

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA**

In the Matter of the Application of SOUTHERN)
CALIFORNIA EDISON COMPANY (U-338-E))
for a Certificate of Public Convenience and)
Necessity for the San Joaquin Cross Valley Loop)
Transmission Project)

A.08-05-039
(Filed May 30, 2008)

OPENING TESTIMONY OF PACE
(PROTECT AGRICULTURE COMMUNITIES ENVIRONMENT)

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I. INTRODUCTION

In the Assigned Commissioner's Scoping Memo and Ruling¹ the Commission requested additional testimony on

"5. Are the mitigation measures or project alternatives infeasible? (CEQA Guideline 15091(a)(3).) This issue includes consideration of community values pursuant to Pub. Util. Code § 1002(a)(1).

6. To the extent that the proposed project and/or project alternatives result in significant and unavoidable impacts, are there overriding considerations that nevertheless merit Commission approval of the proposed project or project alternative? (CEQA Guideline § 15093.)

...

8. Is the proposed project and/or project alternative designed in compliance with the Commission's policies governing the mitigation of EMF effects using low-cost and no-cost measures? (GO 131-D, Part X.)

9. If a certificate is granted, what is the maximum cost of the approved project? (Pub. Util. Code § 1005.5(a).)" (Scoping Memo, pg. 4)

The PACE (Protect Agriculture Communities Environment) opening testimony addresses (5) mitigation measures, (6) unavoidable impacts, and (9) the cost of an approved project².

II. ALTERNATIVE 3A REROUTE AROUND THE STONE CORRAL ECOLOGICAL RESERVE COST IMPACTS – Witness Hank Zaininger

Section 5 of the draft Environmental Impact Report³ compares the San Joaquin Cross Valley Loop (SJXVL) project alternatives. In Section 5.3, p.5-7, the report states that Alternative 3 results in the least impacts on agricultural resources, but due to unmitigable impacts to biological resources Alternative 3 would not be environmentally superior. Further, the report states that the EIR team looked for a feasible alignment (reroute) for Alternative 3 to bypass the sensitive habitat in the Stone Corral Ecological

¹ Dated June 23, 2009.

² The Scoping Memo orders, on page 7: "Issue No. 9: Edison has provided prepared testimony on the cost of its proposed project and Alternatives 2 and 3. We direct Edison to serve this prepared testimony pursuant to the schedule set forth in this ruling, and to provide additional prepared direct testimony setting forth its cost estimate for Alternative 6, taking into account the limitations presented by the schedule set forth in this ruling. Any party to the proceeding (see Rule 1.4) may offer prepared rebuttal testimony on this issue." Rather than wait for rebuttal testimony, which would have hampered other parties ability to respond, we are providing this testimony in our opening comments.

³ Southern California Edison's San Joaquin Cross Valley Loop 220 kV Transmission line Project, CPUC A.08-05-039, SCH #: 2008081090, Draft Environmental Impact Report, June 2009.

Reserve⁴. However, they could not find a feasible reroute due to additional sensitive habitat, residential structures, and other physical constraints on both sides of the reserve. Since the significant unmitigable impact to biological resources for Alternative 3 could not be avoided through rerouting, Alternative 2 was selected as the environmentally superior route.

This testimony summarizes the results of my independent investigation into finding a preliminary feasible reroute of Alternative 3 to bypass the Stone Corral Ecological Reserve and its impact on the cost of the proposed project. In summary, the results of this preliminary investigation are Alternative 3 is modified slightly to reroute the new double circuit San Joaquin Cross Valley Loop transmission line around the Stone Corral Ecological Reserve, avoid construction within the ecological reserve, and avoid disturbing the two existing Big Creek – Rector 220 kV transmission lines crossing within the ecological reserve⁵.

Figure 4.4-4 in Section 4 of the draft Environmental Impact Report shows the location of the Stone Corral Ecological Reserve and generally defines designated critical habitat in the vicinity. The proposed Alternative 3A reroute path is shown in Figure 1. Figure 2 shows a closer view of the Stone Corral Ecological Reserve and surrounding area with the ecological reserve area outlined in blue, the existing Big Creek – Rector 220 kV transmission lines path across the ecological reserve marked in white, and the proposed preliminary Alternative 3A reroute path around the ecological reserve marked in yellow.

⁴ PACE representatives called the CPUC Environmental Project Manager, on June 26, 2009 to request backup data to support the above statements in the draft Environmental Impact Report. He did not have any further backup information available describing the potential reroutes studied.

⁵ Called Route 3A in this testimony.



Figure 1. Alternative 3A Reroute to Bypass the Stone Corral Ecological Reserve

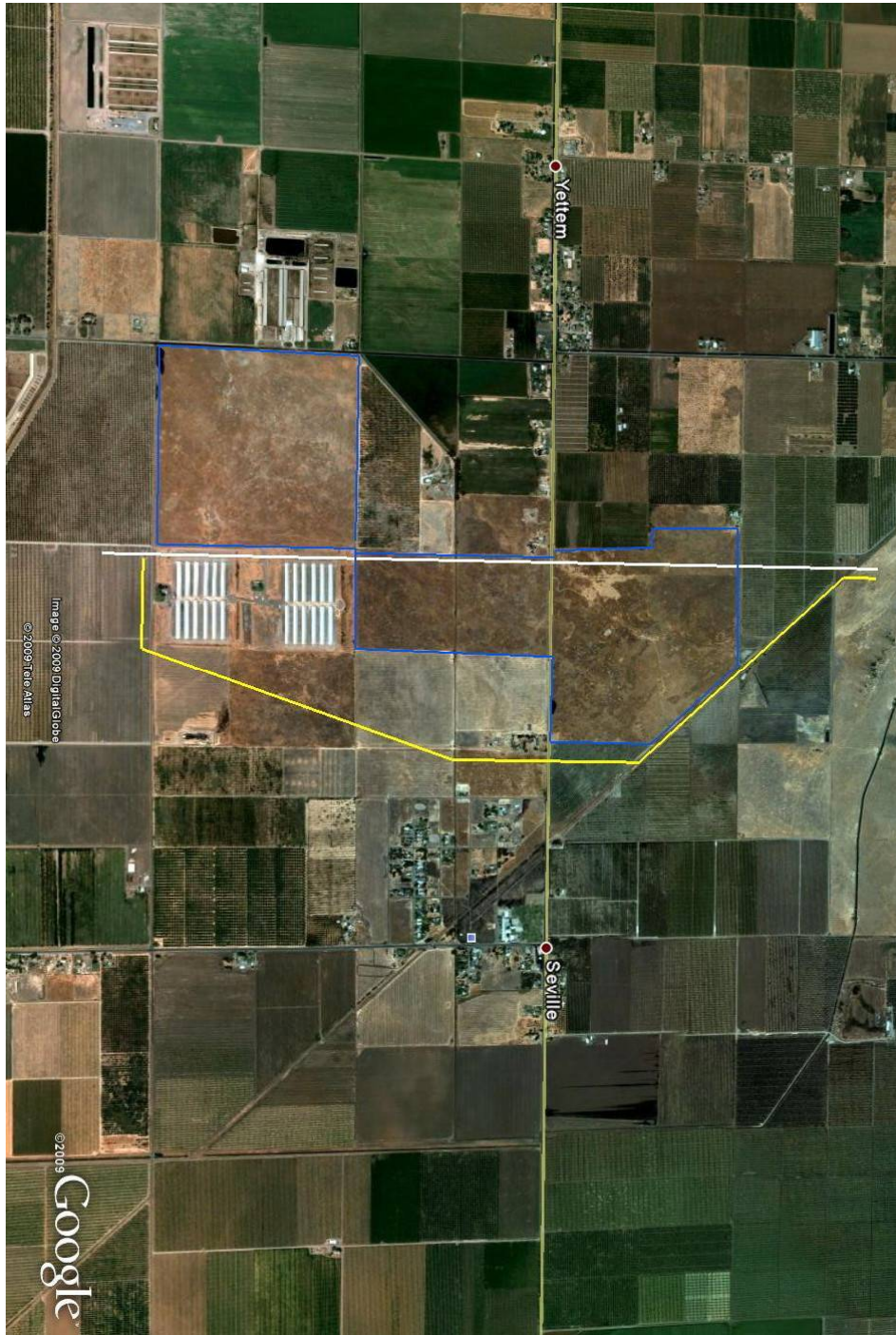


Figure 2. Closer view of Stone Corral Ecological Reserve area outlined in blue, existing line path shown in white, and proposed preliminary Alternative 3A reroute shown in yellow.

For the preliminary Alternative 3A reroute, the new double circuit 220 kV San Joaquin cross valley loop transmission line leaves the existing Big Creek – Rector 220 kV transmission lines right of way South of Avenue 376 approximately 11.6 miles north of the Rector Substation. First, the line proceeds easterly approximately 1200 feet through existing newly planted orchard. Second, the line proceeds northeasterly approximately 4400 feet through previously cultivated fields, which apparently are private property, to a point about 50 feet east of Road 152 and about 1250 feet South of Avenue 384. Third, the line proceeds north approximately 2400 feet through a previously cultivated field, which apparently is private property, across Avenue 384 and through an orchard to an abandoned railroad right of way. Fourth, the line proceeds northwesterly approximately 4100 feet along the abandoned railroad right of way to a point about 50 feet east of the existing Big Creek – Rector 220 kV transmission lines and north of the ecological reserve. Fifth, the line then proceeds north adjacent to the existing Big Creek – Rector 220 kV transmission lines to the point of intersection approximately 14.6 miles north of the Rector Substation, where the new line proceeds easterly and crosses Stokes Mountain as before.

Preliminary tower spotting for the Alternative 3A reroute is shown in Figures 3 through 7. The preliminary tower spotting uses span lengths between structures similar to those used in the preliminary tower spotting for the alternative routes presented in Section 2 and Appendix C of the draft Environmental Impact Report. Figures 3 through 7 are black and white copies of Pages 18 through 22 of the Alternative 3 Road Story⁶ respectively with the Alternative 3A preliminary line reroute centerline, towers and poles marked in red. The new Alternative 3A reroute structures added to bypass the Stone Corral ecological reserve are labeled alphabetically to differentiate them from the existing Alternative 3 structures passing through the reserve.

Figure 3 shows Alternative 3A replacement pole structure #58 and new pole structure #58 replaced with dead end double circuit tower structures relocated South of Avenue 376. The two existing Big Creek – rector 220 kV lines will transition to double circuit configuration at the relocated replacement tower structure #58. The new double circuit San Joaquin cross valley loop transmission line exits the existing right of way, proceeding easterly to a new tower structure A. All construction associated with the placement of these towers, transitioning the existing Big Creek – rector lines to double circuit configuration, and conductor stringing will be located East of Road 144 and South of Avenue 376, which is outside the Stone Corral Ecological Reserve.

⁶ Southern California Edison's San Joaquin Cross Valley Loop 220 kV Transmission Line Project, CPUC A.08-05-039, SCH #: 2008081090, Draft Environmental Impact Report, Appendix C, Section 2.

Figures 3 and 4 show the Alternative 3A cross valley loop reroute preliminary tower spotting from new tower structure A to the next point of intersection, tower structure E located East of Road 152 and South of Avenue 384, using three tangent pole structures, B, C, and D.

Figure 4 also shows the Alternative 3A cross valley loop reroute preliminary tower spotting from new tower structure E to the next point of intersection, tower structure G located on the abandoned railroad right of way and north of Avenue 384, using one tangent pole structure, F.

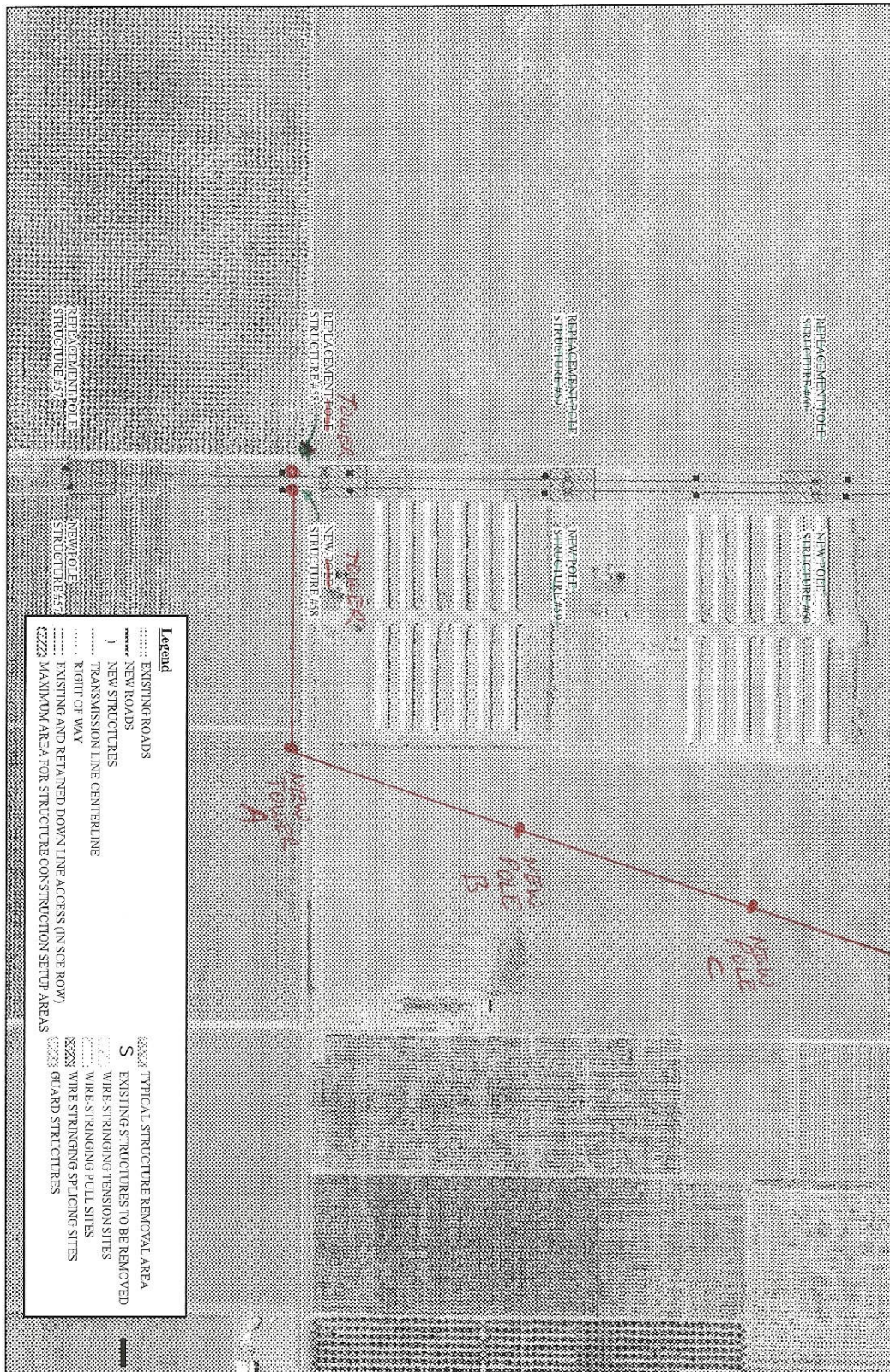


Figure 3. Alternative 3 Road Story, Page 18, with Reroute Marked in Red

Figure 5 shows the Alternative 3A cross valley loop reroute preliminary tower spotting from new tower structure G along the abandoned railroad right of way to the next point of intersection, tower structure K located adjacent to the existing Big Creek – Rector lines, using three tangent pole structures, H, I and J.

Figures 5, 6 and 7 show the Alternative 3A cross valley loop reroute preliminary tower spotting from new tower structure K proceeding north adjacent to the existing Big creek – Rector lines to the next point of intersection, new tower structure #74, using seven tangent pole structures, #67 through #73. This tower spotting is similar to the preliminary Alternative 3 tower spotting, but located adjacent to the existing Big Creek – Rector 220 kV transmission lines, which will remain undisturbed.

Figures 3 through 7 also show that 24 Alternative 3 structures, replacement structures #59 through #74 and new structures #59 through #66, will not be needed if the proposed preliminary Alternative 3A reroute is employed. These changes are marked in green.

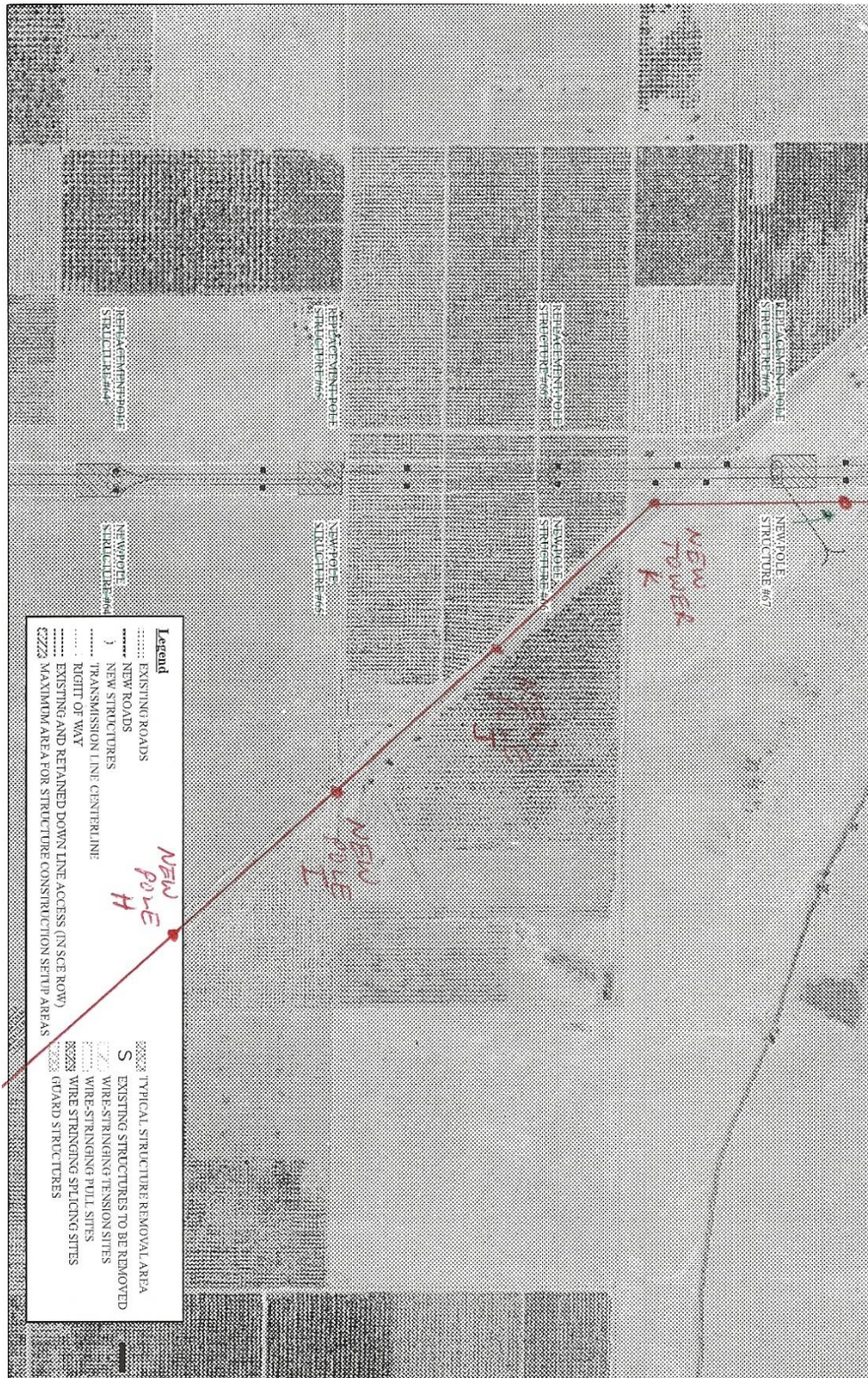


Figure 5. Alternative 3 Road Story, Page 20, with Reroute Marked in Red

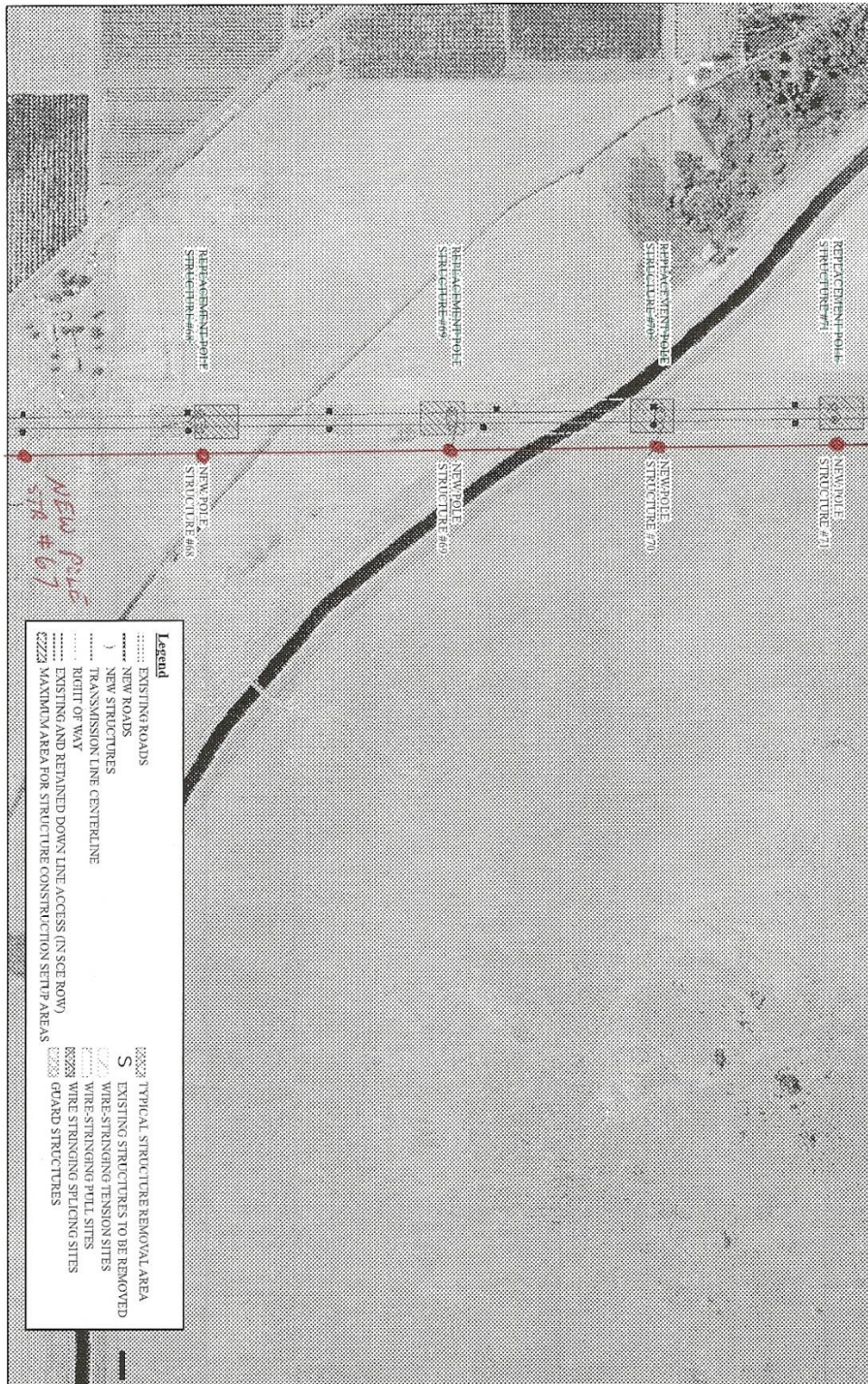


Figure 6. Alternative 3 Road Story, Page 21, with Reroute Marked in Red

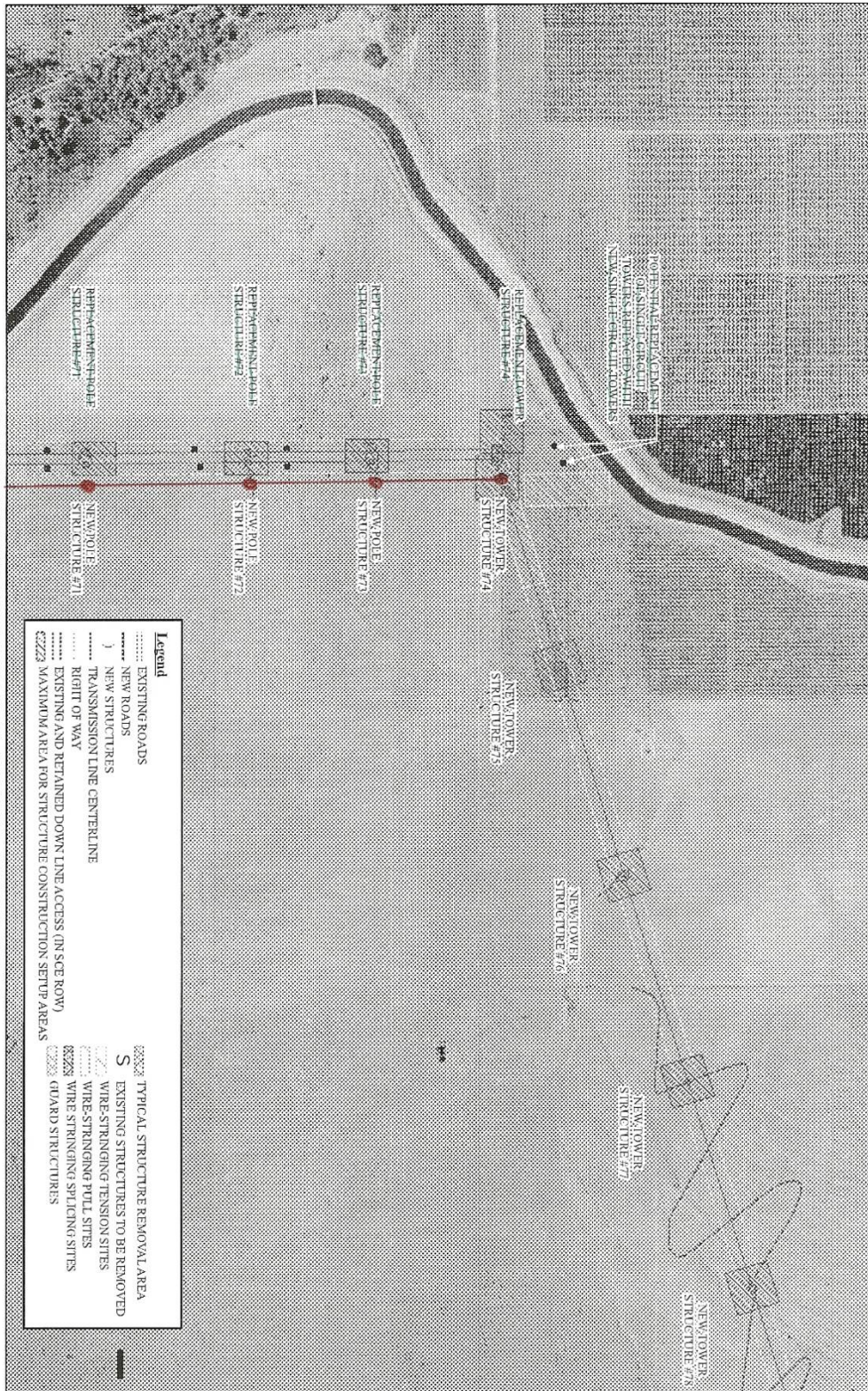


Figure 7. Alternative 3 Road Story, Page 22, with Reroute Marked in Red

The Alternative 3A reroute, modified to include the reroute of the new cross valley loop transmission line around the Stone Corral Ecological Reserve, results in the following incremental impacts on line mileage and right of way requirements:

- The total Alternative 3A reroute transmission line mileage increases about 0.5 miles from 24.3 miles to 24.8 miles.
- The Alternative 3A reroute requires rebuilding approximately 11.6 miles vs. 14.6 miles of existing Rector – Big Creek 220 kV transmission line right of way.
- For the Alternative 3A reroute, approximately 1.2 miles of existing Rector – Big Creek 220 kV transmission line right of way needs to be widened north of the Stone Corral Ecological Reserve, where the new cross valley loop transmission line is located adjacent to the existing Rector – Big Creek 220 kV transmission lines.
- For the Alternative 3A reroute, about 12 miles vs. 9.7 miles of new right of way needs to be acquired.

The Alternative 3A reroute, modified to include the reroute of the new cross valley loop transmission line around the Stone Corral Ecological Reserve, results in the following incremental impacts on construction requirements:

- Demolition of 11.6 miles vs. 14.6 miles of existing Big Creek 3 – Rector transmission line.
- Demolition of 11.6 miles vs. 14.6 miles of existing Big Creek 1 – Rector transmission line.
- Construction of 11.6 miles vs. 14.6 miles of new Big Creek 3 – Rector and Big Creek 1 – Rector double circuit transmission line on existing right of way.
- Construction of 11.6 miles vs. 14.6 miles of new Cross Valley Loop double circuit transmission line on existing right of way.
- Construction of 12 miles vs. 9.7 miles of new Cross Valley Loop double circuit transmission line on new right of way.
- Construction of 1.2 miles of new Cross Valley Loop double circuit transmission line adjacent to existing right of way.

The Alternative 3A reroute, modified to include the reroute of the new San Joaquin Cross Valley Loop (SJXVL) 220 kV transmission line around the Stone Corral Ecological Reserve, is expected to

result in the following approximate incremental impacts on Alternative 3 direct costs with contingency presented in Appendix A of SCE’s cost support testimony⁷:

Table 1. Cost Impact of Route 3A Reroute Around Stone Corral

| Line No. | Alternative 3 Cost \$1000 | Alternative 3A Reroute Cost \$1000 | Cost Change \$1000 |
|-----------------|----------------------------------|---|---------------------------|
| 10 | 10,620 | 8,690 | -1,930 |
| 11 | 43,465 | 30,200 | -13,265 |
| 12 | 68,380 | 69,800 | 1,420 |
| Total | | | -13,775 |

In Line 10 of Appendix A of SCE’s cost support testimony, for Alternative 3, the estimated cost to remove 14.6 miles of existing Big Creek #1 – Rector & Big Creek #3 – Rector 220 kV transmission line is \$10,620,000. For the Alternative 3A reroute, the new SJXVL transmission line exits the existing Big Creek – Rector 220 kV transmission line right of way at approximately 11.6 miles north of the Rector Substation, about 0.8 miles further than Alternative 2, which exits at 10.8 miles north of the Rector Substation. So Line 10 for the Alternative 3A reroute in Table 1 is assumed to cost about 11.6/10.8 times the corresponding Alternative 2 removal cost of \$8,090,000 in Line 6 of Appendix A.

In Line 11 of Appendix A of SCE’s cost support testimony, for Alternative 3, the estimated cost to build 14.6 miles of new double circuit Big Creek #1 – Rector & Big Creek #3 – Rector 220 kV transmission line is \$43,465,000. For the Alternative 3A reroute, the new SJXVL transmission line exits the existing Big Creek – Rector 220 kV transmission line right of way at approximately 11.6 miles north of the Rector Substation, about 0.8 miles further north than Alternative 2, which exits at 10.8 miles north of the Rector Substation. So Line 11 for the Alternative 3A reroute in Table 1 is assumed to cost about 11.6/10.8 times the corresponding Alternative 2 new double circuit Big Creek #1 – Rector & Big Creek #3 – Rector 220 kV transmission line rebuild cost of \$28,140,000 in Line 7 of Appendix A.

In Line 12 of Appendix A of SCE’s cost support testimony, for Alternative 3A, the estimated cost to build 24.3 miles of new double circuit 220 kV transmission line is \$68,380,000. For the Alternative 3A reroute, the new SJXVL transmission line is about 0.5 miles longer. So Line 12 for the Alternative 3A reroute in Table 1 is assumed to cost about 24.8/24.3 times the corresponding Alternative 3 new double circuit SJXVL transmission line cost in Line 12 of Appendix A.

⁷ Southern California Edison Company’s Testimony on San Joaquin Cross-Valley Loop Project (SJXVL) Cost Support for SJXVL Project and Alternatives, Frank Harris, June 26, 2008.

These Line 10, 11 and 12 incremental direct cost changes for the Alternative 3A reroute result in expected total direct cost savings with contingency of about \$13,775,000 compared to Alternative 3 original estimates.

Assuming a P&B and A&G rate of 7.5% similar to the rate used in Appendix A of SCE's cost support testimony for Alternative 3, the resulting total direct plus contingency plus P&B and A&G cost savings for the Alternative 3A reroute compared to Alternative 3 is about \$14,800,000. In addition, assuming an AFUDC rate of 12.6% similar to the rate used in Appendix A of SCE's cost support testimony for Alternative 3, the resulting AFUDC cost savings for the Alternative 3A reroute compared to Alternative 3 is about \$1,900,000.

On July 13, 2009, members of PACE, David Cairns and Carol Cairns, and Phyllis Coring (consultant) and I met with two representatives of the California Department of Fish and Game, Justin Sloan, Environmental Scientist responsible for the Stone Corral Ecological Reserve, and his supervisor, Annee Ferranti, Senior Environmental Scientist, to discuss the feasibility of rerouting Alternative 3 around the ecological reserve. We discussed the proposed preliminary Alternative 3A reroute around the ecological reserve described above. In summary their opinion was that it will be feasible to reroute Alternative 3A around the Stone Corral Ecological Reserve on private property. There is critical habitat only in some spots in the previously cultivated fields outside the ecological reserve. These areas can be specifically identified with a biological survey, and the preliminary Alternative 3A reroute transmission structures relocated appropriately to avoid these areas.

Summing up, this preliminary Alternative 3A reroute bypasses the Stone Corral Ecological Reserve by crossing a small amount of orchards, crossing previously cultivated fields, which apparently are private property, utilizing an abandoned railroad right of way, and avoiding residential structures. This Alternative 3A reroute will mitigate the impacts to the sensitive habitat located within the Stone Corral Ecological Reserve described in the draft Environmental Impact Report. The Alternative 3A reroute also provides the flexibility to adjust structure locations to appropriately mitigate any identified biological resources in sensitive habitat located on private property outside the ecological reserve on the alternative 3A reroute path, while still resulting in the least amount of impacts to agricultural resources. This Alternative 3A reroute is feasible and it will significantly reduce the costs of constructing Alternative 3.

III. RIGHT OF WAY COSTS – Witness John Kirkpatrick

The property rights cost estimates published in SCE Cost Testimony on June 26, 2008 consists of a single dollar amount⁸ multiplied by the number of acres in the right of way of each of the Alternatives 1, 2 and 3 (SCE Cost Testimony, June 26, 2008, page 10; three un-numbered pages marked Confidential in SCE response to Kirkpatrick Data Request No. 1 Questions KDR1 - Q2 & Q3 dated July 10, 2009).. It is obvious that the land under Route 3 (ranging mostly from low value, steep, rough stony native pasture to irrigated farm land) is not of the same value as the land under Routes 1 and 2 (with larger proportions of highly developed urban uses, and intensively farmed irrigated orchards and crop land). The same cost estimates should not be applied to the land under all routes equally.

I estimate the value of property rights plus contingency for Alt 3A presented in this testimony should be \$3,700,000 in the box on Line 22 in the column headed “Total Direct With Contingency” as compared with \$7,300,000 in SCE’s original estimate. This estimate was derived by applying an array of reasonable and accepted value trend estimates⁹ to an array of land uses sourced from the Draft EIR¹⁰, as the following table shows.

⁸ Deemed confidential by Southern California Edison. Email letter from Jennifer R. Hasbrouck, Senior Attorney, SCE, dated April 1, 2009

⁹ “2008 Trends in Agricultural Land Values and Leases”, California Chapter of the American Society of Farm Managers and Rural Appraisers. Used with Permission.

¹⁰ Southern California Edison’s San Joaquin Cross Valley Loop 220 kV Transmission Line Project, CPUC A.08-05-039, SCH #: 2008081090, Draft Environmental Impact Report, Table 4.2-1 “Crops Grown in RoW of Proposed Project and Alternatives”

Table 2. Property Values of Route 3A Right-of-Way

| VALUES PER ACRE | CROP - LAND USE | | Acres Alternative 3 | \$\$\$ Alternative 3 |
|------------------------|---|--------------------|----------------------------|-----------------------------|
| 12,000 | Alfalfa | | | 0 |
| 15,000 | Almond | | 15.9 | \$238,500 |
| 15,000 | Cherry | | 7.8 | 117,000 |
| 15,000 | Citrus | | | 0 |
| 12,000 | Corn | | | 0 |
| 12,000 | Grape | | | 0 |
| 15,000 | Grapefruit | | | 0 |
| 1,500 | Grass Hay | | 11.0 | 16,500 |
| 15,000 | Kiwi | | 5.8 | 87,000 |
| 25,000 | Lemon | | | 0 |
| 13,000 | Nectarine | | | 0 |
| 9,000 | Olive | | 11.6 | 104,400 |
| 15,000 | Orange | | 73.1 | 1,096,500 |
| 15,000 | Orange-Grapefruit Mix | | | 0 |
| 13,000 | Peach | | 1.1 | 14,300 |
| 13,000 | Plum | | 10.0 | 130,000 |
| 12,000 | Pomegranate | | | 0 |
| 25,000 | Tangerine | | 2.4 | 60,000 |
| 15,000 | Walnut | | 25.2 | 378,000 |
| | | | | |
| | | | | |
| | Totals - Listed Cropland | | 163.9 | 2,242,200 |
| | Totals per DEIR | | 163.9 | |
| | Acres in Right of Way | | 381.8 | |
| | Difference: RoW less Cropland | | 217.9 | |
| 1,500 | Value Difference Alt 3 @ Rangeland Value \$1,500/acre | Range Land | 217.9 | 326,880 |
| 1,500 | Adjust for #3 Reroute 1.2 mi widen RoW 50' | Range Land | 21.8 | 32,730 |
| 12,000 | Adjust for #3 Reroute 2.3 mi RoW 100' added | Field Crops | 27.9 | 334,560 |
| | Total Adjusted Value Estimate | | | 2,936,370 |
| | Add Contingency 25% | | | 734,093 |
| | Alt 3 REROUTE TOTAL \$\$ VALUE ESTIMATE ADJUSTED FOR RANGELAND AND RoW REROUTING | TOTAL ALT 3 | | <u>3,670,463</u> |
| | | Round Off: | | \$3,700,000 |

Applying a realistic value for the different land costs under Route 3 reduces the cost of Route 3 by \$3,900,000 in direct costs for a total route cost reduction of \$4,700,000¹¹.

IV. CONCLUSION AND RECOMMENDATIONS

PACE testimony in this proceeding identifies a route around the “unmitigatable” impacts to biological resources of Alternative 3. This adjustment reduces the cost of Route 3 over what SCE originally proffered. A further adjustment to Route 3 costs by using realistic land values reduces Route 3As costs even more. Route 3A, with the adjustments described in this testimony, should be the Commissions preferred route.

Respectfully submitted,



By: /s/

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¹¹ Assuming a contingency rate of 31.51% similar to the rate used in Appendix A of SCE’s cost support testimony for Alternative 3, direct cost savings plus contingency savings is about \$3,900,000 for the Alternative 3A reroute compared to Alternative 3. Assuming a P&B and A&G rate of 7.5% similar to the rate used in Appendix A of SCE’s cost support testimony for Alternative 3, the resulting total direct plus contingency plus P&B and A&G cost savings for the Alternative 3A reroute compared to Alternative 3 is about \$4,200,000. In addition, assuming an AFUDC rate of 12.6% similar to the rate used in Appendix A of SCE’s cost support testimony for Alternative 3, the resulting AFUDC cost savings for the Alternative 3A reroute compared to Alternative 3 is about \$4,700,000.

STATEMENT OF QUALIFICATIONS

Hank Zaininger

Mr. Zaininger founded Zaininger Engineering Company (ZECO) in 1978. Over the past 31 years he has successfully performed numerous electric utility generation, transmission and distribution system technical and economic assessment studies. He has performed T&D system impact studies with new generation or other T&D facilities installed, including load flow, stability, and post transient voltage and reactive margin assessments as appropriate. He has performed innovative electric power system assessments of a broad range of advanced energy technologies, including solar, wind and biogas renewable resources, energy storage, distributed generation and end use technologies. He has investigated distributed generation interconnection requirements, power quality impacts and potential benefits of distributed resources when integrated into distribution systems. He has investigated requirements to enhance intermittent renewable resource benefits for applications in competitive electric utility system markets. He has determined relative SO₂, NO_x, CO₂ and other emissions for both central stations, distributed generation and end use technology alternatives. He has investigated electromagnetic pulse interaction and coupling with electric power systems. He has provided expert witness services in the both the transmission and distribution system areas.

Mr. Zaininger was employed by Power Technologies, Inc. for a total of seven years. He was employed by PTI for three years from 1973 to 1976 prior to forming ZECO, returned for two years from 1987 to 1989 to assist in the start up of the Sacramento office, and returned to PTI to serve as manager of the Sacramento office for two years from 1997 to 1999. At PTI, he undertook assignments in both transmission and distribution system planning and line design areas. He evaluated interconnection requirements, assessed transmission reliability and performed power transfer capability studies for interconnecting new generation additions. He served as an expert witness in cases involving large-scale generation connected to a transmission system and small-scale generation connected to a distribution system, developing testimony based on performing T&D system planning studies as appropriate. He developed the initial version of PTI's transmission line optimization program, LOP1, and performed several EHV line design optimization studies with this methodology. He developed synthetic generation and transmission systems and data for evaluating advanced technologies and new energy resources, and performed several technical and economic assessments of advanced energy technologies and distributed generation, including battery storage and wind generation.

Mr. Zaininger was employed by the Electric Power Research Institute for one year in 1977. At EPRI, he participated in technical and economic cost/benefit assessments of a wide range of new energy technologies, and played a significant role in developing the initial version of the EPRI *Technical Assessment Guide*.

Mr. Zaininger was employed by Illinois Power Company for five years from 1969 to 1973. At IP, he served as a system planner, where he performed transmission and distribution system planning studies involving load flow, transient stability, and economic considerations. He was then assigned generation planning responsibilities for the company, where he performed generation planning studies leading to the

announcement of two generating units currently on line. These generation planning studies involved reliability assessment, production costing, economic and financial evaluation, future plant siting, and environmental impact assessment of new generation alternatives. In addition he served as a transmission line design engineer, where he developed complete design specifications for several transmission lines, and developed a new computerized method of structural analysis for both wood and steel transmission structures.

Mr. Zaininger was employed by Bell Telephone Laboratories for one year in 1968 as a member of the technical staff. At Bell Labs, he performed computer program development and determined system requirements for computerized telephone electronic switching stations, commonly employed today.

Mr. Zaininger received his degree in Electrical Engineering from the University of Illinois in 1968 where he was elected into Eta Kappa Nu. He is a senior member of the IEEE. Until recently he served as Chairman of the IEEE-PES Power System Analysis, Computing and Economics Committee. He is a Registered Professional Engineer in the State of Illinois. He has authored 58 technical publications and has been awarded a patent for the invention of a solar water heating teaching aid.

Henry W. Zaininger Expert Witness Experience

The following selected projects and experience highlight Mr. Zaininger's expert witness credentials.

Assessment of Sunrise Powerlink CPCN Planning Process This project for the California Public Utilities Commission Division of Ratepayer Advocates (DRA). This project consisted of performing a review and assessment of the reasonableness of portions of the San Diego Gas & Electric (SDGE) Application for a Certificate of Public Convenience and Necessity (CPCN) for the proposed Sunrise Powerlink project, associated SDGE direct testimony, other documents supplied by or downloaded from SDGE and the California Independent System Operator (CAISO) web sites, and reviewing and analyzing issues in the Draft Environmental Impact Report / Environmental Impact Statement as directed. H.W. Zaininger prepared and presented testimony, including cross examination, in Phase 1 regarding alternative transmission expansion plans meeting local reliability needs, and in Phase 2 comparing the relative reliability of alternative Northern and Southern Sunrise Powerlink routes at California Public Utilities Commission hearings.

Assessment of Palo Verde – Devers #2 CPCN Planning Process This project for the California Public Utilities Commission Division of Ratepayer Advocates (DRA). This project consisted of performing a review and assessment of the reasonableness of portions of the SCE Application for a Certificate of Public Convenience and Necessity for the proposed Palo Verde - Devers #2 project (DPV2), associated SCE direct testimony and other documents supplied by SCE or downloaded WECC and CAISO web sites. H.W. Zaininger then prepared and presented testimony, including cross-examination, assessing the impact of DPV2 on import capability into California from the Southwest, and the reasonableness of SCE's specifications for DPV2 at a California Public Utilities Commission hearing.

Assessment of the Maine Power Connection Project This project for the Maine Public Utilities Commission (MPUC) consisted of a subcontract to Woodruff Expert Services. This project consisted of performing a review and assessment of transmission studies and other applicant supplied materials supporting the Maine Public Service Co. and the Central Maine Power Co. Application for a Certificate of

Public Convenience and Necessity for the proposed Maine Power Connection (MPC) project to enable interconnection of the Aroostook Wind Energy Project. H. W. Zaininger then presented his findings to MPUC staff.

Review of Transmission Plans in 2006 NPC and SPPC IRP's This project for the Nevada Office of the Attorney General Bureau of Consumer Protection (BCP) consisted of a subcontract to Woodruff Expert Services. ZECO's role consisted of reviewing Nevada Power Company (NPC) and Sierra Pacific Power Company (SPPC) 2006 Integrated Resource Plan filings and data requests and responses; preparing assessments of alternative North/South transmission intertie and other transmission expansion scenarios, as directed by the WES project manager.

CEC Transmission System Engineering Assistance This subcontract to Aspen Environmental Group, completed in December 2003 consisted of providing transmission system engineering services to the California Energy Commission staff to conduct application for certification review of proposed new power plants in both Northern and Southern California. ZECO provided transmission system engineering services to the CEC for the SMUD Cosumnes Power Plant Project, the Palomar Energy Project, the Roseville Energy Facility, the Rio Linda/Elverta Power Plant Project, the Colusa Power Project, and the East Altamont Energy Center. ZECO tasks include performing cursory transmission engineering review of alternative plant sites, performing load flow studies using the GE PSLF program, reviewing system impact studies, attending CEC workshops and hearings, and preparing preliminary and final transmission system engineering staff assessment testimony for several proposed power plants in California.

John Kirkpatrick

JOHN O. KIRKPATRICK, ARA Ret.
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John, 79, has a lifetime of agricultural experience through education, work history in banking and appraisal, through self employment in the appraisal and agricultural consulting fields and, in retirement, as a farm owner/operator. His appreciation for agriculture began at the age of 12, working on his family's citrus and olive operation in Lindsay, Tulare County. He is a graduate of the University of California at Davis, after which he served in the U.S. Military as a commissioned officer. In 1965, he began 13 years' employment as General Manager of a farm and ranch corporation in the Lemon Cove-Exeter area. Responsibilities included management of a Limited Public Utility irrigation ditch company.

Appraisal Experience & Qualifications

Kirkpatrick's appraisal career began at Security First National Bank in 1958, specializing in agricultural accounts throughout the San Joaquin Valley. He became the Assistant Vice President and Trust Real Estate Officer managing bank trust real estate properties in Central California.

He expanded his university education with specialized courses in banking and real estate appraisal from the American Society of Farm Managers and Rural Appraisers. He earned ASFM&RA's highest professional designation as an Accredited Rural Appraiser (ARA) in 1965. He went on to become a faculty member of ASFM&RA, teaching courses in rural appraisal, as well ethics and standards of practice throughout the United States. For 45 years he served in leadership positions, including the presidency, in the California Chapter of ASFM&RA.

Since 1983, he has maintained his own appraisal and consulting business, Kirkpatrick Ag Services.

During the course of Kirkpatrick's career, he served as an expert witness, Receiver, Referee and Trustee in Bankruptcy in California and Federal courts in agricultural cases involving water rights; crop, livestock and tree loss damages & liability ; as well as management practices before the Agricultural Labor Relations Board.

Kirkpatrick and his wife own and operate a 54-acre citrus and pomegranate property in Tulare County.

CERTIFICATE OF SERVICE

I, Lon W. House, certify that I have, on this date, served the OPENING TESTIMONY OF PACE (PROTECT AGRICULTURE COMMUNITIES ENVIRONMENT) by email and U.S. Mail (for parties without email and ALJ Yacknin) on the parties listed on the Service List (attached) for the proceeding in California Public Utilities Commission Docket No. A.08-05-039.

I declare under penalty of perjury, pursuant to the laws of the State of California, that the foregoing is true and correct.

Executed on July 20, 2009 in Cameron Park, California.

/s/ 

Lon W. House

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