; and (e) to provide future possible service to LMUD.

20. Most (85% of the length of transmission line and both new substations) of the construction will occur in California, and most of the power delivered (approximately 92%) through the Project will be consumed outside California.

21. Sierra generates no electricity in California, so electricity imports meet all of its California demand.

22. No power will reach California customers directly through the proposed Project, which does not include any new interconnections to serve California customers.

23. Sierra will continue to route deliveries through existing local transmission systems in the Reno area.

24. Sierra could meet all of its California demand through purchases over an existing intertie with PG&E's system.

25. Sierra imports from or through Nevada to serve nearly 100% of its California demand.

26. Taking energy over the PG&E intertie is more expensive than obtaining it from other sources.

27. The capacity of the PG&E intertie is not sufficient to support Sierra's deficit in capacity on a systemwide basis.

28. Sierra is able to import in excess of its net capacity because the loads of the wholesale customers listed above are subject to interruption without notice when Sierra's 345 kV Idaho intertie is open.

29. Although power generated by others within Sierra's control area is exported over Sierra's facilities, Sierra has minimal export capacity.

30. Sierra is unable to accommodate growth in its retail load or in the loads of its wholesale customers, and it cannot accommodate other utilities or independent power producers seeking to wheel power through, or export power from, Sierra's territory.

31. Sierra relies heavily on limited transmission capacity into the Reno area.

32. Sierra's purchases of short-term firm capacity and economy energy are limited by import capacity constraints.

33. Because Sierra's California service territory is served by a transmission system that is tightly integrated, interruption of service to the Reno area will result in interruption of service to the Tahoe districts in California.

34. Sierra has experienced several blackouts in the Reno Tahoe area.

35. At least one such blackout occurred on February 16, 1990, the cause of which was a snowstorm that caused simultaneous failures on Sierra's PG&E intertie and the existing twin 345 kV transmission lines from Tracy to Valmy.

36. The Project would connect to an existing BPA 230 kV transmission line near Alturas, California, not far from the Oregon border.

37. Sierra does not have firm capacity contracts for the purchase of power through the proposed Project, and Sierra has

not demonstrated the availability of power from sources in the Northwest.

38. Sierra has agreed to additional capacity to increase its contractual commitments to others, including a 12 MW increase to the Truckee Donner Public Utility District.

39. Sierra might enter into a new arrangement with Plumas/Sierra Rural Electric Association, which serves portions of Sierra County, for sales of energy.

40. Another new use made possible by the Project would be wheeling of power through Sierra's territory.

41. The Project could provide electric services to the Lassen community no earlier than approximately 2004.

42. Sierra has neither procured firm capacity contracts for energy to be delivered from the Northwest over the Project, nor has it produced any evidence to show that sufficient capacity will be available on the spot market at the unpredicted times when it will be needed.

43. The proposed route of the Project extends approximately 164 miles through portions of Modoc, Lassen, and Sierra Counties in California. The final 26 miles are in Nevada. Sierra also proposes to construct a new 230/345 kV substation near Alturas, California and a new 345 kV switching substation in California near the Nevada state line at Border Town. Sierra plans to connect the Project with new substation additions to be constructed at its North Valley Road Substation in Reno.

44. Sierra proposes to use steel structures to support the transmission line.

45. Generally, along the length of the line, structures would be tubular, weathering-type structural steel in an H-frame (twin poles connected by a cross beam) configuration. These

would stand 70 to 130 feet above the surface, depending on a variety of factors, such as terrain.

46. Where the line changes direction, a three-pole tubular, weathering-type steel structure with guy wires would be used.

47. Generally, both tangent structures and angle structures would be directly embedded into foundation holes drilled for them. As soils conditions dictate, the angle structures may require poured concrete foundations.

48. The Project would conduct electricity through a three-phase, single-circuit 345 kV line with two conductors per phase. The conductor is steel-core aluminum cable, type 954 MCM ACSR, approximately 1.2" in diameter. The conductor has a non-specular finish. Each pair of conductors would be supported by polymer insulators.

49. Along the tops of the structures, approximately 25 feet above the conductors, two steel shield wires of 3/8" to 1/2" diameter would be installed to protect against lightning strikes. One of the shield wires would have a core with fiber optics for communication between Sierra's control center in Reno and the Hilltop and Border Town Substations.

50. Sierra proposes to construct a substation near Alturas, California. The purpose of this substation is to step up voltage from 230 kV to 345 kV.

51. Sierra proposes to construct an additional substation in California near Border Town, Nevada. The purpose of this substation is to control power flow over the transmission line through use of a phase angle regulating transformer (phase shifter).

52. At its existing North Valley Road Substation in Reno, Sierra would add additional 345 kV works to permit the proposed

transmission line to interconnect with its local transmission network.

53. Sierra plans to begin construction of the Project as soon as a CPCN is granted and other required approvals are obtained.

54. Sierra would construct the Project with a combination of its own personnel and contractors.

55. The estimated capital cost of the Project, including permitting, right-of-way acquisition, design, construction, project administration, and environmental mitigation is $119,730,000.

56. Based on 8% California demand responsibility, credit for wheeling revenues expected, and a levelized fixed charge rate of 12.08363%, Sierra estimated in its application that the cost of the Project allocable to California ratepayers would be approximately $810,000 per year, which represents approximately 1.5% of the total California revenue to Sierra. Sierra has not determined when, if ever, it would seek to have such cost included in rates. Sierra currently estimates that the Project will have no effect on rates.

57. Sierra intends to finance the Project as part of its overall financing plan for the company. Sierra plans to use traditional financing during the time that the Project would be constructed, a mix of long-term debt and equity financing in roughly equal proportion, and some preferred stock. Although the Project, in combination with other planned construction over the next few years, will cause Sierra's return on equity to drop in 1998, the decline is due to an assumed 12-month regulatory lag between the time the capital improvements such as the Project, are placed in service and the date on which rates are adjusted to reflect the addition to rate base.

58. Sierra's balance sheet would reflect the Project by an increase in assets of approximately $120 million with a corresponding increase in liabilities of approximately $60 million in long-term debt and $60 in liabilities. The Project would enhance cash flow by approximately $5 million per year.

59. The FEIR/S identifies temporary employment of local workers, a temporary increase in local demand for consumable materials and increased motel and restaurant business, and increased sales and property tax revenues to county and state government as beneficial effects of the Project.

60. The FEIR/S identifies several significant environmental effects of the Project that can be mitigated or avoided to an extent that they become not significant. The FEIR/S describes measures that will so mitigate or avoid such effects.

61. The FEIR/S identifies several significant environmental effects of the Project that cannot be mitigated or avoided, as follows: (a) Disturbance to context, setting, feeling, or association of cultural resource sites; (b) degradation of quality of residential land uses resulting from permanent change in character of residential environment; (c) degradation of quality of recreational land uses resulting from permanent change in character of recreational environment; (d) significant degradation of scenic quality; and (e) possible disruption of transportation by accident or structural failure of Project resulting in blockages of highways and/or rail facilities.

62. Community values, as expressed by elected officials, county boards of supervisors, and residents, are divided concerning the Project.

63. Each of the significant environmental effects could be substantially mitigated by constructing an underground conduit for the transmission line.

64. It is not economically or environmentally feasible to construct the Project underground.

65. Construction of the Project along Alternative Segments S and U (as described in the FEIR/S) would shift a significant environmental effect of the Project on visual resources from the vicinity of Lassen Red Rocks to another nearby location, and would create other significant effects on the environment that are avoided by Proposed Segment T (as described in the FEIR/S).

66. Sierra's North Valley Road Substation in Reno could accommodate the functions of the Border Town Substation for an additional expense of between $3 million and $9 million.

67. The phase shifter proposed for the Border Town Substation should not be embedded within Sierra's network transmission system because future growth in the areas served by the North Valley Road Substation would make it not cost effective to connect new network transmission to the Sierra side of the phase shifter if it were constructed at the North Valley Road Substation.

68. The Project does not make future improvements either more or less likely.

69. Sierra's EMF measures are not inadequate by virtue of the amount allocated to them in the construction cost estimate.

70. The Merger does not eliminate the need for the Project.

71. The Project would provide voltage support to existing transmission systems serving the Alturas, Canby, Lakeview, and Cedarville areas. This would avoid some transmission system outages that currently result in customer service disruption. The Project would create a third tie for those systems.

72. Sierra plans no permanent road access stream crossings, and Sierra's cost estimate includes the temporary road stream crossings required to construct the Project.

73. A portion of the Project traverses the trace of the Likely Fault. The Likely Fault is not an active fault.

74. Sierra proposes to use the transmission line guard wires (which protect the conductors from lightning strikes) to perform the additional function of carrying telecommunications from the Hilltop and Border Town Substations to Sierra's control center in Reno.

75. Neither the Hilltop Substation nor the Border Town Substation will have personnel stationed at such locations on a regular basis.

76. The use of fiber optic communications technology represents the most cost-effective alternative, compared to microwave, satellite, or standard telephone.

77. Sierra has adequate accounting and management controls in place to assure that the Project will not exceed its estimated costs.

78. Sierra has no procedures in place that will result in, or even encourage, completion of the Project for substantially less than the estimate.

79. The Plan set forth in Appendix B substantially conforms to the recommendations of the FEIR/S for measures required to mitigate or avoid significant environmental effects of the Project that can be mitigated or avoided.

80. The Commission has received the Opinion from the CDFG.

81. Based on the Opinion, the Project will not result in the extinction of any threatened or endangered species.

82. Based on the Opinion, the willow flycatcher (*Empidonax traillii*) is not present along the Project alignment; however, portions of the Project alignment contain suitable habitat for this species.

83. No irreversible or irretrievable commitment has been made after initiation of consultation required pursuant to Section 2090 of the Fish and Game Code of resources to the Project, which has the effect of foreclosing the opportunity for formulating and implementing reasonable and prudent alternatives consistent with conserving the species which prevent jeopardy.

84. The Opinion determines the Project has the potential to result in the incidental taking of endangered or threatened species but that such potential can be minimized through proper conditions.

Conclusions of Law

1. We have considered the following factors: (a) community values, (b) recreational and park areas, (c) historical and aesthetic values, and (d) influence on the environment.

2. NPSC's assessment, to the extent that it is not inconsistent with the projections of the CEC, constitutes the applicable systemwide forecast.

3. Sierra's projections conform to the officially adopted forecast.

4. Neither this Commission nor our Nevada counterpart is in an ideal position to assess the Project as a whole.

5. Purely from the standpoint of assessing the need for the project, no compelling policy reason requires that the California portion of Sierra's service area be served independently from the rest of Sierra's system.

6. California benefits ratably in Sierra's systemwide improvements.

7. Sierra has demonstrated that it needs additional transmission line capacity in its system by its showing that its existing transmission line resources into the Reno/Tahoe area are inadequate to provide reliable service.

8. No weight can be given to the role of the Project in providing access to new markets for economy energy because opportunistic energy purchases do not, by themselves, justify investment in a major transmission line.

9. No weight can be given to the potential of the Project to increase Sierra's import capacity over its existing interties, for the same reason.

10. Little weight can be given to the role of the Project in providing capacity for the benefit of others.

11. The effect the Project on return on equity in combination with the Merger is not material.

12. The Project will not have an adverse effect on shareholders.

13. With respect to each significant effect of the Project that the FEIR/S identifies as a significant effect that can be reduced to a level that it is not significant, the changes or alterations should be required in, or incorporated into, the Project to mitigate or avoid the significant effects on the environment as conditions of the CPCN.

14. With respect to those changes or alterations identified in the immediately preceding Conclusion of Law that are within the responsibility and jurisdiction of another public agency, each such change or alteration has been, or can and should be adopted by that other agency.

15. The Mitigation, Monitoring, Compliance, and Reporting Plan and its monitoring program set forth in Appendix B should be adopted in satisfaction of the requirements of PR Code Section 21086.1.

16. The Executive Director, or his designated staff or outside staff representative, should supervise and oversee construction of the Project insofar as it relates to monitoring

and enforcement of the mitigation conditions described in Appendix B.

17. Sierra should reimburse the Commission for the amount expended by the Commission for its expenses, including, but not limited to, special studies, staff, or Commission staff costs (including allocable indirect costs) directly attributable to, in connection with mitigation monitoring.

18. In monitoring the implementation of the environmental mitigation measures described in Appendix B, the Executive Director should attribute the acts and omissions of Sierra's employees, contractors, subcontractors, or other agents to Sierra.

19. Subject to reasonableness review, such reimbursement for expenses related to mitigation monitoring should be an authorized expense for the purposes of establishing rates, without regard to the construction cost cap established by this decision.

20. We are not the proper body to consider whether the effects of the Project in Nevada are such that the Project should be approved, modified, or denied.

21. The Commission should retain jurisdiction over future improvements to the Project to assure that no new major improvements are connected directly to the Project in California without our review.

22. Increasing the width of the right-of-way reduces EMF at the relevant location, which is the edge of the right-of-way.

23. Sierra has demonstrated that it requires an additional high-voltage transmission line to provide reliable service to its California customers.

24. Constructing the Project, as described in the FEIR/S, would accomplish that objective and, in addition, facilitates possible future interconnection with LMUD and may indirectly

improve electric service reliability in the Alturas area modestly.

25. A CPCN should be conditioned upon adoption and implementation of the environmental mitigation measures set forth in Appendix B.

26. The overriding benefit of the Project in facilitating the provision of reliable electric service by Sierra to its California territory outweighs the significant environmental effects on the environment that cannot be avoided or mitigated by adoption and implementation of the environmental mitigation measures set forth in Appendix B.

27. Electric ratepayers should be required to bear only the marginal cost of the communications capacity actually necessary for utility operations.

28. Where a electric utility elects to install a high-capacity fiber optic communications system, but declines to show how that capacity will be used, we cannot conclude that the associated costs are prudent.

29. The Project is necessary to promote the safety, health, comfort, and convenience of the public, and it is required by the public convenience and necessity.

30. The maximum cost that is reasonable and prudent for the construction of the Project is $103,405,937.

31. Sierra should be permitted to move to increase such maximum cost based the marginal cost to the Project of the fiber optics system and showing of construction management techniques reasonably calculated to reduce actual expenditures below budgeted amounts.

32. The Commission should require reasonable mitigation and enhancement measures as are necessary and appropriate to minimize the adverse impacts of the Project upon endangered and threatened

species as set forth in the Opinion; provided, however, that with respect to Alternative Segment WCFG, the conditions set forth in the Opinion numbered 17 through 20 should be implemented to permit the alignment of the Project along Segment W to avoid the greater visual and land use impact, including the substantially greater impact on residences, of Alternative Segment WCFG compared to Segment W.

33. The CPCN should be granted.

INTERIM ORDER

IT IS ORDERED that:

1. A certificate of public convenience and necessity (CPCN) is granted, subject to the conditions set forth in this order, to Sierra Pacific Power Company (Sierra) to construct and operate a 345 kilovolt (kV) transmission line (including the Hilltop and Border Town Substations) between its North Valley Road Substation and its substation to be constructed in Alturas, California (including the appurtenant tap to the existing 230 kV transmission line of Bonneville Power Administration) (the Project). The maximum reasonable cost of the Project pursuant to Public Utilities (PU) Code Section 1005.5 shall be $103,405,937, subject to Ordering Paragraph 2.

2. Within 180 days of the date of this order, Sierra may move to increase the maximum reasonable cost of the Project set forth in Ordering Paragraph 2 based on the marginal cost properly allocable to the facilities for which this CPCN is granted of fiber optic communications and on the cost control measures that Sierra should implement to facilitate the construction of such facilities at a cost substantially less than the estimate.

3. Sierra shall not commence actual construction of the Project until it has provided to the Executive Director a declaration of a responsible officer under penalty of perjury

that Sierra has received all easements from the U.S. Bureau of Land Management necessary to construct and operate the Project as approved hereby.

4. Sierra shall fully implement the mitigation measures outlined in Appendix B as directed by the Executive Director.

5. The Executive Director shall supervise and oversee construction of the Project insofar as it relates to monitoring and enforcement of the mitigation conditions described in Appendix B. The Executive Director may delegate his duties to one or more Commission staff members or outside staff. The Executive Director shall track and record direct expenses and time devoted to ascertain the costs of the monitoring mitigation measures to the Commission. The Executive Director is authorized to employ staff independent of the Commission staff to carry out such functions, including, without limitation, the on-site environmental inspection, environmental monitoring, and environmental mitigation supervision of the construction of the Project. Such staff may be individually qualified professional environmental monitors or may be employed by one or more firms or organizations. No person or organization shall be so employed who beneficially owns any security of, or has received during the past five years or is presently entitled to receive at any time in the future more than a de minimis amount of compensation for consulting services from, Sierra or Washington Water Power Company (WPPC). In monitoring the implementation of the environmental mitigation measures described in Appendix B, the Executive Director shall attribute the acts and omissions of Sierra's employees, contractors, subcontractors, or other agents to Sierra. Sierra shall comply with all orders and directives of the Executive Director concerning implementation of the environmental mitigation measures described in Appendix B.

6. The Executive Director shall not authorize Sierra to commence actual construction in California until Sierra shall have entered into a cost reimbursement agreement with the Commission for the recovery from Sierra of the costs of the mitigation monitoring program described in Appendix B, including, but not limited to, special studies, outside staff, or Commission staff costs directly attributable to mitigation monitoring. Subject to reasonableness review, such costs shall be an authorized expense for the purpose of establishing rates, without regard to the construction cost cap established by this decision. The Executive Director is authorized to enter into an agreement with Sierra that provides for such reimbursement on terms and conditions consistent with this decision in form satisfactory to the Executive Director. The Executive Director shall evidence his approval of such agreement by his Resolution. The terms and conditions of such agreement shall be deemed conditions of approval of the application to the same extent as if they were set forth in full in this decision.

7. Disputes concerning directives of the Executive Director to Sierra during the course of actual construction of the Project shall be determined by the Executive Director, as evidenced by his Resolution. Any person aggrieved by any such Resolution may appeal to the Commission, pursuant to Rule 9(a) and related provisions of the Rules of Practice and Procedure. The Executive Director's Resolution shall remain in full force and effect until affirmed, modified or vacated by the Commission.

8. On or before the first Commission meeting following the fifth anniversary of the completion of construction of the Project (which shall be the date that the Executive Director determines that the Project has been placed in service), the Executive Director shall conduct a comprehensive review of the effectiveness of the environmental mitigation measures set forth in Appendix B with respect to the Project. If the Executive

Director determines that Sierra should be required to implement different or additional mitigation measures than those provided in Appendix B, the Executive Director shall cause an order instituting investigation to be brought before the Commission for the purpose of determining the need for and cost of such measures. In the event that such different or additional measures are required, Sierra will be granted leave to move for an amendment of the construction cost cap described in Ordering Paragraph 1.

9. Sierra shall not construct in California any power generation plant or line (or permit the connection of any line) that connects to the improvements covered by this order without first obtaining the approval of the Commission.

10. The Executive Director shall file a Notice of Determination for the Project as required by the California Environmental Quality Act and the regulations promulgated pursuant thereto.

11. Sierra shall file a written notice with the Commission, served on all parties to this proceeding, of its agreement, executed by an officer of Sierra duly authorized (as evidenced by a resolution of its boards of directors duly authenticated by a secretary or assistant secretary of Sierra) to acknowledge Sierra's acceptance of the conditions set forth in Ordering Paragraphs 1 through 9, inclusive. Failure to file such notice within 45 days of the effective date of this Decision shall result in the lapse of the authority granted by this Decision.

This order is effective today.

Dated January 10, 1996, at San Francisco, California.

DANIEL Wm. FESSLER
President
GREGORY CONLON
JESSIE J. KNIGHT, Jr.
HENRY M. DUQUE
JOSIAH L. NEEPER
Commissioners

APPENDIX A

Appearances

Sierra Pacific Power Company:	*Kathleen M. Drakulich*, attorney-at-law, and Graham & James, by Peter M. Hanschen, attorney-at-law
Lassen Municipal Utilities District:	Kellison & Cady, by *Frank D. Cady* and Rhea Giannotti, attorneys-at-law
Neighbors Opposing Powerline Encroachment:	Mr. Thomas F. Krauel
Board of Supervisors of County of Sierra, California:	Mr. Tim H. Beals
Citizens for the Preservation of Long Valley:	Campbell, Campbell & Bancroft, by Richard G. Campbell, Jr. attorney-at-law
Border Town Residents:	Steven F. Bus, attorney at law
Green Gulch Ranch:	Edmund T. Allen, III, attorney-at-law, and Kronick, Moskovitz, Tiedemann & Girard, by *Thomas W. Birmingham*, attorney at law
Friends of Peavine, Inc.:	Ms. Lorainne Burke

Appendix B

Mitigation, Monitoring, Compliance and Reporting Plan

Summary of Mitigation Measures

Introduction

The following sections describe the mitigation measures necessary to minimize or avoid significant effects of the Project on the environment of California. The measures are more fully set forth in Appendix F to the FEIR/S (as modified by the December 12, 1995 Addendum). The Executive Director shall liberally interpret the mitigation measures set forth in this summary with a view to fulfilling the purposes for which they are adopted and shall be guided by the fuller description of the mitigation measures contained in the FEIR/S and the Opinion (provided, however, that the alternative to Segment W identified therein shall not be considered a mitigation measure). Within the framework set out by this summary, the Executive Director may add, remove, or modify specific mitigation measures as in his judgment may be necessary to adequately implement the environmental mitigation and protection measures contemplated by this summary.

Air Quality

Particulate emissions (dust) from Project construction can be controlled by developing and implementing a portion of the Plan to reduce emissions by watering disturbed areas, confining construction activities to the right-of-way, staging areas, and access points, and other measures.

Biological Resources

Construction of the Project would result in the temporary or permanent loss of significant plant communities and special status plants and habitat. Such loss can be avoided by marking in the field and working around significant plant communities, special status plants, habitat, and special soils

types. Where it is not possible to avoid such areas, the loss can be mitigated by restoration and off-site compensation measures. Where construction results in exposing sensitive vegetation resources to increased access, exposure can be minimized by replacing existing barriers to overland travel and placing new barriers at access points. Erosion and sedimentation can be controlled through proper measures during construction. Potential introduction of non-native plant species can be mitigated by marking existing weed areas and proper control on equipment and materials transported to or used on the Project and rapid revegetation of disturbed areas.

Portions of the Project cross mule deer winter, holding, and migration habitat. Disturbance to such area will require restoration/reclamation, including forbs and shrubs appropriate to the habitat, and acquisition of compensatory habitat offsite to offset permanent loss of habitat. Portions of the Project cross pronghorn winter, migration, and kidding habitat. Disturbance of such areas will require similar measures with restoration to include browse and other species preferred by pronghorn. Portions of the Project cross sage grouse brood habitat. Disturbance of such areas will require restoration to include sage and forbs required by young grouse. Portions of the Project cross pygmy rabbit habitat. Restriction of travel in such areas to existing roads and non-vehicular installation of transmission lines will be required. Portions of the Project will result in disturbance to special status species and habitat, including special status bats, pygmy rabbits, raptor nest sites, and sage grouse lek locations. Marking and avoiding habitats (with appropriate species-specific buffers and seasonal avoidance periods) will be required. Portions of the Project cross big game habitat, and overland travel may disturb the habitat. If natural recovery and required restoration is not successful, off-site compensatory habitat will be required. Riparian and perennial stream habitats must be avoided.

Portions of the Project may involve construction that has the potential to affect threatened or endangered species as set forth in the biological Opinion delivered by the CDFG. To minimize the effect of the Project on such species, conditions of the Opinion numbered 1 through 15, and 17 through 21 shall be implemented.

Construction activities will result in killing some animals. Deaths can be minimized by construction specifications imposing speed limits, firearm and pet restrictions, and requiring construction worker education and removal of litter. Increased human presence may indirectly affect wildlife along portions of the Project. To minimize such effects, construction schedules must avoid critical seasons and buffer areas should be set around sensitive areas. Increased access effects on wildlife habitat can be minimized by returning construction roads to pre-construction conditions and replacing existing barriers. Bird electrocution at substations can be minimized by substation design to discourage perching and roosting. Potential bird collisions with transmission line along portions of the Project can be minimized by marking lines with bird flight diverters and modifying the alignment of a portion of the Project in the vicinity of Rock Creek near the Alturas Substation. Increased predation of sage grouse leks and waterfowl nesting habitats by raptors and ravens can be avoided by installing perch deterrents on structures located within an 2-mile radius of such habitats. A habitat enhancement plan for sage grouse habitat will be prepared and implemented.

Cultural Resources

Construction of portions of the Project may result in disturbing or removing surface or subsurface significant or unevaluated cultural resource sites. Disturbance to such sites can be avoided by marking them and monitoring, although site specific recovery steps (such as archaeological excavation) may be required in addition for unevaluated or certain other sites

that cannot be avoided. In addition, some vegetation management maintenance activities in sensitive areas may be required to be limited to non-vehicular methods. Portions of the Project will result in disturbance to context, setting, feeling, or association of cultural resource sites that can be mitigated by placing permanent facilities as far as possible from significant cultural resource sites and by developing a plan for land exchange and an interpretive trail at the Infernal Caverns Battleground area. Unauthorized collection or vandalism of significant or unevaluated cultural resource sites may occur in portions of the Project. Direct effects can be minimized by crew education. Indirect effects can be minimized by blocking public access to all new or improved access roads.

Energy and Utilities

Construction of the Project could conflict with existing utility lines. Disruption of service can be avoided by requiring Sierra to submit final construction plans to all affected utilities for review and approval and advance construction notice to utilities where Project constructions activities will occur within 100 yards of facilities of such utilities. Construction of the Project could result in restricted access for utility emergency response units. Such restriction can be minimized by advance notification and coordination and plans to provide emergency access for any property isolated by construction activities. Construction of the Project in conjunction with other projects could result in cumulative effects, which can be minimized by maintaining coordination with responsible agencies and utilities with respect to encroachment permits on affects roadways.

Geology, Soils, and Paleontology

Fault displacement could collapse transmission line structures along portions of the Project. Avoiding placement of structures within active fault zones, potentially active fault zones (where possible), and conducting geological and/or

geotechnical studies to determine the amount of fault displacement and designing the transmission line to withstand such expected maximum fault displacement minimize this effect. Strong ground shaking (earthquakes) could collapse the structures or substations. Determining appropriate seismic criteria and applying such criteria to the design minimize this effect. Portions of the Project traverse areas subject to landslides or slope instability. Appropriate geological and geotechnical studies and blasting plans will minimize this effect.

Portions of the Project would result in the loss or reduced accessibility to mineral resources. Avoiding existing and planned mineral extraction sites and access routes in siting structures and right-of-way access roads will minimize this effect. Construction of the Project will require grading, resulting in ground disturbance/erosion. Minimizing new grading and road upgrading, using special equipment where required, revegetating, and implementing an appropriate soil conservation and erosion control plan will minimize this effect.

Portions of the Project traverse areas with corrosive soils that may affect steel or concrete. Testing soils for corrosion potential and designing appropriate control measures will minimize this effect. Portions of the Project traverse areas with expansive soils. Testing soils for shrink-swell potential and designing facilities to withstand expansive properties of such soils will minimize this effect. Portions of the Project are subject to volcanic ash falls. Potential hazards can be minimized by developing an appropriate plan to identify which Project components are vulnerable and developing procedures to minimize effects on the Project.

Construction of portions of the Project may result in the loss, destruction, or alteration of paleontological resources (fossils). Appropriate sampling and inspection of drill cuttings and excavations will minimize this effect. Avoiding travel in wetlands, avoiding travel to the dry seasons.

The cumulative effects of blasting and erosion can be minimized through developing and implementing appropriate blasting and sedimentation and erosion control plans.

Hydrology

Construction of portions of the Project may result in scour and erosion of stream beds. This effect can be minimized through developing and implementing appropriate sedimentation and erosion control and stream crossing and wetlands protection plans and maximizing the distance of the right-of-way from waterways.

Construction of portions of the Project may be subject to flooding. This effect can be minimized by limiting construction to low-flow periods, locating permanent structures and facilities outside of stream and river beds and appropriate design of any structures that are required to be placed in flood plains, and through developing and implementing appropriate sedimentation and erosion control and stream crossing and wetlands protection plans and maximizing the distance of the right-of-way from waterways.

Construction of the Project may result in sediment loading of surface waters. This effect can be minimized through developing and implementing appropriate sedimentation and erosion control plans and revegetation measures.

Construction of the Project may result in accidental contamination of surface waters and groundwater. This effect can be minimized by requiring fueling to be performed away from streams and developing and implementing appropriate management practices for substances and obtaining required permits.

Construction of portions of the Project may affect ground water flow. This effect can be minimized by developing and implementing appropriate blasting, stream crossing, and wetlands protection plans, avoiding locating structures in wetlands, avoiding travel in wetlands, and limiting construction to the dry seasons.

Land Use, Recreation, and Educational, Religious or Scientific Uses

Construction of the project will disturb residential, recreational, and agricultural uses as a result of increased human intrusions into relatively undeveloped areas through constructing or upgrading roads, blading rough areas, and installing the transmission line. This effect can be minimized by providing advance notice of construction and traffic activities, designating a public affairs officer to be the point of contact to discuss public concerns or questions, replacing existing barriers to overland travel and placing new barriers at access points, returning improved roads to pre-construction condition and restoring existing barriers, informing crews of cultural resource values and regulatory protections and procedures regarding avoidance of sensitive cultural resources, blocking public access to all new or improved access roads, and taking the measures described below under "Visual Resources" with respect to the Hilltop Substation.

Construction of portions of the Project may result in the temporary loss of use of grazing and disturbance to grazing animals. This effect can be minimized by coordinating with permittees of BLM and the U.S. Forest Service for authorized range improvements and livestock water sources affected by the Project.

Grazing animals may be lost during construction through open fences or gates temporarily removed during construction. This effect can be minimized by requiring a temporary barrier across sections of removed fencing, followed by immediate repair or replacement of removed fencing following completion of construction and the closing of all gates immediately following use and requiring all gates to be closed immediately after vehicles and equipment pass.

Construction of portions of the Project may result in temporary loss of cropland use. This effect can be minimized by

agreement with affected farmers and development of a construction schedule in consultation with the applicable County Cooperative Extension Service to avoid prime crop planting, growing, and harvesting seasons.

A portion of the Project along Segment L could result in the degradation of quality of residential uses due to a permanent change in character of the residential environment. This effect can be minimized by designing the Project so that transmission line tower structures are not located within 300 feet of any existing residence and by maximizing the separation distance between residential receptors and the centerline for receptors located less than 300 feet from the centerline.

A portion of the Project would cross a state wildlife area, which would be degraded by the transmission line. This effect can be mitigated by providing the California Department of Fish and Game with land contiguous to the affected area.

Other projects in Modoc and Lassen Counties may have cumulative effects with the Project, which can be minimized by coordination with proponents of projects within one mile of the Project to minimize cumulative construction impacts. The affected counties should consider establishing a 300-foot minimum setback for any future occupied structure along the right-of-way of the Project.

Construction of the Project could disturb sensitive noise receptors. This effect can be minimized by requiring construction activities involving motorized equipment to be restricted to the hours of 7 a.m. through 7 p.m., Monday through Saturday, or such shorter period as required by applicable noise ordinances in effect for at least 30 days prior to this decision, requiring maintenance of proper mufflers on all engines, and notifying receptors in advance.

Public Safety and Health

Operation of the Project could induce currents and voltage on nearby conducting objects that are not properly grounded. This effect can be minimized by identifying such objects, and advising the affected owners or operators of proper grounding procedures and providing guidelines for future activities in the right of way.

Construction and operation of the Project could create potential hazards such as shock, fuel ignition, and fire. This effect can be minimized by designing and constructing the Project in accordance with GIO 95 and the National Electric Safety Code, developing and implementing an appropriate fire prevention and suppression plan, requiring spark arresters on equipment, maintaining a construction fire watch and fire fighting equipment at key locations, and limiting construction and maintenance as required during conditions of extreme fire danger. Construction of the Project will consume energy and produce waste. Consumption and waste can be minimized by developing and implementing an appropriate waste minimization and energy conservation plan.

Socioeconomics and Public Services

Portions of the Project could adversely affect property values. Aligning the Project to avoid proximity to neighboring residential parcels, relocating structures, reducing structure heights, and providing screening, where appropriate, can mitigate such effect.

Construction of the Project could cause fires, thereby placing additional demand on public services. This effect can be minimized by developing and implementing an appropriate fire prevention and suppression plan that includes measures addressing safety/training, response strategy, and interagency coordination.

The construction of portions of the Project could result in minor disruption of grazing and crop activity. This

effect can be minimized by constructing temporary barriers across sections of removed fencing so that grazing animals cannot move through the open section of fencing and repairing removed fencing immediately after completing construction in an area, and adjusting construction schedule around prime crop time periods or by agreement with the affected agricultural user.

Transportation and Traffic

Construction of the Project may create increased accident risk for motorists, pedestrians, and bicyclists during construction. This effect can be minimized by developing and implementing an appropriate transportation management plan.

Construction of the Project may result in roadway blockages and traffic congestion. This effect can be minimized by avoiding land closures or blockages where possible, keeping closures short, providing detours, and avoiding peak period lane closures.

Construction of the Project may result in blocked access to adjacent properties. This effect can be minimized by notifying affected property owners and tenants in advance and providing alternative access if feasible.

Construction of the Project may obstruct pedestrian or bicycle routes or reduce their safety. This effect can be minimized by providing alternative pedestrian/bicycle routes where blockages occur and using appropriate signs and markings.

Construction of the Project may restrict access for emergency response units. This effect can be minimized by advance notification and coordination with emergency service providers and preparing to provide emergency access for any property that becomes isolated by construction activities.

Portions of the Project may interfere with navigable airspace or decrease air safety. This effect can be minimized by designing and constructing the Project to avoid penetrating navigable airspace around public and military airports as defined

by the Federal Aviation Administration, by notifying it if any structure exceeds obstruction standards for encroaches on navigable airspace, using high-visibility markings and lighting as it directs, and placing structures to avoid wires that are more than 200 feet above grade, where feasible.

Construction of the Project in conjunction with other possible projects could create cumulative impacts. This effect can be minimized by maintaining coordination with agencies responsible for encroachment permits on each affected roadway and with utility companies.

Visual Resources

The Hilltop Substation and its transmission line structures will be made more visible by clearing juniper adjacent to Crowder Flat Road for access road construction. This effect can be minimized by limiting structure heights to 70 feet from Milepost MP-1 to Angle Point HS01, confining construction activities within substation sites, staging areas, and transmission line right-of-way, constructing access or spur roads, whenever feasible, at an angle to minimize extended, in line views of newly graded terrain, maintaining juniper density between the Hilltop Substation and Crowder Flat Road, and constructing its access road so as to prevent a direct line of sight from the intersection of the access road with Crowder Flat Road.

Night-time illumination of the Hilltop Substation and the Border Town Substation may cause light scatter and glare. This effect can be minimized by requiring appropriate lamp shields.

A portion of the Project would encroach into the Skedaddle Wilderness Study Area. This effect can be avoided by relocating an angle point of the transmission line further south to avoid encroachment.

The long-term visual impact of the Border Town Substation can be mitigated by preparation and implementation of an appropriate landscaping plan.[43]

Mitigation Monitoring Program

Introduction

Implementation of the mitigation measures described above will fall primarily on Sierra, which will be undertaking construction of the Project directly or through one or more contractors. To assure the completeness and effectiveness of such measures, the Commission will monitor and direct mitigation measures, as described below, in cooperation with responsible agencies of the State of California and the U.S. Bureau of Land Management and the U.S. Forest Service.

Project Construction and O&M Plans

Sierra shall provide, to the specifications required by the Executive Director, a plan that depicts to scale the location of each structure, existing access routes to be used, new access routes to be constructed by type, staging areas, areas to be cleared of shrubs or trees for construction or operation and maintenance, and such other information as the Executive Director shall direct.

Construction Plans and Compliance Criteria

Sierra shall provide, to the specifications required by the Executive Director, drafts of written plans and procedures, consistent with Part F of the FEIR/S, as directed by the Executive Director from the elements set forth as follows:

- Seismic and Geotechnical Studies and Design Criteria
- Soil Conservation and Erosion Control Plan
- Blasting Plan
- Construction Access Field Surveys and Mitigation Plan.

- Stream Crossings and Wetland Protection Plan
- Community and Habitat Restoration Plan
- Wildlife Construction Disturbance Prevention Plan
- Off-Site Habitat Compensation Plan
- Historic Properties Treatment Plan
- Construction Monitoring Plan
- Fugitive Dust Control Plan
- Utilities Coordination Plan
- Landowner/Community Construction Notice and Coordination Plan
- Fire Prevention and Suppression Plan
- Transportation Management Plan
- Visual Impact Minimization Plan
- Resource Mapping and Construction Flagging Plan
- Construction and Operation and Maintenance Crew and Supervisory Education and Training Plan

The Executive Director may prepare, or cause to be prepared, any such element by outside staff or consultants. Unless the Executive Director permits portions of construction activities for which he has approved finalized relevant plans and mitigation monitoring measures to proceed, Sierra shall not undertake any actual construction in California until the Executive Director has approved each of the foregoing elements.

No such element shall be inconsistent with the location, action, criteria, or timing for the cognate element set forth in Part F of the FEIR/S, unless the Executive Director, for good cause shown, determines that a departure from the specific recommendations of Part F is necessary to effectuate the mitigation measures described herein.

Environmental Monitors

The Executive Director may appoint one or more environmental monitors (Monitors) to be physically present at any construction site in California during the course of construction of the Project and who will serve at the pleasure of the Executive Director. Monitors may be appointed to oversee implementation of one or any combination of the foregoing elements. In instances in which more than one Monitor may be present at any given time, the Executive Director will designate a Lead Monitor, whose decisions and orders, as provided herein, shall take precedence over any other Monitor on the site.

The Executive Director shall authorize each Monitor to order Sierra, its employees, contractors, or other agents, to suspend construction activities to the extent necessary to assure that required mitigation measures in California are being carried out or to prevent imminent and irreversible environmental damage arising as a proximal result of construction activities. Environmental damage shall be considered irreversible if, in the judgment of the Monitor, the affected site could not be returned to its pre-disturbance condition within 24 hours of the disturbance. Any such order shall remain in effect for 24 hours or until the Executive Director and Sierra have met and conferred, whichever is longer, or for such shorter or longer period as the Executive Director may direct. The Executive Director may suspend or extend any order of a Monitor in his discretion.

The Executive Director shall require Monitors to advise it in the event that any mitigation measure required in connection with the Project is not being implemented by Sierra or is incapable of implementation with the effect intended.

Construction Contracts and Crews

Sierra will require, as a condition of any construction contract to be performed in California that it awards in

connection with the Project, that contractors shall receive orders from the Executive Director or any Monitor on behalf of Sierra and shall be bound to Sierra to discharge or observe such orders. In the case of any construction that involves the deployment of construction crews in California, Sierra shall require that crew members receive a construction personnel agreement in the form required by the Executive Director that sets forth the duties and responsibilities of crew members with respect to environmental mitigation, and require crew members to execute such agreement as a condition of performing construction services on the Project. Sierra shall provide all such crews information and training concerning required mitigation measures as the Executive Director directs. Sierra shall provide construction supervisors with such written summaries of mitigation monitoring procedures as the Executive Director directs.

Public Records Access

The Executive Director shall make available copies of records and reports in connection with monitoring of mitigation in the same manner as other records of the Commission; provided, however, that the Executive Director shall keep confidential the Historic Properties Treatment Plan required hereunder (in order to protect historic and archaeological resources from unauthorized excavation or vandalism).

Consistent with the Commission's policy favoring alternatives to litigation, the Executive Director shall encourage the early, and informal, resolution of disputes arising concerning implementation of mitigation measures. The Executive Director shall pay particular attention to developing procedures for public information and timely processing of the questions and concerns of residents who may be affected by construction activities. As provided in Ordering Paragraph 7 of the decision, (1) any such person will have the right to a formal decision by the Executive Director to deal with issues that cannot be

satisfactorily resolved at the staff level (or through communications with Monitors, and (2) in the event that any person seeking redress in this way remains unsatisfied with the outcome, that person should file a formal complaint with the Commission. Sierra shall give prompt attention and assistance to the Executive Director in quickly resolving any such community based concerns and issues as requested or required by the Executive Director.

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Appendix C

Glossary of Defined Terms

Abbreviation	Definition
ALJ	Administrative Law Judge
Border Town	Border Town residents, an interested party
Border Town Substation	A proposed new 345 kV switching substation proposed to be constructed in California near Border Town, Nevada
BLM	U.S. Bureau of Land Management
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEQA Guidelines	Regulations prescribed by the Secretary for Resources to be followed by all state and local agencies in California in the implementation of CEQA
CESA	California Endangered Species Act
CPCN	Certificate of public convenience and necessity
D.	Decision
DEIR/S	Draft Environmental Impact Report/Statement
EMF	Electric and magnetic fields
Ex.	Exhibit
FEIR/S	Final Environmental Impact Report/Statement
Peavine	Friends of Peavine, Inc., an interested party
G.O.	General Order
Green Gulch	Green Gulch Ranch, an interested party
Hilltop Substation	A proposed new 230/345 kV substation proposed to be constructed near Alturas, California
Idaho Intertie	A high-voltage transmission line connecting Sierra with the Idaho Power Company
kV	Kilovolt
LMUD	Lassen Municipal Utilities District, an interested party
Long Valley	Citizens for the Preservation of Long Valley, an interested party
Merger	Proposed merger of Sierra with Washington

Abbreviation	Definition
MW	Megawatt
NOPE	Neighbors Opposing Power Encroachment, an interested party
NPSC	Nevada Public Service Commission
Opinion	California Endangered Species Act (CESA) Biological Opinion Alturas Transmission Line Project California Public Utilities Commission (CESA No. 2090-1994-081-1) dated as of December 20, 1995 by the California Department of Fish and Game.
PG&E	Pacific Gas and Electric Company
PG&E Intertie	High-voltage transmission lines connecting Sierra with PG&E
Plan	Mitigation, Monitoring, Compliance and Reporting Plan
Project	A 345 kV overhead electric transmission line and two related substations proposed to be constructed in northeastern California, as described in more detail beginning on page 20
PU Code	Public Utilities Code
Sierra	Sierra Pacific Power Company, applicant
Tr.	Transcript
USGS	United States Geological Survey
WWPC	Washington Water Power Company

Appendix D

Endnotes

[1]The application was thus submitted prior to the date of the publication of the FEIR/S. The ALJ had originally invited the parties to file supplemental briefs in the event that the FEIR/S identified any additional significant environmental effects that could not be mitigated or avoided so that parties could have input on whether a statement of overriding considerations should be made for such effects. In the event, the FEIR/S did not identify any such effects.

[2]From Border Town's brief and comments on the proposed decision it appears that at least one of the principal concerns of this group is with an alternative alignment for the Project, identified in the DEIR/S, known as "WCFG," which would be located immediately adjacent to their neighborhood. This alignment was proposed by the California Department of Fish and Game as environmentally superior to the alignment proposed by Sierra. The FEIR/S concluded, however, that it was not preferable to the proposed alignment of the Project.

[3]Our focus, however, must be on the calculus of benefits and effects in California. (See In re Southern California Edison Co. and San Diego Gas & Electric Co. (1977) 82 CPUC 775, 788.)

[4]Border Town appeared at the evidentiary hearing and raised its due process claim based on lack of adequate notice of the hearing. The presiding officer directed Border Town to file its motion concerning lack of proper notice not later than June 9, 1995. Border Town ignored that direction, and argues in its brief that defective notice deprives this Commission of jurisdiction to hear and determine the application of Sierra, citing two Oklahoma cases. Border Town argues that the notice given pursuant to G.O. 131-C is insufficient and that direct mail notice to all residents within 300 feet of the Project alignment was required. The residences of Border Town's members are all located east of the railroad tracks and west of Highway 395. (Tr. at 1142-43.) Border Town stipulates that such residences are depicted on an aerial photograph introduced into evidence. (Ex. 12, JCO-11.) Border Town disputes testimony that such residences are approximately 380 feet from the proposed transmission line, as testified by Sierra's witnesses. (See Tr. at 931-32, 1138-39.) Border Town did not introduce any other evidence concerning the location of the residences. We agree with Border Town that such residences are not within 380 feet of the proposed transmission line. They are much further away. (FEIR/S Map 30.) Therefore, even if Border Town did not waive its notice objection by failing timely to argue it, notice was not defective under the standard that Border Town claims applies. In its comments on the proposed decision, Border Town objects to the reference to Map 30, because of what it claims is a mistake on the map, which designates another neighborhood as "Border Town." To clarify the location for the record, the portion of Map 30 that contains the Border Town residences is located near the center of the map, west of the highway interchange in the area to the east (note the diagonal orientation of the map) of the railroad track and the shaded portion of the map marked "Study Area for Border Town Substation" and is marked "subdivision" in the immediate vicinity of a high point marked with an elevation of 5,219 feet above sea level. Border Town also commented on the proposed decision that they were deprived of due process not because they did not receive notice, but because they received less notice than others, and so failed to enter an appearance at the prehearing conference, which limited their ability to present testimony when they were permitted to enter an appearance at the evidentiary hearing. As noted, however, Border Town waived its objection to notice by failing timely to raise it as directed by the presiding officer at the hearing. The Oklahoma case that Border Town cites to show the Commission lacks jurisdiction over the application if notice defects exist is, in any case, not controlling.

[5]NOPE argues in its comments on the proposed decision that we should require burial of portions of the project that cross unspecified sensitive areas, and

that burial is "viable." NOPE presented no evidence to show viability, and the FEIR/S raises sufficient potential adverse consequences of burial to permit us to eliminate it as a viable alternative. NOPE's argument that a gas pipeline project in the area "was recently approved and built with less overall concern than this Project" is specious. NOPE also commented that, because, in its view, the FEIR/S does not adequately delineate existing wetlands along the Project alignment, we must deny a CPCN for the Project. Even if the FEIR/S failed to include that information, however, the conclusion that NOPE advances does not follow. Green Gulch argues that since we find that Sierra has failed to carry its burden to demonstrate that each of the purposes for the Project that it advanced can be given weight, the FEIR/S is inadequate because it fails to consider alternatives solely adapted to substitute for the purposes for which Sierra was successful, primarily improving transmission system reliability. We have considered the FEIR/S in our companion decision and concluded that it adequately meets the applicable requirements.

[9] In re the Application of Sierra Pacific Power Company for an order accepting its 1992-2011 Electric Resource Refiled Plan (1993) Nevada Public Service Commission Docket No. 93-4001 (NPSC Order).

[10] NOPE argues in its comments on the proposed decision that the growth rates for Sierra's Nevada territory may be overstated compared to the rates that would be obtained by applying California forecasts. We are unwilling to substitute our judgment concerning Nevada projections for the conclusions of the agency with primary oversight responsibility, which is NPSC. Application filed November 9, 1993, at 13. CEC has recently revised its forecasts. (California Energy Markets (Nov. 3, 1995) at 12). Although the final 1994 Electricity Report has not yet been prepared, CEC's staff recommended in the Draft Final Report annual long-term growth rates of 1.8% for electricity consumption and peak demand. (California Energy Markets (Jul. 7, 1995) at 10.)

[11] For example, Sierra does not appear before either this Commission or the CEC for formal resource planning purposes. (See Tr. at 1027-28.)

[12] NPSC's approval was conceptual. It did not approve any specific alignment for the Project.

[13] Sierra County argues that the Project should be denied on the basis of urban sprawl and speculative gold mining in Sierra's Nevada service territory. This is to say that we should deny a CPCN because it will support consumption and land uses in another state of which Sierra County disapproves. While we might well consider such issues as part of our public interest analysis in California, we would not want other states reaching a different conclusion than ours. Comity dictates, therefore, that we should respect the sovereignty of Nevada on such issues that are of primary concern to its residents.

[14] Except for a possible future interconnection with the Lassen Municipal Utilities District after 2004.

[15] In this respect, it is merely incidental that the Project traverses any part of the Sierra's California service area.

[16] Peavine argues in its comments on the proposed decision that the availability of the PG&E Intertie removes the need for voltage support for Sierra's California customers. That is not how we read the record. The evidence shows, rather, that while the rated capacity of the PG&E Intertie is sufficient to support the California load, due to the integration of Sierra's operations and the large load in the Reno/Sparks area, the PG&E Intertie is not adequate to support Sierra's system in the event its other major transmission resources were out of service.

[17] Green Gulch concedes that the Project is of benefit to the people within Sierra's service area, but argues that it is of no benefit to the people of Long Valley, Sierra County, or the people of the State of California generally. In concluding that Sierra's California customers benefit ratably from the Project, we reject Sierra County's and Green Gulch's conclusion that the Project is of no benefit to Sierra County.

[18] Consisting of firm capacity from Idaho Power Company (85 MW), PacifiCorp (149 MW), and Tri State G&T (23 MW). (Ex. 3 at 4.)

[18]Peavine argues in its comments on the proposed decision that the record contains no evidence linking blackouts to transmission systems faults or deficiencies. NOPE makes a similar point in its comments. We think that the testimony cited adequately establishes that existing transmission resources serving Sierra's customers into and through Reno are vulnerable to weather-related disruption. While adding the Project cannot eliminate any possibility of simultaneous outages, it clearly diminishes the chances of a recurrence of blackouts due to such events.

[19]NOPE commented on the proposed decision that the existing BPA line is approximately 30 miles from the border. We did not mean to suggest that the point of interconnection was on the border.

[20]Peavine argues in its comments to the proposed decision that we should require Sierra to "redesign and upgrade its existing facilities to adequately accommodate adverse whether (sic) conditions, requiring more timely maintenance, possibly improving emergency response, and/or directing construction of local generation to decrease reliance on transmission interties for emergency support." The NPSC has already determined, on a systemwide basis, that the Project is an appropriate means of addressing Sierra's resource planning needs. We will defer to NPSC's assessment concerning the appropriateness of the Project from a systemwide perspective. Unless we were to direct that Sierra serve its California service area through a switch, to implement Peavine's recommendation we would have to either order Sierra to take actions in Nevada inconsistent with NPSC's directives or to construct powerplants in California. These are not steps we are willing to take on this record.

[21]Although the U.S. Fish and Wildlife Service may require monitoring of certain effects of the Project indefinitely, pursuant to the federal Endangered Species Act, the monitoring of conditions that we will require will generally be limited to a period of five years from the date of completion of construction.

[22]NOPE criticizes our reliance on the FEIR/S. In its comments on the proposed decision, NOPE asserts that it is "flawed." In our companion decision, we certify the FEIR/S. In doing so, we are not vouching for its perfection, but the Commission has devoted considerable time, staff resources, and expense to its preparation, and we are satisfied that it represents an adequate basis for our informed decision concerning the environmental issues in connection with the Project. NOPE's criticizes the Finding of Fact that it is not economically or environmentally feasible to construct the Project underground. NOPE maintains that the Finding is unfounded "as studies have not been provided to document this." We disagree. The FEIR/S provides an adequate foundation for this Finding.

[23]NOPE objects to the Finding of Fact that community values are divided concerning the Project on the grounds that it implies "half" of the public is in favor of the Project. We did not say "evenly divided" and we have no reliable means of calibrating community values more closely than we have attempted here.

[24]Mitigation measures are generally required to respond to particular problems created by projects. Thus, construction on a wetland site may call for the purchase, restoration, and preservation of another wetland site that would be able to fulfill the same natural resource functions of the affected wetland. However, since the impacts that the Modoc County supervisors cite are visual, requiring Sierra to provide telecommunications services cannot serve as mitigation.

[25]Long Valley and Green Gulch argue that similar effects will occur near the Border Town Substation. They presented no testimony, however, to show that there exists in the vicinity any historic site that is potentially eligible for inclusion on the National Register of Historic Places.

[26]The FEIR/S characterized one of these effects as follows: "The presence of the [Project] would degrade the quality of residential uses by changing the character of the environment in which these residential uses are located, and conflicting with the desired uses of the residential property. The character of the environment would change as a result of the presence of the [P]roject

structures, either on or near the residential property, in the views from the residential uses) and as result of the presence of electric and magnetic fields (EMFs) from the (P)roject facilities)." (FEIR/S C.8-32.) We do not regard the presence of structures, where it occurs, to be different from the visual impact. Assuming that the property owner receives fair market value for the easement, which will generally exclude residential uses, he or she should not particularly care whether the pole structure is located on the same property where the home is located. What will probably be objectionable is seeing the structure and the line. With respect to EMF, the FEIR/S does not classify potential exposure as a significant effect that cannot be reduced or mitigated. (FEIR/S C.10-49.) We recognize that people may fear the unknown, and prefer not to live near transmission lines for that reason. Like the visual effect, however, that reaction is subjective to the individual. We see no reason to treat the two separately and we do not find the EMF aspect to present a different significant effect on the environment from the visual aspect.

[27]The corridor within which the actual right-of-way for the Project would be located.

[28]NOPE comments on the proposed decision, and suggested that it should be noted "that the views from the City of Alturas of Mt. Shasta, a prominent scenic feature, will be destroyed. It should also be noted that views of the Warner Mountains from Highway 299 will be destroyed." NOPE cites no evidence to support its suggestion. NOPE also argues that CEQA Section 21000(g) requires us to deny a CPCN for the Project. However, that statute expresses the Legislature's intent that public agencies give "major consideration to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian." We believe that we have given major consideration to environmental effects and appropriately balanced those concerns with our duty to assure reliable electric service to Sierra's California customers.

[29]The most recent example of a high-voltage underground transmission line that we have considered involved a single-circuit 230kV, 8,000-foot line. (In re Pacific Gas and Electric Company (1993) 51 CPUC2d 594, 595.)

[30]NOPE argues in its comments on the proposed decision that it is not the responsibility of opponents of the Project "prove that one alternative is better than another." While this is generally true, when a party proposes that a CPCN be granted on the condition that the facilities be constructed in another state at a location to be determined, the party assumes more of a burden of producing evidence to show the feasibility and superiority of the out-of-state alternative.

[31]We do have jurisdiction over California utilities that construct out-of-state transmission lines that are designed to transmit power to California. (See PU Code § 1001.5 (generally exempting out-of-state construction where the utility derives 75 percent or more of its operating revenues outside California, unless Commission determines public interest requires application of PU Code § 1001).)

[32]We reach a different conclusion from BLM's in the FEIR/S concerning one of the alternative California alignments for the Project. For the reasons given in the FEIR/S, we prefer Segment T, and BLM prefers Alternative Segments S and U. This is essentially a difference over whether the Project should be aligned on the east side of Highway 395 (Segment T) in the vicinity of Lassen Red Rocks or on the west side (Segments S and U). (See FEIR/S at D-7.)

[33]Sierra County was alone in arguing that the facilities could be located at Sierra's Tracy Substation, but it presented no evidence on this point.

[34]The principal effect of the Project on recreation in Long Valley seems to be that persons traveling through Long Valley on their way to or from the Toiyabe National Forest and a recreational area in Dog Valley will be able to see the Project. (See Ex. 13 at 2-31.)

[35]Peavine seems to suggest that the reasons Sierra has given to justify location of the substation are pretextual. Peavine does not advance any theory to explain why Sierra bought a site there in the first place or why, if ownership of a border town site was such an important motivating factor,

Sierra is now content to construct the Border Town Substation on property that it does not own.

[35]The witness also testified that the Hilltop Substation could also serve as the site for the phase shifter, but that is not a position that any of the parties in opposition maintained in their briefs.

[36]The term "network transmission system" refers not to intertie transmission facilities between utilities, but to the internal transmission facilities at voltages such as 120 kV within a utility's service area. (Tr. at 1057.)

[37]Border Town commented on the proposed decision that Sierra failed to demonstrate a need for the Border Town substation, but the evidence clearly shows that a substation is required for the Project at its southern end.

[38]Nor are we convinced that the additional 20 minutes of travel time to reach the Border Town Substation is a critical difference.

[39]NOPE argued in its comments on the proposed decision that we should treat the fiber optic channel in the Project as a future project and explore its ramifications more fully. To the extent that the channel is incorporated into the Project, its effects are already reflected. To the extent that it may be necessary to tap the channel for Sierra to provide access to the channel to others, the points of access are likely to be localized and not of a magnitude similar to the Project itself. Those future access improvements will be subject to independent review by the cognizant authorities pursuant to CEQA at the time of construction.

[41]We note that the portions of Project paralleling a recently approved gas pipeline in which Sierra has an interest. It is not out of the realm of possibility that Sierra may consider constructing a generation plant to take advantage of this situation. If so, we should make certain that we review it in connection with this Project.

[42]NOPE concedes this point in its comments on the proposed decision.

[43]NOPE argues in its comments on the proposed decision that we must accept the testimony of its witness on this point because he is a registered geologist. Simply because a witness is permitted to testify as an expert, however, does not compel us to credit his testimony. This testimony lacked credibility because it was unsupported by the data and analyses that a reasonably competent practitioner would adduce as the basis a conclusion in a published report. The same witness testified that a road cut near the site of the Hilltop Substation contained an outcrop that he examined and concluded showed evidence of a fault. The witness testified that although he examined the outcrop, he was unable to determine the orientation of the fault. He then testified that "the weight of the structures (substation equipment) that is applied to the rock may cause the rock (at the edge of Devil's Garden) to fail and damage the towers or the substation." (Ex. 6 at 5.) The edge of Devil's Garden is approximately 1,500 feet from the site of the proposed substation. (Tr. at 844; Ex. 12 at 8.) The witness, who is not a qualified engineering geologist, admitted that he has not adequately studied the site to support his conclusion. (Tr. at 847.) We agree.

[44]In its comments on the proposed decision, NOPE objects to characterizing its points as cost-of-construction issues, and maintains that they are a reliability issue. Even if winter access is limited, nothing in the record suggests that overcoming such access is anything other than a matter of the cost of appropriate improvements and equipment. NOPE also asserts that the possibility of a fault at the site makes access even more problematic. The evidence that NOPE offered on this point, however, lacked credibility. Finally, NOPE suggests that we must conclude that the BPA line to which the Project would connect be shown to be "as reliable" as the Project. NOPE cites no support for the proposition that all components of an electric transmission network must have the same level of reliability. As a practical matter, components differ. It is true that the evidence shows that the BPA line is subject to outages. (Ex. 3 at 19.) However, nothing in the record shows that such outages reasonably can be expected to prevent the Project from improving systemwide reliability for Sierra. The evidence also showed that the construction of the BPA line structures, properly maintained, is as reliable as steel pole structures. (Tr. at 1164.)

"If this additional telecommunications capacity contributes toward the ability of existing or new telephone utilities to bring telephone service to presently unserved portions of Siskiyou, Lassen, and Modoc Counties, that would be a welcome development, but that is not a goal for the phase-shifter, but is
"NOPE commented on the proposed decision that we should not reduce Sierra's estimate for environmental mitigation and for property acquisition, and we adopt that suggestion in part. For environmental mitigation, monitoring, and reporting, costs will be partly within Sierra's ability to manage, but may fall outside Sierra's reasonable control. Because of the importance of assuring implementation of the environmental mitigation measures, we will not limit Sierra's ability to recover associated costs in the same manner as other elements of construction which are much more directly within its control. We do not adopt NOPE's suggestion with respect to the costs of property acquisition because Sierra is in a good position to estimate the fair market value of property it will require and property owners have recourse to the courts in the event of dispute. To the extent that the
"The Border Town Substation site is located in an area that supports low sagebrush scrub habitat. (FEIR/S Map 30.) Although this habitat supports a variety of wildlife species (id. at C.3-16), the shallow, poorly drained, rocky soils result in a plant community of low sagebrush and perennial herbs. Big sagebrush scrub, by contrast, is characterized by individual shrubs that range from 1.5 to 6 feet tall. (Id.) Accordingly, the potential for landscape screening at this site appears limited.

[illegible] that the portions of Project [illegible]
[illegible] in which Sierra has an interest. It is not out of the realm of [illegible] possibility that Sierra may consider constructing a generation plant to take [illegible] advantage of this situation. If so, we should take certain that we review it [illegible] in connection with this Project.

[illegible] We concede this point in its comments on the proposed decision. [illegible] We agree in its comments on the proposed decision that we must accept the [illegible] testimony of its witness on this point because he is a registered geologist. [illegible] Because a witness is permitted to testify as an expert, however, that [illegible] does not compel us to credit his testimony. This testimony lacked credibility [illegible] because it was unsupported by the data and analyses that a reasonably [illegible] prudent practitioner would rely upon as the basis a conclusion in a published [illegible] report. The same witness testified that a road cut near the site of the [illegible] Substation contained an outcrop that he examined and concluded showed [illegible] evidence of a fault. The witness testified that although he examined the [illegible] outcrop, he was unable to determine the orientation of the fault. He then [illegible] testified that "the weight of the structures [apparently equipment] that is [illegible] to the rock may cause the rock [at the edge of Devil's Garden] to fail [illegible] [illegible] damage the towers or the substation." (Ex. 6 at 3.) The edge of Devil's [illegible] is approximately 1,500 feet from the site of the proposed substation. [illegible] (Ex. 14; Ex. 12 at 2.) The witness, who is not a [illegible] engineering [illegible], admitted that he has not adequately studied the site to support his [illegible] opinion. (Tr. at 611.) We agree.

[illegible] its comments on the proposed decision, NOPE objects to characterizing its [illegible] as cost-of-construction issues, and maintains that they are a [illegible] reliability issue. Even if winter access is limited, nothing in the record [illegible] indicates that overcoming such access is anything other than a matter of the [illegible] use of appropriate improvements and equipment. NOPE also asserts that the [illegible] inability of a fault at the site makes access even more problematic. The [illegible] evidence that NOPE offered on this point, however, lacked credibility.

[illegible] Finally, NOPE suggests that we must conclude that the BPA line to which the [illegible] project would connect be shown to be "as reliable" as the project. NOPE cites [illegible] no support for the proposition that all components of an electric transmission [illegible] project must have the same level of reliability. As a practical matter, [illegible] components differ. It is true that the evidence shows that the BPA line is [illegible] subject to outages. (Ex. 3 at 19.) However, nothing in the record shows that [illegible] such outages reasonably can be expected to prevent the project from improving [illegible] the reliability for Sierra. The evidence also showed that the [illegible] construction of the BPA line structures, properly maintained, is as reliable [illegible] as wood pole structures. (Tr. at 1164.)